

Annex N

IPCC Reporting Tables

This annex contains a series of tables which summarize the emissions and activity data discussed in the body of this report. The data in these tables conform with guidelines established by the IPCC (IPCC/UNEP/OECD/IEA 1997; vol. 1) for consistent international reporting of greenhouse gas emissions inventories. The format of these tables does not always correspond directly with the calculations discussed in the body of the report. In these instances, the data have been reorganized to conform to IPCC reporting guidelines. As a result, slight differences may exist between the figures presented in the IPCC tables and those in the body of the report. These differences are merely an artifact of variations in reporting structures; total U.S. emissions are unaffected.

Title of Inventory	<i>Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1996</i>
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Is uncertainty addressed?	Yes
Related documents filed with IPCC	Yes

IPCC Table 1: Sectoral Report for Energy (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)							
Greenhouse Gas Source and Sink Categories	CO ₂ [a]	CH ₄	N ₂ O	NO _x	CO	NMVOC	SO ₂
Total Energy	5,330,574	10,188.5	242.92	20,123	67,596	8,470	16,173
A Fuel Combustion Activities (Reference)	5,317,701						
A Fuel Combustion Activities (Sectoral)	5,317,843	667.1	242.92	20,024	67,280	8,014	15,839
1 Electric Utilities	1,895,156	23.3	26.13	5,991	341	41	11,434
Petroleum	57,236	-	-	-	-	-	-
Gas	147,859	-	-	-	-	-	-
Coal	1,689,925	-	-	-	-	-	-
Geothermal	135	-	-	-	-	-	-
2 Industry	1,125,708	141.6	16.56	2,794	972	188	3,084
Petroleum	383,708	-	-	-	-	-	-
Gas	524,213	-	-	-	-	-	-
Coal	217,787	-	-	-	-	-	-
3 Transport	1,631,090	238.4	195.44	10,656	61,931	7,048	612
Petroleum	1,592,519	-	-	-	-	-	-
Gas	38,570	-	-	-	-	-	-
Coal	0	-	-	-	-	-	-
4 Commercial	237,504	38.2	1.08	336	219	21	IE
Petroleum	56,184	-	-	-	-	-	-
Gas	173,678	-	-	-	-	-	-
Coal	7,642	-	-	-	-	-	-
5 Residential	388,656	225.6	3.71	654	3,817	715	164
Petroleum	99,796	-	-	-	-	-	-
Gas	283,795	-	-	-	-	-	-
Coal	5,065	-	-	-	-	-	-
6 Agriculture / Forestry	IE	IE	IE	IE	IE	IE	IE
Petroleum							
Gas							
Coal							
7 Territories	39,730	NE	NE	NE	NE	NE	NE
Petroleum	38,794						
Gas							
Coal	936						
B Fugitive Emissions from Fuels	12,730	9,521.3	NE	100	316	456	334
1 Solid Fuels	NE	3,301.0	NE	NE	NE	NE	NE
a Coal Mining		3,301.0					
2 Petroleum and Natural Gas	12,730	6,220.3	NE	100	316	456	334
a Petroleum		270.6					
b Natural Gas		5,949.7					
c Venting and Flaring	12,730						
Memo Items*:							
International Bunkers	82,443	NE	NE	IE	IE	IE	IE
Aviation	22,096						
Marine	60,346						
CO ₂ Emissions from Biomass [b]	200,108	IE	IE	IE	IE	IE	IE
Wood	194,963						
Ethanol	5,145						

*Not included in energy totals

Note: Totals may not equal sum of components due to independent rounding.

"-" = Value is not estimated separately, but included in an aggregate figure.

NE = Not estimated

IE = Estimated but included elsewhere

[a] For CO₂ calculations a detailed bottom-up approach was implemented using activity data disaggregated by sector and fuel type.

[b] CO₂ emissions estimates from biomass consumption are from commercial, industrial, residential, transportation, and electric power production applications. Estimates of non-CO₂ emissions from these sources were calculated via U.S. EPA methodologies and are incorporated in sectoral estimates in section A.

