UNITED NATIONS
NATIONS UNIES

FRAMEWORK CONVENTION ON CLIMATE CHANGE - Secretariat
CONVENTION – CADRE SUR LES CHANGEMENTS CLIMATIQUES - Secrétariat

FCCC/WEB/SAI/2009 3 July 2009

SYNTHESIS AND ASSESSMENT REPORT ON THE GREENHOUSE GAS INVENTORIES SUBMITTED IN 2009

Note by the secretariat

CONTENTS

I. MANDATE

1. The Conference of the Parties (COP), by its decision 19/CP.8, adopted the revised guidelines for the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention[1] (Annex I Parties) to be applied from the year 2003.

2. The COP, by its decision 14/CP.11, updated the UNFCCC reporting guidelines on annual inventories[2], including the revisions to the tables of the common reporting format (CRF) for reporting on the LULUCF sector and decided that Annex I Parties shall use these tables for the purpose of submission of the annual inventory due in and after 2007. For the inventory submissions due in 2009, Parties used the updated UNFCCC reporting guidelines adopted by decision 14/CP.11.

3. As part of the inventory review process, the COP, by its decision 19/CP.8, requested the secretariat to conduct an annual synthesis and assessment of GHG inventories for all Annex I Parties. The purposes of the synthesis and assessment are to facilitate the consideration of inventory data and other information across Parties, and to identify issues for further consideration during the reviews of individual inventories. The synthesis and assessment is to be prepared in two parts. Part I is to provide information to allow comparisons across Annex I Parties, as well as descriptions of common methodological issues. Part II is to provide a preliminary analysis of individual Annex I Party inventories, in particular to identify outstanding issues requiring clarification during the individual review stage of the process.

4. As part of the annual inventory review process under the guidelines for review under Article 8 of the Kyoto Protocol[3], the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by its decision 22/CMP.1, requested the secretariat to conduct a standardized set of data comparisons to be performed on the CRF submissions to be used in the review process. Part I of this synthesis and assessment report provides information of such data comparisons across Annex I Parties.

5. In accordance with decision 19/CP.8, Part I of this synthesis and assessment report has been sent to Parties for comment prior to publication on the UNFCCC web site. Part II will be sent to the respective Party for comments and, together with the comments from the respective Party, will be provided to the corresponding expert review team as input for the individual review; Part II will not be published on the UNFCCC web site.

II. COMPARISON OF GHG INVENTORY INFORMATION

A. Approach

6. This document contains Part I of the synthesis and assessment report, covering the 2009 submissions of the national GHG inventories of Annex I Parties, in accordance with the UNFCCC reporting guidelines adopted by decision 14/CP.11, including the 2009 inventory information voluntary reported under Article 7, paragraph 1, of the Kyoto Protocol, in accordance with decision 15/CMP.1.

7. This document covers only the inventory information submitted in the CRF in the 2009 submission. It does not cover information contained in the national inventory reports, or information contained in inventory submissions from previous years. Information in this document is not intended as a judgment of whether inventory problems exist, but as an indication of potential issues that need to be considered further during the third stage of the review process (individual review) by the expert review teams.

8. In the 2009 submission, all 41 Annex I Parties submitted their national GHG inventory. Two Parties, Denmark and France, provided more than one set of CRF tables, because different geographical areas are used for reporting under the Convention and for reporting under the Kyoto Protocol . In this

[1] The full text of the guidelines is contained in document FCCC/CP/2002/8.
[2] The full text of the guidelines is contained in document FCCC/SBSTA/2006/9.
[3] The full text of the guidelines is contained in document FCCC/KP/CMP/2005/8/Add.3.

report, the inventory information for Denmark corresponds to the Kingdom of Denmark (Denmark, Greenland and Faroe Islands) and for France covers metropolitan France, the French Overseas Departments, the French Overseas Collectivities and New Caledonia.

9. This synthesis and assessment report contains greenhouse gas inventory information from all 41 Parties, compiled in tabular format. The tables provide comparisons of implied emission factors and activity data as reported in the CRF, data from international sources, emissions, information on methods used and emission factors as reported by Parties in Summary table 3 of the CRF, and other information relating to GHG inventory estimates. Where possible, this information is provided for all 41 Parties for both the base year or period and for the year 2007. For some categories, however, trend comparisons across all Parties were not possible due to the lack of data or use of notation keys for some or all of the years in the time series.

10. The inventory data were analyzed according to the sectors, subsectors and categories specified in the CRF, which correspond to those of the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the Revised 1996 IPCC Guidelines) and the *IPCC Good Practice Guidance for Land Use, Land-use Change and Forestry* (hereinafter referred to as the IPCC good practice guidance for LULUCF).

11. To facilitate the analysis of the inventory data, the secretariat considers, for each individual Party, those categories that are *key* in terms of their absolute level of emissions and impact on the trend, applying the tier 1 level and trend assessment as described in chapter 5.4 "Methodological choice – Identification of key categories" of the IPCC good practice guidance for LULUCF and chapter 7 "Methodological choice and recalculations" of the *IPCC Good Practice Guidance and Uncertainty Management*. This identification has been performed at the level of detail recommended in that guidance and includes the LULUCF sector.

B. Explanatory notes to the tables

12. Blank cells in a main table indicate that a Party did not report information for a given category and gas in the appropriate table of the CRF. Where a Party's value is very small compared to that of other Parties, it has been rounded to zero (0.0 or 0.00) for this report. Where a Party reports a zero numerical value in the corresponding CRF tables, a zero value (0) is shown in this report. In some cases, when a Party's value is exceptionally small compared to that of other Parties and the numerical format used for these values is not including decimal places, the Party's value has been rounded to zero (0).

13. Blank cells in a trend table indicate that a Party did not provide information for two consecutive years. Very small positive or negative inter-annual changes are shown as zero (0.0) for this report. When no change of numerical values between two consecutive years (or between base year and the latest reported year) is occurring, the inter-annual change between these years is shown as zero value (0). When there has been a change from notation key to a numerical value or vice versa between two consecutive years or two consecutive years both contain notation keys, the symbol "*" is shown in this report.

14. The differences in activity data between the CRF and international data sources were calculated as percentage deviations from the activity data provided in the CRF. A positive number indicates that the data from the international data source are higher than the data reported in the CRF. Similarly, a negative number indicates that data from the international data source are lower than the data reported in the CRF.

15. References to the base year refer to 1990, except for the following Parties with economies in transition which, in accordance with decisions 9/CP.2 and 11/CP.4, use base years other than 1990: Bulgaria (1988), Hungary (average 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

16. Key categories identified by the secretariat's analysis are indicated by "L" for level and "T" for trend assessments in the "key category" columns.

17. The column "Share of national total" in main tables indicates the contribution of that category to the Party's national total of GHG emissions in terms of CO_2 equivalent, excluding emissions and removals from LULUCF.

18. In tables, where shares or contributions of categories, gases, activity data or other parameters to a total are shown (e.g., contribution of specific fuel type to the total emissions of a combustion category), blank cells indicate that a Party did not report information for a given category, gas, activity data or parameter in the appropriate table of the CRF. Where the value of share or contribution is very small, it has been rounded to zero (0.0) for this report. Where a Party reports a zero numerical value for a given category, gas, activity data or parameter in the corresponding CRF tables, its share or contribution is shown as a zero value (0). Where a Party reports a notation key for a given category, gas, activity data or parameter in the corresponding CRF tables, its share or contribution to the total is shown using the symbol "-". Where a Party reports notation keys for two parameters (e.g. implied emission factors) in the corresponding CRF tables, their ratio is shown using the symbol "-".

19. Where Parties used notation keys (NO, NE, NA, IE, C) these have been reproduced verbatim from the CRF tables provided by Parties. The notation keys, as described in the UNFCCC reporting guidelines (FCCC/SBSTA/2006/9), are as follows:

NO	Not occurring	IE	Included elsewhere
NE	Not estimated	C	Confidential
NA	Not applicable		

20. Tables on energy indicate whether implied emission factors (IEFs) given in the CRF are based on gross calorific value (GCV) or net calorific value (NCV). The difference between the NCV and the GCV for each fuel is the latent heat of vaporization of the water produced during combustion of the fuel. For coal and oil, NCV is 5 per cent less than GCV, and for most forms of natural and manufactured gas the difference is 9 to 10 per cent. Australia, Canada, Japan, New Zealand and the United States reported energy data on a GCV basis. The IEFs included in the energy section of this report for these Parties have been converted into NCV-based values (using 5 per cent of difference for liquid, solid, other fuels and biomass and 10 per cent for gaseous fuels) and are not reflecting the reported IEFs.

21. The following chemical formulae or abbreviations for greenhouse gases are used in the synthesis and assessment report:

C	carbon
CF_4	perfluoromethane
C_2F_6	perfluoroethane
C_3F_8	perfluoropropane
C_4F_{10}	perfluorobutane
c-C_4F_8	perfluorocyclobutane
C_5F_{12}	perfluoropentane
C_6F_{14}	perfluorohexane
CH_4	methane
CO_2	carbon dioxide
HFCs	hydrofluorocarbons
N_2O	nitrous oxide
PFCs	perfluorocarbons
SF_6	sulphur hexafluoride

22. To indicate the methods and emission factors used by Parties the following abbreviations have been used (see also footnotes to Summary table 3 of the CRF) in the synthesis and assessment report:

Methods:		Emission factors:	
D	IPCC default	D	IPCC default
RA	Reference approach	CR	CORINAIR
T1	IPCC tier 1	CS	Country specific
T1a, T1b, T1c	IPCC tier 1a, tier 1b, and tier 1c, respectively	PS	Plant specific
		M	Model
T2	IPCC tier 2	OTH	Other
T3	IPCC tier 3		
CR	CORINAIR		
CS	Country specific		
M	Model		
OTH	Other		

23. The following units have been used in the synthesis and assessment report:

kg	kilogram (10^3 grams)
Mg	megagram (10^6 grams) – same as tonne
Gg	gigagram (10^9 grams)
Gg CO_2 equ.	Gg of CO_2 equivalent
t	tonne (10^6 grams)
kt	kilotonne (10^9 grams)
Mt	megatonne (10^{12} grams)
TJ	terajoule (10^{12} joules)
PJ	petajoule (10^{15} joules)
km	kilometer
ha	hectare
kha	thousand hectares
Mha	million hectares
m^3	cubic meter
l	liter
Bbl (oil US)	barrel of oil (United States)
ft^3	cubic feet
Btu	British thermal unit

24. The following other abbreviations have been used in the synthesis and assessment report:

A	actual emissions
AD	activity data
CRF	common reporting format
dm	dry matter
EF	emission factor
FAO	Food and Agriculture Organization of the United Nations
$Frac_{BURN}$	fraction of crop residue burned
$Frac_{FUEL}$	fraction of livestock nitrogen excretion in excrements burned for fuel
$Frac_{GASF}$	fraction of synthetic fertilizer nitrogen applied to soils that volatises as NH_3 and NO_X
$Frac_{GASM}$	fraction of livestock nitrogen excretion that volatises as NH_3 and NO_X
$Frac_{GRAZ}$	fraction of livestock nitrogen excreted and deposited onto soil during grazing
$Frac_{LEACH}$	fraction of nitrogen input to soils that is lost through leaching and run-off
$Frac_{NCRBF}$	fraction of total above-ground biomass of N-fixing crop that is N
$Frac_{NCRO}$	fraction of residue dry biomass that is N

$Frac_R$	fraction of total above-ground crop biomass that is removed from the field as a crop product
GCV	gross calorific value
GHG	greenhouse gas
GWP	global warming potential
IEA	International Energy Agency
IEF	implied emission factor
L	level (key source applying the IPCC good practice guidance tier 1 level assessment)
LPG	liquefied petroleum gas
LTO	landing and take off cycle
N	nitrogen
NCV	net calorific value
NGL	natural gas liquids
NH_3	ammonia
NIR	national inventory report
NMVOC	non-methane volatile organic compounds
NO_X	nitrogen oxides
P	potential emissions
T	trend (key source applying the IPCC good practice guidance tier 1 trend assessment)
yr	year

C. List of tables in Part I

General

Energy

Energy (continued)

Table number	Table name
1.15	CO_2 emissions from energy industries: liquid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.16	CO_2 emissions from energy industries: solid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.17	CO_2 emissions from energy industries: gaseous fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.18	Contribution of fuels to CO_2 emissions from energy industries (%)
1.19	CO_2 emissions from manufacturing industries and construction: all fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.20	CO_2 emissions from manufacturing industries and construction: liquid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.21	CO_2 emissions from manufacturing industries and construction: solid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.22	CO_2 emissions from manufacturing industries and construction: gaseous fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.23	Contribution of fuels to CO_2 emissions from manufacturing industries and construction (%)
1.24	CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): all fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.25	CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): liquid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.26	CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): solid fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.27	CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): gaseous fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.28	Contribution of fuels to CO_2 emissions from other sectors (%)
1.29a	CO_2 emissions from transport: all fuels – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.29b	N_2O emissions from transport: all fuels – trend information
	N_2O emissions (Gg)
	Relative change (%)

Energy (continued)

Table number	Table name
1.30	Road transportation – CO_2, N_2O (2007)
1.31a	CO_2 emissions from road transportation – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.31b	N_2O emissions from road transportation – trend information
	N_2O emissions (Gg)
	Relative change (%)
1.31c	N_2O implied emission factors for road transportation: gasoline – trend information
	N_2O IEF (kg/TJ)
	Relative change (%)
1.31d	N_2O implied emission factors for road transportation: diesel oil – trend information
	N_2O IEF (kg/TJ)
	Relative change (%)
1.32	Civil aviation, navigation and international bunkers – CO_2 (2007)
1.33	Domestic and international aviation – activity data (2007)
1.34	Domestic and international navigation – activity data (2007)
1.35	CO_2 emissions from civil aviation – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.36	CO_2 emissions from aviation bunkers – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.37	CO_2 emissions from navigation – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.38	CO_2 emissions from marine bunkers – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.39	Fugitive emissions from fuels: coal mining and handling – CH_4 (2007)
1.40	Fugitive emissions from fuels: CH_4 emissions from coal mining and handling – trend information
	CH_4 emissions (Gg)
	Relative change (%)
1.41a	Fugitive emissions from fuels: oil and natural gas – CH_4, CO_2 (2007)
1.41b	Fugitive emissions from fuels: oil and natural gas – oil – CH_4, CO_2 (2007)
1.41c	Fugitive emissions from fuels: oil and natural gas – natural gas – CH_4, CO_2 (2007)
1.41d	Fugitive emissions from fuels: oil and natural gas – venting and flaring – CH_4, CO_2 (2007)
1.42a	Fugitive emissions from fuels: CO_2 emissions from oil and natural gas – trend information
	CO_2 emissions (Gg)
	Relative change (%)
1.42b	Fugitive emissions from fuels: CH_4 emissions from oil and natural gas – trend information
	CH_4 emissions (Gg)
	Relative change (%)

Industrial Processes

Table number	Table name
Figure 2.1	Contribution of subsectors to total GHG emissions in the Industrial Processes sector
2.1	Mineral products – CO_2 (2007)
2.2a	CO_2 emissions from cement production – trend information
	CO_2 emissions (Gg)
	Relative change (%)
2.2b	CO_2 implied emission factors for cement production – trend information
	CO_2 IEF (t/t)
	Relative change (%)
2.3	Chemical industry – CO_2 and N_2O (2007)
2.4a	CO_2 emissions from ammonia production – trend information
	CO_2 emissions (Gg)
	Relative change (%)
2.4b	CO_2 implied emission factors for ammonia production – trend information
	CO_2 IEF (t/t)
	Relative change (%)
2.5a	N_2O emissions from nitric acid production – trend information
	N_2O emissions (Gg)
	Relative change (%)
2.5b	N_2O implied emission factors for nitric acid production – trend information
	N_2O IEF (t/t)
	Relative change (%)
2.6a	N_2O emissions from adipic acid production – trend information
	N_2O emissions (Gg)
	Relative change (%)
2.6b	N_2O implied emission factors for adipic acid production – trend information
	N_2O IEF (t/t)
	Relative change (%)
2.7	Metal production – CO_2 (2007)
2.8a	CO_2 emissions from iron and steel production – trend information
	CO_2 emissions (Gg)
	Relative change (%)
2.8b	CO_2 implied emission factors for iron and steel production (steel) – trend information
	CO_2 IEF (t/t)
	Relative change (%)
2.9a	CO_2 emissions from aluminium production – trend information
	CO_2 emissions (Gg)
	Relative change (%)
2.9b	CO_2 implied emission factors for aluminium production – trend information
	CO_2 IEF (t/t)
	Relative change (%)
2.10	Metal production – PFCs and SF_6 (2007)
2.11	CF_4 emissions from aluminium production – trend information
	CF_4 emissions (t)
	Relative change (%)
2.12	Production of halocarbons and SF_6 – HFCs, PFCs and SF_6 (2007)
2.13	HFC-23 emissions from production of halocarbons and SF_6 – trend information
	HFC-23 emissions (t)
	Relative change (%)
2.14a–c	Consumption of halocarbons and SF_6 – HFCs (2007)
2.15a–b	Consumption of halocarbons and SF_6 – PFCs (2007)
2.16	Consumption of halocarbons and SF_6 – SF_6 (2007)

Solvent and other product use

Table number	Table name
3.1	Solvent and other product use – CO_2 and N_2O (2007)

Agriculture

Figure 4.1	Contribution of subsectors to total GHG emissions in the Agriculture sector
4.1	Enteric fermentation – CH_4 (2007)
4.2	CH_4 emissions from enteric fermentation – trend information
	CH_4 emissions (Gg)
	Relative change (%)
4.3a	CH_4 emissions from enteric fermentation: dairy cattle – trend information
	CH_4 emissions (Gg)
	Relative change (%)
4.3b	CH_4 implied emission factors for enteric fermentation: dairy cattle – trend information
	CH_4 IEF (kg/head/yr)
	Relative change (%)
4.4a	CH_4 emissions from enteric fermentation: non-dairy cattle – trend information
	CH_4 emissions (Gg)
	Relative change (%)
4.4b	CH_4 implied emission factors for enteric fermentation: non-dairy cattle – trend information
	CH_4 IEF (kg/head/yr)
	Relative change (%)
4.5	Manure management – CH_4 (2007)
4.6	Manure management – N_2O (2007)
4.7a	CH_4 emissions from manure management – trend information
	CH_4 emissions (Gg)
	Relative change (%)
4.7b	N_2O emissions from manure management – trend information
	N_2O emissions (Gg)
	Relative change (%)
4.8	Agricultural soils – N_2O (2007)
4.9	N_2O emissions from agricultural soils – trend information
	N_2O emissions (Gg)
	Relative change (%)
4.10	Agricultural soils: parameters (fractions) used to estimate N_2O emissions in the agricultural soils category (2007)

Land Use, Land-use Change and Forestry

Table number	Table name
Figure 5.1	Net CO_2 emissions/removals from the LULUCF sector
5.1	Net CO_2 emissions/removals from LULUCF – trend information CO_2 emissions/removals (Gg) Relative change (%)
5.2a	Methods and emission factors used (2007)
5.2b	Methods and emission factors used (2007)
5.3a	Forest land remaining forest land – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.3b	Forest land remaining forest land – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.4	Net CO_2 emissions/removals from forest land remaining forest land – trend information CO_2 emissions/removals (Gg) Relative change (%)
5.5	Area of forest land remaining forest land – trend information Area (kha) Relative change (%)
5.6a	Land converted to forest land – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.6b	Land converted to forest land – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.7	Net CO_2 emissions/removals from land converted to forest land – trend information CO_2 emissions/removals (Gg) Relative change (%)
5.8	Area of land converted to forest land – trend information Area (kha) Relative change (%)
5.9a	Cropland remaining cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.9b	Cropland remaining cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.10	Net CO_2 emissions/removals from cropland remaining cropland – trend information CO_2 emissions/removals (Gg) Relative change (%)
5.11	Area of cropland remaining cropland – trend information Area (kha) Relative change (%)
5.12a	Land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.12b	Land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.13	Net CO_2 emissions/removals from land converted to cropland – trend information CO_2 emissions/removals (Gg) Relative change (%)
5.14	Area of land converted to cropland – trend information Area (kha) Relative change (%)
5.15a	Forest land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)

Land Use, Land-use Change and Forestry (continued)

Table number	Table name
5.15b	Forest land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.16	Net CO_2 emissions/removals from forest land converted to cropland – trend information
	CO_2 emissions/removals (Gg)
	Relative change (%)
5.17	Area of forest land converted to cropland – trend information
	Area (kha)
	Relative change (%)
5.18a	Grassland remaining grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.18b	Grassland remaining grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.19	Net CO_2 emissions/removals from grassland remaining grassland – trend information
	CO_2 emissions/removals (Gg)
	Relative change (%)
5.20	Area of grassland remaining grassland – trend information
	Area (kha)
	Relative change (%)
5.21a	Land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.21b	Land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.22	Net CO_2 emissions/removals from land converted to grassland – trend information
	CO_2 emissions/removals (Gg)
	Relative change (%)
5.23	Area of land converted to grassland – trend information
	Area (kha)
	Relative change (%)
5.24a	Forest land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.24b	Forest land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)
5.25	Net CO_2 emissions/removals from forest land converted to grassland – trend information
	CO_2 emissions/removals (Gg)
	Relative change (%)
5.26	Area of forest land converted to grassland – trend information
	Area (kha)
	Relative change (%)
5.27	Direct N_2O emissions from N-fertilization – AD, IEFs and N_2O emissions (base year and 2007)
5.28	Direct N_2O emissions from N-fertilization – trend information
	N_2O emissions (Gg)
	Relative change (%)
5.29	N_2O emissions from disturbance associated with land-use conversion to cropland – AD, IEFs and N_2O emissions (base year and 2007)
5.30	N_2O emissions from disturbance associated with land-use conversion to cropland – trend information
	N_2O emissions (Gg)
	Relative change (%)

Land Use, Land-use Change and Forestry (continued)

Table number	Table name`
5.31	CO_2 emissions from agricultural lime application in cropland and grassland (base year and 2007)
5.32	CO_2 emissions from agricultural lime application (all land-use categories) – trend information
	CO_2 emissions (Gg)
	Relative change (%)
5.33	Biomass burning – CO_2 emissions from forest land (base year and 2007)
5.34	CH_4 emissions from biomass burning in forest land – trend information
	CH_4 emissions (Gg)
	Relative change (%)
5.35	N_2O emissions from biomass burning in forest land – trend information
	N_2O emissions (Gg)
	Relative change (%)
5.36	CH_4 emissions from biomass burning in land converted to cropland – trend information
	CH_4 emissions (Gg)
	Relative change (%)
5.37	N_2O emissions from biomass burning in land converted to cropland – trend information
	N_2O emissions (Gg)
	Relative change (%)
5.38	CH_4 emissions from biomass burning in grassland – trend information
	CH_4 emissions (Gg)
	Relative change (%)
5.39	N_2O emissions from biomass burning in grassland – trend information
	N_2O emissions (Gg)
	Relative change (%)

Waste

Figure 6.1	Contribution of subsectors to total GHG emissions in the Waste sector
6.1	Solid waste disposal on land, waste-water handling and waste incineration (2007)
6.2	CH_4 emissions from solid waste disposal on land – trend information
	CH_4 emissions (Gg)
	Relative change (%)
6.3	Solid waste disposal on land: CH_4 emissions per capita – trend information
	CH_4 emissions per capita (kg/capita)
	Relative change (%)
6.4	CH_4 recovered from managed solid waste disposal sites – trend information
	CH_4 emissions (Gg)
	Relative change (%)
6.5	Waste generation rate – trend information
	Waste generation (kg/person/day)
	Relative change (%)
6.6a	CH_4 emissions from waste-water handling – trend information
	CH_4 emissions (Gg)
	Relative change (%)
6.6b	N_2O emissions from waste-water handling – trend information
	N_2O emissions (Gg)
	Relative change (%)
6.7	CO_2 emissions from waste incineration – trend information
	CO_2 emissions (Gg)
	Relative change (%)

Table G.1

Submmissions used in the Synthesis and Assessment report: Part I

Party	Initial submission date	CRF for years	NIR	CRF submission date and version used in the S&A report	CRF Reporter version (version used in S&A report)	Sources of data for the trend tables[a]
Australia	26 May 2009	1990-2007	√	26 May 2009 (v. 1.3)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Austria	15 April 2009	1990-2007	√	15 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Belarus	15 April 2009	1990-2007	√	15 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Belgium	15 April 2009	1990-2007	√	15 April 2009 (v. 1.5)	CRF Reporter v. 3.2.0	**1990-2007: S2009**
Bulgaria	13 April 2009	1988-2007	√	13 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1988-2007: S2009**
Canada	17 April 2009	1990-2007	√	17 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Croatia	26 May 2009	1990-2007	√	26 May 2009 (v. 1.1)	CRF Reporter v. 3.1.19	**1990-2007: S2009**
Czech Republic	14 April 2009	1990-2007	√	14 April 2009 (v. 1.1)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Denmark	15 April 2009	1990-2007	√	15 April 2009 (v. 1.1)	CRF Reporter v. 3.2.0	**1990-2007: S2009**
Estonia	15 April 2009	1990-2007	√	15 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
European Community	15 April 2009	1990-2007	√	27 May 2009 (v. 1.4)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Finland	08 April 2009	1990-2007	√	8 April 2009 (v. 1.6)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
France	06 April 2009	1990-2007	√	6 April 2009 (v. 1.2)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Germany	08 April 2009	1990-2007	√	8 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Greece	14 April 2009	1990-2007	√	14 April 2009 (v. 1.2)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Hungary	15 April 2009	1985-1987, 1985-2007	√	15 April 2009 (v. 1.3)	CRF Reporter v. 3.2.3	**1985-1987, 1985-2007: S2009**
Iceland	27 April 2009	1990-2007	√	8 May 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Ireland	09 April 2009	1990-2007	√	9 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Italy	15 April 2009	1990-2007	√	15 April 2009 (v. 1.3)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Japan	30 April 2009	1990-2007	√	30 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Latvia	15 April 2009	1990-2007	√	15 April 2009 (v. 1.3)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Liechtenstein	02 April 2009	1990-2007	√	2 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Lithuania	09 April 2009	1990-2007	√	9 April 2009 (v. 1.2)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Luxembourg	19 May 2009	1990-2007	√	19 May 2009 (v. 1.4)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Monaco	09 April 2009	1990-2007	√	9 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Netherlands (The)	15 April 2009	1990-2007	√	15 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
New Zealand	15 April 2009	1990-2007	√	15 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Norway	15 April 2009	1990-2007	√	15 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Poland	15 April 2009	1988-2007	√	27 May 2009 (v. 2.2)	CRF Reporter v. 3.2.3	**1988-2007: S2009**
Portugal	15 April 2009	1990-2007	√	15 April 2009 (v. 1.3)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Romania	13 April 2009	1989-2007	√	13 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1989-2007: S2009**
Russian Federation	15 April 2009	1990-2007	√	15 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Slovakia	14 April 2009	1990-2007	√	14 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Slovenia	15 April 2009	1986-2007	√	15 April 2009 (v. 1.2)	CRF Reporter v. 3.2.3	**1986-2007: S2009**
Spain	14 April 2009	1990-2007	√	14 April 2009 (v. 1.3)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Sweden	07 April 2009	1990-2007	√	7 April 2009 (v. 1.1)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Switzerland	15 April 2009	1990-2007	√	15 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
Turkey	13 April 2009	1990-2007		13 April 2009 (v. 1.1)	CRF Reporter v. 3.2.1	**1990-2007: S2009**
Ukraine	25 May 2009	1990-2007	√	25 May 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
United Kingdom	15 April 2009	1990-2007	√	27 May 2009 (v. 1.3)	CRF Reporter v. 3.2.3	**1990-2007: S2009**
United States of America	13 April 2009	1990-2007	√	13 April 2009 (v. 1.1)	CRF Reporter v. 3.2.3	**1990-2007: S2009**

[a] S200x - submission in year 200x.

Table G.2

Key categories[a]: base year[b]

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[c]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Energy																																								
1.Stationary Combustion - Liquid Fuels - CO_2	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
1.Stationary Combustion - Liquid Fuels - CH_4																																								
1.Stationary Combustion - Liquid Fuels - N_2O																			L																L					
1.Stationary Combustion - Solid Fuels - CO_2	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
1.Stationary Combustion - Solid Fuels - CH_4								L																					L							L				
1.Stationary Combustion - Solid Fuels - N_2O														L																					L					
1.Stationary Combustion - Gaseous Fuels - CO_2	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L		L	L	L	L	L	L	L		L	L	L	L		L	L	L	L	L	L	L	L	L	L
1.Stationary Combustion - Gaseous Fuels - CH_4																																								
1.Stationary Combustion - Gaseous Fuels - N_2O																																								
1.Stationary Combustion - Other Fuels - CO_2		L		L							L	L	L	L						L					L										L	L				
1.Stationary Combustion - Other Fuels - CH_4																																								
1.Stationary Combustion - Other Fuels - N_2O												L																												
1.Stationary Combustion - Biomass - CO_2																																								
1.Stationary Combustion - Biomass - CH_4													L																	L										
1.Stationary Combustion - Biomass - N_2O																																								
1.A.3.a Civil Aviation - CO_2	L					L							L														L	L				L			L	L				L
1.A.3.a Civil Aviation - CH_4																																								
1.A.3.a Civil Aviation - N_2O																																								
1.A.3.b Road Transportation - CO_2	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
1.A.3.b Road Transportation - CH_4																																								
1.A.3.b Road Transportation - N_2O						L																																		L
1.A.3.c Railways - CO_2						L										L					L																				L
1.A.3.c Railways - CH_4																																								
1.A.3.c Railways - N_2O																																								
1.A.3.d Navigation - CO_2	L					L			L	L	L	L			L		L		L	L								L						L	L			L	L	L
1.A.3.d Navigation - CH_4																																								
1.A.3.d Navigation - N_2O																																								
1.A.3.e Other Transportation - CO_2					L	L						L																L				L					L		L
1.A.3.e Other Transportation - CH_4																																								
1.A.3.e Other Transportation - N_2O																																								
1.A.5.b Mobile - CO_2								L						L								L						L							L	L			L	L
1.A.5.b Mobile - CH_4																																								
1.A.5.b Mobile - N_2O																																								
1.B.1.a Coal Mining and Handling - CO_2																																		L						
1.B.1.a Coal Mining and Handling - CH_4	L				L			L			L		L	L	L	L													L		L	L	L	L	L			L	L	L	L
1.B.1.a Coal Mining and Handling - N_2O																																								
1.B.1.b Solid Fuel Transformation - CO_2																																								
1.B.1.b Solid Fuel Transformation - CH_4																																								
1.B.1.b Solid Fuel Transformation - N_2O																																								
1.B.1.c Other - CO_2																																				L				
1.B.1.c Other - CH_4																																								
1.B.1.c Other - N_2O																																								
1.B.2 Oil and Natural Gas - CO_2	L					L	L				L		L				L		L								L	L				L			L				L	L
1.B.2 Oil and Natural Gas - CH_4	L	L			L	L	L			L	L			L		L			L							L		L		L	L	L	L				L		L	L	L
1.B.2 Oil and Natural Gas - N_2O																																								
Industrial processes																																								
2.A.1 Cement Production - CO_2	L	L		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L				L	L	L	L	L	L	L	L	L	L	L	L	L
2.A.1 Cement Production - CH_4																																								
2.A.1 Cement Production - NO2																																								
2.A.2 Lime Production - CO_2		L		L				L			L			L					L	L									L			L	L		L					
2.A.2 Lime Production - CH_4																																								
2.A.2 Lime Production - N_2O																																								
2.A.3 Limestone and Dolomite Use - CO_2																			L	L												L							L		
2.A.3 Limestone and Dolomite Use - CH_4																																								
2.A.3 Limestone and Dolomite Use - N_2O																																								

Table G.2 (continued)

Key categories[a]: base year[b]

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[c]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Industrial processes																																								
2.A.4 Soda Ash Production and Use - CO_2																																								
2.A.4 Soda Ash Production and Use - CH_4																																								
2.A.4 Soda Ash Production and Use - N_2O																																								
2.A.5 Asphalt Roofing - CO_2																																								
2.A.5 Asphalt Roofing - CH_4																																								
2.A.5 Asphalt Roofing - N_2O																																								
2.A.6 Road Paving with Asphalt - CO_2																																								
2.A.6 Road Paving with Asphalt - CH_4																																								
2.A.6 Road Paving with Asphalt - N_2O																																								
2.A.7 Other - CO_2		L																														L								
2.A.7 Other - CH_4																																								
2.A.7 Other - N_2O																																								
2.B.1 Ammonia Production - CO_2		L			L	L	L				L		L			L		L					L			L		L	L	L	L	L						L		
2.B.1 Ammonia Production - CH_4																																								
2.B.1 Ammonia Production - N_2O																																								
2.B.2 Nitric Acid Production - CO_2																																								
2.B.2 Nitric Acid Production - CH_4																																								
2.B.2 Nitric Acid Production - N_2O		L		L	L		L	L	L		L	L	L		L	L		L	L				L			L		L	L	L	L		L		L	L				
2.B.3 Adipic Acid Production - CO_2																																								
2.B.3 Adipic Acid Production - CH_4																																								
2.B.3 Adipic Acid Production - N_2O						L					L		L	L					L	L																			L		
2.B.4 Carbide Production - CO_2																												L												
2.B.4 Carbide Production - CH_4																																								
2.B.4 Carbide Production - N_2O																																								
2.B.5 Other - CO_2														L																										
2.B.5 Other - CH_4																																								
2.B.5 Other - N_2O													L				L																							
2.B.5 Other - HFCs																																								
2.B.5 Other - PFCs																																								
2.B.5 Other - SF_6																																								
2.C.1 Iron and Steel Production - CO_2	L	L		L	L	L		L			L	L	L	L					L					L		L	L		L		L	L	L		L	L			L		L
2.C.1 Iron and Steel Production - CH_4																																								
2.C.1 Iron and Steel Production - N_2O																																								
2.C.2 Ferroalloys Production - CO_2																	L											L												
2.C.2 Ferroalloys Production - CH_4																																								
2.C.2 Ferroalloys Production - N_2O																																								
2.C.3 Aluminium Production - CO_2																	L										L	L												
2.C.3 Aluminium Production - CH_4																																								
2.C.3 Aluminium Production - N_2O																																								
2.C.3 Aluminium Production - PFCs	L	L				L	L						L				L									L	L	L			L			L		L				
2.C.4.a SF_6 used in Aluminium Foundries - SF_6																																								
2.C.4.b SF_6 used in Magnesium Foundries - SF_6																												L												
2.C.5 Other - CO_2																																								
2.C.5 Other - CH_4																																								
2.C.5 Other - N_2O																																								
2.C.5 Other - HFCs																																								
2.C.5 Other - PFCs																																								
2.C.5 Other - SF_6						L																																		
2.D Other Production - CO_2																																								
2.D Other Production - CH_4																																								
2.D Other Production - N_2O																																								
2.E.1.a Production of HCFC-22 - HFC-23															L											L								L						L
2.E.1.b Other - F-Gases				L																																		L		
2.E.2 Fugitive Emissions - F-Gases													L																												
2.E.3 Other - F-Gases																																								
2.F(a).(1-6) ODS Substitutes - HFCs																																								
2.F(a).(1-6) ODS Substitutes - PFCs																																								
2.F(a).(1-6) ODS Substitutes - SF_6																																								

Table G.2 (continued)

Key categories[a]: base year[b]

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[c]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Industrial processes																																									
2.F(a).7 Semiconductors - HFCs																																									
2.F(a).7 Semiconductors - PFCs																																									
2.F(a).7 Semiconductors - SF_6																																									
2.F(a).8 Electrical Equipment - HFCs																																									
2.F(a).8 Electrical Equipment - PFCs																																									
2.F(a).8 Electrical Equipment - SF_6																																									
2.F(a).9 Other - HFCs																																									
2.F(a).9 Other - PFCs																																									
2.F(a).9 Other - SF_6																																									
2.F(p) Potential Emissions - HFCs																					L																				
2.F(p) Potential Emissions - PFCs																																									
2.F(p) Potential Emissions - SF_6																					L																				
2.G Other - CO_2						L																																			
2.G Other - CH_4																																									
2.G Other - N_2O																																									
2.G Other - HFCs																																									
2.G Other - PFCs																																									
2.G Other - SF_6																																									
Solvent and other product use																																									
3 Solvent and Other Product Use - CO_2																																					L				
3 Solvent and Other Product Use - CH_4																																									
3 Solvent and Other Product Use - N_2O																																									
Agriculture																																									
4.A Enteric Fermentation - CO_2																																									
4.A Enteric Fermentation - CH_4	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
4.A Enteric Fermentation - N_2O																																									
4.B Manure Management - CO_2																																									
4.B Manure Management - CH_4		L		L	L		L		L		L		L	L		L		L	L		L		L			L	L		L	L				L	L		L		L		
4.B Manure Management - N_2O		L		L		L	L		L		L	L	L			L	L		L		L		L					L	L	L	L	L	L	L	L		L		
4.C Rice Cultivation - CO_2																																									
4.C Rice Cultivation - CH_4																																									
4.C Rice Cultivation - N_2O																																									
4.D.1 Direct Soil Emissions - CO_2																																									
4.D.1 Direct Soil Emissions - CH_4																																									
4.D.1 Direct Soil Emissions - N_2O	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L	L	L		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
4.D.2 Pasture, Range and Paddock Manure - CO_2																																									
4.D.2 Pasture, Range and Paddock Manure - CH_4																																									
4.D.2 Pasture, Range and Paddock Manure - N_2O	L			L	L		L				L		L		L		L	L			L						L	L			L			L				L	L		
4.D.3 Indirect Emissions - CO_2																																									
4.D.3 Indirect Emissions - CH_4																																									
4.D.3 Indirect Emissions - N_2O	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L	L	L		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
4.D.4 Other - CO_2																																									
4.D.4 Other - CH_4																																									
4.D.4 Other - N_2O																																					L				L
4.E Prescribed Burning of Savannas - CO_2																																									
4.E Prescribed Burning of Savannas - CH_4	L																																								
4.E Prescribed Burning of Savannas - N_2O																																									
4.F Field Burning of Agricultural Residues - CO_2																																									
4.F Field Burning of Agricultural Residues - CH_4																																									
4.F Field Burning of Agricultural Residues - N_2O																																									
4.G Other - CO_2																																									
4.G Other - CH_4																																									
4.G Other - N_2O																																									

Table G.2 (continued)

Key categories[a]: base year[b]

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[c]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
LULUCF																																								
5.A.1 Forest Land remaining Forest Land - CO_2	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		L	L	L	L	L	L	L		L	L	L	L	L	L	L	L	L	L	L	L	L		L
5.A.1 Forest Land remaining Forest Land - CH_4						L																																		
5.A.1 Forest Land remaining Forest Land - N_2O																																								
5.A.2 Land converted to Forest Land - CO_2		L									L		L					L					L				L			L								L	
5.A.2 Land converted to Forest Land - CH_4																																								
5.A.2 Land converted to Forest Land - N_2O																																								
5.B.1 Cropland remaining Cropland - CO_2	L		L					L	L	L	L	L		L	L				L		L	L					L	L	L			L	L			L	L		L		
5.B.1 Cropland remaining Cropland - CH_4																																								
5.B.1 Cropland remaining Cropland - N_2O																																								
5.B.2 Land converted to Cropland - CO_2	L	L				L				L	L		L																	L								L	
5.B.2 Land converted to Cropland - CH_4																																								
5.B.2 Land converted to Cropland - N_2O												L																												
5.C.1 Grassland remaining grassland - CO_2	L			L							L	L		L				L								L		L	L				L						L
5.C.1 Grassland remaining grassland - CH_4																																								
5.C.1 Grassland remaining grassland - N_2O																																								
5.C.2 Land converted to Grassland - CO_2	L	L									L		L				L										L											L	
5.C.2 Land converted to Grassland - CH_4																																								
5.C.2 Land converted to Grassland - N_2O																																								
5.D.1 Wetlands remaining Wetlands - CO_2																																								
5.D.1 Wetlands remaining Wetlands - CH_4																																								
5.D.1 Wetlands remaining Wetlands - N_2O																																								
5.D.2 Land converted to Wetlands - CO_2						L						L																												
5.D.2 Land converted to Wetlands - CH_4																																								
5.D.2 Land converted to Wetlands - N_2O																																								
5.E Settlements - CO_2		L				L					L		L						L			L					L		L						L			L	L
5.E Settlements - CH_4																																								
5.E Settlements - N_2O																																								
5.F Other Land - CO_2		L																														L								
5.F Other Land - CH_4																																								
5.F Other Land - N_2O																																								
5.G Other - CO_2	L											L																												L
5.G Other - CH_4																																								
5.G Other - N_2O																	L																							
Waste																																								
6.A Solid Waste Disposal on Land - CO_2																																								
6.A Solid Waste Disposal on Land - CH_4	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L			L			L	L	L	L	L		L	L	L	L	L	L		L	L
6.A Solid Waste Disposal on Land - N_2O																																								
6.B Waste-Water Handling - CO_2																																								
6.B Waste-Water Handling - CH_4	L				L		L				L				L	L					L		L								L			L	L					
6.B Waste-Water Handling - N_2O											L																				L									
6.C Waste Incineration - CO_2																				L																				
6.C Waste Incineration - CH_4																																								
6.C Waste Incineration - N_2O																																								
6.D Other - CO_2																																								
6.D Other - CH_4																																								
6.D Other - N_2O																																								
Other																																								
7 Other - CO_2									L																															
7 Other - CH_4																																								
7 Other - N_2O																																								
7(a) Other - F-Gases																																								
7(p) Other - F-Gases																																								

[a] Source: UNFCCC secretariat key category analysis.

[b] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[c] Japan has not reported a complete time series of actual emissions for 2.F 'Consumption of halocarbons and SF$_6$' but has reported a complete time series of potential emissions. The potential emissions have been aggregated to total national emissions in the base year.

Table G.3

Key categories[a]: 2007

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[b]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Energy																																								
1.Stationary Combustion - Liquid Fuels - CO_2	L	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T
1.Stationary Combustion - Liquid Fuels - CH_4																																								
1.Stationary Combustion - Liquid Fuels - N_2O																																	T		L					
1.Stationary Combustion - Solid Fuels - CO_2	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T			L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T		L, T	L, T		L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T
1.Stationary Combustion - Solid Fuels - CH_4								T						T														T				T	T			T	T			
1.Stationary Combustion - Solid Fuels - N_2O																																			T					
1.Stationary Combustion - Gaseous Fuels - CO_2	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T		L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T
1.Stationary Combustion - Gaseous Fuels - CH_4									T																	L, T														
1.Stationary Combustion - Gaseous Fuels - N_2O																																								
1.Stationary Combustion - Other Fuels - CO_2		L, T		L, T					L, T		L, T	L, T	L, T	L, T			T		L, T	L, T				L	L, T	L, T			T		L			T	L, T	L, T			T
1.Stationary Combustion - Other Fuels - CH_4																																								
1.Stationary Combustion - Other Fuels - N_2O												T																												
1.Stationary Combustion - Biomass - CO_2																																								
1.Stationary Combustion - Biomass - CH_4	T							T		T			T								L, T		T						T		T				L, T					
1.Stationary Combustion - Biomass - N_2O																																				L, T				
1.A.3.a Civil Aviation - CO_2	L, T				T	L	T		T		L, T	T	L		L, T		T		L	L, T						L	L, T							L, T	L	T	L, T		T	L
1.A.3.a Civil Aviation - CH_4																																								
1.A.3.a Civil Aviation - N_2O																																								
1.A.3.b Road Transportation - CO_2	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T
1.A.3.b Road Transportation - CH_4																																				T	T			
1.A.3.b Road Transportation - N_2O				L, T		T	T	T			T	L, T				T	T											T	L, T			T	L, T	L, T					T
1.A.3.c Railways - CO_2						L, T						T									L		L					T											L
1.A.3.c Railways - CH_4																																								
1.A.3.c Railways - N_2O																																								
1.A.3.d Navigation - CO_2	T				T	L			L, T	T	L	L	L, T		L		L		L	L, T					T		L, T				T			L, T	L			L, T	L
1.A.3.d Navigation - CH_4																																								
1.A.3.d Navigation - N_2O																																								
1.A.3.e Other Transportation - CO_2		L, T	L, T		L, T	L, T		T		L, T		L															L, T				L, T					T		L, T		L, T
1.A.3.e Other Transportation - CH_4																																								
1.A.3.e Other Transportation - N_2O						T																																		
1.A.5.b Mobile - CO_2								L				T		T								L, T				T		T								T	L, T		L	T
1.A.5.b Mobile - CH_4																																								
1.A.5.b Mobile - N_2O																																								
1.B.1.a Coal Mining and Handling - CO_2																																								
1.B.1.a Coal Mining and Handling - CH_4	L, T				L	T		L, T			T		T	T	L	T				T						T		L, T		L, T	L		L, T	T				L, T	L, T	L, T
1.B.1.a Coal Mining and Handling - N_2O																																								
1.B.1.b Solid Fuel Transformation - CO_2																																								
1.B.1.b Solid Fuel Transformation - CH_4																																								
1.B.1.b Solid Fuel Transformation - N_2O																																								
1.B.1.c Other - CO_2																																	T		L, T					
1.B.1.c Other - CH_4	T																																							
1.B.1.c Other - N_2O																																								
1.B.2 Oil and Natural Gas - CO_2	L, T					L, T	L, T				L	T	L				L, T		T							L, T	L, T	L, T		L, T		L, T			L	L, T				L	T
1.B.2 Oil and Natural Gas - CH_4	L, T	L, T	L		L	L, T	L, T			L, T	L		T	L		L, T			L, T		L		L			T		L, T	L, T	L, T	L, T	L, T	L, T			T		L, T	L, T	L, T
1.B.2 Oil and Natural Gas - N_2O																																								
Industrial processes																																								
2.A.1 Cement Production - CO_2	L	L	L, T	L, T	L, T	L	L, T	L	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L	L, T	L	L, T	L		L, T	L, T			L, T	L, T	L, T	L, T	L, T	L	L, T	L	L, T	L, T	L, T	L, T	L, T	L	L, T
2.A.1 Cement Production - CH_4																																								
2.A.1 Cement Production - NO2																																								
2.A.2 Lime Production - CO_2		L, T		L	L, T		L, T	L			L			L					L	L	T							T	T	L, T		L, T	T		L, T			L, T		
2.A.2 Lime Production - CH_4																																								
2.A.2 Lime Production - N_2O																																								
2.A.3 Limestone and Dolomite Use - CO_2								L, T											L	L											L, T	L, T		L			L, T			
2.A.3 Limestone and Dolomite Use - CH_4																																								
2.A.3 Limestone and Dolomite Use - N_2O																																								

Table G.3 (continued)

Key categories[a]: 2007

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[b]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Industrial processes																																								
2.A.4 Soda Ash Production and Use - CO_2																																								
2.A.4 Soda Ash Production and Use - CH_4																																								
2.A.4 Soda Ash Production and Use - N_2O																																								
2.A.5 Asphalt Roofing - CO_2																																								
2.A.5 Asphalt Roofing - CH_4																																								
2.A.5 Asphalt Roofing - N_2O																																								
2.A.6 Road Paving with Asphalt - CO_2																																								
2.A.6 Road Paving with Asphalt - CH_4																																								
2.A.6 Road Paving with Asphalt - N_2O																																								
2.A.7 Other - CO_2		L, T														L																								
2.A.7 Other - CH_4																																								
2.A.7 Other - N_2O																																								
2.B.1 Ammonia Production - CO_2		L		L, T	L, T	L	L						T	T	T	L, T		T	T				L, T			L		L, T	L, T	L, T	L, T	L, T	L					T	L, T		T
2.B.1 Ammonia Production - CH_4																																								
2.B.1 Ammonia Production - N_2O																																								
2.B.2 Nitric Acid Production - CO_2																																								
2.B.2 Nitric Acid Production - CH_4																																								
2.B.2 Nitric Acid Production - N_2O		T		L, T	L		L, T	L	T		L, T	L, T	L, T	L, T	T	L, T		T	T				L, T			L, T		L, T	L, T	L	L, T		L, T		T	T	T			T	
2.B.3 Adipic Acid Production - CO_2																																								
2.B.3 Adipic Acid Production - CH_4																																								
2.B.3 Adipic Acid Production - N_2O						T					T		T	L, T					T	T										T									T	T
2.B.4 Carbide Production - CO_2																												T												
2.B.4 Carbide Production - CH_4																																								
2.B.4 Carbide Production - N_2O																																								
2.B.5 Other - CO_2				L, T							T	L, T		L, T																											
2.B.5 Other - CH_4																																								
2.B.5 Other - N_2O													T				T									T												T		
2.B.5 Other - HFCs																																								
2.B.5 Other - PFCs																																								
2.B.5 Other - SF_6																																								
2.C.1 Iron and Steel Production - CO_2	L, T	L, T		L, T	L	L, T		L, T			L, T	L, T	L	L, T					T					L, T		L, T	L	L	L, T		L	L, T	L, T		L, T	L, T		T	L, T		L, T
2.C.1 Iron and Steel Production - CH_4																																								
2.C.1 Iron and Steel Production - N_2O																																								
2.C.2 Ferroalloys Production - CO_2							T									L, T												L, T												
2.C.2 Ferroalloys Production - CH_4																																								
2.C.2 Ferroalloys Production - N_2O																																								
2.C.3 Aluminium Production - CO_2	L	T				L, T	T									L, T												L, T					L, T		T				
2.C.3 Aluminium Production - CH_4																																								
2.C.3 Aluminium Production - N_2O																																								
2.C.3 Aluminium Production - PFCs	T	T				T	T				T		T	T	T		L, T		T							T	T	L, T			T	L, T	T	T	T	T	T				T
2.C.4.a SF_6 used in Aluminium Foundries - SF_6														T																										
2.C.4.b SF_6 used in Magnesium Foundries - SF_6		T																										T							T				
2.C.5 Other - CO_2																																						L, T		
2.C.5 Other - CH_4																																								
2.C.5 Other - N_2O																																								
2.C.5 Other - HFCs																																								
2.C.5 Other - PFCs																																								
2.C.5 Other - SF_6						T																																		
2.D Other Production - CO_2																																								
2.D Other Production - CH_4																																								
2.D Other Production - N_2O																																								
2.E.1.a Production of HCFC-22 - HFC-23	T					T					T		T		T											T								T					T
2.E.1.b Other - F-Gases				T							T																											T	
2.E.2 Fugitive Emissions - F-Gases													T							T																				
2.E.3 Other - F-Gases														T																										
2.F(a).(1-6) ODS Substitutes - HFCs	L, T	L, T		L, T		L, T		L, T	L, T	L, T	L, T	L, T	L, T	L, T	T	L, T	L, T	T	L, T	L, T	T	L, T			L, T	L, T	L, T	L, T	T	L, T			T	L, T	L, T	L, T	L, T	T		L, T	L, T
2.F(a).(1-6) ODS Substitutes - PFCs																				T																	T			
2.F(a).(1-6) ODS Substitutes - SF_6																																								

Table G.3 (continued)

Key categories[a]: 2007

Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[b]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
Industrial processes																																								
2.F(a).7 Semiconductors - HFCs																																								
2.F(a).7 Semiconductors - PFCs		T																		T																				
2.F(a).7 Semiconductors - SF_6																																								
2.F(a).8 Electrical Equipment - HFCs																																								
2.F(a).8 Electrical Equipment - PFCs																																								
2.F(a).8 Electrical Equipment - SF_6																																								T
2.F(a).9 Other - HFCs																																								T
2.F(a).9 Other - PFCs																																								
2.F(a).9 Other - SF_6																																								
2.F(p) Potential Emissions - HFCs					T		L, T																																	
2.F(p) Potential Emissions - PFCs																																								
2.F(p) Potential Emissions - SF_6																																								
2.G Other - CO_2	L, T					L, T																							T											
2.G Other - CH_4																																								
2.G Other - N_2O																																								
2.G Other - HFCs																																								
2.G Other - PFCs																																								
2.G Other - SF_6																																								
Solvent and other product use																																								
3 Solvent and Other Product Use - CO_2							T																													T				
3 Solvent and Other Product Use - CH_4																																								
3 Solvent and Other Product Use - N_2O																																								
Agriculture																																								
4.A Enteric Fermentation - CO_2																																								
4.A Enteric Fermentation - CH_4	L, T	L, T	L	L	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T		L, T	L	L, T	L		L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L	L, T
4.A Enteric Fermentation - N_2O																																								
4.B Manure Management - CO_2																																								
4.B Manure Management - CH_4		L, T		L	T			T	L, T		L, T		L, T	L		L, T		L, T	L						L, T	L	L	L, T	L, T	L, T			L, T	L	L, T	L		T	L	L, T
4.B Manure Management - N_2O	T	L, T			T	L	L, T		L		L, T	L, T	L			L, T			L		L, T		L, T					L	L, T	L	L, T	L, T	L, T	L	L, T	L	T			
4.C Rice Cultivation - CO_2																																								
4.C Rice Cultivation - CH_4																				T																				
4.C Rice Cultivation - N_2O																																								
4.D.1 Direct Soil Emissions - CO_2																																								
4.D.1 Direct Soil Emissions - CH_4																																								
4.D.1 Direct Soil Emissions - N_2O	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T	L	L	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T		L	L	L, T	L		L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T	L
4.D.2 Pasture, Range and Paddock Manure - CO_2																																								
4.D.2 Pasture, Range and Paddock Manure - CH_4																																								
4.D.2 Pasture, Range and Paddock Manure - N_2O	L, T				T						L, T		L, T		L, T		L	L, T			L, T					T	L, T		T	L									L	
4.D.3 Indirect Emissions - CO_2																																								
4.D.3 Indirect Emissions - CH_4																																								
4.D.3 Indirect Emissions - N_2O	L, T	L, T	L	L	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T		L, T	L	L, T	L		L, T	L	L	L	L, T	L, T	T	L, T	L	L, T	L, T	L, T		L, T	L	L, T
4.D.4 Other - CO_2																																								
4.D.4 Other - CH_4																																								
4.D.4 Other - N_2O																																			L					L, T
4.E Prescribed Burning of Savannas - CO_2																																								
4.E Prescribed Burning of Savannas - CH_4	L, T																																								
4.E Prescribed Burning of Savannas - N_2O	L, T																																								
4.F Field Burning of Agricultural Residues - CO_2																																								
4.F Field Burning of Agricultural Residues - CH_4																																								
4.F Field Burning of Agricultural Residues - N_2O																																								
4.G Other - CO_2																																								
4.G Other - CH_4																																								
4.G Other - N_2O																																								

Table G.3 (continued)

Key categories[a]: 2007

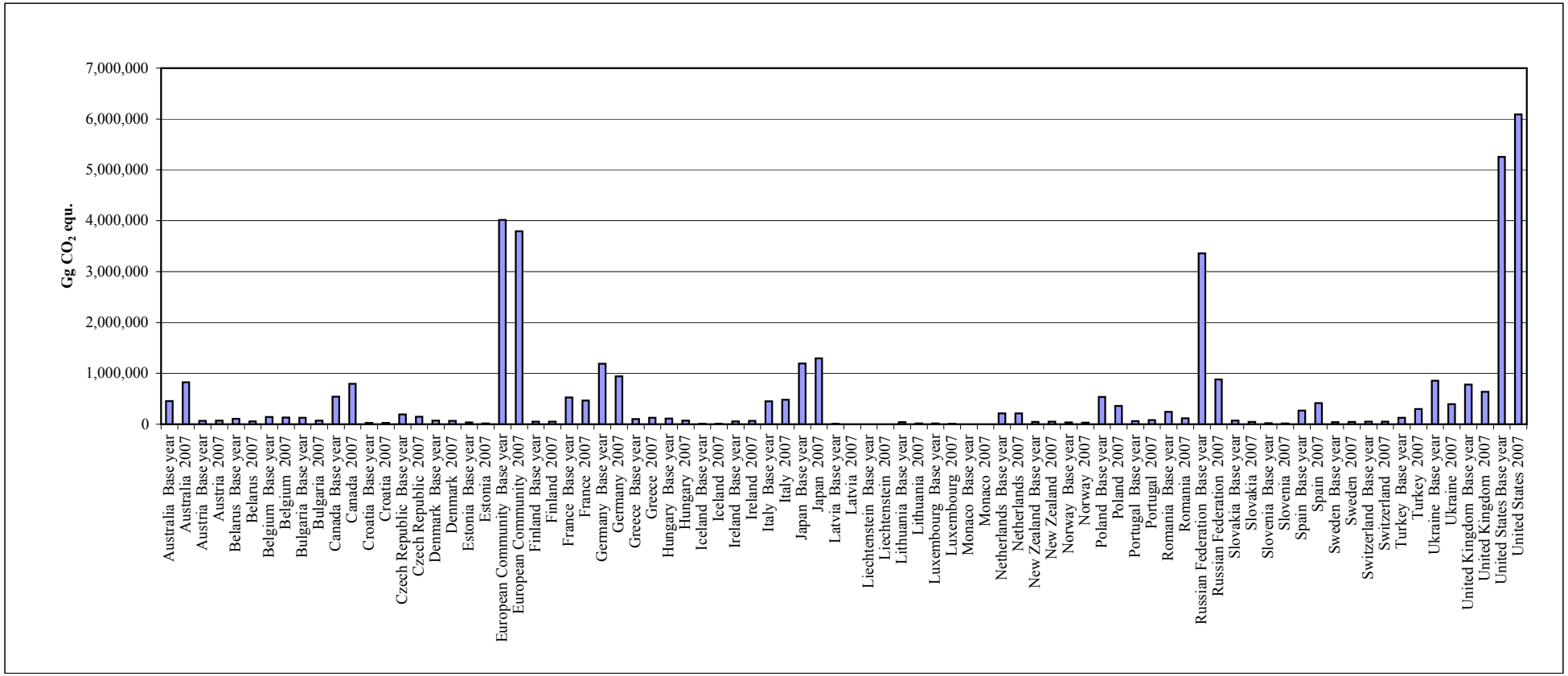
Source categories	Australia	Austria	Belarus	Belgium	Bulgaria	Canada	Croatia	Czech Republic	Denmark	Estonia	European Community	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan[b]	Latvia	Liechtenstein	Lithuania	Luxembourg	Monaco	Netherlands	New Zealand	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	United States
LULUCF																																								
5.A.1 Forest Land remaining Forest Land - CO_2	T	L, T	L, T	L	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T		L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L, T	L, T	L, T	L, T		L, T
5.A.1 Forest Land remaining Forest Land - CH_4						L																																		L, T
5.A.1 Forest Land remaining Forest Land - N_2O																																								
5.A.2 Land converted to Forest Land - CO_2	L, T	L, T							T		L, T		L, T	L, T	T		T	T	T	T			L, T			T	L, T		L, T	L, T			L, T		L, T	L, T	T		L, T	L, T	
5.A.2 Land converted to Forest Land - CH_4																																								
5.A.2 Land converted to Forest Land - N_2O																																								
5.B.1 Cropland remaining Cropland - CO_2	L, T	T				L, T		T	L, T	L, T	L	L, T		L, T	L, T				L, T		T	L					L	T	L, T			L, T	T			L, T	L	L, T	L, T		T
5.B.1 Cropland remaining Cropland - CH_4																																								
5.B.1 Cropland remaining Cropland - N_2O																																								
5.B.2 Land converted to Cropland - CO_2	L, T	L				L, T				T	L		L, T	L, T						T						T												L, T		
5.B.2 Land converted to Cropland - CH_4																																								
5.B.2 Land converted to Cropland - N_2O													T																												
5.C.1 Grassland remaining grassland - CO_2	L, T			L							L, T	L, T		L, T				L				L				L	T	L, T	T				T			T		L, T			T
5.C.1 Grassland remaining grassland - CH_4																																								
5.C.1 Grassland remaining grassland - N_2O																																								
5.C.2 Land converted to Grassland - CO_2	L, T	L, T								L, T	L		L, T	T			L, T		L, T			T					T						L, T						L, T		
5.C.2 Land converted to Grassland - CH_4																																								
5.C.2 Land converted to Grassland - N_2O																																								
5.D.1 Wetlands remaining Wetlands - CO_2					L, T																								T											
5.D.1 Wetlands remaining Wetlands - CH_4																																								
5.D.1 Wetlands remaining Wetlands - N_2O																																								
5.D.2 Land converted to Wetlands - CO_2						T						L, T																												
5.D.2 Land converted to Wetlands - CH_4																													T											
5.D.2 Land converted to Wetlands - N_2O																																								
5.E Settlements - CO_2		L, T				L, T					L		L	L, T					L	T	L	L					T	T	L, T					L, T			L		L, T
5.E Settlements - CH_4																																								
5.E Settlements - N_2O																																								
5.F Other Land - CO_2		L, T								L, T																							L, T							
5.F Other Land - CH_4																																								
5.F Other Land - N_2O																																								
5.G Other - CO_2	T											L, T																												L, T
5.G Other - CH_4																																								
5.G Other - N_2O																	L, T																							
Waste																																								
6.A Solid Waste Disposal on Land - CO_2																																								
6.A Solid Waste Disposal on Land - CH_4	L, T	L, T	L, T	T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L	L, T	L, T	L	L, T	T	L, T		L, T			L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T	L, T
6.A Solid Waste Disposal on Land - N_2O																																								
6.B Waste-Water Handling - CO_2																																								
6.B Waste-Water Handling - CH_4	T				L, T		T		T		T			T	T	L			L		L		L							L, T	T	L, T	T	L	L, T	L				
6.B Waste-Water Handling - N_2O		T									T																		L											
6.C Waste Incineration - CO_2								T					T			T	T			L																				
6.C Waste Incineration - CH_4																																								
6.C Waste Incineration - N_2O																																								
6.D Other - CO_2																																								
6.D Other - CH_4										T																										T				
6.D Other - N_2O										T																														
Other																																								
7 Other - CO_2									L, T																															
7 Other - CH_4																																								
7 Other - N_2O																																								
7(a) Other - F-Gases																																								
7(p) Other - F-Gases																																								

[a] Source: UNFCCC secretariat key category analysis.

[b] Japan has not reported a complete time series of actual emissions for 2.F 'Consumption of halocarbons and SF_6', but has reported a complete time series of potential emissions. The potential emissions have been aggregated to total national emissions in the base year, while actual emissions have been aggregated to total national emissions in the latest year. Therefore only actual emissions are considered for the trend assessment.

Figure G.1

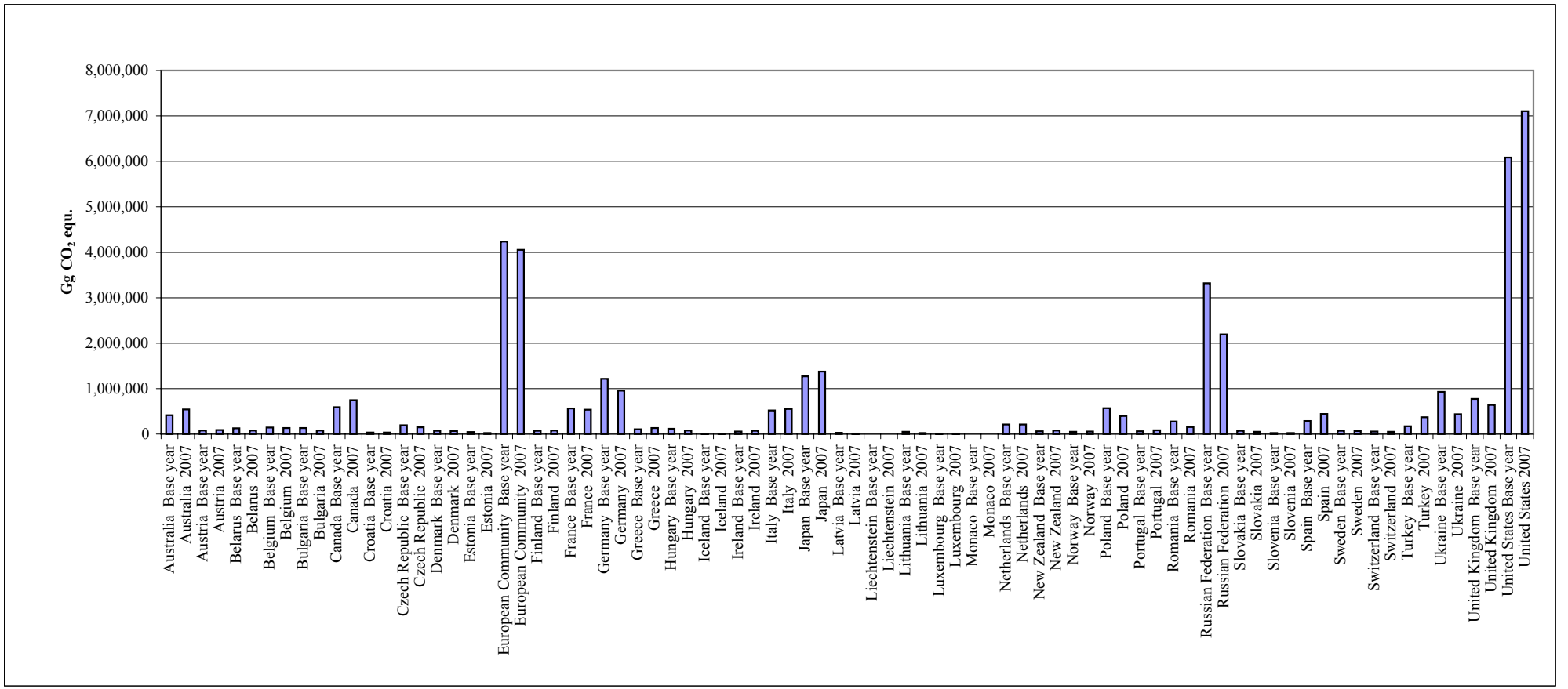
Total GHG emissions (including LULUCF): base year[a] and 2007



[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.2

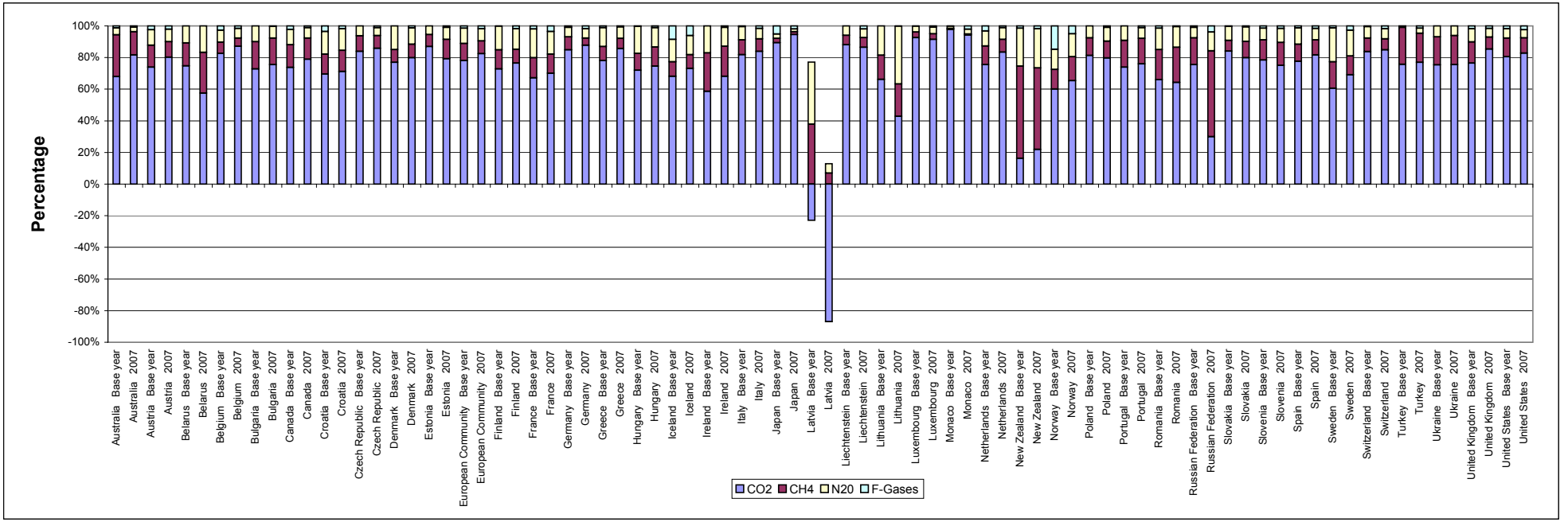
Total GHG emissions (excluding LULUCF): base year[a] and 2007



[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.3

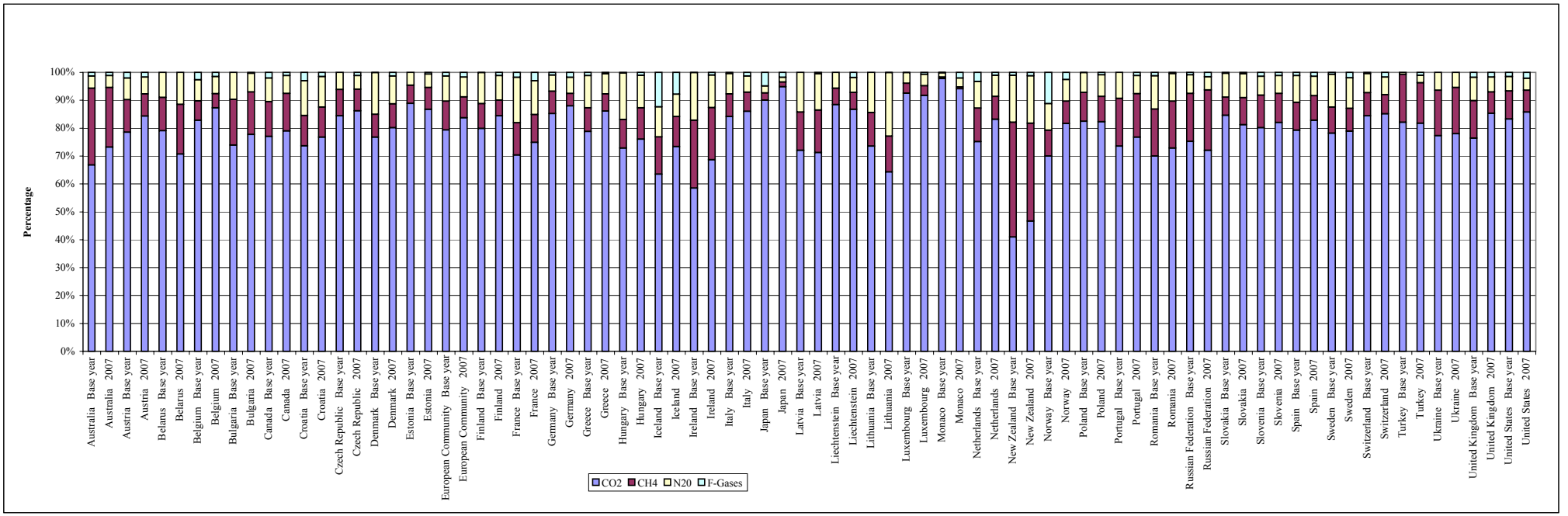
GHG emissions by gas (including LULUCF): base year[a] and 2007



[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.4

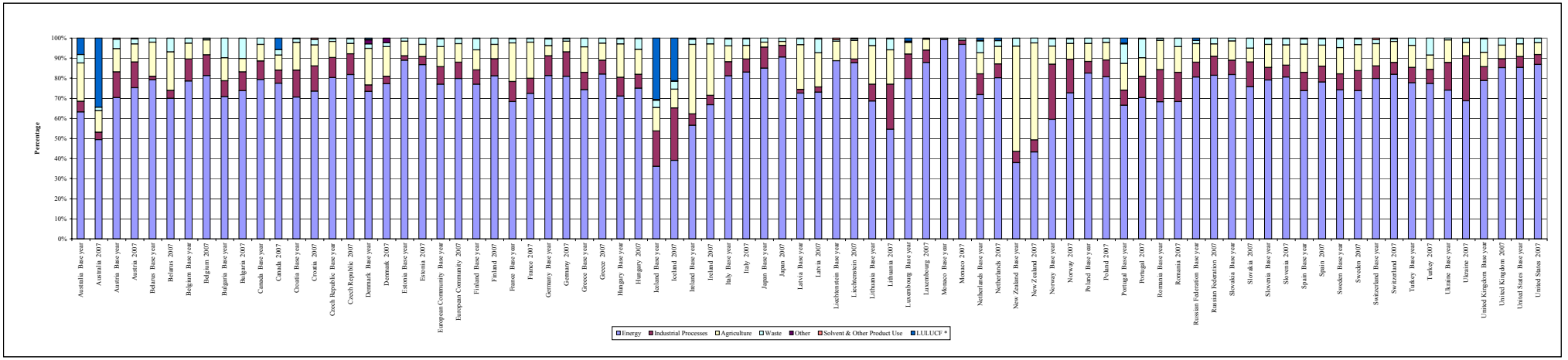
GHG emissions by gas (excluding LULUCF): base year[a] and 2007



[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.5

GHG emissions by sector: base year[a] and 2007 (%)



* In this graph emissions from the LULUCF sector are included only if this sector is a net source of emissions.

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table G.4

Reported recalculations by year for total GHG emissions excluding LULUCF (%)

	Base year[a]	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Australia	0.01	0.01	-0.03	0.00	-0.11	-0.15	-0.20	-0.29	-0.45	-0.21	-0.30	-0.06	-0.36	-0.49	-0.40	-0.41	-0.92	-0.30
Austria	-0.17	-0.17	-0.15	-0.16	-0.15	-0.17	-0.15	-0.14	-0.15	-0.14	-0.11	-0.07	-0.23	-0.15	-0.20	0.12	-0.46	0.47
Belarus	1.39	1.39	1.38	1.28	1.38	1.61	1.64	1.61	1.12	1.78	1.74	1.72	1.93	1.96	1.98	2.05	2.44	0.41
Belgium	-0.53	-0.53	-1.06	-0.49	-1.19	-0.59	-0.14	-0.17	-0.16	0.02	0.07	0.05	0.12	-0.02	-0.05	-0.04	0.00	0.05
Bulgaria	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.16	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.12
Canada	-0.08	-0.08	-0.07	-0.09	-0.08	-0.07	-0.11	-0.10	-0.10	-0.09	-0.12	-0.08	0.13	0.05	-0.06	-0.26	-0.48	-0.34
Croatia	0.09	0.09	0.17	0.18	0.18	0.20	0.20	0.20	0.19	0.24	0.20	0.19	0.18	0.17	0.16	0.16	0.64	0.65
Czech Republic	0.24	0.24	0.16	0.18	0.17	0.19	0.19	0.18	0.20	0.19	0.20	0.19	0.21	0.24	0.29	0.30	0.34	0.61
Denmark	0.10	0.10	0.08	0.10	0.05	0.06	0.06	0.04	0.07	-0.16	0.04	-0.25	-0.04	0.01	-0.03	-0.16	-0.13	0.81
Estonia	0.82	0.82	-0.38	-0.44	-0.29	0.26	0.29	0.54	0.67	0.17	0.36	0.73	1.60	0.95	0.90	1.51	1.68	1.61
European Community	-0.26	-0.26	-0.24	-0.19	-0.19	-0.13	-0.12	-0.13	-0.14	-0.12	-0.19	-0.24	-0.25	-0.29	-0.64	-0.85	-1.07	-0.85
Finland	-0.12	-0.12	-0.13	-0.13	-0.12	-0.11	-0.15	-0.17	-0.24	-0.27	-0.30	-0.33	-0.32	-0.29	-0.35	-0.38	-0.48	-0.44
France	-0.16	-0.16	-0.09	0.10	-0.02	0.04	0.09	-0.03	0.13	0.16	0.10	0.13	0.08	0.06	-0.09	-0.13	-0.34	-0.03
Germany	-1.02	-1.02	-0.92	-0.91	-0.70	-0.69	-0.92	-0.90	-0.91	-0.94	-1.05	-1.11	-1.08	-1.07	-2.23	-2.95	-3.59	-2.47
Greece	0.85	0.85	-0.02	-0.16	-0.45	-0.76	-0.32	-0.53	-0.63	-0.36	-0.71	-0.88	-1.06	-1.27	-1.66	-1.77	-1.50	-3.78
Hungary	0.52	0.99	1.24	1.27	0.96	0.59	0.65	0.61	0.53	0.62	0.68	0.55	0.45	1.06	0.81	0.58	0.23	0.31
Iceland	-0.09	-0.09	-0.04	-0.09	-0.08	-0.06	0.12	0.24	0.37	0.65	1.04	0.94	1.10	1.11	1.38	1.62	1.87	1.70
Ireland	-0.26	-0.26	-0.26	-0.26	-0.28	-0.27	-0.28	-0.26	-0.22	-0.16	-0.12	-0.11	-0.12	-0.11	-0.10	-0.14	-0.12	-0.11
Italy	-0.11	-0.11	-0.16	-0.17	-0.19	-0.24	-0.15	-0.15	-0.18	-0.24	-0.25	-0.50	-0.54	-0.62	-0.64	-0.73	-0.74	-0.87
Japan	-0.20	-0.20	-0.20	-0.20	-0.20	-0.19	-0.20	-0.26	-0.20	-0.17	-0.20	-0.17	-0.17	-0.13	-0.09	0.02	-0.02	0.15
Latvia	0.84	0.84	0.87	0.70	0.85	0.51	0.63	0.48	0.60	0.66	0.65	0.82	0.74	0.68	0.64	1.03	0.74	0.43
Liechtenstein	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.02	0.03	0.01	0.01	0.01	0.01	0.02	0.04	0.06	0.04	-0.02
Lithuania	-0.60	-0.60	-0.65	-1.39	-0.42	-0.42	-0.62	-0.37	-0.47	-0.47	0.62	-0.80	-0.46	-0.19	-0.63	-0.52	-0.52	-1.50
Luxembourg	-0.52	-0.52	0.88	0.12	-0.77	-1.12	0.53	0.28	0.49	-0.42	-2.62	-2.10	-1.87	0.29	0.94	-0.87	0.75	-0.13
Monaco	0.00	0.00	0.00	0.00	-0.03	-0.03	-0.04	-0.06	-0.09	-0.09	-0.09	-0.09	-0.09	-0.08	-0.06	-0.06	-0.10	-0.25
Netherlands	0.16	0.16	0.21	0.36	0.20	0.25	0.30	0.30	0.37	0.28	0.35	0.37	0.28	0.29	0.19	0.14	0.20	0.50
New Zealand	-0.15	-0.15	-0.64	-0.58	-0.05	-0.10	0.01	0.02	0.14	0.08	-0.24	-0.16	0.05	0.02	0.03	0.15	-0.23	-0.35
Norway	-0.01	-0.01	-0.05	-0.11	-0.11	-0.09	-0.12	-0.16	-0.22	-0.24	-0.25	-0.25	-0.22	-0.21	-0.20	-0.16	-0.18	-0.08
Poland	1.08	1.30	1.33	1.34	1.34	1.32	1.32	1.35	1.44	-0.01	-0.02	-0.12	-0.18	-0.29	-0.20	-0.06	0.07	-0.29
Portugal	0.27	0.27	0.12	0.11	0.13	0.09	0.11	0.08	0.13	0.13	0.27	0.24	0.86	1.00	1.21	1.69	2.31	2.37
Romania	-2.07	-1.88	-1.86	-1.73	-1.63	-1.59	-1.81	-1.65	-1.82	-1.93	-2.23	-2.30	-2.26	-2.23	-2.15	-2.12	-1.71	-1.81
Russian Federation	-0.21	-0.21	-0.26	-0.89	-0.71	-0.71	-0.50	-0.48	-0.49	-0.72	-0.66	-0.38	-0.37	-0.34	-0.34	-0.32	-0.26	-0.20
Slovakia	-0.57	-0.57	-0.47	-0.46	-0.33	-0.35	-0.37	-0.33	-0.45	-0.22	-0.36	-0.16	-0.22	-0.26	-0.03	-0.03	0.08	0.07
Slovenia	0.00	-0.04	-0.09	-0.09	-0.84	-0.05	0.15	-0.26	-0.27	-0.30	-0.22	-0.06	-0.27	0.10	-0.15	-0.21	-0.44	-0.10
Spain	0.16	0.16	0.09	0.12	0.14	0.13	0.12	0.21	0.14	0.25	0.26	0.20	0.17	0.11	0.03	0.00	0.06	-0.06
Sweden	-0.15	-0.15	-0.12	-0.17	-0.17	-0.19	-0.15	-0.15	-0.19	-0.21	-0.19	-0.18	-0.23	-0.51	-0.69	0.06	0.45	1.71
Switzerland	-0.17	-0.17	-0.17	-0.18	-0.17	-0.13	-0.11	-0.13	-0.25	-0.22	-0.20	-0.22	-0.23	-0.24	-0.26	-0.22	-0.23	-0.07
Turkey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Ukraine	0.44	0.44	0.24	0.11	0.13	-0.04	0.05	-0.45	-0.74	-1.19	-1.33	-1.34	-1.12	-1.11	-1.35	-1.49	-1.91	-1.45
United Kingdom	0.28	0.28	0.35	0.33	0.34	0.60	0.72	0.71	0.60	0.65	0.48	0.50	0.55	0.40	0.25	0.11	-0.39	-0.66
United States	-0.83	-0.83	-0.89	-0.63	-0.90	-0.67	-0.51	-0.92	-0.51	-0.50	-0.30	-0.39	-0.42	-0.60	-0.30	-0.20	-0.34	-0.16

Note: The values included in this table are those reported by Parties in CRF table 8(a). An empty cell can either depict that a Party did not recalculate its inventory for a given category-gas combination (i.e. 0% difference), or that it has reported for the first time, or ceased reporting emissions for a category-gas combination (i.e. 100% difference).

