

**SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES**

(Sheet 1 of 3)

Year

Submission

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>	PFCs <sup>(1)</sup>	Unspecified mix of HFCs and PFCs <sup>(1)</sup>	SF <sub>6</sub>	NF <sub>3</sub>	NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	(kt)	(kt CO <sub>2</sub> equivalent)				(kt)						
<b>Total national emissions and removals</b>												
<b>1. Energy</b>												
A. Fuel combustion	Reference approach <sup>(2)</sup>											
	Sectoral approach <sup>(2)</sup>											
1. Energy industries												
2. Manufacturing industries and construction												
3. Transport												
4. Other sectors												
5. Other												
B. Fugitive emissions from fuels												
1. Solid fuels												
2. Oil and natural gas and other emissions from energy production												
C. CO <sub>2</sub> Transport and storage												
<b>2. Industrial processes and product use</b>												
A. Mineral industry												
B. Chemical industry												
C. Metal industry												
D. Non-energy products from fuels and solvent use												
E. Electronic industry												
F. Product uses as substitutes for ODS												
G. Other product manufacture and use												
H. Other <sup>(3)</sup>												

**Note:** All footnotes for this table are given at the end of the table on sheet 3.

**SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES**

(Sheet 2 of 3)

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>	PFCs <sup>(1)</sup>	Unspecified mix of HFCs and PFCs <sup>(1)</sup>	SF <sub>6</sub>	NF <sub>3</sub>	NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals											
	(kt)			(kt CO <sub>2</sub> equivalent)			(kt)					
<b>3. Agriculture</b>												
A. Enteric fermentation												
B. Manure management												
C. Rice cultivation												
D. Agricultural soils												
E. Prescribed burning of savannas												
F. Field burning of agricultural residues												
G. Liming												
H. Urea application												
I. Other												
<b>4. Land use, land-use change and forestry</b>	(4)											
A. Forest land	(4)											
B. Cropland	(4)											
C. Grassland	(4)											
D. Wetlands	(4)											
E. Settlements	(4)											
F. Other land	(4)											
G. Harvested wood products												
H. Other	(4)											
<b>5. Waste</b>												
A. Solid waste disposal	(5)											
B. Biological treatment of solid waste	(5)											
C. Incineration and open burning of waste	(5)											
D. Wastewater treatment and discharge												
E. Other	(5)											
<b>6. Other (please specify)<sup>(6)</sup></b>												

**Note:** All footnotes for this table are given at the end of the table on sheet 3.

**SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7**

**(Sheet 3 of 3)**

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>	PFCs <sup>(1)</sup>	Unspecified mix of HFCs and PFCs <sup>(1)</sup>	SF <sub>6</sub>	NF <sub>3</sub>	NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals											
	(kt)	(kt CO <sub>2</sub> equivalent)					(kt)					
<b>Memo items:<sup>(7)</sup></b>												
<b>International bunkers</b>												
Aviation												
Navigation												
<b>Multilateral operations</b>												
<b>CO<sub>2</sub> emissions from biomass</b>												
<b>CO<sub>2</sub> captured</b>												
<b>Long-term storage of C in waste disposal sites</b>												
<b>Indirect N<sub>2</sub>O</b>												
<b>Indirect CO<sub>2</sub></b>												

<sup>(1)</sup> The emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), unspecified mix of HFCs and PFCs and other fluorinated gases are to be expressed as carbon dioxide (CO<sub>2</sub>) equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, Parties are requested to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to table 1.A(c). For estimating national total emissions, the results from the Sectoral approach should be used.

<sup>(3)</sup> 2.H. Other includes pulp and paper and food and beverages industry.

<sup>(4)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(5)</sup> CO<sub>2</sub> from categories solid waste disposal on land and waste incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from waste incineration without energy recovery are to be reported in the waste sector, whereas emissions from incineration with energy recovery are to be reported in the energy sector.