IPCC Table 2a: Sectoral Report for Industrial Processes (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)										
Greenhouse Gas Source and Sink Categories	CO ₂	CH ₄	N ₂ O	NO _x	CO	NMVOG	SO ₂	HFCs [b]	PFCs [b]	SF ₆
Total Industrial Processes	63,309	73.9	108.71	820	5,338	1,970	1,122	[b]	[b]	1.5342
A Mineral Products	62,169	NE	NE	IE	IE	IE	IE	NE	NE	NE
1 Cement Production	37,061									
2 Lime Production	14,092									
3 Limestone and Dolomite Use	6,743									
4 Soda Ash Production and Use	4,273									
5 Asphalt Roofing	NE			IE	IE	IE	IE			
6 Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B Chemical Industry	1,140	73.9	108.71	144	1,110	377	260	IE	IE	IE
1 Ammonia Production	23,138 [a]			-	-	-	-			
2 Nitric Acid Production			45.38	-	-	-	-			
3 Adipic Acid Production			63.32	-	-	-	-			
4 Silicon Carbide Production		0.9		-	-	-	-			
5 Carbon Dioxide Production	1,140			-	-	-	-			
6 Petrochemical Production		73.0		-	-	-	-			
C Metal Production	IE	NE	NE	89	2,157	64	481	NE	[b]	0.4603
1 Iron and Steel Production	79,040 [a]			-	-	-	-			
2 Ferroalloys Production	1,695 [a]			-	-	-	-			
3 Aluminum Production	5258 [a]			-	-	-	-		[b]	
4 SF ₆ Used in Aluminum and Magnesium Foundries				-	-	-	-			0.4603
D Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E Production of Halocarbons and SF₆	NE	NE	NE	NE	NE	NE	NE	IE [b]	IE [b]	IE
1 Byproduct Emissions								IE [b]		
2 Fugitive Emissions										
3 Other										
F Consumption of Halocarbons and SF₆	NE	NE	NE	NE	NE	NE	NE	IE [b]	IE [b]	1.0739
1 Refrigeration and Air Conditioning Equipment								-	-	
2 Foam Blowing								-	-	
3 Fire Extinguishers								-	-	
4 Aerosols								-	-	
5 Solvents								-	-	
6 Electrical Transmission and Distribution								-	-	1.0739
G Other	IE	IE	IE	587	2,071	1,529	381	NO	NO	NO
1 Storage and Transport				5	23	889	2			
2 Other Industrial Processes				366	576	391	371			
3 Miscellaneous				216	1,472	249	8			

Note: Totals may not equal sum of components due to independent rounding.

“-” = Value is not estimated separately, but included in an aggregate figure.

NE = Not estimated

IE = Estimated but included elsewhere

NO = Not known to be occurring

NA = Not applicable

[a] CO₂ emissions from aluminum, ammonia, ferroalloy, and iron & steel production are included in this table for informational purposes, but are not included in the national total in order to prevent double counting these emissions, which are included under non-fuel industrial uses under the Energy sector.

[b] Emissions of HFCs and PFCs are documented by gas in Table 2b.

[c] Includes cooling towers, fugitive dust, health services

IPCC Table 2b: Detailed Emissions of HFCs (1996)

Greenhouse Gas Source and Sink Categories	(MMTCE)	Sectoral Report for National Greenhouse Gas Inventories(Gg)							
	Unspecified*	HFC-23	HFC-125	HFC-134a	HFC-143a	HFC-152a	HFC-227ea	HFC-236fa	HFC-4310mee
Total HFCs and PFCs	1.4	2.690	3.172	13.605	0.226	1.08	2.063	0.079	1.030
A Substitution of Ozone Depleting Substances		0.026	3.172	13.605	0.226	1.08	2.063	0.079	1.030
B Aluminum Production		NO	NO	NO	NO	NO	NO	NO	NO
C HCFC-22 Production		2.664	NO	NO	NO	NO	NO	NO	NO
D Semiconductor Manufacture	1.4	IE	NO	NO	NO	NO	NO	NO	NO