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table G.5a

Reported recalculations by gas: base year [a] and 2006 (%)

	Energy						Industrial Processes						Solvents			
	CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		N_2O	
	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006	Base year[a]	2006
Australia	0.00	-0.19	0.00	-0.47	0.00	0.07	0.00	3.81	0.00	0.00	0.00	0.00				
Austria	0.00	0.25	-0.35	5.74	-19.11	-2.84	0.00	1.16	0.00	0.00	0.00	0.00	-1.19	12.16	0.00	0.00
Belarus	0.14	-0.03	-0.01	0.62	-0.18	-3.18	0.17	-39.69	0.00	0.05	0.00	0.00			0.00	0.00
Belgium	-0.17	0.01	-0.03	1.26	-0.87	1.70	-0.06	-0.35	100.00	0.02	0.00	-0.06			0.06	-0.87
Bulgaria	0.00	0.15	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canada	-0.04	-0.46	0.00	0.15	-0.02	-0.10	0.04	0.72			0.00	0.00			0.00	0.00
Croatia	-0.11	0.00	0.00	0.01	0.00	0.00	0.34	0.30	0.00	0.00	0.00	0.00	19.97	7.77	100.00	100.00
Czech Republic	0.00	0.38	0.00	2.21	0.00	3.94	2.64	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Denmark	0.00	0.88	0.00	6.38	0.00	0.28	4.51	2.35			0.00		21.12	-9.75		1.59
Estonia	2.61	2.40	-31.13	-29.43	39.14	163.20	0.00	0.00								
European Community	0.04	-0.59	0.86	1.20	-3.28	-16.93	-0.14	-0.22	5.72	3.80	0.39	-0.54	59.21	45.43	0.00	-0.22
Finland	-0.07	-0.57	0.01	-0.24	0.00	-0.01	-1.77	-0.70	-43.51	-41.81	0.00	0.00	0.00	0.00	0.00	0.00
France	0.60	0.55	0.10	-0.34	-1.30	-1.45	-0.04	0.10	0.00	0.00	0.00	0.00	11.52	8.23	-0.02	-0.03
Germany	0.01	-1.92	1.49	-0.55	-3.82	-3.20	0.03	-0.09	0.00	0.28	-0.02	-0.05	100.00	100.00	0.00	0.00
Greece	1.12	-0.35	0.11	-4.05	-16.88	-19.64	-2.68	4.09	0.00	-100.00	55.56	-30.14	0.00	0.00		
Hungary	-1.59	-1.12	0.37	0.40	-4.39	0.03	0.00	0.00	0.00	0.00	0.00	-12.23	0.00	0.00	0.00	0.00
Iceland	-0.04	-0.03	-0.20	-3.49	0.57	2.94	0.17	0.34	0.45	0.83	0.00		0.00	0.00	0.00	0.00
Ireland	-0.48	-0.17	0.61	0.78	0.09	0.62	0.07	0.00			0.00		-2.12	1.64		
Italy	0.00	-0.31	1.41	-1.95	-11.63	-31.71	-0.29	-3.30	0.00	0.02	0.00	0.00	0.00	-0.12	0.00	0.00
Japan	0.84	1.32	1.34	4.52	5.92	7.50	-0.08	-0.04	0.00	0.00	0.00	0.00			0.00	-8.13
Latvia	0.35	0.34	0.02	-0.01	0.04	-15.20	0.00	0.00	0.00	-17.50			0.00	0.10		0.00
Liechtenstein	0.00	0.00	0.09	-0.30	1.23	-2.52							0.05	-0.80	1.51	5.57
Lithuania	0.00	-0.14	0.00	0.04	0.00	0.21	-1.76	5.25	0.00	0.00	0.00	-8.52	-0.03	1.35		
Luxembourg	-0.84	0.83	-8.83	-16.14	12.30	-53.19	0.00	5.92					61.74	30.01	0.00	0.00
Monaco	0.00	-0.29	0.00	-1.42	0.00	1.82										
Netherlands	0.00	0.20	2.71	35.01	0.00	-0.36	-0.56	-0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Zealand	-0.21	-0.37	1.18	7.15	-4.50	-1.31	0.12	-0.58	0.00	0.00					0.00	0.00
Norway	-0.05	0.16	0.00	0.09	0.00	4.97	0.35	0.08	0.00	0.00	0.00	0.02	7.73	10.43	0.00	0.00
Poland	0.00	-1.67	-2.59	-0.02	0.01	-0.89	1.69	22.43	69.79	5.87	0.00	0.59	0.00	0.00	0.00	0.00
Portugal	0.35	1.81	3.00	1.69	0.78	5.73	0.00	5.21	0.00	-0.76	0.00	0.00	0.00	0.06		
Romania	0.00	0.04	0.00	0.00	0.00	0.03	0.57	0.13	0.00	0.00	0.00	0.00	0.00	0.00		
Russian Federation	-0.01	0.20	0.01	0.18	-0.89	4.42	1.11	1.34	0.00	0.00	0.00	0.00			0.00	0.00
Slovakia	0.21	-0.01	-0.66	14.23	-5.50	4.70	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
Slovenia	-0.01	0.00	0.03	-0.01	0.09	0.18	0.00	-2.54	0.00	0.00					0.00	0.00
Spain	-0.02	-0.34	0.05	0.44	-2.70	0.04	-0.05	-0.32	17.13	2.22	0.00	0.00	0.00	0.33	0.00	0.00
Sweden	-0.09	1.49	-1.20	4.64	-2.67	-7.28	0.00	11.73	0.00	0.06	0.00	0.02	0.00	-2.34	0.00	-3.79
Switzerland	-0.13	0.06	-0.29	-0.89	-0.14	1.37	0.00	-0.14	-0.01	-1.61	0.00	-31.86	0.17	-4.95	0.00	0.01
Turkey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Ukraine	0.00	0.38	0.00	0.35	-1.17	-3.90	0.85	-7.06	0.00	0.13	0.00	0.00			0.00	0.00
United Kingdom	0.11	-0.44	0.44	2.20	5.17	-41.60	0.00	-4.82	18.59	42.26	0.00	0.00				
United States	-0.32	0.08	1.89	1.20	0.29	0.99	12.92	17.68	-16.31	-11.20	9.37	12.11			0.00	0.00

Note: The values included in this table are those reported by Parties in CRF table 8(a). An empty cell can either depict that a Party did not recalculate its inventory for a given category-gas combination (i.e. 0% difference), or that it has reported for the first time, or ceased reporting emissions for a category-gas combination (i.e. 100% difference).

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table G.5b

Reported recalculations by gas: base year [a] and 2006 (%)

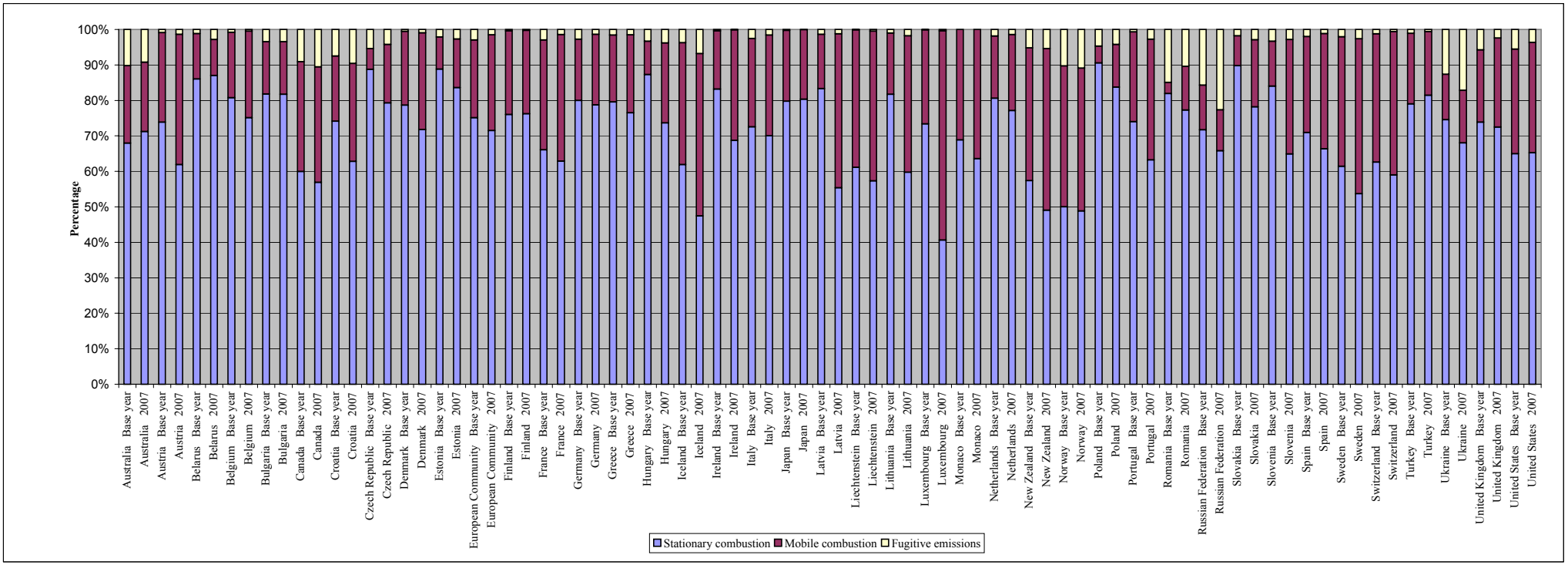
	Agriculture				LULUCF						Waste					
	CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		CH_4		N_2O	
	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006	Base year [a]	2006
Australia	0.00	0.04	0.00	3.23	-67.04	29.78	-2.47	9.34	-1.32	-0.20	0.00	0.53	0.25	-15.22	0.00	0.00
Austria	0.04	-0.22	0.00	0.00	-7.97	-5.36	3.95	9.70	0.00	0.00	0.00	0.00	0.00	5.21	0.11	0.42
Belarus	2.65	8.24	14.21	17.29	0.00	0.05	0.00	25.87	0.00	10.48			0.00	0.00	0.00	0.00
Belgium	1.80	1.98	0.00	-0.40	-0.63	0.00					0.00	0.00	0.00	-0.35	2.64	-6.14
Bulgaria	0.00	0.00	0.14	0.05	-80.19	-62.74							0.00	0.00	0.00	0.00
Canada	-5.98	-4.43	0.71	0.58	-48.39	60.00	17.08	-12.29	15.05	-12.62	0.00	-0.78	4.28	3.51	-6.10	-2.04
Croatia	-0.48	-0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-51.10	-51.10	0.00	23.55	0.00	0.00
Czech Republic	0.00	0.93	0.00	0.00	15.80	31.32	24.35	16.59	6.64	10.36		0.00	0.00	0.00	0.00	0.00
Denmark	0.00	0.51	-0.38	-0.63	0.00	-51.45	0.00	0.00	0.00	0.00			0.00	4.17	0.00	0.00
Estonia	-4.04	-0.95	-7.27	11.18	18.50	156.89	0.00	0.00	120.89	95.94			-1.25	-1.56	0.00	4.20
European Community	-0.83	-0.60	-5.34	-4.92	-16.92	-17.68	1.14	42.36	40.69	66.37	-0.45	1.58	-2.09	-0.35	-0.31	-0.18
Finland	0.59	1.27	-0.01	0.00	-2.85	-3.12	896.62	1,300.84	143.59	252.95			0.15	0.87	0.00	0.47
France	0.84	1.48	0.09	0.11	2.90	3.72	-4.88	54.63	70.05	87.46	-0.92	1.04	-30.68	-28.49	0.91	0.05
Germany	-6.61	-4.68	-29.17	-25.40	-1.08	-55.91			-84.93	57.06			0.00	-6.26	0.00	-1.63
Greece	0.34	2.48	-0.33	-3.10	-0.63	-2.38	0.00	0.00	0.00	0.00	100.00	125.02	0.14	-9.18	0.00	0.89
Hungary	41.23	46.13	1.23	2.60	-12.23	-30.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	-1.18
Iceland	0.00	0.00	-0.01	0.12	2.59	12.48	0.00	0.00	0.02	0.09	0.00	0.00	-2.69	2.70	0.00	9.10
Ireland	0.00	-0.09	0.00	-0.03	36.91	0.95	0.00	0.00	-0.07	-0.24			0.00	0.00	0.00	0.00
Italy	0.00	0.08	-0.01	-0.12	-14.68	-19.78	0.00	11.46	0.00	141.25	0.00	14.26	0.00	0.02	0.00	0.08
Japan	0.09	0.31	-4.38	-5.87	-19.21	-10.72	-91.63	-90.67	-33.08	-46.26	-43.27	-56.38	-7.38	-10.24	-12.42	-15.91
Latvia	0.00	0.00	0.00	0.00	3.53	82.54	2.37	15.25	5.34	13.96		0.00	25.21	5.96	-0.11	0.76
Liechtenstein	0.00	-0.04	0.00	-0.26	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00
Lithuania	0.00	0.00	0.00	1.38	-2.82	15.52	0.00	0.00	0.00	-78.60	0.00	0.00	-12.25	-12.16	-0.17	0.80
Luxembourg	0.01	0.12	-0.17	0.08	-170.63	31.84			100.00	100.00			26.53	22.60	36.31	25.00
Monaco					0.00	0.00								0.00	0.00	0.00
Netherlands	0.42	0.85	2.84	1.47	-2.63	-6.76							0.00	0.29	-9.29	15.00
New Zealand	0.04	-0.47	0.04	-0.47	-11.49	4.94	16.87	-2.87	14.84	-0.95	0.86	-35.81	-3.16	-2.61	4.38	6.34
Norway	0.00	0.02	0.00	0.02	-10.22	-19.00	0.00	0.00	0.00	0.00	0.00		-1.19	-10.99	0.00	0.00
Poland	0.00	0.00	1.04	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.91	-11.40	0.00	47.18
Portugal	0.00	-0.11	0.00	-13.14	0.00	-50.90	0.00	0.00	0.00	0.00	0.00	-99.54	0.00	19.74	0.00	-4.94
Romania	-3.87	3.95	0.00	-0.24	-0.64	-0.79	0.00	0.00	0.00	0.00		13.03	-64.54	-31.18	-71.39	-59.51
Russian Federation	-0.26	-0.62	0.40	0.29	-79.41	-93.27	0.00	0.00	0.00	0.00			-16.40	-15.66	0.00	0.00
Slovakia	0.00	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-40.33	-6.74	280.10	38.71
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00							0.00	0.44	0.24	0.00
Spain	0.00	-1.41	0.00	-0.13	-20.80	-16.85	0.00	0.00	0.00	0.00	0.00	-0.21	9.55	11.93	0.00	-2.27
Sweden	-0.15	0.11	-0.31	-0.09	-45.49	-32.59	-0.43	43.07	-1.64	-10.61	0.00	0.00	0.00	0.00	0.00	1.72
Switzerland	0.00	-0.13	0.00	0.10	-9.05	-147.85	0.00	0.00	-5.42	-7.81	0.00	-0.45	-3.19	-6.34	-5.35	-2.83
Turkey	0.00	0.00	0.00	0.00	1.78	-0.22	-33.33	-13.34	-99.23	-98.95			0.00	0.00		
Ukraine	-0.27	0.05	6.53	-1.26	9.27	8.01	0.00	0.00	0.00	0.00			0.00	-8.02	0.00	0.00
United Kingdom	2.93	0.59	1.34	1.92	1.02	-8.94	0.00	4.72	0.11	3.33	0.00	1.19	0.00	4.23	-0.03	0.01
United States	3.43	7.11	-24.50	-20.11	14.06	18.97	2.54	27.32	1.12	16.66			0.06	3.54	-38.93	-33.52

Note: The values included in this table are those reported by Parties in CRF table 8(a). An empty cell can either depict that a Party did not recalculate its inventory for a given category-gas combination (i.e. 0% difference), or that it has reported for the first time, or ceased reporting emissions for a category-gas combination (i.e. 100% difference).

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure 1.1

Contribution of subsectors to total GHG emissions in Energy [a]



[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.1

CO_2 emissions from Fuel combustion: reference approach and sectoral approach

	Reference approach	Sectoral approach	Difference	Explanation of the differences as reported in table 1.A(c) of the CRF
	(Gg CO_2)		(%)	
Australia Base year	253,483	253,305	0.07	1.AA Fuel Combustion - Sectoral Approach:Estimates are based on Gross Calorific Values (GCV) □1.AC Difference - Reference and Sectoral Approach:The main reason for the difference between the sectoral and reference approaches relates to a discrepancy in liquid fuel emissions of 1.9 %, which is driven by uncertainty within the reference approach. This arises from the sensitivity of final apparent consumption and emission figures to the average density and energy content values used to convert production, exports, imports and stock change from volumetric units into energy units.
Australia 2007	365,096	365,978	-0.24	
Austria Base year	56,362	54,094	4.19	1.AA Fuel Combustion - Sectoral Approach/1990:Usage of "NO" notation keys in table 1.A(a)s1 to s4 : Energy statistics does not inquire all consumers but is limited to statistical samples. In the case that a statistical inquiry results in zero consumption of a specific sector and fuel group it is not always possible to decide if there occurs a consumption of a specific fuel category in a specific sector and year. However, as the energy statistics is based on a top down/bottom up approach it is assured that total national fuel consumption is equivalent to category 1A fuel consumption. Thus "NO" may be sometimes interpreted as "included elsewhere". 1.AC Difference - Reference and Sectoral Approach/1990:Solid fuels: CO2 emissions: Reference Approach includes process emissions from blast furnaces which are included in category 2 C 1 and process emissions from carbide production which are included in category 2 B 4. Liquid fuels: CO2 emissions: Heat values and carbon contents are sector and fuel specific. The reference approach considers a share of feedstocks used for plastics production and solvent production as non-carbon-stored. In the sectoral approach a share of emissions from waste incineration of plastics and solvents use (including imported products) is included in category 1A1a and category 3. In the sectoral approach a share of municipal solid waste without energy recovery is considered in category 6C for the years 1990 and1991. Gaseous fuels: CO2 emissions: National aproach uses sector specific carbon contents and heating values (different from IPCC reference factors). Process emissions from ammonia-production are included in category 2 B 1. Other fuels: The sectoral approach considers waste as an additional fuel type (e.g. municipal solid waste and industrial fuel waste).
Austria 2007	68,449	64,143	6.71	1.AC Difference - Reference and Sectoral Approach/2007:Solid fuels CO2 emissions:Reference Approach includes process emissions from blast furnaces which are included in category 2 C 1 and process emissions from carbide production which are included in category 2 B 4. Liquid fuels CO2 emissions:Heat values and carbon contents are sector and fuel specific. The reference approach considers a share of feedstocks used for plastics production and solvent production as non-carbon-stored. In the sectoral approach a share of emissions from waste incineration of plastics and solvents use (including imported products) is included in category 1A1a and category 3. In the sectoral approach a share of municipal solid waste without energy recovery is considered in category 6C for the years 1990 and1991. From the year 2005 on the Sectoral Approach considers blended transport diesel. Gaseous fuels CO2 emissions:The Sectoral Aproach uses sector specific carbon contents and heating values (different from IPCC reference factors). Process emissions from ammonia-production are included in category 2 B 1. Other fuels:The sectoral approach considers waste as an additional fuel type (e.g. municipal solid waste and industrial fuel waste).
Belarus Base year	100,169	100,211	-0.18	
Belarus 2007	54,834	53,857	1.81	
Belgium Base year	108,712	110,361	-1.49	
Belgium 2007	103,561	104,689	-1.08	1.AB Fuel Combustion - Reference Approach/2007:Reference approach was not available for the 15/1. It will be included in the 15/3 submission
Bulgaria Base year[a]	91,159	90,726	0.48	
Bulgaria 2007	55,242	53,389	3.47	
Canada Base year	447,805	413,932	8.18	1.AB Fuel Combustion - Reference Approach:Refer to section 3.5.1, section 3.5.2 and Annex 4 of the NIR for additional details. 1.AB Liquid Fuels:See NIR, Annex 4, Table A4-2 for fuel source data. 1.AB Solid Fuels:Coke Oven Gas has been allocated to the Gaseous Fuels category. See NIR, Annex 4, Table A4-2 for fuel source data.
Canada 2007				1.AB Gaseous Fuels:See NIR, Annex 4, Table A4-2 for fuel source data. 1.AC Difference - Reference and Sectoral Approach:Refer to Annex 4 of the NIR for a discussion on the comparison of the reference approach and the sectoral approach.
Croatia Base year	21,204	20,167	5.14	1.AA Fuel Combustion - Sectoral Approach:CO2 emissions from Biomas are excluded from Total Fuel Combustion
Croatia 2007	22,402	21,160	5.87	1.AC Difference - Reference and Sectoral Approach:The National approach is based on Sectoral approach recommended by IPCC methodology. The differences between Reference and National approach, in energy consumption and CO2 emission from liquid and solid fuels, are relatively small and therefore acceptable.
Czech Republic Base year	161,238	145,613	10.73	1.AC Difference - Reference and Sectoral Approach:Detailed comparison of the results from Sectoral and Reference Approach (SA and RA), respectively, is given in NIR Annex 1 Reference Approach and Comparison with Sectoral Approach.
Czech Republic 2007	126,204	116,297	8.52	

Table 1.1 (continued)

CO_2 emissions from Fuel combustion: reference approach and sectoral approach

Denmark Base year	51,172	51,198	-0.05	1.AC Difference - Reference and Sectoral Approach:Non-energy use of fuels is not included in the Danish National Approach. Fuel consumption for non-energy is subtracted in Reference Approach to make results comparable. CO2 emission from plastic part of municipal wastes is included in the Danish National Approach.
Denmark 2007	51,125	51,127	0.00	CO2 emission from the plastic part of municipal wastes is added in Reference Approach to make results comparable. (Other fuels of sources 1A1, 1A2 and 1A4)
Estonia Base year	36,963	36,338	1.72	1.AA Fuel Combustion - Sectoral Approach:to the "f.Other" in the Table 1.A(a)s2 are included "Machinery"; " Mining"; "Production of transport equipment"; "Production of non-ferrous mineral products", "Wood industry"; Construction"; "Textile, lether and clthing industry" and Other industry. 1.AA Fuel Combustion - Sectoral Approach/1990:Energy Balance of the Statistics of Estonia□1.AA Liquid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AA Solid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AA Gaseous Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AA Other Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AB Fuel Combustion - Reference Approach/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AB Liquid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AB Solid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AB Gaseous Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AC Difference - Reference and Sectoral Approach/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AC Liquid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AC Solid Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AC Gaseous Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia 1.AC Other Fuels/1990:Energy Balance, Yearbook of the Statistics of Estonia
Estonia 2007	18,487	18,338	0.82	1.AA Fuel Combustion - Sectoral Approach:to the "f.Other" in the Table 1.A(a)s2 are included "Machinery"; " Mining"; "Production of transport equipment"; "Production of non-ferrous mineral products", "Wood industry"; Construction"; "Textile, lether and clthing industry" and Other industry.
European Community Base year	3,119,422	3,111,336	0.26	
European Community 2007	3,166,985	3,137,252	0.95	
Finland Base year	54,440	53,035	2.65	1.AC Difference - Reference and Sectoral Approach:The relatively high difference in liquid fuels CO2 emissions is due to statistical differences in national oil balance.Allocation of Peat is different in SA ('Other fuels') compared to RA ('Solid fuels'). 1.AC Liquid Fuels:The relatively high difference in liquid fuels CO2 emissions is due to statistical differences in national oil balance. 1.AC Solid Fuels:Allocation of Peat is different in SA ('Other fuels') compared to RA ('Solid fuels').
Finland 2007	61,929	61,658	0.44	1.AC Other Fuels:Allocation of Peat is different in SA ('Other fuels') compared to RA ('Solid fuels').
France Base year	365,339	367,239	-0.52	
France 2007	369,612	376,097	-1.72	
Germany Base year	950,866	948,089	0.02	1.AB Liquid Fuels:international bunkers of "other oil" are included
Germany 2007	770,118	755,322	0.87	
Greece Base year	76,009	76,159	-0.20	
Greece 2007	103,962	105,363	-1.33	
Hungary Base year[a]	80,095	78,497	2.03	1.AC Liquid Fuels:Consumption of sectoral approach from 'Other Fuels' must be added to consumption of sectoral approach of 'Liquid Fuels'.
Hungary 2007	55,394	53,689	3.17	1.AC Solid Fuels:Coke oven/gas coke data was modified between 1992 and 2000, therefore the apparent fuel consumption was also changed. 1.AC Gaseous Fuels:Apparent energy consumption was modified according to the methodological change in 1.AA.2.C sector.
Iceland Base year	1,767	1,673	5.62	1.AA Fuel Combustion - Sectoral Approach:1A2f Other manufacturing industries & construction includes: mineral industry, construction and other industries not included above.
Iceland 2007	2,278	1,995	14.22	
Ireland Base year	30,502	30,227	0.91	
Ireland 2007	44,743	44,835	-0.21	
Italy Base year	396,059	402,021	-1.48	
Italy 2007	438,060	444,571	-1.46	
Japan Base year	1,047,665	1,068,019	-1.91	
Japan 2007	1,214,608	1,235,227	-1.67	

Table 1.1 (continued)

CO_2 emissions from Fuel combustion: reference approach and sectoral approach

Latvia Base year	18,759	18,656	0.55	1.AA Fuel Combustion - Sectoral Approach:combustion of used tyres with energy recovery in cement production plant 1.AB Fuel Combustion - Reference Approach:Activity data are taken from Annual Questionnaires 2008 prapared by Central Statistical Bureau for EUROSTAT.
Latvia 2007	8,292	8,307	-0.38	1.AC Difference - Reference and Sectoral Approach:Difference of the Reference approach over the National approach is due to statistical differences.
Liechtenstein Base year	201	202	-0.06	
Liechtenstein 2007	210	210	0.03	
Lithuania Base year	33,876	32,672	3.68	
Lithuania 2007	14,618	12,881	13.48	
Luxembourg Base year	10,496	10,526	-0.28	1.AB Fuel Combustion - Reference Approach:(1) data for the Reference Approach are coming from Eurostat database on energy, populated via the IEA/Eurostat joint questionnaire. The data have been extracted from Eurostat's web site on 29 January 2009; (2) data precision is limited in the questionnaire (no digit), hence some variables reported as NO (since they correspond to 0 kt, ktep, ...in the database) are perhaps not 'real' 0 but rather values smaller than 0.5; (3) the unit for the conversion factor is Eurostat's default since we use Eurostat's default factors; (4) the unit for the fraction of carbon oxidized is the def one too. 1.AB Municipal Solid Waste (Garbage) Incineration:in order to have accurate comparisons in table 1.A(c), this energy source has to be recorded under one of the three main fuels of the Reference Approach (i.e. Liquid, Solid and Gaseous). If not, the total for the Reference Approach would not include municipal waste incineration on the contrary of the Sectoral Approach, hence leading to incomplete comparisons. The source "Other Solid Fossil Fuels" has been selected for recording municipal waste incineration data. Nevertheless, RA data for waste incineration covers both biogenic and non-biogenic fractions incinerated, whereas
Luxembourg 2007	10,473	11,138	-5.98	the SA only considers the non-biogenic fraction. 1.AC Liquid Fuels:RA includes jet kerosene whereas this fuel is not included in the SA and the apparent energy consumption. 1.AC Solid Fuels:RA includes municipal solid waste incineration whereas SA excludes it: reported under other fuels. The apparent energy consumption also includes municipal solid waste. 1.AC Other Fuels:RA: municipal solid waste is reported under solid fuels.
Monaco Base year	105	105	-25.36	1.AB Solid Fuels:M
Monaco 2007	92	92	-31.56	1.AC Difference - Reference and Sectoral Approach:Some little differences in the net calorific values and in the carbon emission factors between both methods.
Netherlands Base year	155,641	149,980	3.77	1.AB Fuel Combustion - Reference Approach:NE; NOT INCLUDED IN ENERGY STATISTICS IE:Ethane INCLUDED IN LPG Petroleum Coke INCLUDED IN Other oil Refinery Feedstocks INCLUDED IN the other primary and secondary fuels Anthracite INCLUDED IN Other Bit. Coal Coking Coal INCLUDED IN Other Bit. Coal Lignite INCLUDED IN Other Bit. Coal 1.AC Difference - Reference and Sectoral Approach:In 1A but not in RA: 1A1a-other fuels: CO2 from fossil waste incineration (AVIs)
Netherlands 2007	168,612	163,776	2.95	Not in NA-1A:CO2 fossil fuel sources in sector 1B:1. B. 1. b. Solid Fuel Transformation 1.B.2.c Flaring CO2 fossil fuel sources in sector 2: 2A4 Soda Ash Production 2B1. Ammonia production 2B5. Other chemicals, excl. activated carbon 2C1. Coke and coal inputs in blast furnace (net) 2D1. Pulp and Paper 2G. Process emissions in other economic sectors After these corrections, the differences are between -1.2% and +0.7%
New Zealand Base year	21,959	21,953	0.03	1.AB Gaseous Fuels:The gas emission factor is based on a weighted average of the emission factors for all gas streams where the weightings are the amount og gas produced at each field (info from the Energy Data file).
New Zealand 2007	30,754	30,504	0.82	

Table 1.1 (continued)

CO_2 emissions from Fuel combustion: reference approach and sectoral approach

Norway Base year	29,372	25,939	13.23	1.AC Difference - Reference and Sectoral Approach:As in previous submissions, there are large deviations in the output from the RA and SA. The results for all years in the period 1990-2007 are displayed in section 3.6.1, Table 3.25 in NIR 2009. □□Generally, the main reason for the deviation between the SA and RA is probably inaccuracies in the oil and gas production or export statistics. Due to the large production and export, small errors can amount to large discrepancies in the national total emissions. According to the Norwegian Petroleum Directorate, the uncertainties for production figures are 1 and 0.3 per cent for natural gas and crude oil, respectively. Norway has also a large non-energy use of coal, coke, natural gas and liquefied petroleum gas (LPG), large oil and gas production and exports (domestic supply is the difference between the two large numbers in each case), and relatively large statistical errors.
Norway 2007	37,637	34,778	8.22	These factors make the use of the RA inappropriate for Norway.
Poland Base year[a]	439,394	440,389	-0.23	1.AB Fuel Combustion - Reference Approach:Country specific carbon emission factors were used for Other bituminous Coal, Lignite. For Gasoline, Jet Kerosene, Gas/Diesel Oil, Residual Fuel Oil and LPG were used average carbon emission factors from subcategory 1A.
Poland 2007	306,359	302,729	1.20	Other oil: sum of other petroleum products and white spirit according to Eurostat
Portugal Base year	40,892	39,154	4.44	1.AC Difference - Reference and Sectoral Approach:Differences between Sectoral and Reference approach (CO2 from fuel combustion): the sectoral approach CO2 estimates depends partially on combustion information from point sources, and the reference approach results from national energy balances.Futhermore, feedstock emissions were estimated differently in the two approaches: in the sectoral approach, emissions were estimated from production activity data; in the reference approach, a global percentage of carbon stored (e.g. lubricants, naphta) was used. In the sectoral approach, emissions from lubricants may not have been totally estimated, because it is uncertain if road traffic emission factors take into account these materials.
Portugal 2007	56,454	54,564	3.46	
Romania Base year[a]	192,424	159,419	20.70	1.AC Difference - Reference and Sectoral Approach:The difference betwen RA and SA is caused by the fact that the Reference Approach treats the non-energy use of fuels as if it were combustion. A correction is done by the carbon stored from non energy fuel use, but the information related to this area are limited in the national energy balance.
Romania 2007	99,785	91,912	8.57	
Russian Federation Base year	2,492,859	2,264,626	10.08	1.AA Fuel Combustion - Sectoral Approach:Explanation of lacking data and notation keys to be added in the following inventory submission
Russian Federation 2007	1,427,173	1,374,619	3.82	1.AB Fuel Combustion - Reference Approach:Explanation of lacking data and notation keys to be added in the following inventory submission
Slovakia Base year	56,377	58,055	-2.89	
Slovakia 2007	35,235	33,990	3.66	
Slovenia Base year[a]	15,038	15,164	-0.83	
Slovenia 2007	15,895	15,826	0.44	
Spain Base year	208,769	205,341	1.67	1.AB Other non-specified:No information on other fuels, not specified in the CRF Reporter, is available.
Spain 2007	339,750	335,569	1.25	
Sweden Base year	48,723	50,470	-4.80	1.AC Difference - Reference and Sectoral Approach:Please note the national method for comparing RA-SA (3.3.6 in the Swedish NIR) includes also other fuels.
Sweden 2007	39,877	45,180	-14.84	
Switzerland Base year	41,558	41,114	1.08	1.AB Fuel Combustion - Reference Approach:Documentation Box to table 1.A(b): The fraction for carbon oxidized is consequently set to 1.0 due to the following reason: combustion installations in Switzerland have very good combustion properties; combined emissions of CO and unburnt VOC lie in the range of only 0.1 to 0.3 percent of CO2 emissions for oil and gas combustion. Since most of the coal used in Switzerland goes to the cement industry, also for coal a fraction factor of 1.0 was chosen. The conversion factors are country specific (see Swiss Energy Statistics 2004, on the back cover). The carbon emission factor for crude oil stems from the 1996 IPCC reference manual; the other carbon emission factors are country specific. Internet adress for the Swiss Energy Statistics: http://www.energie-schweiz.ch/internet/00008/index.html?lang=en 1.AC Difference - Reference and Sectoral Approach:Differences in energy consumption: allocation problems: Only bitumen production from national refineries is shown in table 1.A(d). It is a refinery product and included in the crude oil amount. In the Swiss inventories bitumen emissions (NMVOC) appear under industrial processes and not under energy use.
Switzerland 2007	41,907	41,255	1.58	Gaseous fuels: gas distribution emissions (including emissions from compressor stations) are shown in table 1.B.1 and do not appear in the column "National approach" above. Liquid fuels/Solid fuels: in the national approach, petroleum coke is subsumed under solid fuels (cement industry use; there, petroleum coke is treated as coal). Other: Waste fuels from waste incineration (energy use) and waste fuels from cement production (energy use). In the refernce approach subsumed in "Solid fuels" (Other oil).
Turkey Base year	140,054	126,701	10.54	1.AC Difference - Reference and Sectoral Approach:The reference approach uses data on crude oil as the average "calorific values" and "carbon content". However sectoral approach uses the individual "calorific values" and "Carbon content" in each sectors.
Turkey 2007	303,208	282,472	7.34	

Table 1.1 (continued)

CO_2 emissions from Fuel combustion: reference approach and sectoral approach

Ukraine Base year	586,969	593,126	-1.04	1.AA Fuel Combustion - Sectoral Approach:In 1991-1997 emissions for each fuel type were estimated according to category 1.A «Fuel Combustion». Disaggregating to IPCCC categories is impossible, since there is insufficient disaggregated data on activity. 1.AB Solid Fuels:Included with Other Bituminous Coal. 1.AC Difference - Reference and Sectoral Approach:The main reasons of the differences between two approaches are the absence of energy balances and inconsistencies in fuel supply and use. See NIR Chapter 3.2.1 1.AC Liquid Fuels:See NIR Chapter 3.2.1
Ukraine 2007	228,529	246,992	-7.48	1.AC Solid Fuels:See NIR Chapter 3.2.1 1.AC Gaseous Fuels:See NIR Chapter 3.2.1 1.AC Other Fuels:See NIR Chapter 3.2.1
United Kingdom of Great Britain and N	564,059	568,104	-0.71	1.AA Liquid Fuels:The liquid fuel allocation is as follows:gasoline, diesel oil, residual fuel oil, orimulsion, kerosene, LPG, refinery gas, waste oils, petroleum coke, lubricants, naphtha, other oil products. Liquid fuel emission factors for methane in 1A1, 1A2, 1A4 are mainly from CORINAIR. 1.AA Solid Fuels:The solid fuel allocation is as follows:coal, coke, anthracite, patent fuel, blast furnace gas, coke oven gas. Solid fuel emission factors for methane are mainly based on Brain et al (1994). Emission of VOC from Coal Fired Appliances, DTI, Coal R&D, Report No COAL R033. Solid fuel emission factors for N2O are from Fynes et al (1994) Emissions of Greenhouse gases from coal fired Plant, British coal, CRE. Contract JOUF 0047-C(SMA). 1.AA Gaseous Fuels:The gaseous fuel allocation is as follows:□Natural gas, colliery methane Natural gas emission factors for methane are IPCC defaults. 1.AA Other Fuels:Other fuel allocation is as follows:□municipal solid waste, scrap tyres 1.AB Fuel Combustion - Reference Approach:A significant proportion of fuel consumption emissions occur in 1B1b Solid Fuel Transformation, 2C Metal Production, 2B1 Ammonia Production This discrepancy arises from three sources: (I) The statistical difference between 'apparent consumption' used in the reference inventory and actual consumption used in the sectoral inventory This statistical difference results from losses and errors in the estimates. (2) The sectoral inventory includes emissions from the non-energy use of fuel where they can be specifically identified e.g. catalytic crackers, iron & steel, lubricants combustion, ammonia production. The reference approach implicitly treats the non-energy use of fuel as if it were combustion. A correction is then applied by deducting an estimate of carbon stored from non-energy fuel use. The carbon stored is estimated from an approximate procedure which does not identify specific processes. The result is that the reference approach is based on a higher estimate of non-energy use emissions than the sectoral inventory. (3) The reference approach uses data on primary fuels such as crude oil and natural gas liquids which are then corrected for imports, exports and stock changes of secondary fuels. Thus the estimates obtained will be highly dependent on the default carbon contents used for the primary fuels. Sectoral approach based on consumption of secondary fuels.
United Kingdom of Great Britain and N	540,463	526,276	2.70	1.AC Difference - Reference and Sectoral Approach:The discrepancy in fuel consumption arises from 3 sources: (1) The statistical difference between 'apparent consumption' used in the reference inventory and actual consumption used in the sectoral inventory. This difference results from losses and errors in the estimates. (2) The sectoral inventory includes emissions from the non-energy use of fuel where they can be specifically identified e.g. catalytic crackers, iron&steel, lubricants combustion, ammonia production. The reference approach implicitly treats the non-energy use of fuel as combustion. A correction is then applied by deducting an estimate of carbon stored from non-energy fuel use. The carbon stored is estimated from an approximate procedure which does not identify specific processes.The result is that the reference approach is based on a higher estimate of non-energy use emissions than the sectoral inventory. (3) The reference approach uses data on primary fuels which are then corrected for imports, exports and stock changes of secondary fuels. Thus the estimates obtained are highly dependent on the default carbon contents used for the primary fuels. The sectoral approach is based wholly on the consumption of secondary fuels where carbon contents are known with greater certainty. In particular the carbon contents and calorific values of the primary liquid fuels are likely to vary more than those of secondary fuels 1.AC Difference - Reference and Sectoral Approach/1990:A significant proportion of fuel consumption emissions occur in 1B1b Solid Fuel Transformation, 2C Metal Production, 2B1 Ammonia Production. Including these sources with 1A in the comparison reduces the discrepancy to -0.7%. 1.AC Solid Fuels:So
United States of America Base year	4,802,116	4,836,844	-0.72	1.AA Fuel Combustion - Sectoral Approach:Estimates of biomass consumption for fuel combustion exclude wood wastes, liquors, municipal solid waste, tires, etc.□1.AB Fuel Combustion - Reference Approach:In order to accommodate the differences and limitations between the Reference Approach table of the CRF and that of the U.S. Inventory, the following adaptations were made to section 1.AB: U.S. Territories consumption is included in the Imports column (applies to Natural Gas Liquids, Gasoline, Other Kerosene, Gas/Diesel Oil, Residual Fuel Oil, Lubricants, Other Oil, Other Bit. Coal, and Natural Gas). Adjustments for fuels accounted for in the Industrial Processes sector are included in the stock change column. These adjustments include petroleum coke for aluminum, ferroalloy, titanium dioxide, and ammonia production; coking coal for iron and steel production; natural gas for ammonia production; and other oil and residual fuel for carbon black production.Table 1.A(b) - The United States Reference Approach is also provided in a separate Excel spreadsheet, which is more detailed than this table allows information to be reported. Specifically, the fuel types provided in the CRF tables differ from the fuel types as defined in the U.S., and no "other" options were offered in the CRF table. The U.S. suggests revising the table to allow for additional fuel types.
United States of America 2007	5,909,232	5,890,485	0.32	1.AB Other Fuels:Other (3) includes waste combustion and geothermal emissions. The inclusion of emissions from waste combustion and geothermal in this table gives higher totals for energy consumption and CO2 emissions in the CRF Reference Approach than in the U.S. Inventory Reference Approach which does not includes these sources. 1.AC Difference - Reference and Sectoral Approach:Refer to section 3.11 of the NIR.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.2

CO_2 emissions from stationary combustion - trend information

CO_2 Emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	192,119	288,402	1.5	3.7	2.5	3.3	5.7	3.5	1.8	3.0	1.3	5.1	0.3	2.3	2.1	1.5	50.1
Austria	40,290	40,176	5.8	6.7	5.6	0.3	-5.1	-1.3	-3.0	7.5	-1.2	10.2	-2.1	0.5	-1.2	-9.3	-0.3
Belarus	87,225	48,205	-7.4	-11.1	1.6	3.5	-3.5	-3.8	-3.7	-1.8	-2.2	0.6	6.1	0.2	2.1	-3.2	-44.7
Belgium	90,076	79,523	2.9	0.3	4.9	-6.5	6.2	-6.6	0.6	0.3	-2.5	3.8	-1.8	-2.5	-4.3	-4.8	-11.7
Bulgaria	76,912	45,192	-16.2	4.8	-1.7	-0.4	-13.0	-9.4	-1.4	3.7	-6.6	8.6	-2.8	-0.2	1.2	9.5	-41.2
Canada	275,555	342,619	-2.0	2.6	2.6	1.7	1.2	3.9	6.8	-0.7	1.4	4.1	-3.2	-3.7	-3.8	8.2	24.3
Croatia	16,180	14,814	-27.8	4.1	3.4	4.8	7.0	2.0	-4.5	6.3	5.9	7.6	-4.9	1.1	-2.5	5.7	-8.4
Czech Republic	136,670	96,758	-3.5	2.7	6.0	-7.1	-7.0	-2.0	5.1	1.7	-4.0	-1.3	-1.1	-0.7	0.8	0.6	-29.2
Denmark	40,551	36,967	24.0	-6.2	28.3	-16.8	-8.1	-6.9	-9.6	4.5	-1.0	12.2	-13.9	-9.3	21.8	-12.7	-8.8
Estonia	32,993	15,801	-7.4	-10.1	5.5	-3.9	-10.8	-6.5	-1.2	-0.1	-2.9	13.0	0.7	-4.3	-5.3	18.3	-52.1
European Community	2,409,409	2,280,143	0.9	0.9	3.1	-3.1	1.1	-1.8	0.8	2.9	-1.0	2.5	-0.3	-1.0	-0.4	-2.9	-5.4
Finland	40,460	47,426	-2.7	-7.0	13.4	-4.8	-7.0	-1.9	-4.5	12.7	5.1	15.0	-8.0	-23.0	28.3	-4.9	17.2
France	248,416	238,765	9.2	2.0	5.4	-3.2	7.3	-4.9	-1.2	1.3	-3.5	2.6	1.1	1.8	-2.9	-3.2	-3.9
Germany	780,006	602,758	-4.4	-1.0	4.2	-5.3	-1.5	-4.5	0.5	4.3	-2.0	1.3	-1.5	-2.7	2.7	-4.0	-22.7
Greece	61,653	81,991	-1.6	-0.6	2.8	5.9	4.3	-1.6	8.6	1.9	-0.6	3.8	-0.2	1.0	-2.7	4.1	33.0
Hungary	70,876	41,268	-1.3	-1.6	2.6	-4.0	-3.0	-0.8	-4.3	2.5	-3.3	6.0	-5.1	-1.4	-4.1	-5.3	-41.8
Iceland	1,073	1,021	-5.3	2.6	8.4	2.8	-3.0	0.6	-7.9	-3.2	6.0	-7.3	1.5	-4.2	-9.0	2.5	-4.8
Ireland	25,187	30,691	2.8	2.4	2.1	3.0	3.0	2.6	4.5	5.0	-4.1	-1.2	0.2	3.0	-3.3	-1.4	21.9
Italy	299,706	316,463	-1.0	7.6	-1.6	0.7	2.6	1.4	0.7	1.1	0.1	3.9	0.1	0.7	-1.7	-3.3	5.6
Japan	856,965	993,640	-0.4	0.6	0.7	-0.6	-3.2	3.8	2.3	-1.6	5.1	0.9	0.0	1.0	-1.4	4.0	15.9
Latvia	15,800	4,559	-8.6	-14.1	1.5	-7.7	-5.6	-9.7	-14.4	0.3	-1.9	0.3	-2.9	-0.3	3.5	-2.3	-71.1
Liechtenstein	124	121	-4.7	1.2	0.7	6.7	8.3	-4.6	-7.5	1.6	7.0	6.5	1.2	-0.2	2.9	-22.0	-2.1
Lithuania	27,020	7,794	5.6	-12.8	1.8	-7.7	5.0	-18.7	-13.4	5.8	-0.2	-0.6	4.1	5.6	-1.4	-7.3	-71.2
Luxembourg	7,777	4,561	0.6	-25.3	-0.3	-14.6	-20.3	2.2	-1.0	3.0	20.9	-0.8	12.5	-1.9	0.9	-2.5	-41.4
Monaco	73	59	-5.2	-2.1	6.2	2.8	-1.1	0.3	-0.2	1.1	-2.4	-6.5	-7.9	0.2	-13.9	3.9	-18.6
Netherlands	123,406	128,257	3.8	2.7	5.2	-5.4	1.3	-4.9	1.4	4.5	-0.8	2.4	0.7	-3.8	-3.2	0.3	3.9
New Zealand	13,336	15,842	2.4	-5.8	7.4	14.3	-10.9	6.5	1.9	9.4	-2.8	6.0	-7.5	9.1	0.9	-7.9	18.8
Norway	14,437	19,159	-1.7	-3.6	13.2	-0.5	-2.0	-1.7	0.3	9.9	0.5	6.8	-2.4	-2.7	1.8	-2.6	32.7
Poland	418,542	265,210	1.3	0.2	2.3	-2.4	-8.4	-3.7	-3.5	0.0	-3.8	3.3	-0.8	-2.1	2.7	-1.0	-36.6
Portugal	29,140	35,652	3.8	8.2	-9.4	5.6	7.9	18.4	-7.2	1.4	8.6	-10.5	5.0	6.4	-10.8	-6.2	22.3
Romania	153,634	79,130	-22.2	3.5	3.5	-12.4	-13.5	-11.9	2.5	4.8	4.2	6.6	-3.0	-5.2	3.8	-1.8	-48.5
Russian Federation	1,924,956	1,169,210	-5.6	-3.6	-1.6	-5.0	-3.9	1.6	2.8	0.7	-1.4	1.4	-1.1	-0.8	3.2	-1.7	-39.3
Slovakia	53,162	27,491	-8.8	-5.0	-4.4	-3.8	-0.9	-2.0	-0.3	2.3	-5.6	5.0	-4.2	-4.0	-1.0	-8.6	-48.3
Slovenia	13,192	10,639	-6.1	4.9	0.9	2.1	3.1	-4.1	-0.5	6.9	1.2	-3.8	1.6	-0.3	-0.7	-4.2	-19.4
Spain	148,834	226,427	3.4	6.3	-10.0	11.7	0.1	11.9	4.0	-0.4	8.3	-0.3	6.1	5.1	-5.5	2.0	52.1
Sweden	31,292	24,289	3.1	-2.5	12.6	-12.3	0.9	-8.8	-4.1	1.8	1.6	1.6	-3.6	-9.5	-2.2	-4.4	-22.4
Switzerland	26,094	24,457	5.8	4.0	3.2	-3.9	3.9	-1.5	-4.8	4.1	-2.8	3.8	0.9	1.9	-1.9	-8.5	-6.3
Turkey	100,746	231,461	7.0	7.6	13.0	10.0	0.8	-1.1	13.3	-9.4	4.5	7.5	3.8	7.5	6.9	10.7	129.7
Ukraine	505,988	202,779	1.1	-8.9	-10.5	-7.5	-27.2	-1.2	-7.3	0.7	0.1	7.1	-3.2	3.7	5.2	-2.7	-59.9
United Kingdom	445,632	391,024	2.6	-2.4	4.1	-5.3	1.1	-2.4	2.5	3.2	-4.4	2.4	-0.3	-1.1	-0.6	-2.8	-12.3
United States	3,352,360	4,003,082	0.3	0.6	4.0	1.8	0.3	0.3	3.3	-1.3	0.3	1.6	0.8	0.6	-2.0	2.1	19.4

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary combustion).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.3

Stationary combustion: liquid fuels - CO_2 (2007)

	Key category	Share of national total	IEF in CRF based on GCV or NCV	Energy industries						Manufacturing industries and construction			Other sectors						Other (Not specified elsewhere)		
				Methods and EF used[a]		CO_2 IEF				Method and EF used[b]		CO_2 IEF	Method and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF
				Methods	EF	Total	Public electricity and heat production	Petroleum refining	Manufacture of solid fuels and other energy industries	Methods	EF	Total	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fisheries	Methods	EF	Stationary
		%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia[e]	L	6.7	GCV	T2	CS, PS	72.17	73.23	71.37	72.64	T2	CS	72.27	T1, T2	CS	71.54	71.90	65.55	72.51	T1, T2	CS, D	73.30
Austria	L, T	13.7	NCV	T2	CS, PS	75.63	78.84	74.77	NO	T2, T3	CS, PS	75.18	T2, T3	CS	73.45	71.54	74.53	69.81	CS, M	CS	NA
Belarus	L, T	10.8	NCV	D, T1	D	76.38	76.38	IE	IE	D, T1	D	73.72	D, T1	D	70.23	69.85	62.69	72.56	D, T1	D	68.38
Belgium	L, T	17.3	NCV			67.78	76.67	66.82	NO			79.87			72.24	73.06	72.90	67.77			NA
Bulgaria	L, T	5.8	NCV	T2	CS	71.95	79.48	NO	69.97	T2	CS	83.05	T2	CS	71.17	74.37	62.94	73.30	NA	NA	NO
Canada[e]	L, T	4.0	GCV	T2	CS	76.66	77.03	76.09	NA	CS, T2	CS, OTH	76.90	T2	CS	74.61	75.08	73.81	75.85	NA	NA	NA
Croatia	L, T	21.6	NCV	T1, T2	D, PS	75.09	76.56	73.75	NO	T1	D	81.24	T1	D	71.82	72.36	70.52	73.05	NA	NA	NO
Czech Republic	L, T	3.2	NCV	T1	CS, D	71.69	76.41	69.72	72.60	T1	CS, D	73.26	T1	CS, D	70.21	74.14	68.01	71.38	T1	D	NO
Denmark	L, T	11.9	NCV	CR	CR, CS, D	66.31	77.62	57.94	74.00	CR	CS	79.97	CR	CS	74.32	73.71	74.58	74.08	OTH	CS	NA
Estonia	L, T	3.1	NCV	T1, T2	CS, D	75.17	75.17	NO	NO	T1, T2	CS, D	72.74	T1, T2	CS, D	72.18	72.70	69.91	72.84	NA	NA	NO
European Community	L, T	13.2	NCV	CR, CS, OTH, T1, T2, T3	CR, CS, D, PS	71.53	76.68	69.29	75.47	CR, CS, M, T1, T2, T3	CR, CS, D, PS	76.48	CR, CS, M, T1, T2, T3	CR, CS, D	72.71	73.05	72.43	73.11	CS, M, OTH, T1, T2, T3	CR, CS, D	71.78
Finland	L, T	14.7	NCV	T3	CS, D, PS	69.17	77.76	64.63	NO	CS, M, T3	CS, PS	68.21	M, T1, T3	CS, D	74.24	74.92	73.77	74.37	CS, T1	CS	71.03
France	L, T	17.3	NCV	CR	CS	69.83	77.65	65.85	NO	CR	CS	90.96	CR	CS	73.58	74.51	73.10	73.45	NA	NA	NO
Germany	L, T	9.2	NCV	CS	CS	70.59	84.49	68.66	75.57	CS, T2	CS	61.88	CS	CS	73.42	72.97	73.54	73.65	CS	CS	73.99
Greece	L, T	22.7	NCV	T2	CS, PS	72.70	75.72	68.22	NO	T2	PS	65.41	T2	D	73.06	72.28	73.12	73.26	NA	NA	NO
Hungary	L, T	6.2	NCV	T1, T2, T3	CS, D, PS	79.03	78.84	75.37	98.98	T1, T2	CS, D	25.79	T1	D	69.59	68.29	62.44	72.97	NA	NA	NO
Iceland	L, T	20.8	NCV	T1	D	75.91	75.91	NO	NO	T1	D	74.09	T1	D	74.07	66.47	69.56	74.19	NA	NA	NO
Ireland	L, T	15.8	NCV	T1, T3	CS, PS	78.77	83.44	65.65	NO	T1	CS	81.02	T1	CS	72.54	73.15	72.06	73.30	NA	NA	NO
Italy	L, T	15.6	NCV	T3	CS	75.48	76.39	74.97	76.52	T2	CS	83.01	T2	CS	71.06	69.64	70.20	72.91	T2	CS	NA
Japan[e]	L, T	23.5	GCV	T1	CS	70.04	73.52	56.79	61.95	T1	CS	70.47	T1	CS	70.26	71.38	68.18	72.96	NA	NA	NO
Latvia	L, T	8.0	NCV	T1	CS	76.16	76.45	NO	74.84	T1	CS, PS	73.36	T1	CS	72.03	73.08	64.59	73.95	T1	CS	NA
Liechtenstein	L, T	19.3	NCV	T2	CS	NO	NO	NO	NO	T2	CS	73.70	CS, T1, T2	CS	73.52	73.46	73.70	73.60	T1	CS	NO
Lithuania	L, T	10.0	NCV	T2	CR, CS	76.16	78.57	75.52	73.79	T2	CR, CS	80.42	T2	CS	70.04	73.63	65.11	73.88			NE, NO
Luxembourg	L, T	8.2	NCV	T1, T2	CS, D	74.10	74.10	NO	NO	T1, T2	CS, D, PS	73.26	T1, T2	CS, D	74.05	74.04	74.04	74.10	T1	D	74.10
Monaco	L, T	19.3	NCV	T1	D	78.41	78.41	NO	NO	NA	NA	NA, NO	T1	D	73.33	IE	73.33	NO	NA	NA	NO
Netherlands	L, T	9.8	NCV	T2	CS	62.54	53.77	63.49	74.11	T2	CS	63.10	T2	CS, D	76.63	78.09	71.93	77.10	T2	D	NA
New Zealand[e]	L, T	3.5	GCV	D	CS	76.64	72.31	76.66	NO	D	CS	70.30	CS, D	CS, D	70.74	69.15	62.99	72.65	NA	NA	NA
Norway	L, T	12.3	NCV	T1, T2, T3	CS, PS	59.70	72.83	54.86	74.23	T1, T2, T3	CS	64.21	T2	CS	73.36	73.41	72.75	73.55	T2	CS	73.76
New Zealand[d]	L, T	4.8	NCV	T2, T3	CS, D, PS	73.51	76.90	73.08	73.19	T2, T3	CS, D, PS	69.44	T2, T3	CS, D, PS	70.91	71.16	67.58	72.85	NA	NA	IE
Portugal	L, T	19.3	NCV	T2	CR, D, PS	72.46	76.47	69.21	NO	T2	CR, D, PS	76.22	T2	CR, D	68.47	71.87	63.00	73.07	T1	CR, D	NO
Romania	L, T	9.9	NCV	T1	D	71.39	71.39	IE	IE	T1	D	70.94	T1	D	68.35	70.13	65.92	72.75	NA	NA	NE
Russian Federation	L, T	7.3	NCV	T1, T2	CS, D	73.45	76.51	69.40	72.66	T1	D	73.29	T1	D	69.50	73.83	62.46	72.64	D, T1	CS, D	72.69
Slovakia	L, T	4.7	NCV	T1, T1a, T2	CS	67.04	75.87	66.91	NO	T2	CS	75.49	T2	CS	68.24	68.26	NO	68.21	T2	CS	74.15
Slovenia	L, T	10.4	NCV	T1, T2	CS, D	73.50	73.61	73.01	71.50	T1	CS, D	78.17	T1	CS, D	71.74	71.03	71.81	72.88	NA	NA	NA
Spain	L, T	16.4	NCV	T2	CR, CS, PS	70.20	76.34	64.59	95.31	T2, T3	CR, CS, PS	82.48	T2, T3	CR, CS	71.16	71.52	69.69	72.58	NA	NA	NA
Sweden	L, T	21.1	NCV	T1, T2, T3	CS	64.47	75.30	60.47	74.26	T1, T2, T3	CS	70.40	T1, T2, T3	CS	72.91	70.45	74.09	72.93	T1	CS	NO
Switzerland	L, T	29.4	NCV	CS, T2	CS	61.45	73.50	61.02	NO	CS, T2	CS	73.98	CS, T2	CS	73.50	73.50	73.50	73.63	T2	CS	NO
Turkey	L, T	10.2	NCV	T1	D	73.48	72.60	74.80	IE	T1	D	79.19	T1	D	71.76	IE	68.65	73.23	NA	NA	NO
Ukraine	L, T	0.8	NCV	T1	D	65.33	76.50	63.30	70.64	T1	D	75.49	T1	D	65.46	72.66	62.76	72.85	T1	D	74.08
United Kingdom	L, T	8.0	NCV	OTH, T1, T2	CR, CS	74.69	75.47	75.30	62.23	T2	CS	71.95	T2	CS	72.10	75.84	71.14	73.81	T2, T3	CS	NA
United States[e]	L, T	9.7	GCV	T1	CS	83.76	83.76	IE	IE	T1	CS	72.91	T1	CS	70.09	72.09	69.07	IE	CS, T1	CS	29.78

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.1 Energy industries.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.2 Manufacturing industries and construction.

[c] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.4 Other sectors.

[d] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.5 Other (not specified elsewhere).

[e] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.4

Stationary combustion: solid fuels - CO_2 (2007)

	Key category	Share in national total	IEF in CRF based on GCV or NCV	Energy industries						Manufacturing industries and construction			Other sectors						Other (Not specified elsewhere)		
				Methods and EF used[a]		CO_2 IEF				Method and EF used[b]		CO_2 IEF	Method and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF
				Methods	EF	Total	Public electricity and heat production	Petroleum refining	Manufacture of solid fuels and other energy industries	Methods	EF	Total	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fisheries	Methods	EF	Stationary
		%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia[e]	L, T	36.1	GCV	T2	CS, PS	95.37	95.46	NA	88.31	T2	CS	84.52	T1, T2	CS	96.68	96.75	95.42	NA	T1, T2	CS, D	NA
Austria	L, T	12.5	NCV	T2	CS, PS	93.03	93.03	NO	NO	T2, T3	CS, PS	100.65	T2, T3	CS	94.26	93.10	94.42	94.13	CS, M	CS	NA
Belarus	L, T	3.1	NCV	D, T1	D	97.93	97.93	IE	IE	D, T1	D	103.82	D, T1	D	92.95	93.28	92.86	94.00	D, T1	D	103.53
Belgium	L, T	14.1	NCV			113.21	123.09	NO	35.51			71.13			92.71	92.70	92.71	92.71			NA
Bulgaria	L, T	45.5	NCV	T2	CS	107.01	107.63	NO	50.79	T2	CS	127.45	T2	CS	101.14	99.94	101.16	101.02	NA	NA	NO
Canada[e]	L, T	15.6	GCV	T2	CS	92.83	93.29	86.62	90.48	CS, T2	CS, OTH	47.09	T2	CS	100.15	NO	100.15	NO	NA	NA	NA
Croatia	L, T	8.2	NCV	T1, T2	D, PS	92.94	92.94	NO	NO	T1	D	94.64	T1	D	95.80	94.27	96.33	NO	NA	NA	NO
Czech Republic	L, T	49.9	NCV	T1	CS, D	95.10	96.56	NO	53.58	T1	CS, D	95.97	T1	CS, D	97.14	99.14	96.91	98.65	T1	D	NO
Denmark	L, T	27.1	NCV	CR	CR, CS, D	94.26	94.26	NO	NO	CR	CS	96.20	CR	CS	95.01	NO	97.85	95.00	OTH	CS	NO
Estonia	L, T	59.0	NCV	T1, T2	CS, D	98.28	99.36	86.53	NO	T1, T2	CS, D	98.50	T1, T2	CS, D	98.66	97.86	98.85	96.30	NA	NA	NO
European Community	L, T	20.8	NCV	CR, CS, OTH, T1, T2, T3	CR, CS, D, PS	100.84	100.50	266.89	105.94	CR, CS, M, T1, T2, T3	CR, CS, D, PS	78.86	CR, CS, M, T1, T2, T3	CR, CS, D	99.21	97.16	100.00	95.28	CS, M, OTH, T1, T2, T3	CR, CS, D	0.21
Finland	L, T	21.4	NCV	T3	CS, D, PS	94.07	93.72	93.65	108.95	CS, M, T3	CS, PS	154.04	M, T1, T3	CS, D	93.41	NO	89.87	93.65	CS, T1	CS	NO
France	L, T	10.0	NCV	CR	CS	109.50	106.73	268.00	106.47	CR	CS	133.48	CR	CS	95.00	95.00	95.00	95.00	NA	NA	NO
Germany	L, T	34.7	NCV	CS	CS	101.57	102.50	NO	87.63	CS, T2	CS	33.83	CS	CS	99.38	100.81	98.87	98.00	CS	CS	98.00
Greece	L, T	34.0	NCV	T2	CS, PS	122.00	122.00	NO	NO	T2	PS	96.06	T2	D	94.60	NO	94.60	NO	NA	NA	NO
Hungary	L, T	16.6	NCV	T1, T2, T3	CS, D, PS	101.60	104.12	NO	44.23	T1, T2	CS, D	97.32	T1	D	94.44	93.34	94.49	93.41	NA	NA	NO
Iceland	L	1.4	NCV	T1	D	NO	NO	NO	NO	T1	D	92.71	T1	D	NO	NO	NO	NO	NA	NA	NO
Ireland	L, T	13.7	NCV	T1, T3	CS, PS	103.26	102.99	NO	122.32	T1	CS	94.61	T1	CS	99.31	94.90	99.55	NO	NA	NA	NO
Italy	L, T	12.1	NCV	T3	CS	106.34	95.04	NO	197.52	T2	CS	70.30	T2	CS	95.04	NO	95.04	NO	T2	CS	NA
Japan[e]	L, T	32.9	GCV	T1	CS	93.81	94.73	NO	67.45	T1	CS	98.06	T1	CS	97.09	97.09	NO	113.40	NA	NA	NO
Latvia	L, T	3.4	NCV	T1	CS	93.15	92.90	NO	95.43	T1	CS, PS	91.94	T1	CS	92.56	92.85	92.20	92.20	T1	CS	NA
Liechtenstein		0.0	NCV	T2	CS	NO	NO	NO	NO	T2	CS	NO	CS, T1, T2	CS	94.00	NO	94.00	NO	T1	CS	NO
Lithuania	L, T	4.4	NCV	T2	CR, CS	100.16	99.66	NO	102.00	T2	CR, CS	95.03	T2	CS	95.55	95.17	95.93	97.41			NE, NO
Luxembourg	L, T	1.7	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D, PS	94.80	T1, T2	CS, D	97.50	97.50	97.50	NO	T1	D	NO
Monaco		-	NCV	T1	D	NO	NO	NO	NO	NA	NA	NA, NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Netherlands	L, T	14.8	NCV	T2	CS	107.56	107.56	NO	NO	T2	CS	132.08	T2	CS, D	102.48	104.72	94.69	NO	T2	D	NA
New Zealand[e]	L, T	5.9	GCV	D	CS	94.08	94.08	NO	NO	D	CS	94.29	CS, D	CS, D	94.36	94.19	96.32	94.08	NA	NA	NA
Norway	L, T	1.2	NCV	T1, T2, T3	CS, PS	90.93	90.93	NO	NO	T1, T2, T3	CS	107.60	T2	CS	102.47	NO	102.47	NO	T2	CS	NO
Poland	L, T	55.6	NCV	T2, T3	CS, D, PS	98.17	98.99	NA	80.00	T2, T3	CS, D, PS	112.75	T2, T3	CS, D, PS	94.24	95.09	93.97	95.08	NA	NA	IE
Portugal	L, T	13.1	NCV	T2	CR, D, PS	90.16	90.16	NO	NO	T2	CR, D, PS	98.61	T2	CR, D	NO	NO	NO	NO	T1	CR, D	NO
Romania	L, T	24.4	NCV	T1	D	99.25	99.25	IE	IE	T1	D	158.37	T1	D	95.77	89.40	96.88	104.01	NA	NA	NE
Russian Federation	L, T	13.4	NCV	T1, T2	CS, D	92.38	92.88	52.30	94.60	T1	D	74.29	T1	D	93.35	90.29	93.62	94.88	D, T1	CS, D	93.57
Slovakia	L, T	28.0	NCV	T1, T1a, T2	CS	101.19	100.94	108.93	NO	T2	CS	147.48	T2	CS	103.17	97.17	104.07	101.72	T2	CS	101.49
Slovenia	L, T	32.1	NCV	T1, T2	CS, D	102.75	102.75	NO	NO	T1	CS, D	98.25	T1	CS, D	NO	NO	NO	NO	NA	NA	NA
Spain	L, T	17.7	NCV	T2	CR, CS, PS	97.92	98.12	NA	84.97	T2, T3	CR, CS, PS	117.13	T2, T3	CR, CS	87.09	78.38	90.24	NA	NA	NA	NO
Sweden	L	10.7	NCV	T1, T2, T3	CS	140.85	150.04	NO	71.31	T1, T2, T3	CS	81.11	T1, T2, T3	CS	93.00	NO	NO	93.00	T1	CS	NA
Switzerland	L, T	1.9	NCV	CS, T2	CS	94.00	NO	94.00	NO	CS, T2	CS	96.12	CS, T2	CS	94.00	NO	94.00	NO	T2	CS	NO
Turkey	L, T	31.1	NCV	T1	D	97.61	97.61	NA	IE	T1	D	99.21	T1	D	136.83	IE	136.83	NO	NA	NA	NO
Ukraine	L, T	21.4	NCV	T1	D	91.35	96.28	96.30	57.47	T1	D	76.51	T1	D	96.55	96.51	96.58	96.34	T1	D	96.31
United Kingdom	L, T	22.7	NCV	OTH, T1, T2	CR, CS	90.54	90.66	NO	81.32	T2	CS	141.25	T2	CS	104.19	92.58	106.05	88.09	T2, T3	CS	NA
United States[e]	L, T	29.6	GCV	T1	CS	94.22	94.22	IE	IE	T1	CS	93.77	T1	CS	95.13	95.13	95.13	IE	CS, T1	CS	77.19

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.1 Energy industries.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.2 Manufacturing industries and construction.

[c] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.4 Other sectors.

[d] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.5 Other (not specified elsewhere).

[e] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.5

Stationary combustion: gaseous fuels - CO_2 (2007)

	Key category	Share in national total	IEF in CRF based on GCV or NCV	Energy industries						Manufacturing industries and construction			Other sectors							Other (Not specified elsewhere)		
				Methods and EF used[a]		CO_2 IEF				Method and EF used[b]		CO_2 IEF	Method and EF used[c]		CO_2 IEF					Method and EF used[d]		CO_2 IEF
				Methods	EF	Total	Public electricity and heat production	Petroleum refining	Manufacture of solid fuels and other energy industries	Methods	EF	Total	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fisheries	Methods	EF	Stationary
		%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia[e]	L, T	10.5	GCV	T2	CS, PS	56.88	56.91	56.84	56.84	T2	CS	56.89	T1, T2	CS	56.95	56.90	56.97	56.84	T1, T2	CS, D	NA
Austria	L, T	17.5	NCV	T2	CS, PS	55.40	55.40	55.40	55.40	T2, T3	CS, PS	55.36	T2, T3	CS	55.40	55.40	55.40	55.40	CS, M	CS	NA
Belarus	L, T	46.4	NCV	D, T1	D	55.85	55.85	IE	IE	D, T1	D	58.12	D, T1	D	55.82	55.82	55.82	55.82	D, T1	D	56.58
Belgium	L, T	24.5	NCV			55.95	55.95	55.82	NO			55.85			55.81	55.81	55.81	55.82			NA
Bulgaria	L	8.3	NCV	T2	CS	55.82	55.82	55.82	55.82	T2	CS	55.82	T2	CS	55.80	55.80	55.80	55.80	NA	NA	NO
Canada[e]	L, T	26.1	GCV	T2	CS	57.18	54.96	39.76	64.47	CS, T2	CS, OTH	56.61	T2	CS	55.38	55.57	55.15	57.60	NA	NA	NA
Croatia	L, T	15.9	NCV	T1, T2	D, PS	55.88	55.90	55.82	55.82	T1	D	55.17	T1	D	55.73	55.68	55.74	55.82	NA	NA	NO
Czech Republic	L, T	11.0	NCV	T1	CS, D	55.82	55.82	55.82	55.82	T1	CS, D	55.82	T1	CS, D	55.82	55.82	55.82	55.82	T1	D	NO
Denmark	L, T	14.2	NCV	CR	CR, CS, D	56.78	56.78	NO	56.78	CR	CS	56.78	CR	CS	56.78	56.78	56.78	56.78	OTH	CS	NO
Estonia	L, T	9.6	NCV	T1, T2	CS, D	67.23	67.23	NO	NO	T1, T2	CS, D	55.82	T1, T2	CS, D	55.82	55.82	55.82	55.82	NA	NA	NO
European Community	L, T	20.9	NCV	CR, CS, OTH, T1, T2, T3	CR, CS, D, PS	56.69	56.14	56.26	64.57	CR, CS, M, T1, T2, T3	CR, CS, D, PS	56.25	CR, CS, M, T1, T2, T3	CR, CS, D	56.41	56.37	56.43	56.59	CS, M, OTH, T1, T2, T3	CR, CS, D	55.52
Finland	L, T	10.3	NCV	T3	CS, D, PS	54.77	54.77	54.76	NO	CS, M, T3	CS, PS	54.81	M, T1, T3	CS, D	54.76	54.76	54.76	54.76	CS, T1	CS	54.76
France	L, T	15.5	NCV	CR	CS	56.76	57.00	55.69	NO	CR	CS	57.00	CR	CS	57.00	57.00	57.00	57.00	NA	NA	NO
Germany	L, T	17.3	NCV	CS	CS	56.00	56.00	56.00	55.79	CS, T2	CS	56.00	CS	CS	56.00	56.00	56.00	56.00	CS	CS	56.00
Greece	L, T	5.6	NCV	T2	CS, PS	55.07	55.01	NO	58.86	T2	PS	55.81	T2	D	55.82	55.82	55.82	NO	NA	NA	NO
Hungary	L, T	31.5	NCV	T1, T2, T3	CS, D, PS	55.82	55.82	55.82	55.82	T1, T2	CS, D	55.82	T1	D	55.82	55.82	55.82	55.82	NA	NA	NO
Iceland		0.0	NCV	T1	D	NO	NO	NO	NO	T1	D	127.51	T1	D	NO	NO	NO	NO	NA	NA	NO
Ireland	L, T	14.8	NCV	T1, T3	CS, PS	56.76	56.76	NO	NO	T1	CS	57.11	T1	CS	57.11	57.11	57.11	NO	NA	NA	NO
Italy	L, T	28.8	NCV	T3	CS	55.64	55.64	55.64	55.64	T2	CS	55.64	T2	CS	55.64	55.64	55.64	55.64	T2	CS	NA
Japan[e]	L, T	14.8	GCV	T1	CS	54.90	54.90	54.89	55.04	T1	CS	55.10	T1	CS	55.24	55.08	55.53	55.04	NA	NA	NO
Latvia	L, T	26.2	NCV	T1	CS	55.82	55.82	NO	55.82	T1	CS, PS	55.82	T1	CS	55.82	55.82	55.82	55.82	T1	CS	NA
Liechtenstein	L, T	30.5	NCV	T2	CS	55.00	55.00	NO	NO	T2	CS	55.00	CS, T1, T2	CS	55.00	55.00	55.00	NO	T1	CS	NO
Lithuania	L, T	17.2	NCV	T2	CR, CS	56.90	56.90	56.90	56.90	T2	CR, CS	56.90	T2	CS	56.90	56.90	56.90	56.90			NE, NO
Luxembourg	L, T	24.6	NCV	T1, T2	CS, D	56.79	56.79	NO	NO	T1, T2	CS, D, PS	56.79	T1, T2	CS, D	56.79	56.79	56.79	NO	T1	D	NO
Monaco	L, T	11.8	NCV	T1	D	56.72	56.72	NO	NO	NA	NA	NA, NO	T1	D	56.72	IE	56.72	NO	NA	NA	NO
Netherlands	L, T	36.1	NCV	T2	CS	57.67	56.70	56.70	72.37	T2	CS	56.67	T2	CS, D	56.70	56.70	56.70	56.70	T2	D	NA
New Zealand[e]	L, T	11.5	GCV	D	CS	59.39	58.21	66.94	59.90	D	CS	66.34	CS, D	CS, D	59.21	59.21	59.21	59.21	NA	NA	NA
Norway	L, T	20.9	NCV	T1, T2, T3	CS, PS	66.18	64.90	NO	66.20	T1, T2, T3	CS	71.23	T2	CS	65.54	65.54	65.54	65.54	T2	CS	NO
Poland	L, T	6.0	NCV	T2, T3	CS, D, PS	55.26	54.62	55.78	55.82	T2, T3	CS, D, PS	55.27	T2, T3	CS, D, PS	55.82	55.82	55.82	55.69	NA	NA	IE
Portugal	L, T	10.6	NCV	T2	CR, D, PS	55.82	55.82	55.82	NO	T2	CR, D, PS	55.82	T2	CR, D	55.82	55.82	55.82	55.82	T1	CR, D	NO
Romania	L, T	17.6	NCV	T1	D	55.82	55.82	IE	IE	T1	D	55.82	T1	D	55.82	55.82	55.82	55.82	NA	NA	NE
Russian Federation	L, T	31.8	NCV	T1, T2	CS, D	55.29	55.26	55.82	55.82	T1	D	55.82	T1	D	55.82	55.82	55.82	55.82	D, T1	CS, D	55.82
Slovakia	L, T	25.7	NCV	T1, T1a, T2	CS	76.57	55.16	52.55	209.68	T2	CS	60.47	T2	CS	55.19	55.19	55.19	55.19	T2	CS	55.18
Slovenia	L, T	8.7	NCV	T1, T2	CS, D	55.02	55.02	NO	NO	T1	CS, D	55.02	T1	CS, D	55.02	55.02	55.02	NO	NA	NA	NA
Spain	L, T	16.8	NCV	T2	CR, CS, PS	56.59	56.56	57.25	56.00	T2, T3	CR, CS, PS	56.01	T2, T3	CR, CS	56.00	56.00	56.00	56.00	NA	NA	NA
Sweden	L, T	3.2	NCV	T1, T2, T3	CS	56.50	56.50	56.50	NO	T1, T2, T3	CS	56.50	T1, T2, T3	CS	56.50	56.50	56.50	56.50	T1	CS	56.50
Switzerland	L, T	11.6	NCV	CS, T2	CS	55.00	55.00	NO	NO	CS, T2	CS	55.00	CS, T2	CS	55.00	55.00	55.00	55.00	T2	CS	NO
Turkey	L, T	20.8	NCV	T1	D	55.82	55.82	55.8195	IE	T1	D	59.36	T1	D	59.50	IE	59.50	NO	NA	NA	NO
Ukraine	L	23.8	NCV	T1	D	55.82	55.82	55.82	55.82	T1	D	55.82	T1	D	55.82	55.82	55.82	55.82	T1	D	55.82
United Kingdom	L, T	30.2	NCV	OTH, T1, T2	CR, CS	58.27	56.52	57.05	66.24	T2	CS	57.05	T2	CS	57.05	57.05	57.05	57.05	T2, T3	CS	NA
United States[e]	L, T	16.8	GCV	T1	CS	55.88	55.88	IE	IE	T1	CS	55.88	T1	CS	55.88	55.88	55.88	IE	CS, T1	CS	24.16

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.1 Energy industries.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.2 Manufacturing industries and construction.