<sup>(6)</sup> If reporting any country-specific category under sector "6. Other", detailed explanations should be provided in Chapter 8: Other (CRF sector 6) of the national i

<sup>(7)</sup> Parties are asked to report emissions from international aviation and international navigation and multilateral operations, as well as CO<sub>2</sub> emissions from biomass and CO<sub>2</sub> captured, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

SUMMARY 2 SUMMARY REPORT FOR CO<sub>2</sub> EQUIVALENT EMISSIONS  
(Sheet 1 of 1)

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	Unspecified mix of HFCs and PFCs	NF <sub>3</sub>	Total
SINK CATEGORIES	CO <sub>2</sub> equivalent (kt)								
<b>Total (net emissions)<sup>(1)</sup></b>									
<b>1. Energy</b>									
A. Fuel combustion (sectoral approach)									
1. Energy industries									
2. Manufacturing industries and construction									
3. Transport									
4. Other sectors									
5. Other									
B. Fugitive emissions from fuels									
1. Solid fuels									
2. Oil and natural gas									
C. CO <sub>2</sub> transport and storage									
<b>2. Industrial processes and product use</b>									
A. Mineral industry									
B. Chemical industry									
C. Metal industry									
D. Non-energy products from fuels and solvent use									
E. Electronic Industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use									
H. Other									
<b>3. Agriculture</b>									
A. Enteric fermentation									
B. Manure management									
C. Rice cultivation									
D. Agricultural soils <sup>(3)</sup>									
E. Prescribed burning of savannas									
F. Field burning of agricultural residues									
G. Liming									
H. Urea application									
I. Other									
<b>4. Land use, land-use change and forestry<sup>(1)</sup></b>									
A. Forest land									
B. Cropland									
C. Grassland									
D. Wetlands									
E. Settlements									
F. Other land									
G. Harvested wood products									
H. Other									
<b>5. Waste</b>									
A. Solid waste disposal									
B. Biological treatment of solid waste									
C. Incineration and open burning of waste									
D. Waste water treatment and discharge									
E. Other									
<b>6. Other (as specified in summary 1.A)</b>									
<b>Memo items:<sup>(2)</sup></b>									
<b>International bunkers</b>									
Aviation									
Navigation									
<b>Multilateral operations</b>									
<b>CO<sub>2</sub> emissions from biomass</b>									
<b>CO<sub>2</sub> captured</b>									
<b>Long-term storage of C in waste disposal sites</b>									
<b>Indirect N<sub>2</sub>O</b>									
<b>Indirect CO<sub>2</sub></b>									
<b>Total direct CO<sub>2</sub> equivalent emissions without land use, land-use change and forestry</b>									
<b>Total direct CO<sub>2</sub> equivalent emissions with land use, land-use change and forestry</b>									
<b>Total direct and indirect CO<sub>2</sub> equivalent emissions without land use, land-use change and forestry</b>									
<b>Total direct and indirect CO<sub>2</sub> equivalent emissions with land use, land-use change and forestry</b>									

<sup>(1)</sup> For carbon dioxide (CO<sub>2</sub>) from land use, land-use change and forestry the net emissions/removals are to be reported. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(2)</sup> See footnote 7 to table Summary 1.A.

**SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED**

(Sheet 1 of 2)

Year

Submission

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>		Unspecified mix of HFCs and PFCs		NF <sub>3</sub>	
	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
<b>1. Energy</b>																
A. Fuel combustion																
1. Energy industries																
2. Manufacturing industries and construction																
3. Transport																
4. Other sectors																
5. Other																
B. Fugitive emissions from fuels																
1. Solid fuels																
2. Oil and natural gas																
C. CO <sub>2</sub> transport and storage																
<b>2. Industrial processes</b>																
A. Mineral industry																
B. Chemical industry																
C. Metal industry																
D. Non-energy products from fuels and solvent use																
E. Electronic industry																
F. Product uses as ODS substitutes																
G. Other product manufacture and use																
H. Other																

Use the following notation keys to specify the method applied:

- D** (IPCC default)
- RA** (Reference Approach)
- T1** (IPCC Tier 1)
- T1a, T1b, T1c** (IPCC Tier 1a, Tier 1b and Tier 1c, respectively)
- T2** (IPCC Tier 2)
- T3** (IPCC Tier 3)
- CR** (CORINAIR)
- CS** (Country Specific)
- OTH** (Other)
- M** (model)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different methods per source category where more than one method is indicated, should be provided in the documentation box. Also use the documentation box to explain the use of notation OTH.