*Includes gases such as HFC-23, CF₄, C₂F₆, SF₆, and C₃F₈

IE = Estimated but included elsewhere

NO = Not known to be occurring

IPCC Table 2c: Detailed Emissions of PFCs (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)					
Greenhouse Gas Source and Sink Categories	CF ₄	C ₂ F ₆	C ₄ F ₁₀	C ₆ F ₁₄	PFC/PFPEs [a]
Total HFCs and PFCs	1.434	0.143	0.064	0.006	0.990
A Substitution of Ozone Depleting Substances	NO	NO	0.064	0.006	0.990
B Aluminum Production	1.434	0.143	NO	NO	NO
C HCFC-22 Production	NO	NO	NO	NO	NO
D Semiconductor Manufacture	IE	IE	NO	NO	NO

IE = Estimated but included elsewhere

NO = Not known to be occurring

[a] PFC/PFPEs are a proxy for many diverse PFCs and perfluoropolyethers (PFPEs) that are employed in solvent applications. The GWP and atmospheric lifetime of this aggregate category is based upon that of C₆F₁₄.

IPCC Table 3: Sectoral Report for Solvent and Other Product Use (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)				
Greenhouse Gas Source and Sink Categories	NOx	CO	NMVOc	SO ₂
Total Solvent and Other Product Use	3	5	5,691	1
A Degreasing	[a]	[a]	599	[a]
B Dry Cleaning	[a]	1	172	[a]
C Graphic Arts	1	[a]	353	[a]
D Surface Coating (including paint)	2	1	2,613	[a]
E Other Industrial	[a]	3	48	[a]
F Non-Industrial	[a]	[a]	1,905	NO

[a] Less than 0.5 Gg

IPCC Table 4: Sectoral Report for Agriculture (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)							
Greenhouse Gas Source and Sink Categories	CO ₂	CH ₄	N ₂ O	NOx	CO	NMVOc	SO ₂
Total Agriculture	NE	9,381.5	847.94	34	783	NE	NE
A Enteric Fermentation	NE	6,023.0	NE	NE	NE		
1 Dairy Cattle		1,456.0					
2 Beef Cattle		4,294.0					
3 Sheep		68.0					

4 Goats		12.0				
5 Horses, Mules and Asses		108.0				
6 Swine		85.0				
B Manure Management	NE	2,889.9	34.95	NE	NE	
1 Dairy Cattle		786.6	0.84			
2 Beef Cattle		226.1	14.46			
3 Sheep		2.8	0.27			
4 Goats		0.9	0.05			
5 Horses, Mules and Asses		30.8	0.59			
6 Swine		1,541.3	0.76			
7 Poultry		301.5	17.97			
C Rice Cultivation	NE	431.3	NE	NE	NE	
1 Irrigated		431.3				
2 Rainfed						
3 Deepwater						
D Agricultural Soils	NE	NE	811.56	NE	NE	
1 Direct Emission from Agricultural Cropping Practices			442.32			
2 Direct Emissions from Animal Production			128.21			
3 Indirect Emissions from Nitrogen Applied to Agricultural Soils			241.03			
E Prescribed Burning of Savannas	NE	NE	NE	NE	NE	
F Field Burning of Agricultural Residues	NE	37.3	1.42	34	783	
1 Cereals		27.5	0.67	16	578	
2 Pulse		8.7	0.74	17	183	
3 Tuber and Root		0.1	0.01	0	2	
4 Sugar Cane		0.9	0.01	0	19	

Note: Totals may not equal sum of components due to independent rounding.
NE = Not estimated