[c] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.4 Other sectors.

[d] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.5 Other (not specified elsewhere).

[e] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.6

Stationary combustion: other fuels - CO_2 (2007)

	Key category	Share in national total	IEF in CRF based on GCV or NCV	Energy industries						Manufacturing industries and construction			Other sectors						Other (Not elsewhere specified)		
				Methods and EF used[a]		CO_2 IEF				Method and EF used[b]		CO_2 IEF	Method and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF
				Methods	EF	Total	Public electricity and heat production	Petroleum refining	Manufacture of solid fuels and other energy industries	Methods	EF	Total	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fisheries	Methods	EF	Stationary
		%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia[e]		-	GCV	T2	CS, PS	NA	NA	NA	NA	T2	CS	NA	T1, T2	CS	NA	NA	NA	NA	T1, T2	CS, D	NA
Austria	L, T	2.0	NCV	T2	CS, PS	55.57	55.57	NO	NO	T2, T3	CS, PS	55.51	T2, T3	CS	104.17	104.17	NO	NO	CS, M	CS	NA
Belarus		-	NCV	D, T1	D	NO	NO	NO	NO	D, T1	D	IE, NE	D, T1	D	NO	NO	NO	NO	D, T1	D	NO
Belgium	L, T	4.6	NCV			107.32	107.32	NO	NO			56.95			65.58	65.50	66.00	NO			NA
Bulgaria		-	NCV	T2	CS	NO	NO	NO	NO	T2	CS	NO	T2	CS	NO	NO	NO	NO	NA	NA	NO
Canada[e]		0.0	GCV	T2	CS	NA	NA	NA	NA	CS, T2	CS, OTH	85.00	T2	CS	NA	NA	NA	NA	NA	NA	NA
Croatia		-	NCV	T1, T2	D, PS	NO	NO	NO	NO	T1	D	NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Czech Republic		-	NCV	T1	CS, D	NO	NO	NO	NO	T1	CS, D	NO	T1	CS, D	NO	NO	NO	NO	T1	D	NO
Denmark	L, T	1.0	NCV	CR	CR, CS, D	IE, NO	IE	NO	NO	CR	CS	IE, NO	CR	CS	IE, NO	IE	NO	NO	OTH	CS	NO
Estonia		-	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D	NA, NO	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	NO
European Community	L, T	1.4	NCV	CR, CS, OTH, T1, T2, T3	CR, CS, D, PS	82.61	79.48	NA, NO	132.58	CR, CS, M, T1, T2, T3	CR, CS, D, PS	71.18	CR, CS, M, T1, T2, T3	CR, CS, D	102.95	106.16	66.28	100.98	CS, M, OTH, T1, T2, T3	CR, CS, D	NA, NO
Finland	L, T	14.1	NCV	T3	CS, D, PS	100.43	100.43	NO	NO	CS, M, T3	CS, PS	98.10	M, T1, T3	CS, D	100.98	100.98	100.98	100.98	CS, T1	CS	NO
France	L, T	1.7	NCV	CR	CS	108.03	95.79	NO	132.58	CR	CS	51.94	CR	CS	57.00	57.00	57.00	NO	NA	NA	NO
Germany	L, T	1.8	NCV	CS	CS	91.51	91.51	NO	NO	CS, T2	CS	73.45	CS	CS	NO	NO	NO	NO	CS	CS	NO
Greece		-	NCV	T2	CS, PS	NO	NO	NO	NO	T2	PS	NO	T2	D	NO	NO	NO	NO	NA	NA	NO
Hungary		0.1	NCV	T1, T2, T3	CS, D, PS	NO	NO	NO	NO	T1, T2	CS, D	4.56	T1	D	NO	NO	NO	NO	NA	NA	NO
Iceland	T	0.6	NCV	T1	D	91.48	91.48	NO	NO	T1	D	NO	T1	D	91.48	91.48	NO	NO	NA	NA	NO
Ireland		-	NCV	T1, T3	CS, PS	NO	NO	NO	NO	T1	CS	NO	T1	CS	NO	NO	NO	NO	NA	NA	NO
Italy	L, T	0.8	NCV	T3	CS	94.00	94.00	NO	NO	T2	CS	260.40	T2	CS	112.90	112.90	NO	NO	T2	CS	NA
Japan[e]	L, T	1.2	GCV	T1	CS	NE	NE	IE	NE	T1	CS	NE, NO	T1	CS	NO	NO	NO	NO	NA	NA	NO
Latvia		0.1	NCV	T1	CS	NO	NO	NO	NO	T1	CS, PS	79.40	T1	CS	NO	NO	NO	NO	T1	CS	NA
Liechtenstein		-	NCV	T2	CS	NO	NO	NO	NO	T2	CS	NO	CS, T1, T2	CS	NO	NO	NO	NO	T1	CS	NO
Lithuania		-	NCV	T2	CR, CS	NO	NO	NO	NO	T2	CR, CS	NO	T2	CS	NO	NO	NO	NO			NE, NO
Luxembourg	L	0.9	NCV	T1, T2	CS, D	97.55	97.55	NO	NO	T1, T2	CS, D, PS	86.87	T1, T2	CS, D	NO	NO	NO	NO	T1	D	NO
Monaco	L, T	29.3	NCV	T1	D	55.57	55.57	NO	NO	NA	NA	NA, NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Netherlands	L, T	1.1	NCV	T2	CS	70.28	70.28	NO	NO	T2	CS	NA, NO	T2	CS, D	NO	NO	NO	NO	T2	D	NA
New Zealand[e]		-	GCV	D	CS	IE, NO	NO	IE	NO	D	CS	NO	CS, D	CS, D	NO	NO	NO	NO	NA	NA	NA
Norway		0.4	NCV	T1, T2, T3	CS, PS	23.90	23.90	NO	NO	T1, T2, T3	CS	20.01	T2	CS	NO	NO	NO	NO	T2	CS	NO
Poland		-	NCV	T2, T3	CS, D, PS	NA	NA	NA	NA	T2, T3	CS, D, PS	NA	T2, T3	CS, D, PS	NA	NA	NA	NA	NA	NA	IE
Portugal	T	0.6	NCV	T2	CR, D, PS	115.16	115.16	NO	NO	T2	CR, D, PS	66.68	T2	CR, D	NO	NO	NO	NO	T1	CR, D	NO
Romania		-	NCV	T1	D	IE, NE	NE	NE	IE	T1	D	IE, NE	T1	D	NE	NE	NE	NE	NA	NA	NE
Russian Federation	L	0.8	NCV	T1, T2	CS, D	142.29	142.29	142.29	NA	T1	D	142.29	T1	D	142.29	142.29	NO	142.29	D, T1	CS, D	126.56
Slovakia		0.1	NCV	T1, T1a, T2	CS	227.99	227.99	NO	NO	T2	CS	NO	T2	CS	NO	NO	NO	NO	T2	CS	NO
Slovenia		0.1	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1	CS, D	71.36	T1	CS, D	NA, NO	NO	NO	NO	NA	NA	NA
Spain	T	0.3	NCV	T2	CR, CS, PS	35.12	35.12	NA	NA	T2, T3	CR, CS, PS	73.95	T2, T3	CR, CS	NA	NA	NA	NA	NA	NA	NO
Sweden	L, T	2.1	NCV	T1, T2, T3	CS	28.17	28.17	NO	NO	T1, T2, T3	CS	56.00	T1, T2, T3	CS	NO	NO	NO	NO	T1	CS	NO
Switzerland	L, T	4.8	NCV	CS, T2	CS	44.43	44.43	NO	NO	CS, T2	CS	58.32	CS, T2	CS	NO	NO	NO	NO	T2	CS	NO
Turkey		-	NCV	T1	D	NO	NO	NO	NO	T1	D	NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Ukraine		0.5	NCV	T1	D	87.82	103.24	71.87	94.61	T1	D	85.63	T1	D	96.19	96.07	96.15	96.26	T1	D	96.30
United Kingdom		0.2	NCV	OTH, T1, T2	CR, CS	30.47	30.47	NO	NO	T2	CS	68.66	T2	CS	30.47	30.47	NA	NO	T2, T3	CS	NA
United States[e]	T	0.3	GCV	T1	CS	417.08	417.08	NA	NA	T1	CS	NA	T1	CS	IE, NA	NA	NA	IE	CS, T1	CS	NA, NE

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.1 Energy industries.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.2 Manufacturing industries and construction.

[c] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.4 Other sectors.

[d] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.5 Other (not specified elsewhere).

[e] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.7

Fuel consumption in stationary combustion: all fuels - trend information

Fuel consumption (TJ)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2,672,015	4,020,137	0.6	4.1	2.8	2.9	5.3	3.1	1.3	2.8	0.8	4.6	0.4	2.7	2.0	2.8	50.5
Austria	640,013	758,921	6.3	6.4	6.3	-0.9	-2.9	0.8	-4.0	8.0	0.0	8.3	-1.0	3.4	0.3	-6.4	18.6
Belarus	1,266,663	853,126	-8.5	-10.5	2.4	7.1	-2.7	-2.2	-2.5	-1.0	-1.2	1.4	6.4	1.3	2.3	-1.9	-32.6
Belgium	1,204,443	1,249,448	6.7	3.4	5.6	-6.0	7.1	-4.8	0.0	1.0	-2.3	4.3	-0.7	-1.2	-2.8	-3.7	3.7
Bulgaria	916,095	518,156	-17.0	7.2	-2.3	-3.8	-10.9	-9.9	-0.1	2.0	-5.2	6.8	-1.7	0.3	1.6	7.5	-43.4
Canada	4,944,220	6,363,503	-1.7	1.9	2.5	0.8	1.5	4.5	5.9	-1.7	2.7	3.7	-2.0	-3.8	-4.0	9.1	28.7
Croatia	252,954	227,037	-27.0	1.8	5.9	4.2	5.3	0.6	-3.8	4.1	5.2	7.8	-4.2	-0.3	-3.3	6.8	-10.2
Czech Republic	1,563,685	1,231,794	-1.5	4.9	7.5	-6.8	-5.7	-1.1	3.6	2.0	-3.4	1.2	-0.1	-0.1	-0.5	-0.6	-21.2
Denmark	537,273	598,643	20.7	-2.9	24.6	-13.3	-5.6	-4.3	-6.7	4.6	-0.1	9.9	-9.2	-5.6	15.3	-9.0	11.4
Estonia	376,094	197,066	-6.3	-5.4	7.1	-3.1	-11.0	-5.9	-0.4	1.1	-2.6	11.5	2.0	-3.3	-6.7	16.3	-47.6
European Community	32,349,108	34,253,402	2.6	2.1	4.0	-2.3	1.7	-0.9	1.0	3.0	-1.0	2.9	0.8	-0.4	-0.1	-2.7	5.9
Finland	673,056	884,251	-2.2	-3.8	8.3	0.2	-2.0	1.2	-2.8	6.3	5.3	10.0	-3.7	-15.8	19.8	-4.9	31.4
France	3,626,751	3,689,154	11.1	2.2	6.2	-3.9	6.7	-4.4	-0.6	2.0	-3.6	3.2	1.5	1.7	-2.9	-3.7	1.7
Germany	9,870,882	8,569,687	-2.1	-0.2	4.7	-3.5	-1.1	-4.1	0.7	4.2	-2.1	1.7	-0.3	-2.5	3.4	-4.5	-13.2
Greece	663,678	947,272	-0.8	1.0	4.6	4.7	4.8	-0.5	10.1	1.8	-0.1	4.3	-0.6	1.3	0.0	3.8	42.7
Hungary	988,173	707,990	-1.0	2.0	1.8	-2.7	-1.2	-2.8	-3.2	3.2	-2.6	5.9	-2.8	5.2	-3.7	-6.1	-28.4
Iceland	14,393	13,541	-5.9	2.2	8.6	2.7	-3.0	0.8	-7.9	-3.5	6.4	-7.0	1.1	-4.4	-9.3	2.0	-5.9
Ireland	306,673	426,602	3.6	2.3	3.1	3.2	5.0	3.9	4.4	5.1	-2.7	-0.5	1.0	2.6	-0.6	-1.8	39.1
Italy	4,285,668	4,911,137	0.2	7.9	-0.9	0.8	3.0	2.5	0.9	1.1	-0.5	5.0	0.7	1.6	-1.8	-2.0	14.6
Japan	12,091,879	14,138,061	0.1	0.7	0.7	-0.7	-2.8	3.8	1.8	-2.1	4.6	0.8	-0.3	1.2	-0.7	4.5	16.9
Latvia	255,992	123,704	-4.9	-4.8	1.3	-3.1	-3.4	-6.4	-10.0	5.9	-0.7	3.7	0.8	0.0	2.3	-2.5	-51.7
Liechtenstein	1,869	2,156	-3.5	1.2	2.1	5.7	8.6	-2.8	-4.8	0.8	6.0	7.2	2.1	0.8	3.2	-17.0	15.3
Lithuania	400,063	148,303	4.9	-9.3	2.9	-6.2	3.7	-13.8	-6.9	5.4	1.1	1.4	3.9	4.1	-1.5	-6.6	-62.9
Luxembourg	67,169	76,051	4.4	-11.1	4.1	-5.2	-6.2	2.8	-0.4	3.5	24.6	-0.3	12.3	-2.1	1.7	-1.9	13.2
Monaco	1,146	988	-3.7	-1.6	6.0	3.9	-1.7	0.6	0.6	1.7	-3.3	-7.8	-7.9	0.3	-14.6	7.2	-13.8
Netherlands	1,913,589	2,009,317	5.1	2.2	7.3	-5.3	0.8	-4.4	1.5	4.4	-1.9	1.5	1.6	-3.4	-2.1	-0.5	5.0
New Zealand	265,046	293,593	-0.7	-11.1	2.1	9.0	-9.7	9.5	1.1	9.7	-4.4	8.1	-7.5	12.9	0.8	-2.8	10.8
Norway	251,657	334,820	-2.9	-2.4	10.7	0.8	-2.7	-1.1	0.9	7.2	1.7	6.4	-2.8	-2.7	3.8	-2.0	33.0
Poland	4,419,948	3,139,558	1.5	0.6	2.8	-1.8	-7.4	-2.7	-3.8	0.9	-3.1	3.4	-0.3	-0.5	3.0	-1.8	-29.0
Portugal	470,290	624,626	4.5	6.8	-7.3	5.4	7.9	17.9	-6.5	2.1	8.1	-8.2	6.2	5.4	-8.5	-3.3	32.8
Romania	2,119,111	1,184,449	-20.2	11.1	5.4	-15.7	-12.1	-10.8	1.2	0.5	4.6	7.7	-2.1	-4.3	2.5	-2.4	-44.1
Russian Federation	27,907,189	18,323,971	-5.4	-4.0	-1.2	-4.6	-3.7	1.9	2.0	1.0	-0.8	2.2	-0.8	-0.4	3.2	-0.8	-34.3
Slovakia	632,435	359,481	-6.4	-3.7	-2.3	-3.1	-0.8	-1.3	-3.5	3.9	-6.5	2.8	-2.3	-1.7	-4.8	-7.0	-43.2
Slovenia	170,401	145,591	-3.1	2.6	2.4	1.3	3.3	-4.2	-1.4	3.8	0.7	-1.3	1.9	0.6	-2.1	-5.8	-14.6
Spain	1,936,087	3,280,634	3.8	7.2	-7.6	11.1	0.9	10.0	5.1	0.9	8.0	2.3	6.9	6.4	-3.7	1.6	69.4
Sweden	558,800	604,634	3.8	0.1	11.1	-9.8	0.6	-5.4	-4.7	6.9	-0.4	2.1	-1.8	-2.7	1.2	-0.9	8.2
Switzerland	409,326	415,698	6.5	4.5	4.2	-4.0	3.8	-0.9	-4.3	4.5	-2.5	4.0	1.2	2.1	-1.3	-7.3	1.6
Turkey	1,235,492	3,213,590	6.3	9.2	12.0	0.1	11.3	0.1	13.9	-7.1	4.5	8.9	3.6	14.1	5.7	9.9	160.1
Ukraine	7,372,401	2,994,047	0.8	-8.4	-8.2	-7.9	-26.1	-1.5	-6.1	-0.6	-0.6	7.9	-2.0	2.6	2.6	-3.4	-59.4
United Kingdom	5,634,754	5,687,145	3.3	-0.1	5.3	-4.2	2.3	-0.5	3.1	2.9	-3.6	2.0	0.7	-1.0	-1.5	-2.3	0.9
United States	53,394,124	63,000,875	0.4	1.1	3.7	1.4	-0.3	0.7	3.0	-2.1	0.7	0.8	0.9	0.3	-1.8	2.2	18.0

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.8

Fuel consumption in stationary combustion: liquid fuels – trend information

Fuel consumption (TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	399,998	526,173	0.1	3.1	1.8	-5.8	1.9	2.3	1.2	1.2	1.9	8.4	-3.3	9.8	5.7	0.9	31.5
Austria	196,415	162,312	6.5	-0.6	7.6	0.8	0.7	-6.9	-9.8	6.7	-6.2	8.1	-3.4	-4.3	4.7	-15.4	-17.4
Belarus	644,377	119,700	-3.4	-10.3	-5.0	-9.0	-2.3	-11.5	-17.6	-6.2	-10.6	-7.7	2.5	-6.8	7.9	-14.4	-81.4
Belgium	399,404	314,531	14.1	-0.5	8.7	-6.7	3.3	-12.5	-6.6	10.2	-6.7	6.0	-2.0	-3.0	-8.3	-8.0	-21.2
Bulgaria	276,792	55,630	-26.3	-1.2	-12.5	-9.3	-6.2	-5.3	-19.6	-4.2	-0.9	1.8	-7.2	-5.4	2.4	4.4	-79.9
Canada	656,828	421,035	-11.1	-2.9	2.1	1.6	3.8	-6.4	1.4	4.6	-8.2	19.4	-2.3	-11.2	-20.6	3.7	-35.9
Croatia	126,152	92,639	-29.7	16.4	0.1	0.3	10.7	5.6	-18.2	4.3	1.7	12.5	-14.7	3.4	-4.7	0.6	-26.6
Czech Republic	184,964	66,316	-7.9	4.4	14.4	-37.5	7.9	23.7	-13.4	-9.4	-6.4	-9.8	14.0	-6.5	-8.8	-21.5	-64.1
Denmark	158,622	109,991	3.7	7.6	15.8	-10.3	-5.6	-1.8	-6.6	1.2	-3.9	-11.6	-7.4	-4.4	1.0	-7.5	-30.7
Estonia	82,534	9,296	-0.5	-30.8	10.4	-12.1	-3.9	-9.4	-37.5	15.2	-8.4	-3.9	-5.5	-5.4	-23.3	5.0	-88.7
European Community	9,782,664	7,267,394	5.3	1.5	1.8	-3.8	0.0	-5.3	-4.1	4.2	-4.7	-1.0	-3.4	-1.3	-3.0	-10.7	-25.7
Finland	203,355	162,919	-3.7	-3.8	2.9	-4.0	4.2	-0.7	-6.7	2.7	1.4	-1.9	-3.2	-3.1	-0.2	-2.0	-19.9
France	1,459,165	1,208,270	8.4	3.3	3.2	-3.2	4.2	-5.4	-6.6	4.6	-8.3	2.1	0.4	0.0	-3.2	-6.6	-17.2
Germany	1,982,471	1,244,883	15.2	-2.1	6.7	-5.5	-3.7	-11.9	-4.7	9.6	-8.3	-0.7	-6.8	-0.1	2.6	-25.6	-37.2
Greece	300,526	421,526	2.4	7.2	12.4	1.0	0.1	-2.8	8.4	1.6	2.8	8.1	-6.4	3.6	3.7	-2.9	40.3
Hungary	254,351	107,683	-2.4	-12.3	-12.4	7.9	-7.4	-13.7	0.6	-11.1	-15.4	-13.0	-3.3	13.9	0.7	3.6	-57.7
Iceland	13,879	12,589	-5.7	3.0	9.0	2.0	-3.6	0.9	-8.2	-4.3	7.4	-7.0	-0.7	-3.2	-10.7	-0.5	-9.3
Ireland	98,437	144,140	11.8	1.3	-4.6	13.0	10.0	14.1	-5.5	7.2	-9.0	-6.0	4.1	3.8	-6.7	-9.6	46.4
Italy	2,050,491	1,130,013	-2.7	6.4	-3.3	-2.0	-2.2	-4.5	-3.3	-1.4	-1.3	-4.5	-10.6	-7.4	-3.7	-11.6	-44.9
Japan	6,433,479	4,830,240	-1.8	-2.0	-2.1	-4.9	-4.3	1.9	-2.5	-6.3	4.1	-2.8	-3.0	0.8	-8.9	1.7	-24.9
Latvia	98,894	13,329	-13.0	-25.1	13.9	-21.5	-1.6	-10.6	-38.2	-21.1	-5.3	-2.5	-3.5	-11.7	4.0	-7.7	-86.5
Liechtenstein	1,303	639	-12.3	-2.9	-6.9	13.4	7.1	-12.0	-12.0	-4.8	12.8	6.0	-2.8	-4.4	4.3	-39.2	-50.9
Lithuania	187,288	32,518	6.2	-20.9	1.2	-8.3	21.7	-28.2	-29.7	12.5	-7.8	-16.3	5.5	4.3	-10.7	-15.7	-82.6
Luxembourg	17,074	14,257	23.9	-8.4	6.9	-1.7	3.5	-0.5	-5.2	7.2	-16.7	-3.2	12.4	-4.9	-7.1	-2.8	-16.5
Monaco	507	257	-15.4	-6.2	7.7	-7.6	4.7	-2.3	-8.8	-5.5	9.4	7.0	-7.9	-0.8	-7.8	-20.4	-49.3
Netherlands	365,479	317,885	-3.9	-2.9	0.1	-2.1	3.3	-3.9	-1.7	4.8	-13.2	4.6	-0.7	-2.7	-3.5	7.0	-13.0
New Zealand	36,640	39,281	-5.8	2.6	-1.8	-2.0	-3.3	3.6	2.3	-1.9	2.8	7.0	1.8	0.6	-6.1	2.4	7.2
Norway	120,304	101,943	-8.1	-8.1	19.1	-6.5	0.9	2.3	-11.5	5.3	-0.3	7.3	-10.9	-8.0	6.5	-9.5	-15.3
Poland	255,226	271,201	-6.4	2.4	14.5	13.2	-0.9	-1.4	7.1	1.4	-1.8	9.3	-0.3	-5.6	-7.9	-8.9	6.3
Portugal	255,247	216,906	4.8	7.1	-10.3	7.2	11.8	0.2	-10.3	4.8	6.3	-16.0	2.6	10.0	-19.3	-7.7	-15.0
Romania	446,052	214,302	-27.9	3.6	13.5	-1.3	-19.0	-21.0	-4.1	10.6	1.9	-12.1	7.0	-7.7	-8.8	10.0	-52.0
Russian Federation	8,384,563	2,215,974	-5.2	-2.9	-5.0	-2.8	-10.0	0.7	-1.2	-1.6	-6.6	-1.4	-0.1	-2.1	1.3	-6.1	-73.6
Slovakia	81,347	31,028	-12.2	-8.3	-6.9	-5.5	-4.1	-2.8	-7.5	1.2	1.7	6.8	9.8	-22.7	-2.3	-4.5	-61.9
Slovenia	37,559	29,404	-0.9	5.4	15.0	-2.0	-0.2	3.6	-8.1	0.7	-6.3	-5.1	-1.5	-1.7	-3.5	-23.9	-21.7
Spain	855,514	973,621	4.3	6.0	-7.4	2.3	2.6	6.2	-1.2	3.0	1.8	-1.2	2.7	-0.5	-5.1	-4.6	13.8
Sweden	297,250	197,981	0.8	-2.1	12.4	-12.9	-0.2	-9.1	-4.2	-1.6	-0.5	0.7	-7.5	-10.9	-1.4	-9.3	-33.4
Switzerland	261,389	207,151	7.8	2.7	3.5	-4.2	4.3	-3.2	-8.4	4.5	-3.6	3.6	-0.4	0.5	-3.4	-12.2	-20.7
Turkey	493,755	511,370	-1.4	6.9	5.6	5.9	-6.7	-2.4	10.7	-6.5	3.1	-1.2	-0.8	-8.4	-11.4	-6.0	3.6
Ukraine	1,351,836	53,341	59.8	-22.6	-20.5	-14.0	-73.2	-33.2	-38.7	9.9	0.5	-13.0	-4.7	19.9	-26.0	-9.2	-96.1
United Kingdom	1,178,328	704,420	2.1	-4.5	-0.3	-11.8	-3.6	-6.8	-3.1	4.9	-8.3	-2.7	2.9	3.4	-7.4	-5.9	-40.2
United States	12,384,995	13,112,382	-1.9	-4.7	6.1	1.3	0.4	2.4	-0.4	2.7	-4.9	4.9	3.3	0.6	-3.5	-2.3	5.9

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.9

Fuel consumption in stationary combustion: solid fuels – trend information

Fuel consumption (TJ)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1,448,771	2,177,433	3.3	2.9	4.2	4.8	6.5	3.0	1.0	2.9	0.9	4.3	0.5	1.2	2.3	0.1	50.3
Austria	139,820	113,480	4.5	14.1	0.7	5.3	-21.4	2.2	14.2	8.1	-1.2	13.8	-2.4	-1.4	-1.5	-6.7	-18.8
Belarus	105,401	25,508	-9.0	-15.4	5.7	-18.9	-8.5	-14.4	8.3	-11.4	-13.6	-5.5	-7.6	5.0	-6.1	-4.0	-75.8
Belgium	423,131	209,407	-0.1	-2.0	-5.2	-9.4	5.8	-14.7	6.8	-9.3	0.0	-2.5	-1.9	-8.0	-5.0	-10.6	-50.5
Bulgaria	422,902	316,197	-12.2	2.1	0.7	4.8	-12.8	-10.0	0.8	8.8	-6.6	9.7	-2.3	-1.6	0.3	12.2	-25.2
Canada	1,120,770	1,406,914	3.7	2.6	1.3	5.4	7.7	0.8	7.7	-0.6	-1.9	2.3	-3.4	-3.0	-2.1	4.4	25.5
Croatia	28,889	28,504	-38.9	11.7	-19.0	64.9	-3.2	-13.6	119.2	5.4	22.1	12.5	7.3	-1.7	-7.5	8.0	-1.3
Czech Republic	1,134,431	789,981	-1.8	-0.5	4.1	-5.0	-9.8	-5.5	9.6	1.7	-4.0	-0.9	-2.5	0.0	2.8	2.4	-30.4
Denmark	254,835	195,268	35.7	-16.3	37.4	-25.6	-15.1	-16.0	-16.2	5.7	0.2	36.6	-23.5	-15.6	50.3	-16.2	-23.4
Estonia	236,963	132,193	-9.5	-7.9	3.6	-2.5	-11.2	-6.1	0.3	-2.8	-3.5	16.6	1.6	-5.0	-5.8	23.5	-44.2
European Community	12,079,734	8,709,001	-4.4	-2.5	-2.0	-5.4	-0.5	-5.2	3.7	0.7	0.1	2.9	-1.1	-2.2	1.9	0.0	-27.9
Finland	145,480	163,828	-7.9	-20.1	29.9	-10.3	-26.3	1.5	-1.8	15.1	12.7	36.6	-11.4	-45.7	81.0	-13.3	12.6
France	661,754	455,994	10.4	0.4	6.3	-10.9	20.0	-11.0	-1.0	-13.3	-0.3	4.2	0.6	8.3	-7.7	3.2	-31.1
Germany	5,537,085	3,630,591	-11.6	-2.9	-0.6	-4.3	-1.9	-4.3	3.3	0.5	-0.4	0.3	-1.8	-2.7	2.1	3.5	-34.4
Greece	337,360	371,827	-3.7	-4.1	-2.7	7.8	4.6	-3.8	7.2	2.2	-3.7	0.1	3.1	-1.7	-8.2	5.9	10.2
Hungary	348,762	125,479	-3.6	-2.9	2.3	-5.2	-6.8	1.7	-2.5	-5.3	-2.0	5.4	-6.9	-11.7	-2.5	0.9	-64.0
Iceland	513	674	-9.1	-34.0	-24.7	64.0	27.8	-6.2	3.6	31.4	-25.0	-9.3	51.4	-44.7	37.2	79.6	31.4
Ireland	144,698	93,065	-1.1	0.1	1.7	-6.9	0.8	-14.4	6.9	5.1	-2.1	-6.5	-5.9	11.5	-10.1	-6.7	-35.7
Italy	630,359	700,211	-6.0	6.7	-8.0	-1.2	3.7	0.1	1.6	11.4	3.2	8.4	11.7	-0.8	1.1	0.3	11.1
Japan	3,353,693	4,958,702	-0.6	3.6	2.7	2.6	-4.0	4.8	6.9	2.5	6.3	2.7	2.5	1.8	-0.4	3.5	47.9
Latvia	30,385	4,445	-12.7	-27.7	-5.7	-11.3	-27.2	-24.2	2.3	-5.6	-19.2	-16.6	-18.5	20.3	6.6	22.1	-85.4
Liechtenstein	1	0	-5.4	-3.7	-26.9	5.3	5.0	-47.6	118.2	-45.8	-7.7	8.3	-23.1	-10.0	-33.3	-16.7	-86.5
Lithuania	33,624	11,303	11.6	-20.3	-8.1	-17.5	-13.4	-14.7	-27.6	-9.8	62.6	27.9	-2.0	10.3	35.8	-3.1	-66.4
Luxembourg	28,178	2,269	-6.8	-41.2	-8.3	-31.8	-61.0	7.4	-0.8	-25.9	-0.9	-12.9	8.2	5.9	-13.9	10.7	-91.9
Monaco	NA,NO	NA,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	300,497	277,646	-8.9	4.4	-4.5	-4.4	3.9	-14.8	7.4	6.7	0.2	2.5	-2.1	-5.7	-2.7	6.7	-7.6
New Zealand	35,219	49,998	-8.8	-1.9	-1.0	17.1	-14.9	1.6	-8.1	32.7	-2.7	58.5	6.2	15.2	-0.4	-33.7	42.0
Norway	8,233	6,492	-1.9	0.5	-1.7	7.1	-5.2	-19.0	-2.0	-8.5	-3.0	1.5	-4.7	-14.6	7.8	3.6	-21.2
Poland	3,846,191	2,240,497	3.2	0.1	2.0	-4.2	-9.4	-3.2	-6.5	-0.2	-4.7	2.4	-1.9	-0.7	4.0	-1.4	-41.7
Portugal	108,813	118,240	6.3	10.2	-7.1	1.2	-10.3	22.4	0.3	-11.1	7.7	-5.8	0.5	-0.1	0.2	-13.0	8.7
Romania	537,493	353,056	-21.1	3.0	2.1	-16.1	-16.8	-8.4	12.0	8.9	4.3	11.6	-5.3	-3.4	13.5	1.4	-34.3
Russian Federation	6,562,420	3,234,762	-6.6	-3.7	-0.7	-10.1	-4.8	0.9	11.3	0.1	-3.0	-0.4	-4.8	-2.3	4.2	-4.6	-50.7
Slovakia	308,585	106,943	-12.3	-9.2	-9.3	-7.1	-1.2	-2.7	-1.3	2.8	-9.9	8.1	-6.8	-0.8	-0.8	-12.1	-65.3
Slovenia	85,059	64,951	-6.7	2.9	-8.9	7.1	6.7	-10.8	2.3	9.0	7.3	-6.0	2.4	-0.3	1.8	2.4	-23.6
Spain	737,872	790,529	2.0	2.6	-17.6	12.9	-2.0	13.5	5.4	-8.6	12.9	-6.7	4.5	0.8	-13.1	8.8	7.1
Sweden	99,589	91,799	1.6	-0.2	13.4	-9.3	1.1	-8.2	0.5	8.2	1.3	1.8	6.3	-6.2	-2.7	-1.5	-7.8
Switzerland	15,843	10,146	-23.2	1.3	-34.9	-11.5	-9.6	-1.4	43.9	2.0	-7.0	1.6	20.1	24.4	7.5	4.4	-36.0
Turkey	611,512	1,145,521	9.0	4.9	16.1	-1.2	15.9	-7.3	14.2	-17.1	4.0	7.2	4.6	-0.5	12.9	13.2	87.3
Ukraine	2,008,966	1,037,975	-13.3	-5.4	-21.8	-2.5	-15.8	2.6	-6.2	9.0	4.4	2.7	-5.7	3.1	17.0	1.4	-48.3
United Kingdom	2,532,618	1,498,285	0.6	-5.2	-6.9	-12.0	0.8	-12.4	7.4	6.5	-7.0	7.5	-4.0	1.8	9.2	-7.2	-40.8
United States	19,101,361	23,538,020	-0.3	0.7	4.4	2.5	1.6	0.4	3.9	-2.6	0.4	1.8	1.6	1.2	-1.2	1.1	23.2

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.10

Fuel consumption in stationary combustion: gaseous fuels – trend information

Fuel consumption (TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	644,046	1,109,166	-5.1	7.4	-0.2	3.3	5.5	5.1	1.6	5.0	2.8	3.3	1.8	4.0	-0.2	9.2	72.2
Austria	199,931	277,397	5.8	9.4	6.7	-3.8	2.0	1.3	-5.5	7.3	2.3	7.6	-1.4	9.1	-9.0	-6.0	38.7
Belarus	493,858	660,515	-12.9	-10.6	6.8	18.6	-3.2	2.6	2.4	1.1	2.2	4.0	8.3	2.1	1.0	0.6	33.7
Belgium	328,859	576,764	5.9	11.7	11.6	-6.2	12.4	6.7	0.0	0.2	0.1	6.4	-0.7	1.7	-0.3	0.8	75.4
Bulgaria	201,521	112,630	-16.3	23.0	-1.8	-17.0	-15.6	-14.4	6.5	-9.5	-10.4	3.9	0.1	12.5	4.1	1.4	-44.1
Canada	2,650,766	3,846,511	-1.7	3.1	3.7	-0.8	-1.8	7.3	7.1	-2.3	5.6	2.6	-3.1	-2.4	-0.6	10.1	45.1
Croatia	75,233	92,575	-16.6	-17.2	15.9	4.5	1.8	-2.4	1.1	9.6	5.9	-2.6	5.9	-2.8	-0.8	16.7	23.1
Czech Republic	222,830	297,703	5.1	26.8	15.2	2.1	0.1	0.7	-3.0	7.1	-2.6	0.1	-0.6	-1.1	-2.2	-5.6	33.6
Denmark	76,092	170,875	13.2	15.8	17.8	5.3	8.6	5.1	-0.9	4.1	-0.1	1.4	-0.8	-3.6	1.8	-10.6	124.6
Estonia	48,239	32,445	-1.7	13.5	15.4	-4.0	-12.8	-5.9	29.3	8.0	2.0	2.4	4.1	3.8	3.6	-2.7	-32.7
European Community	8,646,214	15,001,971	8.4	7.0	11.3	-0.1	4.6	4.5	3.0	3.5	0.3	4.8	3.2	0.7	-0.7	-1.1	73.5
Finland	90,756	147,790	4.5	3.8	4.6	-1.6	14.6	0.1	3.0	9.0	-1.6	10.7	-3.6	-8.6	6.8	-7.5	62.8
France	976,743	1,459,325	12.6	2.2	11.2	-1.3	6.0	-2.2	6.5	7.7	-1.2	2.3	2.9	2.0	-1.6	-4.3	49.4
Germany	2,043,698	2,954,248	7.4	6.8	11.7	-4.4	1.5	0.3	0.1	5.0	-0.6	4.5	2.1	-5.0	4.1	-4.4	44.6
Greece	6,404	132,823	-1.2	-4.4	9.3	178.7	261.4	69.6	44.4	1.9	6.7	10.5	10.7	4.3	17.1	24.4	1973.9
Hungary	349,655	429,124	1.5	9.1	11.6	-5.2	1.9	1.3	-3.2	11.2	1.4	9.9	-3.2	4.8	-5.6	-7.5	22.7
Iceland	1	1	-4.3	0.0	0.0	4.8	-5.2	-8.5	9.9	-15.2	-3.6	-3.7	19.2	3.1	14.2	-5.8	-25.2
Ireland	59,028	180,477	2.1	8.3	18.1	3.1	2.2	10.1	18.8	2.0	5.7	11.3	2.1	-5.5	13.7	8.4	205.7
Italy	1,537,487	2,861,795	6.1	10.1	3.6	3.7	7.9	9.2	3.7	0.4	-0.6	10.4	3.8	7.1	-2.1	0.8	86.1
Japan	2,106,359	4,105,551	7.2	3.3	5.1	4.2	2.4	6.0	3.5	0.0	3.2	4.1	0.0	-0.1	11.5	9.3	94.9
Latvia	99,211	56,625	-0.5	23.0	-13.9	22.4	-2.1	-4.2	10.2	16.1	2.4	4.1	-0.8	2.6	3.3	-3.3	-42.9
Liechtenstein	506	1,349	21.4	9.3	14.4	-3.0	10.2	7.6	-1.6	9.3	1.1	7.1	5.8	4.3	1.6	-4.8	166.8
Lithuania	167,235	74,623	2.6	8.9	4.9	-4.8	-17.6	3.1	17.4	1.2	2.5	10.7	4.0	5.6	-1.7	-3.9	-55.4
Luxembourg	19,994	55,948	3.7	14.3	9.6	2.7	0.9	4.0	2.2	3.6	51.6	1.0	12.7	-1.7	4.6	-2.5	179.8
Monaco	160	204	16.8	4.7	-1.5	-3.9	4.1	5.3	9.5	-2.0	5.0	-0.6	0.9	2.2	6.9	-4.9	27.6
Netherlands	1,207,669	1,313,207	11.6	2.9	11.4	-6.9	-0.6	-2.8	0.9	3.9	-0.1	0.7	2.2	-4.3	-1.9	-3.1	8.7
New Zealand	168,159	157,913	0.9	-18.6	5.0	13.5	-12.6	10.0	2.6	10.0	-8.8	-3.1	-19.2	18.3	3.5	10.5	-6.1
Norway	83,671	173,200	5.2	2.3	6.3	6.9	-4.7	-5.9	15.6	9.7	2.2	6.9	4.1	-0.2	3.2	2.7	107.0
Poland	283,300	434,660	-8.4	3.5	4.5	7.3	0.5	0.7	4.7	5.3	4.0	5.7	7.3	3.4	2.7	1.2	53.4
Portugal	NO	155,111	*	*	*	*	755.2	263.0	-18.1	23.6	23.4	1.0	20.0	6.0	-4.8	8.3	*
Romania	1,109,201	481,259	-16.5	3.8	-1.7	-17.8	-5.9	-7.8	-0.8	-2.8	5.1	12.3	-5.9	-4.9	1.5	-10.6	-56.6
Russian Federation	12,258,856	12,588,161	-5.1	-4.5	0.3	-3.2	-1.6	2.0	0.2	1.9	1.1	4.0	-0.1	0.5	3.2	1.5	2.7
Slovakia	234,492	193,196	2.0	0.9	1.9	0.3	0.0	-0.5	-4.8	4.3	-6.3	-0.8	-3.9	-2.2	-7.2	-5.2	-17.6
Slovenia	26,669	32,640	2.1	0.4	7.1	-4.0	3.6	2.4	2.0	2.4	-2.3	9.7	0.9	1.2	-1.4	-0.8	22.4
Spain	188,874	1,324,386	12.1	29.8	12.7	32.8	2.8	15.4	17.5	10.0	13.2	16.0	14.3	18.9	2.9	2.3	601.2
Sweden	24,368	36,943	9.4	1.6	7.6	1.0	-1.2	1.0	-10.1	17.3	1.5	-5.0	-2.4	-9.9	6.0	11.0	51.6
Switzerland	67,044	107,912	12.7	10.2	8.2	-3.5	2.8	3.5	-0.6	4.0	-1.9	6.0	3.1	2.7	-2.8	-2.6	61.0
Turkey	130,225	1,349,988	23.0	28.9	16.9	-9.0	44.2	20.3	17.8	8.2	6.6	21.3	6.2	21.0	11.7	16.9	936.7
Ukraine	3,915,259	1,858,380	-11.1	-3.4	2.8	-8.0	-18.6	-0.3	-4.2	-4.9	-3.0	11.3	0.0	2.0	-2.6	-5.8	-52.5
United Kingdom	1,888,454	3,358,087	7.6	5.9	16.3	2.6	4.6	6.7	3.0	0.8	-1.4	0.7	2.0	-3.1	-4.8	0.7	77.8
United States	19,512,608	23,998,722	2.4	4.6	1.8	0.8	-1.6	0.0	4.1	-3.5	4.3	-2.1	-1.5	-0.9	-1.5	6.3	23.0

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.11

Fuel consumption in stationary combustion: biomass – trend information

Fuel consumption (TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	179,200	207,366	-0.4	4.1	5.2	4.2	1.0	-1.7	2.6	-4.1	-11.0	4.8	1.6	-3.6	-0.2	6.2	15.7
Austria	94,858	175,464	8.9	6.6	6.4	-2.3	-2.0	14.3	-5.6	10.4	3.8	5.2	1.4	7.6	10.8	1.1	85.0
Belarus	21,180	47,403	-52.4	13.9	7.0	45.6	15.4	6.5	4.1	5.8	1.7	3.1	2.8	16.0	11.0	1.5	123.8
Belgium	20,023	55,975	-21.2	12.6	7.6	-0.4	3.0	4.3	-0.4	16.8	4.2	20.0	12.2	10.8	14.7	11.6	179.6
Bulgaria	14,879	33,698	-0.4	21.2	3.2	4.4	42.9	0.4	22.5	-2.7	17.9	0.6	8.3	-7.1	3.4	-6.3	126.5
Canada	514,227	685,121	-1.1	-1.2	-0.5	0.0	3.2	8.8	0.0	-5.9	6.7	0.8	7.4	-6.7	-13.2	17.9	33.2
Croatia	22,680	13,319	-31.0	3.5	19.4	3.4	-6.4	-10.9	12.3	-21.7	1.2	28.8	-0.6	-6.9	0.0	-9.8	-41.3
Czech Republic	21,460	77,794	2.0	5.9	3.5	9.6	4.6	6.3	3.0	2.1	16.1	91.2	11.3	11.7	-15.0	13.9	262.5
Denmark	47,723	122,510	8.4	6.0	6.9	4.1	-0.7	5.7	4.6	10.2	6.7	11.9	7.2	7.2	4.1	6.6	156.7
Estonia	8,358	23,131	-1.9	67.0	16.1	4.5	-14.7	-1.0	3.0	3.2	-0.1	9.5	5.4	-2.9	-17.1	14.2	176.8
European Community	1,556,822	2,556,457	6.8	1.9	3.3	5.2	1.7	4.2	-0.3	3.3	1.8	4.7	7.4	2.4	5.0	1.6	64.2
Finland	178,494	299,596	-1.5	1.6	0.0	13.8	3.5	7.0	-0.6	-4.2	7.8	2.1	4.2	-6.5	12.6	-4.8	67.8
France	475,818	471,444	17.8	0.8	5.0	-5.9	3.6	-1.8	-2.2	-5.4	-0.5	6.7	2.4	0.0	-1.7	-2.1	-0.9
Germany	223,188	526,896	-1.8	-1.4	-0.9	35.7	3.6	6.8	3.0	8.2	2.1	2.4	17.4	4.3	6.9	4.0	136.1
Greece	19,388	21,096	0.9	-0.4	2.8	-3.1	-2.8	10.2	14.6	-1.5	-8.2	-12.4	10.2	-0.3	1.4	1.4	8.8
Hungary	13,095	32,305	42.8	13.4	-8.8	1.5	-7.7	0.3	9.7	-9.3	7.8	33.9	33.9	67.5	-10.2	-17.9	146.7
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	4,510	8,920	-3.9	-1.6	14.5	12.2	16.9	-3.8	6.3	9.0	-3.2	-4.4	16.8	24.8	1.5	1.2	97.8
Italy	56,679	187,593	13.8	-0.5	3.1	12.1	-2.0	17.4	4.1	9.9	-3.3	18.0	20.1	-0.4	7.1	14.5	231.0
Japan	198,347	243,568	0.7	3.9	0.4	3.1	-8.1	4.0	3.3	-8.7	4.2	2.1	-0.6	19.6	1.1	4.4	22.8
Latvia	27,501	49,095	17.3	13.3	4.5	0.2	-1.3	-1.8	-7.1	10.8	-0.5	7.6	5.6	0.0	0.7	-2.1	78.5
Liechtenstein	60	167	-21.6	-21.7	-2.9	14.8	10.8	9.1	53.7	-32.1	2.2	25.0	8.3	7.8	13.1	28.8	177.1
Lithuania	11,916	29,859	0.0	4.9	9.6	2.3	10.2	3.7	4.7	5.6	5.8	3.4	2.8	-1.5	1.8	-3.2	150.6
Luxembourg	1,586	2,332	1.2	-2.3	-11.6	8.2	-4.7	6.9	0.8	3.4	0.9	11.0	8.3	-0.3	7.6	14.4	47.0
Monaco	8	12	1.6	1.4	0.3	0.3	0.0	0.5	-3.9	0.4	17.8	-15.6	2.2	-6.0	-8.4	73.4	62.8
Netherlands	30,311	69,498	-1.7	6.2	14.5	8.9	4.3	3.9	9.2	5.6	11.2	-6.0	14.9	24.5	0.8	-11.8	129.3
New Zealand	25,028	46,400	7.4	1.0	-1.8	-5.9	4.4	23.0	2.1	0.9	6.0	1.3	4.5	6.3	0.8	2.5	85.4
Norway	35,274	44,895	-5.5	1.2	4.0	5.4	-8.4	5.5	-1.6	8.1	6.9	1.5	-3.7	2.3	0.1	-2.1	27.3
Poland	35,231	193,200	-13.9	2.1	-1.5	-0.1	0.5	-4.0	1.4	6.9	1.8	0.6	3.8	2.9	10.4	-1.2	448.4
Portugal	104,991	129,301	2.0	1.4	0.6	3.5	-0.5	3.5	3.0	-0.5	1.0	-0.3	6.8	1.1	2.2	2.0	23.2
Romania	26,366	135,832	-6.3	216.5	30.2	-32.7	-10.5	-5.5	-2.0	-22.8	10.1	21.0	9.8	2.4	-1.1	2.7	415.2
Russian Federation	571,804	165,877	-2.0	-10.6	-14.3	-13.6	-18.7	28.0	-15.5	-3.0	-4.2	-0.5	-3.3	-0.3	0.3	7.0	-71.0
Slovakia	7,911	28,038	34.7	2.9	24.8	-12.8	-1.2	2.4	9.4	14.5	-0.6	6.9	25.9	39.5	-6.6	-1.0	254.4
Slovenia	20,985	18,199	-2.8	-1.3	2.1	1.5	1.7	-12.5	0.9	-1.9	1.9	6.3	8.9	6.6	-11.6	-5.0	-13.3
Spain	150,724	165,787	-0.1	0.4	-2.0	5.5	-2.4	0.6	1.1	1.0	1.2	3.3	2.8	0.4	1.1	0.8	10.0
Sweden	119,953	230,717	7.1	5.4	8.8	-6.3	0.7	1.5	-8.3	19.5	-2.7	3.1	-0.6	7.4	5.9	2.6	92.3
Switzerland	32,235	36,768	9.0	6.7	9.3	-11.1	1.3	-0.8	-5.0	4.9	-2.1	5.9	-0.1	5.7	1.8	-1.3	14.1
Turkey	IE,NO	206,711	*	*	*	*	*	*	*	*	*	*	*	*	-3.7	-3.7	*
Ukraine	36,374	18,617	*	*	*	*	*	-6.0	10.5	11.2	16.7	8.6	-8.7	-20.0	1.4	-9.6	-48.8
United Kingdom	28,577	89,328	5.0	7.3	2.6	4.4	-0.8	8.4	-2.3	6.8	3.3	10.8	10.8	1.5	3.3	6.3	212.6
United States	2,339,598	2,298,332	-0.1	2.0	2.8	-2.7	-7.9	1.4	2.2	-11.2	-0.5	0.4	6.0	1.7	0.8	-0.2	-1.8

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.12

Fuel consumption in stationary combustion: other fuels – trend information

Fuel consumption (TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	8,990	30,268	12.1	3.7	28.4	-6.4	-6.4	-6.4	5.9	18.1	13.2	12.1	21.2	-7.7	40.2	5.8	236.7
Belarus	1,847	IE,NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	33,027	92,770	28.0	9.1	8.4	14.3	4.6	5.5	5.6	0.4	-6.9	0.8	3.3	3.5	1.7	-6.5	180.9
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	1,628	3,921	13.7	-18.5	2.0	-51.3	52.8	-2.2	17.5	-4.9	53.1	-4.7	11.2	-27.5	5.1	0.0	140.8
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	IE,NO	IE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	283,675	718,579	4.3	2.5	6.7	9.8	3.9	2.4	4.8	7.2	1.2	10.0	5.8	0.8	9.0	6.2	153.3
Finland	54,971	110,119	4.5	7.7	9.8	0.8	-6.5	-10.3	-13.5	37.5	6.5	10.8	-10.8	-20.1	31.9	10.1	100.3
France	53,271	94,121	7.7	3.4	-1.0	0.0	2.8	10.5	5.0	0.1	3.1	13.3	-5.3	-1.8	-1.4	5.4	76.7
Germany	84,441	213,070	-12.1	-15.3	-2.2	24.9	1.2	17.2	16.5	3.7	-3.6	10.6	22.8	11.1	11.9	10.7	152.3
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	22,311	13,401	-16.6	97.9	-27.5	-17.9	56.2	-24.4	-43.7	44.9	-22.3	1.5	10.6	20.4	30.1	-39.5	-39.9
Iceland	NO	277	*	24.4	27.5	0.0	0.0	2.0	0.0	0.0	0.0	4.1	141.0	4.7	30.8	13.9	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	10,653	31,524	-9.8	24.7	16.9	19.7	25.7	-28.0	12.8	10.8	-4.7	9.5	27.0	4.2	-3.4	-1.8	195.9
Japan	NE,NO	NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NA,NO	210	*	*	*	*	*	*	257.0	87.1	35.4	-12.3	7.9	-41.7	-28.4	60.3	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NE,NO	NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	336	1,245	2.2	-4.5	-22.6	18.5	167.4	10.5	8.8	33.4	9.4	-6.3	7.9	-0.6	5.1	-12.0	270.3
Monaco	471	515	1.8	-0.3	7.1	12.8	-6.0	1.0	3.5	6.1	-10.7	-17.2	-10.9	0.4	-27.5	36.6	9.3
Netherlands	9,634	31,080	-0.1	17.0	33.6	19.5	8.1	6.1	0.3	0.9	4.3	10.8	8.0	-5.8	1.6	6.4	222.6
New Zealand	IE,NA,NO	IE,NA,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	4,174	8,291	3.3	4.0	-1.4	3.6	11.0	12.9	7.4	5.2	-1.2	18.6	0.0	4.3	0.3	-0.5	98.6
Poland	NA,NO	IE,NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	1,239	5,067	-5.0	45.2	9.2	16.8	26.9	69.3	53.0	-18.6	-7.7	11.8	11.4	-0.2	5.6	-2.1	308.9
Romania	IE,NE	IE,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	129,546	119,197	-1.3	35.8	-29.5	20.4	3.1	24.2	13.8	4.1	6.9	-25.1	42.3	-2.9	12.4	-24.5	-8.0
Slovakia	100	276	50.0	-6.2	-2.0	8.5	14.6	-5.4	19.5	-37.0	80.2	-1.7	10.9	11.1	1.0	-4.4	176.2
Slovenia	129	396	-37.0	28.2	26.4	-6.3	30.2	52.8	-5.9	-23.0	-3.5	36.4	55.5	35.0	5.6	-11.6	206.9
Spain	3,103	26,311	0.8	42.7	37.7	46.0	-0.9	11.9	1.0	1.4	20.3	25.9	11.1	5.9	5.4	7.6	747.9
Sweden	17,641	47,194	35.8	-7.1	5.8	-6.3	13.0	-7.7	7.5	-0.6	9.0	20.5	15.2	15.6	-3.7	16.2	167.5
Switzerland	32,815	53,721	-4.2	3.2	3.6	4.9	7.7	3.4	7.7	5.4	2.5	0.2	3.6	3.3	9.1	-1.8	63.7
Turkey	NA,NO	NA,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	59,966	25,733	-23.2	-9.3	-10.5	-7.5	-7.7	-1.5	-11.4	-1.4	-10.0	5.7	-17.2	26.8	17.4	13.5	-57.1
United Kingdom	6,777	37,024	4.8	10.3	-0.8	17.0	29.5	-3.5	2.0	6.4	9.4	5.6	-3.5	0.5	10.2	4.2	446.3
United States	55,563	53,420	3.4	-13.9	7.1	2.8	0.3	0.4	-4.9	-2.5	5.5	-0.5	2.7	-0.8	-0.8	1.9	-3.9

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.13

Contribution of fuels to total energy consumption in stationary combustion (%)

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels		Biomass	
	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007	Base year[a]	2006	Base year[a]	2007
Australia	15.0	13.1	54.2	54.2	24.1	27.6	-	-	6.7	5.2
Austria	30.7	21.4	21.8	15.0	31.2	36.6	1.4	4.0	14.8	23.1
Belarus	50.9	14.0	8.3	3.0	39.0	77.4	0.1	-	1.7	5.6
Belgium	33.2	25.2	35.1	16.8	27.3	46.2	2.7	7.4	1.7	4.5
Bulgaria	30.2	10.7	46.2	61.0	22.0	21.7	-	-	1.6	6.5
Canada	13.3	6.6	22.7	22.1	53.6	60.4	0.0	0.1	10.4	10.8
Croatia	49.9	40.8	11.4	12.6	29.7	40.8	-	-	9.0	5.9
Czech Republic	11.8	5.4	72.5	64.1	14.3	24.2	-	-	1.4	6.3
Denmark	29.5	18.4	47.4	32.6	14.2	28.5	-	-	8.9	20.5
Estonia	21.9	4.7	63.0	67.1	12.8	16.5	-	-	2.2	11.7
European Community	30.2	21.2	37.3	25.4	26.7	43.8	0.9	2.1	4.8	7.5
Finland	30.2	18.4	21.6	18.5	13.5	16.7	8.2	12.5	26.5	33.9
France	40.2	32.8	18.2	12.4	26.9	39.6	1.5	2.6	13.1	12.8
Germany	20.1	14.5	56.1	42.4	20.7	34.5	0.9	2.5	2.3	6.1
Greece	45.3	44.5	50.8	39.3	1.0	14.0	-	-	2.9	2.2
Hungary	25.7	15.2	35.3	17.7	35.4	60.6	2.3	1.9	1.3	4.6
Iceland	96.4	93.0	3.6	5.0	0.0	0.0	-	2.0	-	-
Ireland	32.1	33.8	47.2	21.8	19.2	42.3	-	-	1.5	2.1
Italy	47.8	23.0	14.7	14.3	35.9	58.3	0.2	0.6	1.3	3.8
Japan	53.2	34.2	27.7	35.1	17.4	29.0	-	-	1.6	1.7
Latvia	38.6	10.8	11.9	3.6	38.8	45.8	-	0.2	10.7	39.7
Liechtenstein	69.7	29.7	0.1	0.0	27.1	62.6	-	-	3.2	7.7
Lithuania	46.8	21.9	8.4	7.6	41.8	50.3	-	-	3.0	20.1
Luxembourg	25.4	18.7	42.0	3.0	29.8	73.6	0.5	1.6	2.4	3.1
Monaco	44.3	26.0	-	-	13.9	20.6	41.1	52.1	0.7	1.3
Netherlands	19.1	15.8	15.7	13.8	63.1	65.4	0.5	1.5	1.6	3.5
New Zealand	13.8	13.4	13.3	17.0	63.4	53.8	-	-	9.4	15.8
Norway	47.8	30.4	3.3	1.9	33.2	51.7	1.7	2.5	14.0	13.4
Poland	5.8	8.6	87.0	71.4	6.4	13.8	-	-	0.8	6.2
Portugal	54.3	34.7	23.1	18.9	-	24.8	0.3	0.8	22.3	20.7
Romania	21.0	18.1	25.4	29.8	52.3	40.6	-	-	1.2	11.5
Russian Federation	30.0	12.1	23.5	17.7	43.9	68.7	0.5	0.7	2.0	0.9
Slovakia	12.9	8.6	48.8	29.7	37.1	53.7	0.0	0.1	1.3	7.8
Slovenia	22.0	20.2	49.9	44.6	15.7	22.4	0.1	0.3	12.3	12.5
Spain	44.2	29.7	38.1	24.1	9.8	40.4	0.2	0.8	7.8	5.1
Sweden	53.2	32.7	17.8	15.2	4.4	6.1	3.2	7.8	21.5	38.2
Switzerland	63.9	49.8	3.9	2.4	16.4	26.0	8.0	12.9	7.9	8.8
Turkey	40.0	15.9	49.5	35.6	10.5	42.0	-	-	-	6.4
Ukraine	18.3	1.8	27.2	34.7	53.1	62.1	0.8	0.9	0.5	0.6
United Kingdom	20.9	12.4	44.9	26.3	33.5	59.0	0.1	0.7	0.5	1.6
United States	23.2	20.8	35.8	37.4	36.5	38.1	0.1	0.1	4.4	3.6

Note: This table includes data from categories 1.A.1 Energy industries, 1.A.2 Manufacturing industries and construction, 1.A.4 Other sectors and 1.A.5.a Other (stationary).

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.14

CO_2 emissions from energy industries: all fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	142,609	220,972	2.3	3.8	3.0	4.1	7.4	4.0	1.6	3.8	0.7	5.2	0.3	1.1	2.0	1.3	54.9
Austria	13,792	13,929	6.0	9.8	6.9	0.6	-6.4	-1.2	-3.8	14.4	-3.2	17.9	1.5	-1.6	-3.4	-10.4	1.0
Belarus	65,141	30,456	-10.2	-14.7	0.2	5.8	-5.9	-4.0	-4.3	1.5	-1.0	-0.5	6.6	-1.7	1.4	-6.1	-53.2
Belgium	29,948	26,803	-0.9	-1.8	-0.9	-3.9	9.9	-12.0	4.4	-5.5	5.6	5.3	0.2	-1.5	-5.2	-3.1	-10.5
Bulgaria	43,217	32,795	-6.3	2.0	-2.9	0.9	-11.1	-6.3	1.8	10.8	-8.9	7.0	-0.1	1.4	1.5	12.6	-24.1
Canada	144,307	192,613	-0.7	4.1	-0.4	5.3	9.5	4.7	6.6	2.9	-0.5	2.6	-4.9	-3.7	-4.1	7.0	33.5
Croatia	7,127	7,639	-33.1	10.0	-1.4	9.1	12.3	2.8	-8.5	7.1	14.3	9.2	-13.2	0.4	-3.3	15.0	7.2
Czech Republic	57,707	61,316	-0.5	5.5	4.7	-0.4	-5.7	-5.7	13.5	-1.4	-2.9	1.3	-1.0	0.0	3.1	3.8	6.3
Denmark	26,173	25,132	34.2	-9.7	38.8	-20.8	-10.9	-9.7	-11.6	5.8	0.6	18.1	-19.1	-12.9	34.9	-15.9	-4.0
Estonia	29,448	14,458	-7.4	-9.3	4.9	-3.2	-11.2	-4.9	-2.1	-1.7	-2.0	14.3	0.7	-5.0	-5.2	15.8	-50.9
European Community	1,151,380	1,207,864	0.5	0.9	1.4	-3.2	3.1	-1.9	2.6	2.2	2.9	2.2	-0.1	0.3	0.0	1.0	4.9
Finland	19,057	30,439	-1.2	-8.7	23.7	-8.1	-12.0	-2.1	-6.6	24.4	10.0	23.0	-11.4	-33.6	50.1	-6.3	59.7
France	66,363	67,179	18.5	5.0	7.7	-5.3	21.9	-8.7	-2.9	-11.7	9.3	3.4	-0.4	7.6	-5.2	3.3	1.2
Germany	414,853	385,528	-3.2	-2.5	1.8	-5.9	1.0	-3.2	4.0	2.5	0.6	2.1	-0.2	0.2	1.0	4.4	-7.1
Greece	43,149	58,840	-2.6	-2.7	-1.8	7.8	5.3	0.6	8.9	0.9	-1.0	2.3	2.4	0.7	-4.0	6.0	36.4
Hungary	26,953	20,371	2.6	-0.8	3.6	-0.7	4.3	-0.8	-7.4	-0.2	-7.5	4.6	-10.3	-9.0	4.8	6.1	-24.4
Iceland	13	29	11.8	17.4	-19.1	-33.2	32.3	-21.2	-10.9	-2.6	18.3	-6.7	-2.9	27.7	18.9	93.1	118.2
Ireland	11,159	14,407	4.1	5.4	5.4	4.7	2.6	4.3	2.0	7.6	-5.3	-4.3	-2.3	2.4	-4.8	-3.4	29.1
Italy	134,092	157,850	-4.2	9.9	-3.3	1.3	7.8	-2.8	3.7	2.3	4.6	0.7	-0.7	1.4	-0.1	-0.8	17.7
Japan	324,014	448,564	0.8	-3.2	0.1	-0.9	-2.8	5.2	2.2	-2.2	9.1	3.7	-1.1	3.9	-2.6	13.4	38.4
Latvia	6,332	1,964	-8.3	-8.2	3.6	-6.7	1.2	-12.6	-15.4	-1.9	-4.4	-2.8	-8.5	-0.5	1.1	-6.1	-69.0
Liechtenstein	0	2	550.0	13.8	25.3	-2.4	15.7	0.0	-5.7	6.1	-14.3	12.5	4.4	6.4	-9.3	-9.6	1950.0
Lithuania	13,849	4,907	7.7	-11.8	10.8	-7.5	12.1	-19.0	-13.7	9.5	-3.0	-1.8	3.7	4.4	-8.1	-9.7	-64.6
Luxembourg	1,299	1,359	-4.3	-14.8	-13.6	-38.0	-63.2	11.1	2.0	13.7	450.3	2.7	20.3	1.0	4.8	-10.8	4.6
Monaco	27	30	-1.8	-0.3	7.4	12.1	-5.9	1.1	3.2	5.9	-10.5	-16.9	-11.1	0.2	-23.0	32.5	8.3
Netherlands	52,492	65,519	1.2	6.2	1.4	1.6	3.6	-6.0	2.7	6.6	-0.9	2.2	2.1	-3.8	-7.3	5.0	24.8
New Zealand	6,006	7,845	1.5	-13.5	12.1	30.6	-24.9	24.5	-5.2	20.1	-11.1	19.0	-5.3	27.8	0.1	-15.9	30.6
Norway	6,648	12,683	5.0	-1.8	10.1	3.9	-4.2	-0.3	9.5	12.7	1.7	6.2	1.1	0.4	-0.1	1.8	90.8
Poland	268,295	182,695	-1.7	-6.7	3.0	-2.7	-3.4	-3.0	-1.2	1.2	-3.0	5.1	-0.8	-1.2	2.4	-0.3	-31.9
Portugal	15,944	19,777	4.2	14.9	-20.1	4.5	15.5	32.7	-14.9	2.9	15.6	-17.4	7.4	14.0	-12.0	-10.8	24.0
Romania	106,012	48,438	-19.7	2.2	4.1	-14.9	-10.8	-12.5	0.5	6.8	1.8	3.4	-6.6	-5.6	5.4	-0.7	-54.3
Russian Federation	1,172,334	886,484	-6.3	-5.4	-0.3	-5.8	0.7	-1.4	1.5	-0.2	1.1	1.2	-1.7	1.0	3.6	-1.7	-24.4
Slovakia	16,091	10,241	-9.2	-2.3	-0.7	0.2	2.1	1.2	-0.1	6.4	-2.7	4.0	-2.4	-7.8	-5.6	-8.5	-36.4
Slovenia	6,701	6,567	-14.7	7.1	-6.9	7.9	4.2	-11.7	5.8	12.8	4.0	-4.2	2.1	0.2	0.8	3.4	-2.0
Spain	77,357	122,137	1.0	7.8	-14.7	16.4	-1.2	19.3	4.2	-5.5	13.7	-6.3	8.8	8.7	-7.2	5.1	57.9
Sweden	9,831	10,283	12.0	-7.5	35.6	-26.4	9.2	-11.8	-13.5	14.6	9.9	9.4	-5.8	-8.1	-2.9	-3.5	4.6
Switzerland	2,493	3,344	11.2	1.0	8.0	-1.5	11.6	-5.2	-3.1	4.5	1.9	-0.7	10.7	4.5	6.9	-8.1	34.1
Turkey	34,015	106,603	7.7	0.3	9.9	12.0	10.1	8.2	10.7	3.8	-7.1	0.2	2.7	16.2	2.3	17.7	213.4
Ukraine	271,267	111,168	*	*	*	*	*	3.1	-7.0	3.6	-0.2	6.5	-7.0	1.7	9.0	0.1	-59.0
United Kingdom	237,170	210,586	0.1	-1.1	1.0	-6.4	2.5	-5.0	5.6	5.2	-1.3	3.7	-0.8	0.0	1.8	-1.9	-11.2
United States	1,820,634	2,417,977	-0.1	0.8	3.8	3.4	4.2	0.5	4.7	-1.6	0.4	1.3	1.4	2.9	-2.2	3.0	32.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.15

CO_2 emissions from energy industries: liquid fuels - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	8,982	9,602	4.5	5.7	-1.6	-8.5	3.4	6.2	-9.8	-1.6	-0.8	10.4	-4.8	10.9	2.0	-3.7	6.9
Austria	3,190	3,491	6.9	-11.8	0.2	9.6	7.1	-12.9	-16.8	9.9	-14.4	15.2	7.1	-12.2	19.1	-9.5	9.4
Belarus	39,471	1,123	-7.5	-15.9	-12.4	-17.7	-9.1	-17.9	-27.9	1.6	-12.0	-18.2	-8.5	-24.3	14.5	-63.2	-97.2
Belgium	4,949	4,883	4.0	-12.2	16.5	3.5	14.3	-24.1	-3.6	11.4	-3.9	11.5	0.5	-7.4	-2.2	-5.6	-1.3
Bulgaria	8,520	918	-39.9	-8.2	-11.3	-26.8	-60.1	-2.6	-27.2	2.6	5.9	-6.1	0.9	17.4	-2.0	7.3	-89.2
Canada	15,625	8,121	-10.3	13.2	-11.1	17.7	31.2	-15.9	-4.3	10.2	-14.0	18.5	0.0	-16.3	-33.2	2.2	-48.0
Croatia	4,723	3,507	-34.0	32.5	-6.8	0.6	18.8	6.3	-34.1	5.3	4.4	23.1	-25.5	4.5	-4.3	9.3	-25.8
Czech Republic	1,790	1,063	29.5	1.4	3.3	-8.8	-12.1	-7.0	2.4	-4.9	6.5	-4.3	1.7	-6.2	-6.4	-26.3	-40.6
Denmark	1,844	1,932	12.2	28.8	44.4	-11.7	-8.9	-4.1	-6.2	0.0	-7.0	-31.0	-19.7	-8.7	6.7	-9.5	4.7
Estonia	4,825	410	1.9	-24.4	1.4	-13.7	2.7	-6.9	-45.8	1.2	-12.0	-6.4	-8.9	-3.4	-24.3	0.1	-91.5
European Community	226,369	165,474	4.6	5.0	-1.4	-5.1	2.7	-5.5	-3.2	0.5	0.6	-5.8	-5.2	-1.2	-6.0	-8.0	-26.9
Finland	2,847	2,853	1.6	-6.2	13.8	-14.5	2.0	2.1	-14.8	9.7	9.8	-2.1	-12.6	-6.0	5.6	-0.2	0.2
France	20,968	20,159	22.3	6.3	0.2	2.9	9.4	-6.7	-1.9	-4.9	-1.1	4.3	2.1	-1.8	-6.0	-0.7	-3.9
Germany	24,931	25,136	15.3	-2.7	-1.0	-7.6	1.9	-4.9	3.2	-1.3	1.5	5.2	3.2	5.2	-2.0	-3.4	0.8
Greece	7,840	10,561	6.0	6.0	1.8	-1.5	-1.1	-0.9	11.1	-4.0	0.1	4.5	-5.4	6.1	7.2	1.3	34.7
Hungary	5,350	1,658	47.3	-6.0	-13.5	11.3	-1.5	-10.6	-15.4	-1.1	-37.3	-17.1	-39.8	6.9	12.4	8.0	-69.0
Iceland	13	17	11.8	14.6	-34.6	-54.0	76.4	-37.6	-24.5	-6.9	50.6	-14.5	-10.1	77.0	-33.8	283.0	30.3
Ireland	1,269	1,644	55.1	-3.5	-0.1	30.9	32.8	26.0	-20.9	13.0	-23.4	-27.9	23.0	2.3	-12.6	-36.7	29.6
Italy	80,168	39,779	-0.3	7.1	-3.6	-2.0	-1.9	-10.9	-2.5	-2.9	1.3	-10.9	-17.0	-11.2	-3.6	-14.6	-50.4
Japan	151,894	94,865	-5.2	-15.2	-6.4	-14.0	-11.2	-1.4	-10.8	-23.9	21.8	2.7	-9.8	14.9	-16.8	48.8	-37.5
Latvia	3,076	106	-17.9	-33.5	33.3	-36.2	17.9	-15.5	-55.0	-32.7	-3.7	-28.8	-12.5	-24.3	-37.0	-8.1	-96.6
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	7,648	1,959	17.2	-22.6	10.3	-8.5	33.5	-30.8	-34.5	21.3	-5.9	-17.0	6.6	3.6	-11.1	-15.1	-74.4
Luxembourg	9	1	142.9	-2.8	-34.4	54.5	-58.8	2.6	-34.5	70.1	-16.0	-33.9	5.5	1.0	-25.5	10.8	-85.7
Monaco	1	0	-85.7	4.3	68.3	-72.8	60.0	31.8	-65.5	*	*	*	*	*	*	-47.4	-93.5
Netherlands	10,207	8,788	0.5	14.7	-3.8	1.3	4.3	-6.1	2.8	5.3	-15.1	7.1	-3.2	-2.0	-20.4	0.3	-13.9
New Zealand	211	148	7.9	61.7	-25.4	-23.5	1.2	40.0	-22.9	7.4	-5.9	21.4	-4.6	-11.7	-9.1	-5.1	-29.8
Norway	1,174	1,560	0.2	-12.5	28.2	-5.5	-0.6	5.6	-13.2	3.3	-9.3	7.5	-11.7	7.0	9.1	1.4	32.8
Poland	9,302	5,195	-5.4	-7.7	11.6	-8.0	-6.9	-6.8	-3.3	10.2	-0.4	-0.7	-0.6	-5.6	11.2	-5.8	-44.2
Portugal	8,260	4,940	2.4	15.3	-36.6	6.1	45.9	2.2	-20.9	17.9	18.6	-35.5	-1.9	39.0	-32.2	-9.1	-40.2
Romania	17,864	5,510	-25.9	5.4	10.8	0.0	-22.0	-18.0	-20.2	24.7	-9.6	-13.7	-6.0	-3.2	-16.3	-14.0	-69.2
Russian Federation	237,660	85,530	-5.2	-12.9	-6.3	-10.0	14.7	-13.3	-6.5	-4.0	-2.1	-1.9	-8.8	2.7	2.3	-12.9	-64.0
Slovakia	1,540	1,007	-6.7	-0.7	0.1	0.7	1.1	1.2	-21.7	14.7	2.2	6.1	26.6	-36.7	-7.7	3.4	-34.6
Slovenia	309	34	-6.9	-13.4	6.3	-0.2	-14.8	-57.3	59.0	74.3	-39.0	-17.4	-41.8	15.4	23.9	-24.2	-89.1
Spain	16,924	21,858	3.8	14.3	-8.2	-4.3	10.3	21.1	-2.1	5.7	5.0	-12.9	5.7	2.9	-6.4	-7.9	29.2
Sweden	3,057	2,719	20.8	-10.6	65.3	-40.0	12.3	-18.6	-23.0	18.3	9.9	12.3	-19.7	-7.0	1.1	-21.8	-11.0
Switzerland	691	759	52.3	-1.6	13.3	-11.4	28.0	-22.5	-18.2	7.7	3.0	-5.1	20.4	-2.9	10.6	-16.8	9.8
Turkey	7,065	11,359	-17.6	-7.4	15.1	7.6	7.2	-1.7	31.6	1.3	-1.0	-7.0	-6.7	-17.6	-6.2	8.7	60.8
Ukraine	52,890	1,488	*	*	*	*	*	-40.3	-50.2	35.9	10.4	-22.9	-12.4	-6.6	-2.4	-19.7	-97.2
United Kingdom	41,195	18,597	-2.6	0.4	-2.6	-17.5	-6.1	-7.8	-4.4	-2.7	4.7	-2.7	-0.3	4.6	-11.2	-8.2	-54.9
United States	101,766	55,325	-7.0	-28.0	8.1	13.9	40.5	-7.4	-6.0	11.5	-22.5	24.0	2.0	2.2	-45.6	-0.6	-45.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.16