Use the following notation keys to specify the emission factor used:

- D** (IPCC default)
- CR** (CORINAIR)
- CS** (Country Specific)
- PS** (Plant Specific)
- OTH** (Other)
- M** (model)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

**SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED**

(Sheet 2 of 2)

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>		Unspecified mix of HFCs and PFCs		NF <sub>3</sub>	
	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
<b>3. Agriculture</b>																
A. Enteric fermentation																
B. Manure management																
C. Rice cultivation																
D. Agricultural soils <sup>(3)</sup>																
E. Prescribed burning of savannas																
F. Field burning of agricultural residues																
G. Liming																
H. Urea application																
I. Other																
<b>4. Land use, land-use change and forestry</b>																
A. Forest land																
B. Cropland																
C. Grassland																
D. Wetlands																
E. Settlements																
F. Other land																
G. Harvested wood products																
H. Other																
<b>5. Waste</b>																
A. Solid waste disposal																
B. Biological treatment of solid waste																
C. Incineration and open burning of waste																
D. Waste water treatment and discharge																
E. Other																
<b>6. Other (as specified in summary 1.A)</b>																

Use the following notation keys to specify the method applied:

- D (IPCC default)
- RA (Reference Approach)
- T1 (IPCC Tier 1)
- T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively)
- T2 (IPCC Tier 2)
- T3 (IPCC Tier 3)
- CR (CORINAIR)
- CS (Country Specific)
- OTH (Other)
- M (model)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different methods per source category where more than one method is indicated, should be provided in the documentation box. Also use the documentation box to explain the use of notation OTH.

Use the following notation keys to specify the emission factor used:

- D (IPCC default)
- CR (CORINAIR)
- CS (Country Specific)
- PS (Plant Specific)
- OTH (Other)
- M (model)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

**Documentation box:**

- Parties should provide the full information on methodological issues, such as methods and emission factors used, in the relevant sections of chapters 3 to 8 (see section 2.2 of each of Chapters 3 - 8) of the national inventory report (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 this table.
- Where a mix of methods/emission factors has been used within one source category, use this documentation box to specify those methods/emission factors for the various sub-sources where they have been applied.
- Where the notation OTH (Other) has been entered in this table, use this documentation box to specify those other methods/emission factors.

**TABLE 6 CROSS-SECTORAL REPORT: Indirect emissions of N<sub>2</sub>O and CO<sub>2</sub>**  
 (Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	SOURCE EMISSIONS					INDIRECT EMISSIONS	
	CH <sub>4</sub>	CO	NM VOC	NO <sub>x</sub>	NH <sub>3</sub>	CO <sub>2</sub>	N <sub>2</sub> O
	(kt)					(kt)	
<b>Total</b>							
<b>1. Energy</b>							
<b>2. Industrial processes and product use</b>							
<b>3. Agriculture</b>							
<b>4. LULUCF</b>							
<b>5. Waste</b>							
<b>6. Other (please specify)</b>							

**TABLE 7 SUMMARY OVERVIEW FOR KEY CATEGORIES**  
**(Sheet 1 of 1)**

Year  
 Submission  
 Country

KEY CATEGORIES OF EMISSIONS AND REMOVALS	Gas	Criteria used for key source identification		Key category excluding LULUCF	Key category including LULUCF
		L	T		
<i>For example: 3.B Manure management</i>	<i>CH<sub>4</sub></i>	<i>X</i>		<i>X</i>	

**Note:** L = Level assessment; T = Trend assessment.

Note: The key categories included are the ones identified by the secretariat.