IPCC Table 5: Sectoral Report for Land-Use Change and Forestry (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)						
Greenhouse Gas Source and Sink Categories	CO ₂ Emissions	CO ₂ Removals	CH ₄	N ₂ O	NO _x	CO
Total Land-Use Change and Forestry		-764,683	NE	NE	NE	NE
A Changes in Forest and Other Woody Biomass Stocks		-311,667				
1 Forest Trees, Understory, Floor		-311,667				
B Forest and Grassland Conversion		NO				
C Abandonment of Managed Lands		NO				
D CO ₂ Emissions and Removals from Soil		-316,250				
1 Forest Soils		-316,250				
2 Non-Forest Soils		NE				
E Other		-136,767				
1 Landfilled Wood Carbon Flux		-71,243				
2 Wood Product Flux		-65,523				

NE = Not estimated

NO = Not known to be occurring

IPCC Table 6: Sectoral Report for Waste (1996)

Sectoral Report for National Greenhouse Gas Inventories (Gg)							
Greenhouse Gas Source and Sink Categories	CO ₂	CH ₄	N ₂ O	NO _x	CO	NMVOC	SO ₂
Total Waste	IE	11,532	28	87	1,019	368	43
A Solid Waste Disposal on Land	IE	11,372	NE	1	2	19	[a]
1 Managed Waste Disposal		11,372		1	2	19	[a]
B Wastewater Handling	NE	161	27	[a]	[a]	58	1
1 Domestic		161	NE	[a]	[a]	47	-
2 Industrial		NE	NE	[a]	[a]	11	-
3 Human Sewage		-	27	-			
C Waste Incineration	IE	NE	1	85	1,016	218	42
1 Waste Incineration			1	49	402	50	32
2 Open Burning				36	614	169	10
D Other	NE	NE	NE	1	1	73	[a]
1 Treatment Storage and Disposal Facility						41	-
2 Scrap and Waste Materials/Leaking Underground Storage Tanks				1	1	32	-

"-" = Value is not estimated separately, but included in an aggregate figure.

[a] Less than 0.5 Gg

NE = Not estimated

IE = Estimated but included elsewhere

IPCC Table 7 A: Summary Report for National Greenhouse Gas Inventories (1996)

Summary Report for National Greenhouse Gas Inventories (Gg)											
Greenhouse Gas Source and Sink Categories	CO ₂ Emissions	CO ₂ Removals	CH ₄	N ₂ O	NO _x	CO	NMVOC	SO ₂	HFCs	PFCs	SF ₆
Total National Emissions and Removals	5,393,883	-764,683	31,176.1	1,227.11	21,067	74,741	16,499	17,339	[b]	[b]	1.5342
1 Energy	5,330,574		10,188.5	242.92	20,123	67,596	8,470	16,173	NO	NO	NO
A Fuel Combustion Activities (Sectoral)	5,317,843		667.1	242.92	20,024	67,280	8,014	15,839			
1 Electric Utilities	1,895,156		23.3	26.13	5,473	341	41	11,434			
2 Industry	1,125,708		141.6	16.56	2,875	972	188	3,084			

3 Transport	1,631,090		238.4	195.44	10,656	61,931	7,048	612			
4 Commercial	237,504		38.2	1.08	336	219	21	546			
5 Residential	388,656		225.6	3.71	654	3,817	715	164			
6 Agriculture / Forestry	IE		IE	IE	IE	IE	IE	IE			
7 Territories	39,730		NE	NE	NE	NE	NE	NE			
B Fugitive Emissions from Fuels	12,730		9,521.3		100	316	456	334			
1 Solid Fuels	NE		3,301.0	NE	NE	NE	NE	NE			
2 Petroleum and Natural Gas	12,730		6,220.3	NE	100	316	456	334			
2 Industrial Processes	63,309		73.9	108.71	820	5,338	1,970	1,122	[b]	[b]	1.5342
A Mineral Products	62,169		NE	NE	IE	IE	IE	IE	NE	NE	NE
B Chemical Industry	1,140		73.9	108.71	144	1,110	377	260	IE	IE	IE
C Metal Production	IE		NE	NE	89	2,157	64	481	NE	[b]	0.4603
D Other Production	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
E Production of Halocarbons and SF ₆	NE		NE	NE	NE	NE	NE	NE	IE [b]	IE [b]	IE
F Consumption of Halocarbons and SF ₆	NE		NE	NE	NE	NE	NE	NE	IE [b]	IE [b]	1.0739
G Other	IE		IE	IE	587	2,071	1,529	381	NO	NO	NO
3 Solvent and Other Product Use	NE		NE	NE	3	5	5,691	1	NO	NO	NO

*Not included in energy totals

Note: Totals may not sum due to independent rounding.