CO_2 emissions from energy industries: solid fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	120,219	181,968	4.0	3.0	3.8	5.1	7.6	3.2	2.1	3.2	0.6	5.0	0.1	0.1	2.1	-0.6	51.4
Austria	6,247	5,067	9.1	38.1	3.7	6.5	-30.1	8.3	27.3	21.7	-6.2	25.5	-3.5	-12.4	-3.4	-10.2	-18.9
Belarus	2,283	598	2.6	-13.3	21.5	-32.0	-2.7	-25.0	13.4	2.8	-15.1	-7.1	-7.3	-11.2	-10.2	1.1	-73.8
Belgium	21,482	9,456	-4.0	-3.8	-7.3	-7.7	-0.1	-23.2	12.2	-12.4	6.3	-3.3	0.9	-4.0	-13.0	-13.0	-56.0
Bulgaria	31,318	29,130	15.4	0.3	-1.3	5.4	-4.4	-7.4	3.8	12.8	-9.7	8.4	0.1	0.2	1.9	13.8	-7.0
Canada	85,657	108,992	3.9	2.9	1.4	6.6	6.0	0.3	7.8	0.2	-1.2	2.2	-4.3	-2.6	-3.9	6.3	27.2
Croatia	610	2,040	-27.4	146.8	-43.3	314.4	2.4	-10.8	181.5	7.5	26.9	8.3	-6.9	8.3	-7.0	6.5	234.5
Czech Republic	54,051	58,088	-1.4	4.9	4.0	0.1	-5.5	-6.3	14.9	-1.0	-3.2	1.8	-1.1	0.3	3.5	4.7	7.5
Denmark	22,462	17,341	37.6	-16.9	40.2	-26.8	-15.7	-16.2	-17.2	7.1	1.4	38.3	-25.0	-16.5	52.9	-17.1	-22.8
Estonia	22,076	12,237	-10.0	-8.8	3.4	-1.4	-11.9	-4.9	-0.7	-3.3	-2.1	18.3	0.5	-6.3	-6.0	21.2	-44.6
European Community	826,935	715,689	-1.0	-1.8	-0.6	-5.8	1.6	-4.7	5.1	2.4	2.0	3.5	-0.9	-2.0	1.1	0.7	-13.5
Finland	9,640	13,269	-8.1	-22.2	41.2	-12.7	-31.5	2.5	-2.9	23.2	17.0	43.9	-12.9	-53.3	111.2	-13.4	37.6
France	38,372	31,739	18.0	6.1	12.4	-11.9	36.4	-13.6	-2.7	-20.2	11.9	4.2	-4.8	10.6	-6.7	6.8	-17.3
Germany	362,767	307,736	-4.6	-2.5	1.1	-6.1	0.5	-3.9	4.3	2.9	0.2	1.0	-1.1	-2.6	0.4	5.2	-15.2
Greece	35,207	42,571	-4.6	-4.6	-2.7	9.9	5.1	-1.8	6.3	2.3	-1.8	1.2	3.6	-0.1	-8.3	4.5	20.9
Hungary	14,582	9,056	-5.9	3.1	3.7	3.0	-0.8	1.7	-2.8	-5.3	-3.6	9.1	-7.1	-18.8	-3.2	1.6	-37.9
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	8,009	6,817	-1.7	5.3	2.5	-3.0	-5.0	-8.4	8.5	7.8	-3.0	-7.6	-8.1	10.5	-11.6	-3.8	-14.9
Italy	37,209	51,617	-8.6	15.9	-8.7	-0.1	12.0	-0.6	10.0	15.3	10.9	8.0	14.7	2.3	0.0	-1.8	38.7
Japan	89,106	221,175	6.0	7.7	2.9	7.2	-1.3	9.0	9.3	6.7	9.6	4.4	4.1	5.8	-4.0	4.5	148.2
Latvia	519	35	-9.0	15.7	-19.6	-4.0	-30.0	-37.0	57.5	-41.0	-21.4	-32.5	-69.8	-13.0	-44.8	169.9	-93.3
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	220	94	-13.1	-20.8	-13.5	-5.5	-3.4	11.5	-28.6	8.1	-8.9	20.9	-3.7	-10.5	11.0	42.0	-57.3
Luxembourg	1,230	NO	-5.2	-24.0	-16.4	-47.2	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	25,776	26,068	-8.1	4.8	-4.7	-3.5	5.0	-13.7	6.8	7.2	0.7	2.7	-2.4	-4.4	-6.4	8.2	1.1
New Zealand	465	2,330	-53.4	46.6	9.6	94.9	-36.0	45.5	-19.3	53.1	0.2	118.8	30.9	26.7	-3.9	-49.7	400.7
Norway	205	122	12.8	0.5	-6.3	-7.0	0.6	-34.7	-3.9	6.3	-3.4	-8.7	-0.5	-3.4	-6.2	6.2	-40.5
Poland	257,338	171,541	-1.5	-6.6	2.5	-2.5	-3.6	-3.2	-1.6	1.0	-3.5	5.2	-1.3	-1.2	2.1	-0.3	-33.3
Portugal	7,685	10,014	6.1	14.6	-7.9	3.1	-8.1	27.5	-3.1	-7.5	10.7	-4.5	2.1	2.2	-0.1	-17.6	30.3
Romania	46,030	31,419	-23.8	3.2	1.3	-17.1	-15.7	-7.4	13.9	11.4	3.7	8.0	-5.5	-5.5	14.2	3.0	-31.7
Russian Federation	408,091	257,697	-6.6	-2.8	2.9	-9.3	-4.4	-1.6	7.8	-1.9	1.2	-0.3	-5.5	-1.2	4.9	-5.3	-36.9
Slovakia	11,553	5,391	-17.5	-8.4	-4.5	-0.9	2.1	4.0	7.4	11.7	-1.4	6.8	-5.7	-3.7	-5.7	-9.7	-53.3
Slovenia	6,195	6,269	-13.2	6.6	-7.9	9.9	4.5	-11.3	5.7	12.2	5.1	-6.0	3.4	-0.3	0.9	3.6	1.2
Spain	59,635	72,027	-0.5	5.5	-18.3	17.6	-1.4	19.0	5.3	-9.3	13.4	-7.6	5.0	0.8	-13.6	8.4	20.8
Sweden	5,737	5,514	5.2	-5.8	20.4	-14.9	6.9	-7.6	-7.7	11.6	10.4	8.5	2.0	-11.7	-6.4	1.8	-3.9
Switzerland	47	161	-78.9	-33.3	*	*	*	*	*	*	*	*	*	78.1	0	-14.0	243.7
Turkey	21,514	54,129	14.9	-1.8	9.5	11.2	8.4	2.6	-0.4	0.8	-16.0	-4.0	5.0	26.7	3.9	16.8	151.6
Ukraine	96,018	76,844	*	*	*	*	*	0.9	-5.6	13.0	3.3	3.6	-8.8	6.7	21.7	2.7	-20.0
United Kingdom	185,476	116,452	0.3	-5.9	-5.7	-13.8	3.9	-15.4	12.5	10.8	-5.9	9.4	-3.9	1.3	10.5	-8.4	-37.2
United States	1,531,067	1,967,647	0.0	1.3	5.5	2.6	1.7	0.3	4.9	-3.0	0.9	2.0	0.6	2.1	-1.3	1.8	28.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.17

CO_2 emissions from energy industries: gaseous fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	13,409	29,402	-14.3	10.9	-1.3	2.2	8.1	10.7	3.0	10.9	2.2	5.1	3.3	5.2	0.8	16.9	119.3
Austria	4,237	4,716	0.4	9.9	15.0	-11.5	7.2	2.5	-17.7	7.7	6.8	11.2	3.1	20.1	-18.0	-11.9	11.3
Belarus	23,386	28,734	-16.2	-14.0	7.9	23.1	-4.8	2.4	2.2	1.4	2.0	3.0	9.3	1.3	0.4	-0.2	22.9
Belgium	2,767	11,002	19.9	24.8	6.4	0.6	41.0	22.8	-3.1	-5.8	8.5	17.0	-1.6	5.2	0.8	8.9	297.6
Bulgaria	3,379	2,748	-23.6	30.5	-4.0	-1.1	-22.1	1.0	-3.8	-3.8	-4.9	-0.8	-2.8	8.7	-1.2	3.5	-18.7
Canada	43,025	75,501	-6.6	4.3	-1.2	0.2	11.3	19.1	6.8	5.9	3.1	0.6	-6.6	-3.0	0.5	8.7	75.5
Croatia	1,793	2,092	-32.5	-43.0	34.4	2.8	-3.7	-4.6	18.6	11.1	24.1	-16.3	13.1	-15.8	4.3	37.8	16.7
Czech Republic	1,866	2,165	-4.0	29.3	22.5	-3.8	-3.1	6.8	-3.5	-6.8	-1.0	-5.8	-1.5	-2.7	0.8	1.3	16.0
Denmark	1,540	5,194	16.2	21.9	25.8	12.2	14.1	7.5	2.8	4.0	3.5	-0.3	-0.3	-6.1	5.4	-15.6	237.4
Estonia	2,548	1,812	-2.3	14.0	23.3	-5.7	-19.2	-2.1	36.6	7.8	3.1	0.0	4.9	2.4	5.2	-8.2	-28.9
European Community	81,155	290,521	3.3	9.7	17.5	11.4	9.8	12.9	1.6	1.9	7.6	5.3	6.7	8.8	0.2	7.3	258.0
Finland	2,620	5,287	4.8	6.7	9.0	-1.4	25.2	0.1	3.0	10.4	-0.7	14.2	-4.9	-8.3	7.0	-13.6	101.8
France	1,583	6,903	19.4	-6.0	42.6	-3.9	5.2	-14.2	-27.2	4.1	123.1	-13.3	19.4	59.1	0.0	1.6	336.0
Germany	22,404	42,402	0.3	-0.4	14.3	-4.6	4.6	1.1	-0.3	1.9	3.6	10.8	2.6	21.0	5.3	2.5	89.3
Greece	102	5,708	6.3	-4.4	5.4	109.1	305.2	127.4	51.2	-1.5	6.7	10.4	8.8	-4.0	18.4	31.5	5494.1
Hungary	7,021	9,657	0.2	-2.7	19.5	-15.1	19.8	2.2	-10.0	9.4	2.8	5.2	-7.4	3.0	13.0	10.4	37.5
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	1,881	5,945	-5.5	15.5	20.7	8.8	-3.6	11.7	19.7	2.1	8.2	18.9	-4.9	-8.9	12.0	13.8	216.1
Italy	16,562	66,221	-13.5	16.2	7.2	20.3	42.3	22.1	12.0	1.5	5.1	13.8	7.1	13.6	2.9	10.6	299.8
Japan	76,761	124,241	6.5	1.5	4.6	3.7	2.9	6.2	2.4	-0.6	1.4	3.2	-4.0	-5.5	11.2	11.1	61.9
Latvia	2,737	1,824	2.6	43.8	-21.9	51.1	-4.8	-5.0	12.1	16.3	-3.0	4.9	-5.0	2.9	5.5	-7.1	-33.4
Liechtenstein	0.1188	2	550.0	13.8	25.3	-2.4	15.7	0.0	-5.7	6.1	-14.3	12.5	4.4	6.4	-9.3	-9.6	1950.0
Lithuania	5,982	2,854	-3.7	16.7	12.6	-6.0	-22.5	13.4	22.7	-1.2	0.4	13.8	1.6	5.4	-6.1	-6.8	-52.3
Luxembourg	27	1,292	-21.0	202.1	7.9	-7.8	-2.2	9.6	5.3	20.2	635.9	2.8	20.9	1.5	4.8	-11.4	4753.5
Monaco	NO	1	*	*	*	*	*	*	*	*	*	722.8	113.2	-38.0	-39.6	1667.2	-27.9	*
Netherlands	15,917	28,479	16.7	3.0	11.6	6.9	1.7	1.7	-1.0	6.9	3.8	-0.7	8.0	-4.3	-3.8	3.8	78.9
New Zealand	5,330	5,367	6.1	-20.6	15.1	24.5	-23.3	20.2	-1.5	14.8	-13.9	-7.8	-28.3	31.5	4.9	18.3	0.7
Norway	5,172	10,827	5.8	0.5	7.3	6.5	-5.2	-0.8	15.0	14.7	3.5	6.0	2.9	-0.3	-1.2	1.8	109.3
Poland	1,654	5,959	-15.1	-8.4	52.2	2.7	28.6	19.0	25.9	0.1	15.5	8.8	17.4	4.4	5.2	3.2	260.2
Portugal	NO	4,479	*	*	*	*	1270.8	360.5	-45.1	15.7	28.9	-17.2	52.1	13.9	-9.0	5.6	*
Romania	42,118	11,509	-12.1	-1.5	3.4	-23.6	9.9	-15.2	-3.6	-12.1	7.7	6.4	-9.4	-7.2	-0.2	-3.1	-72.7
Russian Federation	518,483	527,746	-6.6	-5.2	0.2	-2.7	-0.2	1.7	-0.5	1.5	1.6	3.5	0.9	1.9	2.8	3.3	1.8
Slovakia	2,844	3,780	22.1	5.0	3.2	1.7	0.5	-0.5	-2.6	-0.6	-5.3	0.0	-5.4	-2.8	-5.3	-9.1	32.9
Slovenia	197	264	-53.5	37.1	12.1	-31.2	3.9	-1.3	-3.2	10.7	-5.0	67.7	-15.7	11.0	-2.8	3.4	34.3
Spain	678	27,555	58.7	69.1	167.9	286.3	-43.4	14.1	29.1	-0.9	78.2	33.5	47.6	64.4	14.2	8.9	3966.5
Sweden	485	790	21.2	9.7	-1.1	1.1	-2.8	1.4	-13.1	28.1	1.4	-4.1	-13.8	-15.8	7.7	22.0	63.0
Switzerland	235	261	9.9	12.5	23.8	5.6	-2.3	-1.2	-13.5	8.6	-3.9	12.4	0.3	2.1	-15.9	-18.7	11.3
Turkey	5,436	41,115	12.2	23.1	5.3	20.5	20.0	38.1	24.0	12.1	5.1	11.2	4.9	19.5	3.0	21.6	656.4
Ukraine	121,652	32,105	*	*	*	*	*	14.1	-4.4	-9.7	-5.4	13.7	-3.3	-5.2	-11.0	-4.9	-73.6
United Kingdom	10,353	74,549	5.5	15.6	25.4	17.6	3.5	14.4	0.1	-0.4	4.3	-2.8	4.1	-3.3	-8.1	12.2	620.1
United States	176,456	373,837	2.0	8.2	-10.3	6.8	13.3	4.8	8.0	3.3	5.4	-9.1	6.6	7.6	5.9	10.3	111.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.18

Contribution of fuels to CO_2 emissions from energy industries (%)

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007
Australia	6.3	4.3	84.3	82.3	9.4	13.3	-	-
Austria	23.1	25.1	45.3	36.4	30.7	33.9	0.9	4.7
Belarus	60.6	3.7	3.5	2.0	35.9	94.3	-	-
Belgium	16.5	18.2	71.7	35.3	9.2	41.0	2.5	5.5
Bulgaria	19.7	2.8	72.5	88.8	7.8	8.4	-	-
Canada	10.8	4.2	59.4	56.6	29.8	39.2	-	-
Croatia	66.3	45.9	8.6	26.7	25.2	27.4	-	-
Czech Republic	3.1	1.7	93.7	94.7	3.2	3.5	-	-
Denmark	7.0	7.7	85.8	69.0	5.9	20.7	1.3	2.6
Estonia	16.4	2.8	75.0	84.6	8.7	12.5	-	-
European Community	19.7	13.7	71.8	59.3	7.0	24.1	1.5	3.0
Finland	14.9	9.4	50.6	43.6	13.7	17.4	20.7	29.7
France	31.6	30.0	57.8	47.2	2.4	10.3	8.2	12.5
Germany	6.0	6.5	87.4	79.8	5.4	11.0	1.1	2.7
Greece	18.2	17.9	81.6	72.4	0.2	9.7	-	-
Hungary	19.8	8.1	54.1	44.5	26.0	47.4	-	-
Iceland	100.0	59.7	-	-	-	-	-	40.3
Ireland	11.4	11.4	71.8	47.3	16.9	41.3	-	-
Italy	59.8	25.2	27.7	32.7	12.4	42.0	0.1	0.1
Japan	46.9	21.1	27.5	49.3	23.7	27.7	1.9	1.8
Latvia	48.6	5.4	8.2	1.8	43.2	92.9	-	-
Liechtenstein	-	-	-	-	100.0	100.0	-	-
Lithuania	55.2	39.9	1.6	1.9	43.2	58.2	-	-
Luxembourg	0.7	0.1	94.7	-	2.0	95.1	2.6	4.8
Monaco	4.1	0.2	-	-	-	3.0	95.9	96.8
Netherlands	19.4	13.4	49.1	39.8	30.3	43.5	1.1	3.3
New Zealand	3.5	1.9	7.7	29.7	88.7	68.4	-	-
Norway	17.7	12.3	3.1	1.0	77.8	85.4	1.5	1.4
Poland	3.5	2.8	95.9	93.9	0.6	3.3	-	-
Portugal	51.8	25.0	48.2	50.6	-	22.6	-	1.7
Romania	16.9	11.4	43.4	64.9	39.7	23.8	-	-
Russian Federation	20.3	9.6	34.8	29.1	44.2	59.5	0.7	1.7
Slovakia	9.6	9.8	71.8	52.6	17.7	36.9	1.0	0.6
Slovenia	4.6	0.5	92.5	95.5	2.9	4.0	-	-
Spain	21.9	17.9	77.1	59.0	0.9	22.6	0.2	0.6
Sweden	31.1	26.4	58.4	53.6	4.9	7.7	5.6	12.2
Switzerland	27.7	22.7	1.9	4.8	9.4	7.8	61.0	64.7
Turkey	20.8	10.7	63.2	50.8	16.0	38.6	-	-
Ukraine	19.5	1.3	35.4	69.1	44.8	28.9	0.3	0.7
United Kingdom	17.4	8.8	78.2	55.3	4.4	35.4	0.1	0.5
United States	5.6	2.3	84.1	81.4	9.7	15.5	0.6	0.9

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Romania (1989) and Slovenia (1986).

Table 1.19

CO_2 emissions from manufacturing industries and construction: all fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	36,040	48,347	-1.3	2.6	0.3	0.4	-0.3	2.0	2.3	-2.1	3.7	1.7	2.7	8.5	4.6	2.8	34.2
Austria	12,687	15,668	3.1	1.9	1.6	11.2	-8.2	-6.6	5.2	-1.5	4.0	2.5	0.0	8.7	1.8	-1.9	23.5
Belarus	7,215	8,703	7.3	-0.1	4.7	1.1	4.1	-1.4	-2.9	-6.7	2.8	8.6	11.4	3.9	3.3	2.6	20.6
Belgium	33,118	26,294	0.2	0.7	-1.3	-2.7	7.9	-4.7	2.4	-1.3	-5.9	-0.9	-3.1	-4.8	-1.4	-4.2	-20.6
Bulgaria	24,755	10,782	-32.4	19.9	-2.9	1.1	-19.6	-13.6	-3.4	-9.1	-5.5	13.1	-6.2	-3.7	-1.5	5.0	-56.4
Canada	62,488	71,783	-6.1	1.3	4.4	0.0	-5.5	0.4	5.1	-6.8	3.4	7.0	1.2	-4.5	0.9	11.3	14.9
Croatia	5,447	3,874	-28.7	-7.8	1.5	0.9	9.5	-10.0	4.1	4.6	-6.8	5.5	12.3	2.8	2.6	3.4	-28.9
Czech Republic	46,616	24,940	5.4	0.5	11.8	-20.6	-1.7	4.8	-5.9	4.4	-5.2	-5.5	-1.4	2.4	-8.4	2.2	-46.5
Denmark	5,424	5,686	9.6	2.1	3.2	0.7	0.5	1.1	-3.5	1.1	-4.7	-0.6	0.8	-3.8	3.2	-1.2	4.8
Estonia	2,026	995	-9.3	-31.6	17.0	-10.6	-2.1	-45.0	30.1	22.4	-28.3	4.7	8.0	14.7	-0.3	84.5	-50.9
European Community	612,761	517,244	-3.5	0.1	-1.5	1.9	-1.8	-0.9	0.8	-0.5	-3.5	2.3	-1.2	-1.3	0.4	-2.3	-15.6
Finland	13,233	11,232	-3.8	-4.5	-0.9	1.2	-2.7	-0.2	0.1	-3.8	-2.6	3.3	0.8	-2.5	2.4	-1.6	-15.1
France	88,312	78,709	0.8	-0.2	0.8	1.5	1.6	-6.0	1.8	1.5	-4.4	1.3	-2.7	1.2	-0.7	-2.5	-10.9
Germany	154,482	89,096	-13.7	0.3	-3.6	-0.2	-4.0	-1.7	-3.6	-3.2	-2.3	0.9	-4.1	-2.3	5.2	-3.7	-42.3
Greece	10,378	10,485	-1.4	8.4	7.0	1.0	0.5	-11.9	10.5	1.1	-4.0	-2.1	-7.2	-2.4	2.7	13.8	1.0
Hungary	19,589	7,665	-13.5	1.4	-0.6	-11.4	-4.1	-10.3	1.9	0.8	-1.8	6.6	-7.7	13.4	-16.4	-4.4	-60.9
Iceland	361	400	-20.9	4.6	11.0	17.1	-4.6	5.5	-10.0	11.2	0.8	-9.9	8.2	-8.0	-4.3	-1.7	10.9
Ireland	3,970	6,089	2.9	2.5	-4.4	10.0	0.3	4.7	18.1	-0.4	-5.1	0.3	7.2	1.4	-1.8	6.2	53.4
Italy	88,937	78,867	-3.3	2.6	-2.5	3.6	-6.5	4.5	1.6	-3.1	-4.5	6.0	-0.2	-5.2	0.5	-3.9	-11.3
Japan	371,310	381,040	-1.4	1.3	2.2	0.6	-6.1	2.0	3.3	-2.5	2.0	0.3	1.6	-1.7	1.7	-0.2	2.6
Latvia	3,777	1,228	-25.0	-2.0	-2.1	-2.5	-12.4	-9.4	-17.7	-7.9	4.9	-0.9	0.2	1.6	5.2	2.4	-67.5
Liechtenstein	35	31	-3.1	0.4	-0.1	4.5	6.5	-1.5	-8.7	0.6	3.2	7.4	-2.4	-3.2	3.4	-17.5	-12.5
Lithuania	6,197	1,581	0.9	-14.4	-12.1	1.3	-1.9	-22.4	-8.2	-1.7	7.4	1.2	7.9	10.5	15.9	-1.9	-74.5
Luxembourg	5,108	1,798	-3.3	-36.8	-2.4	-15.6	-29.8	7.7	1.5	-6.5	-3.1	-3.5	9.0	5.2	0.2	6.3	-64.8
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	32,696	27,749	-0.8	-7.4	1.6	-4.7	0.3	-0.8	-1.8	-1.7	2.0	2.0	-0.8	-0.5	1.3	0.3	-15.1
New Zealand	4,527	5,314	8.8	-1.5	9.9	6.8	1.2	-8.6	4.9	2.6	5.8	-3.3	-15.5	-6.6	6.3	5.4	17.4
Norway	3,597	3,520	-4.2	-10.1	12.8	-0.7	1.9	-7.9	-5.3	1.9	-6.8	8.3	-4.4	-6.7	9.9	-10.2	-2.2
Poland	42,536	34,644	-6.3	29.1	6.7	-3.2	-14.3	-14.3	0.0	-12.1	-7.6	-0.8	0.5	-17.3	3.2	5.9	-18.6
Portugal	9,162	10,695	2.6	2.2	2.9	10.1	-0.9	0.1	3.9	-3.4	-1.6	-2.9	1.3	-2.7	-4.0	2.9	16.7
Romania	37,425	19,530	-32.8	2.8	4.1	-15.8	-26.0	-5.9	8.0	4.3	10.0	5.5	1.8	-4.7	-6.7	1.2	-47.8
Russian Federation	216,339	113,577	-3.1	12.2	0.8	-0.2	-16.8	9.6	18.8	1.3	-2.7	-1.3	3.5	3.2	1.1	-6.1	-47.5
Slovakia	24,291	12,465	-7.8	-7.2	-6.9	-6.5	-5.9	-5.3	0.8	-2.2	-4.5	10.7	-7.0	-1.3	9.5	-6.5	-48.7
Slovenia	4,352	2,312	-1.8	-2.0	-5.3	-10.6	2.9	0.8	-1.4	-2.6	1.6	-3.9	5.3	9.2	4.1	-9.4	-46.9
Spain	46,196	67,543	4.6	7.7	-9.6	11.2	0.8	4.2	3.5	7.3	2.4	7.2	3.1	1.1	-2.5	-2.0	46.2
Sweden	11,150	10,099	0.2	3.8	0.3	1.6	-5.0	-8.0	2.8	-0.2	-0.4	-2.9	-0.8	-6.1	3.0	-4.7	-9.4
Switzerland	5,951	5,804	-2.0	-2.7	-3.0	3.1	2.8	0.7	3.1	0.4	-1.4	-0.4	0.7	1.8	0.9	-1.0	-2.5
Turkey	37,531	80,012	7.8	13.2	23.8	9.6	-2.8	-10.1	20.3	-21.7	23.9	16.0	1.4	-1.8	14.6	4.1	113.2
Ukraine	143,311	48,604	*	*	*	*	*	-4.8	-1.2	-3.1	-1.4	11.5	3.2	4.4	0.1	-1.1	-66.1
United Kingdom	99,046	79,335	0.0	-3.5	1.2	0.0	-1.8	0.7	-0.2	-0.3	-9.0	1.3	-1.8	-0.1	-1.6	-2.9	-19.9
United States	834,204	845,416	-1.6	1.0	3.9	0.5	-5.2	-2.9	1.9	-0.6	0.4	0.3	0.0	-2.0	2.0	0.1	1.3

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.20

CO_2 emissions from manufacturing industries and construction: liquid fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	11,856	16,950	-3.3	2.2	5.6	-7.6	0.4	-1.5	9.3	-3.7	4.3	0.4	1.2	13.4	16.9	4.6	43.0
Austria	3,141	2,829	13.4	-5.5	-3.2	23.5	-5.3	-24.9	1.4	1.1	-12.5	5.4	8.1	4.3	4.1	-1.5	-9.9
Belarus	3,938	3,250	13.9	-1.0	4.7	-1.2	5.1	-5.9	-10.4	-10.2	-4.1	2.6	15.8	-1.3	6.0	3.0	-17.5
Belgium	7,533	3,800	17.5	-3.0	-12.2	-0.8	1.8	-26.2	-3.0	23.9	-7.7	-7.1	1.7	-7.3	-7.6	-8.1	-49.6
Bulgaria	7,740	3,200	73.3	41.5	-9.4	13.6	32.6	-9.5	-16.8	-11.9	7.7	7.9	-7.9	-8.5	1.4	7.2	-58.7
Canada	12,940	6,331	-15.7	-11.6	5.6	-2.4	-6.8	-4.8	0.9	8.2	-17.8	23.9	-2.1	-13.5	-17.5	-3.6	-51.1
Croatia	2,136	1,717	-29.3	-1.7	3.8	-4.2	21.5	-6.6	3.0	8.2	-9.3	2.9	-0.7	21.3	9.2	-9.2	-19.6
Czech Republic	9,110	3,606	-9.8	13.4	14.3	-49.7	36.9	38.2	-17.8	-13.8	-8.1	-11.0	19.6	-6.0	-9.4	-18.5	-60.4
Denmark	2,685	2,634	11.4	-2.2	5.1	-4.6	-0.5	1.3	-1.9	3.1	1.4	-1.6	0.8	-5.5	10.8	-3.1	-1.9
Estonia	775	161	0.4	-64.9	95.1	-2.9	-48.1	-43.9	15.7	9.9	27.6	24.8	7.6	-9.5	-19.8	22.8	-79.2
European Community	193,232	152,832	1.6	-1.3	-3.8	1.4	-1.3	-4.5	-4.2	2.4	-4.8	1.1	-0.5	-0.9	-0.6	-3.4	-20.9
Finland	4,540	3,538	-5.6	1.0	-3.7	0.7	2.2	1.9	-3.3	-2.0	-0.7	-0.7	3.8	-3.4	-2.2	-3.8	-22.1
France	32,004	24,899	0.6	1.3	0.2	-1.2	5.4	-10.2	-9.9	1.8	-9.2	0.5	-1.5	5.2	1.4	-4.6	-22.2
Germany	25,897	11,483	8.3	-3.6	-2.5	-7.1	-5.7	-9.5	-8.5	-4.2	-3.1	-10.2	-7.5	-3.6	-1.4	-5.5	-55.7
Greece	5,638	7,325	-3.9	15.2	13.3	3.6	-4.5	-8.1	6.3	-0.6	3.8	1.1	-10.7	3.0	5.5	12.0	29.9
Hungary	4,164	1,775	-4.6	-13.7	-3.8	-11.2	-18.5	-12.2	-0.1	-24.2	4.5	16.6	8.4	11.0	-10.4	-8.7	-57.4
Iceland	313	338	-22.7	8.7	13.3	15.1	-6.6	6.5	-11.0	9.4	3.5	-10.0	4.8	-3.9	-7.0	-9.3	7.9
Ireland	2,225	3,438	2.9	0.0	-13.0	18.0	-1.1	8.0	13.5	-0.8	-6.6	0.2	0.0	2.2	-10.9	4.2	54.5
Italy	34,529	25,534	-9.7	-0.2	-3.5	4.6	-5.0	6.5	-1.6	-0.5	-4.5	10.9	-0.6	-7.2	0.9	-6.2	-26.0
Japan	146,181	122,205	1.2	1.2	1.2	0.9	-5.6	1.7	0.5	-4.9	-1.3	-1.8	0.5	-3.6	-3.1	-6.2	-16.4
Latvia	2,189	296	-35.2	2.0	-2.3	-2.1	-19.3	-12.1	-33.3	-35.4	-6.2	2.1	-5.7	-18.3	16.4	-5.1	-86.5
Liechtenstein	19	9	-12.3	-2.8	-7.2	13.8	7.4	-12.2	-12.2	-4.8	13.0	6.0	-2.9	-4.3	4.1	-40.7	-52.2
Lithuania	3,897	249	-3.9	-15.7	-16.5	-0.7	-8.6	-20.2	-20.0	-10.9	-32.0	-36.2	16.3	15.6	-6.5	-7.0	-93.6
Luxembourg	285	273	25.1	-24.0	-0.8	-7.6	0.6	15.1	-5.3	-14.6	-24.8	-1.1	19.2	40.0	-6.6	-0.4	-4.0
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	8,644	9,051	0.9	-20.3	0.6	-8.7	1.2	7.5	-9.4	2.6	13.1	11.5	-5.0	-0.8	14.3	5.7	4.7
New Zealand	714	985	-3.7	6.7	5.3	-7.5	-16.0	-6.3	37.4	-2.9	4.0	0.0	18.7	0.2	1.0	8.7	37.9
Norway	2,884	2,358	-5.9	-15.5	16.0	-8.8	6.0	-7.3	-6.4	4.9	-6.3	9.8	-10.8	-8.8	10.1	-13.8	-18.2
Poland	4,188	4,736	-11.2	29.3	31.9	15.0	13.9	-10.2	-4.5	-7.8	-0.8	14.9	-0.6	-8.2	-6.5	-13.8	13.1
Portugal	6,465	6,557	2.3	7.2	4.8	13.5	-0.6	-4.3	-9.0	-1.8	-0.4	-8.0	5.5	2.0	-6.1	-8.6	1.4
Romania	10,195	5,969	-33.8	-10.9	33.8	-21.4	-19.9	-13.8	28.3	3.5	17.0	-18.7	13.7	-8.0	0.0	20.3	-41.5
Russian Federation	70,035	28,711	-5.1	9.0	-4.8	32.4	-26.8	15.3	20.9	-6.7	-5.6	-7.4	0.2	-0.3	-0.2	1.6	-59.0
Slovakia	4,163	1,194	-13.9	-12.0	-10.8	-9.3	-7.6	-5.8	-0.4	-11.5	2.4	8.5	-7.4	-3.7	2.6	-7.9	-71.3
Slovenia	1,656	588	-13.6	-1.5	-13.5	-17.5	-3.2	4.3	-5.8	-10.0	-10.5	-10.0	13.5	20.4	10.3	-30.6	-64.5
Spain	24,520	25,750	3.5	6.8	-15.7	13.4	-0.6	-1.2	-5.1	4.3	-0.2	3.9	0.8	-2.7	-2.3	-3.7	5.0
Sweden	8,484	7,538	-3.4	4.4	-0.8	2.3	-5.6	-7.1	0.5	-1.4	0.9	-1.1	-4.1	-7.9	3.9	-6.3	-11.1
Switzerland	3,340	2,572	2.5	-8.3	1.6	4.6	4.0	-0.1	-5.8	0.6	-1.9	-2.0	-1.4	-0.9	-1.8	-7.8	-23.0
Turkey	12,574	11,078	3.6	10.1	11.7	3.5	-13.5	0.5	-0.6	-9.0	14.2	5.0	-0.9	-2.1	-15.1	-25.1	-11.9
Ukraine	39,844	1,164	*	*	*	*	*	-29.3	-33.8	-12.0	-15.1	-0.7	4.9	51.9	-49.8	-10.2	-97.1
United Kingdom	27,587	19,960	6.2	-11.1	-2.9	-7.7	-1.6	-4.7	-0.3	10.6	-15.9	-2.7	6.1	7.4	-6.5	-2.4	-27.6
United States	274,616	352,460	-6.6	-3.8	9.3	-1.0	-8.7	1.7	2.5	10.4	-3.2	5.3	5.7	4.5	7.3	-0.5	28.3

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.21

CO_2 emissions from manufacturing industries and construction: solid fuels - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	11,100	13,258	-1.9	1.9	-2.1	1.3	-4.5	3.9	-1.1	-6.0	3.0	5.0	6.4	9.1	1.4	1.4	19.4
Austria	5,016	5,410	-5.1	5.2	-1.3	14.0	-14.8	1.7	6.8	-4.7	9.4	3.2	-0.4	10.8	1.2	-3.0	7.8
Belarus	942	351	-3.6	-20.7	6.5	-4.4	-5.1	-6.1	2.7	10.7	-4.9	-2.4	6.2	30.3	-27.6	-3.9	-62.7
Belgium	15,755	8,487	-3.0	-5.2	-4.1	-10.1	12.7	-4.0	3.9	-4.7	-7.0	1.4	-8.1	-13.6	2.5	-7.7	-46.1
Bulgaria	9,353	4,352	-57.4	14.4	-1.8	16.1	-41.8	-8.3	-4.0	-3.4	-7.4	19.9	-9.1	-10.4	-8.8	8.5	-53.5
Canada	5,931	7,593	-17.1	-2.4	2.3	0.7	-2.3	2.7	5.5	-1.8	0.3	7.0	6.5	-2.3	10.5	0.2	28.0
Croatia	1,677	603	-41.0	-12.2	-9.0	-8.0	-18.3	-19.5	25.8	2.5	-1.7	34.7	82.7	-27.0	-8.5	17.2	-64.0
Czech Republic	31,522	14,958	8.9	-10.3	8.1	-15.3	-10.5	-2.8	-0.3	8.6	-4.6	-5.5	-9.0	7.0	-11.5	16.5	-52.5
Denmark	1,444	889	9.0	-1.5	-1.1	1.6	-3.7	-13.0	-4.7	-12.3	-15.9	2.1	11.2	-6.2	2.0	-0.8	-38.5
Estonia	808	708	-5.4	-8.9	-3.8	-22.5	61.3	-40.5	37.7	24.9	-43.6	-20.4	12.7	37.7	5.1	145.5	-12.4
European Community	236,279	114,224	-10.5	-6.2	-4.9	-0.2	-7.2	-3.9	-4.4	-4.1	-7.7	1.9	-2.6	-5.2	3.8	-1.5	-51.7
Finland	4,904	3,488	-4.7	-11.8	-1.3	4.8	-1.3	0.3	3.9	-11.4	-2.1	3.7	-0.8	2.2	-2.5	-8.4	-28.9
France	32,273	21,720	-2.1	-9.2	-2.6	3.0	-4.9	-3.2	2.8	-2.7	-9.9	0.4	6.5	0.4	-2.9	-2.7	-32.7
Germany	80,146	18,595	-28.6	-1.8	-6.3	2.3	-9.5	-4.7	-14.8	-8.1	-1.5	0.2	-13.3	-11.0	14.6	-13.2	-76.8
Greece	4,563	2,190	1.8	-0.5	-2.6	-6.9	0.5	-20.5	17.1	1.5	-20.5	-12.2	-3.4	-23.9	-5.9	33.7	-52.0
Hungary	7,815	2,953	-15.6	-7.3	-2.6	-22.6	14.1	0.5	9.0	-15.0	-0.1	-6.1	8.2	7.3	-4.0	3.6	-62.2
Iceland	48	62	-9.1	-34.0	-24.7	64.0	27.8	-6.2	3.6	31.4	-25.0	-9.3	51.4	-44.7	37.2	79.6	31.4
Ireland	871	556	0.4	36.2	65.0	-23.9	-12.7	-18.5	73.0	13.9	-5.5	6.1	13.8	12.0	-21.6	5.7	-36.1
Italy	21,265	15,084	-1.5	-5.2	-7.8	2.1	-6.9	0.1	-6.2	-4.2	-15.5	13.2	0.4	-8.2	10.0	3.9	-29.1
Japan	214,770	228,255	-3.6	1.1	2.7	0.2	-6.2	2.0	5.1	-1.2	3.9	0.8	1.6	-2.3	3.6	2.4	6.3
Latvia	146	195	-36.5	-50.2	-7.0	-4.2	-7.4	2.0	-26.8	0.0	-4.2	-19.3	2.7	175.0	36.0	42.4	34.0
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	189	557	46.1	-44.9	-8.5	-17.0	7.3	-12.8	-21.1	-15.2	395.1	57.0	0.5	9.0	43.0	3.5	194.2
Luxembourg	4,073	214	-6.0	-50.7	-7.0	-33.7	-69.5	7.8	-0.2	-26.3	-0.1	-13.0	8.1	6.3	-13.4	10.9	-94.7
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	5,033	4,550	-12.8	2.9	-1.8	-3.2	0.3	-6.4	-1.5	6.7	-0.9	4.6	7.9	-4.8	3.6	2.2	-9.6
New Zealand	1,896	1,612	2.2	-17.3	2.7	2.8	0.0	-14.8	-0.5	20.6	-4.1	31.8	-36.1	7.5	4.6	5.6	-15.0
Norway	714	552	2.7	6.1	1.7	1.4	-17.1	-26.7	5.7	-13.2	-11.3	5.8	15.1	-18.2	15.1	-0.1	-22.6
Poland	30,601	22,861	-2.3	32.4	4.0	-5.9	-18.7	-15.7	-0.6	-14.5	-10.1	-5.5	-1.7	-23.4	4.3	11.7	-25.3
Portugal	2,615	707	3.5	-11.6	-3.2	-6.2	-22.7	-11.2	34.1	-34.6	-38.6	-26.8	-34.1	-78.7	40.5	501.7	-72.9
Romania	10,639	5,698	-30.0	4.8	5.2	2.6	-14.8	-22.8	-1.2	-2.6	13.4	41.7	-1.9	4.1	1.8	-5.7	-46.4
Russian Federation	39,429	20,893	-6.6	-10.1	-4.9	-37.5	1.0	19.6	49.7	16.1	-11.2	1.0	0.4	2.9	-11.5	21.0	-47.0
Slovakia	14,404	7,430	-8.2	-7.6	-7.2	-6.6	-5.9	-5.0	-0.6	-0.1	-6.3	13.8	-6.2	2.3	7.1	-6.9	-48.4
Slovenia	1,446	387	-11.9	18.8	-10.9	-14.0	27.4	3.0	-11.8	17.6	33.1	-14.3	1.1	2.2	0.9	5.3	-73.2
Spain	13,238	5,694	8.3	-14.4	-13.2	-5.0	-19.6	-5.5	-10.9	12.0	-1.3	-8.7	-5.8	-5.0	-8.1	21.6	-57.0
Sweden	1,865	1,479	6.2	7.8	0.8	1.0	-2.9	-15.8	20.8	-0.1	-5.4	-14.4	11.3	5.2	5.2	-7.4	-20.7
Switzerland	1,388	774	-22.8	1.9	-33.9	-11.4	-8.5	-1.4	45.4	1.9	-7.1	1.6	-2.7	16.6	11.8	9.3	-44.2
Turkey	23,228	50,371	7.6	10.3	38.4	10.8	6.7	-16.0	37.5	-32.6	30.7	14.6	2.1	-8.0	24.8	9.6	116.9
Ukraine	25,149	10,334	*	*	*	*	*	34.0	-5.5	-0.7	9.9	14.2	2.4	10.7	19.9	-2.3	-58.9
United Kingdom	43,412	25,483	-1.3	-6.0	-3.7	-0.7	-8.9	-3.0	-9.1	-2.7	-9.8	4.4	-2.2	-2.8	4.5	0.4	-41.3
United States	149,476	107,379	-0.7	-4.2	-5.2	2.0	-5.5	-2.9	2.4	0.7	-8.5	0.4	1.0	-2.0	-1.8	-5.9	-28.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.22

CO_2 emissions from manufacturing industries and construction: gaseous fuels - trend informatio

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	13,084	18,139	1.0	3.4	-2.0	6.3	2.1	3.3	-0.2	1.8	3.8	0.4	1.5	4.6	-2.6	2.2	38.6
Austria	4,265	6,485	2.3	3.2	5.4	4.2	-3.5	-2.6	5.7	-2.0	6.7	-0.1	-3.6	10.0	-2.0	-0.6	52.0
Belarus	2,216	5,101	5.8	4.7	4.5	4.3	4.1	4.0	3.8	-5.5	9.3	13.9	9.1	5.0	4.8	2.8	130.1
Belgium	7,784	9,600	-10.4	10.1	6.9	-2.0	7.5	3.3	1.7	-4.7	-0.9	-4.3	-0.8	2.6	-1.4	-0.4	23.3
Bulgaria	7,661	3,230	-7.2	18.1	-0.9	-26.3	-10.7	-25.9	16.6	-14.7	-15.8	7.6	2.0	14.4	6.0	-1.2	-57.8
Canada	43,485	57,542	-1.9	5.0	4.4	0.7	-5.9	1.1	5.7	-10.0	7.9	4.4	1.1	-3.0	2.5	15.1	32.3
Croatia	1,635	1,554	-15.5	-11.6	3.0	8.8	6.6	-11.5	1.1	1.2	-5.2	1.1	3.9	0.2	-1.2	16.0	-5.0
Czech Republic	5,984	6,375	10.0	29.5	19.8	-5.9	-1.4	-3.6	-5.5	11.6	-4.4	-2.0	1.8	-0.1	-1.5	-10.6	6.5
Denmark	1,294	2,117	6.5	11.4	3.8	7.1	4.3	9.3	-4.9	5.0	-7.0	-0.3	-3.4	-0.9	-4.6	0.5	63.6
Estonia	443	127	-33.5	5.9	-11.5	-1.5	-14.9	-59.6	20.0	28.6	-26.7	52.3	-0.4	12.5	16.4	5.5	-71.4
European Community	175,187	232,474	0.6	7.2	3.2	3.1	1.6	3.8	7.5	-0.3	-0.2	2.7	-1.7	-0.3	-1.1	-2.6	32.7
Finland	2,191	2,338	2.2	-2.5	-5.2	-3.3	-3.4	0.8	3.7	4.6	-3.6	-2.0	3.4	-8.8	6.3	8.1	6.7
France	24,034	31,321	4.9	8.0	5.2	3.1	3.5	-3.5	12.8	4.5	3.0	1.8	-8.5	-1.4	-1.0	-1.1	30.3
Germany	45,540	51,598	0.0	4.8	-1.6	-0.3	0.9	2.9	3.8	-0.7	-1.5	3.0	-1.8	-0.8	2.3	-1.3	13.3
Greece	177	970	-5.0	-8.5	37.1	430.4	228.8	0.0	23.7	17.2	4.3	5.6	11.1	16.1	0.3	-6.2	448.5
Hungary	7,558	2,876	-17.1	24.7	3.9	-3.7	-9.3	-16.6	0.7	27.4	-3.8	10.2	-22.8	20.2	-28.8	-7.9	-62.0
Iceland	0	0	-4.3	0.0	0.0	4.8	-5.2	-8.5	9.9	-15.2	-3.6	-3.7	19.2	3.1	14.2	-5.8	-25.2
Ireland	873	2,095	5.3	3.0	2.1	4.5	9.7	2.1	19.0	-4.2	-0.4	-1.9	25.7	-4.7	30.5	9.7	139.9
Italy	32,087	37,018	3.6	8.0	0.8	2.9	-7.7	4.3	7.1	-4.4	-1.2	1.4	-0.3	-2.7	-2.8	-5.0	15.4
Japan	7,738	22,881	12.4	7.5	8.6	1.8	-11.5	5.8	5.4	-1.7	6.3	8.2	9.8	19.0	12.8	7.5	195.7
Latvia	1,442	719	-8.3	2.5	-1.1	-3.4	2.5	-6.5	7.7	17.7	10.8	-0.8	2.7	3.5	-2.3	-2.7	-50.1
Liechtenstein	16	22	7.4	3.2	6.0	-2.4	5.8	7.9	-6.3	4.3	-2.8	8.4	-2.1	-2.4	3.0	-1.6	32.5
Lithuania	2,111	775	5.7	-1.4	-3.2	8.2	8.6	-26.8	12.5	10.3	11.7	1.7	9.1	9.3	10.8	-3.8	-63.3
Luxembourg	750	1,260	0.2	8.6	4.6	9.0	-2.9	5.9	3.1	-1.5	0.0	-1.6	7.6	-1.6	4.6	8.9	68.0
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	19,020	14,148	1.6	-3.8	2.8	-3.5	-0.1	-2.5	1.2	-5.0	-1.6	-2.9	-1.0	0.9	-5.6	-3.4	-25.6
New Zealand	1,917	2,717	19.9	7.9	15.1	12.2	5.1	-6.1	2.1	-3.3	10.9	-18.6	-9.8	-15.5	9.3	4.1	41.7
Norway	NO	590	*	580.8	38.2	375.5	17.7	25.1	-10.6	3.2	-4.1	1.2	19.1	15.9	4.9	-3.5	*
Poland	7,747	7,047	-25.2	-0.7	15.0	8.0	-5.0	-8.7	10.5	-0.6	-0.6	7.4	12.3	-1.9	8.6	4.6	-9.0
Portugal	NO	3,292	*	*	*	*	415.2	108.7	63.8	27.3	16.9	18.4	-2.9	-4.2	-0.9	11.7	*
Romania	16,591	7,864	-33.3	7.3	-5.6	-19.9	-34.0	8.5	3.3	7.5	5.1	4.8	-1.5	-7.7	-15.2	-5.3	-52.6
Russian Federation	97,745	62,776	-0.5	21.3	6.6	-4.1	-13.7	4.7	11.4	2.3	1.2	2.7	3.8	5.6	4.9	-15.0	-35.8
Slovakia	5,724	3,842	-2.2	-4.2	-4.6	-5.0	-5.4	-5.6	3.7	-2.7	-3.3	5.9	-8.4	-7.4	17.2	-5.4	-32.9
Slovenia	1,238	1,309	12.7	-6.9	4.2	-4.1	2.2	-2.6	4.7	-2.0	0.5	2.6	2.1	5.0	1.3	0.3	5.7
Spain	8,439	35,621	1.9	35.5	5.8	17.3	12.8	15.1	18.2	9.2	5.3	12.9	6.4	4.7	-2.0	-4.1	322.1
Sweden	687	944	-2.6	-9.2	15.2	3.2	-2.0	0.4	-9.2	13.4	1.1	-3.8	7.1	-7.9	2.9	9.0	37.3
Switzerland	1,067	2,162	10.1	4.4	1.9	5.7	2.0	3.7	8.1	-0.2	-1.0	1.6	4.4	1.5	1.0	4.9	102.7
Turkey	1,729	18,563	41.5	42.3	3.9	24.9	-17.8	-5.8	-7.8	24.6	17.9	50.5	2.8	22.6	25.3	15.2	973.6
Ukraine	74,454	35,830	*	*	*	*	*	-7.1	2.8	-3.2	-2.9	11.3	3.3	0.6	-1.7	-1.0	-51.9
United Kingdom	28,046	33,668	-4.2	7.2	10.5	6.4	4.9	6.9	6.5	-4.1	-4.7	1.1	-5.5	-2.6	-2.7	-5.6	20.0
United States	410,111	385,576	1.3	5.6	3.7	0.9	-3.1	-5.4	1.4	-7.5	5.5	-3.0	-4.2	-6.9	-1.5	2.5	-6.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.23

Contribution of fuels to CO_2 emissions from manufacturing industries and construction (%)

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007
Australia	32.9	35.1	30.8	27.4	36.3	37.5	-	-
Austria	24.8	18.1	39.5	34.5	33.6	41.4	2.1	6.0
Belarus	54.6	37.3	13.1	4.0	30.7	58.6	1.6	-
Belgium	22.7	14.5	47.6	32.3	23.5	36.5	6.2	16.8
Bulgaria	31.3	29.7	37.8	40.4	30.9	30.0	-	-
Canada	20.7	8.8	9.5	10.6	69.6	80.2	0.2	0.4
Croatia	39.2	44.3	30.8	15.6	30.0	40.1	-	-
Czech Republic	19.5	14.5	67.6	60.0	12.8	25.6	-	-
Denmark	49.5	46.3	26.6	15.6	23.9	37.2	0.0	0.8
Estonia	38.3	16.2	39.9	71.1	21.9	12.7	-	-
European Community	31.5	29.5	38.6	22.1	28.6	44.9	1.3	3.4
Finland	34.3	31.5	37.1	31.1	16.6	20.8	12.1	16.6
France	36.2	31.6	36.5	27.6	27.2	39.8	0.0	1.0
Germany	16.8	12.9	51.9	20.9	29.5	57.9	1.9	8.3
Greece	54.3	69.9	44.0	20.9	1.7	9.3	-	-
Hungary	21.3	23.2	39.9	38.5	38.6	37.5	0.3	0.8
Iceland	86.8	84.4	13.2	15.6	0.0	0.0	-	-
Ireland	56.1	56.5	21.9	9.1	22.0	34.4	-	-
Italy	38.8	32.4	23.9	19.1	36.1	46.9	1.2	1.6
Japan	39.4	32.1	57.8	59.9	2.1	6.0	0.7	2.0
Latvia	58.0	24.1	3.9	15.9	38.2	58.6	-	1.4
Liechtenstein	53.2	29.1	-	-	46.8	70.9	-	-
Lithuania	62.9	15.8	3.1	35.2	34.1	49.0	-	-
Luxembourg	5.6	15.2	79.7	11.9	14.7	70.1	-	2.764265158
Monaco	-	-	-	-	-	-	-	-
Netherlands	26.4	32.6	15.4	16.4	58.2	51.0	-	-
New Zealand	15.8	18.5	41.9	30.3	42.4	51.1	-	-
Norway	80.2	67.0	19.8	15.7	-	16.8	-	0.6
Poland	9.8	13.7	71.9	66.0	18.2	20.3	-	-
Portugal	70.6	61.3	28.5	6.6	-	30.8	0.9	1.3
Romania	27.2	30.6	28.4	29.2	44.3	40.3	-	-
Russian Federation	32.4	25.3	18.2	18.4	45.2	55.3	4.2	1.1
Slovakia	17.1	9.6	59.3	59.6	23.6	30.8	-	-
Slovenia	38.1	25.4	33.2	16.7	28.4	56.6	0.3	1.2
Spain	53.1	38.1	28.7	8.4	18.3	52.7	-	0.7
Sweden	76.1	74.6	16.7	14.6	6.2	9.3	1.0	1.4
Switzerland	56.1	44.3	23.3	13.3	17.9	37.2	2.6	5.1
Turkey	33.5	13.8	61.9	63.0	4.6	23.2	-	-
Ukraine	27.8	2.4	17.5	21.3	52.0	73.7	2.7	2.6
United Kingdom	27.9	25.2	43.8	32.1	28.3	42.4	0.0	0.3
United States	32.9	41.7	17.9	12.7	49.2	45.6	-	-

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Romania (1989) and Slovenia (1986).

Table 1.24

CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): all fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	12,911	18,629	0.7	5.1	2.9	2.0	1.7	1.5	3.4	5.2	2.3	10.8	-4.7	1.4	-0.8	0.6	44.3
Austria	13,811	10,580	8.0	8.7	8.2	-9.8	-0.3	3.9	-9.8	10.4	-4.2	10.4	-8.0	-5.7	-2.1	-17.2	-23.4
Belarus	14,290	8,387	-1.7	-5.1	2.5	-1.1	-0.6	-5.3	-3.9	-9.1	-7.7	-2.0	-0.6	4.7	3.9	1.8	-41.3
Belgium	27,011	26,425	10.4	2.1	17.2	-12.0	1.1	-3.3	-4.7	7.8	-5.9	7.4	-2.5	-1.4	-6.2	-7.2	-2.2
Bulgaria	8,940	1,614	-24.1	-21.2	23.5	-17.3	11.6	-16.6	-23.9	-13.6	26.6	6.3	-20.3	-3.3	11.6	-14.9	-81.9
Canada	68,760	78,223	-0.7	0.7	7.4	-3.6	-10.6	5.0	8.7	-4.4	4.9	5.7	-2.7	-2.8	-6.8	8.1	13.8
Croatia	3,606	3,301	-15.8	8.0	14.3	1.6	-4.2	13.0	-4.5	6.4	2.4	6.2	-2.2	0.9	-6.1	-9.0	-8.4
Czech Republic	32,347	10,503	-21.8	-1.9	-0.3	-1.8	-20.5	-1.0	-3.4	9.5	-6.5	-3.6	-1.3	-10.0	9.9	-17.6	-67.5
Denmark	8,954	6,148	2.8	2.6	6.4	-9.0	-2.9	-2.0	-7.5	2.8	-3.7	0.7	-3.2	-0.9	-4.5	-8.7	-31.3
Estonia	1,519	347	-5.7	11.0	9.0	-19.7	-10.1	3.6	-1.0	26.7	6.4	-11.5	-5.0	0.2	-14.9	3.3	-77.1
European Community	637,798	553,577	6.2	1.7	10.1	-6.7	0.1	-2.3	-2.3	7.0	-5.4	3.1	0.3	-3.1	-1.9	-10.8	-13.2
Finland	7,040	4,918	-2.2	-7.5	2.0	0.2	1.6	-1.5	-6.4	3.8	-1.1	-3.0	-1.6	-4.1	-2.9	-1.3	-30.1
France	93,742	92,877	10.5	2.3	7.9	-5.7	3.6	-1.3	-2.5	9.6	-9.5	3.3	5.2	-1.2	-3.2	-8.0	-0.9
Germany	204,341	127,528	0.6	1.4	13.1	-6.7	-4.2	-8.3	-3.8	12.3	-6.9	0.0	-3.0	-9.0	5.4	-22.9	-37.6
Greece	8,126	12,666	3.6	0.9	23.6	2.7	3.4	-1.6	5.8	7.7	4.6	15.3	-5.6	4.8	-0.7	-9.7	55.9
Hungary	24,334	13,232	3.0	-4.8	3.3	-4.0	-13.6	5.7	-2.5	8.1	2.3	7.7	3.3	0.3	-6.8	-19.1	-45.6
Iceland	699	592	2.5	1.4	7.9	-3.2	-2.6	-1.8	-6.6	-11.3	9.6	-5.6	-2.5	-2.1	-12.5	3.1	-15.3
Ireland	10,059	10,196	1.3	-1.6	0.4	-2.7	5.1	-1.3	1.8	4.0	-1.3	3.0	0.3	4.7	-2.1	-2.9	1.4
Italy	76,677	79,746	7.3	9.8	2.4	-3.4	4.1	5.9	-5.3	3.5	-3.2	8.4	2.0	5.5	-6.4	-7.2	4.0
Japan	161,641	164,036	-0.8	7.1	-1.1	-2.4	2.3	4.7	0.6	1.2	3.6	-3.5	-0.8	0.2	-5.2	-7.7	1.5
Latvia	5,690	1,367	2.0	-33.3	1.3	-15.7	-13.6	-1.8	-7.7	14.8	-2.7	7.6	4.4	-1.7	5.7	-0.5	-76.0
Liechtenstein	88	88	-6.1	1.3	0.5	7.8	8.8	-5.8	-7.1	1.9	9.1	6.0	2.4	0.7	3.1	-23.7	-0.5
Lithuania	6,974	1,306	5.7	-14.0	-12.8	-15.3	-15.9	-13.4	-16.4	-4.9	7.7	3.8	2.0	5.9	11.3	-4.1	-81.3
Luxembourg	1,366	1,398	20.1	1.1	11.1	-3.0	4.8	-3.9	-4.1	11.4	-9.5	-0.1	10.1	-11.2	-2.0	-4.5	2.3
Monaco	45	29	-7.3	-3.7	5.0	-6.2	4.4	-0.6	-3.7	-4.4	7.8	4.5	-5.3	0.2	-6.8	-14.6	-34.8
Netherlands	38,217	34,989	11.5	5.6	13.4	-15.0	-1.8	-5.8	1.7	5.5	-2.4	3.2	-0.8	-6.0	0.9	-7.5	-8.4
New Zealand	2,803	2,683	-6.3	0.9	-4.5	-1.4	-2.1	5.8	11.8	1.2	0.3	-2.0	2.5	-8.3	-5.3	-5.3	-4.3
Norway	4,130	2,924	-10.2	-0.2	20.9	-10.5	-0.4	2.2	-15.5	10.1	5.3	7.2	-10.6	-9.2	-0.1	-10.3	-29.2
Poland	107,711	47,871	20.8	0.3	-4.2	-0.9	-17.9	5.2	-14.2	7.7	-3.0	0.2	-1.8	7.0	3.4	-7.6	-55.6
Portugal	4,025	5,180	5.5	-2.9	7.7	-0.1	3.6	7.8	3.9	5.6	3.4	3.1	3.9	-3.5	-17.7	-4.6	28.7
Romania	10,197	11,161	-13.9	17.6	-3.3	19.3	-0.8	-18.7	3.3	-5.6	5.7	29.4	4.8	-4.9	17.0	-10.6	9.5
Russian Federation	256,627	136,882	-4.6	-7.1	-10.2	-3.5	-5.4	9.3	5.8	4.0	-13.7	1.5	-2.9	-15.5	1.5	-0.3	-46.7
Slovakia	10,908	3,641	-11.5	-4.9	-5.3	-5.1	5.8	-0.9	-3.6	6.4	-11.3	-2.3	-10.2	-0.4	-8.5	-19.2	-66.6
Slovenia	2,139	1,760	19.1	8.0	27.4	2.5	1.0	7.2	-10.1	3.0	-4.9	-2.9	-2.3	-9.4	-9.4	-20.1	-17.7
Spain	25,281	36,747	8.9	-0.1	3.8	0.7	2.6	4.8	4.2	2.6	3.1	5.6	3.6	1.6	-5.8	-0.1	45.4
Sweden	10,311	3,898	-2.1	-4.3	1.0	-8.3	-0.8	-5.3	-1.1	-10.5	-7.7	-4.4	-4.2	-19.0	-12.0	-6.1	-62.2
Switzerland	17,650	15,310	7.7	6.6	4.3	-6.2	3.1	-1.5	-7.5	5.4	-4.1	6.0	-0.6	1.5	-4.5	-11.1	-13.3
Turkey	29,201	44,846	5.1	12.3	3.9	7.6	-8.1	-3.9	8.0	-17.5	5.2	9.3	11.0	6.8	4.3	7.9	53.6
Ukraine	91,409	41,478	*	*	*	*	*	-7.6	-12.9	-1.8	6.1	4.3	-0.2	7.3	2.2	-10.8	-54.6
United Kingdom	109,416	101,104	10.4	-3.6	11.8	-7.4	1.1	-0.5	-0.3	2.5	-6.2	1.0	1.8	-3.9	-4.3	-4.3	-7.6
United States	552,260	554,976	2.6	0.3	7.0	-3.6	-8.0	3.7	4.9	-2.4	-0.3	5.8	-3.2	-2.6	-9.0	5.1	0.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.25

CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): liquid fuels - trend informatio

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	5,921	9,019	0.8	1.9	0.4	3.0	1.6	2.9	3.6	12.8	2.5	17.3	-8.2	3.7	-3.3	-0.2	52.3
Austria	8,234	5,767	4.5	8.5	14.3	-9.5	0.4	4.6	-11.7	7.7	-0.9	9.7	-10.3	-6.9	1.4	-25.1	-30.0
Belarus	5,209	4,233	13.4	1.5	8.4	5.3	5.2	-5.4	-8.8	-11.9	-13.0	-1.8	4.5	4.5	5.1	6.4	-18.7
Belgium	17,171	14,081	7.2	-0.2	17.0	-11.7	0.5	-4.3	-8.0	6.8	-6.4	7.8	-4.6	-1.1	-10.9	-9.3	-18.0
Bulgaria	3,778	309	-55.7	-40.8	-26.2	7.4	72.8	42.3	-14.8	40.4	-27.9	-21.0	-20.3	-1.6	25.0	-22.1	-91.8
Canada	19,199	15,797	-8.8	-7.1	9.0	-4.6	-11.8	2.3	6.6	-1.4	2.3	18.5	-4.3	-6.0	-13.7	7.7	-17.7
Croatia	2,430	1,781	-21.4	1.7	13.7	2.0	-9.0	15.3	1.3	1.6	5.1	2.0	-2.9	-5.0	-6.9	-12.1	-26.7
Czech Republic	2,618	159	-23.0	-30.8	27.9	-17.8	-50.7	-18.0	7.3	15.2	-35.3	-16.3	-7.6	-9.6	-3.1	-41.8	-93.9
Denmark	7,128	3,561	-1.0	0.8	3.0	-10.0	-4.8	-1.2	-9.5	1.5	-4.1	-3.6	-4.9	-1.5	-6.9	-9.5	-50.0
Estonia	656	118	-17.8	-17.8	26.4	-12.8	38.7	5.4	22.7	100.5	-13.0	-16.4	-5.4	-8.2	-23.6	-1.5	-82.0
European Community	299,638	214,135	7.7	0.4	7.6	-5.3	-1.2	-4.7	-4.9	8.1	-7.4	1.5	-4.0	-1.3	-2.7	-17.7	-28.5
Finland	6,768	4,583	-1.8	-7.4	1.8	0.1	1.7	-1.7	-6.5	3.6	-1.5	-3.2	-1.4	-4.2	-3.3	-1.1	-32.3
France	59,214	47,525	7.3	3.2	4.6	-5.4	1.4	-1.5	-7.1	9.4	-9.6	2.8	0.7	-1.4	-4.1	-8.9	-19.7
Germany	91,461	51,435	17.4	-2.2	11.3	-4.9	-4.6	-13.6	-5.7	15.1	-11.4	-1.4	-9.5	-0.6	4.9	-36.7	-43.8
Greece	8,006	12,001	3.2	1.0	23.9	2.6	3.5	-1.3	5.8	7.8	5.0	15.1	-6.2	3.6	-2.1	-10.9	49.9
Hungary	7,114	1,244	-18.3	-27.3	-18.0	-7.5	-14.2	-5.0	-3.8	-3.1	-2.9	-22.1	9.8	-16.4	5.2	-7.9	-82.5
Iceland	699	578	2.5	1.4	7.9	-3.2	-2.6	-1.8	-6.6	-11.3	9.6	-5.7	-3.9	-2.2	-12.8	2.8	-17.3
Ireland	3,827	5,863	3.7	4.9	-2.6	4.8	2.5	11.3	-1.0	6.5	-0.3	2.7	-0.8	5.5	-3.1	-3.3	53.2
Italy	38,770	20,993	-2.1	9.1	-1.1	-5.1	0.4	6.6	-7.6	2.7	-4.4	-0.6	-4.7	-0.4	-8.2	-12.0	-45.9
Japan	137,095	105,408	-1.8	7.4	-2.3	-4.2	1.4	4.7	-0.8	0.9	2.7	-5.8	-3.0	-1.6	-11.3	-13.7	-23.1
Latvia	2,156	569	16.2	-37.5	-0.5	-12.4	-11.7	6.6	-7.8	7.5	-6.3	13.1	1.6	-3.1	10.6	-8.7	-73.6
Liechtenstein	77	38	-12.3	-2.9	-6.9	13.4	7.1	-11.9	-12.0	-4.8	12.7	6.0	-2.8	-4.5	4.3	-38.9	-50.7
Lithuania	2,759	259	-9.4	-18.8	-15.8	-16.0	-9.7	-17.2	-14.1	-10.7	0.6	-1.4	-7.1	2.2	-9.2	-13.4	-90.6
Luxembourg	965	772	23.1	-3.1	9.4	-0.6	4.0	-4.9	-5.1	12.2	-14.1	-2.4	11.7	-14.2	-7.2	-4.4	-20.0
Monaco	36	19	-13.3	-6.3	7.3	-7.0	4.5	-2.5	-8.5	-5.3	9.4	7.0	-7.9	-0.8	-8.3	-20.3	-48.0
Netherlands	4,369	2,600	-12.4	-5.8	1.3	-9.3	5.1	-3.3	-3.8	-0.8	-3.6	0.3	-2.9	0.0	-1.3	-10.3	-40.5
New Zealand	1,580	1,512	-8.4	-3.5	-1.3	2.9	1.6	3.8	-6.1	-3.2	3.4	9.2	-6.0	2.7	-10.2	-0.7	-4.3
Norway	4,090	2,836	-10.3	-0.1	21.1	-10.5	-0.4	2.2	-15.5	9.8	5.1	7.4	-11.2	-10.3	-0.3	-10.6	-30.7
Poland	5,090	9,383	-4.7	-2.0	5.7	27.9	-7.0	8.0	18.6	2.5	-2.9	11.6	-0.5	-4.1	-18.1	-8.5	84.3
Portugal	4,025	4,293	5.5	-2.9	7.7	-0.2	2.7	5.8	1.5	2.8	1.6	1.1	4.1	-4.5	-20.8	-7.1	6.6
Romania	4,772	3,621	-24.4	25.9	-3.6	36.9	-7.5	-39.7	13.1	-22.6	17.9	10.8	37.6	-19.8	-5.4	40.6	-24.1
Russian Federation	77,913	32,021	-4.9	3.8	-31.3	1.7	-20.7	30.3	40.2	1.0	-23.7	-3.7	19.4	-19.8	-6.6	5.2	-58.9
Slovakia	387	7	-17.0	-21.0	-22.0	-22.7	-23.0	-22.3	-28.6	1.1	-7.9	-18.8	12.2	24.5	9.1	-81.4	-98.1
Slovenia	814	1,537	14.4	10.9	32.2	3.4	1.0	5.3	-9.7	2.1	-4.0	-3.8	-3.6	-7.6	-8.6	-21.3	88.8
Spain	21,680	24,910	5.4	1.6	2.3	-1.0	0.5	3.6	4.2	0.0	0.4	4.0	1.5	-0.7	-6.5	-3.7	14.9
Sweden	9,950	3,553	-2.1	-4.7	0.9	-8.5	-1.1	-5.7	-0.8	-11.2	-8.4	-4.1	-4.6	-20.0	-13.6	-6.3	-64.3
Switzerland	15,207	11,763	6.6	5.4	3.3	-5.6	3.0	-2.7	-8.4	5.2	-4.5	5.6	-1.6	1.0	-4.8	-12.7	-22.6
Turkey	14,949	15,565	2.2	11.4	-0.3	0.3	-3.0	-1.2	6.5	-12.9	-0.8	-1.9	6.4	-3.9	-10.6	1.8	4.1
Ukraine	8,028	844	*	*	*	*	*	-21.3	-18.8	0.5	3.3	-6.7	-4.3	11.2	-9.3	11.7	-89.5
United Kingdom	18,502	12,836	6.4	-4.5	7.7	-8.3	-2.5	-8.7	-5.4	6.7	-13.6	-3.6	2.5	-1.5	-1.0	-8.7	-30.6
United States	158,639	127,320	0.3	-3.8	8.2	-8.2	-7.1	6.5	7.4	2.3	-8.8	13.2	-1.8	-5.6	-9.8	-2.4	-19.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.26

CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): solid fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	566	358	-7.9	-4.6	-7.5	-8.2	-24.5	-12.1	41.5	36.1	-4.7	2.4	2.5	0.0	-9.2	2.7	-36.8
Austria	2,654	496	10.6	-5.9	-5.1	-21.9	-12.9	-5.5	-9.4	-0.8	-18.3	-6.9	-14.5	-1.4	-11.5	-8.6	-81.3
Belarus	6,715	1,278	-14.0	-16.0	-3.7	-11.9	-12.0	-10.7	2.9	-21.8	-10.4	-5.7	-12.1	6.1	3.1	-10.3	-81.0
Belgium	1,976	610	14.4	-3.7	13.7	-14.7	-16.5	-9.4	-15.1	5.8	-16.5	-6.3	6.7	-4.8	2.8	-1.1	-69.1
Bulgaria	4,953	996	-5.5	-18.7	29.0	-18.0	4.7	-26.8	-27.9	-36.1	74.0	14.1	-23.0	-8.5	2.6	-18.5	-79.9
Canada	191	118	-0.7	34.5	-0.3	-7.0	-12.2	-3.8	-2.0	-2.5	-36.3	-0.5	11.6	26.8	-0.6	-8.1	-38.2
Croatia	514	17	-47.8	-10.9	1.9	-7.3	45.6	-12.1	-10.6	-45.0	44.3	31.5	-44.0	22.2	-15.8	-47.7	-96.6
Czech Republic	25,140	2,266	-26.1	-9.0	-8.5	-10.7	-37.5	-5.1	-9.0	12.1	-11.8	-16.0	1.6	-29.6	54.4	-45.4	-91.0
Denmark	320	196	26.5	-25.1	-29.5	-13.0	-24.0	-24.1	34.2	14.0	-30.3	38.3	18.8	22.4	11.7	2.6	-38.8
Estonia	722	49	-0.4	68.6	18.7	-27.1	-36.5	8.5	-18.1	-25.2	16.0	-27.1	39.7	-7.4	-25.8	-35.5	-93.2
European Community	106,188	12,773	-19.8	-15.1	-1.7	-16.9	-18.7	-10.6	-9.7	-2.5	-16.0	-16.2	-10.4	-7.3	6.3	-1.2	-88.0
Finland	46	12	-25.4	-64.8	-11.5	-18.2	10.3	-10.1	0.9	-22.4	18.6	-3.5	0.0	-31.8	-4.8	1.8	-75.1
France	4,401	325	0.3	43.1	-0.7	-39.9	-26.5	-24.6	-11.6	-10.9	-38.7	-4.9	0.0	-20.3	0.8	5.8	-92.6
Germany	67,075	5,063	-34.6	-13.2	-7.1	-21.0	-35.8	-6.0	0.3	3.2	-8.8	-27.4	-16.6	5.3	27.5	-1.9	-92.5
Greece	102	7	33.8	-4.9	8.2	4.0	-13.2	-25.5	11.0	-6.3	-74.5	-39.6	65.5	23.9	15.9	-79.6	-93.3
Hungary	12,281	566	6.0	-16.5	3.1	-17.6	-56.6	7.0	-25.6	41.5	7.6	1.1	-28.7	1.6	1.4	-42.7	-95.4
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	5,745	2,102	-2.7	-10.1	-0.1	-13.1	5.1	-25.7	-0.7	-5.4	-1.8	-1.9	-2.3	4.2	-3.0	-4.3	-63.4
Italy	920	27	6.3	3.2	-3.6	-41.2	-44.5	-2.9	-3.1	10.8	-78.0	0.0	-52.2	-7.9	1.4	-18.1	-97.1
Japan	4,744	2,463	-8.3	-11.8	5.7	-2.6	-2.4	-3.5	6.3	-1.2	-0.1	-1.8	-3.0	-4.1	-2.3	0.6	-48.1
Latvia	2,175	180	-11.7	-43.6	8.4	-17.2	-28.0	-20.0	-23.6	36.2	-20.4	-7.4	-2.9	-3.8	-2.7	-2.8	-91.7
Liechtenstein	0	0	-5.4	-3.7	-26.9	5.3	5.0	-47.6	118.2	-45.8	-7.7	8.3	-23.1	-10.0	-33.3	-16.7	-86.5
Lithuania	2,792	431	11.2	-15.7	-7.5	-18.6	-17.0	-18.3	-28.8	-12.2	22.6	9.3	-4.1	15.7	32.3	-15.7	-84.6
Luxembourg	24	1	16.8	28.5	-42.4	-7.7	-27.1	-7.0	-29.7	-4.2	-38.5	-5.6	17.9	-20.1	-54.6	-21.0	-95.9
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	189	86	-21.2	-15.3	-1.0	-3.6	5.8	2.4	0.0	12.3	-8.4	2.2	9.9	-64.3	-13.9	109.5	-54.3
New Zealand	778	532	-7.4	12.9	-14.5	-15.3	-15.5	-8.8	-4.6	28.7	-4.1	-10.1	44.3	-31.4	18.5	-8.5	-31.6
Norway	36	2	-6.2	-16.2	-22.1	9.8	-3.7	-16.6	-7.0	-22.2	47.7	-29.3	-13.4	-47.1	-24.9	-32.6	-94.3
Poland	96,209	27,362	25.8	-0.7	-5.3	-7.6	-24.2	5.6	-26.8	9.1	-5.3	-6.6	-3.6	14.4	16.0	-9.4	-71.6
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	2,219	50	-30.4	-10.7	97.8	-12.5	-84.4	149.3	-9.3	-69.2	239.3	-51.5	75.2	-63.6	1.8	-11.4	-97.8
Russian Federation	120,680	9,689	-6.6	-4.7	-7.2	-4.5	-6.1	18.8	2.9	5.1	-37.7	-3.2	-6.5	-39.5	9.9	-24.1	-92.0
Slovakia	7,680	332	-15.9	-14.5	-23.8	-23.5	3.9	-15.7	13.6	-14.3	-42.0	-8.3	-22.0	-9.6	8.8	-48.4	-95.7
Slovenia	1,291	NO	27.3	-20.3	-16.9	-41.6	-18.3	4.7	-40.3	-23.0	-16.3	-1.6	-39.9	-64.1	*	*	*
Spain	2,282	553	20.4	-28.3	-4.8	-1.5	-6.8	-28.0	-39.8	-29.7	14.8	21.7	1.6	1.3	-1.2	1.5	-75.7
Sweden	157	1	-33.3	-50.0	-59.0	214.2	-50.0	-36.3	0.0	*	*	*	*	*	0.0	0.0	-99.7
Switzerland	57	35	15.4	-4.2	-43.5	-15.4	-36.4	0.0	-7.1	0.0	0.0	0.0	207.7	0.0	0.0	0.0	-38.5
Turkey	14,148	11,389	6.2	12.1	-4.7	12.0	-22.8	-16.0	0.7	-33.4	28.1	19.5	16.7	2.1	0.9	12.9	-19.5
Ukraine	60,906	5,497	*	*	*	*	*	-0.9	-22.3	-7.6	14.8	-7.4	-2.8	-13.1	-9.5	-12.8	-91.0
United Kingdom	20,323	3,300	5.9	-25.2	4.4	-8.9	-9.3	-6.3	-16.1	-5.4	-22.2	-16.8	-12.6	-23.6	-6.9	1.3	-83.8
United States	14,709	7,342	-8.8	-2.8	1.7	6.4	-21.9	2.2	-16.5	2.9	0.6	-4.5	20.0	-8.9	-32.1	8.9	-50.1

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.27

CO_2 emissions from other sectors (commercial/institutional, residential, agriculture/forestry/fisheries): gaseous fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	6,423	9,252	1.4	8.5	5.4	1.5	2.7	0.7	2.4	-2.1	2.4	4.9	-1.3	-0.9	2.2	1.2	44.0
Austria	2,574	4,163	20.3	18.3	-0.7	-5.3	4.8	5.4	-6.3	20.6	-7.3	14.8	-3.1	-4.2	-6.6	-6.8	61.7
Belarus	2,351	2,875	0.3	0.3	0.3	0.3	0.3	0.3	0.3	7.9	2.2	-0.1	-0.9	4.3	2.7	1.5	22.3
Belgium	7,812	11,622	17.0	7.4	18.1	-12.3	4.1	-0.9	1.8	9.4	-4.3	7.8	0.1	-1.7	-0.2	-4.9	48.8
Bulgaria	209	310	-86.2	350.7	91.6	-63.3	81.8	4.0	16.0	30.0	6.5	36.2	20.9	42.9	44.8	10.9	48.5
Canada	49,370	62,308	2.4	3.0	7.0	-3.3	-10.3	5.7	9.3	-5.2	5.7	2.4	-2.3	-2.0	-4.9	8.2	26.2
Croatia	662	1,503	29.5	22.6	16.0	1.3	1.9	11.0	-13.5	17.7	-2.8	12.6	0.4	9.4	-4.9	-4.2	127.2
Czech Republic	4,589	8,078	2.5	23.3	7.8	13.8	2.6	2.9	-0.7	7.7	-1.4	3.4	-2.4	-1.5	-3.5	-3.0	76.0
Denmark	1,486	2,391	15.8	11.8	18.9	-6.5	2.6	-3.2	-3.8	4.9	-1.7	6.4	-0.5	-1.2	-2.0	-7.8	60.9
Estonia	141	180	23.6	-30.0	-22.9	-0.1	18.7	-4.6	1.4	0.1	45.6	7.4	-27.3	20.3	3.4	28.5	28.4
European Community	230,729	323,396	16.1	5.9	14.2	-6.9	3.4	0.6	0.5	6.7	-3.1	5.3	3.9	-4.3	-1.7	-6.0	40.2
Finland	104	206	15.3	0.1	9.1	3.3	-2.3	5.3	-3.9	9.8	4.5	-0.2	-6.0	1.3	1.5	-5.5	98.4
France	30,057	44,927	18.4	-1.3	14.1	-4.2	7.9	-0.4	4.2	10.2	-9.1	4.1	10.6	-0.7	-2.1	-7.3	49.5
Germany	45,804	71,030	18.4	11.5	20.1	-6.7	1.0	-1.5	-2.0	10.0	-1.4	3.4	4.2	-16.8	4.7	-9.9	55.1
Greece	17	658	8.9	7.4	0.0	4.5	56.9	-14.9	19.0	29.4	53.5	73.5	68.6	86.3	55.0	24.8	3775.4
Hungary	4,939	11,421	21.5	11.0	10.2	0.7	-3.6	7.7	0.1	7.4	2.5	12.6	5.7	1.9	-8.3	-18.5	131.3
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	487	2,231	29.9	4.0	17.1	-0.5	15.7	12.6	16.0	9.3	-3.9	10.0	6.1	3.0	1.8	-0.4	358.0
Italy	36,418	55,980	17.3	10.4	4.9	-1.7	6.9	5.5	-4.5	3.5	-2.0	12.9	4.2	8.1	-6.0	-5.5	53.7
Japan	19,802	56,165	7.6	7.9	5.2	6.8	6.7	5.5	6.2	2.4	7.7	5.3	6.9	6.2	12.4	5.5	183.6
Latvia	1,359	618	1.4	2.1	-4.9	-19.2	4.3	3.5	5.3	12.9	14.7	8.6	10.5	0.5	3.4	9.2	-54.6
Liechtenstein	11	50	36.3	14.0	19.8	-3.5	12.8	8.0	1.7	12.5	4.2	6.1	10.0	7.3	1.7	-5.9	345.4
Lithuania	1,423	617	24.3	-5.0	-15.4	-10.4	-21.6	-2.3	-6.3	6.7	4.2	4.1	14.1	1.8	8.5	11.7	-56.7
Luxembourg	378	625	12.4	9.2	16.6	-7.1	7.0	-2.1	-1.8	10.0	-1.2	3.7	7.6	-6.6	5.4	-4.7	65.5
Monaco	9	11	16.8	4.7	-1.5	-3.9	4.1	5.3	9.5	-2.1	4.3	-1.5	1.5	2.7	-3.2	-2.3	17.9
Netherlands	33,659	32,303	14.8	6.9	14.5	-15.5	-2.4	-6.0	2.2	6.1	-2.3	3.4	-0.6	-6.3	1.1	-7.4	-4.0
New Zealand	444	639	3.4	-2.6	1.7	4.8	2.1	25.5	67.6	-3.4	-1.8	-14.5	-3.6	-10.2	-9.6	-12.1	44.0
Norway	NO	86	*	406.3	32.1	37.4	323.1	106.4	6.2	439.8	9.2	-3.1	115.7	89.4	10.5	4.4	*
Poland	6,412	11,125	6.2	7.2	-6.2	7.8	-1.7	1.3	-4.3	10.7	2.5	3.6	0.6	4.7	-1.6	-1.9	73.5
Portugal	NO	887	*	*	*	*	1784.3	221.3	86.4	59.0	26.4	22.6	2.0	4.6	5.6	9.8	*
Romania	3,206	7,491	16.8	15.3	-8.3	12.8	11.1	-8.8	-0.1	3.6	-0.3	38.9	-5.8	2.9	24.7	-24.0	133.6
Russian Federation	57,045	95,036	-0.2	-11.5	-2.6	-4.7	-0.7	1.9	-4.0	5.0	-2.0	4.2	-8.8	-9.1	3.4	1.1	66.6
Slovakia	2,842	3,301	1.1	7.7	13.5	7.5	7.3	6.0	-9.5	15.7	-1.2	-1.1	-8.2	0.9	-11.0	-13.7	16.2
Slovenia	34	223	26.6	34.1	25.8	37.5	10.4	29.3	-5.1	15.7	-10.3	4.8	10.7	-18.6	-12.5	-11.1	557.7
Spain	1,319	11,283	47.6	5.5	20.5	12.5	17.9	19.9	11.3	16.2	12.2	9.8	10.1	8.2	-4.3	8.7	755.7
Sweden	205	345	20.4	11.6	5.6	-5.9	9.0	5.0	-7.7	5.6	4.5	-10.0	1.7	-2.5	9.1	-4.3	68.5
Switzerland	2,386	3,512	14.2	13.2	9.8	-8.7	3.9	3.9	-3.8	6.1	-2.2	7.9	2.7	3.3	-3.6	-5.5	47.2
Turkey	104	17,892	281.6	22.9	89.9	30.4	8.3	8.0	22.4	-12.1	1.9	27.2	14.4	30.8	26.8	10.4	17,069.2
Ukraine	22,442	34,915	*	*	*	*	*	-9.2	-9.8	0.0	3.6	8.4	0.5	11.6	4.6	-11.0	55.6
United Kingdom	70,531	84,927	12.7	1.2	14.0	-7.0	3.4	1.9	2.4	2.5	-3.5	3.0	2.4	-3.3	-4.7	-3.8	20.4
United States	378,912	420,315	3.9	1.8	6.7	-2.4	-7.9	2.8	4.6	-4.1	2.7	3.7	-4.2	-1.4	-8.1	7.6	10.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.28

Contribution of fuels to CO_2 emissions from other sectors (%)

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007	Base year[a]	2007
Australia	45.9	48.4	4.4	1.9	49.8	49.7	-	-
Austria	59.6	54.5	19.2	4.7	18.6	39.3	2.5	1.5
Belarus	36.5	50.5	47.0	15.2	16.5	34.3	0.1	-
Belgium	63.6	53.3	7.3	2.3	28.9	44.0	0.2	0.4
Bulgaria	42.3	19.1	55.4	61.7	2.3	19.2	-	-
Canada	27.9	20.2	0.3	0.2	71.8	79.7	-	-
Croatia	67.4	53.9	14.3	0.5	18.3	45.5	-	-
Czech Republic	8.1	1.5	77.7	21.6	14.2	76.9	-	-
Denmark	79.6	57.9	3.6	3.2	16.6	38.9	0.2	0.0
Estonia	43.2	34.0	47.6	14.1	9.3	51.9	-	-
European Community	47.0	38.7	16.6	2.3	36.2	58.4	0.2	0.6
Finland	96.1	93.2	0.7	0.2	1.5	4.2	1.7	2.4
France	63.2	51.2	4.7	0.4	32.1	48.4	0.1	0.1
Germany	44.8	40.3	32.8	4.0	22.4	55.7	-	-
Greece	98.5	94.8	1.3	0.1	0.2	5.2	-	-
Hungary	29.2	9.4	50.5	4.3	20.3	86.3	-	-
Iceland	100.0	97.7	-	-	-	-	-	2.3
Ireland	38.0	57.5	57.1	20.6	4.8	21.9	-	-
Italy	50.6	26.3	1.2	0.0	47.5	70.2	0.7	3.4
Japan	84.8	64.3	2.9	1.5	12.3	34.2	-	-
Latvia	37.9	41.6	38.2	13.2	23.9	45.2	-	-
Liechtenstein	87.2	43.2	0.1	0.0	12.7	56.7	-	-
Lithuania	39.6	19.8	40.0	33.0	20.4	47.2	-	-
Luxembourg	70.6	55.2	1.8	0.1	27.7	44.7	-	-
Monaco	80.0	63.8	-	-	20.0	36.2	-	-
Netherlands	11.4	7.4	0.5	0.2	88.1	92.3	-	-
New Zealand	56.4	56.4	27.8	19.8	15.8	23.8	-	-
Norway	99.0	97.0	0.9	0.1	-	2.9	0.1	-
Poland	4.7	19.6	89.3	57.2	6.0	23.2	-	-
Portugal	100.0	82.9	-	-	-	17.1	-	-
Romania	46.8	32.4	21.8	0.4	31.4	67.1	-	-
Russian Federation	30.4	23.4	47.0	7.1	22.2	69.4	0.4	0.1
Slovakia	3.5	0.2	70.4	9.1	26.1	90.7	-	-
Slovenia	38.0	87.3	60.4	-	1.6	12.7	-	-
Spain	85.8	67.8	9.0	1.5	5.2	30.7	-	-
Sweden	96.5	91.1	1.5	0.0	2.0	8.9	-	-
Switzerland	86.2	76.8	0.3	0.2	13.5	22.9	-	-
Turkey	51.2	34.7	48.5	25.4	0.4	39.9	-	-
Ukraine	8.8	2.0	66.6	13.3	24.6	84.2	0.0	0.5
United Kingdom	16.9	12.7	18.6	3.3	64.5	84.0	0.1	0.0
United States	28.7	22.9	2.7	1.3	68.6	75.7	-	-

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Romania (1989) and Slovenia (1986).