TABLE 8 RECALCULATION - RECALCULATED DATA  
(Sheet 1 of 4)

Recalculated year:

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>						CH <sub>4</sub>						N <sub>2</sub> O					
	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>
	CO <sub>2</sub> equivalent (kt)			(%)			CO <sub>2</sub> equivalent (kt)			(%)			CO <sub>2</sub> equivalent (kt)			(%)		
<b>Total national emissions and removals</b>																		
<b>1. Energy</b>																		
A. Fuel combustion activities																		
1. Energy Industries																		
2. Manufacturing industries and construction																		
3. Transport																		
4. Other sectors																		
5. Other																		
B. Fugitive emissions from fuels																		
1. Solid fuels																		
2. Oil and natural gas																		
C. CO <sub>2</sub> Transport and storage																		
<b>2. Industrial processes and product use</b>																		
A. Mineral industry																		
B. Chemical industry																		
C. Metal industry																		
D. Non-energy products from fuels and solvent use																		
G. Other product manufacture and use																		
H. Other																		

Note: All footnotes for this table are given at the end of the table on sheet 4.

TABLE 8 RECALCULATION - RECALCULATED DATA  
(Sheet 2 of 4)

Recalculated year:

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>						CH <sub>4</sub>						N <sub>2</sub> O					
	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>
	CO <sub>2</sub> equivalent (kt)			(%)			CO <sub>2</sub> equivalent (kt)			(%)			CO <sub>2</sub> equivalent (kt)			(%)		
Total national emissions and removals																		
<b>3. Agriculture</b>																		
A. Enteric fermentation																		
B. Manure management																		
C. Rice cultivation																		
D. Agricultural soils <sup>(1)</sup>																		
E. Prescribed burning of savannas																		
F. Field burning of agricultural residues																		
G. Liming																		
H. Urea application																		
I. Other																		
<b>5. Land use, land-use change and forestry (net)<sup>(4)</sup></b>																		
A. Forest land																		
B. Cropland																		
C. Grassland																		
D. Wetlands																		
E. Settlements																		
F. Other land																		
G. Harvested wood products																		
H. Other																		

Note: All footnotes for this table are given at the end of the table on sheet 4.

TABLE 8 RECALCULATION - RECALCULATED DATA  
(Sheet 3 of 4)

Recalculated year: Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>					CH <sub>4</sub>					N <sub>2</sub> O							
	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions excluding LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions including LULUCF <sup>(3)</sup>
	CO <sub>2</sub> equivalent (kt)		%			CO <sub>2</sub> equivalent (kt)		%			CO <sub>2</sub> equivalent (kt)		%					
<b>5. Waste</b>																		
A. Solid waste disposal																		
B. Biological treatment of solid waste																		
C. Incineration and open burning of waste																		
D. Waste water treatment and discharge																		
E. Other																		
<b>6. Other (as specified in summary 1.A)</b>																		
<b>Memo items:</b>																		
<b>International bunkers</b>																		
Aviation																		
Navigation																		
<b>Multilateral operations</b>																		
CO <sub>2</sub> emissions from biomass																		
CO <sub>2</sub> captured																		
Long-term storage of C in waste disposal sites																		
Indirect N <sub>2</sub> O																		
<b>Indirect CO<sub>2</sub></b>																		

Note: All footnotes for this table are given at the end of the table on sheet 4.

TABLE 8 RECALCULATION - RECALCULATED DATA  
(Sheet 4 of 4) Recalculated year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs				PFCs				SF <sub>6</sub>				Unspecified mix of HFCs and PFCs				NF <sub>3</sub>			
	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>
	CO <sub>2</sub> equivalent (kt)				CO <sub>2</sub> equivalent (kt)				CO <sub>2</sub> equivalent (kt)				CO <sub>2</sub> equivalent (kt)				CO <sub>2</sub> equivalent (kt)			
			(%)				(%)				(%)				(%)				(%)	
<b>Total Actual Emissions</b>																				
2.B.9 Fluorochemical production																				
2.B.10 Other																				
2.C.3 Aluminum production																				
2.C.4 Magnesium production																				
2.C.7 Other																				
2.E.1. Integrated circuit or semiconductor																				
2.E2. TFT flat panel display																				
2.E3. Photovoltaics																				
2.E4. Heat transfer fluid																				
2.E.5. Other (as specified in table 201)																				
2.F.1. Refrigeration and air conditioning																				
2.F.2. Foam blowing agents																				
2.F.3. Fire protection																				
2.F.4. Aerosols																				
2.F.5. Solvents																				
2.F.6. Other applications																				
2.G.1. Electrical equipment																				
2.G.2. SF <sub>6</sub> and PFCs from other product use																				
2.G.4. Other																				
2H. Other (please specify)																				