NE = Not estimated

IE = Estimated but included elsewhere

NO = Not known to be occurring

[a] CO₂ emissions estimates from biomass consumption are from commercial, industrial, residential, transportation, and electric power production applications. They are provided for informational purposes only and are not included in national totals. Estimates of non-CO₂ emissions from these sources were calculated via U.S. EPA methodologies and are incorporated in sectoral estimates in section 1A.

[b] Totaled by gas in Table 2b

IPCC Table 7 A (continued): Summary Report for National Greenhouse Gas Inventories (1996)

Summary Report for National Greenhouse Gas Inventories (Gg)											
Greenhouse Gas Source and Sink Categories	CO ₂ Emissions	CO ₂ Removals	CH ₄	N ₂ O	NO _x	CO	NM VOC	SO ₂	HFCs	PFCs	SF ₆
4 Agriculture	NE		9,381.5	847.94	34	783	NE	NE	NO	NO	NO
A Enteric Fermentation	NE		6,023.0	NE	NE	NE					
B Manure Management	NE		2,889.9	34.95	NE	NE					
C Rice Cultivation	NE		431.3	NE	NE	NE					
D Agricultural Soils	NE		NE	811.56	NE	NE					
E Prescribed Burning of Savannas	NO		NO	NO	NO	NO					
F Field Burning of Agricultural Residues	NE		37.3	1.42	34	783					
5 Land-Use Change & Forestry		-764,683	NE	NE	NE	NE	NE	NE	NO	NO	NO
A Changes in Forest and Other Woody Biomass Stocks		-311,667									
B Forest and Grassland Conversion		NO									
C Abandonment of Managed Lands		NO									
D CO ₂ Emissions and Removals from Soil		-316,250									
E Other		-136,767									
6 Waste	IE		11,532.3	27.55	87	1,019	368	43	NO	NO	NO
A Solid Waste Disposal on Land	IE		11,371.7	NE	1	2	19	0			
B Wastewater Handling	NE		160.6	26.66	0	0	58	1			
C Waste Incineration	IE		NE	0.89	85	1,016	218	42			
D Other	NE		NE	NE	1	1	73	0			
Memo Items*:											
International Bunkers	82,443		NE	NE	IE	IE	IE	IE	NO	NO	NO
Aviation	22,096										
Marine	60,346										
CO ₂ Emissions from Biomass [a]	200,108		IE	IE	IE	IE	IE	IE	NO	NO	NO

*Not included in energy totals

Note: Totals may not sum due to independent rounding.

NE = Not estimated

IE = Estimated but included elsewhere

NO = Not known to be occurring

[a] CO₂ emissions estimates from biomass consumption are from commercial, industrial, residential, transportation, and electric power production applications. They are provided for informational purposes only and are not included in national totals. Estimates of non-CO₂ emissions from these sources were calculated via U.S. EPA methodologies and are incorporated in sectoral estimates in section 1A.