Table 1.29a

CO_2 emissions from transport: all fuels - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	60,738	76,482	-1.1	4.1	3.4	1.9	0.0	1.0	2.7	-1.9	2.2	0.7	5.2	-0.9	-0.3	0.2	25.9
Austria	13,769	23,923	10.6	1.8	9.9	-5.7	12.9	-2.9	5.5	6.6	9.5	8.3	2.6	2.6	-5.4	1.1	73.7
Belarus	12,986	5,652	-1.4	-9.9	-0.7	-9.0	-7.0	-17.7	-7.5	0.0	34.2	-7.3	14.1	1.4	26.5	0.2	-56.5
Belgium	20,093	25,065	0.9	0.3	1.9	0.9	2.9	1.5	1.9	2.6	1.3	2.2	4.0	-3.4	-2.1	-0.5	24.7
Bulgaria	13,814	8,197	-39.9	4.5	-4.2	-17.4	19.6	-4.1	-5.2	2.3	5.1	12.4	4.3	9.4	6.2	-4.9	-40.7
Canada	138,377	191,555	-3.3	2.6	2.4	3.8	2.1	2.5	0.8	-0.9	1.3	2.7	3.1	2.2	-0.3	4.4	38.4
Croatia	3,987	6,345	-26.3	6.2	8.0	9.4	5.1	5.5	0.2	1.4	6.7	8.1	2.6	4.0	6.6	7.3	59.1
Czech Republic	7,342	18,461	-9.1	24.1	10.8	6.1	4.8	1.9	2.4	6.8	4.3	13.1	4.7	8.2	1.9	4.6	151.4
Denmark	10,528	13,986	3.6	1.2	2.2	1.6	-0.2	0.0	-1.7	0.0	0.8	3.8	2.5	0.9	2.8	4.2	32.8
Estonia	3,345	2,537	-4.0	-21.7	4.3	6.0	3.1	-9.6	-1.2	17.7	7.6	0.5	2.7	2.6	9.1	5.5	-24.2
European Community	688,170	850,892	2.0	1.2	2.2	1.2	3.1	2.4	0.1	1.2	1.3	0.7	1.4	-0.6	0.2	0.1	23.6
Finland	12,517	14,044	-2.8	-1.7	-0.2	5.0	1.2	1.6	-0.7	1.0	1.5	1.5	2.7	0.3	1.4	2.7	12.2
France	118,823	137,332	2.3	1.3	1.1	1.7	1.6	2.4	-0.4	2.2	0.8	-0.3	0.4	-1.1	-0.8	-1.0	15.6
Germany	162,615	151,885	2.1	2.0	0.0	0.2	1.8	3.0	-2.2	-2.2	-0.8	-3.6	-0.5	-5.2	-2.6	-2.2	-6.6
Greece	14,506	23,371	5.1	2.2	2.9	4.5	9.9	2.1	-4.4	4.2	1.1	5.7	1.8	0.4	4.0	3.5	61.1
Hungary	7,621	12,422	-12.5	1.9	0.0	6.1	13.6	4.4	-0.4	3.8	4.8	3.4	5.7	16.1	4.1	1.3	63.0
Iceland	600	974	1.9	-3.9	-1.6	2.0	0.5	3.6	0.4	1.7	0.6	14.7	7.0	0.7	18.0	3.8	62.2
Ireland	5,039	14,144	4.0	3.8	17.0	4.7	18.0	10.8	7.4	4.8	1.8	1.6	5.5	6.4	5.4	4.9	180.7
Italy	101,269	127,212	2.5	2.0	1.1	1.5	3.3	1.3	0.4	1.7	1.6	0.8	1.6	-1.0	1.0	0.0	25.6
Japan	211,054	241,587	5.4	3.1	2.2	0.8	-0.3	0.8	-0.3	1.0	-2.0	-0.8	0.0	-1.9	-1.3	-1.9	14.5
Latvia	2,857	3,745	-6.0	-4.4	-1.6	-0.4	-1.1	-1.4	10.9	18.0	3.1	5.4	5.7	4.1	10.6	11.5	31.1
Liechtenstein	75	86	17.5	2.5	1.6	4.4	-0.3	6.7	4.3	-3.8	-4.9	-0.3	-1.4	-0.5	-3.4	5.0	13.9
Lithuania	5,652	5,071	10.4	22.9	10.0	11.7	5.1	-11.0	-10.8	8.4	3.6	1.7	9.5	5.8	5.3	17.1	-10.3
Luxembourg	2,701	6,571	18.7	-5.1	2.9	5.9	4.4	7.7	12.7	6.3	6.9	10.5	14.4	3.3	-2.5	-4.0	143.2
Monaco	33	33	14.3	-3.4	-0.5	-4.9	-3.5	1.4	-5.0	0.6	-0.5	-1.0	-2.4	-4.5	-0.5	1.7	0.5
Netherlands	26,009	35,201	1.1	1.8	2.5	1.3	2.4	3.2	1.1	1.5	2.1	2.0	1.0	0.1	2.5	-1.0	35.3
New Zealand	8,617	14,661	0.1	7.1	0.7	3.2	1.7	1.9	4.9	3.0	4.5	4.6	2.5	1.1	1.5	0.8	70.1
Norway	11,109	15,442	-0.8	3.4	5.3	1.9	2.6	4.5	-6.3	2.1	-1.0	2.2	3.4	0.8	4.3	5.6	39.0
Poland	21,847	37,519	-5.5	8.7	11.2	2.4	2.8	0.2	-4.0	-2.6	-1.0	2.7	6.0	5.0	5.7	0.4	71.7
Portugal	9,920	18,839	5.9	5.1	5.0	5.6	12.0	5.1	10.2	1.6	2.6	-0.5	-0.2	-0.8	0.3	-2.3	89.9
Romania	5,785	12,782	-14.6	-2.3	35.5	-3.5	-0.5	-21.8	11.4	18.9	7.9	1.2	19.7	-18.6	3.9	4.1	121.0
Russian Federation	339,671	205,409	-3.0	-7.2	-4.3	-7.4	17.4	0.9	-21.7	5.5	3.8	5.1	3.8	4.6	4.5	3.8	-39.5
Slovakia	4,892	6,499	-15.8	6.1	1.3	3.9	6.3	-2.2	-10.2	13.7	2.9	2.1	5.6	17.8	-7.6	13.2	32.8
Slovenia	1,983	5,188	-5.6	9.9	15.8	1.6	-13.6	-4.9	4.2	3.6	0.3	3.6	3.7	6.7	5.0	12.6	161.7
Spain	56,506	109,142	4.0	1.5	6.9	0.9	9.6	5.9	3.2	4.8	1.9	4.7	3.9	4.2	2.9	3.4	93.1
Sweden	18,333	20,642	-2.5	-0.5	-1.3	1.4	1.7	1.5	-1.3	1.1	3.0	1.6	1.8	1.3	-0.9	0.5	12.6
Switzerland	14,576	16,209	3.2	-2.2	0.3	4.0	1.4	4.0	1.6	-1.8	-0.7	1.2	0.8	0.6	0.6	2.1	11.2
Turkey	25,955	51,011	-4.9	11.7	6.3	-4.6	-5.5	5.9	5.0	0.2	2.9	4.8	7.1	0.2	7.9	16.6	96.5
Ukraine	87,138	44,213	*	*	*	*	*	-14.7	-2.8	1.7	8.7	0.5	6.8	4.6	2.4	1.6	-49.3
United Kingdom	117,187	131,763	-0.5	-0.9	4.1	1.2	-0.6	0.6	-0.6	-0.3	1.6	1.1	1.1	1.0	1.3	0.4	12.4
United States	1,436,605	1,864,111	-2.8	2.0	2.3	1.5	1.4	4.2	3.0	-1.3	2.2	-0.3	2.7	1.4	0.2	0.3	29.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.29b

N_2O emissions from transport: all fuels - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2.41	5.49	6.3	7.4	5.9	4.5	7.7	7.8	9.6	4.1	8.4	5.2	7.1	-4.1	-4.1	-1.6	128.1
Austria	0.61	0.91	20.5	1.6	2.7	-2.0	12.6	-2.6	1.8	3.5	8.6	2.8	-1.7	-3.7	-7.6	-4.5	48.1
Belarus	0.11	0.04	-1.3	-9.5	-0.1	-9.1	-6.7	-17.7	-13.9	-0.7	34.7	-9.3	14.1	2.9	22.3	-2.2	-62.1
Belgium	1.18	2.63	7.1	6.9	7.1	6.2	7.6	7.0	4.2	3.2	2.8	1.2	2.9	1.1	0.0	0.4	123.2
Bulgaria	0.33	0.20	-40.2	3.1	-2.3	-14.1	11.9	-0.7	0.7	5.5	5.7	14.9	2.9	15.7	2.9	-2.8	-37.2
Canada	20.36	24.69	1.0	2.0	3.5	3.1	-3.7	2.0	0.1	-5.2	-3.1	0.9	0.6	-0.3	-3.0	4.2	21.2
Croatia	0.16	0.62	-26.1	10.5	12.4	19.7	15.5	13.3	9.7	12.1	11.1	13.9	8.3	1.1	12.6	13.2	283.2
Czech Republic	0.27	2.35	13.7	46.1	15.7	13.3	30.5	15.4	-21.8	10.9	13.3	18.6	8.9	6.7	1.3	4.6	770.2
Denmark	0.37	0.45	6.0	4.1	4.6	2.2	-1.6	-1.1	-2.5	-3.2	-1.9	-0.1	0.4	-3.2	-1.0	1.1	19.8
Estonia	0.08	0.23	-5.1	11.1	2.0	12.2	12.7	-2.6	6.6	37.1	12.1	9.3	11.0	14.2	15.6	3.1	181.5
European Community	19.92	37.56	8.0	13.4	-1.0	4.7	4.8	4.0	1.4	1.0	0.6	-0.3	0.7	-3.7	0.9	0.0	88.5
Finland	0.56	2.12	13.3	9.4	9.0	11.4	9.6	9.6	6.8	6.6	7.5	7.0	8.2	5.7	4.3	4.1	278.6
France	1.62	2.32	-0.6	4.1	5.8	5.2	1.9	3.7	0.5	2.7	2.2	0.7	1.9	-0.6	0.3	0.9	43.2
Germany	2.18	3.67	34.7	9.6	4.5	2.3	1.2	0.7	-4.1	-3.0	-3.1	-6.9	-2.6	-7.5	-5.3	-2.5	68.2
Greece	0.54	0.88	3.2	11.2	11.6	11.3	16.1	9.5	3.6	12.4	-7.9	-4.6	-8.5	-5.1	-3.9	-2.0	61.2
Hungary	0.36	1.24	-11.2	-0.5	-2.9	3.4	9.9	1.4	-2.2	2.7	2.1	4.2	-8.0	11.2	-8.4	-1.0	243.5
Iceland	0.02	0.13	2.8	115.9	-0.7	59.7	2.5	48.7	-0.7	1.0	1.0	5.2	4.2	17.3	6.9	1.1	681.0
Ireland	0.27	0.66	1.8	3.5	16.7	15.4	19.2	2.7	6.7	4.5	-4.4	-2.4	1.2	-0.3	-2.8	-4.5	145.0
Italy	3.58	4.94	5.2	15.9	8.8	4.1	-0.1	3.6	-1.3	-1.9	-1.4	-3.8	-1.5	-22.8	5.0	-1.6	37.8
Japan	13.56	8.98	3.9	3.0	1.9	1.0	-2.2	-0.3	-2.2	-4.0	-6.1	-6.7	-8.1	-8.6	-7.7	-6.4	-33.8
Latvia	0.26	0.24	-1.0	3.6	2.4	3.5	-0.7	-2.3	8.8	5.6	7.8	14.1	7.0	-9.4	1.3	0.5	-9.7
Liechtenstein	0.00	0.00	36.8	18.1	-1.8	5.4	-5.4	3.5	4.8	-8.4	-13.4	-9.2	-8.3	-8.0	-11.5	3.5	24.2
Lithuania	0.22	0.23	9.7	16.1	9.1	17.9	8.4	-8.8	-9.9	11.4	3.9	1.1	11.7	7.3	7.9	20.9	5.7
Luxembourg	0.12	0.33	16.5	-0.9	4.2	7.7	0.2	2.6	7.0	1.4	-0.3	7.7	9.4	2.0	-4.8	-0.5	173.4
Monaco	0.00	0.00	15.0	17.4	18.6	8.6	7.5	12.3	1.4	4.2	4.1	-2.2	-1.7	-3.7	0.8	1.5	337.0
Netherlands	0.88	1.42	19.7	6.8	2.1	0.9	-0.8	-1.3	-2.5	-0.1	-0.3	-1.9	-1.8	-2.1	1.1	-2.4	61.7
New Zealand	0.24	0.52	0.8	10.7	2.7	5.2	2.5	2.9	6.9	3.3	5.4	4.7	2.2	3.2	2.3	2.0	115.3
Norway	0.47	1.26	2.4	15.6	18.9	4.2	2.5	16.7	-14.2	5.8	-0.5	6.1	5.9	0.7	10.5	8.7	168.5
Poland	0.90	3.79	-11.6	29.7	36.3	28.6	22.8	6.9	10.4	-3.9	-4.4	0.1	2.4	5.8	6.2	4.6	322.8
Portugal	0.50	1.97	5.6	14.3	11.5	10.3	15.2	9.5	11.7	2.6	4.2	0.6	0.2	0.6	1.8	-0.3	291.0
Romania	0.05	0.11	-16.3	-6.3	38.4	-2.7	-1.9	-20.9	9.6	20.6	8.4	0.8	19.6	-18.7	4.4	4.2	116.0
Russian Federation	2.50	1.41	-3.9	-7.0	-6.1	-3.7	10.4	1.2	-22.8	7.7	2.7	3.9	4.4	2.4	6.1	4.9	-43.5
Slovakia	0.39	0.64	-18.8	13.7	8.7	10.0	10.8	2.8	-6.7	18.6	-0.6	5.2	0.9	17.7	-6.8	11.8	61.4
Slovenia	0.10	0.61	-3.5	24.6	26.8	10.9	-5.9	3.1	10.5	7.1	3.7	5.7	3.8	7.4	6.5	10.6	485.7
Spain	2.37	9.54	5.7	9.4	12.6	9.1	15.6	10.9	7.2	8.0	6.4	7.2	6.2	6.0	4.9	4.1	301.8
Sweden	0.47	0.53	-8.9	13.2	-1.9	6.9	-3.0	6.4	3.2	-6.8	-2.9	-1.9	-2.9	-1.7	-5.4	-3.5	12.7
Switzerland	0.33	0.38	23.2	3.7	6.4	4.5	-0.1	1.3	-2.9	-6.9	-7.3	-6.4	-6.5	-6.9	-6.8	-5.0	15.5
Turkey	0.84	2.10	-5.2	10.6	9.8	-7.0	-5.8	16.7	9.3	4.8	8.3	12.4	23.0	2.1	-19.2	22.6	149.6
Ukraine	0.71	0.33	*	*	*	*	*	-18.2	-2.2	5.6	8.6	-0.3	7.7	6.0	4.3	5.0	-54.3
United Kingdom	4.70	5.27	0.4	25.0	-25.8	1.6	1.6	0.3	-0.9	-3.8	-3.0	-3.1	-2.2	-3.1	-1.7	-3.1	12.2
United States	136.38	91.58	4.9	2.2	1.3	1.3	-0.2	-2.1	-2.1	-5.4	-8.4	-7.8	-6.7	-8.5	-9.0	-10.8	-32.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.30

Road transportation - CO_2, N_2O (2007)

	CO_2 emissions							N_2O emissions						
	Key category	Share of national total	Methods and EF used[a]		CO_2 IEF			Key category	Share of national total	Method and EF used[a]		N_2O IEF		
			Methods	EF	IEF in CRF based on GCV or NCV	Gasoline	Diesel oil			Methods	EF	IEF in CRF based on GCV or NCV	Gasoline	Diesel oil
		(%)				(t/TJ)			(%)				(kg/TJ)	
IPCC default EF[b]					NCV	72.1 (US) 73.0 (Europe)	72.1 (US) 74.0 (Europe)					NCV	3-43 (US) 1-20 (Europe)	1-14 (US) 3-4 (Europe)
Australia[c]	L, T	12.3	T1	CS, D	GCV	70.24	72.84		0.30	T1, T2, T3	CS, D	GCV	7.71	1.65
Austria	L, T	26.3	CS, M	CS	NCV	72.26	69.19		0.30	CS, M	CS	NCV	4.84	1.86
Belarus	L, T	4.9	D, T1	CS, D	NCV	68.61	73.33		0.01	D, T1	D	NCV	0.60	0.60
Belgium	L, T	18.5			NCV	68.60	73.32	L, T	0.60			NCV	12.01	6.64
Bulgaria	L, T	9.6	T1, T2	CS, D	NCV	72.16	76.14		0.08	T1, T2	CS, D	NCV	1.14	1.91
Canada[c]	L, T	17.8	CS, T1, T2, T3	CS	GCV	68.84	73.19	T	0.44	CS, T1, T2, T3	CS, D	GCV	6.86	2.49
Croatia	L, T	18.7	T1, T3	CR, D	NCV	71.39	73.46	T	0.59	T1, T3	CR, D	NCV	8.44	6.85
Czech Republic	L, T	12.0	T1	D	NCV	72.68	73.94	T	0.48	T1, T2	CS, D	NCV	18.07	4.51
Denmark	L, T	19.4	OTH	CS	NCV	72.76	74.00		0.19	OTH	OTH	NCV	1.93	2.53
Estonia	L, T	10.1	T1	D	NCV	68.61	73.33		0.31	T1, T3	D	NCV	8.90	5.64
European Community	L, T	19.6	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV	71.33	73.39	T	0.26	CR, CS, D, IE, M, OTH, T1, T2, T3	CR, CS, D, IE, M, OTH	NCV	3.52	2.91
Finland	L, T	15.7	M, T1, T3	CS, D	NCV	72.84	73.55	L, T	0.82	M, T1, T3	CS, D	NCV	23.91	3.30
France	L, T	24.0	CR, T3	CS	NCV	72.35	74.70		0.12	CR, T3	CS	NCV	1.39	1.06
Germany	L, T	15.1	CS, T1, T3	CS	NCV	72.00	74.00		0.11	T1, T3	CS, M	NCV	1.73	1.55
Greece	L, T	15.0	CR, M, T1, T2	D, M	NCV	68.61	73.31		0.17	CR, M, T1, T2	CR, D, M	NCV	3.04	1.73
Hungary	L, T	16.1	T1	CS, D	NCV	68.61	73.33	T	0.50	T1, T1c, T2	CS, D	NCV	12.30	3.93
Iceland	L, T	19.9	T1	D	NCV	68.61	73.33	T	0.91	T2	D	NCV	15.71	3.52
Ireland	L, T	19.9	T1, T2	CS	NCV	69.96	73.30		0.27	T1, T3	CR, M	NCV	4.44	2.15
Italy	L, T	21.5	D, M, T1, T2	CS	NCV	71.15	73.16		0.26	D, M, T1, T2	CR, CS	NCV	3.16	2.60
Japan[c]	L, T	15.8	T1	CS	GCV	70.59	72.29		0.18	D, T2	CS, D	GCV	2.90	2.14
Latvia	L, T	28.9	CR, T1, T2	CS, D	NCV	68.60	74.59		0.36	CR, T1	D, OTH	NCV	4.43	1.97
Liechtenstein	L, T	35.2	T1	CS	NCV	73.90	73.60		0.26	T1	CS, D	NCV	2.04	1.41
Lithuania	L, T	19.5	T2	CS	NCV	73.00	74.00		0.28	T2	CS	NCV	2.00	4.00
Luxembourg	L, T	50.9	T1, T3	D	NCV	70.65	73.71		0.78	T1, T3	D, OTH	NCV	4.68	3.24
Monaco	L, T	32.1	T1	D	NCV	73.00	74.00		1.34	T1	D	NCV	12.97	3.83
Netherlands	L, T	16.6	CS, T2	CS	NCV	72.01	74.32		0.21	CS, T2	CS, D	NCV	3.80	2.30
New Zealand[c]	L, T	17.6	D	CS	GCV	69.24	72.31		0.20	D	D	GCV	1.50	3.90
Norway	L, T	18.4	T1, T2	CS, PS	NCV	71.30	72.58		0.30	CS, T2, T3	CR, CS, D	NCV	6.02	2.16
Poland	L, T	9.1	T1, T2	CS, D	NCV	70.37	73.16	T	0.28	T1, T2	CS, D	NCV	15.49	3.42
Portugal	L, T	22.2	CR, T1, T2	CR, D, OTH	NCV	71.06	72.41	L, T	0.73	CR, T1, T2, T3	CR, D	NCV	9.82	6.67
Romania	L, T	7.9	T1	D	NCV	68.61	73.33		0.02	T1	D	NCV	0.60	0.60
Russian Federation	L, T	4.9	T1	D	NCV	68.61	73.33		0.01	T1	D	NCV	0.60	0.60
Slovakia	L, T	13.6	D, M, T1, T2	D	NCV	73.01	73.83	T	0.39	D, M, T1, T2	D	NCV	11.27	4.56
Slovenia	L, T	24.8	M, T1	D, M	NCV	73.89	73.79	L, T	0.89	CS, M, T1	D, M	NCV	11.47	6.67
Spain	L, T	22.1	CR, T2	CR, D	NCV	70.31	72.56	L, T	0.64	CR, T1, T2	CR, D	NCV	8.13	6.39
Sweden	L, T	29.6	CS, T1, T2	CS	NCV	72.60	72.01		0.19	CS, IE, M, T1, T2	CR, CS, D, IE,	NCV	1.84	1.12
Switzerland	L, T	30.8	T1, T2, T3	CS	NCV	73.90	73.60		0.22	T1, T2, T3	CS, D	NCV	1.83	1.46
Turkey	L, T	11.5	T1, T2	D	NCV	69.30	74.10		0.16	T1, T2	D	NCV	4.03	3.61
Ukraine	L, T	6.9	T1, T3	D, OTH	NCV	68.61	73.33		0.02	T1, T3	D	NCV	0.60	0.60
United Kingdom	L, T	19.1	CS, T2, T3	CS	NCV	70.06	73.21		0.20	T2, T3	CR, CS, D	NCV	2.24	2.52
United States[c]	L, T	22.1	T1, T2	CS	GCV	70.71	72.98	T	0.37	M, T1, T2	CS, D, M	GCV	5.05	0.19

[a] Information on methods and emission factors in this table is a reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.3 Transport.

[b] Source of default emission factors: IPCC Guidelines, volume 3, pages 1.70–1.83. For updates on the default emission factors for N2O for US gasoline vehicles, see table 2.7, page 2.47 in the IPCC good practice guidance.

[c] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than woul have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.31a

CO_2 emissions from road transportation - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	53,153	66,450	-1.9	2.8	3.1	1.9	1.6	2.0	2.5	-2.4	3.4	1.0	5.0	-1.6	-1.0	-0.4	25.0
Austria	13,286	23,167	11.0	1.8	10.2	-5.9	12.6	-3.7	5.2	7.4	10.8	8.1	2.4	2.2	-5.2	1.2	74.4
Belarus	12,928	3,905	-2.2	-11.7	-3.1	-11.8	-10.4	-21.5	-21.7	-1.1	46.3	-13.5	19.5	3.1	25.7	-3.4	-69.8
Belgium	19,270	24,318	1.0	0.3	2.0	1.2	3.1	1.5	1.7	2.8	1.3	2.2	4.0	-3.4	-2.0	-0.5	26.2
Bulgaria	7,747	7,298	-41.8	8.3	-1.6	-24.3	28.3	3.4	-5.8	3.6	5.7	14.3	4.5	9.4	6.1	-4.2	-5.8
Canada	94,923	133,189	-2.4	1.3	-1.1	4.4	3.1	2.6	0.9	2.0	1.6	2.3	3.5	1.3	1.4	3.2	40.3
Croatia	3,561	6,059	-25.6	6.5	7.7	11.4	6.2	6.1	0.8	1.2	6.7	8.5	2.9	3.8	6.6	7.5	70.1
Czech Republic	5,995	18,039	-9.8	26.9	11.8	7.2	5.2	2.6	2.7	7.4	4.9	14.0	5.0	8.6	1.8	5.1	200.9
Denmark	9,275	13,198	4.5	0.9	1.7	2.0	1.7	1.3	-1.0	0.2	1.2	4.0	2.6	0.8	3.1	4.8	42.3
Estonia	2,148	2,225	-9.9	-0.1	2.5	8.6	1.9	-8.3	-0.6	22.1	1.9	-0.6	3.8	4.9	8.5	6.0	3.6
European Community	637,514	794,384	2.3	1.2	2.1	1.2	3.1	2.4	0.2	1.4	1.5	0.5	1.4	-0.9	0.0	0.2	24.6
Finland	10,839	12,320	-2.9	-1.5	-0.7	5.0	1.0	1.6	-0.8	1.8	2.0	1.6	3.1	0.4	1.3	3.2	13.7
France	111,367	128,337	2.5	0.9	0.8	1.7	1.6	2.2	-0.4	2.5	0.6	-0.1	0.2	-1.2	-0.5	-1.1	15.2
Germany	150,358	144,114	2.5	2.5	0.0	0.6	2.1	3.2	-2.1	-2.0	-1.0	-3.7	-0.1	-5.4	-2.6	-2.0	-4.2
Greece	11,761	19,785	7.2	3.2	4.8	2.3	5.0	1.8	1.2	2.2	3.7	6.1	0.6	1.1	3.2	4.7	68.2
Hungary	6,807	12,233	-12.2	2.1	0.1	6.4	14.3	4.7	-0.1	4.2	5.1	3.3	6.2	16.7	4.0	1.3	79.7
Iceland	509	891	3.5	-1.9	-3.7	6.0	1.4	4.5	2.1	1.1	1.4	13.0	5.3	4.0	15.0	3.7	75.1
Ireland	4,701	13,755	4.4	2.8	17.6	5.4	19.2	10.8	8.0	4.4	2.7	1.6	5.5	6.4	6.0	5.1	192.6
Italy	93,387	118,721	2.1	2.0	0.4	1.5	3.2	1.2	0.2	2.4	1.9	1.0	1.8	-1.1	1.1	0.4	27.1
Japan	189,228	217,653	5.4	2.7	2.2	0.2	0.4	1.1	-0.5	1.3	-2.4	-0.8	0.7	-2.2	-1.5	-1.9	15.0
Latvia	2,314	3,495	-6.9	-5.7	-1.9	-1.1	0.0	0.1	11.9	20.0	3.1	4.8	6.1	4.6	12.9	13.3	51.1
Liechtenstein	75	86	17.5	2.5	1.6	4.4	-0.3	6.7	4.3	-3.8	-4.9	-0.3	-1.4	-0.6	-3.5	5.0	13.8
Lithuania	5,281	4,819	10.4	24.7	6.8	13.1	5.7	-10.8	-11.8	9.8	3.2	1.3	10.0	6.2	5.9	17.9	-8.7
Luxembourg	2,676	6,569	18.9	-5.0	2.9	5.9	4.5	7.8	12.8	6.3	7.0	10.5	14.5	3.4	-2.5	-3.9	145.5
Monaco	32	31	14.1	-3.4	-0.3	-5.6	-3.2	0.8	-5.9	-0.5	0.2	-1.5	-2.9	-4.6	-0.4	1.2	-3.0
Netherlands	25,472	34,458	1.1	1.9	2.7	1.2	2.4	2.8	1.1	1.6	2.1	1.8	1.2	0.2	2.7	-1.0	35.3
New Zealand	7,516	13,281	1.4	8.2	1.6	4.5	2.3	2.0	3.0	1.3	5.7	4.0	2.9	1.7	2.2	2.7	76.7
Norway	7,630	10,124	-1.0	1.8	3.2	0.0	2.8	-0.6	-2.0	6.0	1.0	1.6	3.5	1.8	3.1	2.5	32.7
Poland	16,068	36,275	-2.3	9.2	10.9	3.7	3.4	2.0	-4.0	-2.5	-0.8	2.6	6.5	5.3	6.0	0.1	125.8
Portugal	9,249	18,165	6.7	5.3	5.2	5.8	12.4	5.4	10.5	1.7	2.6	-0.4	-0.4	-0.9	0.3	-2.4	96.4
Romania	4,574	12,028	-16.1	-2.5	39.8	-5.3	0.5	-23.3	11.2	28.4	6.7	1.7	20.4	-16.9	4.0	0.6	162.9
Russian Federation	176,308	106,721	-4.4	-8.5	-5.2	-2.0	15.5	0.8	-33.4	11.6	2.7	3.1	-1.4	11.8	8.6	6.0	-39.5
Slovakia	4,501	6,375	-15.0	6.0	1.4	4.5	7.0	-2.0	-10.5	14.3	3.2	2.8	5.8	18.2	-7.8	13.5	41.6
Slovenia	1,914	5,148	-6.0	10.0	16.1	1.6	-13.7	-4.9	4.2	3.7	0.3	3.7	3.8	6.7	5.0	12.7	169.0
Spain	50,442	97,848	5.7	1.4	6.5	1.0	9.6	5.2	2.9	4.9	2.2	4.8	3.6	3.3	2.7	2.8	94.0
Sweden	16,869	19,369	-1.5	-0.9	-1.2	0.8	1.2	1.0	-1.2	1.4	3.5	1.3	1.9	1.6	-0.5	0.8	14.8
Switzerland	13,983	15,803	3.6	-2.2	0.4	4.1	1.5	4.2	1.6	-1.8	-0.6	1.3	0.8	0.6	0.6	2.1	13.0
Turkey	24,036	42,934	-6.0	8.5	6.2	-5.8	-6.8	8.6	5.6	-0.9	1.9	4.0	5.3	1.3	7.4	15.8	78.6
Ukraine	46,346	30,087	*	*	*	*	*	-24.3	4.2	10.8	18.3	0.8	11.2	9.4	6.7	7.8	-35.1
United Kingdom	109,881	122,015	-0.7	-0.9	3.9	1.2	-0.6	0.8	-0.7	0.0	2.1	-0.2	1.1	0.4	0.3	1.0	11.0
United States	1,180,829	1,567,832	-1.7	1.2	2.6	2.5	2.9	3.8	1.1	0.6	2.8	0.8	2.5	0.3	-0.1	0.2	32.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.31b

N_2O emissions from road transportation - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2.20	5.22	6.3	6.9	5.9	4.6	9.1	8.7	9.9	4.2	9.2	5.5	7.2	-4.4	-4.5	-1.9	136.6
Austria	0.57	0.86	21.9	1.7	3.0	-2.0	13.0	-3.1	1.7	3.6	8.9	3.6	-2.3	-3.5	-7.6	-4.8	50.8
Belarus	0.11	0.03	-2.0	-11.4	-2.7	-11.8	-10.1	-21.4	-21.5	-1.1	47.0	-13.5	19.0	3.1	25.6	-3.4	-69.8
Belgium	1.08	2.56	7.6	7.2	7.5	6.7	7.9	7.4	4.0	3.5	2.9	1.1	2.9	1.3	1.1	0.5	137.9
Bulgaria	0.16	0.19	-40.2	6.3	3.4	-22.5	24.3	7.6	1.0	7.9	6.5	17.4	3.7	16.5	2.4	-1.6	18.9
Canada	10.32	10.67	9.3	0.9	-1.5	0.6	-2.7	-1.5	-4.9	-1.2	-3.8	-4.4	-3.6	-5.1	-4.2	-0.8	3.3
Croatia	0.16	0.62	-24.8	11.0	12.7	20.3	15.9	13.5	10.0	12.2	11.1	14.0	8.4	1.0	12.6	13.2	297.3
Czech Republic	0.23	2.33	18.0	48.4	16.3	13.5	31.0	15.8	-22.0	11.1	13.6	18.9	9.0	6.8	1.4	4.5	921.9
Denmark	0.31	0.41	7.5	4.0	4.0	2.9	1.0	0.7	-1.4	-3.2	-2.0	-0.2	0.3	-3.6	-0.9	1.7	31.1
Estonia	0.07	0.22	-6.6	18.8	1.5	12.9	12.8	-2.2	7.1	38.3	11.4	9.4	11.2	14.6	15.6	3.2	217.9
European Community	17.35	34.63	9.3	14.4	-1.4	5.0	4.9	4.1	1.4	1.2	0.8	-0.5	0.6	-4.1	0.9	0.1	99.6
Finland	0.51	2.08	14.8	10.1	9.2	11.6	9.9	9.9	7.1	6.9	7.8	7.2	8.4	5.8	4.3	4.3	303.2
France	1.41	2.06	-0.7	3.4	5.5	5.8	1.9	3.4	0.8	3.7	2.1	1.3	1.6	-0.8	1.4	1.1	46.6
Germany	1.96	3.48	38.9	10.2	4.7	2.7	1.4	0.7	-5.3	-2.9	-3.3	-7.1	-2.3	-7.9	-5.6	-2.5	77.1
Greece	0.40	0.73	9.3	17.2	14.7	12.1	14.6	11.8	7.2	13.0	-7.9	-5.7	-10.6	-5.6	-5.7	-1.5	84.9
Hungary	0.29	1.23	-11.0	-0.4	-2.9	3.5	10.2	1.5	-2.1	2.9	2.2	4.2	-8.0	11.6	-8.6	-1.0	317.2
Iceland	0.01	0.13	4.4	134.2	-1.5	64.5	2.8	50.0	-0.4	0.9	1.2	4.8	3.9	18.2	6.3	1.1	798.8
Ireland	0.18	0.60	3.6	5.6	18.6	19.6	22.8	2.3	8.0	4.8	0.0	-3.3	0.7	0.4	0.3	-5.5	235.7
Italy	3.21	4.58	5.2	17.0	9.0	4.6	-0.3	3.6	-1.5	-1.6	-1.4	-4.0	-1.5	-24.0	4.8	-1.2	42.6
Japan	12.59	8.03	4.0	3.1	1.9	0.7	-2.1	-0.1	-2.4	-4.2	-6.6	-7.1	-8.5	-9.3	-8.5	-6.9	-36.2
Latvia	0.05	0.14	1.2	2.5	6.3	3.5	11.9	10.7	15.4	9.1	12.8	16.5	12.2	-17.6	12.9	6.9	173.1
Liechtenstein	0.00	0.00	36.8	18.1	-1.8	5.4	-5.4	3.5	4.8	-8.4	-13.5	-9.2	-8.3	-8.0	-11.6	3.5	24.1
Lithuania	0.20	0.22	9.6	17.4	5.4	19.8	9.4	-8.4	-11.0	13.1	3.6	0.7	12.5	7.8	8.6	21.9	8.6
Luxembourg	0.11	0.33	18.0	-0.1	4.0	8.0	0.2	2.7	7.3	1.2	0.0	8.3	10.1	2.6	-4.6	0.1	197.0
Monaco	0.00	0.00	14.8	17.5	18.8	8.4	7.7	12.2	1.2	4.0	4.3	-2.3	-1.8	-3.7	0.8	1.4	338.4
Netherlands	0.87	1.41	19.7	6.9	2.1	0.8	-0.9	-1.4	-2.5	-0.1	-0.3	-2.0	-1.8	-2.1	1.1	-2.4	61.8
New Zealand	0.21	0.48	1.9	12.2	3.8	6.5	3.2	2.9	5.6	1.8	6.7	4.2	2.4	4.1	2.9	3.6	128.7
Norway	0.15	0.54	12.0	17.4	18.4	10.2	9.0	6.4	4.3	9.1	3.5	2.5	2.9	0.4	0.0	-1.8	254.7
Poland	0.49	3.66	-8.4	27.8	39.0	33.8	28.9	9.2	11.7	-3.4	-4.4	-0.1	2.0	6.3	6.5	4.7	640.2
Portugal	0.45	1.94	6.2	14.9	12.3	10.8	15.9	9.9	12.1	2.9	4.4	0.8	0.2	0.6	1.9	-0.3	326.7
Romania	0.04	0.10	-17.0	-7.0	44.0	-4.5	-0.1	-22.4	9.4	30.1	7.2	1.2	20.2	-16.9	4.6	-0.1	159.7
Russian Federation	1.49	0.91	-4.4	-8.1	-5.1	-1.8	14.8	0.7	-32.6	11.0	2.8	3.5	3.9	5.8	7.7	5.8	-39.0
Slovakia	0.23	0.59	-14.7	16.1	12.7	15.3	15.9	5.2	-7.6	22.5	0.4	8.9	1.3	19.7	-7.9	13.3	154.7
Slovenia	0.08	0.60	-7.1	26.5	29.1	11.7	-6.0	3.3	10.9	7.5	3.6	6.1	3.9	7.6	6.7	10.9	679.5
Spain	2.19	9.20	7.0	9.6	12.6	9.5	15.9	10.8	7.2	8.2	6.7	7.3	6.2	5.7	5.0	3.9	319.7
Sweden	0.32	0.41	-7.5	16.2	-2.0	7.6	-5.2	6.3	4.1	-7.9	-3.0	-3.1	-3.0	-1.5	-5.8	-3.4	27.7
Switzerland	0.31	0.37	25.0	3.9	6.7	4.6	-0.1	1.4	-3.0	-7.0	-7.4	-6.4	-6.6	-7.1	-7.0	-5.3	18.3
Turkey	0.80	1.87	-6.1	7.5	10.0	-8.3	-6.9	19.7	10.7	4.7	8.0	12.7	23.7	8.6	-20.7	14.1	135.3
Ukraine	0.39	0.25	*	*	*	*	*	-23.4	3.7	11.3	18.0	0.2	11.6	9.4	6.2	7.8	-34.6
United Kingdom	3.81	4.05	-0.1	27.9	-29.3	1.3	1.2	0.1	-1.2	-4.8	-3.6	-4.8	-3.8	-5.0	-3.3	-4.0	6.4
United States	130.01	83.87	5.5	2.2	1.3	1.5	0.0	-2.7	-2.6	-5.1	-8.7	-8.1	-7.3	-9.5	-9.8	-11.7	-35.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.31c

N_2O implied emissions factor for road transportation: gasoline - trend information

N_2O IEF (kg/TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia[b]	3.56	7.71	9.9	5.6	4.7	4.1	9.2	7.7	8.4	7.8	6.4	4.5	1.6	-2.6	-3.8	-3.6	116.9
Austria	4.22	4.84	13.6	3.9	3.9	3.4	5.8	2.1	0.8	-0.9	-1.6	-3.4	-5.0	-6.5	-10.3	-9.2	14.8
Belarus	0.60	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belgium	1.53	12.01	7.8	18.1	19.4	17.2	10.8	14.6	11.2	4.7	6.1	-1.5	8.8	6.9	20.0	3.6	686.9
Bulgaria	1.20	1.14	-2.6	-0.3	1.0	1.3	-12.2	6.5	2.7	-3.0	1.4	2.8	-4.7	6.2	-0.1	0.1	-4.8
Canada[b]	9.36	6.86	12.7	1.0	-0.8	-3.3	-6.5	-4.9	-6.3	-3.2	-6.4	-6.7	-6.7	-6.3	-6.1	-5.9	-26.7
Croatia	1.88	8.44	0.1	8.2	12.2	19.1	20.1	14.9	14.4	23.4	10.2	10.0	5.1	3.9	3.9	5.9	349.8
Czech Republic	2.44	18.07	65.4	34.2	3.9	9.4	29.1	11.0	-20.2	6.4	12.2	7.7	6.5	3.2	2.8	-0.5	641.4
Denmark	3.08	1.93	3.5	2.5	2.1	0.0	-2.3	-1.3	-1.0	-5.0	-6.0	-7.3	-6.0	-9.1	-11.1	-13.9	-37.4
Estonia	1.48	8.90	10.5	16.0	11.7	11.7	23.3	12.0	16.1	10.4	20.3	14.8	16.1	17.6	3.8	-4.2	500.3
European Community	2.03	3.52	11.2	18.8	-5.4	4.8	2.0	1.9	1.5	-0.9	-2.4	-2.7	-2.1	-9.0	-0.6	-5.0	73.6
Finland	3.66	23.91	28.9	14.9	15.7	11.0	13.5	12.6	12.5	6.3	6.8	7.3	7.7	6.7	5.5	4.4	554.2
France	1.26	1.39	0.0	5.5	8.0	4.2	-1.0	-1.5	-1.2	-2.0	-1.1	0.1	0.0	-4.6	-2.2	-3.5	10.5
Germany	1.02	1.73	53.4	8.5	4.3	1.3	-1.8	-3.5	-4.9	-3.4	-4.5	-6.2	-5.7	-8.2	-8.8	-9.5	69.8
Greece	1.47	3.04	-0.6	32.3	21.2	19.6	14.9	16.3	10.1	15.0	-9.5	-8.6	-10.5	-6.5	-7.4	-4.8	107.2
Hungary	2.44	12.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-5.5	-12.5	-0.7	404.4
Iceland	1.72	15.71	1.3	207.5	0.1	67.8	0.3	50.3	0.0	0.0	0.1	0.1	0.0	15.8	0.2	-0.1	815.5
Ireland	3.58	4.44	4.1	0.7	11.8	14.3	11.0	-7.3	2.1	-2.2	-4.8	-6.8	-6.0	-9.7	-9.7	-18.1	24.0
Italy	3.54	3.16	1.0	16.8	9.0	4.7	-2.0	3.9	1.5	-3.1	-6.3	-7.1	-3.1	-41.6	4.7	-7.0	-10.5
Japan[b]	6.82	2.90	-0.1	0.4	-0.7	-0.9	-4.4	-2.8	-5.2	-6.6	-7.9	-9.6	-10.4	-9.3	-10.3	-8.3	-57.5
Latvia	0.77	4.43	7.6	6.8	16.2	16.4	21.6	18.0	24.4	8.1	16.7	21.0	18.0	0.7	-3.5	-7.4	475.3
Liechtenstein	1.85	2.04	22.2	15.8	-2.9	0.3	-1.4	-2.8	-4.3	-5.7	-7.6	-8.2	-7.9	-8.5	-9.3	0.0	10.3
Lithuania	2.00	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Luxembourg	4.56	4.68	0.0	7.5	3.1	2.6	-1.4	-3.4	-0.1	-1.1	-3.0	-8.8	-7.1	-5.8	-7.9	-20.2	2.6
Monaco	1.70	12.97	0.4	28.2	24.1	18.0	13.7	12.4	9.1	6.9	4.5	2.8	2.6	2.1	1.3	0.9	663.2
Netherlands	3.33	3.80	24.4	6.4	-1.1	-0.1	-4.3	-4.7	-5.2	-4.3	-2.6	-4.9	-3.9	-3.5	-4.0	-3.5	13.9
New Zealand[b]	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Norway	1.03	6.02	24.2	23.1	22.6	16.8	10.9	10.2	9.6	5.1	4.1	2.3	1.3	1.5	0.1	-0.7	483.1
Poland	1.55	15.49	-4.6	40.0	41.4	45.7	36.7	9.9	28.0	2.1	0.7	3.0	1.8	12.0	0.1	5.6	897.3
Portugal	1.75	9.82	1.1	18.2	13.0	9.3	8.7	7.4	5.6	3.7	1.9	2.1	1.4	1.6	1.8	1.2	461.8
Romania	0.60	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Russian Federation	0.60	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slovakia	1.78	11.27	5.4	31.5	27.8	25.9	16.8	11.1	7.0	10.5	4.9	8.0	-0.3	9.5	3.6	5.1	532.5
Slovenia	1.86	11.47	-0.8	23.3	16.8	14.5	13.5	11.8	8.9	5.7	5.7	4.7	4.6	4.3	4.3	2.8	515.8
Spain	1.76	8.13	2.0	16.2	12.6	12.6	11.0	10.5	8.7	8.5	7.8	5.4	5.6	5.3	6.0	-5.2	362.7
Sweden	1.50	1.84	-10.6	16.1	-1.5	10.7	-4.7	5.0	5.0	-10.5	-6.3	-3.7	-2.5	-2.1	-7.2	-8.5	22.7
Switzerland	1.85	1.83	22.4	7.5	4.6	0.3	-1.5	-2.8	-4.4	-5.6	-7.4	-8.3	-7.9	-8.6	-9.4	-10.1	-0.7
Turkey	6.59	4.03	-3.2	-3.2	1.9	-18.9	-12.5	21.5	11.0	15.9	14.2	14.3	22.2	-57.0	-15.3	11.7	-38.8
Ukraine	0.60	0.60	*	*	*	*	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
United Kingdom	2.67	2.24	1.3	37.3	-36.6	0.2	0.9	-2.0	-1.2	-6.8	-8.2	-7.2	-8.8	-8.4	-8.5	-11.6	-16.2
United States[v]	9.50	5.05	7.1	1.2	-1.0	0.4	-3.0	-5.7	-2.7	-5.8	-10.9	-8.6	-8.9	-8.6	-9.0	-11.7	-46.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.31d

N_2O implied emissions factor for road transportation: diesel oil - trend information

N_2O IEF (kg/TJ)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia[b]	1.40	1.65	0.7	0.5	1.0	1.3	1.8	-1.1	-0.7	-2.4	1.3	0.0	-1.6	5.2	3.8	5.9	18.2
Austria	1.84	1.86	0.1	-1.3	-1.6	4.3	0.6	3.0	0.4	0.1	1.5	0.3	0.7	-2.0	-0.7	-2.4	1.5
Belarus	0.60	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belgium	5.94	6.64	5.8	2.7	-1.2	-0.7	2.1	1.8	-1.6	-0.4	0.0	-0.8	-4.0	5.1	-0.2	0.5	11.9
Bulgaria	1.91	1.91	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canada[b]	2.33	2.49	0.8	0.6	0.1	0.2	1.4	0.0	0.4	-0.1	0.5	0.1	0.0	0.2	0.2	0.3	7.0
Croatia	5.88	6.85	4.3	1.1	1.3	-0.2	3.1	-0.1	4.1	-2.5	-2.4	1.0	7.1	-7.6	9.2	6.4	16.4
Czech Republic	3.00	4.51	-0.2	0.0	5.0	10.5	18.4	11.7	-26.7	6.1	4.5	4.0	8.7	6.2	-1.1	1.5	50.4
Denmark	1.80	2.53	0.0	4.2	3.2	2.1	2.5	2.6	1.1	1.2	2.8	2.6	3.6	1.2	2.4	3.9	40.5
Estonia	4.17	5.64	-2.5	6.8	-4.9	-0.9	-2.1	1.8	-2.5	17.6	-1.8	5.5	-0.4	0.3	10.6	0.0	35.4
European Community	1.91	2.91	0.2	2.9	2.8	3.7	4.7	4.2	3.8	3.1	3.8	3.2	2.6	3.3	2.5	3.3	52.6
Finland	3.26	3.30	2.6	2.8	-0.9	-3.4	-0.8	-0.2	0.2	0.8	1.4	1.1	-1.5	2.6	0.2	-1.0	1.1
France	0.54	1.06	-4.2	3.0	3.2	7.6	5.7	7.3	7.2	7.5	6.3	4.7	4.1	4.7	4.0	2.6	95.6
Germany	0.82	1.55	-0.6	5.3	6.4	8.2	9.1	8.2	6.0	6.7	4.1	2.0	5.1	2.9	1.7	3.5	88.4
Greece	3.93	1.73	-0.3	1.1	0.1	-0.5	1.3	0.8	-1.3	1.6	-15.8	-16.2	-14.3	-8.3	-12.0	-10.9	-55.9
Hungary	3.90	3.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-34.6	-0.1	0.1	0.0	0.7
Iceland	3.05	3.52	0.7	0.5	0.9	1.0	2.5	1.0	0.8	0.9	0.6	-0.1	-0.3	0.8	-2.0	4.4	15.4
Ireland	1.40	2.15	-13.9	2.8	-10.0	-2.2	-7.9	4.4	-0.4	22.0	11.9	11.0	9.0	10.3	9.3	8.4	53.4
Italy	1.79	2.60	1.7	1.9	4.1	-0.9	-7.2	3.3	1.0	1.9	14.8	6.5	4.2	5.9	5.0	3.4	45.5
Japan[b]	1.94	2.14	-1.2	1.4	0.6	0.8	-0.5	1.8	5.9	-2.0	4.5	1.9	-6.0	-1.3	2.5	3.5	10.2
Latvia	3.92	1.97	5.4	4.0	3.4	-12.5	-0.5	4.0	-12.9	-24.1	3.4	3.8	-46.2	-1.4	9.8	-0.7	-49.9
Liechtenstein	0.75	1.41	-1.3	-2.7	2.8	8.1	7.5	10.5	9.5	5.8	7.3	5.1	4.8	4.6	3.7	0.0	88.0
Lithuania	4.00	4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Luxembourg	1.38	3.24	0.0	-3.7	-3.0	8.2	-0.2	4.3	5.1	3.6	3.6	28.3	15.9	12.6	3.4	14.9	134.6
Monaco	3.67	3.83	1.2	0.3	0.8	-0.1	0.1	-0.1	-0.1	0.5	-0.2	0.0	-0.2	-0.1	0.3	0.0	4.2
Netherlands	1.45	2.30	0.4	0.1	5.8	5.3	7.7	5.8	7.7	6.5	1.8	1.6	1.4	0.3	1.5	-1.5	58.5
New Zealand[b]	3.90	3.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Norway	2.41	2.16	-0.6	2.6	0.3	-3.2	-4.7	-1.9	-1.5	-0.5	0.5	2.0	1.8	0.7	0.3	-1.5	-10.4
Poland	3.10	3.42	-0.4	0.9	0.9	0.2	0.2	0.5	-5.9	0.3	0.6	0.2	0.8	0.0	0.5	5.8	10.2
Portugal	5.09	6.67	0.8	1.8	1.3	1.3	-0.2	2.5	0.0	1.1	1.1	1.2	1.0	2.5	1.3	1.8	31.0
Romania	0.60	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Russian Federation	0.60	0.60	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	49.6	-30.6	-0.4	-3.3	0.0
Slovakia	4.68	4.56	3.7	-0.1	2.2	0.0	0.3	2.3	-1.1	1.2	-6.4	2.7	-2.6	-4.7	-2.1	-1.1	-2.5
Slovenia	5.13	6.67	-0.2	0.3	0.0	0.8	-0.5	0.2	-0.1	0.8	1.2	1.3	1.6	0.1	1.7	-0.1	30.0
Spain	4.61	6.39	0.3	1.1	1.7	5.3	1.7	2.0	1.7	0.3	2.8	1.5	2.0	1.7	1.5	4.3	38.6
Sweden	1.06	1.12	9.9	11.9	4.6	-5.0	-1.7	8.7	8.8	0.2	-1.3	-2.3	-5.9	-0.8	3.6	9.6	5.8
Switzerland	0.75	1.46	-1.7	-1.6	2.8	7.3	8.1	9.8	9.3	6.4	7.2	5.2	4.3	4.6	3.9	3.7	93.8
Turkey	IE	3.61	*	*	*	*	*	*	*	*	*	*	*	*	-29.6	-0.5	*
Ukraine	0.60	0.60	*	*	*	*	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
United Kingdom	2.01	2.52	-1.1	3.7	0.1	3.7	6.7	4.0	3.7	2.4	2.7	2.8	2.8	-0.7	2.0	1.1	25.5
United States[b]	0.22	0.19	5.9	1.0	-0.6	-2.8	0.0	-2.1	-2.3	4.3	-2.0	-0.8	-3.2	-4.1	-2.3	-0.3	-13.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.32

Civil aviation, navigation and international bunkers - CO_2 (2007)

	Methods and EF used[a]		IEF in CRF based on GCV or NCV	Civil aviation				Aviation bunkers		Navigation				Marine bunkers	
						CO_2 IEF		CO_2 IEF				CO_2 IEF		CO_2 IEF	
	Methods	EF		Key category	Share of national total	Jet kerosene	Aviation gasoline	Jet kerosene	Aviation gasoline	Key category	Share of national total	Residual oil	Gas/diesel oil	Residual oil	Gas/diesel oil
					(%)	(t/TJ)		(t/TJ)			(%)	(t/TJ)		(t/TJ)	
IPCC default EF[b]			NCV			72.80	72.10	72.80	72.10			77.60	73.00	77.60	75.0 - 77.6
Australia[c]	T1	CS, D	GCV	L, T	0.98	72.53	69.82	72.53	NA	T	0.51	76.70	72.84	76.70	72.84
Austria	CS, M	CS	NCV		0.08	72.82	72.45	72.82	NO		0.08	NO	69.12	NO	NO
Belarus	D, T1	CS, D	NCV		0.01	70.79	68.61	70.79	NE		0.02	NE	73.31	NE	NE
Belgium			NCV		0.01	70.80	66.41	70.79	NO		0.36	NO	73.42	76.59	73.33
Bulgaria	T1, T2	CS, D	NCV	T	0.18	70.60	70.80	70.60	NO	T	-	NO	NO	NO	76.14
Canada[c]	CS, T1, T2, T3	CS	GCV	L	1.02	71.32	73.55	71.32	NA	L	0.77	77.37	73.19	77.37	73.19
Croatia	T1, T3	CR, D	NCV	T	0.23	70.79	68.61	70.79	NO		0.33	NO	73.33	76.59	73.33
Czech Republic	T1	D	NCV		0.02	74.22	73.29	75.47	NE		0.01	NO	73.48	NO	NO
Denmark	OTH	CS	NCV	T	0.16	72.00	73.00	72.00	73.00	L, T	0.67	78.00	74.00	78.00	74.00
Estonia	T1	D	NCV		0.01	NO	70.78	70.79	NO	T	0.25	NO	73.33	76.59	73.33
European Community	R, CS, D, M, OTH, T1, T2, T	CR, CS, D, M, OTH	NCV	L, T	0.54	72.24	58.77	72.13	69.55	L	0.53	76.99	73.83	77.14	73.79
Finland	M, T1, T3	CS, D	NCV	T	0.39	73.20	71.30	73.20	NO	L	0.74	78.80	74.10	78.80	74.10
France	CR, T3	CS	NCV	L	0.87	71.59	IE	71.59	IE	L, T	0.59	78.00	75.00	78.00	75.00
Germany	CS, T1, T3	CS	NCV		0.24	73.27	69.30	73.27	NO		0.06	NO	74.00	78.00	74.00
Greece	CR, M, T1, T2	D, M	NCV	L, T	1.02	70.64	68.61	70.63	NO	L	1.60	76.59	73.33	76.59	73.33
Hungary	T1	CS, D	NCV		-	NO	IE	70.79	NO		0.00	NO	73.33	NA	NA
Iceland	T1	D	NCV	T	0.49	70.79	68.61	70.79	69	L	1.34	76.59	73.33	76.59	73.33
Ireland	T1, T2	CS	NCV		0.18	71.36	IE	71.37	NO		0.01	NO	73.30	76.00	73.30
Italy	D, M, T1, T2	CS	NCV	L	0.44	71.50	70.00	71.50	NO	L	0.90	76.54	73.27	76.54	73.27
Japan[c]	T1	CS	GCV	L, T	0.79	70.67	70.59	74.39	NO	L, T	0.90	IE	72.29	IE	72.29
Latvia	CR, T1, T2	CS, D	NCV		0.02	72.92	70.20	72.92	NO		0.04	NO	74.00	76.60	74.00
Liechtenstein	T1	CS	NCV		0.05	73.20	NO	73.20	NO		-	NO	NO	NO	NO
Lithuania	T2	CS	NCV		0.02	74.00	72.00	74.00	NO		0.07	78.00	74.00	78.00	74.00
Luxembourg	T1, T3	D	NCV		0.00	NO	69.30	71.50	69.30		0.00	NO	74.10	NE	74.10
Monaco	T1	D	NCV		-	NO	NO	70.79	NO	T	1.71	NO	74.00	NO	74.00
Netherlands	CS, T2	CS	NCV		0.02	71.50	72.00	72.79	NO		0.29	NO	74.30	77.71	75.00
New Zealand[c]	D	CS	GCV	L	1.21	71.28	68.67	71.28	NO		0.40	76.02	NO	76.66	72.31
Norway	T1, T2	CS, PS	NCV	L, T	1.65	73.09	71.30	73.09	NO	L, T	4.72	78.82	73.66	78.82	73.55
Poland	T1, T2	CS, D	NCV		0.02	73.26	72.10	73.26	NO		0.00	77.60	73.17	77.60	74.10
Portugal	CR, T1, T2	CR, D, OTH	NCV		0.48	70.60	69.51	70.60	69.51		0.26	76.59	73.33	76.59	73.33
Romania	T1	D	NCV		0.04	70.78	68.61	70.78	68.52		0.06	76.59	73.33	76.59	73.33
Russian Federation	T1	D	NCV		0.47	70.79	IE	71.50	NE	T	0.06	76.59	73.33	77.40	74.10
Slovakia	D, M, T1, T2	D	NCV		0.03	73.05	73.60	73.05	73.60		-	NO	NO	NO	75.01
Slovenia	M, T1	D, M	NCV		0.01	NO	71.50	71.50	NO		-	NO	IE	77.60	NO
Spain	CR, T2	CR, D	NCV	L, T	1.71	72.98	IE	72.65	NO	L, T	0.74	76.78	72.64	76.78	72.64
Sweden	CS, T1, T2	CS	NCV	L	0.92	73.10	72.30	73.10	NO	L	0.68	77.61	74.45	77.61	74.45
Switzerland	T1, T2, T3	CS	NCV	T	0.27	73.20	IE	73.20	IE		0.23	NO	73.71	NO	NO
Turkey	T1, T2	D	NCV	L, T	1.63	71.90	NO	NE	NE		0.43	77.40	74.10	NE	NE
Ukraine	T1, T3	D, OTH	NCV		0.05	71.50	68.61	71.50	NO		0.07	76.59	73.33	76.59	73.33
United Kingdom	CS, T2, T3	CS	NCV	T	0.33	71.76	69.46	71.76	NO	L, T	0.77	77.81	73.80	77.81	73.80
United States[c]	T1, T2	CS	GCV	L	2.40	70.72	69.03	70.72	NA	L	0.63	78.62	71.35	78.62	72.98

[a] Information on methods and emission factors in this table is a reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.A.3 Transport.

[b] Source of default emission factors: IPCC Guidelines, volume 3, pages 1.89, 1.91 (for gas/diesel oil: single value for internal waterways and range for sea-going ships, boats).

[c] Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. This means that reported IEFs are about 5 per cent lower for liquid and solid fuels and biomass, and about 10 per cent lower for gaseous fuels than would have been the case if the data were given on a net calorific value (NCV) basis. The IEFs included in this table have been converted into NCV-based values and are not reflecting the reported IEFs.

Table 1.33

Domestic and international aviation - activity data (2007)

	Activity data in CRF based on GCV or NCV	Civil aviation						Aviation bunkers						Total jet kerosene and aviation gasoline		
		Jet kerosene[b]			Aviation gasoline[c]			Jet kerosene[b]			Aviation gasoline[c]					
		CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference
		(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)
Australia	GCV	73,876	77030	4.3	3,039	2,810	-7.5	134,400	128,961	-4.0	NA	0		211,315	208,800	-1.2
Austria	NCV	889	7482	741.9	124	0	-100.0	29,881	23,736	-20.6	NO	0		30,893	31,218	1.1
Belarus	NCV	62	0	-100.0	21	0	-100.0	2,292	0	-100.0	NE	0		2,375	0	-100.0
Belgium	NCV	89	0	-100.0	28	132	373.9	53,500	42,398	-20.8	NO	0		53,617	42,530	-20.7
Bulgaria	NCV	1,869	1720	-8.0	17	0	-100.0	7,474	7,611	1.8	NO	0		9,360	9,331	-0.3
Canada	GCV	108,915	223456	105.2	3,091	2,912	-5.8	139,840	21,943	-84.3	NA	0		251,845	248,311	-1.4
Croatia	NCV	1,026	2451	138.8	49	44	-10.3	3,428	1,849	-46.1	NO	0		4,504	4,344	-3.5
Czech Republic	NCV	346	1462	322.1	88	88	0.5	14,462	14,362	-0.7	NE	0		14,896	15,912	6.8
Denmark[d]	NCV	1,382	1376	-0.4	98	88	-10.6	37,519	37,109	-1.1	1	0	-100.0	39,000	38,573	-1.1
Estonia	NCV	NO	0		18	0.0	-100.0	2,096	2,107	0.5	NO	0		2,114	2,107	-0.3
European Community	NCV	300,309	392418	30.7	2,994	5,324	77.8	1,824,003	1,746,015	-4.3	65	0	-100.0	2,127,372	2,143,757	0.8
Finland	NCV	4,134	5848	41.5	48	440	822.4	22,710	22,446	-1.2	NO	0		26,892	28,734	6.8
France[e]	NCV	65,284	56373	-13.6	IE	968		243,396	246,863	1.4	IE	0		308,680	304,204	-1.5
Germany	NCV	31,223	75766	142.7	607	616	1.5	344,954	302,978	-12.2	NO	0		376,784	379,360	0.7
Greece	NCV	18,920	15007	-20.7	164	0	-100.0	41,389	39,904	-3.6	NO	0		60,473	54,911	-9.2
Hungary	NCV	NO	0		IE	0		10,145	10,406	2.6	NO	0		10,145	10,406	2.6
Iceland	NCV	275	258	-6.1	38	44	15.8	7,211	6,966	-3.4	16	0	-100.0	7,540	7,268	-3.6
Ireland	NCV	1,711	2107	23.1	IE	132		42,037	40,549	-3.5	NO	0		43,748	42,788	-2.2
Italy	NCV	33,310	40549	21.7	659	660	0.2	145,878	135,794	-6.9	NO	0		179,847	177,003	-1.6
Japan	GCV	161,850	153658	-5.1	145	134	-7.5	259,778	259,747	0.0	NO	0		421,773	413,539	-2.0
Latvia	NCV	19	0	-100.0	7	0	-100.0	3,371	3,354	-0.5	NO	0		3,397	3,354	-1.3
Liechtenstein[f]	NCV	2			NO			10			NO			12		
Lithuania	NCV	38	0	-100.0	22	0	-100.0	2,742	3,010	9.8	NO	0		2,802	3,010	7.4
Luxembourg	NCV	NO	0		8	0	-100.0	18,578	18,189	-2.1	1	0	-100.0	18,587	18,189	-2.1
Monaco[e]	NCV	NO			NO			55			NO			55		
Netherlands[h]	NCV	230	2451	964.7	342	132	-61.4	152,440	153,510	0.7	NO	0		153,013	156,093	2.0
New Zealand	GCV	12,964	13261	2.3	570	580	1.7	38,569	37,024	-4.0	NE	0		52,103	50,865	-2.4
Norway	NCV	12,361	13846	12.0	71	88	23.8	17,074	15,394	-9.8	NO	0		29,506	29,328	-0.6
Poland	NCV	929	0	-100.0	176	0	-100.0	17,647	18,576	5.3	NO	176		18,752	18,752	0.0
Portugal	NCV	5,492	4988	-9.2	28	88	212.1	35,342	36,894	4.4	64	0	-100.0	40,925	41,970	2.6
Romania	NCV	756	2881	281.2	7	1,056	14959.0	5,857	4,515	-22.9	43	44	2.9	6,662	8,496	27.5
Russian Federation	NCV	144,452	230050	59.3	IE	1,628		110,836	230,007	107.5	NE	0		255,288	461,685	80.8
Slovakia	NCV	178	0	-100.0	6	0	-100.0	1,606	2,064	28.5	1	0	-100.0	1,792	2,064	15.2
Slovenia	NCV	NO	0		24	44	84.0	1,361	1,333	-2.0	NO	0		1,385	1,377	-0.5
Spain	NCV	103,891	103028	-0.8	477	484	1.5	143,435	142,244	-0.8	NO	0		247,802	245,756	-0.8
Sweden	NCV	8,250	11911	44.4	27	132	383.5	30,022	27,262	-9.2	NO	0		38,299	39,305	2.6
Switzerland[f]	NCV	1,891	2107	11.4	IE	220		53,543	54,696	2.2	IE	0		55,434	57,023	2.9
Turkey	NCV	84,335	42828	-49.2	NO	0		NE	48,289		NE	0		84,335	91,117	8.0
Ukraine	NCV	2,939	0	-100.0	42	88	107.5	11,944	14,964	25.3	NO	0		14,926	15,052	0.8
United Kingdom	NCV	28,391	65532	130.8	1,476	1,452	-1.7	487,279	476,139	-2.3	NO	0		517,146	543,123	5.0
United States	GCV	2,507,334	2667794	6.4	33,742	33,107	-1.9	785,027	709,095	-9.7	NA	0		3,326,103	3,409,996	2.5

[a] Data provided by IEA on 15 May 2009 .

[b] UNFCCC has included the quantities reported in IEA for 'kerosene type jet fuel' and 'gasoline type jet fuel'.

[c] UNFCCC has included the quantities reported in IEA for 'aviation gasolinel' and 'motor gasoline'.

[d] IEA data for Denmark does not include Faroe Islands and Greenland.

[e] IEA data for France includes data for Monaco, but excludes data for the following overseas territories: Guadeloupe, Guyana, Martinique, New Caledonia, French Polynesia, Reunion and Saint Pierre Miquelon.

[f] No IEA data for Liechtenstein are available. These data are not included in the data of Switzerland.

[g] IEA data for Monaco are included in the data of France.

[h] IEA data for the Netherlands excludes data for the following territories: Suriname and the Netherlands Antilles.

Table 1.34

Domestic and international navigation - activity data (2007)

	Activity data in CRF based on GCV or NCV	Navigation						Marine bunkers						Total					
		Residual oil			Gas / diesel oil			Residual oil			Gas / diesel oil			Residual oil			Gas / diesel oil		
		CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference	CRF	IEA[a]	Difference
		(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)
Australia	GCV	6,997	7,029	0.5	11,100	17,509	57.7	31,600	31,950	1.1	4,600	3,025	-34.2	38,597	38,979	1.0	15,700	20,533	30.8
Austria	NCV	NO	0		875	682	-22.1	NO	0		NO	0		NO	0		875	682	-22.1
Belarus	NCV	NE	0		218	0	-100.0	NE	0		NE	0		NE	0		218	0	-100.0
Belgium	NCV	NO	0		6,426	7,924	23.3	369,716	364,200	-1.5	28,768	22,450	-22.0	369,716	364,200	-1.5	35,194	30,374	-13.7
Bulgaria	NCV	NO	0		NO	0		NO	0		2,175	2,215	1.8	NO	0		2,175	2,215	1.8
Canada	GCV	42,368	38,914	-8.2	37,771	35,784	-5.3	27,026	24,803	-8.2	1,800	1,704	-5.3	69,394	63,717	-8.2	39,572	37,488	-5.3
Croatia	NCV	NO	0		1,469	1,448	-1.4	808	800	-1.0	188	170	-9.3	808	800	-1.0	1,657	1,619	-2.3
Czech Republic	NCV	NO	0		214	213	-0.3	NO	0		NO	0		NO	0		214	213	-0.3
Denmark[b]	NCV	610	1,080	77.1	5,121	3,408	-33.4	35,243	34,680	-1.6	10,947	10,906	-0.4	35,853	35,760	-0.3	16,068	14,314	-10.9
Estonia	NCV	NO	0		740	724	-2.1	8,904	8,880	-0.3	1,289	1,321	2.5	8,904	8,880	-0.3	2,029	2,045	0.8
European Community	NCV	103,855	52,520	-49.4	164,108	155,277	-5.4	1,939,873	1,936,200	-0.2	230,899	267,017	15.6	2,043,728	1,988,720	-2.7	395,008	422,294	6.9
Finland	NCV	2,241	2,200	-1.8	3,197	4,814	50.6	15,841	15,640	-1.3	3,265	3,238	-0.8	18,082	17,840	-1.3	6,462	8,051	24.6
France[c]	NCV	1,290	0	-100.0	34,319	2,556	-92.6	112,446	111,720	-0.6	10,120	8,094	-20.0	113,735	111,720	-1.8	44,439	10,650	-76.0
Germany	NCV	NO	0		7,177	7,114	-0.9	104,030	102,960	-1.0	24,441	24,239	-0.8	104,030	102,960	-1.0	31,618	31,354	-0.8
Greece	NCV	14,067	14,000	-0.5	13,746	13,632	-0.8	114,943	114,400	-0.5	15,815	15,549	-1.7	129,010	128,400	-0.5	29,562	29,181	-1.3
Hungary	NCV	NO	0		42	43	1.4	NA	0		NA	0		NA,NO	0		42	43	1.4
Iceland	NCV	578	559.9845	-3.1	218	213	-2.1	809	800	-1.1	1,977	1,960	-0.9	1,386	1,360	-1.9	2,195	2,173	-1.0
Ireland	NCV	NO	1,040		57	85	50.7	2,769	2,720	-1.8	1,997	1,832	-8.3	2,769	3,760	35.8	2,054	1,917	-6.7
Italy	NCV	29,196	0	-100.0	28,843	9,670	-66.5	96,428	122,240	26.8	2,916	22,152	659.7	125,624	122,240	-2.7	31,758	31,822	0.2
Japan	GCV	IE	112,166		6,546	46,988	617.8	IE	231,361		5,141	11,204	117.9	IE	343,526		11,687	58,192	397.9
Latvia	NCV	NO	0		43	42.579756	-1.0	4,953	4,880	-1.5	2,507	2,513	0.3	4,953	4,880	-1.5	2,550	2,556	0.2
Liechtenstein[d]	NCV	NO			NO			NO			NO			NO			NO		
Lithuania	NCV	9	0	-100.0	235	213	-9.4	3,622	4,320	19.3	617	596	-3.3	3,631	4,320	19.0	852	809	-5.0
Luxembourg	NCV	NO	0		6	0	-100.0	NE	0		1.707524697	0	-100.0	NE,NO	0		8	0	-100.0
Monaco[e]	NCV	NO			19			NO			225			NO			244		
Netherlands[f]	NCV	NO	0		8,152	9,968	22.3	612,321	604,120	-1.3	46,887	61,387	30.9	612,321	604,120	-1.3	55,039	71,355	29.6
New Zealand	GCV	4,155	0	-100.0	NO	0		12,170	11,374	-6.5	1,336	1,661	24.4	16,325	11,374	-30.3	1,336	1,661	24.4
Norway	NCV	4,827	4,760	-1.4	28,697	27,988	-2.5	10,898	12,520	14.9	15,814	14,910	-5.7	15,725	17,280	9.9	44,511	42,898	-3.6
Poland	NCV	41	0	-100.0	100	213	112.0	8,160	8,160	0.0	2,130	2,130	0.0	8,201	8,160	-0.5	2,230	2,343	5.0
Portugal	NCV	1,972	0	-100.0	803	1,193	48.5	20,132	22,120	9.9	2,974	5,495	84.8	22,104	22,120	0.1	3,777	6,688	77.1
Romania	NCV	165	0	-100.0	1,019	3,493	242.8	402	559.9845	39.4	2,476	852.0138	-65.6	567	560	-1.2	3,495	4,345	24.3
Russian Federation	NCV	7,980	12,160	52.4	8,767	34,293	291.2	4,212	0	-100.0	14,513	0	-100.0	12,192	12,160	-0.3	23,279	34,293	47.3
Slovakia	NCV	NO	0		NO	0		NO	0		435	0	-100.0	NO	0		435	0	-100.0
Slovenia	NCV	NO	0		IE	0		2,030	1960.008552	-3.4	NO	0		2,030	1960.008552	-3.4	IE,NO	0	
Spain	NCV	29,879	9,600	-67.9	13,304	51,333	285.8	303,841	302,480	-0.4	48,470	47,797	-1.4	333,720	312,080	-6.5	61,774	99,130	60.5
Sweden	NCV	1,975	1,840	-6.8	2,924	2,769	-5.3	89,367	80,080	-10.4	6,468	5,495	-15.0	91,342	81,920	-10.3	9,391	8,264	-12.0
Switzerland[d]	NCV	NO	0		1,569	341	-78.3	NO	0		NO	383		NO	0		1,569	724	-53.9
Turkey	NCV	4,526	4,520	-0.1	16,714	16,444	-1.6	NE	25,240		NE	9,542		4,526	29,760	557.6	16,714	25,986	55.5
Ukraine	NCV	239	0	-100.0	3,652	5666	55.1	353	0	-100.0	1,538	0	-100.0	592	0	-100.0	5,190	5666	9.2
United Kingdom	NCV	23,569	22,760	-3.4	40,733	40,129	-1.5	64,003	58,840	-8.1	29,404	38,383	30.5	87,571	81,600	-6.8	70,137	78,512	11.9
United States	GCV	343,380	3,698	-98.9	285,864	0	-100.0	640,987	971,674	51.6	117,462	293,684	150.0	984,367	975,373	-0.9	403,326	293,684	-27.2

[a] Data provided by IEA on 15 May 2009 .