	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>
	CO <sub>2</sub> equivalent (kt)			
	(%)			
Total CO <sub>2</sub> equivalent emissions with land use, land-use change and forestry				
Total CO <sub>2</sub> equivalent emissions without land use, land-use change and forestry				

<sup>(1)</sup> Estimate the percentage change due to recalculation with respect to the previous submission (percentage change = 100 x [(LS-PS)/PS], where LS = latest submission and PS = previous submission. All cases of recalculation of the estimate of the source/sink category should be addressed and explained in the NIR.

<sup>(2)</sup> Total emissions refer to total aggregate GHG emissions expressed in terms of CO<sub>2</sub> equivalent, excluding GHGs from the LULUCF sector. The impact of the recalculation on the total emissions is calculated as follows: impact of recalculation (%) = 100 x [(source (LS) - source (PS))/total emissions (LS)], where LS = latest submission, PS = previous submission.

<sup>(3)</sup> Total emissions refer to total aggregate GHG emissions expressed in terms of CO<sub>2</sub> equivalent, including GHGs from the LULUCF sector. The impact of the recalculation on the total emissions is calculated as follows: impact of recalculation (%) = 100 x [(source (LS) - source (PS))/total emissions (LS)], where LS = latest submission, PS = previous submission.

<sup>(4)</sup> Net CO<sub>2</sub> emissions/removals to be reported.

**Documentation box:**

Parties should provide detailed information on recalculations in Chapter 10: Recalculations and Improvements, and in the relevant sections of Chapters 3 to 8 (see section 2.5 of each of Chapters 3 - 8) of the national inventory report (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 this table.  
References should point particularly to the sections of the NIR in which justifications of the changes as to improvements in accuracy, completeness and consistency of the inventory are reported.

**TABLE 9 COMPLETENESS - INFORMATION ON NOTATION KEYS**  
(Sheet 1 of 1)

Year  
Submission  
Country

Sources and sinks not estimated ("NE") <sup>(1)</sup>				
GHG	Sector <sup>(2)</sup>	Source/sink category <sup>(2)</sup>	Explanation	
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				
Unspecified mix of HFCs and PFCs				
NF <sub>3</sub>				
Sources and sinks reported elsewhere ("IE") <sup>(3)</sup>				
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				
Unspecified mix of HFCs and PFCs				
NF <sub>3</sub>				

<sup>(1)</sup> Clearly indicate sources and sinks which are considered in the 2006 IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for not reporting these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the notation key "NE" (not estimated) is entered in the sectoral tables.

<sup>(2)</sup> Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, category: Waste water treatment and discharge).

<sup>(3)</sup> Clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the 2006 IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector/category. An entry should be made for each source/sink for which the notation key "IE" (included elsewhere) is used in the sectoral tables.