[b] Totaled by gas in Table 2b

IPCC Table 7B: Short Summary Report for National Greenhouse Gas Inventories (1996)

Summary Report for National Greenhouse Gas Inventories (Gg)											
Greenhouse Gas Source and Sink Categories	CO ₂ Emissions	CO ₂ Removals	CH ₄	N ₂ O	NOx	CO	NMVOC	SO ₂	HFCs	PFCs	SF ₆
Total National Emissions and Removals	5,393,883	-764,683	31,176.1	1,227.11	21,067	74,741	16,499	17,339	[b]	[b]	1.5342
1 Energy (Reference Approach)	5,317,701										
1 Energy (Sectoral Approach)	5,330,574		10,188.5	242.92	20,123	67,596	8,470	16,173	NO	NO	NO
A Fuel Combustion Activities	5,317,843		667.1	242.92	20,024	67,280	8,014	15,839			
B Fugitive Emissions from Fuels	12,730		9,521.3	NE	100	316	456	334			
2 Industrial Processes	63,309		73.9	108.71	820	5,338	1,970	1,122	[b]	[b]	1.5342
3 Solvent and Other Product Use	NE		NE	NE	3	5	5,691	1	NO	NO	NO
4 Agriculture	NE		9,381.5	847.94	34	783	NE	NE	NO	NO	NO
5 Land-Use Change & Forestry		-764,683	NE	NE	NE	NE	NE	NE	NO	NO	NO
6 Waste	IE		11,532.3	27.55	87	1,019	368	43	NO	NO	NO
Memo Items*:											
International Bunkers	82,443		NE	NE	IE	IE	IE	IE	NO	NO	NO
Aviation	22,096										
Marine	60,346										
CO ₂ Emissions from Biomass [a]	200,108		IE	IE	IE	IE	IE	IE	NO	NO	NO

*Not included in energy totals

Note: Totals may not sum due to independent rounding.

NE = Not estimated

IE = Estimated but included elsewhere

NO = Not known to be occurring

[a] CO₂ emissions estimates from biomass consumption are from commercial, industrial, residential, transportation, and electric power production applications. They are provided for informational purposes only and are not included in national totals. Estimates of non-CO₂ emissions from these sources were calculated via U.S. EPA methodologies and are incorporated in sectoral estimates in section 1A.

[b] Totaled by gas in Table 2b

IPCC Table 8A (part I): Overview Table for National Greenhouse Gas Inventories (1996)

Greenhouse Gas Source and Sink Categories	CO ₂		CH ₄		N ₂ O		NO _x		CO		NMVOC	
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality
Total National Emissions and Removals												
1 Energy												
A Fuel Combustion Activities (Reference)	ALL	H	NE		NE		NE		NE		NE	
A Fuel Combustion Activities (Sectoral)												
1 Electric Utilities	ALL	H	ALL	M	ALL	M	ALL	H	ALL	H	ALL	H
2 Industry	ALL	H	ALL	M	ALL	M	ALL	H	ALL	H	ALL	H
3 Transport	ALL	H	ALL	M	PART [b]	M	ALL	H	ALL	H	ALL	H
4 Commercial	ALL	H	ALL	M	ALL	M	ALL	H	ALL	H	ALL	H
5 Residential	ALL	H	ALL	M	ALL	M	ALL	H	ALL	H	ALL	H
6 Agriculture / Forestry	IE		IE		IE		IE		IE		IE	
7 Territories	ALL	H	NE		NE		NE		NE		NE	
B Fugitive Emissions from Fuels												
1 Solid Fuels	NE		ALL	M	NE		NE		NE		NE	
2 Petroleum and Natural Gas	PART [c]	M	ALL	M	NE		ALL	H	ALL	H	ALL	H
2 Industrial Processes												
A Mineral Products	ALL	H	NE		NE		IE		IE		IE	
B Chemical Industry	ALL	M	ALL	M	ALL	H	ALL	H	ALL	H	ALL	H
C Metal Production	IE		NE		NE		ALL	H	ALL	H	ALL	H
D Other Production	NA		NA		NA		NA		NA		NA	
E Production of Halocarbons and SF ₆	NO		NO		NO		NO		NO		NO	
F Consumption of Halocarbons and SF ₆	NO		NO		NO		NO		NO		NO	
G Other [f]	IE		IE		IE		ALL	H	ALL	H	ALL	H
3 Solvent and Other Product Use	NE		NE		NE		ALL	H	ALL	H	ALL	H