[b] IEA data for Denmark does not include Faroe Islands and Greenland.

[c] IEA data for France includes data for Monaco, but excludes data for the following overseas territories: Guadeloupe, Guyana, Martinique, New Caledonia, French Polynesia, Reunion and Saint Pierre Miquelon.

[d] No IEA data for Liechtenstein are available. These data are not included in the data of Switzerland.

[e] IEA data for Monaco are included in the data of France.

[f] IEA data for the Netherlands excludes data for the following territories: Suriname and the Netherlands Antilles.

Table 1.35

CO_2 emissions from civil aviation - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2,895	5,292	23.6	15.5	8.7	4.1	-10.8	-4.9	5.4	9.2	-11.5	-2.5	2.8	5.9	1.9	1.9	82.8
Austria	32	74	17.2	6.5	10.2	11.0	9.6	5.0	-17.1	-10.7	3.6	0.6	2.8	3.8	7.5	2.7	130.3
Belarus	C	6	*	*	*	*	*	*	*	3.6	-13.5	27.4	27.2	3.5	13.6	-22.5	*
Belgium	7	8	-1.5	0.2	1.6	3.8	-0.3	39.8	-12.7	1.0	20.7	-4.7	-23.7	11.7	-25.6	28.5	24.6
Bulgaria	612	133	-14.7	-13.0	-22.5	-14.3	-34.5	-70.4	-10.1	45.4	3.1	17.6	84.9	15.1	2.0	9.1	-78.2
Canada	6,182	7,595	-11.4	8.6	4.7	2.5	2.2	1.6	-0.2	-6.1	9.7	7.4	8.4	0.5	-2.3	1.5	22.9
Croatia	155	76	-79.6	-14.7	-15.2	-1.6	2.6	0.3	-18.6	0.4	-5.7	-2.5	15.6	13.5	9.9	3.8	-50.9
Czech Republic	149	32	-9.0	-11.3	-10.7	-8.2	-85.6	1.4	-10.3	33.3	30.5	2.1	2.1	-18.4	25.0	100.1	-78.5
Denmark	243	107	-17.9	1.2	3.1	3.5	-8.6	-10.2	-11.5	4.8	-13.4	-2.3	-7.3	5.4	5.8	-24.4	-56.0
Estonia	6	1	2.7	13.6	-6.9	155.0	35.5	77.1	-56.3	-91.3	334.5	-59.8	115.5	-20.7	-26.6	3.2	-77.1
European Community	16,561	21,871	-6.4	8.0	8.7	4.9	5.7	7.2	3.2	-4.3	-4.5	-0.8	3.5	5.4	1.2	1.4	32.1
Finland	385	306	-11.8	1.5	16.4	11.0	14.2	-0.9	-1.0	-2.0	-13.2	1.1	1.6	-0.9	-1.2	-5.8	-20.5
France	4,298	4,674	2.7	12.2	9.9	3.4	2.1	3.1	1.9	-6.9	-3.0	-8.2	0.2	-2.1	-4.8	-3.1	8.7
Germany	3,025	2,330	-7.1	-2.2	-1.5	-1.4	-3.2	1.5	0.2	-8.1	-6.7	-4.2	-1.2	5.3	5.8	2.0	-23.0
Greece	717	1,348	-13.4	6.0	7.3	13.6	1.7	19.6	9.7	-7.8	-14.2	12.6	3.6	-1.2	5.6	5.3	88.0
Hungary	1	IE, NO	*	*	*	*	*	*	*	-13.3	*	*	*	*	*	*	*
Iceland	32	22	-3.7	29.2	13.1	-6.3	5.0	-3.8	-12.1	-12.1	-12.3	2.7	6.0	11.5	8.2	-21.7	-30.5
Ireland	59	122	0.1	7.0	2.9	7.4	15.1	6.2	13.7	13.5	-3.8	-2.3	2.5	2.6	5.2	7.7	106.7
Italy	1,613	2,428	-1.3	6.4	12.0	8.1	8.8	15.3	2.0	-8.5	0.1	-0.4	-7.6	-1.2	3.9	6.0	50.5
Japan	7,162	10,876	8.4	12.3	-1.9	6.5	-0.3	-1.7	1.4	0.4	2.0	1.2	-3.6	1.3	3.5	-2.7	51.8
Latvia	0	2	3.1	100.0	50.1	33.3	25.0	20.0	16.7	14.3	11.0	7.0	54.2	-9.4	12.1	-46.0	2750.1
Liechtenstein	0	0.1	0.0	0.0	1.0	1.0	1.0	1.0	0.9	0.9	4.4	4.4	-28.4	35.1	60.7	-1.1	77.5
Lithuania	1	4	0.0	0.0	*	*	*	*	*	578.4	36.8	-71.2	52.2	-43.2	12.7	67.5	510.6
Luxembourg	0	1	51.9	7.7	6.7	1.7	-13.9	2.1	-4.6	-0.7	-7.3	16.3	-12.3	-1.0	-15.0	0.0	154.4
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	41	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Zealand	772	915	-15.2	2.7	-3.5	-2.4	3.8	-10.0	11.2	32.5	-6.4	12.4	3.0	-8.0	1.7	-18.2	18.6
Norway	679	908	2.6	7.5	11.1	2.8	2.4	14.9	-8.6	0.6	-14.1	4.5	-0.9	-15.9	8.2	5.6	33.7
Poland	121	81	203.6	-8.3	-10.1	-16.8	-11.8	-14.9	49.0	-5.0	23.6	-27.0	-7.0	11.1	28.0	7.8	-33.2
Portugal	235	390	-18.7	9.7	0.8	3.1	12.3	9.6	14.8	4.9	4.6	-4.4	12.7	2.9	-1.4	-0.8	65.6
Romania	26	54	-4.1	-14.2	-38.7	15.3	-41.7	28.6	-41.6	7.1	1.2	69.2	-5.3	7.5	-17.7	354.0	110.1
Russian Federation	18,500	10,225	-3.2	-4.3	-11.7	-2.6	-4.6	1.3	-6.6	8.0	1.3	3.4	4.9	-4.7	3.7	8.2	-44.7
Slovakia	8	14	-7.0	-0.2	17.2	-11.4	-8.1	1.4	3.6	-4.9	4.3	28.1	29.8	16.2	11.5	15.0	74.6
Slovenia	1	2	-43.0	-2.6	11.8	6.8	23.8	-3.1	0.1	-18.2	-0.5	2.7	-21.3	-11.1	-10.4	13.6	175.0
Spain	4,130	7,582	-15.1	14.8	15.8	7.3	14.7	9.8	6.0	-0.5	-7.0	4.8	10.7	16.6	5.1	5.2	83.6
Sweden	673	605	-8.9	1.4	-3.0	8.3	2.0	4.7	-7.9	-2.9	-4.0	-3.0	14.6	-0.7	-6.0	-2.9	-10.2
Switzerland	253	138	-7.4	-0.1	-3.3	-4.1	-3.8	-2.1	-5.4	-9.6	-11.7	-3.8	0.6	-13.5	-2.4	14.1	-45.2
Turkey	905	6,064	14.4	67.4	9.8	5.3	2.7	-12.0	7.9	8.6	12.7	10.2	16.2	-15.5	11.8	33.7	570.3
Ukraine	781	213	*	*	*	*	*	-6.4	-6.2	1.0	16.7	33.1	17.0	-5.1	12.0	8.1	-72.7
United Kingdom	1,244	2,140	-2.4	6.2	9.1	3.9	8.9	10.5	8.3	4.5	0.5	2.1	7.2	9.0	-3.8	-6.6	72.0
United States	144,938	170,661	-7.2	3.0	2.9	3.6	-1.7	9.4	3.3	-7.6	-5.8	1.2	1.8	8.9	-1.6	0.0	17.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.36

CO_2 emissions from aviation bunkers - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	4,339	9,261	4.0	9.5	7.8	3.6	10.6	0.5	0.9	6.3	-14.1	-11.5	1.1	14.4	17.7	15.1	113.4
Austria	886	2,176	12.2	12.0	10.5	4.0	3.5	-2.3	10.0	-2.6	-6.7	-5.7	18.7	13.6	4.5	6.2	145.6
Belarus	5,558	162	*	-35.5	-10.1	-6.5	-43.1	15.2	63.2	8.1	22.4	8.5	-3.4	-20.9	-22.7	0.7	-97.1
Belgium	3,096	3,787	-16.0	14.5	15.8	7.8	12.9	12.7	1.6	-9.5	-16.8	8.9	-2.5	-4.9	4.1	2.8	22.3
Bulgaria	749	528	-64.1	-13.1	-14.1	-9.4	14.7	-34.9	-15.5	45.8	1.5	21.5	-16.4	16.6	2.4	9.0	-29.6
Canada	6,878	9,475	-10.0	6.3	17.3	2.5	3.1	6.9	1.5	-10.4	0.7	-7.2	12.1	6.6	-0.3	-3.8	37.8
Croatia	343	243	-80.1	-0.8	-5.7	8.0	8.8	-4.5	-14.3	0.0	-3.8	-0.9	16.1	20.7	1.6	5.6	-29.3
Czech Republic	617	1,091	-10.1	0.9	8.6	1.3	8.7	-5.3	11.5	7.4	8.1	16.1	28.8	3.9	2.8	2.8	76.9
Denmark	1,736	2,701	-6.0	2.7	5.6	2.0	7.4	6.1	2.6	1.5	-13.6	4.0	14.3	5.2	0.3	4.6	55.6
Estonia	105	148	2.7	13.6	-6.8	32.0	-34.4	31.9	11.8	-17.8	12.1	1.3	54.4	69.1	-33.9	57.4	40.7
European Community	61,228	131,574	0.3	5.8	5.7	5.4	8.0	8.2	5.8	-1.3	-2.2	3.7	7.8	4.8	4.2	2.6	114.9
Finland	1,012	1,662	-5.9	8.2	7.1	3.9	2.5	7.0	-2.8	2.5	-1.1	3.3	15.1	0.6	11.2	15.4	64.3
France	8,861	17,425	-3.5	0.8	6.0	2.2	6.9	10.4	4.4	1.1	0.3	0.9	6.9	1.4	5.7	4.0	96.7
Germany	11,412	25,273	-0.6	4.8	5.8	4.7	3.8	8.2	6.9	-1.8	-0.2	2.2	9.9	9.1	5.0	3.8	121.5
Greece	2,448	2,923	-13.8	-6.2	-4.2	-3.3	5.0	12.3	-12.3	-7.1	0.0	30.2	2.8	-23.2	19.9	2.1	19.4
Hungary	431	718	-20.9	-1.6	6.8	-5.1	4.6	7.3	6.3	-15.1	7.2	2.6	3.0	8.8	-1.7	10.2	66.5
Iceland	220	512	1.1	10.5	15.0	7.6	15.8	7.5	12.2	-14.4	-11.3	7.5	14.1	11.0	18.6	2.3	132.9
Ireland	1,061	3,000	-3.5	-2.7	-8.2	21.0	2.6	18.9	16.0	20.4	6.6	-2.2	-5.6	16.0	15.7	5.5	182.9
Italy	4,161	10,430	20.0	6.0	7.2	2.0	8.7	9.7	8.4	-0.1	-8.7	16.6	1.1	5.7	7.9	6.1	150.7
Japan	13,189	18,359	5.5	12.3	9.0	3.8	4.5	-2.1	-0.2	-4.2	13.0	-3.6	3.9	0.7	-6.4	-8.0	39.2
Latvia	221	246	35.2	0.0	28.0	0.0	-9.4	0.0	-10.3	0.0	3.8	44.5	21.9	21.3	12.3	21.9	11.2
Liechtenstein	0	1	0.0	0.0	2.8	2.7	2.7	2.6	2.5	2.5	-10.3	10.1	-28.4	35.1	60.7	-1.1	77.5
Lithuania	418	203	19.9	2.6	-17.5	-6.1	-9.7	-7.1	-3.7	23.8	-14.7	12.8	12.1	33.9	13.7	25.3	-51.4
Luxembourg	402	1,328	3.9	13.6	8.7	22.0	12.7	17.5	-3.4	8.0	8.3	4.1	8.9	1.4	-6.2	7.4	230.5
Monaco	2	4	2.0	3.6	1.0	6.1	12.4	5.7	15.8	-7.6	-8.1	0.0	-10.1	8.2	5.8	9.8	59.7
Netherlands	4,540	11,097	6.7	16.1	6.5	8.2	9.4	2.8	-0.8	-2.2	4.6	-1.6	6.9	3.6	0.9	1.1	144.4
New Zealand	1,338	2,612	-4.5	9.2	4.4	4.3	-0.3	8.2	-6.1	3.8	3.4	28.7	9.0	0.7	0.4	-1.1	95.2
Norway	619	1,248	-9.7	-5.0	18.1	11.5	6.6	14.6	-3.1	-8.5	-11.5	1.0	13.3	27.5	15.2	0.3	101.4
Poland	1,106	1,293	6.3	4.3	2.8	-31.4	-1.6	-11.6	62.4	-5.8	21.9	-32.3	-1.8	13.5	33.4	4.1	16.9
Portugal	1,454	2,500	5.0	4.1	-1.0	3.2	5.7	10.3	2.9	-2.6	-5.0	10.0	7.7	3.9	5.8	5.6	71.9
Romania	156	417	7.5	30.8	-26.9	-17.1	-21.4	35.1	24.1	-5.4	-5.0	34.2	3.9	16.0	9.5	-6.8	168.2
Russian Federation	4,369	7,925	-4.6	7.3	8.4	-1.0	-2.7	-5.1	10.4	2.6	-0.5	4.7	15.3	-2.7	9.2	17.0	81.4
Slovakia	63	117	-7.0	0.6	18.0	-11.4	-7.8	0.9	1.6	-5.9	3.8	32.2	35.2	16.0	12.1	16.1	86.0
Slovenia	97	97	-65.3	6.8	-7.4	5.5	-8.0	19.4	15.0	12.9	2.9	-4.4	-23.8	7.2	13.8	32.4	-0.2
Spain	3,441	10,420	19.1	5.9	5.4	8.1	6.2	3.5	7.4	1.8	-3.8	5.0	10.9	-0.5	4.2	5.2	202.8
Sweden	1,335	2,195	-18.5	6.4	2.7	5.7	7.2	12.3	2.5	-2.9	-13.9	-2.8	13.1	9.3	3.6	9.4	64.4
Switzerland	3,066	3,919	-2.4	6.6	4.1	3.9	4.8	7.4	4.7	-5.6	-7.7	-10.3	-5.8	1.7	5.1	6.9	27.8
Turkey	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	2,368	854	-13.7	-30.1	-43.0	-3.0	-4.5	-8.4	-0.9	0.4	12.6	16.8	21.2	10.7	18.0	13.4	-63.9
United Kingdom	31,402	69,937	-1.4	6.3	6.0	6.3	11.3	8.7	10.3	-2.5	-1.9	2.4	9.5	7.9	1.6	-1.9	122.7
United States	46,378	52,740	6.7	-9.1	12.7	-1.9	9.3	-10.2	3.8	0.8	8.7	-12.0	9.3	-7.2	-3.3	-3.3	13.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.37

CO_2 emissions from navigation - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2,919	2,780	-11.2	19.8	3.5	-0.3	-12.6	-11.6	4.8	-10.5	-0.3	-0.3	7.9	2.9	12.3	12.3	-4.8
Austria	53	69	-9.2	9.6	2.0	-0.8	7.3	-2.0	7.7	3.7	9.3	-17.5	19.2	-2.9	-13.7	5.2	31.4
Belarus	NA, NE	17	*	*	*	*	*	*	*	*	*	*	*	*	29.0	5.0	*
Belgium	396	472	-2.8	4.9	2.4	1.9	2.5	4.3	8.9	2.3	2.0	2.6	3.5	-1.9	-16.0	5.7	19.2
Bulgaria	1,088	NA, NO	-93.8	2.1	143.0	-83.1	85.6	-13.8	*	*	*	*	*	*	*	*	*
Canada	4,693	5,741	4.4	-6.8	2.4	1.4	14.8	-3.9	2.8	8.6	-0.5	13.8	7.0	-2.9	-11.1	6.8	22.3
Croatia	133	108	-19.6	12.7	51.4	-20.7	-23.5	-3.1	-2.1	7.2	20.6	0.3	-18.0	9.3	4.1	3.9	-19.0
Czech Republic	56	16	-0.8	3.2	-16.8	-16.1	-2.6	-41.7	-28.3	60.0	-50.0	0.0	50.0	-16.7	20.0	-15.8	-72.0
Denmark	713	454	0.0	5.0	9.7	-2.3	-18.6	-17.2	-13.8	-3.1	-1.0	0.9	3.1	-0.8	-2.2	-1.6	-36.4
Estonia	578	54	17.6	-97.0	77.4	-13.8	-1.9	-7.8	39.7	-8.1	52.4	-22.1	0.5	-4.2	36.4	59.1	-90.6
European Community	19,493	21,646	1.4	-5.0	2.9	-0.8	4.2	-0.6	-8.0	1.8	-2.6	11.1	1.4	3.3	6.7	-2.3	11.0
Finland	441	584	0.6	-6.4	6.5	6.4	-2.1	4.5	0.4	-8.5	5.4	2.0	-2.2	1.6	7.0	2.6	32.2
France	1,874	3,188	-10.6	2.6	-7.4	-0.8	1.6	9.3	-10.2	16.3	13.9	6.5	5.2	2.9	5.1	9.4	70.1
Germany	2,050	531	1.0	-21.0	-8.1	-20.9	-8.4	-18.5	-7.2	-3.6	-12.8	4.3	12.8	14.9	-14.3	-37.9	-74.1
Greece	1,825	2,113	1.4	-4.8	-14.3	21.4	54.1	-1.2	-42.8	35.8	-9.7	-0.7	12.0	-4.6	10.0	-6.5	15.8
Hungary	113	3	-8.3	-58.1	17.9	71.7	-26.6	-48.3	6.7	-6.3	180.0	361.9	-85.8	-34.5	36.1	-14.3	-97.3
Iceland	59	60	-8.6	-35.7	17.6	-38.9	-23.4	-11.2	-30.6	62.2	-9.5	84.6	42.1	-53.6	127.1	18.3	1.4
Ireland	84	4	-0.1	-6.0	3.0	6.0	5.6	13.4	2.5	-7.1	-51.4	-5.2	4.2	0.8	-93.6	7.4	-95.1
Italy	5,420	4,970	7.4	-2.0	12.3	3.7	2.8	-4.4	-0.2	-2.0	-4.3	-0.5	-1.0	0.2	-3.7	-4.5	-8.3
Japan	13,731	12,411	4.2	3.4	5.9	6.3	-11.1	-0.4	1.6	-3.1	1.2	-3.0	-8.7	-0.1	-2.2	-1.6	-9.6
Latvia	17	5	16.6	4.5	3.0	-5.2	-0.3	4.5	4.4	0.2	-3.3	-1.2	-4.6	2.1	3.0	-88.6	-69.7
Liechtenstein	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	16	18	75.0	-2.0	46.9	0.5	15.0	-48.4	-3.8	17.2	13.9	11.2	28.7	-1.3	13.7	-6.6	15.3
Luxembourg	0	0	2.5	0.8	-6.2	19.9	-3.1	17.4	3.5	0.2	-1.1	2.0	3.1	18.3	-6.0	-6.3	94.8
Monaco	1	2	28.7	-5.1	-14.9	61.7	-19.7	36.4	40.1	32.4	-15.3	14.0	10.0	-1.1	-2.4	13.0	229.4
Netherlands	405	606	2.3	-5.7	-8.0	9.0	5.3	32.8	-2.1	-0.4	3.8	16.4	-7.6	-5.5	-3.3	0.0	49.6
New Zealand	244	300	-0.8	-9.4	-13.8	-25.5	-31.9	51.5	80.9	-12.9	14.2	2.1	-9.9	17.2	-21.4	-7.5	22.9
Norway	1,929	2,598	-0.2	4.2	5.5	10.4	4.8	9.2	-8.5	-10.3	-1.5	-0.4	2.0	3.2	-1.0	12.1	34.7
Poland	143	11	-43.8	57.6	2.0	-15.1	-21.9	44.4	-63.8	-43.8	16.9	-33.7	-35.8	24.2	32.1	-23.1	-92.6
Portugal	262	210	-1.5	-7.0	4.5	3.6	2.2	-10.0	-11.0	-3.4	4.9	0.7	2.1	-0.6	0.5	0.5	-19.8
Romania	257	89	36.2	-15.9	28.1	146.4	-13.4	35.0	-51.5	-89.4	144.6	-62.7	81.8	85.3	-13.1	122.1	-65.6
Russian Federation	16,019	1,257	-3.8	-21.5	-9.4	39.3	-33.1	99.2	138.1	-9.9	9.5	-11.3	-38.8	-2.1	-3.0	-22.4	-92.2
Slovakia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	IE, NA, NO	IE, NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	1,500	3,260	-0.9	-14.6	3.1	-20.2	0.4	34.0	4.5	13.3	11.5	3.8	1.9	3.9	9.9	18.0	117.4
Sweden	540	445	-24.8	18.9	-3.1	22.1	23.1	14.3	3.0	-1.4	-2.2	16.1	-12.2	-5.7	-9.8	-8.9	-17.5
Switzerland	112	116	-0.4	-0.4	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	3.4
Turkey	497	1,589	6.7	16.5	-3.7	-0.2	4.0	-9.2	-5.3	28.5	2.7	8.4	38.1	5.8	12.7	10.4	219.4
Ukraine	2,564	286	*	*	*	*	*	0.4	1.0	4.0	0.1	0.8	8.3	-3.7	11.8	4.8	-88.8
United Kingdom	4,112	4,931	4.5	-3.2	8.1	-3.6	-6.6	-9.2	-3.3	-17.5	-16.0	71.8	-1.8	13.7	31.7	-10.4	19.9
United States	39,505	45,022	-10.9	20.4	-5.7	-35.5	-23.0	3.2	128.6	-31.1	9.8	-36.0	27.6	12.8	10.2	4.0	14.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.38

CO_2 emissions from marine bunkers - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2,057	2,621	-9.6	33.0	1.6	-7.3	-12.0	10.5	13.0	-6.1	9.1	-2.5	0.8	-5.8	-0.2	-0.2	27.4
Austria	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	13,303	30,427	1.2	-8.8	22.7	10.8	4.5	-19.3	8.1	0.9	39.8	1.5	5.6	2.9	9.3	11.5	128.7
Bulgaria	969	166	0.5	3.8	-17.1	49.3	-6.4	-97.5	704.1	49.0	9.9	29.6	-15.9	-4.6	-3.2	-51.0	-82.9
Canada	3,003	2,112	3.6	3.8	-6.9	-1.2	24.0	-10.1	1.5	7.8	-24.3	-42.3	21.9	-2.0	-9.3	19.4	-29.7
Croatia	109	76	-34.3	-26.3	12.6	-35.9	10.0	-18.9	-13.2	56.7	-18.0	-6.2	6.4	8.1	-22.8	24.1	-30.3
Czech Republic	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	3,087	3,559	-10.5	4.8	-5.1	-8.3	0.2	-5.9	3.0	-15.8	-17.7	5.5	-18.7	3.6	30.2	3.7	15.3
Estonia	574	777	3.8	-30.8	4.6	10.8	6.2	6.7	-9.3	-4.8	18.5	-4.9	33.0	-20.1	77.6	16.0	35.2
European Community	102,819	167,186	-0.7	1.5	6.7	8.9	4.7	-4.6	5.5	3.8	3.2	1.3	6.2	5.0	6.4	0.9	62.6
Finland	1,845	1,490	-4.7	-20.8	13.2	8.7	28.2	7.1	15.3	-10.5	12.7	-0.6	-19.5	-1.7	10.0	-17.9	-19.2
France	8,137	9,530	3.7	3.1	4.9	10.0	10.1	1.6	3.4	-14.8	-3.0	8.3	13.6	-8.6	3.8	2.6	17.1
Germany	7,980	9,923	-15.6	0.9	-1.1	6.2	-5.2	1.9	5.2	1.9	7.0	10.2	2.4	-6.3	3.5	19.3	24.4
Greece	8,028	10,012	-8.2	7.5	-12.0	0.3	11.4	-11.0	15.5	-2.9	-10.3	2.4	0.9	-11.2	7.9	2.2	24.7
Hungary	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	99	207	-62.0	54.0	-13.9	20.0	18.7	-7.2	33.4	-31.8	39.1	-30.7	36.5	-43.4	23.7	50.8	109.0
Ireland	57	357	88.5	200.3	35.1	-4.4	4.6	8.9	-12.2	6.7	-10.7	18.7	-12.2	-30.4	22.4	-11.7	528.5
Italy	4,389	7,756	-18.4	10.9	-29.2	7.1	4.3	3.3	26.7	15.1	15.3	13.2	8.3	1.7	7.6	4.2	76.7
Japan	17,640	18,944	5.5	1.1	-41.1	30.2	6.5	-5.3	4.5	-13.6	4.9	9.9	4.7	12.9	-5.9	-0.4	7.4
Latvia	1,500	565	-70.1	-46.2	-35.3	-27.2	-79.0	-33.2	-20.0	2349.3	5.5	-8.7	7.9	28.7	-24.3	-9.5	-62.3
Liechtenstein	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	304	328	64.9	-7.1	-6.9	-53.9	-17.5	45.0	26.4	3.4	8.0	-3.6	8.5	24.3	-6.7	-17.1	8.0
Luxembourg	0	0	8.6	0.8	-6.2	-1.8	11.0	9.8	10.5	0.2	5.4	2.0	-3.3	34.1	5.6	-16.8	83.2
Monaco	4	17	29.3	-3.7	-8.3	39.4	-6.1	41.3	40.2	38.2	-15.9	17.5	13.3	-0.2	-2.4	15.6	307.9
Netherlands	34,357	51,385	2.8	1.3	2.2	6.2	1.1	3.4	6.3	10.1	-1.2	-6.7	8.7	15.0	3.8	-8.6	49.6
New Zealand	1,030	978	-11.4	-16.1	-4.8	3.7	-3.8	-14.8	-18.4	8.5	29.8	-18.8	-14.8	34.9	-2.6	2.2	-5.0
Norway	1,478	2,022	-15.3	22.2	10.0	21.0	-4.5	-6.6	-2.8	-0.3	-20.3	-0.6	-4.2	15.0	0.0	-10.7	36.8
Poland	1,648	791	-57.7	117.0	15.2	-31.6	75.1	104.7	-47.1	-8.7	3.5	5.4	-11.0	27.1	-8.3	-15.7	-52.0
Portugal	1,383	1,760	-0.8	5.3	5.5	-2.5	0.7	30.7	10.1	-30.4	5.9	23.5	16.8	-12.4	9.0	5.1	27.3
Romania	1,352	215	23.7	-22.3	48.5	128.8	-1.2	-52.0	-46.9	-87.8	183.9	-60.5	53.9	97.2	3.4	142.8	-84.1
Russian Federation	7,586	1,401	-6.9	-23.6	-1.5	-22.1	-0.6	-20.2	-2.9	10.7	-2.6	-3.2	4.0	-15.1	-3.3	-10.2	-81.5
Slovakia	65	33	-12.2	35.0	-14.8	-40.4	39.8	-78.9	*	*	7.9	-24.3	-61.1	-92.0	4371.5	6.9	-50.1
Slovenia	NA	157	*	*	*	*	*	*	*	*	*	*	*	*	*	68.3	*
Spain	11,528	26,850	6.0	2.8	46.0	23.3	5.3	-2.4	2.2	11.9	2.4	1.9	3.1	9.8	4.4	2.3	132.9
Sweden	2,228	7,418	18.5	-1.7	5.9	17.3	15.4	-2.2	-2.8	-2.4	-11.8	34.5	17.8	2.1	7.5	3.9	232.9
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	3,528	140	*	*	*	*	*	-19.2	-9.2	7.2	-40.5	-29.3	20.8	13.5	-2.1	-31.9	-96.0
United Kingdom	6,768	7,152	-3.1	7.0	9.4	12.1	9.3	-26.9	-11.7	11.8	-15.9	-3.5	14.1	0.1	15.5	1.5	5.7
United States	67,952	56,016	9.0	0.5	0.4	7.7	7.3	-19.8	-12.0	-5.8	6.6	8.1	20.8	1.8	1.6	0.1	-17.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.39

Fugitive emissions from fuels: coal mining and handling - CH_4 (2007)

	Key category	Share of national total	Methods and EF used[a]		Activity data					CH_4 IEF			
					CRF			IEA[b]		Underground mines		Surface mines	
			Methods	EF	Underground mines	Surface mines	Total	Total	Difference	Mining activities	Post-mining activities	Mining activities	Post-mining activities
		(%)			(Mt)				(%)	(kg/t)			
IPCC default Ef[b]										4.50-16.75	0.60-2.68	0.20-1.34	0-0.13
Australia	L, T	4.64	T2, T3	CS, D, PS	92.1	387.7	479.8	389.4	-18.8	8.30	0.37	1.02	NE
Austria		-	NA	NA	NO	NO	NO	0.0		NO	NO	NO	IE
Belarus		-	NA	NA	NE	NE	NE	2.5		NE	NE	NE	NE
Belgium		-			NO	NO	NO	0		NE, NO	NO	NE, NO	NE, NO
Bulgaria	L	1.72	T1	D	3.0	25.5	28.5	28.5	0.0	11.73	1.68	0.80	0.07
Canada	T	0.10	CS	CS	1.6	84.3	85.9	68.4	-20.3	2.81	IE	0.38	IE
Croatia		-	NA	NA	NO	NO	NO	0		NO	NO	NO	NO
Czech Republic	L, T	3.03	T1, T2	CS, D	12.9	45.7	58.6	62.6	6.9	12.26	1.64	0.77	0.07
Denmark[d]		-	NA	NA	NO	NO	NO	0		NO	NO	NO	NO
Estonia		-	NA	NA	NO	NO	NO	17.0		NA	NA	NA	NA
European Community	T	0.22	CR, CS, T1, T1b, T2, T3	R, CS, D, OTH, I	38.2	266.6	304.9	312.5	2.5	9.54	0.85	0.28	0.00
Finland		-	NA	NA	NO	NO	NO	4.5		NO	NO	NO	NO
France[e]	T	0.00	CR	CS, PS	NA	NA	NA	0		NA	NO	NA	NO
Germany	T	0.42	CS, T2	CS	21.3	180.4	201.7	204.6	1.4	8.23	0.58	0.01	IE
Greece	L	1.06	T1	D	NO	66.5	66.5	66.3	-0.2	NO	NO	1.01	IE
Hungary	T	0.03	D, T2	CS	1.5	8.4	9.8	9.8	0	0.67	0.07	NA	NA
Iceland		-	NA	NA	NO	NO	NO	0		NO	NO	NO	NO
Ireland		-	NA	NA	NE	NE	NE	2.8		NO	NO	NO	NO
Italy		0.01	T1	CR, CS, D	0.2	NO	0.2	0.2	0	10.05	0.30	NO	NA
Japan	T	0.00	T1, T3	D, OTH	0.6	0.7	1.3	0	-100.0	1.43	1.64	0.77	0.07
Latvia		-	NA	NA	NO	NO	NO	0.0		NO	NO	NO	NO
Liechtenstein[f]		-	NA	NA	NO	NO	NO			NO	NO	NO	NO
Lithuania		-	NA	NA	NO	NO	NO	0.1		NO	NO	NO	NO
Luxembourg		-	NA	NA	NO	NO	NO	0		NO	NO	NO	NO
Monaco[g]		-	NA	NA	NO	NO	NO			NO	NO	NO	NO
Netherlands		-	T1b	D	NA	NA	NA	0		NA	NA	NA	NA
New Zealand	T	0.35	T1	D	0.6	4.2	4.8	4.8	0.0	12.82	1.60	0.77	0.07
Norway		0.12	T2	CS	0.1	4.2	4.3	4.0	-7.2	7.16	IE	0.54	IE
Poland	L, T	2.14	CS, T1	CS	82.8	57.7	140.5	144.9	3.2	4.55	0.34	0.01	NE
Portugal		-	NA	NA	NO	NO	NO	0		NO	IE	NO	IE
Romania	L, T	1.76	T1	D	7.7	28.9	36.6	35.8	-2.3	11.73	1.64	0.77	0.07
Russian Federation	L	2.17	T2	CS	108.0	206.0	314.0	290.3	-7.5	13.00	0.00	4.29	IE
Slovakia		0.60	T2	CS	2.1	NO	2.1	2.1	2.3	6.05	0.60	NO	NO
Slovenia	L, T	1.23	T1	CS	4.5	NO	4.5	4.5	0.3	1.87	0.81	NO	NO
Spain	T	0.20	CR, CS, T2	CR, CS	9.1	10.9	20.0	17.2	-14.1	2.99	1.24	0.20	0.05
Sweden		-	T2, T3	CS	NO	NO	NO	0.5		NO	NO	NO	NO
Switzerland		-	NA	NA	NO	NO	NO	0		NO	NO	NO	NO
Turkey		0.49	T1	D	2.5	72.9	75.4	75.4	0.0	11.73	NA	0.80	NA
Ukraine	L, T	6.37	T1, T3	CS, D	76.5	0.2	76.8	59.3	-22.7	17.20	1.34	0.94	0.13
United Kingdom	L, T	0.41	T3	CS, OTH	7.7	8.9	16.5	16.5	0	20.90	1.16	0.34	NO
United States	L, T	0.81	T2, T3	CS	319.1	720.0	1039.2	1039.2	0.0	7.12	0.91	0.92	0.15

[a] Information on methods and emission factors in this table is presented as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.B.1 Solid fuels.

[b] Source: IEA [unpublished]. Data downloaded on 3 July 2008 from http://data.iea.org/IEASTORE/DEFAULT.ASP (restricted access to the public).

[c] Source of default emission factors: IPCC Guidelines, volume 3, pages 1.105–1.110 (Tier 1).

[d] IEA data for Denmark does not include Faroe Islands and Greenland.

[e] IEA data for France includes data for Monaco, but excludes data for the following overseas territories: Guadeloupe, Guyana, Martinique, New Caledonia, French Polynesia, Reunion and Saint Pierre Miquelon.

[f] No IEA data for Liechtenstein are available. These data are not included in the data of Switzerland.

[g] IEA data for Monaco are included in the data of France.

Table 1.40

Fugitive emissions from fuels: CH_4 emissions from coal mining and handling - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	756	1,195	3.5	1.2	-4.3	11.5	7.3	-6.9	5.8	-0.1	-3.1	0.4	2.8	6.4	10.0	9.4	58.1
Austria	1	IE, NO	-15.0	-5.2	-14.6	2.0	0.9	-0.2	10.3	-4.8	18.2	-18.4	-79.6	-97.4	8.3	*	*
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	14	NO	-38.8	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	95	62	-14.1	3.7	-2.7	-9.9	5.0	-12.1	1.9	1.1	1.4	-1.6	2.0	-10.2	7.3	10.0	-34.4
Canada	91	36	9.0	-3.0	3.1	-7.2	-16.8	-20.7	-12.2	4.3	-4.0	-7.8	-24.8	10.1	-2.3	7.8	-60.1
Croatia	2	NO	-10.9	-20.3	-19.3	-26.8	4.7	-69.9	*	*	*	*	*	*	*	*	*
Czech Republic	362	217	-11.3	-1.9	-2.9	-1.9	-4.0	-9.5	4.4	2.4	-3.0	-3.9	-2.7	-0.3	6.7	-7.9	-39.9
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	2,109	425	-2.4	2.6	-8.2	-3.9	-14.0	-2.2	-8.8	-12.8	-0.6	-10.6	-17.4	-12.7	-10.5	-18.0	-79.8
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	204	0	-7.2	-0.9	-24.0	-14.9	-3.0	-5.0	-3.6	-36.0	-10.7	-28.9	-90.8	-95.5	0.0	0.0	-99.9
Germany	877	190	-5.2	-1.7	-5.9	-1.2	-18.3	12.8	-10.0	-11.7	0.1	-7.7	-18.2	-12.0	-15.0	-17.6	-78.4
Greece	52	67	1.5	1.7	3.7	-1.6	3.5	1.9	3.0	3.8	6.2	-3.1	2.6	-0.9	-7.0	3.0	28.1
Hungary	44	1	-1.9	-13.1	5.9	-0.4	-5.3	-9.0	0.0	-18.0	14.7	-9.6	-55.7	-81.3	4.9	-1.3	-97.5
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NE, NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	3	2	-11.9	-35.6	-17.6	-39.5	-86.6	-20.8	4730.7	17.0	17.3	53.4	-60.8	-3.1	-77.9	652.4	-37.4
Japan	134	2	-9.6	-21.5	-3.5	-22.4	-13.3	-0.8	-11.2	-25.9	-79.2	-20.7	-29.1	10.6	-7.4	-24.4	-98.2
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	13	12	-32.6	32.3	3.5	-0.5	17.2	3.6	-3.9	4.8	-0.7	-6.2	-6.1	-1.9	47.1	-41.8	-3.8
Norway	3	3	6.4	-1.6	2.2	-12.5	3.9	28.4	9.2	-9.3	-7.7	53.6	-36.0	-27.6	-2.7	60.1	16.6
Poland	879	406	-5.8	0.3	-0.3	-1.4	-7.6	-0.2	-4.7	-9.5	-5.7	3.0	-1.1	-3.3	-3.9	-7.3	-53.8
Portugal	3	IE, NO	-3.2	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	304	128	-12.1	1.4	4.6	-19.0	-22.8	-13.0	19.3	8.2	-6.0	-0.4	-4.6	-3.4	4.2	3.1	-58.0
Russian Federation	3,202	2,263	-15.4	-4.1	-5.3	-6.3	-8.4	8.2	2.3	5.0	-6.4	7.4	3.3	4.1	6.4	0.4	-29.3
Slovakia	27	14	6.0	-0.7	1.3	1.8	1.8	-5.4	-2.3	-8.6	-2.4	-17.8	-6.4	-18.2	-9.3	-7.9	-50.3
Slovenia	17	12	-6.7	1.5	-4.5	7.2	-1.2	-6.7	-1.8	-7.7	13.4	3.1	-0.4	-5.6	-0.4	0.0	-29.1
Spain	85	41	-11.3	0.3	1.3	-0.7	-10.3	-7.2	0.9	-12.1	-3.3	-2.0	-5.1	-5.4	-1.1	-4.9	-51.8
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	68	87	-1.3	-7.9	4.6	5.1	2.8	-2.7	1.8	0.2	-10.9	-10.5	-4.9	20.6	9.0	13.6	28.4
Ukraine	2,638	1,322	-8.7	-18.8	-4.1	-1.7	0.7	-1.2	11.1	-15.8	12.1	-2.5	1.4	-2.7	1.7	-4.2	-49.9
United Kingdom	870	126	2.8	9.5	-7.2	-4.2	-14.7	-16.2	-12.5	-9.5	0.0	-14.0	-9.6	-17.1	-7.4	-30.1	-85.5
United States	4,003	2,744	-3.5	-1.6	-0.4	-0.6	0.6	-5.7	-3.9	-0.2	-6.0	0.1	2.3	-1.8	2.2	-1.3	-31.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.41a

Fugitive emissions from fuels: oil and natural gas - CH_4, CO_2 (2007)

	CH_4				CO_2			
	Key category	Share of national total (%)	Methods and EF used[a]		Key category	Share of national total (%)	Methods and EF used[a]	
			Methods	EF			Methods	EF
Australia	L, T	0.86	T1, T2	CS	L, T	1.14	T1, T2	CS
Austria		0.80	T1	CS, D	L, T	0.27	CS, T1	CS, PS
Belarus		2.00	CS	CS	L	-	NA	NA
Belgium		0.31				0.07		
Bulgaria		0.84	T1	D	L	-	NA	NA
Canada	L, T	6.44	CS	CS	L, T	2.13	CS	CS
Croatia	L, T	5.00	T1	D	L, T	2.05	CS	CS
Czech Republic		0.46	T1, T2	CS, D		0.00	T1	D
Denmark		0.19	CR, CS	CR, CS		0.54	CR	CS
Estonia		2.37	T1	D	L, T	-	NA	NA
European Community	L	0.56	CR, CS, OTH, T1, T1b, T2, T3	CR, CS, D, OTH, PS	L	0.42	CR, CS, D, T1, T2, T3	CS, D, PS
Finland	T	0.07	CS, T1, T2	CS, D, PS		0.17	CS	CS, D
France	L	0.35	CR	CS	T	0.69	CR	CS
Germany		0.71	CS, T1	CS, D	L	0.00	CS, T1	CS, D
Greece		0.12	T1	D		0.01	T1	D
Hungary		2.72	CS, D	CS, D, OTH	L, T	0.10	D	D
Iceland	L, T	-	NA	NA		3.38	CS	OTH
Ireland		0.09	CS	CS		-	NA	NA
Italy	T	0.90	T1, T2	CS, D	L, T	0.39	T1, T2	CS, D
Japan		0.03	CS, T1	CS, D, OTH		0.00	T1	D
Latvia		0.90	CS	PS	L	-	NA	NA
Liechtenstein		0.44	T3	CS		-	NA	NA
Lithuania		0.92	T1	D	L	0.05	T1	D
Luxembourg		0.39	T1	D		0.00	T1	D
Monaco		-	NA	NA		-	NA	NA
Netherlands	L, T	0.43	T1b, T2, T3	CS, D, PS	T	0.56	CS, T2, T3	CS, PS
New Zealand	L, T	0.59	D	CS, D		1.40	D	CS
Norway	L, T	1.16	T2	CS	L, T	6.65	T2	CS, PS
Poland		1.21	T1	CS, D	L, T	0.05	T1	CS, D
Portugal	L, T	0.86	CR, OTH	CR, OTH	L, T	1.09	D	D
Romania		5.35	T1	D	L, T	-	NA	NA
Russian Federation	L, T	14.67	T1, T1b, T2	CS, D	L, T	1.62	T1, T1b	D
Slovakia		1.59	T1	CS	L, T	0.00	T1	CS
Slovenia		0.15	T1	CS, D		-	NA	NA
Spain	L	0.13	CR, CS, T1	CR, CS		0.56	CS, T1, T2	CS, PS
Sweden	L, T	0.01	CS, T2	CS, PS		0.96	T2	CS, D
Switzerland		0.34	CS	CS	T	0.20	CS	CS
Turkey		-	NA	NA		-	NA	NA
Ukraine		5.43	T1	CS, D	L, T	0.01	T1	D
United Kingdom	L	0.85	T2, T3	CS, PS	L, T	0.80	T2, T3	CS, PS
United States	T	1.88	M	M	L, T	0.41	M	M

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 1.B.2 Oil and natural gas.

Table 1.41b

Fugitive emissions from fuels: oil and natural gas - oil - CH_4, CO_2 (2007)

	Oil																	
	Exploration				Production				Transport				Refining (R) / Storage (S)			
	CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data	
	Value		Unit	Description	Value		Unit	Description	Value		Unit	Description	Value		Unit	Description
IPCC default EF[b]					300 - 5,000		PJ	Oil produced	745.00		PJ	Oil tankered	20 - 250 (S) 90 - 1,400 (R)		PJ	Oil refined
Australia	NA	NA	Not specified	NA	611	NA	PJ	Crude oil and ORF produced	745	NA	PJ	Quantity shipped	1,603	282,414	PJ	Oil refined
Austria	IE	IE	Not specified	number of wells drilled	6,581,967	166,276,347	Mt	Oil throughput	IE	IE	Not specified	oil loaded in tankers	32	NA	Mt	Oil refined (SNAP 0401)
Belarus	NO	NO	Not specified	number of wells drilled	2,650	NA	PJ	PJ of oil produced	NO	NO	Not specified	PJ oil loaded in tankers	745	NA	PJ	(e.g. PJ oil refined)
Belgium	NO	NO	Not specified	(SPEC)	NO	NO	Not specified	(spec)	NO	NO	Not specified	(spec)	NA	NA	PJ	(e.g. PJ oil refined)
Bulgaria	NE	NE	Not specified	(e.g. number of wells drilled)	2,650	NE	PJ	(e.g. PJ of oil produced)	745	NE	PJ	(e.g. PJ oil loaded in tankers)	745	NE	PJ	(e.g. PJ oil refined)
Canada	IE	IE	Not specified	NA	2,158	1,811	10^3 m^3	Conventional Oil, Heavy Oil and Crude Oil Production	11	0	m^3	Convention, Heavy, and Crude Oil Production	10	2	TJ	Energy Consumption of Refineries
Croatia	NE	NO	Not specified		2,650	NO	PJ	(e.g. PJ of oil produced)	745	NO	PJ	(e.g. PJ oil loaded in tankers)	135	NO	PJ	(e.g. PJ oil refined)
Czech Republic	NA	NA	Not specified	(e.g. number of wells drilled)	5,287	NE	PJ	(e.g. PJ of oil produced)	NO	NO	Not specified	(e.g. PJ oil loaded in tankers)	1,150	IE	PJ	(e.g. PJ oil refined)
Denmark	IE	NA	Not specified	(e.g. number of wells drilled)	206	NA	10^3 m^3	Oil produced	IE	NA	10^3 m^3	Oil transported by pipelines	266	NA	kt	(e.g. PJ oil refined)
Estonia	NO	NO	PJ	Shale Oil	4,000	NO	PJ	(e.g. PJ of oil produced)	745	NO	PJ	(e.g. PJ oil loaded in tankers)	200	NO	PJ	(e.g. PJ oil refined)
European Community	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	ot specified	not estimated
Finland	NO	NO	Not specified	(e.g. number of wells drilled)	NO	NO	Not specified	(e.g. PJ of oil produced)	NO	NO	Not specified	kt oil loaded in tankers	37	102	kt	kt oil refined
France	NO	NO	Not specified		35,000	1,675,000	PJ	PJ Produced	NA	NA	PJ	PJ Loaded	11	812,873	PJ	PJ Refined
Germany	NE	95	Not specified	number of wells drilled	1	NE	t	oil produced	0	0	t	oil transported in pipelines	0	NO	t	oil refined
Greece	NO	NO	Not specified	(e.g. number of wells drilled)	1,450	270	10^3 m^3	Crude oil and NGL production	NA	NA	PJ	Crude oil imports	880	IE	PJ	Refinery input (crude oil and NGL)
Hungary	IE	IE	Not specified	(e.g. number of wells drilled)	49,497	NO	PJ	oil produced	6	IE	10^3 m^3	pipeline and tankers	1,400	NO	PJ	oil refined
Iceland	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		NO	NO	ot specified	
Ireland	NO	NO	Not specified	(e.g. number of wells drilled)	NO	NO	Not specified	(e.g. PJ of oil produced)	NO	NO	Not specified	(e.g. PJ oil loaded in tankers)	NO	NE	ot specified	(e.g. PJ oil refined)
Italy	IE	IE	Not specified	number of wells drilled	1,683	56,082	Gg	(Gg of oil produced)	NA	NA	Not specified	oil loaded in tankers	24	15,336	Gg	(Gg oil refined)
Japan	135	2,850	Not specified	number of wells drilled	1	0	10^3 l	oil produced	0	0	10^3 l	Oil & Condensate produced	91	NE	PJ	oil refined
Latvia	NO	NO	Not specified	(e.g. number of wells drilled)	NO	NO	PJ	(e.g. PJ of oil produced)	NO	NO	PJ	(e.g. PJ oil loaded in tankers)	NO	NO	PJ	(e.g. PJ oil refined)
Liechtenstein	NO	NO	Not specified	number of wells drilled	NO	NO	Not specified	oil produced	NO	NO	Not specified	oil loaded in tankers	NO	NO	ot specified	oil refined
Lithuania	270	5,700	Not specified	(wells drilled)	1,450	271	10^3 m^3	(conventional oil production)	5	0	10^3 m^3	oil transported by pipelines	745	NO	PJ	(e.g. PJ oil refined)
Luxembourg	NO	NO	Not specified	number of wells drilled	NO	NO	Not specified	oil produced	NO	NO	Not specified	oil loaded in tankers	NO	NO	ot specified	oil refined
Monaco	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		NO	NO	ot specified	
Netherlands	IE	IE	Not specified	number of wells drilled/tested	IE	IE	10^6 m^3	Refery input: crude oil, NGL	NE	NE	Not specified	(e.g. PJ oil loaded in tankers)	159	430,712	PJ	Refery input: crude oil, NGL
New Zealand	NE	NE	Not specified	(e.g. number of wells drilled)	NE	NE	Not specified	(e.g. PJ of oil produced)	1	NE	TJ	(e.g. PJ oil loaded in tankers)	1	NE	TJ	(e.g. PJ oil refined)
Norway	IE	IE	kg	number of wells drilled	IE	IE	Not specified	oil produced	NA	NA	PJ	Oil loaded	3,927	1,508,206	PJ	Oil refined
Poland	NA	NA	Not specified	NE	61,800	6,315,000	PJ	Production	6	1	Gg	oil ltransported by pipeline	745	NA	PJ	oil refined
Portugal	31	233	Not specified		NO	NO	Not specified		60,000	1,100,000	Mt	Consumption of crude	21	9,232	Mt	Production (crude and other materials)
Romania	NE	NE	Not specified	number of wells drilled	300	NE	PJ	(e.g. PJ of oil produced)	745	NE	PJ	(e.g. PJ oil loaded in tankers)	110	NE	PJ	(e.g. PJ oil refined)
Russian Federation	64	0	Not specified	number of wells drilled	1,690,370	314,760	Mt	oil produced	6,301	563	Mt	(oil transported in pipelines)	36,856	NE	Mt	oil refined
Slovakia	NO	NO	Not specified	(e.g. number of wells drilled)	36,145	153	PJ	production	130	1	PJ	transport of crude oil (transfer)	130	1	PJ	refinin/storage
Slovenia	NO	NO	Not specified	(e.g. number of wells drilled)	NO	NO	TJ	(e.g. PJ of oil produced)	NO	NO	Not specified	(e.g. PJ oil loaded in tankers)	NO	NO	TJ	(e.g. PJ oil refined)
Spain	NE	NA	Not specified		9,000	NA	Tg	Crude oil produced	27,000	NA	Tg	Transport of crude oil	975	32,162,993	Tg	Oil refined
Sweden	NO	NO	Not specified		NO	NO	Not specified		NE	NE	Not specified	(e.g. PJ oil loaded in tankers)	13,571	28,570,549	Mt	(e.g. PJ oil refined)
Switzerland	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		1,042	31,387	PJ	Crude oil used
Turkey	NE	NE	Not specified		NE	NE	Not specified		NE	NE	Not specified		NE	NE	ot specified	
Ukraine	NE	NE	Not specified	number of wells drilled	4,500	NE	PJ	Oil and natural gas liquids produced	5	0	10^3 m^3	Crude oil transported by pipeline	1,200	NE	PJ	Oil refined
United Kingdom	33,270	2,133,456	Not specified	Wells drilled	620	127,984	PJ	Oil and gas produced.	114	NO	Gg	Offshore loading of oil only	465	NO	PJ	Oil refinery throughput
United States	IE	NA	Not specified	IE	724,101	155,259	10^6 Bbl(oil US)	(e.g. Domestic Oil Production)	919	NA	10^6 Bbl(oil US)	Refinery Feed	4,798	NA	Bbl(oil US)	Refinery Feed

[a] The units of the implied emission factors (IEF) vary from Party to Party depending on the unit of the activity data used. The unit of the IEF is kg/unit of activity data.

[b] Source of emissions factors: IPCC Guidelines, vol. 3, pages 1.119–1.121. For updated detailed emission factors on CH_4 and implied emissions factors on CO_2 and N_2O also look at the IPCC good practice guidance, table 2.16, pages 2.86–2.87.

Table 1.41c

Fugitive emissions from fuels: oil and natural gas - natural gas - CH_4, CO_2 (2007)

	Natural Gas															
	Production (P) / Processing (Pr)				Transmission				Distribution				Other leakage			
	CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data		CH_4 IEF[a]	CO_2 IEF	Activity data	
	Value		Unit	Description	Value		Unit	Description	Value		Unit	Description	Value		Unit	Description
IPCC default EF[b]	**15000-314000 (P) 288000-628000 (Pr)**		**PJ**	**Gas produced**	**57,000 - 628,000**		**PJ**	**Gas consumed/produced**	**57,000 - 628,000**		**PJ**	**Gas consumed/produced**	**0 - 384,000**		**PJ**	**Gas consumed**
Australia	623	IE	PJ	Gas produced	9,600	550	PJ	Gas transmitted	219,045	12,953	PJ	Utility sales	NE	NE	Not specified	NE
Austria	IE	51,407	10^6 m^3	Gas throughput (a)	2,900	25	km	Pipelines length (km)	650	NA	km	Distribution network length	NO	NO	PJ	(e.g. PJ gas consumed)
Belarus	288,000	NA	PJ	PJ gas produced	20,715	NA	PJ	PJ gas consumed	IE	NA	Not specified	PJ gas consumed	84,431	NA	PJ	PJ gas consumed
Belgium	NO	NO	Not specified	(speci	NA	NA	PJ	(e.g. PJ gas consumed)	26,504	2,861	PJ	PJ gas consumed	NO	NO	Not specified	(speci)
Bulgaria	83,682	NE	PJ	(e.g. PJ gas produced)	11,038	NE	PJ	(e.g. PJ gas consumed)	9,563	NE	PJ	(e.g. PJ gas consumed)	269,414	NE	PJ	(e.g. PJ gas consumed)
Canada	1,362	44	10^6 m^3	Gross New Production of Natural Gas (also includes oil and Gas Well Drilling and Servicing)	3,247	24	km	Pipeline Distance	744	NE	km	Pipeline Distance - leakage	968	190	Not specified	
Croatia	458,000	6,642,030	PJ	(e.g. PJ gas produced)	IE	NO	PJ	(e.g. PJ gas consumed)	IE	NO	Not specified	(e.g. PJ gas consumed)	253,552	NO	Not specified	(e.g. PJ gas consumed)
Czech Republic	39,354	NO	PJ	(e.g. PJ gas produced)	7,786	NO	PJ	(e.g. PJ gas consumed)	130,369	NO	PJ	(e.g. PJ gas consumed)	14,762	NO	PJ	(e.g. PJ gas consumed)
Denmark	IE	NA	10^6 m^3	Gas produced	12	NA	10^6 m^3	Gas transmission	29	NA	10^6 m^3	Gas distributed	NO	NO	Not specified	Incl. in transmission
Estonia	NO	NO	PJ	(e.g. PJ gas produced)	458,000	NO	PJ	(e.g. PJ gas consumed)	NO	NO	PJ	Natural Gas	271,054	NO	PJ	
European Community	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	IE, NA, NE, NO	Not specified	
Finland	NO	NO	Not specified	(e.g. PJ gas produced)	2,109	5,800	PJ	PJ gas consumed	218,895	601,961	PJ	PJ gas distributed via local networks	NO	NO	Not specified	t of natural gas released from pipelines
France	56,312	NA	PJ	PJ Production	NA	NA	PJ	PJ Consumed	NO	NO	Not specified		NO	NO	Not specified	
Germany	89	0	TJ	production and processing	12	NO	TJ	pipelines and containers	434	NO	km	distribution net	42	NO	TJ	gas consumed
Greece	305	99	10^6 m^3	Natural gas production	2,519	16	km	Length of transmission pipeline	615	NA	km	Length of distribution mains	IE	IE	Not specified	(e.g. PJ gas consumed)
Hungary	138,038	NO	PJ	gas produced	33,434	NO	PJ	gas consumed	520	NO	km	Pipeline, length	NO	NO	Not specified	(e.g. PJ gas consumed)
Iceland	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified	
Ireland	51,172	NO	PJ	PJ of Gas produced	IE	IE	Not specified	(e.g. PJ gas consumed)	30,906	NO	PJ	PJ of gas consumed	NO	NO	PJ	(e.g. PJ gas consumed)
Italy	1,611	1,895	10^6 m^3	(Mm3 gas produced)	449	NA	10^6 m^3	(Mm3 gas transported)	5,291	NA	10^6 m^3	(Mm3 gas transported)	IE	NA	Not specified	
Japan	4	0	10^3 m^3	gas produced	363	NA	km	Pipelines length	469	NA	PJ	LNG & NG Consumption with Town Gas Production	IE	NA	Not specified	not estimated
Latvia	NO	NO	TJ	(e.g. PJ gas produced)	C	NO	TJ	(e.g. PJ gas consumed)	C	NO	TJ	(e.g. PJ gas consumed)	C	NO	Not specified	
Liechtenstein	NO	NO	Not specified	gas produced	NO	NO	Not specified	gas consumed	472	NO	TJ	gas consumed	IE	NO	Not specified	
Lithuania	NO	NO	PJ	(e.g. PJ gas produced)	IE	IE	km	gas consumed	IE	IE	kha	distribution mains	NE	NE	PJ	(e.g. PJ gas consumed)
Luxembourg	NO	NO	Not specified	gas produced	42,983	1,411	PJ	gas consumed	IE	IE	Not specified	gas consumed	IE	IE	Not specified	
Monaco	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified	
Netherlands	IE	NO	PJ	gas produced	1,996	NO	PJ	gas transported	105,972	3,260	10^3 km	natural gas distribution network	IE	NE	Not specified	
New Zealand	NE	NE	Not specified	(e.g. PJ gas produced)	IE	IE	TJ	(e.g. PJ gas consumed)	245	28	TJ	(e.g. PJ gas consumed)	NE	NE	Not specified	(e.g. PJ gas consumed)
Norway	IE	IE	Not specified	gas produced	IE	IE	Not specified	gas consumed	IE	IE	Not specified	gas consumed	NE, NO	NE, NO	Not specified	
Poland	96,379	22,886	PJ	Production	53,213	522	PJ	gas consumed	310,710	1,167	PJ	gas consumed	1,291	10	Not specified	NE
Portugal	NO	NO	Not specified		6,433	17,718	Gg	gas consumed	IE	IE	Gg	gas consumed	IE	IE	Not specified	
Romania	288,000	NE	PJ	(e.g. PJ gas produced)	364,300	NE	PJ	(e.g. PJ gas consumed)	IE	IE	Not specified	gas consumed	163,227	NE	PJ	(e.g. PJ gas consumed)
Russian Federation	3,629	122	10^6 m^3	gas produced	8,904	5	kt	(total gas transmission)	20,690	NE	10^6 m^3	gas consumed	8,813	NE	Not specified	gas consumed
Slovakia	758,868	3,204	PJ	production	2,900	12	km	transfer	710	3	km	distribution	IE	IE	PJ	consumed
Slovenia	39	NA	TJ	PJ gas produced	233	NE	km	lenght of transport pipelines	200	NA	km	lenght of pipelines	1	NA, NE	Not specified	(e.g. PJ gas consumed)
Spain	70,889	NE	PJ	PJ gas produced (NCV)	481	4	PJ	PJ gas (NCV)	17,001	126	PJ	PJ gas consumed (NCV)	NE	NE	Not specified	(e.g. PJ gas consumed)
Sweden	NO	NO	Not specified		NO	NO	TJ	Pressure levelling losses	NO	NO	Not specified	(e.g. PJ gas consumed)	NO	NO	Not specified	
Switzerland	NO	NO	Not specified		374	2,273	km	See documentation box	IE	IE	Not specified		IE	IE	Not specified	
Turkey	NE	NE	Not specified		NE	NE	Not specified		NE	NE	Not specified		NE	NE	Not specified	
Ukraine	2,900	95	10^6 m^3	Natural Gas Produced	5,838,941	NO	10^3 km	Length of natural gas transmission pipeline	820,000	NO	10^3 km	Length of natural gas distribution network	245,180	NO	PJ	Residential and Non-residential Gas Consumed
United Kingdom	IE	NE	Not specified	(e.g. PJ gas produced)	IE	NE	Not specified	(e.g. PJ gas consumed)	64,972	NE	PJ	Gas consumed	NE	NE	Not specified	(e.g. PJ gas consumed)
United States	86,142	1,120,202	10^9 ft^3	(e.g. Total Natural Gas Produced)	83,535	2,645	10^9 ft^3	(e.g. Total Natural Gas Consumed)	61,120	1,798	10^9 ft^3	(e.g. Total Natural Gas Consumed)	IE	IE	Not specified	(e.g. PJ gas consumed)

[a] The units of the implied emission factors (IEF) vary from Party to Party depending on the unit of the activity data used. The unit of the IEF is kg/unit of activity data.

[b] Source of emissions factors: IPCC Guidelines, vol. 3, pages 1.119–1.121. For updated detailed emission factors on CH_4 and implied emissions factors on CO_2 and N_2O also look at the IPCC good practice guidance, table 2.16, pages 2.86–2.87.

Table 1.41d

Fugitive emissions from fuels: oil and natural gas - venting and flaring - CH_4, CO_2 (2007)

	Venting and flaring																					
	Oil							Gas								Combined						
	Venting[a]			Flaring[a]				Venting[a]			Flaring[a]					Venting[a]			Flaring[a]			
	CH_4 IEF[b]	Activity data		CH_4 IEF[b]	CO_2 IEF	Activity data		CH_4 IEF[b]	Activity data		CH_4 IEF[b]	CO_2 IEF	Activity data			CH_4 IEF[b]	Activity data		CH_4 IEF[b]	CO_2 IEF	Activity data	
	value	unit	Description	value		unit	Description	value	unit	Description		value	unit	Description		value	unit	Description	value		unit	Description
IPCC default EF[c]	1,000 -3,000	PJ	Oil produced	1,000 -3,000		PJ	Oil produced	6,000 -209,000	PJ	Gas produced	6,000 - 209,000		PJ	Gas produced		3,000 -14,000	PJ	Oil produced	3,000 -14,000		PJ	Oil and gas produced
Australia	NA	Not specified	NA	IE	IE	Not specified	IE	17,568	PJ	PJ gas produced	IE	IE	Not specified	IE		NA	Not specified	NA	10,652	815,112	PJ	PJ gas and oil produced
Austria	IE	Mt	oil produced	IE	IE	PJ	Oil consumed	IE	PJ	gas produced	IE	IE	PJ	gas consumed		IE	Mt	Oil Produced	IE	IE	Mt	oil consumed
Belarus	NE	Not specified	PJ oil produced	NE	NE	Not specified	PJ gas consumption	6,000	Not specified	PJ gas produced	IE	NA	Not specified	PJ gas consumption		NE	Not specified		NE	NE	Not specified	
Belgium	NO	Not specified	(spec)	NO	NO	Not specified	(spec)	NO	Not specified	(spec)	NO	NO	Not specified	(spec)		NO	Not specified	(spec)	IE	NE	Not specified	(spec)
Bulgaria	2,000	PJ	(e.g. PJ oil produced)	9	NE	PJ	(e.g. PJ gas consumption)	18,000	PJ	(e.g. PJ gas produced)	329	NE	PJ	(e.g. PJ gas consumption)		NE	Not specified		NE	NE	Not specified	
Canada	6,512	m^3	Conventional oil, Heavy Oil, and Crude Oil Production	776	1,084,448	10^6 m^3	Flared Gas and Flare	1,035	10^6 m^3	gross new production of natural Gas	93	141,524	10^6 m^3	Flared Gas and Flare		262,992,444	10^6 m^3	Number of Wells Drilled (Number)	30,819,046	47,558,421,736	10^6 m^3	Number of Wells Drilled (Number)
Croatia	NO	PJ	(e.g. PJ oil produced)	IE	NO	Not specified	(e.g. PJ gas consumption)	18,000	PJ	(e.g. PJ gas produced)	IE	NO	Not specified	(e.g. PJ gas consumption)		NO	Not specified		NO	NO	Not specified	
Czech Republic	20	Not specified	(e.g. PJ oil produced)	1	1,141	Not specified	(e.g. PJ gas consumption)	NA	Not specified	(e.g. PJ gas produced)	22	35,242	Not specified	(e.g. PJ gas consumption)		NA	Not specified		NA	NA	Not specified	
Denmark	NO	Not specified	(e.g. PJ oil produced)	0	57	GJ	Refinergy gas consumption	IE	Not specified	Incl. in transmission	0	57	GJ	Gas consumption		NO	Not specified		NO	NO	Not specified	
Estonia	4,000	PJ	(e.g. PJ oil produced)	NA	NO	PJ	Shale Oil	NO	PJ	(e.g. PJ gas produced)	NA	NA	PJ	Natural Gas		NO	PJ	Natural Gas	NO	NO	PJ	Oil and Gas
European Community	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	Not specified	not estimated	NE	NE	Not specified	not estimated		NE	Not specified	not estimated	NE	NE	Not specified	not estimated
Finland	NO	kt	kt oil refined	0	6,630	kt	kt oil refined	NO	Not specified	(e.g. PJ gas produced)	NO	NA	Not specified	(e.g. PJ gas consumption)		NO	Not specified		NO	NO	Not specified	
France	NO	Not specified		2	24,102	PJ	PJ Consumed	NO	Not specified		IE	IE	Gg	gas consumed		NO	Not specified		NA	128,485,999	PJ	PJ Consumed
Germany	NE	m^3		IE	NE	Gg		NE	m^3	vented natural gas	IE	NE	10^3 m^3	flared natural gas		NE	m^3		IE	NE	m^3	
Greece	7,416	10^3 m^3	Crude oil and NGL production	135	67,000	10^3 m^3	Crude oil and NGL production	320,000	10^6 m^3	Sour Natural gas production	15	2,457	10^6 m^3	Natural gas production		NO	Not specified		NO	NO	Not specified	
Hungary	2,000	PJ	PJ oil produced	687	1,842,402	PJ	Oil production	24,000	PJ	PJ gas produced	29	4,734	10^6 m^3	gas production		NA	Not specified		NA	NA	Not specified	Oil and gas produced, oil refining
Iceland	NO	Not specified		NO	NO	Not specified		NO	Not specified		NO	NO	Not specified			NO	Not specified		NO	NO	Not specified	
Ireland	NO	Not specified	(e.g. PJ oil produced)	NO	NO	Not specified	(e.g. PJ gas consumption)	IE	Not specified	(e.g. PJ gas consumed)	NO	NO	PJ	quantity of gas flared		NO	Not specified		NO	NO	Not specified	
Italy	IE	Not specified		6,175	2,541,500	10^6 m^3	(Mm3 gas consumption)	IE	Not specified		IE	IE	10^3 m^3	gas produced		NO	Not specified		NO	NO	Not specified	
Japan	1	10^3 t	oil produced	12	6,009	10^3 t	oil produced	IE	km	pipeline length	0	4	10^3 m^3	gas produced		IE	Not specified	included elsewhere	IE	IE	Not specified	included elsewhere
Latvia	NO	PJ	(e.g. PJ oil produced)	NO	NO	PJ	(e.g. PJ gas consumption)	NO	PJ	(e.g. PJ gas produced)	NO	NO	PJ	(e.g. PJ gas consumption)		NO	PJ		NO	NO	PJ	
Liechtenstein	NO	Not specified	oil produced	NO	NO	Not specified	gas consumed	NO	Not specified	gas produced	NO	NO	Not specified	gas consumed		NO	Not specified	gas produced	NO	NO	Not specified	Gas/Oil Produced
Lithuania	1,381	10^3 m^3	(conventional oil production and oil transported by tanker truck)	138	66,997	10^3 m^3	(conventional oil production	IE	km	(transmission pipeline	NO	NO	PJ	(e.g. PJ gas consumption)		NO	PJ		NO	NO	PJ	
Luxembourg	NO	Not specified	oil produced	NO	NO	Not specified	gas consumed	NO	Not specified	gas produced	NO	NO	Not specified	gas consumed		NO	Not specified	combined oil and gas production	NO	NO	Not specified	combined oil and gas consumption
Monaco	NO	Not specified		NO	NO	Not specified		NO	Not specified		NO	NO	Not specified			NO	Not specified		NO	NO	Not specified	
Netherlands	IE	10^6 m^3	oil produced	IE	IE	10^6 m^3	oil produced	IE	PJ	gas produced	IE	IE	PJ	gas produced		IE	Not specified		IE	IE	Not specified	(specify)
New Zealand	IE	Not specified	(e.g. PJ oil produced)	IE	IE	Not specified	(e.g. PJ gas consumption)	IE	Not specified	(e.g. PJ gas produced)	IE	IE	TJ	(e.g. PJ gas consumption)		IE	Not specified		412	184,719	TJ	venting & flaring from oil & gas
Norway	IE	Not specified	(e.g. PJ oil produced)	NE	NA	PJ	Oil flared	IE	Not specified	(e.g. PJ gas produced)	97,762	55,261,266	PJ	Gas flared		1,603	PJ	Oil and gas produced	IE	IE	Not specified	
Poland	IE	10^3 m^3	oil produced	IE	IE	10^3 m^3	oil produced	IE	Not specified	NE	IE	IE	10^3 m^3	gas production		NO	Not specified	NE	NO	NO	Not specified	NE
Portugal	7	Mt	Oil refined	IE	IE	Not specified		NO	Not specified		IE	IE	Not specified			NO	Not specified		IE	IE	Not specified	
Romania	NE	PJ	(e.g. PJ oil produced)	NE	NE	Not specified	(e.g. PJ gas consumption)	18,000	PJ	(e.g. PJ gas produced)	NE	NE	Not specified	(e.g. PJ gas consumption)		NE	Not specified	(PJ gas and oil produced)	NE	NE	Not specified	(PJ gas and oil combined comsumption)
Russian Federation	1,610	kt	oil produced	IE	IE	kt	oil production	IE	km	length of pipelines	23	3,764	10^6 m^3	gas production		NE	Not specified	(oil produced)	12,000	2,000,000	10^6 m^3	(Assotiated gas flaring)
Slovakia	6,506	PJ	production	6,506	27	PJ	production	1,200	km	transfer	32,432	137	PJ	production		NO	Not specified		NO	NO	Not specified	
Slovenia	NO	Not specified	(e.g. PJ oil produced)	NO	NO	Not specified	(e.g. PJ gas consumption)	NO	Not specified	(e.g. PJ gas produced)	NO	NO	Not specified	(e.g. PJ gas consumption)		NO	Not specified		NO	NO	Not specified	
Spain	NA	Not specified	(e.g. PJ oil produced)	500	8,110,564	Tg	(e.g. PJ gas consumption)	17,242,495	PJ	gas produced	5,499	55,995,696	PJ	(e.g. PJ gas consumption)		NA	Not specified		NE	NE	Not specified	
Sweden	NE	Not specified	(e.g. PJ oil produced)	1	58,109	TJ	Refinery gas other liquid fuels	NE	Not specified	(e.g. PJ gas produced)	NE	NE	Not specified	(e.g. PJ gas consumption)		NE	Not specified		NA	NA	Not specified	
Switzerland	IE	Not specified		81	192,130	PJ	Crude oil used	IE	Not specified		NO	NO	Not specified			NO	Not specified	(specify)	NO	NO	Not specified	
Turkey	NE	Not specified		NE	NE	Not specified		NE	Not specified		NE	NE	Not specified			NE	Not specified		NE	NE	Not specified	
Ukraine	NE	Not specified	(e.g. PJ oil produced)	IE	IE	Not specified	(e.g. PJ gas consumption)	NE	Not specified	(e.g. PJ gas produced)	11	1,800	10^6 m^3	Natural Gas Produced		NE	Not specified	—	NE	NE	Not specified	—
United Kingdom	IE	Not specified	(e.g. PJ oil produced)	IE	IE	Not specified	(e.g. PJ gas consumption)	IE	Not specified	(e.g. PJ gas produced)	IE	IE	Not specified	(e.g. PJ gas consumption)		NA	Not specified		396,659,872	107,118,323,487	PJ	Gas flared
United States	IE	Not specified	oil produced	IE	IE	Not specified	(e.g. Total Natural Gas Consumption)	IE	Not specified	(e.g. Total Natural Gas Produced)	IE	IE	Not specified	(e.g. Total Natural Gas Consumption)		IE	Not specified		IE	54,706,667	10^12 Btu	Gas Flared

[a] The units of the implied emission factors (IEF) vary from Party to Party depending on the unit of the activity data used. The unit of the IEF is kg/unit of activity data.

[b] Source of emissions factors: IPCC Guidelines, vol. 3, pages 1.119–1.121. For updated detailed emission factors on CH_4 and implied emissions factors on CO_2 and N_2O also look at the IPCC good practice guidance, table 2.16, pages 2.86–2.87.