**TABLE 10 EMISSION TRENDS**  
**GHG CO<sub>2</sub> eq emissions**  
**(Sheet 1 of 6)**

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
		(kt CO <sub>2</sub> eq)		%
<b>Total (net emissions)<sup>(1)</sup></b>				
<b>1. Energy</b>				
A. Fuel combustion (sectoral approach)				
1. Energy industries				
2. Manufacturing industries and construction				
3. Transport				
4. Other sectors				
5. Other				
B. Fugitive emissions from fuels				
1. Solid fuels				
2. Oil and natural gas				
3. Other emissions from energy production				
C. CO <sub>2</sub> transport and storage				
<b>2. Industrial pProcesses</b>				
A. Mineral industry				
B. Chemical industry				
C. Metal industry				
D. Non-energy products from fuels and solvent use				
E. Electronic industry				
F. Product uses as ODS substitutes				
G. Other product manufacture and use				
H. Other				
<b>3. Agriculture</b>				
A. Enteric fermentation				
B. Manure management				
C. Rice cultivation				
D. Agricultural soils				
E. Prescribed burning of savannas				
F. Field burning of agricultural residues				
G. Liming				
H. Urea application				
I. Other				
<b>4. Land use, land-use change and forestry<sup>(2)</sup></b>				
A. Forest land				
B. Cropland				
C. Grassland				
D. Wetlands				
E. Settlements				
F. Other land				
G. Harvested wood products				
H. Other				
<b>5. Waste</b>				
A. Solid waste disposal				
B. Biological treatment of solid waste				
C. Incineration and open burning of waste				
D. Waste water treatment and discharge				
E. Other				
<b>6. Other (as specified in summary I.A)</b>				
<b>Memo items:</b>				
<b>International bunkers</b>				
Aviation				
Marine				
<b>Multilateral operations</b>				
CO <sub>2</sub> emissions from biomass				
CO <sub>2</sub> captured				
Long-term storage of C in waste disposal sites				
Indirect N <sub>2</sub> O				
<b>Indirect CO<sub>2</sub></b>				
<b>Total direct CO<sub>2</sub> equivalent emissions without LULUCF</b>				
<b>Total direct CO<sub>2</sub> equivalent emissions with LULUCF</b>				
<b>Total direct and indirect CO<sub>2</sub> equivalent emissions without LULUCF</b>				
<b>Total direct and indirect CO<sub>2</sub> equivalent emissions with LULUCF</b>				

Note: All footnotes for this table are given at the end of the table on sheet 6.

**TABLE 10 EMISSION TRENDS**  
**CO<sub>2</sub>**  
**(Sheet 2 of 6)**

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
	(kt)			%
<b>1. Energy</b>				
A. Fuel combustion (sectoral approach)				
1. Energy industries				
2. Manufacturing industries and construction				
3. Transport				
4. Other sectors				
5. Other				
B. Fugitive emissions from fuels				
1. Solid fuels				
2. Oil and natural gas				
3. Other Emissions from energy production				
C. CO <sub>2</sub> transport and storage				
<b>2. Industrial processes</b>				
A. Mineral industry				
B. Chemical industry				
C. Metal industry				
D. Non-energy products from fuels and solvent use				
E. Electronic industry				
F. Product uses as ODS substitutes				
G. Other product manufacture and use				
H. Other				
<b>3. Agriculture</b>				
A. Enteric fermentation				
B. Manure management				
C. Rice cultivation				
D. Agricultural soils				
E. Prescribed burning of savannas				
F. Field burning of agricultural residues				
G. Liming				
H. Urea application				
I. Other				
<b>4. Land use, land-use change and forestry</b>				
A. Forest land				
B. Cropland				
C. Grassland				
D. Wetlands				
E. Settlements				
F. Other land				
G. Harvested wood products				
H. Other				
<b>5. Waste</b>				
A. Solid waste disposal				
B. Biological treatment of solid waste				
C. Incineration and open burning of waste				
D. Waste water treatment and discharge				
E. Other				
<b>6. Other (as specified in summary 1.A)</b>				
<b>Total direct CO<sub>2</sub> emissions without net CO<sub>2</sub> from LULUCF</b>				
<b>Total direct CO<sub>2</sub> emissions with net CO<sub>2</sub> from LULUCF</b>				
<b>Total direct and indirect CO<sub>2</sub> emissions without net CO<sub>2</sub> from LULUCF</b>				
<b>Total direct and indirect CO<sub>2</sub> emissions with net CO<sub>2</sub> from LULUCF</b>				
<b>Memo items:</b>				
<b>International bunkers</b>				
Aviation				
Marine				
<b>Multilateral operations</b>				
<b>CO<sub>2</sub> emissions from biomass</b>				
<b>CO<sub>2</sub> captured</b>				
<b>Long-term storage of C in waste disposal sites</b>				
<b>Indirect N<sub>2</sub>O</b>				
<b>Indirect CO<sub>2</sub> emissions</b>				

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

CH<sub>4</sub>  
(Sheet 3 of 6)