NE = Not estimated
 IE = Estimated but included elsewhere
 NO = Not known to be occurring
 NA = Not applicable
 PART = Partly estimated

Quality:
 H = High Confidence in Estimation
 M = Medium Confidence in Estimation
 L = Low Confidence in Estimation

Documentation:
 H = High (all background information included)
 M = Medium (some background information included)
 L = Low (only emission estimates included)

Disaggregation:
 1 = Total emissions estimated
 2 = Sectoral split
 3 = Subsectoral split

ALL = Full estimate of all possible sources
 [a] Non-forest soils are not included in this estimate.
 [b] Estimate does not include nitrous oxide emissions from jet aircraft.
 [c] Estimate excludes geologic carbon dioxide deposits released during petroleum and natural gas production.
 [d] Estimate does not include emissions from industrial wastewater.
 [e] Includes emissions from human sewage only
 [f] From storage and transport; other industrial processes; and cooling towers, fugitive dust, and health services
 [g] From landfilled wood and wood product flux
 [h] From treatment, storage and disposal facilities: scrap and waste materials; and underground storage tanks

IPCC Table 8A (part II): Overview Table for National Greenhouse Gas Inventories (1996)

Greenhouse Gas Source and Sink Categories	CO ₂		CH ₄		N ₂ O		NO _x		CO		NMVOC	
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality
4 Agriculture												
A Enteric Fermentation	NE		ALL	M	NE		NE		NE		NE	
B Manure Management	NE		ALL	M	ALL	M	NE		NE		NE	
C Rice Cultivation	NE		ALL	M	NE		NE		NE		NE	
D Agricultural Soils	NE		NE		ALL	M	NE		NE		NE	
E Prescribed Burning of Savannas	NE		NE		NE		NE		NE		NE	
F Field Burning of Agricultural Residues	NE		ALL	M	ALL	M	ALL	M	ALL	M	NE	
5 Land-Use Change & Forestry												

A	Changes in Forest and Other Woody Biomass Stocks	ALL	M	NE		NE		NE		NE		NE	
B	Forest and Grassland Conversion	NO		NE		NE		NE		NE		NE	
C	Abandonment of Managed Lands	NO		NE		NE		NE		NE		NE	
D	CO ₂ Emissions and Removals from Soil	PART [a]	L	NE		NE		NE		NE		NE	
E	Other [g]	ALL	M	NE		NE		NE		NE		NE	
6	Waste												
A	Solid Waste Disposal on Land	IE		ALL	H	NE		ALL	H	ALL	H	ALL	H
B	Wastewater Handling	NE		PART [d]	M	PART [e]		ALL	H	ALL	H	ALL	H
C	Waste Incineration	IE		NE		ALL	M	ALL	H	ALL	H	ALL	H
D	Other [h]	NE		NE		NE	M	ALL	H	ALL	H	ALL	H
Memo Items:													
	International Bunkers												
	Aviation	ALL	M	NE		NE		IE		IE		IE	
	Marine	ALL	M	NE		NE		IE		IE		IE	
	CO ₂ Emissions from Biomass [a]	ALL	M	IE		IE		IE		IE		IE	

NE = Not estimated

IE = Estimated but included elsewhere

NO = Not known to be occurring

NA = Not applicable

PART = Partly estimated

ALL = Full estimate of all possible sources

[a] Non-forest soils are not included in this estimate.

[b] Estimate does not include nitrous oxide emissions from jet aircraft.

[c] Estimate excludes geologic carbon dioxide deposits released during petroleum and natural gas production.

[d] Estimate does not include emissions from industrial wastewater.