Table 1.42a

Fugitive emissions from fuels: CO_2 emissions from oil and natural gas - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	5,982	6,160	-3.9	3.2	-6.9	-3.3	4.3	8.3	12.6	6.6	-6.5	-10.5	-4.4	-3.1	4.2	6.4	3.0
Austria	102	237	8.8	-0.4	-44.1	69.7	17.7	20.2	-3.5	11.1	-8.6	39.5	-9.9	-2.4	13.2	2.2	132.3
Belarus	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	85	91	-1.5	0.3	9.8	0.9	7.2	9.9	49.9	-10.6	3.6	-27.0	-8.0	1.9	24.9	-30.9	7.0
Bulgaria	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	10,559	15,946	4.3	5.8	6.3	1.9	10.5	-10.0	2.1	-2.3	1.3	3.5	-3.1	-2.9	5.0	-1.7	51.0
Croatia	416	665	9.6	15.2	-7.6	-6.9	-1.8	-10.8	20.5	8.6	-3.2	2.8	3.8	-2.7	-4.1	0.3	59.9
Czech Republic	IE, NA, NE, NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	263	367	96.6	-22.4	9.9	41.2	-25.3	113.0	-33.9	6.5	-15.6	2.8	10.7	-27.5	-3.4	-13.7	39.2
Estonia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	17,352	16,973	1.3	3.1	1.0	-4.8	-3.0	-7.7	-0.8	0.8	0.6	0.2	-3.2	2.9	0.4	-0.5	-2.2
Finland	220	135	-4.9	3.3	-9.8	29.1	-28.0	-10.3	-0.2	-7.5	4.7	-4.1	-5.0	11.2	-9.6	18.5	-38.5
France	4,508	3,717	6.3	-12.9	1.4	5.1	-2.2	-3.7	1.7	2.9	-6.8	-1.4	2.4	-2.3	5.3	-10.6	-17.6
Germany	0	0	0.7	1.6	0.5	3.4	-0.1	0.4	-0.3	0.1	0.3	-0.8	0.3	10.3	2.1	-4.7	14.3
Greece	70	7	1.0	-14.4	12.6	-10.2	-30.6	-94.7	1573.0	-29.4	4.7	-34.9	-1.3	-17.5	-3.7	-23.6	-90.1
Hungary	196	77	-1.6	2.3	-9.6	-9.2	-7.8	-3.9	-7.7	-10.0	-1.5	6.6	-4.8	-10.5	-3.8	-5.8	-60.7
Iceland	67	152	0.0	22.6	0.6	-13.1	31.8	30.7	33.0	-5.5	3.1	-13.5	-10.0	-0.6	26.8	-3.2	127.4
Ireland	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	3,341	2,176	-2.3	-1.6	-4.4	6.9	-3.9	-22.9	7.5	-5.6	-7.4	25.4	-24.1	-1.9	3.6	-0.6	-34.9
Japan	37	38	46.5	-0.4	-3.1	-2.8	-10.9	-10.9	-5.3	-10.0	-4.6	11.4	1.6	7.4	-4.5	4.6	2.5
Latvia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	2	13	105.4	36.6	23.4	35.7	27.5	-14.3	36.0	48.5	-7.9	-11.7	-20.8	-27.9	-15.9	-14.4	709.8
Luxembourg	0	0	4.3	12.8	11.0	2.7	0.9	3.6	2.8	3.5	47.2	1.3	12.9	-1.8	5.0	-2.3	175.6
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	775	1,154	-8.6	-13.2	-13.0	28.8	-37.3	-29.3	22.0	-36.3	559.1	-6.7	-4.5	7.6	-0.5	8.0	48.9
New Zealand	640	1,056	13.5	-4.5	2.1	8.2	-3.9	-6.6	-6.2	7.4	-2.6	4.8	33.8	3.6	3.3	5.6	65.0
Norway	2,650	3,662	-20.7	-1.1	16.0	-8.3	3.3	21.3	5.8	-8.4	-14.2	-2.6	-5.3	-2.3	-3.0	44.5	38.2
Poland	46	197	-0.4	3.0	8.7	-8.1	23.7	19.4	49.3	17.5	-5.2	5.3	15.8	-4.3	-6.2	-9.7	328.9
Portugal	155	888	2.7	32.9	-10.5	23.6	-2.9	-3.9	-10.9	28.1	-1.2	9.6	-3.8	10.5	3.2	12.2	472.4
Romania	IE, NE, NO	E, NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	22,479	35,545	3.2	7.5	1.3	7.5	0.6	8.2	-0.4	1.4	43.2	-1.7	14.4	4.8	1.5	21.2	58.1
Slovakia	0	0	-9.0	9.6	2.1	0.8	6.8	-0.1	6.5	2.4	-3.2	6.5	-4.5	-7.0	3.0	-14.4	2.7
Slovenia	NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	1,760	2,482	-3.1	-10.9	-2.1	3.2	4.8	2.5	6.7	-6.1	4.0	-10.8	13.7	-1.3	5.9	8.9	41.0
Sweden	311	627	-17.7	15.7	-10.4	4.4	4.3	1.9	17.7	-10.3	-4.3	5.2	-2.7	-0.2	153.3	-20.0	101.4
Switzerland	139	103	-2.3	-1.7	7.5	-2.6	-2.3	-4.7	-3.0	3.5	-3.5	-10.7	5.2	-0.8	4.2	-7.0	-26.3
Turkey	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	53	38	-13.3	-0.9	1.4	-1.5	-0.9	0.7	-1.1	2.7	1.7	2.7	6.6	1.6	-3.2	0.1	-28.3
United Kingdom	5,760	5,092	-1.1	21.2	5.7	-21.6	-1.0	-14.4	-5.0	3.5	-4.8	-5.1	-2.9	12.7	-15.0	4.3	-11.6
United States	34,109	28,967	-2.7	0.9	-6.8	-0.5	-6.4	3.3	-3.0	-2.0	2.9	-4.0	-1.2	4.7	0.3	-2.9	-15.1

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.42b

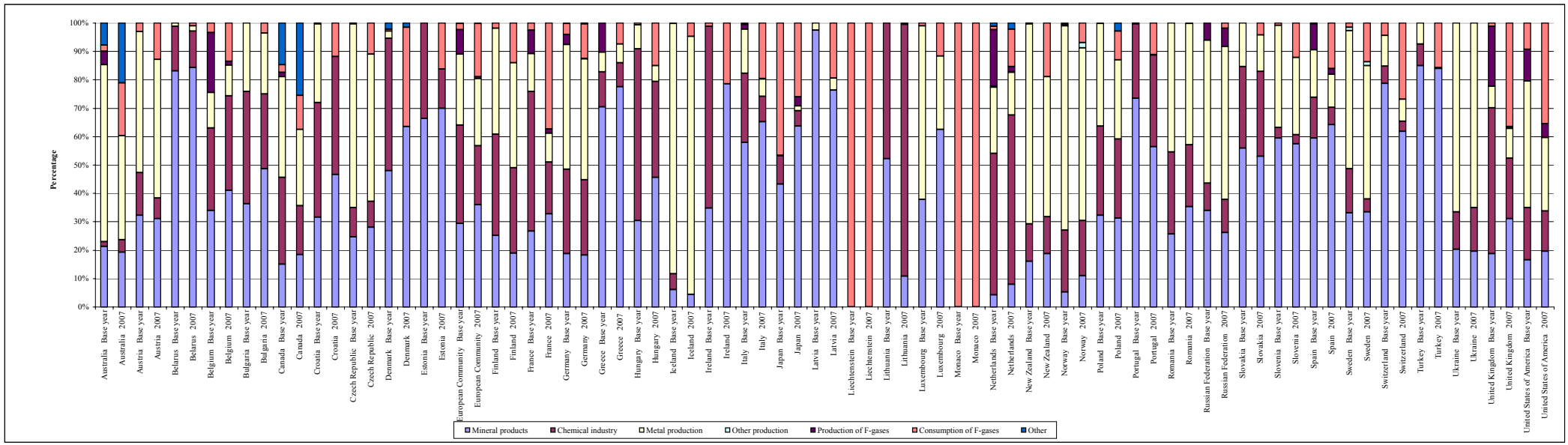
Fugitive emissions from fuels: CH_4 emissions from oil and natural gas - trend information

CH_4 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	331	221	-10.1	19.8	-8.5	4.1	-2.9	-16.9	8.2	2.2	-5.9	-6.8	-2.1	-3.6	-2.7	-3.7	-33.4
Austria	18	34	4.2	5.3	5.9	3.7	2.2	4.1	2.8	1.5	3.9	2.2	8.0	2.9	4.1	0.9	88.7
Belarus	59	76	-10.1	-4.1	8.4	8.8	-3.9	-2.2	6.9	0.5	0.9	3.9	6.1	-2.7	4.8	-3.8	29.9
Belgium	25	19	-0.9	1.1	-2.9	-5.5	-3.5	0.3	-2.9	-1.7	-4.7	-4.5	-1.7	4.1	-0.8	0.4	-22.2
Bulgaria	61	30	-6.2	14.8	1.3	-11.9	-9.3	-16.0	34.1	-8.1	-9.1	2.5	10.5	11.8	-2.7	4.1	-50.2
Canada	1,436	2,291	4.0	6.6	7.2	3.5	1.9	-1.4	5.2	1.6	-1.6	1.3	1.3	-1.1	0.8	-1.5	59.5
Croatia	57	77	-6.2	1.1	-0.1	6.0	-13.0	-1.0	6.0	11.7	4.1	0.8	2.1	0.0	10.6	9.9	34.7
Czech Republic	43	33	-14.8	0.0	8.3	-1.8	5.2	-2.3	-5.0	-6.2	2.8	-9.0	-7.1	19.6	2.3	0.2	-22.7
Denmark	2	6	21.0	15.4	-3.9	10.3	0.1	14.2	6.9	0.2	3.3	1.9	20.4	-0.6	28.1	-0.8	223.9
Estonia	38	25	-0.3	15.0	10.7	-2.6	-5.6	-2.7	14.7	7.5	-16.2	10.3	18.1	3.0	1.3	-0.4	-34.3
European Community	1,495	1,086	0.4	-4.1	-1.1	-3.9	-0.2	-3.7	-2.6	0.7	-1.1	-6.5	-3.3	0.5	-5.6	-1.0	-27.3
Finland	1	2	272.6	-0.5	3.4	-13.2	1.8	-19.0	-6.8	23.1	-15.8	7.9	-10.6	16.4	-13.4	-7.7	358.6
France	133	90	-3.8	-4.7	-5.2	-0.9	-0.6	-1.1	-2.6	-1.1	-0.1	-0.5	-0.9	-3.0	-1.4	0.3	-32.1
Germany	356	322	4.4	-12.4	3.5	-3.1	-0.8	-1.3	-1.5	1.5	-1.8	0.2	-3.1	-2.4	-2.0	-2.0	-9.5
Greece	4	8	-3.1	-6.2	94.9	5.7	12.7	-16.6	27.8	0.8	-0.5	4.6	3.5	0.3	3.4	2.3	72.7
Hungary	77	98	3.6	5.6	2.2	1.1	1.0	-1.2	1.2	-1.8	-0.9	1.9	0.9	0.0	0.6	0.3	28.0
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	6	3	-2.8	-3.2	-3.6	-4.2	-12.7	-3.0	-4.8	7.8	-24.8	808.3	-89.5	-14.2	80.1	-41.4	-54.5
Italy	348	237	-0.4	-3.3	-1.6	-0.5	1.4	-2.9	-3.4	-5.7	-0.4	-2.7	-2.6	0.1	-9.1	-3.0	-31.7
Japan	11	17	11.1	-0.5	-0.7	2.7	-1.8	-1.1	4.3	-2.2	7.5	2.6	3.7	5.1	5.7	7.2	58.2
Latvia	13	5	-3.7	-2.6	-3.6	-6.7	-4.1	-4.7	-7.5	-3.0	4.3	-21.8	-1.1	11.8	-27.5	2.6	-60.4
Liechtenstein	0	0	18.1	8.5	9.8	3.7	8.7	6.8	4.0	7.1	5.4	5.8	5.2	12.6	3.5	0.6	233.5
Lithuania	17	11	3.0	17.1	8.3	-3.5	-6.7	-0.1	16.0	11.8	-1.0	5.2	-3.1	1.9	-1.6	11.2	-36.2
Luxembourg	1	2	4.3	12.8	11.0	2.7	0.9	3.6	2.8	3.5	47.2	1.3	12.9	-1.8	5.0	-2.3	175.6
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	78	42	0.0	-0.2	-7.4	-33.8	1.1	-14.2	-7.1	-1.7	-4.0	-0.7	-5.5	5.8	-7.4	26.9	-45.9
New Zealand	15	21	-4.4	-2.6	0.3	15.3	9.4	10.1	-3.1	6.6	-1.4	0.5	-2.7	4.0	-1.5	5.1	38.9
Norway	15	31	11.4	-1.7	4.1	11.9	-6.1	-6.0	18.1	14.9	-9.8	-6.8	8.8	-14.5	-11.1	17.2	100.6
Poland	163	230	-5.2	8.9	4.7	-0.3	1.3	-3.0	8.2	4.5	-2.4	10.1	6.0	2.6	0.9	11.0	41.6
Portugal	2	33	-5.0	-3.5	-11.1	85.9	66.9	29.7	-6.3	151.1	16.6	16.5	-38.5	100.8	-12.3	-8.0	1270.7
Romania	1,039	388	-15.6	1.5	-1.2	-19.5	-3.5	-5.6	-1.0	-2.5	0.4	8.9	-5.2	-5.1	-0.7	-7.1	-62.7
Russian Federation	15,956	15,317	0.2	-3.1	0.4	-5.4	4.2	0.5	2.7	0.2	3.2	4.1	2.2	1.0	2.6	0.7	-4.0
Slovakia	24	35	2.1	9.6	2.1	0.8	6.8	-0.1	6.5	2.3	-3.2	6.5	-4.5	-6.9	0.5	10.3	45.0
Slovenia	3	1	2.4	-5.1	-3.3	-4.5	-7.5	-3.2	-4.2	-5.4	-7.0	-3.6	-8.5	-1.7	-4.1	-3.0	-45.8
Spain	30	27	13.9	2.8	-4.6	16.3	5.0	-26.1	11.4	10.4	9.0	-26.9	20.3	9.3	-31.7	-9.4	-11.2
Sweden	0	0	-0.9	5.0	0.5	-0.1	0.0	-9.8	0.2	-2.6	8.6	-12.8	13.5	-11.0	14.7	-9.4	5.7
Switzerland	18	8	-5.1	-7.6	-8.1	-5.9	-2.0	3.1	-7.4	2.0	-10.9	-9.7	-1.3	-1.2	-0.7	-0.7	-54.5
Turkey	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	1,492	1,128	-7.3	-4.4	1.8	-3.2	-7.4	2.0	-0.3	-1.9	0.2	7.0	1.6	2.2	0.1	-1.1	-24.4
United Kingdom	491	259	-2.1	0.9	-2.8	-5.6	-2.2	-4.6	-4.3	0.6	-3.0	-25.7	4.1	-4.1	-5.8	0.3	-47.2
United States	7,783	6,355	0.8	-0.7	1.2	-1.1	-1.9	-3.1	2.9	-0.9	-0.5	-1.6	-6.2	-8.3	-1.1	0.3	-18.4

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure 2.1

Contribution of subsectors to total GHG emissions in Industrial processes[a]



[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.1

Mineral products - CO_2 (2007)

	Methods and EF used [a]		Cement production					Lime production		
					Activity data (production)					
	Methods	EF	Key category	Share of national total	Description [b]	Value	CO_2 IEF	Key category	Share of national total	CO_2 IEF
				(%)		(kt)	(t/t)		(%)	(t/t)
IPCC default EF [c]							0.499 (cement)			
IPCC default EF [d]							0.51 (clinker)			0.59-0.86
Australia	T2	CS	L	0.7	Clinker production	7,112	0.55		0.2	0.67
Austria	CS, T1	CS, D	L	2.4	Clinker Production [kt]	3,992	0.53	L, T	0.7	0.76
Belarus	D, T1	D	L, T	2.4	Used clincer production data	3,820	0.51		0.9	0.74
Belgium			L, T	2.4	2.A.1-Cement Production,,,Activity Data,,,(kt)	5,733	0.54	L	1.6	0.76
Bulgaria	D, T1, T2	D	L, T	2.5	Klinker - kt	3,645	0.52	L, T	1.4	0.79
Canada	D, T1, T2	CS, D	L	1.0	Clinker Production Data	14,023	0.52		0.2	0.76
Croatia	T1, T2	CS, D	L, T	5.0	(e.g. cement or clinker production)	3,234	0.50	L, T	0.8	0.81
Czech Republic	CS, T1, T2	CR, CS	L	1.4	(clinker production)	3,837	0.53	L	0.5	0.73
Denmark	CS	CS	L, T	2.1	Production of Cement	2,946	0.48		0.1	0.75
Estonia	CS, T1	CS, D	L, T	2.7	(e.g. cement or clinker production)	1,114	0.54		0.2	0.79
European Community	CR, CS, D, OTH, T1, T2	CR, CS, D, OTH, PS	L, T	2.1	2.A.1-Cement Production,,,Activity Data,,,(kt)	NE	NE	L	0.4	NE
Finland	T1, T2	CS, D	L, T	0.8	clinker production	1,201	0.50		0.6	0.73
France	CR	D, PS	L, T	1.7	kt of Clinker	18,046	0.52		0.5	0.74
Germany	CS, D, T1, T2	CS, D	L, T	1.5	(clinker production)	26,992	0.53	L	0.6	0.79
Greece	CS, T1	CS, PS	L, T	4.8	clinker production	12,035	0.52		0.4	0.85
Hungary	CS, D, T2, T3	CS, D, PS	L	1.7	Clinker Production	2,577	0.52		0.4	0.79
Iceland	D, T2	D, PS	L	1.4	clinker production	115	0.55		-	NO
Ireland	T2	D, PS	L, T	3.4	Clinker production	4,441	0.53		0.3	0.78
Italy	D, T2	CS, D, PS	L	3.2	(clinker production)	33,742	0.53	L	0.4	0.71
Japan	CS, D, T2	CS, D	L, T	2.2	Clinker produced	59,885	0.50	L	0.6	0.75
Latvia	CR, T2	CR, CS, PS	L	1.4	(e.g. cement or clinker production)	338	0.51	T	0.0	0.30
Liechtenstein	NA	NA		-	Production	NO	NO		-	NO
Lithuania	CS, T1, T2	CS, D, PS	L, T	2.1	(clinker production)	966	0.54		0.2	0.76
Luxembourg	CS, T2	CS, PS	L, T	3.3	clinker production	816.688	0.52		-	NO
Monaco	NA	NA		-		NO	NO		-	NO
Netherlands	CS	CS, D, PS		0.2	Clinker production	845	0.48		-	NE
New Zealand	T1a, T2	D, PS	L, T	0.9	Cement production	C	C		0.2	0.71
Norway	T2	CS	L, T	1.6	Production quantity	1,637	0.53		0.2	0
Poland	T1, T2, T3	CS, D, OTH, PS	L, T	1.8	Clinker production	13,168	0.54	T	0.4	0.79
Portugal	CR, D, OTH, T2	CR, CS, D, OTH	L, T	5.0	Total clinker production	8,018	0.51	T	0.6	0.75
Romania	CR, CS, D, OTH, T2	CR, D, PS	L, T	2.6	(clinker production data)	7,670	0.53	L, T	1.8	C
Russian Federation	D, T2	D	L	1.2	(clinker production)	52,583	0.52		0.4	0.74
Slovakia	T2	CS	L, T	3.1	Clinker Production	2,825	0.52	L, T	1.9	0.77
Slovenia	CS, D, T2	CS, D	L	2.7	Clinker produced	1,028	0.54	T	0.6	0.74
Spain	CS, D, T2	CS, D, PS	L, T	3.9	Clinker production	32,046	0.54		0.4	0.74
Sweden	CS, D, T2	CS, D, PS	L, T	2.1	Produced amount of clinker	2,493	0.55	L, T	1.0	0.55
Switzerland	CS, D, T2	CS, D	L, T	3.6	clinker production	3,512	0.53		0.1	C
Turkey	T1	D	L, T	5.7	clinker	41,585	0.51		0.2	0.91
Ukraine	T1, T2	CS, D	L, T	1.4	(clinker production)	11,757	0.52	L, T	0.9	0.66
United Kingdom	T2	CS, D	L	1.0	clinker production kt	10,641	0.57		0.1	0.44
United States	CS, T1, T2	CS, D	L, T	0.6	Clinker Production	86,106	0.52		0.2	0.76

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 2.A Mineral products.

[b] The CRF requests Parties to specify the activity data used (e.g. cement or clinker) for estimating the emissions from cement production. The descriptions included in this column are as reported in the CRF by Parties.

[c] Source of default emission factors: IPCC Guidelines, volume 3, page 2.6.

[d] Source of default emission factors: IPCC good practice guidance, pages 3.13 and 3.22.

Table 2.2a

CO_2 emissions from cement production - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	3,463	3,895	-8.1	-3.6	-3.4	-1.8	9.1	1.3	2.9	-2.2	-1.5	2.8	-0.8	2.5	6.7	0.2	12.5
Austria	2,033	2,131	-1.4	-22.4	0.2	7.8	-9.2	0.5	6.5	0.5	0.9	1.1	2.0	0.4	8.7	9.0	4.8
Belarus	966	1,937	-3.9	-10.6	14.1	47.5	-3.3	-3.3	-2.7	-5.1	19.4	18.6	11.0	12.6	7.2	27.2	100.6
Belgium	2,824	3,087	2.0	2.4	-7.6	5.1	0.4	-1.9	5.0	-9.6	1.2	-2.0	-3.3	3.4	6.1	-0.8	9.3
Bulgaria	2,006	1,897	-40.8	38.1	-1.5	-13.1	-51.1	30.3	7.0	3.7	-0.8	4.7	13.6	12.8	-4.1	27.5	-5.4
Canada	5,436	7,253	-18.2	13.2	-5.3	7.6	2.6	4.2	1.5	-2.8	3.0	1.1	4.2	1.2	1.9	-0.9	33.4
Croatia	1,086	1,612	-35.3	-25.3	8.9	15.7	7.7	30.7	11.5	14.5	-2.2	-0.6	6.3	2.0	5.9	1.5	48.5
Czech Republic	2,489	2,043	-7.2	-9.2	5.6	-1.6	-0.8	-5.1	-1.3	-15.9	-13.8	6.9	10.7	-2.2	7.6	16.9	-17.9
Denmark	882	1,407	23.3	1.0	6.5	12.4	-3.6	-2.5	2.2	0.2	2.0	-6.1	9.7	-6.5	2.4	0.8	59.5
Estonia	483	597	-2.5	5.4	3.9	9.6	1.9	-10.5	4.9	2.2	-6.0	-6.6	8.8	0.9	10.9	44.3	23.5
European Community	80,357	87,106	-5.2	3.7	-3.5	2.9	2.7	1.8	1.8	-1.9	0.0	1.7	2.9	0.3	0.8	2.3	8.4
Finland	734	600	-22.0	4.0	1.0	17.6	-0.3	6.8	5.6	-0.3	-3.6	-3.8	13.4	4.5	3.2	4.5	-18.3
France	10,948	9,334	-5.0	-1.6	-2.3	-3.8	7.1	-3.5	2.1	1.1	-0.1	-1.0	4.2	3.5	-0.8	1.8	-14.7
Germany	15,146	14,306	-10.2	1.4	-4.8	3.1	1.8	1.5	-3.3	-11.5	-5.0	5.3	4.2	-7.2	2.2	8.3	-5.5
Greece	5,641	6,272	-0.8	7.4	0.3	0.5	-0.4	-0.3	2.7	0.4	-3.8	0.9	-0.1	6.7	-2.8	-2.9	11.2
Hungary	1,765	1,328	-38.6	3.6	-4.6	5.7	0.2	2.6	12.5	0.4	6.0	-0.5	-9.1	-10.6	8.1	2.5	-24.8
Iceland	52	63	-6.9	0.8	10.8	11.4	17.0	13.6	6.7	-10.5	-31.7	-18.5	55.1	8.4	13.2	3.5	22.5
Ireland	884	2,374	-11.5	2.3	11.8	16.5	-7.5	10.1	45.9	8.8	0.5	14.4	7.9	2.7	-0.4	1.1	168.6
Italy	16,084	17,914	-1.0	11.0	-8.6	1.8	2.1	5.1	3.8	3.6	-0.4	4.2	1.5	-1.0	0.4	2.5	11.4
Japan	37,966	30,076	4.3	-0.4	1.0	-6.2	-11.4	-1.0	0.3	-2.1	-5.7	-1.5	-2.1	3.2	-0.9	-4.1	-20.8
Latvia	366	172	-10.6	17.6	0.8	1.7	-2.8	32.0	-36.3	23.9	7.4	10.4	5.7	-2.9	10.7	28.8	-53.1
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	1,668	524	-7.1	-19.3	3.1	15.3	12.5	-16.0	-15.4	-3.1	2.5	0.7	20.0	9.2	34.6	1.5	-68.6
Luxembourg	557	426	-4.5	-10.8	-1.4	3.3	0.4	4.9	5.6	-12.8	3.5	-12.2	9.9	-1.8	-0.9	-1.1	-23.5
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	416	403	19.7	-7.6	-26.2	19.0	14.9	19.7	-9.3	1.9	2.3	-11.2	2.8	-5.6	-4.9	0.8	-3.1
New Zealand	442	688	-2.5	8.4	-5.3	4.5	-8.2	8.8	-0.2	0.8	3.0	-3.0	-8.8	18.5	-5.2	27.6	55.7
Norway	649	874	-8.8	3.6	-1.4	6.9	-5.8	-0.4	0.8	-4.2	0.6	2.7	-16.0	7.5	3.1	8.7	34.8
Poland	7,028	7,050	-0.7	0.4	-6.7	8.4	-6.0	-2.5	-1.0	-18.9	-5.8	-2.2	11.0	-0.3	18.3	17.8	0.3
Portugal	3,107	4,065	3.0	5.1	-2.1	5.1	-0.7	8.2	-0.5	-4.8	7.9	-7.5	10.6	1.9	-1.1	3.1	30.8
Romania	5,572	4,027	-28.0	13.5	1.7	-6.1	-3.0	-9.3	0.4	4.2	-4.6	0.3	12.9	6.1	15.1	10.9	-27.7
Russian Federation	34,051	27,199	-5.1	1.0	-23.6	-3.5	-2.9	10.5	14.7	5.0	7.9	9.1	12.0	6.4	10.3	12.6	-20.1
Slovakia	1,438	1,458	-29.1	3.5	-4.7	10.4	50.0	0.3	-34.9	1.6	-3.6	-20.9	32.0	3.2	10.6	6.9	1.4
Slovenia	515	556	-11.4	6.1	7.4	1.2	4.2	0.9	5.6	3.1	-12.1	1.5	5.1	2.5	5.1	6.2	8.0
Spain	12,534	17,305	-4.7	7.5	-2.0	5.3	8.3	4.5	2.1	1.9	3.4	3.3	1.6	3.1	1.1	-0.1	38.1
Sweden	1,272	1,365	-10.6	16.8	-5.5	-9.8	2.5	0.5	13.0	3.4	-3.8	-5.8	6.5	4.4	9.6	-7.1	7.3
Switzerland	2,525	1,844	-12.9	-5.7	-10.0	-10.3	0.0	-0.1	7.4	1.9	-3.8	-2.2	6.0	5.4	0.3	1.7	-27.0
Turkey	10,333	21,208	12.1	4.7	2.8	3.1	1.5	-4.1	3.5	-0.7	2.6	3.1	7.8	10.9	5.0	8.9	105.2
Ukraine	9,287	6,172	-5.1	-31.7	-36.6	11.8	15.4	-9.2	-10.8	9.5	13.9	28.2	19.7	13.1	14.6	11.7	-33.5
United Kingdom	7,295	6,117	-17.8	-1.3	2.1	4.6	1.9	-4.5	-3.0	-7.7	2.5	-2.0	1.9	-0.6	-0.8	3.8	-16.2
United States	33,278	44,525	-2.2	2.1	0.6	3.4	2.3	2.0	3.0	0.4	3.7	0.4	5.9	0.7	1.4	-4.4	33.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.2b

CO_2 implied emission factors for cement production - trend information

CO_2 IEF (t/t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	0.558	0.548	-0.1	0.4	0.0	0.1	-0.5	-0.9	-0.1	-0.2	-0.4	-0.6	0.3	0.0	0.4	-0.3	-1.9
Austria	0.551	0.534	0.2	0.4	0.7	1.2	-1.8	-0.2	0.9	0.2	-0.9	1.0	-1.2	0.5	-4.1	-0.2	-3.1
Belarus	0.507	0.507	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Belgium	0.534	0.539	0.2	0.0	-0.2	0.1	0.0	-0.1	0.1	-0.6	0.4	3.8	-1.4	-3.8	2.4	-0.5	0.9
Bulgaria	0.520	0.520	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	0.517	0.517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Croatia	0.516	0.498	-0.2	-1.3	-0.1	-1.5	0.1	0.2	0.7	-0.5	-0.7	-0.4	0.3	-0.6	-0.2	-0.6	-3.4
Czech Republic	0.527	0.532	0.4	0.4	0.4	1.1	1.1	0.6	-1.0	0.7	-0.1	0	0	-3.1	-0.3	0.1	1.1
Denmark	0.545	0.478	-0.1	-0.4	0.1	0.0	-4.8	4.9	0.2	-1.6	0.6	-0.5	-2.4	-1.2	-2.5	-2.7	-12.3
Estonia	0.531	0.536	-0.2	-0.4	-0.4	-0.5	0.5	0.0	-0.2	0.5	0.2	-0.5	0.4	1.0	0.0	0.2	1.0
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	0.499	0.499	0.0	0.0	0.1	-0.4	0.1	0.0	0.1	-0.1	0.2	0.0	0.1	0.2	-0.1	-0.3	0.0
France	0.525	0.517	0	0	0	0	0	0	0	0	0	0	-0.9	2.5	-3.0	0.1	-1.5
Germany	0.530	0.530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	0.530	0.521	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.8	-1.3	-1.2	-1.6
Hungary	0.556	0.515	-0.8	-0.1	2.5	0.1	-2.8	2.2	0.9	0.8	-0.6	-0.7	-1.8	-5.2	0.4	0.8	-7.4
Iceland	0.532	0.551	0	0	0	0	0	0	0	0	0	0	0	2.3	0	1.3	3.6
Ireland	0.549	0.535	0.0	0.0	-0.1	0.0	0.0	0.0	-0.3	-0.1	-0.3	-1.6	-0.1	0.0	-0.4	0.2	-2.6
Italy	0.540	0.531	0	0	0	0	0	0	0	0	0	0	-1.5	-1.2	0.1	0.9	-1.7
Japan	0.498	0.502	0.0	0.0	0	0.0	0.0	0.0	-0.5	0.5	0.2	0.2	0.2	0.3	0.1	-0.1	0.9
Latvia	0.548	0.508	-3.3	0.4	-10.6	-0.1	0.2	-1.8	0.3	1.9	-1.3	1.2	-2.0	-4.9	-11.1	25.9	-7.3
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	0.546	0.542	-0.5	-1.8	-0.1	1.1	-0.2	0.0	-1.0	1.3	1.1	0.2	-0.2	-5.2	2.7	0.5	-0.6
Luxembourg	0.532	0.522	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	0	0	-1.8
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	0.540	0.477	0	0.1	-0.2	0.2	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-4.3	-1.5	-6.4	-11.7
New Zealand	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	0.521	0.534	-1.1	-0.2	0.3	-0.4	-0.1	0.3	1.6	-0.7	-1.9	-0.1	6.7	-2.1	-0.5	0.1	2.4
Poland	0.525	0.535	0	0	0	0	0	0	0	0.4	-0.2	-0.4	-0.2	1.3	-0.1	0.4	2.0
Portugal	0.507	0.507	0.0	0	0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0
Romania	0.527	0.525	-0.1	0.0	0.0	0.0	0.1	0.3	-0.3	0.0	-0.1	0.1	-0.4	0.0	0.0	0.0	-0.4
Russian Federation	0.517	0.517	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slovakia	0.507	0.516	0	0	0	0	0	0	-0.4	-0.7	0.9	1.9	2.0	-0.3	0.5	-2.0	1.8
Slovenia	0.541	0.540	0	0	0	0	0	0	0	0	0	0	0	-0.2	-0.4	0.5	-0.1
Spain	0.540	0.540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sweden	0.542	0.548	0.0	-0.8	0.8	-0.6	-0.3	0.0	0.1	-0.1	0.2	0.0	-0.2	1.3	1.3	-0.9	1.1
Switzerland	0.525	0.525	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turkey	0.510	0.510	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0.0
Ukraine	0.532	0.525	0.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	0	0.0	0	0	0.0	0.0	-1.3
United Kingdom	0.553	0.575	0.0	0	0.0	0.0	0	0.0	0	0.0	0	0	0	0.0	-1.3	5.4	4.0
United States	0.517	0.517	0.0	0.0	0	0	0	0	0.0	0.0	0	0.0	0	0	0	0	0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.3

Chemical industry - CO_2 and N_2O (2007)

	CO_2						N_2O								
	Methods and EF used[a]		Ammonia production				Methods and EF used[a]		Nitric acid production				Adipic acid production		
	Methods	EF	Key category	Share of national total	Activity data (production)	CO_2 IEF	Methods	EF	Key category	Share of national total	Activity data (production)	N_2O IEF	Key category	Share of national total	N_2O IEF
				(%)	(kt)	(t/t)				(%)	(kt)	(t/t)		(%)	(t/t)
IPCC default EF[b]						1.5-1.6						0.002-0.019			0.59-0.86
Australia	T2	CS		-	C	IE	NA	NA		-	C	IE		-	NO
Austria	CS, T2	CS, PS	L	0.5	441	1.1	CS	PS	T	0.3	499	0.002		-	NO
Belarus	NA	NA		-	1,015	NO	T1	D		0.5	267	0.005		-	NO
Belgium			L, T	1.0	1,088	1.2			L, T	1.0	1,199	0.004		-	NO
Bulgaria	D, T1	CS, D	L, T	0.7	430	1.2	D	D	L	1.7	712	0.006		-	NO
Canada	CS	CS	L	0.8	4,000	1.9	CS, T3	CS, D		0.2	1,132	0.003	T	0.2	C
Croatia	T1a	PS	L	2.9	430	2.2	T1	D, PS	L, T	2.3	307	0.008		-	NO
Czech Republic	T1	CS		0.4	227	2.4	CS, T1	CS, PS	L	0.5	554	0.004		-	NO
Denmark				-	NO	NO	NA	NA	T	-	NO	NO		-	NO
Estonia	T1a, T1b	CS		0.6	202	0.6	NA	NA		-	NO	NO		-	NO
European Community	CR, CS, D, T1, T1a, T1b, T2	CR, CS, D, OTH, PS		0.4	NE	NE	CR, CS, D, T1, T2	CR, CS, D, OTH, PS	L, T	0.6	NE	NE	T	0.2	NE
Finland	T2	CS, D		-	NO	NO	T1	PS	L, T	1.9	615	0.008		-	NO
France	CR	D, PS	T	0.3	1,262	1.4	CR	PS	L, T	0.6	2,355	0.005	T	0.3	C
Germany	CS, D	CS, D	T	0.5	2,865	1.8	CS	CS, D, PS	L, T	1.0	5,604	0.006	L, T	0.6	C
Greece	T1a	PS	T	0.2	166	1.9	D	D	T	0.3	203	0.007		-	NO
Hungary	T2	D, PS	L, T	1.1	346	2.4	T3	D, PS	L, T	1.2	475	0.006		-	NO
Iceland	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Ireland	NA	NA	T	-	NO	NO	NA	NA	T	-	NO	NO		-	NO
Italy	D	CR, PS	T	0.1	578	1.1	D	D, PS	T	0.2	505	0.007	T	0.1	0.03
Japan	T1	CS		0.2	1,318	1.7	D, T1	CS, PS		0.0	590	0.003	T	0.0	C
Latvia	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Liechtenstein	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Lithuania	T2	PS	L, T	9.4	1,137	2.0	T1	D	L, T	10.4	1,188	0.007		-	NO
Luxembourg	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Monaco	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Netherlands	CS, T1, T1b	CS, D, PS	L	1.5	C	C	T2	PS	L, T	2.1	C	C		-	NO
New Zealand	T2	CS, PS		0.5	236	1.5	NA	NA		-	NO	NO		-	NO
Norway	T2	CS, D	L, T	0.5	335	1.4	CS, T2, T3	PS	L, T	2.5	1,619,876	0.000		-	NO
Poland	T1, T2	CR, CS, D	L, T	1.1	2,418	1.7	T1	CS	L, T	1.1	2,270	0.006		-	NO
Portugal	D, T2	CS, PS	L, T	2.4	C	C	D	CR, OTH	L	0.8	C	C		-	NO
Romania	T1b	D	L, T	1.4	1,371	1.5	D	CR, D	L, T	1.8	981	0.009	T	-	NO
Russian Federation	D, T1b, T3	CS, D	L, T	0.9	13,151	1.5	D	D		0.2	5,526	0.002		-	NO
Slovakia	T2	PS	L	0.7	362	0.9	T1, T2	D, PS	L, T	3.0	489	0.009		-	NO
Slovenia	D	D		-	NO	NO	NA	NA		-	NO	NO		-	NO
Spain	D	CS, D, PS		0.1	526	1.2	D	CS	T	0.3	626	0.007		-	NA
Sweden	D	PS		-	NO	NO	CS, T2	PS	T	0.4	249	0.003		-	NO
Switzerland	CS	CS		0.0	34	0.0	D	CS	T	0.2	54	0.005		-	NO
Turkey	NA	NA	T	-	C	C	NA	NA		-	C	C		-	NA
Ukraine	T1, T3	CS, D	L, T	2.6	5,143	2.2	T1	D		-	C	IE		-	IE
United Kingdom	CS, T1	CS, OTH		0.2	33	36.4	CS	CS	T	0.3	2	3.542	T	0.2	C
United States	CS, T1	CS, D	T	0.1	10,386	1.3	T2, T3	CS, D, OTH		0.3	7,823	0.009	T	0.1	0.02

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 2.B Chemical industry.

[b] Source of default emission factors: ammonia; IPCC Guidelines, volume 3, page 2.16 nitric acid and adipic acid; IPCC good practice guidance, pages 3.34 and 3.44.

Table 2.4a

CO_2 emissions from ammonia production - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	517	473	5.6	5.9	0.3	-1.2	-1.3	1.0	-2.3	-8.8	2.9	8.3	-11.1	7.6	7.7	-12.6	-8.4
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	420	1301	-8.9	9.7	-4.8	0.8	-4.5	21.0	-2.7	-5.7	2.8	1.7	-0.7	5.1	-3.0	0.8	209.4
Bulgaria	1662	532	-16.5	20.9	-0.7	-17.7	-46.4	-28.2	71.1	-10.4	-36.4	6.0	21.0	1.9	-21.7	13.8	-68.0
Canada	4994	6240	-1.6	12.3	-0.6	1.4	-0.2	3.5	0.1	-10.0	1.3	-1.0	11.6	-7.4	3.9	-5.1	24.9
Croatia	871	945	6.6	8.3	-4.2	9.4	-21.6	19.7	-0.6	-17.7	-9.2	14.2	4.2	-1.5	-2.7	8.6	8.5
Czech Republic	807	544	-3.1	-11.7	7.6	-8.4	3.1	-14.8	14.4	-15.8	-12.8	30.2	-0.7	-12.8	-4.6	-6.3	-32.5
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	317	124	-8.0	2.6	1.8	5.3	8.6	-10.2	-13.4	7.9	-86.0	226.8	84.7	-16.3	-6.1	-7.6	-60.7
European Community	17023	16553	-2.3	7.1	-3.5	1.8	3.7	-7.1	4.7	-2.7	-2.9	-1.2	2.0	1.6	-6.8	5.7	-2.8
Finland	44	NO	1.1	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	3050	1764	-0.7	-1.8	5.8	-2.7	-1.7	-4.8	4.4	-11.7	-13.7	-5.9	2.1	8.0	-36.6	34.4	-42.2
Germany	4596	5200	-16.2	19.5	-1.1	-0.7	0.4	-3.4	6.6	-1.2	1.9	9.1	-1.6	1.6	-2.2	1.2	13.1
Greece	IE	321	*	*	*	*	*	-18.8	85.6	-53.4	37.0	55.9	6.2	-8.3	10.4	2.1	*
Hungary	1996	844	-40.8	-1.0	11.6	-4.1	-11.4	-10.8	29.3	-9.8	-28.7	-0.5	28.7	12.9	-6.0	9.2	-57.7
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	990	NO	4.0	-7.9	-5.2	16.3	-1.3	-11.0	-6.4	17.9	-22.1	-100.0	*	*	*	*	*
Italy	1710	649	-4.3	-3.3	-32.9	12.2	-8.3	-10.3	12.7	4.0	10.3	21.9	10.0	-5.7	-6.9	-1.1	-62.0
Japan	3385	2296	-1.5	1.1	0.7	-2.5	-11.2	10.0	-3.2	-7.0	-8.1	-10.2	0.5	-12.3	0.4	6.1	-32.2
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	1190	2329	9.0	59.5	26.8	-16.6	6.1	-1.7	4.6	5.9	5.3	-3.4	-6.7	7.6	-2.2	106.3	95.8
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	3096	3016	12.7	-0.9	-5.3	5.2	1.6	-0.7	0.6	-16.0	-4.2	-1.1	7.4	0.6	-1.1	-1.8	-2.6
New Zealand	278	360	0.9	3.2	-13.2	16.1	7.2	15.2	-5.5	11.7	-7.6	14.1	-2.6	-8.5	12.5	-7.5	29.7
Norway	500	301	-11.7	7.9	-6.5	8.2	-48.6	-35.4	124.1	-7.2	-5.7	35.5	6.8	-32.6	10.4	-18.6	-39.8
Poland	4358	4209	-0.9	15.0	-1.8	1.5	-7.6	-11.3	23.8	-4.7	-22.3	45.8	2.6	6.1	-4.9	-0.5	-3.4
Portugal	569	1996	-21.5	54.8	-18.7	46.9	24.9	-52.9	10.9	53.4	6.5	6.1	5.8	5.5	5.2	4.9	250.7
Romania	5006	2057	-36.9	25.4	1.8	-48.3	-50.8	78.2	50.5	-8.0	-1.6	27.1	-1.6	13.3	-1.9	-13.2	-58.9
Russian Federation	18888	19727	-5.2	9.3	-0.1	-9.5	-8.8	16.5	14.6	-0.6	-0.8	5.7	8.0	4.1	3.9	1.5	4.4
Slovakia	356	327	-2.3	8.4	7.3	-0.4	-11.1	-0.1	10.7	2.2	-2.9	-11.6	15.3	4.5	-16.8	-6.9	-8.3
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	709	622	20.8	1.6	4.3	5.7	-5.9	-7.3	-1.7	0.5	-2.5	2.8	-7.3	3.4	-5.0	6.8	-12.3
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	0	0	-0.8	-0.8	-0.8	-0.8	3.4	0.4	10.9	12.1	-9.4	-21.9	15.2	-15.7	15.3	-12.4	-15.1
Turkey	713	C	-5.0	16.4	3.3	3.2	-42.8	-71.9	-35.2	25.6	347.9	-3.7	13.9	-7.5	-69.9	*	*
Ukraine	11939	11238	-3.7	10.9	-9.8	7.8	-2.7	13.6	-3.4	5.2	-0.6	6.9	-1.0	0.5	5.1	-6.3	-5.9
United Kingdom	1322	1209	0.2	0.2	0.2	-34.4	25.0	0.2	16.9	5.6	-9.4	-6.4	8.5	-11.3	-24.1	42.3	-8.5
United States	13047	9036	1.8	-4.3	2.2	1.4	0.8	-8.4	-6.0	-24.1	13.7	-16.0	8.5	-3.9	-4.5	2.9	-30.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.4b

CO_2 implied emission factors for ammonia production - trend information

CO_2 IEF (t/t)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	1.12	1.07	2.5	-0.5	-2.1	-0.2	-2.2	-0.3	-0.7	-1.8	-0.6	-1.6	-11.0	14.7	2.6	-0.5	-4.3
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	1.17	1.20	12.0	0.7	-3.1	-0.6	-1.6	2.0	1.3	3.3	-2.2	-4.8	6.6	-5.1	8.9	-8.4	2.4
Bulgaria	1.24	1.24	0	0	0	0	0	0	0	0	0	0	*	*	*	0	0
Canada	1.89	1.87	-0.1	-3.6	-1.6	3.8	-1.0	1.9	-0.4	-2.4	4.0	-4.4	1.4	1.1	-0.9	0.0	-1.1
Croatia	2.52	2.20	5.8	0.5	-3.2	1.6	4.6	-6.7	-2.5	3.1	0.1	1.5	-17.1	-0.1	-0.3	-1.9	-13.0
Czech Republic	2.40	2.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	1.08	0.62	0.1	-8.3	1.0	3.8	6.1	-5.0	-2.4	4.1	-45.5	56.6	-10.0	-20.5	-5.6	-3.2	-42.8
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	1.55	NO	0.1	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	1.58	1.40	-1.6	-2.0	0.8	-0.1	-0.1	-0.6	-2.2	-2.2	1.4	-4.3	4.8	0.3	1.1	-1.4	-11.7
Germany	1.82	1.82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	IE	1.94	*	*	*	*	*	-14.8	193.6	0.0	0.0	-2.2	-0.3	1.9	-1.3	-0.9	*
Hungary	2.55	2.44	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-4.2
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	2.30	NO	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	*	*	*	*	*
Italy	1.18	1.12	0	0	0	0	0	0	0	0	0.0	0.0	-1.8	0.6	1.1	-4.3	-4.5
Japan	1.81	1.74	0.6	-1.6	-0.1	-0.6	-4.6	7.5	-2.3	1.7	0.7	-1.7	-4.0	-9.4	-1.7	7.7	-3.9
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	2.09	2.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	1.6	-2.0	0.3	0.0	-2.1
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	1.62	1.53	0.9	4.2	1.9	0.6	-10.5	0.4	-4.1	1.3	-1.2	-0.8	0.1	1.9	-0.9	5.0	-5.8
Norway	1.44	1.36	2.1	0.9	-0.8	21.9	-16.2	9.7	-8.5	-4.3	-4.1	13.9	-10.9	-0.1	-2.6	-0.4	-5.4
Poland	1.82	1.74	-2.8	-0.5	1.0	-1.5	1.5	1.8	-1.5	1.7	2.5	3.5	-6.0	3.1	3.2	-4.3	-4.6
Portugal	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	1.50	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russian Federation	1.50	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slovakia	0.99	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	-8.9	-8.9
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	1.24	1.18	1.4	1.5	1.6	0.3	0.4	-2.6	-2.2	1.5	0.4	0.7	-0.9	-6.3	5.5	-0.8	-4.4
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	0.01	0.01	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0
Turkey	1.60	C	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Ukraine	2.45	2.19	1.8	4.0	-15.2	4.8	0.9	0.2	0.2	1.8	-0.4	2.7	-1.9	-9.2	6.5	-6.1	-11.0
United Kingdom	29.53	36.42	-1.3	0.3	0.2	-19.7	14.5	-6.9	9.4	33.4	-4.8	1.2	9.3	-8.9	-7.3	10.3	23.3
United States	1.20	1.27	0	0	0	0	0	0	0.2	3.4	0.2	2.0	-0.7	2.1	-0.6	-0.9	5.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.5a

N_2O emissions from nitric acid production - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	2.9	0.9	1.7	3.9	2.0	-1.3	4.0	3.0	3.0	-17.4	2.6	9.4	-68.2	-2.4	2.2	-3.6	-70.4
Belarus	1.1	1.3	-18.2	-11.1	-12.5	28.6	11.1	0	-10.0	11.1	20.0	-8.3	18.2	14.8	-13.1	0.0	17.9
Belgium	11.5	4.4	-2.9	9.2	10.6	-4.7	2.1	-2.7	-5.6	-4.3	-8.6	-18.9	4.4	-1.7	-32.1	-34.6	-61.8
Bulgaria	7.8	4.3	-27.9	43.6	2.1	-17.7	-40.0	-24.4	79.5	-1.5	-15.9	6.5	-26.0	15.6	-9.3	47.2	-45.3
Canada	3.3	3.7	4.4	5.0	10.2	-4.4	-2.2	12.7	5.4	4.4	-2.2	0.7	-2.9	1.9	-1.4	-8.1	12.0
Croatia	2.6	2.4	-12.2	-3.8	-6.9	5.1	-24.7	18.0	17.7	-15.9	-2.9	-5.7	22.0	-2.4	-1.1	10.5	-7.8
Czech Republic	3.6	2.5	-34.8	14.9	-9.4	9.0	7.7	-17.8	13.8	-1.1	-13.5	-0.3	20.7	-5.8	-9.3	-15.6	-31.4
Denmark	3.4	NO	-8.4	12.1	-7.7	1.7	-4.9	17.8	5.6	-11.8	-12.6	15.6	-40.7	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	119.8	83.6	-5.2	0.8	1.1	-1.2	-0.7	5.6	-0.9	-12.2	-9.6	8.0	5.3	7.0	-16.6	-6.1	-30.2
Finland	5.3	4.8	-13.1	1.9	0.0	-1.4	-4.7	-2.1	1.3	-5.3	3.4	5.5	6.3	8.6	-11.5	3.0	-10.5
France	21.2	11.0	1.4	-9.2	0	2.7	-0.5	1.9	1.0	-15.7	-11.4	-0.5	0.7	-6.9	-13.8	-7.3	-48.1
Germany	15.1	30.8	-20.7	14.0	-4.8	0.3	-0.6	4.1	6.9	-12.2	9.9	64.4	14.1	47.1	-23.3	12.7	104.5
Greece	3.6	1.4	-17.6	-0.5	14.2	-12.2	-17.7	3.8	2.4	-16.0	-3.7	-7.7	-4.9	-0.3	-18.9	-0.7	-60.4
Hungary	14.7	2.9	-49.5	-33.7	42.9	-3.7	-16.0	-12.4	31.7	8.6	-35.7	5.6	33.5	-1.9	-17.5	-36.7	-80.1
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	3.3	NO	-21.5	0	0	0	0.0	0	0.0	-28.1	-50.0	*	*	*	*	*	*
Italy	6.7	3.6	-4.2	10.5	-4.2	1.5	-14.8	-14.1	36.0	-3.6	-17.1	12.5	58.5	-6.5	-27.4	-9.5	-46.8
Japan	2.5	1.9	-0.4	-1.6	-2.4	-3.3	9.9	-3.1	4.1	-8.2	2.9	6.8	1.9	-4.7	-9.4	-16.6	-23.0
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	2.5	8.3	4.9	11.4	37.3	10.4	29.3	5.3	17.4	10.3	8.1	3.1	9.4	13.6	0.3	28.6	234.4
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	20.4	13.9	1.4	-5.8	-0.3	0	-0.5	-4.3	-1.1	-9.4	-5.8	0.6	11.0	0.7	-1.1	-23.1	-32.0
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	6.7	4.4	-7.6	-0.2	-1.1	-0.8	5.1	13.7	-9.6	-2.9	13.5	-10.4	8.0	5.8	-16.8	-15.3	-33.6
Poland	14.1	14.7	-8.8	13.5	-0.1	-6.3	-7.6	-2.1	22.7	2.6	-18.0	20.2	2.7	6.5	-0.8	3.1	3.8
Portugal	1.8	2.0	-5.7	22.6	5.4	1.4	-30.0	66.6	-41.8	33.8	1.3	1.3	1.2	1.2	1.2	1.2	10.6
Romania	21.8	8.9	-49.2	14.6	6.6	-31.6	-28.2	13.8	43.8	-12.3	1.3	19.6	16.6	0.2	-21.0	10.5	-59.0
Russian Federation	11.5	11.1	-2.9	12.3	10.2	-12.8	-14.8	14.6	20.6	5.4	18.7	-7.5	5.6	9.1	0.7	6.6	-3.9
Slovakia	3.7	4.6	-30.7	14.8	16.8	-5.4	-15.0	-24.9	29.9	13.1	-10.6	10.7	14.3	-3.1	22.2	-9.8	22.9
Slovenia	NO	NO	*	*	*	*	26.4	-11.8	69.6	-10.5	-9.4	12.0	-19.7	-84.8	*	*	*
Spain	9.3	4.4	-10.4	10.0	2.4	-3.3	-7.8	9.4	-2.1	-10.5	-7.1	1.5	-9.0	4.1	-16.4	-12.6	-52.9
Sweden	2.6	0.8	5.3	-8.5	-4.0	-1.2	12.7	-12.3	-3.7	-25.0	-8.0	-2.2	-0.9	3.0	3.9	-46.5	-70.0
Switzerland	0.6	0.3	-0.8	-1.7	-3.3	-44.3	16.0	0.3	10.9	5.6	-6.5	-10.8	7.7	-27.7	24.4	-15.2	-52.1
Turkey	0.4	C	758.7	414.3	-7.1	-28.5	24.4	4.1	-1.9	-19.1	15.1	-5.8	2.6	-54.4	72.0	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	12.6	5.7	1.1	-5.2	1.8	-5.1	17.2	47.3	-8.1	-22.3	-37.3	9.4	13.5	-23.6	-12.9	0.3	-54.8
United States	64.4	70.1	-0.1	1.4	4.1	2.5	-1.6	-3.7	-2.7	-18.8	8.2	-6.0	-0.8	3.8	-2.1	19.0	8.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.5b

N_2O implied emission factors for nitric acid production – trend information

N_2O IEF (t/t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	0.006	0.002	0.7	7.7	-0.4	0.0	0.7	1.4	-1.0	-13.6	0.4	2.4	-69.0	0.2	-1.7	11.9	-68.6
Belarus	0.005	0.005	0	0	0	0	0	0	0	0	0	0	0	0.0	-0.2	0	-0.2
Belgium	0.008	0.004	0	0	-0.7	-1.0	-1.6	-1.3	0.5	-1.7	-5.9	-29.7	7.3	-2.8	-31.2	2.2	-54.2
Bulgaria	C	0.006	0	0	0	0	0	0	*	*	0	*	*	*	*	0	*
Canada	0.003	0.003	10.5	-3.6	5.1	-0.7	4.7	4.8	-1.2	6.5	-9.8	4.1	-11.9	8.2	-4.2	-4.2	-4.5
Croatia	0.008	0.008	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0	0
Czech Republic	0.007	0.004	-1.2	1.4	-6.8	9.4	-2.3	-3.8	2.5	-1.2	0.0	-12.9	13.2	-5.6	-11.1	-17.3	-34.4
Denmark	0.007	NO	0	0	0	0	0	0	0	0	0.0	0.0	0.0	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	0.010	0.008	-0.8	-1.4	0.0	-2.0	1.2	-2.4	1.6	-0.6	-0.7	-1.0	0.8	-6.1	-14.1	0.4	-20.1
France	0.007	0.005	4.3	-9.8	-9.3	8.8	2.0	2.8	-4.3	-3.2	-2.9	-8.4	-1.2	-9.0	0.3	-6.8	-29.5
Germany	0.006	0.006	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	0.007	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	0.014	0.006	-1.9	-1.7	-2.3	0.8	2.7	0.3	-2.0	-0.6	-1.0	1.7	-1.5	-16.0	-13.3	-38.5	-57.5
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	0.010	NO	2.2	0	0	0	0.0	0	0.0	-28.1	0	*	*	*	*	*	*
Italy	0.006	0.007	0.6	-0.1	3.4	-1.1	-0.6	-4.5	5.5	1.8	-19.4	13.1	38.7	0.6	-21.1	-5.8	9.1
Japan	0.004	0.003	-0.7	-1.1	1.9	-4.2	18.1	-4.9	1.9	-0.3	-2.6	10.2	3.3	-3.7	-20.1	-3.6	-8.0
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	0.007	0.007	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.1	0.1
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	0.005	0.000	-9.0	-5.0	-0.2	1.2	1.0	15.6	-10.9	-4.8	12.5	-13.1	7.7	6.4	-18.7	-99.9	-99.9
Poland	0.006	0.006	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	0.009	0.009	-1.0	-0.5	-0.5	0.4	0.3	1.3	0.3	0.9	-2.4	-0.5	3.1	-1.9	0.6	-1.1	-2.8
Russian Federation	0.002	0.002	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0
Slovakia	0.009	0.009	-8.0	3.8	4.3	0.3	-5.1	-7.5	-2.2	-0.8	2.8	-1.7	-1.0	2.2	7.8	4.0	0.7
Slovenia	NO	NO	*	*	*	*	0.0	0.0	2.8	-2.7	0	0	0	-6.5	*	*	*
Spain	0.007	0.007	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
Sweden	0.007	0.003	-0.3	-17.2	0.0	1.4	9.9	-8.5	-14.1	14.3	-1.3	-0.4	-0.3	0.0	0.9	-41.7	-55.0
Switzerland	0.005	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0.019	C	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	5.230	3.542	0.2	-1.6	0.1	-1.4	5.6	57.8	10.3	-4.5	-36.6	4.5	14.0	-23.9	1.6	-8.4	-32.3
United States	0.009	0.009	0.0	0	0	0	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.6a

N_2O emissions from adipic acid production - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	34.6	4.8	-6.7	-2.2	6.9	-13.8	-48.8	-65.5	-48.5	-10.6	55.6	-13.3	185.2	-14.4	-54.4	23.4	-86.1
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	190.1	28.9	2.3	-3.7	2.7	-4.2	-38.0	-60.7	-7.6	36.6	-10.0	-2.8	-8.8	-13.9	-43.6	36.5	-84.8
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	47.8	5.1	-2.1	4.6	2.8	-0.9	-44.2	-53.2	-29.6	51.0	-17.8	4.0	-71.6	29.3	1.2	2.1	-89.4
Germany	60.7	18.1	5.6	-9.9	6.3	-11.8	-67.7	-70.0	-27.5	165.6	4.3	-1.8	26.5	-31.5	-8.3	87.2	-70.1
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	14.8	2.5	10.5	15.7	-2.7	0.3	4.8	5.1	4.4	5.4	-1.7	-6.8	3.4	-8.5	-76.6	-45.0	-82.9
Japan	24.2	0.9	-9.7	-1.0	13.8	6.5	-13.7	-84.1	215.2	-82.4	-28.9	-6.2	84.0	-38.1	76.7	-70.5	-96.4
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	1.5	NO	-35.2	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	2.2	NO	-14.9	10.3	0.8	39.7	3.7	-19.7	24.1	-42.6	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	66.9	3.2	0.5	-10.5	-1.2	2.8	-1.6	-95.0	94.4	20.8	-62.1	-9.4	89.8	-16.1	-22.1	63.6	-95.2
United States	49.4	19.1	-2.3	14.4	-1.0	-39.2	-41.4	-8.1	10.4	-18.3	19.6	4.4	-6.6	0.0	0.0	0.0	-61.3

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.6b

N_2O implied emission factors for adipic acid production – trend information

N_2O IEF (t/t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Germany	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	0.30	0.03	0	0	0	0	0	0	0	0	0	0	-8.3	-5.2	-79.1	-45.0	-90.0
Japan	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	0.30	NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	0.30	NO	0	0	0	0	-0.1	0.2	0.0	-0.1	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	0.07	0.02	1.4	13.1	-2.0	-41.4	-40.8	-12.7	8.2	-9.4	8.4	0	-10.4	0	0	0	-71.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.7

Metal production - CO_2 (2007)

	Methods and EF used[a]		Iron and steel[b]							Aluminium production			
						Steel		Pig iron					
	Methods	EF	Key category	Share of national total	CO_2 IEF	Activity Data (production)	CO_2 IEF	Activity Data (production)	CO_2 IEF	Key category	Share of national total	Activity Data (production)	CO_2 IEF
				(%)	t/t	(kt)	t/t	(kt)	t/t		(%)	(kt)	t/t
IPCC default EF[c]					1.5-1.6								1.5-1.8
Australia	T1b	CS	L, T	1.4	0.8	6,600	NA	NO	NO	L	0.6	1,964	1.6
Austria	CS, T2	D, PS	L, T	6.2	0.3	7,578	0.1	5,888	0.8	T	-	NO	NO
Belarus	D, T1	D		0.0	IE, NO	IE	IE	IE	IE		-	NO	NO
Belgium			L, T	1.1	0.0	11,027	0.1	6,577	0.1		-	NO	NO
Bulgaria	D	CS	L	1.9	C	C	C	C	NO		-	17	NO
Canada	CS, T2	CS, D, OTH	L, T	0.8	0.2	15,572	0.0	8,579	0.6	L, T	0.7	3,083	1.7
Croatia	T1	D		0.0	0.0	76	0.0	NO	NO	T	-	NO	NO
Czech Republic	T1	D	L, T	5.3	0.4	6,211	1.3	5,282	IE		-	NO	NO
Denmark	NA	NA		-	NA, NO	NO	NO	NO	NO		-	NO	NO
Estonia	NA	NA		-	NA, NE	NE	NE	NE	NE		-	NO	NO
European Community	CR, CS, D, T1, T1a, T2, T3	CR, CS, D, PS	L, T	1.7	NE	NE	NE	NE	NE		0.1	NE	NE
Finland	CS, T1, T2, T3	CS, D	L, T	3.1	0.5	4,431	0.6	IE	IE		-	NO	NO
France	CR	CS, PS	L	0.5	0.1	19,380	0.1	12,426	0.1		0.1	427	1.7
Germany	CS, T2, T3	CS	L, T	4.8	0.4	48,550	1.0	31,150	IE		0.1	554	1.4
Greece	CR, CS	CR, PS		0.2	0.1	2,555	0.1	NO	NO		0.2	C	C
Hungary	CS	D		0.4	0.1	2,241	0.1	1,394	IE		-	NO	NO
Iceland	T1, T2	D		-	NA, NO	NO	NO	NO	NO	L, T	15.2	456	1.5
Ireland	NA	NA		-	NO	NO	NO	NO	NO		-	NO	NO
Italy	D	CR, CS, PS	T	0.3	0.0	31,506	0.0	11,111	0.1		0.1	180	1.6
Japan	CS	OTH		0.0	NE	NE	IE	NE	IE		-	7	IE
Latvia	T2	PS		0.1	0.1	131	0.1	NO	NO		-	NO	NO
Liechtenstein	NA	NA		-	NO	NO	NO	NO	NO		-	NO	NO
Lithuania	NA	NA		-	NO	NO	NO	NO	NO		-	NO	NO
Luxembourg	T2	CS	L, T	1.6	0.1	2,892	0.1	NO	NO		-	NO	NO
Monaco	NA	NA		-	NA, NO	NO	NO	NO	NO		-	NO	NO
Netherlands	T1a, T2	CS	L, T	0.8	0.2	7,364	0.0	NO	NO		0.2	297	1.5
New Zealand	T2	D, PS	L	2.2	C, IE, NO	C	C	IE	IE		0.8	353	1.6
Norway	T2, T3	CS, PS	L	0.7	3.2	NO	NO	111	3.2	L, T	4.0	1,363	1.6
Poland	CS, T1, T2, T3	CS, D	L, T	2.1	0.4	IE	IE	5,804	0.7		0.0	58	1.8
Portugal	D, T2	D, PS		0.0	0.0	1,463	0.0	IE	IE		-	NO	NO
Romania	D, T1b, T2	CS, D	L	5.5	0.4	6,270	0.1	3,947	2.0		0.3	C	C
Russian Federation	T1b, T2, T3	CS, D, PS	L, T	3.9	0.5	72,370	0.1	51,516	1.5		0.3	C	C
Slovakia	T2	CS, PS	L, T	1.1	0.1	4,785	0.1	4,012	IE		0.4	160	1.2
Slovenia	D, T2	D, PS		0.1	0.0	669	0.0	NO	NO	L, T	0.9	111	1.7
Spain	D, T2	CS, PS	L, T	0.5	0.1	18,979	0.1	4,142	0.1		0.2	405	1.7
Sweden	CS, D, T1	CS, PS	L, T	3.3	0.1	1,922	0.1	3,947	0.5		0.2	100	1.4
Switzerland	CS	CS		0.3	0.1	1,267	0.1	IE	NO	T	-	NO	NO
Turkey	NA	NA	T	-	IE, NA	C	IE	C	IE		-	NA	C
Ukraine	T1, T2, T3	CS, D	L, T	13.4	0.7	43,647	0.1	35,650	1.5		-	C	IE
United Kingdom	T2, T3	CS		0.3	0.1	3,056	0.0	10,960	IE		0.1	365	1.5
United States	T1, T2	CS, D	L, T	1.1	0.5	98,103	0.1	37,970	0.7		0.1	2,600	1.6

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category 2.C Metal production.

[b] CO_2 emission estimates from sinter (2.C.1.3) were reported by Belgium, European Community, Luxembourg (1990-1997), Poland, Spain and the United States; CO_2 emission estimates from coke (2.C.1.4) were reported by Australia, European Community, Finland, Poland, Portugal (1990-2001) and the United States.

[c] Source of default emission factors: IPCC Guidelines, volume 3, pages 2.28 and 2.33.

Table 2.8a

CO_2 emissions from iron and steel production - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	9,018	7,346	-2.6	2.9	-0.5	-0.2	-3.8	4.9	-5.6	-7.5	-2.6	-2.9	6.2	-21.2	0.5	1.8	-18.5
Austria	3,546	5,482	-1.0	14.9	-5.6	10.7	-4.9	-3.6	11.8	-1.0	10.8	-1.8	-1.7	12.3	4.0	5.6	54.6
Belarus	6	12	1.0	-15.5	19.1	37.7	15.7	2.7	12.0	-0.7	-0.3	5.4	13.3	8.0	10.7	4.0	114.6
Belgium	1,946	1,427	-13.5	8.2	-17.2	2.9	8.0	5.6	-10.7	-8.0	27.4	-16.1	-2.6	-7.2	4.1	-10.7	-26.7
Bulgaria	2,360	1,440	-26.1	9.4	-9.8	7.0	-14.8	-9.2	-12.6	-4.6	-6.2	25.7	-8.3	-8.5	12.5	-7.0	-39.0
Canada	7,060	6,033	17.8	4.6	-1.7	-2.5	1.8	2.7	0.0	-7.8	-2.3	-1.0	2.3	-2.5	10.4	-22.2	-14.6
Croatia	1	0	-30.0	-47.9	172.7	52.2	48.4	-26.4	-8.0	-18.4	-41.6	24.8	103.5	-14.3	9.3	-5.3	-55.4
Czech Republic	12,533	8,030	-29.9	5.2	-7.5	6.7	-11.7	-20.6	18.2	-6.7	4.1	10.1	12.1	-13.8	15.1	-4.7	-35.9
Denmark	28	NA, NO	0.0	15.1	-8.8	-0.5	20.5	2.0	-5.4	14.6	*	*	*	*	*	*	*
Estonia	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Communit	71,751	68,506	-4.9	0.3	-7.9	9.6	-4.0	-5.6	6.3	-3.8	1.8	0.2	2.8	-0.8	3.1	2.9	-4.5
Finland	1,861	2,460	0.7	-1.6	14.2	9.0	-2.8	0.8	-3.3	2.3	-4.8	7.8	3.8	-6.6	2.8	0.9	32.1
France	3,151	2,679	1.1	20.9	-28.8	13.2	-5.8	-5.8	-8.3	-6.2	23.7	7.6	15.8	-8.5	-14.9	-12.3	-15.0
Germany	48,326	46,244	-4.1	0.4	-7.6	11.9	-3.2	-6.7	10.6	-4.2	0.2	-1.3	2.6	-3.9	5.4	3.1	-4.3
Greece	93	230	-1.9	10.7	-13.8	25.4	9.1	-14.1	16.1	16.0	43.6	-7.5	15.6	21.5	0.2	3.5	147.8
Hungary	470	290	-34.9	-4.0	0.6	-9.1	7.4	-0.3	3.5	4.2	5.3	-3.1	-2.0	0.6	6.4	7.6	-38.2
Iceland	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	3,124	1,483	-5.1	-2.5	-19.8	-7.6	-9.2	-24.1	-16.9	0.7	-4.2	-4.5	13.1	19.7	1.9	-5.1	-52.5
Japan	356	212	-9.3	3.3	6.4	1.2	-23.8	-13.2	-2.4	-15.2	4.9	9.3	6.7	-6.2	-26.6	19.4	-40.5
Latvia	13	13	-32.1	-32.3	-21.4	129.5	6.3	-9.3	9.3	-4.6	-5.5	60.0	6.2	-4.3	1.7	1.6	-0.4
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	985	203	-4.8	-39.6	-10.5	-29.4	-52.2	5.0	-1.1	6.0	0.4	-2.2	0.3	0.3	37.2	-3.0	-79.3
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	2,514	1,647	-13.9	0.0	-3.5	16.8	-18.1	-8.5	-15.9	-1.2	7.4	10.6	-15.8	-8.6	16.3	18.0	-34.5
New Zealand	1,311	1,646	8.8	5.3	-2.7	-10.9	7.7	3.4	-1.0	4.9	-2.3	13.1	0.5	-2.8	-0.4	1.9	25.6
Norway	216	361	-9.2	3.3	7.0	-22.7	13.8	3.7	7.8	12.6	-1.9	10.4	3.5	-20.0	22.6	-1.3	67.1
Poland	10,889	8,342	-31.0	31.4	-14.8	10.2	-24.8	-6.7	37.2	-18.8	2.7	10.9	-3.8	62.9	23.2	-0.3	-23.4
Portugal	13	13	4.6	-14.1	-4.8	34.1	-3.4	8.8	9.7	-12.1	-55.6	9.5	37.0	-19.3	3.1	3.0	-2.6
Romania	15,831	8,441	-36.1	10.9	-6.2	7.0	-0.2	-39.1	0.9	-7.4	34.0	-11.0	4.4	8.2	19.4	3.8	-46.7
Russian Federation	100,961	85,023	-20.0	9.0	-6.4	0.4	-7.2	17.8	8.9	2.7	4.9	-1.2	3.9	-2.6	7.8	-0.6	-15.8
Slovakia	420	535	-11.2	-3.7	-9.0	5.2	0.9	10.3	2.9	6.6	9.4	10.5	0.9	-6.3	11.4	-5.0	27.4
Slovenia	40	28	-42.0	-3.9	-19.1	15.9	2.0	1.9	15.0	-0.5	5.6	9.4	18.6	2.2	-5.7	-2.0	-29.9
Spain	2,491	2,363	-3.8	-46.6	3.0	18.5	6.6	2.8	12.1	0.7	5.7	-13.7	6.8	17.8	2.4	0.4	-5.1
Sweden	1,813	2,179	2.5	-6.6	-0.2	-0.4	-3.1	-9.4	-2.6	16.0	-7.1	12.8	-5.4	18.1	-3.4	4.2	20.2
Switzerland	111	177	4.3	-41.8	3.1	6.9	11.6	46.0	11.3	2.5	7.4	1.6	7.3	-5.5	8.1	1.0	60.0
Turkey	770	IE, NA	-17.2	-16.3	34.1	30.5	-20.8	-31.2	3.5	-23.2	-34.6	13.2	17.1	-8.1	-8.2	*	*
Ukraine	80,459	58,586	-17.3	-9.3	0.8	17.4	2.6	5.7	8.8	0.9	1.1	2.1	2.1	-4.4	8.6	10.5	-27.2
United Kingdom	1,859	2,096	-34.0	22.6	18.1	-14.9	-12.1	20.7	-9.6	-34.5	-35.2	105.8	13.5	26.0	-16.7	33.4	12.8
United States	109,760	77,370	-9.2	3.8	-2.2	1.2	-6.2	-2.7	2.1	-12.1	-4.8	-2.8	-1.7	-3.7	4.0	1.7	-29.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.8b

CO_2 implied emission factors for iron and steel production (steel) - trend information

CO_2 IEF (t/t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	0.11	0.11	2.5	3.3	-0.5	-1.2	-0.8	-1.3	0.5	-1.6	1.6	-1.3	0.1	3.9	0.6	-0.2	-3.3
Belarus	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	0.09	0.05	-2.8	2.4	-19.6	3.6	6.9	-2.9	-1.3	9.2	-16.3	7.9	-13.8	-4.2	-5.0	-5.5	-40.3
Bulgaria	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	0.05	0.04	7.0	3.8	3.4	-5.6	-6.1	-2.5	-2.3	-8.7	3.0	-3.2	6.8	-6.2	2.7	2.5	-11.6
Croatia	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	1.24	1.29	-11.2	18.3	-16.9	14.3	-17.3	2.7	3.7	-8.1	0.6	6.0	8.1	-2.1	1.0	8.2	4.2
Denmark	0.05	NO	0.0	16.1	-1.4	-19.1	31.4	-4.3	19.6	0.2	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	0.65	0.55	-0.3	6.0	9.9	-3.6	-8.1	0.7	-6.6	6.4	-6.3	-9.5	2.4	-4.8	-3.6	15.1	-14.6
France	0.09	0.07	7.2	0.9	-10.3	-1.6	0.1	-2.4	-21.4	17.5	-0.4	43.1	-18.9	2.3	-0.8	-2.5	-16.6
Germany	1.10	0.95	-0.1	-2.5	-2.4	-1.1	-1.1	-2.3	0.3	-0.8	-0.2	-0.8	-0.9	0.1	-0.7	0.3	-13.4
Greece	0.09	0.09	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	-4.8	-2.2	-3.1
Hungary	0.13	0.13	0	0	0	0.7	-0.1	-0.2	0.3	-0.3	0.3	-0.1	-0.2	0.1	0.2	0.1	0.9
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	0.05	0.02	0.8	-8.1	-8.4	-9.2	-10.3	-22.7	-25.8	4.6	2.0	-2.7	-0.7	-3.8	3.7	1.1	-58.2
Japan	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	0.12	0.10	0.0	7.4	2.7	-4.5	-1.2	1.6	-0.6	1.3	0.9	-7.6	-0.5	0.7	0.6	-15.3	-17.3
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.12	0.07	0.0	-17.3	-4.8	-16.4	-19.3	0.0	0.0	0	0.0	0.0	0.0	21.1	7.4	-4.7	-39.0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	-27.7	33.5	36.1	-23.8	0.0	18.9	-0.9	-18.8	-4.3
New Zealand	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	0.01	0.01	-2.3	-3.6	-0.6	3.4	-2.7	0.3	0.9	-5.4	-22.1	-2.4	-6.3	4.3	-0.7	-0.6	-31.1
Romania	0.06	0.07	-2.8	9.3	4.0	1.8	5.7	-3.9	-3.0	0.3	11.9	-2.0	-6.6	-6.0	-4.0	22.0	23.7
Russian Federation	0.09	0.09	-4.9	4.9	0.5	0.7	1.5	0.3	-6.0	1.0	1.2	-1.2	-1.8	-2.5	-1.7	-2.9	4.8
Slovakia	0.12	0.11	0	0	0	0	0	0	0	0	0	3.5	0	-2.2	-2.4	-4.0	-5.2
Slovenia	0.02	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-2.8	12.5	-3.7	-12.8	-4.0	159.6
Spain	0.08	0.08	0.0	-12.1	1.0	1.9	-1.6	13.4	7.8	-1.2	0.9	-16.6	2.0	10.0	-10.5	9.2	-3.8
Sweden	0.08	0.10	-0.3	6.1	6.4	-9.7	3.6	0.7	-1.1	-1.1	3.4	-0.7	3.8	4.6	0.9	3.0	21.9
Switzerland	0.10	0.14	0	0	0	0	0	40	0	0	0	0	0	0	0	0	40.0
Turkey	1.60	IE	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
Ukraine	0.07	0.09	4.7	2.5	-0.2	-3.9	0.4	2.8	1.1	2.0	-1.1	3.5	0.9	-0.3	3.6	0.0	24.9
United Kingdom	0.01	0.01	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0	0.0	0.0	0.0	0	-9.1
United States	0.19	0.15	-8.7	-0.9	-2.6	-2.7	-2.8	-4.6	-0.9	7.1	-10.4	-2.9	-11.9	22.9	-0.3	-0.8	-23.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.9a

CO_2 emissions from aluminium production - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2,021	3,196	0.1	-2.3	11.8	-1.2	14.2	3.5	1.8	3.7	4.9	1.0	-0.8	1.0	-0.4	5.4	58.2
Austria	158	NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	2,715	5,097	15.9	-3.4	6.1	1.7	1.2	-0.7	-1.3	7.8	5.2	3.7	-7.8	14.6	5.2	0.1	87.8
Croatia	111	NO	-31.4	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	3,884	3,810	-4.0	4.1	1.7	1.8	4.9	4.7	2.8	2.3	1.4	-0.7	2.0	-0.2	-5.0	0.1	-1.9
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	534	710	-11.2	-2.9	3.0	6.4	4.6	9.1	-0.5	4.6	4.5	-4.9	-4.5	-1.4	6.6	-5.4	33.1
Germany	1,012	757	-6.7	14.2	0.3	-0.8	7.0	3.3	1.9	1.4	0.3	1.0	1.2	-3.4	-20.0	7.3	-25.2
Greece	232	257	1.8	-5.2	0.0	1.3	10.1	9.5	1.7	-0.3	1.2	1.5	0.2	-0.8	-0.2	0.6	10.9
Hungary	133	NO	-16.3	7.6	4.9	0.6	0.1	-0.2	0.6	2.2	2.0	-0.7	-2.0	-7.5	*	*	*
Iceland	136	680	2.0	1.9	4.1	20.4	40.5	30.8	-0.5	8.2	5.0	2.3	1.4	0.4	24.0	34.1	398.0
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	359	278	-6.0	1.3	3.7	1.8	-0.4	0.1	1.4	-1.2	1.5	0.5	2.1	0.2	-0.8	-7.6	-22.6
Japan	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	395	431	-3.1	-1.7	5.2	2.0	14.3	8.5	5.0	-2.8	-3.0	-0.5	16.7	1.1	-14.5	4.1	9.1
New Zealand	443	579	-1.4	-4.1	10.8	4.1	0.7	5.0	-0.5	-3.0	12.2	-2.2	1.3	0.2	-2.9	4.8	30.6
Norway	1,419	2,179	-1.2	1.1	0.7	8.4	7.2	1.4	1.6	0.8	3.1	9.2	10.3	4.3	0.8	-0.6	53.5
Poland	86	104	-0.4	12.6	-6.8	3.3	1.0	-5.9	2.7	4.3	7.7	-2.7	3.0	-9.1	4.4	3.1	20.8
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	398	394	-8.2	19.0	-0.3	16.7	6.7	-0.4	-0.5	3.8	3.8	6.1	8.7	11.0	7.0	2.6	-1.1
Russian Federation	5,114	6,848	-5.7	4.8	3.8	2.3	1.6	3.7	3.3	1.9	1.3	3.5	3.4	1.3	1.7	6.0	33.9
Slovakia	121	192	-1.6	-0.6	184.8	-1.1	-2.0	1.1	0.6	0.2	-0.2	1.6	40.6	-2.0	-14.8	-2.1	58.4
Slovenia	89	187	-16.6	4.2	-7.1	-0.3	-0.3	-0.3	1.1	-0.2	47.5	9.3	0.7	1.6	-2.9	-7.7	109.7
Spain	610	676	-0.4	7.0	-0.2	0.6	-1.1	0.9	0.8	1.7	1.9	0.4	1.2	2.0	3.0	-0.9	10.7
Sweden	133	140	0.2	7.9	6.1	-0.5	2.1	0.6	3.5	-4.2	5.1	0.0	-3.6	2.0	-0.8	-1.8	5.0
Switzerland	139	NO	-5.9	-14.2	28.3	2.7	18.3	6.6	3.2	2.1	10.7	9.2	2.3	-0.2	-73.2	*	*
Turkey	110	C	-8.3	2.9	1.0	-0.1	-0.3	-0.2	-0.3	0.4	1.2	1.0	1.4	-6.3	0.0	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	450	561	1.3	2.8	0.9	3.2	4.3	4.2	12.5	11.7	1.0	-0.5	4.9	2.8	-2.6	1.2	24.7
United States	6,831	4,251	1.7	2.2	5.8	0.5	2.9	1.5	-3.2	-28.0	2.5	0.3	-6.0	-2.1	-8.2	11.8	-37.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.9b

CO_2 implied emission factors for aluminium production - trend informatio

CO_2 IEF (t/t)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1.64	1.63	0	5.0	8.0	-5.7	0.3	-2.5	-1.5	1.0	3.7	-1.5	-1.9	0.3	-1.6	2.6	-0.5
Austria	1.80	NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	1.74	1.65	-0.7	0.2	1.1	-0.3	-0.8	-1.8	-0.1	-1.1	0.3	0.5	-0.6	2.3	0.0	-0.9	-4.8
Croatia	1.50	NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	1.64	1.66	1.1	2.4	-1.2	1.3	-0.7	1.6	2.8	0.1	3.3	-1.0	-4.9	-0.5	6.2	-1.7	1.5
Germany	1.37	1.37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	1.80	NO	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	*	*	*
Iceland	1.55	1.49	0.5	0.2	0.9	0.7	-0.1	2.4	-2.4	0.3	-2.9	1.3	-0.4	-0.1	3.6	-4.0	-4.0
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	1.55	1.55	0	0	0	0	0	0	0	0	0	0	0	1.5	-1.5	0	0
Japan	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	1.45	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	1.68	1.64	-1.8	-4.5	5.7	-4.7	-2.4	2.5	-0.8	-1.5	9.1	-2.3	-2.6	-0.1	0.9	-0.5	-2.3
Norway	1.63	1.60	-2.6	2.6	-0.1	0.7	-1.1	0.1	-0.6	0.1	-0.7	-0.9	-1.0	-1.1	1.3	0.8	-2.1
Poland	1.80	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	1.80	1.20	0	0	-16.7	0	0	0	0	0	0	0	0	-3.4	-14.4	-3.5	-33.5
Slovenia	2.01	1.69	-4.2	4.4	-3.9	-3.9	0.5	-1.8	0.0	-0.1	4.6	-1.5	-1.3	1.6	-1.3	-1.4	-16.1
Spain	1.72	1.67	-0.2	0.0	-0.2	1.1	-1.3	-0.1	0.4	-1.3	0.9	-1.9	-0.1	1.4	2.2	-2.0	-2.9
Sweden	1.38	1.40	-0.4	-3.7	2.3	-0.6	3.8	-2.7	1.8	-4.8	6.4	-0.6	-3.6	0.7	0.0	0.0	1.3
Switzerland	1.60	NO	0	0	0	0	0	0	0	0	0	0	0	0	0.8	*	*
Turkey	1.80	C	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	1.55	1.54	0.0	-0.1	0.0	-0.1	0.0	-0.1	-0.5	0	0	0	0	0	0	0	-0.9
United States	1.69	1.63	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	0.2	-0.1	0.3	1.0	-0.6	-0.4	-1.8	-3.1

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.10

Metal production - PFCs and SF_6 (2007)

	PFCs									SF_6							
	Methods and EF used[a]		Aluminium production - PFCs							Methods and EF used[b]		SF_6 used in magnesium foundries					
			Key category	Share of national total	Activity data (aluminium production)	IEF		Ratio				Key category	Share of national total	Activity data (production)		SF6 IEF	Actual SF_6 emissions[e]
	Methods	EF				CF_4	C_2F_6	IEF CF_4 / IEF C_2F_6		Methods	EF			Description	Value		
				(%)	(kt)	(kg/t)							(%)		(t)	(kg/t)	(t)
IPCC default EF[c]						0.31-1.7	0.04-0.17									1[d]	
Australia	T1c	CS	T	0.1	1,964	0.03	0.00	7.7		NA	NA		-	(SF6 consumption)	NO	NO	NO
Austria	NA	NA	T	-	NO	NO	NO	-		NA	NA	T	-	cast Magnesium [t]	3,600	NO	NO
Belarus	NA	NA		-	NO	NO	NO	-		NA	NA		-	NO	NO	NO	NO
Belgium	NA	NA		-	NO	NO	NO	-		NA	NA		-	Foundries,,,Activity Data,,,(t)	NO	NO	NO
Bulgaria	NA	NA		-	17	NO	NO	-		NA	NA		-		NO	NO	NO
Canada	CS	OTH	T	0.3	3,083	0.10	0.01	13.3		D, T3	D, PS		0.0	SF6 use	8	1,000	8.3
Croatia	NA	NA	T	-	NO	NO	NO	-		NA	NA		-		NO	NO	NO
Czech Republic	NA	NA		-	NO	NO	NO	-		NA	NA		-	NO	NO	NO	NO
Denmark	NA	NA		-	NO	NO	NO	-		NA	NA		-	(SF6 consumption)	NO	NO	NO
Estonia	NA	NA		-	NO	NO	NO	-		NA	NA		-	(Magnesium Foundries)	NO	NO	NO
European Community	CS, T2, T3	CS, D, PS	T	0.0	NE	NE	NE	-		CR, D, T2	CS, D, PS		0.0	Foundries,,,Activity Data,,,(t)	NE	NE	35.5
Finland	NA	NA		-	NO	NO	NO	-		NA	NA		-	(SF6 consumption)	C	C	C
France	CR	PS	T	0.1	427	0.11	0.03	4.1		CR	CS, PS		0.1	SF6 consumption	NA	NA	13.3
Germany	T3	CS	T	0.0	554	0.05	0.00	10.0		D	D		0.0	Consumption Mg-Production	15	1,000	15.2
Greece			T	0.0	C	C	C	-		NA	NA		-		NO	NO	NO
Hungary	NA	NA		-	NO	NO	NO	-		NA	NA		-		NO	NO	NO
Iceland	T2	D	L, T	6.3	456	0.08	0.01	7.8		NA	NA		-		NO	NO	NO
Ireland	NA	NA		-	NO	NO	NO	-		NA	NA		-	NO	NO	NO	NO
Italy	T2	D, PS	T	0.0	180	0.15	0.02	8.3		D	PS		0.0	consumption of SF6	2	1,000	2.3
Japan	T1b	CS		0.0	7	0.30	0.03	10.0		CS	CS		0.1	SF6 consumption	42	1,000	41.7
Latvia	NA	NA		-	NO	NO	NO	-		NA	NA		-		NO	NO	NO
Liechtenstein	NA	NA		-	NO	NO	NO	-		NA	NA		-	NO	NO	NO	NO
Lithuania	NA	NA		-	NO	NO	NO	-		NA	NA		-		NO	NO	NO
Luxembourg	NA	NA		-	NO	NO	NO	-		NA	NA		-	magnesium production	NO	NO	NO
Monaco	NA	NA		-	NO	NO	NO	-		NA	NA		-		NO	NO	NO
Netherlands	T2	PS	T	0.0	297	0.04	0.01	7.6		NA	NA		-		NO	NO	NO
New Zealand	T2	D	T	0.1	353	0.01	0.00	8.3		NA	NA		-	SF6 consumption	NO	NA	NA
Norway			L, T	1.5	1,363	0.08	0.01	10.6		NA	NA	T	-		NO	NO	NO
Poland	T1c	D		0.1	58	0.61	0.06	10.0		T1	D		0.0	production	55	1	0.1
Portugal	NA	NA		-	NO	NO	NO	-		NA	NA		-	(SF6 consumption)	NO	NO	NO
Romania	T1	D	T	0.4	C	C	C	-		NA	NA		-	(SF6 consumption)	NO	NO	NO
Russian Federation	T1b	D	L, T	0.8	C	C	C	-		NA	NA		-	(SF6 consumption)	NO	NO	NO
Slovakia	T1	D	T	0.1	160	0.02	0.00	10.0		NA	NA		-		NO	NO	NO
Slovenia	T3	PS	T	0.4	111	0.11	0.01	8.7		NA	NA		-		NO	NO	NO
Spain	T2	PS	T	0.0	405	0.04	0.00	16.8		NA	NA		-	NO	NO	NA	NA
Sweden	T2	CS	T	0.4	100	0.36	0.02	22.1		D	D	T	0.2	SF6 consumption	5	1,000	4.7
Switzerland	NA	NA	T	-	NO	NO	NO	-		T2	D		0.1	(specify)	C	C	2.6
Turkey	NA	NA		-	NA	C	C	-		NA	NA		-		NA	NA	NA
Ukraine	T1	D		-	C	IE	IE	-		NA	NA		-	Magnesium Foundries	NO	NO	NO
United Kingdom	CS	CS, PS		0.0	365	IE	IE	-		T2	PS		-	SF6 consumption	IE	IE	IE
United States	T2	CS	T	0.1	2,600	0.19	0.03	7.0		D	CS		0.0	Magnesium Production and Processing	C	C	124.4

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for PFCs for all subcategories within the category 2.C Metal production.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for SF_6 for all subcategories within the category 2.C Metal production.