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
			(kt)	%
<b>1. Energy</b>				
A. Fuel combustion (sectoral approach)				
1. Energy industries				
2. Manufacturing industries and construction				
3. Transport				
4. Other sectors				
5. Other				
B. Fugitive emissions from fuels				
1. Solid fuels				
2. Oil and natural gas				
3. Other emissions from energy production				
C. CO <sub>2</sub> transport and storage				
<b>2. Industrial processes</b>				
A. Mineral industry				
B. Chemical industry				
C. Metal industry				
D. Non-energy products from fuels and solvent use				
E. Electronic industry				
F. Product uses as ODS substitutes				
G. Other product manufacture and use				
H. Other				
<b>3. Agriculture</b>				
A. Enteric fermentation				
B. Manure management				
C. Rice cultivation				
D. Agricultural soils				
E. Prescribed burning of savannas				
F. Field burning of agricultural residues				
G. Liming				
H. Urea application				
I. Other				
<b>4. Land use, land-use change and forestry</b>				
A. Forest land				
B. Cropland				
C. Grassland				
D. Wetlands				
E. Settlements				
F. Other land				
G. Harvested wood products				
H. Other				
<b>5. Waste</b>				
A. Solid waste disposal				
B. Biological treatment of solid waste				
C. Incineration and open burning of waste				
D. Waste water treatment and discharge				
E. Other				
<b>6. Other (as specified in summary 1.A)</b>				
<b>Total CH<sub>4</sub> emissions without CH<sub>4</sub> from LULUCF</b>				
<b>Total CH<sub>4</sub> emissions with CH<sub>4</sub> from LULUCF</b>				
<b>Memo items:</b>				
<b>International bunkers</b>				
Aviation				
Marine				
<b>Multilateral operations</b>				
<b>CO<sub>2</sub> emissions from biomass</b>				
<b>CO<sub>2</sub> captured</b>				
<b>Long-term storage of C in waste disposal sites</b>				
<b>Indirect N<sub>2</sub>O</b>				
<b>Indirect CO<sub>2</sub> emissions</b>				

Note: All footnotes for this table are given at the end of the table on sheet 6.



**TABLE 10 EMISSION TRENDS**  
**N<sub>2</sub>O**  
**(Sheet 4 of 6)**

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
			(kt)	%
<b>1. Energy</b>				
A. Fuel combustion (sectoral approach)				
1. Energy industries				
2. Manufacturing industries and construction				
3. Transport				
4. Other sectors				
5. Other				
B. Fugitive emissions from fuels				
1. Solid fuels				
2. Oil and natural gas				
3. Other emissions from energy production				
C. CO <sub>2</sub> transport and storage				
<b>2. Industrial processes</b>				
A. Mineral industry				
B. Chemical industry				
C. Metal industry				
D. Non-energy products from fuels and solvent use				
E. Electronic industry				
F. Product uses as ODS substitutes				
G. Other product manufacture and use				
H. Other				
<b>3. Agriculture</b>				
A. Enteric fermentation				
B. Manure management				
C. Rice cultivation				
D. Agricultural soils				
E. Prescribed burning of savannas				
F. Field burning of agricultural residues				
G. Liming				
H. Urea application				
I. Other				
<b>4. Land use, land-use change and forestry</b>				
A. Forest land				
B. Cropland				
C. Grassland				
D. Wetlands				
E. Settlements				
F. Other land				
G. Harvested wood products				
H. Other				
<b>5. Waste</b>				
A. Solid waste disposal				
B. Biological treatment of solid waste				
C. Incineration and open burning of waste				
D. Waste water treatment and discharge				
E. Other				
<b>6. Other (as specified in summary 1.A)</b>				
<b>Total direct N<sub>2</sub>O emissions without N<sub>2</sub>O from LULUCF</b>				
<b>Total direct N<sub>2</sub>O emissions with N<sub>2</sub>O from LULUCF</b>				
<b>Memo items:</b>				
<b>International bunkers</b>				
Aviation				
Marine				
<b>Multilateral operations</b>				
<b>CO<sub>2</sub> emissions from biomass</b>				
<b>CO<sub>2</sub> captured</b>				
<b>Long-term storage of C in waste disposal sites</b>				
<b>Indirect N<sub>2</sub>O</b>				
<b>Indirect CO<sub>2</sub> emissions</b>				

Note: All footnotes for this table are given at the end of the table on sheet 6.