[e] Includes emissions from human sewage only

[f] From storage and transport; other industrial processes; and cooling towers, fugitive dust, and health services

[g] From landfilled wood and wood product flux

[h] From treatment, storage and disposal facilities: scrap and waste materials; and underground storage tanks

Quality:

H = High Confidence in Estimation

M = Medium Confidence in Estimation

L = Low Confidence in Estimation

Documentation:

H = High (all background information included)

M = Medium (some background information included)

L = Low (only emission estimates included)

Disaggregation:

1 = Total emissions estimated

2 = Sectoral split

3 = Subsectoral split

IPCC Table 8A (part III): Overview Table for National Greenhouse Gas Inventories (1996)

Greenhouse Gas Source and Sink Categories	SO ₂		HFCs		PFCs		SF ₆		Documentation	Disaggregation	Footnotes
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality			
Total National Emissions and Removals											
1 Energy											
A Fuel Combustion Activities (Reference)	NE		NE		NE		NE		H		3
A Fuel Combustion Activities (Sectoral)									H		3
1 Electric Utilities	ALL	H	NO		NO		NO				
2 Industry	ALL	H	NO		NO		NO				
3 Transport	ALL	H	NO		NO		NO				
4 Commercial	IE		NO		NO		NO				
5 Residential	IE		NO		NO		NO				
6 Agriculture / Forestry	NE		NO		NO		NO				
7 Territories	NE		NO		NO		NO				
B Fugitive Emissions from Fuels											
1 Solid Fuels	NE		NO		NO		NO		H		3
2 Petroleum and Natural Gas	ALL	H	NO		NO		NO		H		3
2 Industrial Processes											
A Mineral Products	IE		NE		NE		NE		H		3
B Chemical Industry	ALL	H	IE		IE		IE		H		3
C Metal Production	ALL	H	NE		ALL	M	ALL	M	M		3
D Other Production	NA		NA		NA		NA				
E Production of Halocarbons and SF ₆	NO		ALL	M	ALL	M	IE		M		2
F Consumption of Halocarbons and SF ₆	NO		ALL	M	ALL	M	ALL	M	M		2
G Other [f]	ALL	H	NO		NO		NO		M		2
3 Solvent and Other Product Use	ALL	H	NO		NO		NO		M		3

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[f] From storage and transport; other industrial processes; and cooling towers, fugitive dust, and health services

[g] From landfilled wood and wood product flux

[h] From treatment, storage and disposal facilities: scrap and waste materials; and underground storage tanks

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Documentation:

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M = Medium (some background information included)

L = Low (only emission estimates included)

Disaggregation:

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2 = Sectoral split

3 = Subsectoral split

IPCC Table 8A (part IV): Overview Table for National Greenhouse Gas Inventories (1996)

Greenhouse Gas Source and Sink Categories	SO ₂		HFCs		PFCs		SF ₆		Documentation	Disaggregation	Footnotes
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality			
4 Agriculture											
A Enteric Fermentation	NE		NO		NO		NO		H		3
B Manure Management	NE		NO		NO		NO		H		3
C Rice Cultivation	NE		NO		NO		NO		H		3
D Agricultural Soils	NE		NO		NO		NO		H		3
E Prescribed Burning of Savannas	NE		NO		NO		NO				
F Field Burning of Agricultural Residues	NE		NO		NO		NO		H		3
5 Land-Use Change & Forestry											
A Changes in Forest and Other Woody Biomass Stocks	NE		NO		NO		NO		M		2
B Forest and Grassland Conversion	NE		NO		NO		NO				
C Abandonment of Managed Lands	NE		NO		NO		NO				
D CO ₂ Emissions and Removals from Soil	NE		NO		NO		NO		M		2
E Other [g]	NE		NO		NO		NO		M		2
6 Waste											
A Solid Waste Disposal on Land	ALL	H	NO		NO		NO		H		3
B Wastewater Handling	ALL	H	NO		NO		NO		H		2
C Waste Incineration	ALL	H	NO		NO		NO		H		2
D Other [h]	ALL	H	NO		NO		NO				
Memo Items:											
International Bunkers											
Aviation	IE		NO		NO		NO		H		1
Marine	IE		NO		NO		NO		H		1
CO ₂ Emissions from Biomass [a]	IE		NO		NO		NO		H		2

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PART = Partly estimated

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[a] Non-forest soils are not included in this estimate.

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Disaggregation:

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