**TABLE 10 EMISSION TRENDS**  
**HFCs, PFCs, SF<sub>6</sub>, and NF<sub>3</sub>**  
**(Sheet 5 of 6)**

Year  
Submission  
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
	(kt)			%
<b>Emissions of HFCs and PFCs - (kt CO<sub>2</sub> equivalent)</b>				
<b>Emissions of HFCs - (kt CO<sub>2</sub> equivalent)</b>				
HFC-23				
HFC-32				
HFC-41				
HFC-43-10mee				
HFC-125				
HFC-134				
HFC-134a				
HFC-143				
HFC-143a				
HFC-152				
HFC-152a				
HFC-161				
HFC-227ea				
HFC-236cb				
HFC-236ea				
HFC-236fa				
HFC-245ca				
HFC-245fa				
HFC-365mfc				
Unspecified mix of listed HFCs <sup>(3)</sup> - (kt CO <sub>2</sub> equivalent)				
<b>Emissions of PFCs - (kt CO<sub>2</sub> equivalent)</b>				
CF <sub>4</sub>				
C <sub>2</sub> F <sub>6</sub>				
C <sub>3</sub> F <sub>8</sub>				
C <sub>4</sub> F <sub>10</sub>				
c-C <sub>4</sub> F <sub>8</sub>				
C <sub>5</sub> F <sub>12</sub>				
C <sub>6</sub> F <sub>14</sub>				
C <sub>10</sub> F <sub>18</sub>				
SF <sub>6</sub> CF <sub>3</sub>				
c-C <sub>3</sub> F <sub>6</sub>				
Unspecified mix of listed PFCs <sup>(3)</sup> - (kt CO <sub>2</sub> equivalent)				
<b>Unspecified mix of listed HFCs and PFCs - (kt CO<sub>2</sub> equivalent)</b>				
<b>Emissions of SF<sub>6</sub> - (kt CO<sub>2</sub> equivalent)</b>				
SF <sub>6</sub>				
<b>Emissions of NF<sub>3</sub> - (kt CO<sub>2</sub> equivalent)</b>				
NF <sub>3</sub>				

Note: All footnotes for this table are given at the end of the table on sheet 6.

**TABLE 10 EMISSION TRENDS  
SUMMARY  
(Sheet 6 of 6)**

Year  
Submission  
Country

GREENHOUSE GAS EMISSIONS	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
	CO <sub>2</sub> equivalent (kt)			(%)
CO <sub>2</sub> emissions without net CO <sub>2</sub> from LULUCF				
CO <sub>2</sub> emissions with net CO <sub>2</sub> from LULUCF				
CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF				
CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF				
N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF				
N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF				
HFCs				
PFCs				
Unspecified mix of HFCs and PFCs				
SF <sub>6</sub>				
NF <sub>3</sub>				
<b>Total (without LULUCF)</b>				
<b>Total (with LULUCF)</b>				
<b>Total (without LULUCF, with indirect)</b>				
<b>Total (with LULUCF, with indirect)</b>				

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	(Years 1991 to latest reported year)	Change from base to latest reported year
	CO <sub>2</sub> equivalent (kt)			(%)
1. Energy				
2. Industrial processes and product use				
3. Agriculture				
4. Land use, land-use change and forestry <sup>(4)</sup>				
5. Waste				
6. Other				
<b>Total (including LULUCF)<sup>(4)</sup></b>				

<sup>(1)</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

<sup>(2)</sup> Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(3)</sup> In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is kt of CQ equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

<sup>(4)</sup> Includes net CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from LULUCF.

**Documentation box:**

- Parties should provide detailed explanations on emissions trends in chapter 2: Trends in Greenhouse Gas Emissions and, as appropriate, in the corresponding Chapters 3 - 8 of the national inventory report (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 this table.
- Use the documentation box to provide explanations if potential emissions are reported.