[c] Source of default emission factors: IPCC good practice guidance, page 3.44.

[d] The default SF_6 emission factor is 1 kg/t magnesium produced or smelted.

[e] IPCC good practice guidance state that SF_6 emissions equal consumption (IPCC good practice, page 3.48).

Table 2.11

CF_4 emissions from aluminium production - trend information

CF_4 emissions (t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	513.3	65.3	0.1	-29.3	-7.9	-12.9	35.2	-31.4	13.0	40.0	-4.1	-2.5	1.8	4.5	-61.7	-14.8	-87.3
Austria	137.3	NO	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	905.4	303.6	6.3	-8.5	2.5	-1.9	1.7	-17.2	-7.4	-18.9	-14.3	1.3	0.9	8.1	-21.3	-15.1	-66.5
Croatia	126.2	NO	-31.4	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	1,701.9	185.8	-10.8	-4.8	-5.0	-3.1	-2.3	-4.9	-26.9	-14.8	46.8	-31.1	-32.6	-28.1	-14.3	-7.3	-89.1
Finland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	368.6	48.7	-13.9	-16.5	-14.2	2.9	27.2	32.8	-37.9	-23.3	99.1	-14.7	-42.6	-43.4	-15.9	-27.0	-86.8
Germany	335.5	26.0	-14.5	5.4	-5.3	-26.8	8.4	-26.2	-58.6	4.3	16.0	9.7	-5.7	-24.5	-44.1	2.7	-92.2
Greece	34.7	7.9	0.0	-11.4	-13.5	130.5	23.2	-35.4	12.6	-38.4	-2.8	-12.4	-8.2	-0.1	-0.2	-17.6	-77.2
Hungary	36.2	NO	-13.7	5.0	-4.5	-0.3	7.6	2.4	20.3	-5.8	1.6	-6.7	6.2	3.9	*	*	*
Iceland	54.6	36.6	-17.0	32.0	-57.3	227.5	118.7	-3.8	-26.6	-27.9	-20.9	-17.6	-35.5	-32.4	1177.0	-15.6	-33.0
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	198.3	26.3	-21.9	-12.6	-49.2	1.8	0.6	-0.7	37.8	17.8	-15.2	34.7	-41.2	15.0	-14.6	30.8	-86.7
Japan	NE	2.0	*	*	-5.5	-9.8	-16.9	-41.0	-38.9	-11.6	-5.7	2.5	-2.7	0.0	0.1	-0.9	*
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	277.3	13.2	-0.8	-3.0	11.5	6.8	-26.4	-25.8	4.7	-4.5	53.6	-77.7	-74.4	-17.4	-28.4	64.6	-95.3
New Zealand	83.8	5.3	-50.4	-23.1	60.5	-30.2	-70.0	25.0	-5.0	3.9	19.0	24.5	-12.8	-23.5	38.5	-51.0	-93.7
Norway	467.4	108.7	-10.9	-1.2	-8.8	-11.1	-8.8	-6.5	-5.0	0.6	7.4	-37.6	-2.8	-4.4	-12.5	6.5	-76.7
Poland	34.0	35.2	*	*	-6.8	3.3	1.0	-5.9	2.7	4.3	7.7	-2.7	3.0	-9.1	4.4	3.1	3.4
Portugal	NE	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	451.4	81.4	-8.2	19.0	-0.3	-78.7	6.7	-0.4	-0.5	3.8	3.8	6.1	8.7	11.0	7.0	2.6	-82.0
Russian Federation	2,063.2	2,258.5	-3.1	6.7	4.8	2.1	1.5	4.7	3.5	-0.6	-21.5	3.7	4.3	1.0	1.5	4.4	9.5
Slovakia	36.6	3.4	-1.6	-13.4	-69.7	-3.4	-33.1	-49.4	0.6	0.2	-0.2	83.0	-7.4	3.8	78.6	-30.5	-90.8
Slovenia	37.2	12.1	17.5	1.4	-16.2	-18.8	-23.2	-30.2	0	0	10.3	2.7	0.6	2.5	-6.7	-20.7	-67.4
Spain	122.2	17.6	-6.4	1.6	-4.9	2.2	-7.5	-9.9	-44.8	-48.6	5.0	-4.4	-3.6	-20.6	-6.4	-6.9	-85.6
Sweden	53.7	35.5	0.7	8.6	-13.3	-8.5	-2.8	9.7	-17.7	-2.3	9.0	0.4	0.3	2.6	-4.7	0.9	-33.8
Switzerland	13.3	NO	-15.6	-20.7	17.9	-6.3	6.8	-8.7	-31.2	2.1	10.7	9.2	-4.1	-6.9	-73.4	*	*
Turkey	NA	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	2,440.1	491.3	-16.1	-1.7	5.4	-11.6	-18.1	-1.6	1.8	-60.8	50.3	-28.2	-26.3	5.0	-16.6	50.6	-79.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.12

Production of halocarbons and SF_6 - HFCs, PFCs and SF_6 (2007)

	HFCs							PFCs		SF_6	
	Methods and EF used[a]		Production of HCFC-22					Methods and EF used[a]		Methods and EF used[a]	
	Methods	EF	Key category	Share of national total	Activity data (HCFC-22 production)		IEF	Methods	EF	Methods	EF
					CRF	International[b]	HFC-23				
				(%)	(t)		(kg/t)				
IPCC default Ef[c]							40.0				
Australia	NA	NA	T	-	NO	-14.8	NO	NA	NA	NA	NA
Austria	NA	NA		-	NO		NA	NA	NA	NA	NA
Belarus	NA	NA		-	NO		NO	NA	NA	NA	NA
Belgium				0	0	-1.2	NE				
Bulgaria	NA	NA		-	NO		NO	NA	NA	NA	NA
Canada	NA	NA	T	-	NA	85	NO	NA	NA	NA	NA
Croatia	NA	NA		-	NO		NO	NA	NA	NA	NA
Czech Republic	NA	NA		-	NO	0	NO	NA	NA	NA	NA
Denmark	NA	NA		-	NO	-0.4	NO	NA	NA	NA	NA
Estonia	NA	NA		-	NO		NO	NA	NA	NA	NA
European Community	CR, T2	PS	T	0.0	C, NA, NE, NO	3,864	C, NA, NE, NO	CR, T2	PS	NA	NA
Finland	NA	NA		-	NO		NO	NA	NA	NA	NA
France	CR	PS	T	0.0	C	1,585	C	CR	PS	NA	NA
Germany				-	NE	287	C	NA	NA	NA	NA
Greece	NA	NA	T	-	NO		NO	NA	NA	NA	NA
Hungary	NA	NA		-	NO		NO	NA	NA	NA	NA
Iceland	NA	NA		-	NO		NO	NA	NA	NA	NA
Ireland	NA	NA		-	NA		NA	NA	NA	NA	NA
Italy	CS	PS		-	C		NA	NA	NA	NA	NA
Japan	CS	CS		0.0	61,197	647	0.3				
Latvia	NA	NA		-	NO		NO	NA	NA	NA	NA
Liechtenstein	NA	NA		-	NO		NO	NA	NA	NA	NA
Lithuania	NA	NA		-	NO		NO	NA	NA	NA	NA
Luxembourg	NA	NA		-	NO		NO	NA	NA	NA	NA
Monaco	NA	NA		-	NO		NO	NA	NA	NA	NA
Netherlands	T1, T2	PS	T	0.1	C	787	C	NA	NA	NA	NA
New Zealand	NA	NA		-	NO		NO	NA	NA	NA	NA
Norway	NA	NA		-	NO	0	NO	NA	NA	NA	NA
Poland	NA	NA		-	NO		NO	NA	NA	NA	NA
Portugal	NA	NA		-	NO		NO	NA	NA	NA	NA
Romania	NA	NA		-	NO		NO	NA	NA	NA	NA
Russian Federation	D	D		0.6	31,145	281	40.0	D	D	D	CS
Slovakia	NA	NA		-	NO	-0.1	NO	NA	NA	NA	NA
Slovenia	NA	NA		-	NO		NO	NA	NA	NA	NA
Spain	T2	PS	T	0.1	C	9	C	NA	NA	NA	NA
Sweden	NA	NA		-	NO		NO	NA	NA	NA	NA
Switzerland	NA	NA		-	NO		NO	NA	NA	NA	NA
Turkey	NA	NA		-	NA		NA	NA	NA	NA	NA
Ukraine	NA	NA		-	NO		NO	NA	NA	NA	NA
United Kingdom[d]	T2	PS		-	IE	1,197	IE	T2	PS	NA	NA
United States	M, T2	CS, M	T	0.2	161,684	5,645	9.0	NA	NA	NA	NA

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for HFCs, PFCs and SF_6 in all subcategories within the category 2.E Production of halocarbons and SF_6.

[b] Source of data for HCFC production: Ozone secretariat, downloaded from web site 27 April 2009 from http://ozone.unep.org/Data_Reporting/Data_Access. Data are for total HCFC production in units of ODP (ozone depleting potential).

[c] Source of default emission factors: IPCC Guidelines, volume 3, page 2.3

[f] The United Kingdom reported aggregated HFC emissions from 2.E.1 Production and 2.E.2 Fugitive.

Table 2.13

HFC-23 emissions from production of halocarbons and SF6 - trend information

HFC-23 emissions (t)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	96.3	NA, NO	0	-11.4	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	65.6	NA, NO	8.9	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	834.2	97.8	-5.5	8.3	13.0	4.6	3.8	-15.3	-13.3	-46.2	-22.4	-6.6	-21.0	-15.4	-54.8	-24.3	-88.3
Finland	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	140.1	23.4	30.3	-76.2	73.8	-6.7	-37.9	98.7	-19.5	4.4	3.3	-34.4	33.9	17.3	15.8	-38.1	-83.3
Germany	C, NA, NO	C, NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	79.9	NO	18.4	51.7	15.2	5.7	10.1	15.2	-25.6	-14.8	0.4	-16.7	-4.2	-15.4	*	*	*
Hungary	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	30.0	NA, NO	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NE, NO	18.6	*	*	-8.1	-5.8	-6.2	2.3	-12.0	-24.7	-34.7	-17.6	-79.7	-54.5	41.8	-66.9	*
Latvia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	378.8	20.7	-22.1	-8.3	19.6	-2.6	16.1	-55.8	-29.6	-81.4	52.2	-39.4	-14.6	-44.7	43.1	-13.6	-94.5
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NE, NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	1,265.2	1,073.7	-2.0	13.7	-11.8	29.1	18.2	8.9	23.2	-3.4	-26.9	-14.2	49.0	7.0	-3.7	7.9	-15.1
Slovakia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	205.4	53.7	-9.3	34.1	9.0	14.4	-12.2	16.0	7.3	-54.1	-62.1	52.6	-57.2	-15.5	29.8	-20.3	-73.9
Sweden	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	IE, NA	IE, NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	3,113.0	1,453.0	-10.1	4.5	-5.5	-3.4	31.2	-23.0	-5.9	-31.0	6.9	-41.8	40.2	-8.1	-12.6	22.8	-53.3

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 2.14a

Consumption of halocarbons and SF_6 - HFCs (2007)

	Methods and EF used[a]		HFC-23			HFC-32			HFC-41			HFC-431-0mee			HFC-125		
	Methods	EF	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A
Australia	M	D	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	1,016.64	IE, NE, NO
Austria	CS	CS	22.23	22.24	1.00	10.36	4.43	2.34	NE, NO	NO	NE, NO	2.05	2.02	1.02	342.49	178.45	1.92
Belarus			NE, NO	2.35	NE, NO	NE, NO	0.10	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	7.42	NE, NO
Belgium			NE, NO	NA, NE, NO	NA, NE, NO	46.55	10.44	4.46	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	778.24	359.83	2.16
Bulgaria	NA	NA	NA, NE, NO	NE, NO	NA, NE, NO	2.78	NE, NO	NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	42.79	NE, NO	NE, NO
Canada	T2	D	8.40	7.85	1.07	83.05	39.26	2.12	IE, NA, NO	E, NA, NE, NO	IE, NA, NE, NO	1.50	1.88	0.80	1,410.55	932.42	1.51
Croatia	NA	NA	NO	NO	NO	9.49	NE, NO	NE, NO	NO	NO	NO	NO	NO	NO	142.03	NE, NO	NE, NO
Czech Republic	D, T1, T2	D	4.91	3.24	1.52	287.98	30.63	9.40	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	1,545.60	388.10	3.98
Denmark			2.81	2.81	1.00	19.27	10.01	1.93	NO	NO	NO	NO	NO	NO	261.89	206.07	1.27
Estonia	T2	CS	NA, NO	0.11	NA, NO	NA, NO	1.26	NA, NO	NO	NO	NO	NA, NO	NO	NA, NO	NA, NO	28.88	NA, NO
European Community			IE	1,738.07	IE	IE	593.59	IE	IE	E, NA, NE, NO	IE, NA, NE, NO	IE	312.39	IE	IE	8,419.91	IE
Finland	T1, T2	D	1.26	C, NA, NE, NO	C, NA, NE, NO	18.88	8.84	2.14	NO	NO	NO	NO	NO	NO	359.52	227.01	1.58
France			NA	33.96	NA	NA	117.88	NA	NA	NO	NA, NO	NA	310.38	NA	NA	2,211.96	NA
Germany	CS, T2	CS, D	2,686.57	217.05	12.38	869.62	40.20	21.63	IE, NO	NA, NO	IE, NA, NO	C, IE, NO	C, NO	C, IE, NO	16,423.30	1,764.28	9.31
Greece			NE	NE, NO	NE, NO	NE	41.84	NE	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	195.09	NE
Hungary	CS, D, T1	CS	1.59	0.65	2.43	14.36	9.39	1.53	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	270.28	168.36	1.61
Iceland	T1, T1a	D	NE, NO	NA, NE, NO	NA, NE, NO	0.20	0.11	1.80	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	27.75	20.45	1.36
Ireland	T1, T2, T3	CS	33.96	5.09	6.67	11.02	2.75	4.00	NO	NO	NO	NO	NO	NO	278.55	67.85	4.11
Italy	CS, T2	CS, D, PS	NA, NO	26.24	NA, NO	139.10	316.73	0.44	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	4,704.00	2,215.31	2.12
Japan	CS	CS	12,999.87	5.11	2,544.31	IE, NE	319.07	IE, NE	NO	E, NA, NE, NO	IE, NA, NE, NO	IE, NE, NO	, NA, NE, NO	IE, NA, NE, NO	IE, NE	1,374.51	IE, NE
Latvia	OTH, T2	D, OTH	NO	NO	NO	3.86	0.14	27.52	NO	NO	NO	NO	NO	NO	46.06	4.00	11.53
Liechtenstein	CS	CS	NO	NO	NO	NO	0.05	NO	NO	NO	NO	NO	NO	NO	NO	1.11	NO
Lithuania	T1, T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	0.03	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	9.08	NE, NO
Luxembourg	CS	CS	NE	0.59	NE	NE	0.89	NE	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	14.86	NE
Monaco	T1a	D	NO	NA, NE, NO	NA, NE, NO	0.21	0.20	1.09	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	1.11	1.03	1.08
Netherlands	T2	CS	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE	304.08	NE
New Zealand	T2	CS, D	NO	NA, NO	NA, NO	14.55	7.06	2.06	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	452.68	219.80	2.06
Norway	T2	CS	4.23	1.57	2.70	12.92	4.17	3.10	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	222.84	146.85	1.52
Poland	T1, T1a, T1b, T	D	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO
Portugal			0.37	3.37	0.11	55.10	37.52	1.47	NO	NO	NO	NO	NO	NO	1,099.24	220.64	4.98
Romania	T2	D	5.34	1.63	3.27	6.56	0.03	213.44	NE, NO	0.03	NE, NO	NE, NO	0.01	NE, NO	99.31	1.73	57.42
Russian Federation	T1, T1a, T2	D	NE	185.54	NE	NE	33.84	NE	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	708.99	NE
Slovakia	D	CS	0.09	0.93	0.10	15.95	4.59	3.47	NO	NO	NO	NO	NO	NO	151.86	55.46	2.74
Slovenia	T2	D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Spain			NE	1,425.92	NE	C, NE	NA, NO	C, NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	407.76	NE
Sweden	CS, T2	CS, D, PS	NA, NE, NO	0.80	NA, NE, NO	19.21	3.33	5.76	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	203.62	71.11	2.86
Switzerland	T1, T2	CS, D	4.61	4.00	1.15	34.20	6.52	5.24	NO	NO	NO	NO	NO	NO	616.68	132.59	4.65
Turkey			NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE
Ukraine	T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	OTH, T2, T3	CS, OTH	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO
United States	M, T2	CS, M	326.15	278.96	1.17	3,989.79	861.54	4.63	NE, NO	NA, NO	NA, NE, NO	C, IE, NE	C, NA, NO	IE, NA, NE, NO	36,086.29	14,708.75	2.45

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all HFCs for all subcategories within the category 2.F Consumption of halocarbons and SF_6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 2.14b

Consumption of halocarbons and SF_6 - HFCs (2007)

	Methods and EF used[a]		HFC-134			HFC-134a			HFC-152a			HFC-143			HFC-143a		
	Methods	EF	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A
			(Gg CO_2 equivalent)			(Gg CO_2 equivalent)			(Gg CO_2 equivalent)			(Gg CO_2 equivalent)			(Gg CO_2 equivalent)		
Australia	M	D	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	2,482.13	IE, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	1,414.63	IE, NE, NO
Austria	CS	CS	NE, NO	NO	NE, NO	495.12	368.48	1.34	41.13	54.91	0.75	NE, NO	NO	NE, NO	404.15	205.04	1.97
Belarus			NE, NO	2.45	NE, NO	NE, NO	6.14	NE, NO	NE, NO	0.00	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	12.62	NE, NO
Belgium			NE, NO	NA, NE, NO	NA, NE, NO	1,288.95	862.38	1.49	42.48	42.49	1.00	NE, NO	NA, NE, NO	NA, NE, NO	891.20	478.69	1.86
Bulgaria	NA	NA	NA, NE, NO	NE, NO	NA, NE, NO	86.87	NE, NO	NE, NO	67.37	NE, NO	NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	46.79	NE, NO	NE, NO
Canada	T2	D	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE, NO	2,682.92	2,875.48	0.93	20.07	26.75	0.75	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE, NO	1,551.08	1,054.06	1.47
Croatia	NA	NA	NO	NO	NO	86.47	NE, NO	NE, NO	0.00	NE, NO	NE, NO	NO	NO	NO	214.51	NE, NO	NE, NO
Czech Republic	D, T1, T2	D	NA, NE, NO	NO	NA, NE, NO	1,471.96	748.89	1.97	0.13	0.08	1.59	NA, NE, NO	NO	NA, NE, NO	502.36	407.06	1.23
Denmark			NO	NO	NO	227.93	371.44	0.61	1.82	0.42	4.34	NO	NO	NO	278.42	249.24	1.12
Estonia	T2	CS	NO	NO	NO	NA, NO	73.98	NA, NO	NA, NO	2.77	NA, NO	NO	NO	NO	NA, NO	36.93	NA, NO
European Community			IE	IE, NA, NE, NO	IE, NA, NE, NO	IE	24,428.93	IE	IE	304.33	IE	IE	IE, NA, NE, NO	IE, NA, NE, NO	IE	8,649.68	IE
Finland	T1, T2	D	NO	NO	NO	597.38	316.55	1.89	6.51	0.42	15.64	NO	NO	NO	411.35	274.00	1.50
France			NA	NO	NA, NO	NA	8,248.85	NA	NA	48.46	NA	NA	NO	NA, NO	NA	2,754.27	NA
Germany	CS, T2	CS, D	IE, NO	NA, NO	IE, NA, NO	48,513.00	6,453.53	7.52	6.21	72.40	0.09	IE, NO	NA, NO	IE, NA, NO	19,351.39	2,245.87	8.62
Greece			NE	NE, NO	NE, NO	NE	428.64	NE	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NA, NE, NO	NA, NE, NO
Hungary	CS, D, T1	CS	NO	NA, NO	NA, NO	394.72	238.38	1.66	2.37	2.37	1.00	NO	NA, NO	NA, NO	307.91	193.15	1.59
Iceland	T1, T1a	D	NE, NO	NA, NE, NO	NA, NE, NO	19.09	15.43	1.24	0.04	0.05	0.78	NE, NO	NA, NE, NO	NA, NE, NO	33.86	23.31	1.45
Ireland	T1, T2, T3	CS	NO	NO	NO	1,155.13	321.72	3.59	5.49	1.00	5.51	NO	NO	NO	342.56	82.79	4.14
Italy	CS, T2	CS, D, PS	NA, NO	NO	NA, NO	5,825.30	2,787.74	2.09	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	1,417.40	1,220.74	1.16
Japan	CS	CS	NO	IE, NA, NE, NO	IE, NA, NE, NO	12,440.87	3,653.07	3.41	IE, NE	201.45	IE, NE	NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	E, NA, NE, NO	IE, NA, NE, NO
Latvia	OTH, T2	D, OTH	NO	NO	NO	11.51	41.55	0.28	0.04	NO	NO	NO	NO	NO	NO	5.66	NO
Liechtenstein	CS	CS	NO	NO	NO	NO	2.31	NO	NO	NO	NO	NO	NO	NO	NO	1.00	NO
Lithuania	T1, T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	0.59	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	14.35	NE, NO
Luxembourg	CS	CS	NE	NA, NE, NO	NA, NE, NO	NE	53.64	NE	NE	0.61	NE	NE	NA, NE, NO	NA, NE, NO	NE	14.48	NE
Monaco	T1a	D	NO	NA, NE, NO	NA, NE, NO	3.86	0.41	9.37	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	0.26	0.26	1.00
Netherlands	T2	CS	NE, NO	NO	NE, NO	NE	543.01	NE	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE	440.80	NE
New Zealand	T2	CS, D	NO	NA, NO	NA, NO	190.77	344.60	0.55	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	584.98	283.86	2.06
Norway	T2	CS	NO	0.09	NO	736.84	251.84	2.93	21.55	4.89	4.41	0.52	0.51	1.00	204.36	152.02	1.34
Poland	T1, T1a, T1b, T	D	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	3,310.00	NA, NO	NA, NO	0.03	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO
Portugal			NO	NO	NO	819.07	565.89	1.45	15.44	40.54	0.38	NO	NO	NO	1,329.92	70.77	18.79
Romania	T2	D	NE, NO	0.87	NE, NO	375.34	9.70	38.70	NE, NO	NO	NE, NO	NE, NO	0.00	NE, NO	109.40	1.76	62.07
Russian Federation	T1, T1a, T2	D	NE	NA, NE, NO	NA, NE, NO	NE	1,823.93	NE	NE	7.00	NE	NE	NA, NE, NO	NA, NE, NO	NE	709.39	NE
Slovakia	D	CS	NO	NO	NO	221.13	106.29	2.08	0.09	0.17	0.53	NO	NO	NO	128.67	55.74	2.31
Slovenia	T2	D	NO	NA, NO	NA, NO	NE, NO	130.91	NE, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Spain			NE	NA, NO	NA, NE, NO	NE	2,489.66	NE	NE	12.48	NE	NE	NA, NO	NA, NE, NO	C, NE	569.07	C, NE
Sweden	CS, T2	CS, D, PS	NO	NA, NO	NA, NO	641.55	674.94	0.95	33.42	30.61	1.09	NO	NA, NO	NA, NO	157.10	74.26	2.12
Switzerland	T1, T2	CS, D	NO	NO	NO	841.30	358.51	2.35	3.31	2.35	1.41	NO	NO	NO	704.65	123.15	5.72
Turkey			NA, NE	NA	NA, NE	NA, NE	3,174.30	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE
Ukraine	T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	46.24	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	OTH, T2, T3	CS, OTH	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO
United States	M, T2	CS, M	NE, NO	C, NA, NO	C, NA, NE, NO	91,559.72	68,616.35	1.33	C, IE, NE	C, NA, NO	C, IE, NA, NE, NO	NE, NO	C, NA, NO	C, NA, NE, NO	27,613.51	16,726.54	1.65

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all HFCs for all subcategories within the category 2.F Consumption of halocarbons and SF6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 2.14c

Consumption of halocarbons and SF_6 - HFCs (2007)

	Methods and EF used[a]		HFC-227ea			HFC-236fa			HFC-245ca			Unspecified HFCs			Total		
	Methods	EF	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a)	Ratio P / A
Australia	M	D	IE, NE, NO	E, NA, NE, NO	E, NA, NE, NO	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NO	E, NA, NE, NO	7,745.19	204.21	37.93	7,745.19	5,117.61	1.51
Austria	CS	CS	23.20	7.68	3.02	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	32.16	17.38	1.85	1,372.88	860.63	1.60
Belarus			NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	31.08	NE, NO
Belgium			10.18	11.64	0.87	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE	0	NE	3,057.60	1,765.48	1.73
Bulgaria	NA	NA	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	246.61	NA, NE, NO	NA, NE, NO
Canada	T2	D	0.75	1.50	0.50	IE, NA, NO	E, NA, NE, NO	IE, NA, NE, NO	IE, NE, NO	IE, NA, NE, NO	E, NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	5,758.32	4,939.19	1.17
Croatia	NA	NA	IE, NO	NE, NO	IE, NE, NO	12.60	NE, NO	NE, NO	NO	NO	NO	NO	NO	NO	465.10	NA, NE, NO	NA, NE, NO
Czech Republic	D, T1, T2	D	0.96	1.07	0.90	70.88	26.55	2.67	NA, NE, NO	0.01	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	3,884.78	1,605.62	2.42
Denmark			NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	792.13	840.00	0.94
Estonia	T2	CS	NO	0.73	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	144.73	NA, NO
European Community			IE	591.44	IE	IE	17.11	IE	IE	IE, NA, NE, NO	E, NA, NE, NO	178,931.66	9,737.45	18.38	178,931.66	54,792.90	3.27
Finland	T1, T2	D	C, NO	NO	C, NO	NO	NO	NO	NO	NO	NO	0.95	77.11	0.01	1,395.84	903.92	1.54
France			NA	131.61	NA	NA	NO	NA, NO	NA	NO	NA, NO	NA	NO	NA, NO	NA	13,935.92	NA
Germany	CS, T2	CS, D	1,010.49	93.08	10.86	C, IE, NO	3.98	C, IE, NO	IE, NO	NA, NO	IE, NA, NO	IE, NO	1.69	IE, NO	88,860.59	10,892.07	8.16
Greece			NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	665.57	NE
Hungary	CS, D, T1	CS	2.37	2.20	1.08	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	993.60	614.50	1.62
Iceland	T1, T1a	D	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	80.94	59.36	1.36
Ireland	T1, T2, T3	CS	203.43	16.41	12.40	NO	NO	NO	NO	NO	NO	NO	NO	NO	2,030.15	497.62	4.08
Italy	CS, T2	CS, D, PS	NO	114.57	NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	12,085.80	6,681.31	1.81
Japan	CS	CS	NO	115.12	NO	NO	E, NA, NE, NO	IE, NA, NE, NO	NO	IE, NA, NE, NO	E, NA, NE, NO	32,598.65	7,044.21	4.63	58,039.39	12,712.54	4.57
Latvia	OTH, T2	D, OTH	NO	NA, NO	NA, NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	61.48	51.34	1.20
Liechtenstein	CS	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	4.47	18.20
Lithuania	T1, T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	24.05	NE, NO
Luxembourg	CS	CS	NE	1.98	NE	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	87.04	NE
Monaco	T1a	D	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	5.44	1.89	2.87
Netherlands	T2	CS	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE	182.83	NE	NE, NO	1,470.73	NE, NO
New Zealand	T2	CS, D	87.38	1.31	66.96	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1,330.37	856.63	1.55
Norway	T2	CS	4.22	3.57	1.18	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1,207.49	565.51	2.14
Poland	1, T1a, T1b, T	D	NA, NO	16.97	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	3,327.01	NA, NO
Portugal			NO	2.40	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	3,319.14	941.12	3.53
Romania	T2	D	NE, NO	0.30	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	595.94	16.07	37.09
Russian Federation	T1, T1a, T2	D	NE	51.76	NE	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	3,520.45	NE
Slovakia	D	CS	2.90	0.02	142.86	18.90	3.78	5.00	NO	NO	NO	NO	NO	NO	539.59	226.99	2.38
Slovenia	T2	D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NE, NO	130.91	NE, NO
Spain			C, NE	211.79	C, NE	NE	13.13	NE	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	C, NE	5,129.82	C, NE
Sweden	CS, T2	CS, D, PS	26.22	0.28	92.27	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	1,081.13	855.34	1.26
Switzerland	T1, T2	CS, D	3.07	2.39	1.29	NO	NO	NO	NO	NO	NO	NO	NO	NO	2,207.81	629.52	3.51
Turkey			NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	3,174.30	NA, NE
Ukraine	T2	CS	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	46.24	NE, NO
United Kingdom	OTH, T2, T3	CS, OTH	NA, NE, NO	IE, NA, NO	E, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	E, NA, NE, NO	64,936.39	9,433.25	6.88	64,936.39	9,433.25	6.88
United States	M, T2	CS, M	C, IE, NE	C, NA, NO	E, NA, NE, NO	1,517.86	856.67	1.77	C, NE, NO	C, NA, NO	C, NA, NE, NO	24,576.14	6,482.85	3.79	185,669.45	108,531.66	1.71

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all HFCs for all subcategories within the category 2.F Consumption of halocarbons and SF_6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 2.15a

Consumption of halocarbons and SF_6 - PFCs (2007)

	Methods and EF used[b]		CF_4			C_2F_6			C_3F_8			C_4F_{10}			c-C_4F_8		
	Methods	EF	P[c] 2.F(p) (Gg CO_2 equivalent)	A[d] 2.F(a)	Ratio P / A	P[c] 2.F(p) (Gg CO_2 equivalent)	A[d] 2.F(a)	Ratio P / A	P[c] 2.F(p) (Gg CO_2 equivalent)	A[d] 2.F(a)	Ratio P / A	P[c] 2.F(p) (Gg CO_2 equivalent)	A[d] 2.F(a)	A[d] Ratio P / A	P[c] 2.F(p) (Gg CO_2 equivalent)	A[d] 2.F(a)	Ratio P / A
Australia	NA	NA	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO
Austria	CS	CS	IE, NE, NO	IE, NO	IE, NE, NO	IE, NE, NO	IE, NO	IE, NE, NO	IE, NE, NO	IE, NO	IE, NE, NO	IE, NE, NO	0.16	IE, NE, NO	IE, NO	IE, NO	IE, NO
Belarus	NA	NA	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NA	NA	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	8.63	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO
Bulgaria	NA	NA	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO
Canada	T2	D	0.35	0.27	1.31	1.10	1.99	0.55	0.10	0.61	0.17	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO
Croatia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic			6.31	4.79	1.32	14.26	9.70	1.47	7.00	5.67	1.23	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO
Denmark			0.91	0.91	1.00	NO	NO	NO	0.63	10.54	0.06	NO	NO	NO	3.92	3.92	1.00
Estonia	T2	CS	NO	NO	NO	NO	NO	NO	NO	0.06	NO	NO	NO	NO	NO	NO	NO
European Community			IE	253.70	IE	IE	334.10	IE	IE	306.01	IE	IE	4.31	IE	IE	21.46	IE
Finland	T1, T2	D	C, NO	C, NA, NO	C, NA, NO	NO	NA, NO	NA, NO	-0.13	7.86	-0.02	NO	NO	NO	NO	C, NO	C, NO
France			NA	82.52	NA	NA	123.63	NA	NA	5.45	NA	NA	NO	NA, NO	NA	4.46	NA
Germany	T2	CS, D	IE, NO	76.78	IE, NO	238.46	96.81	2.46	349.97	159.08	2.20	IE, NO	NA, NO	IE, NA, NO	IE, NO	2.08	IE, NO
Greece	NA	NA	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO
Hungary	CS	CS	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	4.44	2.38	1.87	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Iceland	NA	NA	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO
Ireland	T1a	CS	31.14	21.97	1.42	200.72	102.26	1.96	NO	NO	NO	NO	NO	NO	19.92	6.35	3.14
Italy	CS	PS	141.29	71.52	1.98	54.91	11.40	4.82	1.47	0.09	15.80	NO	NO	NO	53.55	4.65	11.52
Japan			4,223.05	IE, NA, NE, NO	NO	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO
Latvia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Liechtenstein	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	T1a	D	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	0.06	0.06	1.00	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO
Netherlands	CS, T2	PS	C, NE	NO	C, NE, NO	C, NE	NO	C, NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO
New Zealand	T2	D	IE, NA, NO	NA, NO	IE, NA, NO	IE, NA, NO	NA, NO	IE, NA, NO	2.71	1.40	1.93	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Norway			NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	-0.07	0.04	-1.83	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Poland	T1	D	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	15.73	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO
Portugal	NA	NA	NO	NO	NO	0.06	NO	NO	5.66	NO	NO	NO	NO	NO	NO	NO	NO
Romania	T2	D	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO
Russian Federation	T1	D	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	101.62	NE
Slovakia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Slovenia	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Spain			NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	121.19	NE	NE	4.15	NE	NE	NA, NO	NA, NE, NO
Sweden	CS	CS, D	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	1.82	1.80	1.01	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Switzerland	T1, T2	CS, D	15.93	18.55	0.86	34.13	31.19	1.09	15.13	5.92	2.56	NO	NO	NO	1.57	2.70	0.58
Turkey	NA	NA	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE
Ukraine	NA	NA	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	T1, T2, T3	CS	IE, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO
United States	M, T2	CS, M	1,068.88	1,284.87	0.83	2,950.56	2,258.63	1.31	145.04	43.00	3.37	C, IE, NE, NO	C, NA, NO	IE, NA, NE, NO	719.67	57.35	12.55

[a] IInformation on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all PFCs for all subcategories within the category 2.F Consumption of halocarbons and SF_6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 2.15b

Consumption of halocarbons and SF_6 - PFCs (2007)

	Methods and EF used[a]		C_5F_{12}			C_6F_{14}			Unspecified PFCs			Total		
	Methods	EF	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a) (Gg CO_2 equivalent)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a) (Gg CO_2 equivalent)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a) (Gg CO_2 equivalent)	Ratio P / A	P[b] 2.F(p) (Gg CO_2 equivalent)	A[c] 2.F(a) (Gg CO_2 equivalent)	Ratio P / A
Australia	NA	NA	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO
Austria	CS	CS	NO	NO	NO	NO	NO	NO	451.77	182.55	2.47	451.77	182.71	2.47
Belarus	NA	NA	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NA, NE, NO	NA, NE, NO
Belgium	NA	NA	NO	NA, NE, NO	NA, NE, NO	NO	0	NO	NE	0	NE	8.63	NA, NE, NO	NA, NE, NO
Bulgaria	NA	NA	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
Canada	T2	D	NA, NO	0.01	NA, NO	1.45	1.46	1.00	NA, NO	NA, NE, NO	NA, NE, NO	3.01	4.34	0.69
Croatia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Czech Republic			NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	27.57	20.16	1.37
Denmark			NO	NO	NO	NO	NO	NO	NO	NO	NO	5.46	15.36	0.36
Estonia	T2	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.06	NO
European Community			IE	IE, NA, NE, NO	IE, NA, NE, NO	IE	183.52	IE	1,725.10	493.75	3.49	1,725.10	1,596.85	1.08
Finland	T1, T2	D	NO	NO	NO	NO	NO	NO	12.06	0.54	22.54	11.93	8.40	1.42
France			NA	NO	NA, NO	NA	183.52	NA	NA	NO	NA, NO	NA	399.59	NA
Germany	T2	CS, D	IE, NO	NA, NO	IE, NA, NO	IE, NO	NA, NO	IE, NA, NO	IE, NO	NA, NO	IE, NA, NO	588.43	334.75	1.76
Greece	NA	NA	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE	NA, NE, NO	NA, NE, NO
Hungary	CS	CS	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	4.44	2.38	1.87
Iceland	NA	NA	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO
Ireland	T1a	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	251.78	130.58	1.93
Italy	CS	PS	NO	NO	NO	NO	NO	NO	NO	NO	NO	251.21	87.67	2.87
Japan			IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	11,807.58	5,685.71	2.08	16,030.63	5,685.71	2.82
Latvia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Liechtenstein	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Lithuania	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Luxembourg	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Monaco	T1a	D	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	0.06	0.06	1.00
Netherlands	CS, T2	PS	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	C, NE	225.58	C, NE	C, NE, NO	225.58	C, NE, NO
New Zealand	T2	D	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	2.71	1.40	1.93
Norway			NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	-0.07	0.04	-1.83
Poland	T1	D	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	15.73	NA, NO
Portugal	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	5.72	NA, NO	NA, NO
Romania	T2	D	NE, NO	0.03	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	0.03	NE, NO
Russian Federation	T1	D	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	NA, NE, NO	NA, NE, NO	NE	101.62	NE
Slovakia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Slovenia	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Spain			NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	125.34	NE
Sweden	CS	CS, D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1.82	1.80	1.01
Switzerland	T1, T2	CS, D	NO	NO	NO	17.46	18.72	0.93	NO	NO	NO	84.22	77.08	1.09
Turkey	NA	NA	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE	NA, NE	NA	NA, NE
Ukraine	NA	NA	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NA, NE, NO	NA, NE, NO
United Kingdom	T1, T2, T3	CS	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	148.36	79.36	1.87	148.36	79.36	1.87
United States	M, T2	CS, M	C, IE, NE, NO	C, NA, NO	IE, NA, NE, NO	C, IE, NE, NO	C, NA, NO	IE, NA, NE, NO	IE, NE, NO	NA, NO	IE, NA, NE, NO	4,884.14	3,643.84	1.34

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all PFCs for all subcategories within the category 2.F Consumption of halocarbons and SF_6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 2.16

Consumption of halocarbons and SF_6 - SF_6 (2007)

	Methods and EF used[a]		SF_6		
	Methods	EF	P[b] 2.F(p)	A[c] 2.F(a)	Ratio P / A
			(Gg CO_2 equivalent)		
Australia	T2	CS	NE, NO	521.02	NE, NO
Austria	CS	CS	440.14	409.58	1.07
Belarus	D	D	NE, NO	2.27	NE, NO
Belgium			NE, NO	80.98	0.04
Bulgaria	D	D	NA, NE, NO	3.40	NA, NE, NO
Canada	T1	OTH	NE, NO	1,247.35	1.03
Croatia	T2	PS	NE, NO	16.69	NE, NO
Czech Republic	D, T3	D	133.84	75.85	1.76
Denmark			122.13	30.35	4.02
Estonia	T2, T3	CS	NA, NO	0.97	NA, NO
European Community	CS, OTH, T1, T2, T3	CS, D, OTH, PS	29,027,934.53	5,902.87	4,917.60
Finland	T1, T2, T3	OTH	134.01	22.59	5.93
France			NA	766.49	NA
Germany	CS	CS	86,318.16	2,894.75	29.82
Greece	CS	CS	NE	9.92	NE
Hungary	CS, D, T1	CS	268.11	171.65	1.56
Iceland	T1	CR, D	NE, NO	9.86	9.10
Ireland	T1, T1a	CS	117.65	73.20	1.61
Italy	CS, T3	CS, PS	1,985.85	373.66	5.31
Japan			36,717.57	2,118.45	17.33
Latvia	T2	D	NE, NO	8.70	NE, NO
Liechtenstein	CS	CS	4.14	0.12	34.61
Lithuania	T1	CS	NE, NO	0.84	NE, NO
Luxembourg	CS	CS	NE	3.94	NE
Monaco	D	D	0.12	0.08	1.49
Netherlands	CS, T2	D, PS	C, NE	213.95	C, NE
New Zealand	T2, T3	CS	16.97	14.70	1.15
Norway	T2	CS	NE, NO	76.24	3.28
Poland	T1	D	NA, NO	30.61	NA, NO
Portugal			28,937,652.30	8.04	3,599,209.48
Romania	T2	D	NE, NO	3.18	NE, NO
Russian Federation	T2	D	NE	125.89	NE
Slovakia	D	CS	79.43	17.44	4.56
Slovenia	T2	D	NE, NO	18.84	NE, NO
Spain	T2	D	NE	339.97	NE
Sweden	CS, D	CR, D, PS	259.60	37.26	6.97
Switzerland	T2	M	-38.64	113.27	-0.34
Turkey			NA, NE	952.11	NA, NE
Ukraine	NA	NA	NE, NO	NE, NO	NE, NO
United Kingdom	OTH, T3	CS, OTH	901.44	645.03	1.40
United States	T2, T3	CS, M	23,428.08	13,485.51	1.74

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for SF_6 for all subcategories within the category 2.F Consumption of halocarbons and SF6.

[b] P = Potential emissions

[c] A = Actual emissions

Table 3.1

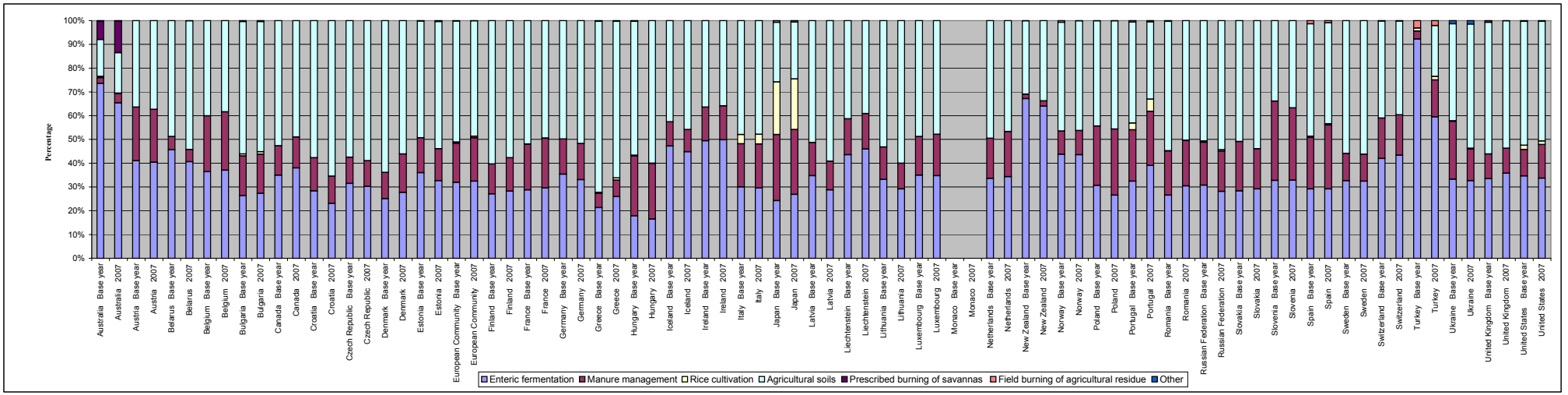
Solvent and other product use - CO_2 and N_2O (2007)

	Methods and EF used[a]		Key category (CO_2)	Methods and EF used[a]		Key category (N_2O)	Paint application		Degreasing and dry cleaning			
	CO_2			N_2O			CO_2		CO_2		N_2O	
	Methods	EF		Methods	EF		Share of national total (%)	CO_2 IEF (t/t)	Share of national total (%)	CO_2 IEF (t/t)	Share of national total (%)	N_2O IEF (t/t)
Australia	NA	NA		NA	NA		-	NA	-	NA	-	NA
Austria	CR, CS	CS		CS	D		0.1	1.16	0.0	1.46	-	NA
Belarus	NA	NA		T1	D		-	NA	-	NA	-	NA
Belgium	NA	NA					-	NA	-	NA	-	NA
Bulgaria	D	CS		D	CS		-	NE	-	NE	-	NA
Canada	NA	NA		T1	OTH		-	NA	-	NA	-	NA
Croatia	OTH	OTH	T	T1	D		0.1	1.15	0.0	NA	-	NE
Czech Republic	CR	CS		D	D		0.1	3.14	0.0	3.14	-	NA
Denmark	CS	CS		CS	CS		0.1	0.07	0.0	0.21	-	NA
Estonia	NA	NA		NA	NA		-	NA	-	NA	-	NA
European Community	CR, CS, D, M, T2	CR, CS, D, M, OTH, PS		CR, CS	CS, D		0.1	NE	0.0	NE	-	NA, NE, NO
Finland	T2	D		CS	CS		0.0	2.20	0.0	2.20	-	NO
France	CR	CS, PS		CR	CS		0.1	2.47	0.0	1.01	-	NA
Germany	CS	CS		CS	CS		0.1	NE	0.0	NE	-	NO
Greece	CR	CR		NA	NA		0.0	0.00	0.0	0.00	-	NE
Hungary	CS	CS		CS, T2	PS		0.1	C	0.0	0.05	-	NO
Iceland							0.1	0.00	0.0	3.12	-	NA
Ireland	CR, CS	CR		NA	NA		0.0	3.12	0.0	3.12	-	NA
Italy	CR, CS	CR, CS		CS	CS		0.1	0.74	0.0	2.38	-	NA
Japan	NA	NA		CS	OTH		-	NA	-	NE	-	NA
Latvia	CR	CR		CS	CS		0.2	1.04	0.1	0.00	-	NO
Liechtenstein	CS	CS		CS	CS		0.1	0.41	0.0	NA	-	NO
Lithuania	CR	D		NA	NA		0.2	3.12	0.0	3.12	-	NE
Luxembourg	M	M		CS	CS		0.0	1.48	0.0	1.51	-	NE
Monaco	NA	NA		NA	NA		-	NE	-	NE	-	NE
Netherlands	CS	CS		CS	CS		0.0	2.64	0.0	0.58	-	NO
New Zealand	NA	NA		D	D		-	NE	-	NE	-	NA
Norway	T2	CS		CS	CS		0.0	3.00	0.0	3.00	-	NA
Poland	CS	CS		CS	CS		0.1	3.12	0.0	3.12	-	NA
Portugal	D	CR, CS, OTH		NA	NA		0.1	0.46	0.0	3.12	-	NO
Romania	CR	CR		NA	NA		0.1	NE	0.0	NE	-	NE
Russian Federation	NA	NA		CS	CS		-	NE	-	NE	-	NE
Slovakia	NA	NA		D	CS		-	NE	-	NE	-	NE
Slovenia	NA	NA		D	D		-	NO	-	NE	-	NE
Spain	D	CR		CS	CS		0.1	0.59	0.0	2.81	-	NA
Sweden	CS	CS		CS	CS		0.1	1.50	0.0	0.58	-	NA
Switzerland	CS	CS	T	CS	CS		0.1	0.38	0.0	NA	-	NO
Turkey	NA	NA		NA	NA		-	NE	-	NE	-	NE
Ukraine	NA	NA		OTH	OTH		-	NE	-	NE	-	NE
United Kingdom	NA	NA		NA	NA		-	NE	-	NE	-	NE
United States	NA	NA		CS	D		-	NE	-	NE	-	NE

[a] Information on methods and emission factors in this table is as reported by Parties in the table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the Solvent and other product use sector.

Figure 4.1

Contribution of subsectors to total GHG emissions in the Agriculture sector [a]



[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.1

Enteric fermentation - CH_4 (2007)

	Key category	Share of national total	Methods and EF used[a]		Cattle					Sheep				Swine			
					Activity data (population size)			Dairy cattle	Non-dairy cattle	Activity data (population size)			CH_4 IEF	Activity data (population size)			CH_4 IEF
			Methods	EF	CRF	FAO[b]	Difference	CH_4 IEF		CRF	FAO[b]	Difference		CRF	FAO[b]	Difference	
		(%)			(thousands of head)		(%)	(kg/head/yr)		(thousands of head)		(%)	(kg/head/yr)	(thousands of head)		(%)	(kg/head/yr)
IPCC default EF[c]								56-118[d]	44-56[d]				8.0				1.5
Australia	L, T	10.6	CS, T1, T2	CS, D	26,873	28,400	5.7	113	72	85,323	100,000	17.2	6.9	2,506	2,430	-3.0	1.5
Austria	L, T	3.7	T1, T2	CS, D	2,000	1,998	-0.1	115	56	351	312	-11.1	8.0	3,286	3,213	-2.2	1.5
Belarus	L	7.8	T1	D	4,007	3,989	-0.4	99	56	53	52	-0.6	8.0	3,598	3,642	1.2	1.5
Belgium	L	2.7			2,649	2,640	-0.4	118	46	150	156	3.3	8.0	6,255	6,270	0.2	1.5
Bulgaria	L, T	1.8	T1	D	615	628	2.1	81	56	1,581	1,635	3.4	8.0	951	1,013	6.5	1.5
Canada	L, T	3.0	T1, T2	CS, D	15,020	14,155	-5.8	116	65	584	879	50.5	8.0	14,672	13,810	-5.9	1.5
Croatia	L, T	2.4	T1, T2	CS, D	468	483	3.2	96	66	646	680	5.3	5.0	1,348	1,489	10.5	1.0
Czech Republic	L, T	1.6	T1, T2	CS, D	1,392	1,390	-0.2	115	50	169	150	-11.2	8.0	2,830	2,741	-3.1	1.5
Denmark	L, T	4.1	T1	CS	1,566	1,579	0.8	131	40	87	230	163.5	17.2	13,723	13,599	-0.9	1.1
Estonia	L, T	2.0	T1, T2	CS, D	241	245	1.6	126	62	72	63	-13.4	8.0	379	346	-8.8	0.8
European Community	L, T	3.0	CR, CS, D, T1, T2	CS, D, OTH	76,122	75,884	-0.3	110	47	96,308	95,114	-1.2	7.0	122,253	124,205	1.6	1.3
Finland	L, T	2.0	CS, D, T1, T2	CS, D, OTH	927	929	0.3	122	IE	119	110	-7.8	8.4	1,448	1,435	-0.9	1.5
France	L, T	5.3	CR	CS, D	19,855	19,359	-2.5	118	49	8,928	8,499	-4.8	9.7	11,592	14,736	27.1	1.1
Germany	L	1.8	CS, D, T1, T2	CS, D	12,687	12,601	-0.7	92	42	2,538	2,444	-3.7	8.0	27,125	26,530	-2.2	1.2
Greece	L, T	2.2	T1, T2	CS, D	635	625	-1.6	96	56	8,823	8,803	-0.2	7.5	898	950	5.8	1.5
Hungary	L, T	2.1	D, T2	CS, D	710	702	-1.1	121	53	1,301	1,298	-0.2	8.0	4,037	3,987	-1.2	1.5
Iceland	L, T	5.3	T1	D, OTH	72	65	-9.4	100	48	636	450	-29.2	8.0	35	42	21.2	1.5
Ireland	L, T	12.8	T1, T2	CS, D	6,002	6,710	11.8	110	54	5,656	5,471	-3.3	5.8	1,581	1,588	0.4	0.4
Italy	L, T	2.0	T1, T2	CS, D	6,283	6,110	-2.8	113	46	8,237	8,227	-0.1	8.0	9,273	9,281	0.1	1.5
Japan		0.5	CS, T1	CS, D	4,003	4,398	9.9	108	66	10	10	3.5	4.1	9,750	9,759	0.1	1.1
Latvia	L, T	4.9	T1	D	399	377	-5.5	81	56	54	41	-23.5	8.0	414	417	0.7	1.5
Liechtenstein	L	4.3	T2	CS	5	6	16.8	121	81	4	3	-18.5	10.4	2	3	72.9	1.3
Lithuania	L, T	5.0	T1, T2	CS, D	771	839	8.8	102	43	50	37	-27.3	8.0	923	1,127	22.1	1.5
Luxembourg	L	1.9	T1, T2	CS, D, OTH	191.928	192	-0.2	127	55	9.339	9	-3.1	8.0	83.255	97	16.4	1.5
Monaco		-	NA	NA	NO			NO	NO	NO			NO	NO			NO
Netherlands	L, T	3.0	T1, T2	CS, D	3,763	3,730	-0.9	129	72	1,369	1,388	1.4	8.0	11,663	11,600	-0.5	1.5
New Zealand	L, T	30.9	T1, T2	CS, D	9,654	9,650	0.0	77	57	38,460	40,000	4.0	10.9	367	360	-1.8	1.5
Norway	L, T	3.4	T1, T2	CS, D	898	930	3.5	112	96	1,469	2,400	63.4	14.2	675	830	22.9	1.5
Poland	L, T	2.3	T1, T2	CS, D	5,696	5,696	0.0	96	48	332	332	0.0	8.1	18,129	18,129	0.0	1.5
Portugal	L, T	3.6	T2	CS	1,429	1,407	-1.5	119	56	3,395	3,549	4.5	9.6	2,337	2,295	-1.8	1.4
Romania	L	3.9	T1	D	2,787	2,934	5.3	92	56	8,469	7,678	-9.3	5.0	6,565	6,815	3.8	1.0
Russian Federation	L, T	1.7	CS, T1, T2	CS, D	21,466	21,466	0.0	100	53	17,508	17,508	0.0	8.0	15,793	15,793	0.0	1.5
Slovakia	L, T	2.0	T1, T2	CS, D	502	508	1.2	109	56	347	333	-4.2	10.3	952	1,105	16.1	1.5
Slovenia	L, T	3.3	T1, T2	CS, D	480	451	-5.9	97	52	131	132	0.3	8.0	543	575	6.0	1.6
Spain	L, T	3.1	CS, T1, T2	CS, D	6,527	6,456	-1.1	98	54	22,194	21,847	-1.6	8.7	26,563	26,034	-2.0	1.5
Sweden	L	4.2	CS, T1, T2	CS, D	1,560	1,561	0.1	132	54	509	505	-0.7	8.0	1,676	1,695	1.1	1.5
Switzerland	L, T	4.5	T2	CS	1,572	1,565	-0.4	111	81	444	450	1.4	10.4	1,573	1,650	4.9	1.4
Turkey	L, T	4.2	T1	D	11,067	10,871	-1.8	65	44	25,462	25,400	-0.2	5.0	2	1	-24.9	1.0
Ukraine	L, T	2.2	T1, T2, T3	CS, D, OTH	5,491	6,175	12.5	95	75	1,034	925	-10.6	8.2	7,020	8,055	14.7	1.5
United Kingdom	L	2.4	T1	CS, D	10,183	9,988	-1.9	105	43	33,946	33,582	-1.1	4.7	4,834	4,882	1.0	1.5
United States	L, T	2.0	M, T1, T2	CS, D, M	100,901	97,003	-3.9	115	54	6,165	6,165	0	8.0	65,022	61,860	-4.9	1.5

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation. For these Parties, information on implied emission factors refers to mature dairy cattle and mature non-dairy resp

[a] Information on methods and emission factors in this table is presented as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for the various livestock types within the category 4.A Enteric fermentation - CH_4.

[b] Source of international statistics: FAOSTAT data, downloaded on 27 April 2009 from http://faostat.fao.org/site/573/default.aspx. Time series population data on cattle, swine and sheep for Belarus, Croatia, Estonia, Lativia, Lithuania, Russian Federation, Slovenia and Ukraine are available from 1992; data for Czech Republic and Slovakia are available from 1993. Data for Luxembourg are included in the data of Belgium for 1990-1999.

[c] Source of default emission factors: IPCC Guidelines, volume 3, tables 4-3 and 4-4 (pages 4.10–4.11).

[d] For dairy and non-dairy cattle, IPCC default emission factors (in kg CH_4/head/year) are provided by regions as shown below (see footnote c for source reference).

	North America	Western Europe	Eastern Europe	Oceania	Asia
Dairy cattle	**118**	**100.0**	**81**	**68**	**56**
Non-dairy cattle	**47**	**48.0**	**56**	**53**	**44**

Table 4.2

CH_4 emissions from enteric fermentation - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	3,042	2,741	0.2	-0.8	-0.4	0.7	-0.1	1.1	0.5	0.7	-2.1	0.1	0.7	0.5	-1.7	-2.9	-9.9
Austria	179	153	-1.4	0.8	-1.4	-1.7	-0.8	-1.0	-0.6	-1.5	-1.8	-1.2	-0.3	-0.9	-0.4	0.4	-14.6
Belarus	478	296	-6.1	-6.8	-4.0	0.1	-1.7	-8.0	-2.8	-1.5	-1.8	-1.7	3.0	2.9	1.1	0.3	-38.1
Belgium	196	170	-0.7	1.1	-1.8	-1.3	-1.0	0.2	-0.9	0.9	-3.7	-3.3	-1.3	-1.3	-1.0	0.3	-13.5
Bulgaria	193	65	-7.9	-5.4	-3.4	-3.5	2.9	1.5	-4.4	-21.5	10.9	3.7	-0.8	-5.1	0.0	-3.0	-66.1
Canada	806	1,078	1.7	5.3	2.3	0.5	0.7	1.0	2.6	3.0	0.9	0.3	4.0	2.0	-2.7	-2.0	33.7
Croatia	58	38	-7.7	-3.3	-4.6	-1.1	-1.9	-0.2	-1.5	2.4	-1.6	4.8	3.0	5.4	2.8	-3.4	-35.5
Czech Republic	232	113	-5.8	-2.6	-0.9	-6.7	-6.2	2.1	-4.0	0.7	-2.3	-2.6	-3.2	0.2	-1.9	1.0	-51.3
Denmark	155	133	0.1	-0.5	-0.4	-3.5	-0.1	-4.1	-0.7	1.9	-2.4	-1.5	-3.4	-1.3	-2.0	6.3	-14.5
Estonia	52	21	-5.5	-11.5	-4.7	-2.5	-1.6	-13.9	-1.5	5.4	-5.6	1.3	1.1	0.9	0.4	-1.6	-60.1
European Community	6,373	5,738	-2.1	0.3	0.8	-1.1	-0.2	0.0	-1.2	-0.9	-1.8	-0.8	-1.3	-0.7	-0.8	0.4	-10.0
Finland	92	74	-4.0	-5.4	0.5	1.3	-2.2	-1.5	-0.2	-1.4	0.5	-1.7	-1.3	-0.7	0.1	-1.5	-19.1
France	1,482	1,357	-1.6	0.6	-0.1	-1.1	-0.7	-0.1	1.1	0.2	-1.3	-2.3	-1.8	0.0	-0.1	0.4	-8.4
Germany	1,038	809	-11.9	0.5	0.8	-3.3	-0.5	0.8	-1.3	1.9	-4.1	-1.0	-2.9	-0.2	-1.9	0.9	-22.1
Greece	137	140	-1.1	0.6	0.3	0.1	0.5	0.6	1.0	0.6	0.3	-1.0	-1.1	-0.4	0.4	0.4	1.8
Hungary	165	74	-6.2	-1.2	-0.7	-2.9	0.3	0.4	-0.4	-3.9	-2.2	-1.2	-3.1	-1.3	-3.8	-0.5	-54.9
Iceland	13	11	-2.2	-3.3	1.0	1.3	1.2	-0.9	-4.3	-0.3	-2.3	-1.7	-1.5	1.0	2.0	1.3	-11.5
Ireland	452	421	0.9	0.0	2.3	2.2	1.6	-2.4	-4.8	-1.0	-0.7	-0.9	-0.1	-0.6	-0.5	-3.3	-6.9
Italy	580	525	2.2	1.8	0.5	0.4	-0.7	1.1	-2.1	-6.8	-2.7	0.2	-2.0	0.1	-2.0	3.7	-9.5
Japan	365	339	1.4	-1.1	-0.7	-0.6	-0.5	-0.8	-0.4	-0.5	-0.4	-1.3	-1.1	-0.6	0.3	0.2	-7.2
Latvia	98	28	-3.4	-3.2	-5.8	-6.2	-8.8	-13.1	-2.4	4.5	0.4	-3.5	-1.6	2.8	-2.0	4.7	-71.2
Liechtenstein	0.47	0.49	-1.2	1.7	0.2	-1.3	0.3	-2.0	-3.9	8.8	-0.2	1.5	1.7	1.7	4.0	1.4	5.9
Lithuania	149	59	-6.4	-5.5	0.7	-1.6	-6.4	-5.7	-10.9	2.9	3.1	3.7	-1.8	-0.7	3.8	-4.5	-60.4
Luxembourg	13	12	-0.5	2.8	1.2	-1.9	-1.0	-0.1	-1.3	0.5	-2.8	-2.9	-1.0	-0.1	-1.0	3.6	-8.9
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	359	301	2.5	-0.1	-4.4	-1.2	-2.3	-0.2	-4.1	2.0	-5.7	0.7	0.3	-0.2	-0.2	1.1	-16.2
New Zealand	1,039	1,111	0.0	0.7	1.0	2.2	-2.2	1.4	3.1	0.6	-0.8	1.3	0.0	1.0	0.3	-2.8	6.9
Norway	93	89	1.4	1.0	0.3	-0.8	0.9	-0.3	-1.4	-1.8	-2.3	2.5	-2.5	0.6	-3.8	1.7	-3.8
Poland	748	443	-10.9	-5.2	-3.3	3.4	2.4	-5.4	-7.0	-3.9	-2.9	-0.6	-2.8	2.1	2.5	1.5	-40.8
Portugal	125	142	1.4	4.7	2.1	-3.4	3.6	3.2	1.6	-0.6	-0.2	-2.1	3.4	0.8	0.0	-1.9	13.6
Romania	506	283	-11.0	-2.1	-0.2	-2.3	-5.6	-5.6	-5.1	-1.7	3.1	1.9	-1.0	1.3	2.7	-1.6	-44.0
Russian Federation	4,537	1,804	-2.9	-9.9	-10.3	-9.5	-10.5	-12.2	0.5	2.1	-0.8	-2.8	-3.2	-5.9	-4.9	1.1	-60.2
Slovakia	95	45	-8.3	7.2	-6.3	-10.5	-5.7	-4.0	-1.2	2.6	-3.2	-4.3	-5.5	1.4	-1.5	0.2	-52.4
Slovenia	36	33	-7.1	3.9	-3.7	-5.8	2.0	3.6	5.5	-2.4	1.0	-4.6	-0.9	0.3	-0.1	4.5	-10.5
Spain	561	646	1.4	0.8	7.6	-1.0	2.4	1.2	0.5	2.6	0.6	1.5	-2.2	-1.5	-1.1	1.7	15.1
Sweden	146	130	-2.1	-3.0	-1.1	0.2	-2.9	-0.9	-2.5	-1.1	-0.6	-1.6	1.5	-1.1	0.0	-2.1	-10.5
Switzerland	118	110	0.3	0.7	-0.8	-1.8	-0.9	-0.7	-0.1	1.1	-0.8	-1.4	-1.0	0.6	0.6	0.8	-6.3
Turkey	812	744	3.3	-2.3	-0.1	-6.7	-1.9	0.4	-3.7	-2.6	-6.6	0.1	1.8	3.6	3.3	8.5	-8.3
Ukraine	1,645	447	-3.3	-11.3	-11.7	-14.8	-3.4	-13.4	-10.1	2.2	0.4	-14.3	-7.1	-4.4	-2.8	-10.4	-72.8
United Kingdom	876	741	-1.5	-1.1	0.9	-1.3	-0.3	-0.1	-3.3	-6.1	-0.9	0.4	0.2	-2.3	-0.3	-1.9	-15.4
United States	6,342	6,618	0.2	2.2	-1.7	-1.9	-1.0	-0.5	-1.5	-0.6	0.3	0.4	-0.6	1.7	1.6	0.6	4.3

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.3a

CH_4 emissions from enteric fermentation: dairy cattle - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	275	301	-0.8	4.0	3.5	4.3	4.8	2.9	1.9	-0.2	-1.3	-1.7	-0.9	-2.7	-4.1	-7.0	9.4
Austria	88	60	-2.9	-11.2	-0.4	4.2	2.1	-3.4	-9.7	-2.3	-0.1	-4.5	-2.8	0.2	-0.5	0.2	-31.7
Belarus	205	145	-4.3	-4.3	-4.4	0.6	-1.1	-5.5	-3.0	0.1	-2.9	-2.2	2.6	3.3	-0.3	-1.7	-29.5
Belgium	83	61	-4.8	0.2	-4.0	-2.1	1.1	-0.7	-0.6	1.1	-2.4	-2.2	-2.5	-2.2	-1.6	0.8	-26.7
Bulgaria	51	28	-2.7	-6.4	1.0	2.4	8.7	5.4	-0.6	-19.7	6.6	-0.8	1.5	-1.9	-2.6	-1.7	-45.4
Canada	131	115	-3.0	1.1	1.5	-0.1	-2.7	5.1	-1.6	-2.5	0.8	-2.2	-0.6	-0.6	-1.0	-2.7	-12.1
Croatia	37	23	-6.4	-1.6	-4.8	-1.7	-1.9	-2.3	-1.5	-0.4	-0.9	2.8	-8.6	10.2	3.7	-2.5	-38.2
Czech Republic	119	65	-7.2	-3.8	-0.7	-8.7	-3.9	2.9	-2.7	0.0	-0.8	-1.9	-2.9	3.8	-1.3	0.5	-45.1
Denmark	88	71	-0.7	0.0	-1.1	-4.6	0.1	-5.0	-1.1	-0.1	0.0	-0.5	-3.9	1.6	-3.9	2.5	-18.9
Estonia	27	13	-5.8	-11.3	-2.4	0	0.8	-15.1	0.1	4.7	-11.0	1.5	3.4	-0.5	-0.3	-4.4	-52.9
European Community	2,409	1,976	-4.5	-0.6	-0.8	-1.3	-0.6	-0.1	-2.3	0.3	-0.9	-0.9	-1.5	-0.3	-1.7	-0.3	-18.0
Finland	48	36	-8.2	-3.1	-1.2	1.7	-1.5	-1.2	1.0	-0.9	-0.2	-3.0	-1.3	-1.2	-1.7	-2.7	-23.9
France	556	454	-4.2	-0.8	-1.6	-1.6	-0.8	-0.4	0.1	-0.2	0.6	-2.3	-1.4	0.4	-2.1	-0.3	-18.3
Germany	457	376	-9.7	0.5	0.1	-3.0	-2.2	0.7	-2.3	1.7	-2.5	0.8	-1.6	0.2	-3.2	1.2	-17.7
Greece	20	21	-1.2	0.4	-0.3	-0.6	0.1	-0.5	0.5	0.9	2.3	-0.5	-2.1	0.1	0.6	0.7	4.1
Hungary	63	32	-8.7	-1.5	0.8	-1.0	0.2	0.8	1.2	-2.2	-6.4	-4.4	-5.8	-2.0	-7.3	-1.8	-48.9
Iceland	3	3	-1.9	-0.3	-1.9	-1.2	-1.0	-3.2	-4.3	-3.1	-2.8	-2.4	-2.0	0.6	3.9	2.1	-19.2
Ireland	137	120	-1.3	-0.3	0.4	-0.3	-0.8	-1.0	-1.5	-0.2	-0.5	-0.7	0.2	-2.9	0.6	-1.2	-12.5
Italy	245	208	-6.7	4.3	1.5	0.8	1.5	0.3	-3.7	-0.1	-4.0	0.1	-1.8	1.5	-0.8	0.9	-15.1
Japan	192	159	0.5	-1.1	-0.6	-1.2	-1.5	-1.9	-1.3	-0.8	-0.5	-1.4	-1.6	-1.5	-1.4	-1.2	-17.5
Latvia	43	15	-0.7	-6.4	-5.8	-4.4	-8.0	-14.9	-0.7	2.2	-1.9	-9.3	0.1	-0.5	-1.7	-1.1	-66.4
Liechtenstein	0.32	0.31	-0.1	-0.6	0.5	0.2	0.6	-0.5	-4.3	10.8	-2.4	-0.4	-1.7	0.4	3.7	0.1	-0.8
Lithuania	76	40	-4.0	-3.7	1.7	0.1	-5.8	-9.7	-6.7	3.4	1.4	1.2	-1.5	-2.6	-2.4	2.6	-47.3
Luxembourg	6	5	-5.3	1.1	-0.9	-2.2	-0.3	-0.8	-2.4	0.3	-0.6	-2.2	-0.6	-0.5	-1.0	2.8	-18.4
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	207	182	-0.7	0.7	-4.5	-1.5	1.2	0.4	-4.6	4.1	-5.0	2.1	0.7	-1.3	0.2	0.5	-12.1
New Zealand	239	406	2.9	6.2	5.5	3.0	0.0	3.0	8.3	6.7	4.8	2.7	-1.1	-0.1	1.2	-0.3	70.2
Norway	46	35	-1.5	-0.1	1.0	-2.4	-1.8	0.7	-6.5	-2.3	-1.0	-1.2	-2.1	-2.8	-1.9	-1.4	-23.5
Poland	445	267	-8.4	-7.7	-2.4	1.8	1.4	-4.0	-8.4	-1.5	-4.2	1.3	-3.0	0.6	1.4	0.3	-39.9
Portugal	37	37	-1.9	3.4	1.5	0.6	0.9	7.2	-1.0	-1.2	0.4	-4.9	0.1	2.8	-1.4	-3.6	-0.8
Romania	154	144	0.0	2.8	0.0	-2.4	-2.7	-2.5	1.1	1.2	1.1	2.3	-3.5	2.0	2.8	-4.9	-6.5
Russian Federation	2,094	941	-2.9	-6.8	-7.2	-6.2	-8.6	-9.7	0.8	1.6	-3.5	-4.5	-3.9	-6.6	-6.4	-1.1	-55.0
Slovakia	40	24	-6.3	1.3	-3.3	-6.6	-4.1	-2.4	1.2	-1.8	2.9	-4.2	-5.4	1.8	-1.3	1.2	-41.5
Slovenia	20	11	-6.9	0.5	-19.3	-4.0	-0.3	2.4	-4.5	-2.5	4.7	-7.1	1.7	-8.0	-5.6	3.5	-44.9
Spain	116	90	4.0	-2.1	1.2	-2.0	0.8	-1.5	-3.2	1.7	1.7	-2.3	-2.5	-2.0	-4.5	-2.4	-22.7
Sweden	69	49	-8.0	-3.8	-5.1	1.7	-4.5	0.5	-4.8	-0.7	-0.1	-3.1	1.0	-2.3	0.1	-4.2	-29.5
Switzerland	81	68	0.8	0.4	-0.1	-1.3	0.1	-6.9	-1.3	0.6	-1.5	-2.6	-1.9	0.0	-0.4	0.2	-16.0
Turkey	57	276	23.8	12.6	5.5	-4.5	1.0	2.8	1.3	2.7	0.3	4.3	8.7	11.6	17.7	77.8	386.6
Ukraine	944	314	-2.3	-8.1	-9.2	-11.9	-3.1	-11.9	-8.3	1.4	-0.6	-12.1	-5.9	-6.4	-4.4	-9.5	-66.7
United Kingdom	251	205	-2.9	-3.0	0.3	-1.5	-2.2	1.1	-3.3	-2.5	2.6	-0.6	-2.7	-1.4	-0.7	-3.3	-18.1
United States	1,563	1,521	0.1	0.3	-5.0	-0.1	-0.4	0.9	1.3	-0.3	0.5	0.8	-1.2	2.1	2.0	1.6	-2.7

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation. For these Parties, emissions from mature dairy cattle are included in this table.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.3b

CH_4 implied emission factors for enteric fermentation: dairy cattle - trend information

CH_4 IEF (kg/head/yr)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	107	113	0.7	0.5	0.1	0.3	0.2	0.9	0.4	0.7	-0.5	-0.1	-0.3	0.2	0.4	-0.5	5.7
Austria	98	115	0.2	1.9	0.9	0.9	0.9	0.9	1.5	1.5	1.4	0.8	0.8	0.8	0.8	0.8	17.8
Belarus	87	99	-2.3	-2.4	0.1	2.8	1.6	-2.5	-0.9	3.6	1.0	1.2	5.4	6.5	3.6	1.5	14.2
Belgium	99	118	0.2	0.7	1.3	1.3	-0.1	1.1	1.6	0.3	1.2	0.6	0.5	1.4	1.3	2.7	19.7
Bulgaria	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	95	116	0.7	0.3	1.7	1.0	1.1	7.7	2.6	-1.3	1.2	-0.5	0.0	1.4	1.3	-0.5	22.0
Croatia	78	96	-2.3	1.2	2.7	1.8	1.7	-0.4	0.9	2.6	1.8	1.1	1.1	5.5	3.8	0	23.4
Czech Republic	96	115	-4.0	4.0	1.5	-2.3	4.3	3.7	1.6	0.7	1.7	-0.9	0.0	3.6	0.5	0.3	20.1
Denmark	117	131	0.9	-0.5	-0.8	-0.2	0.3	-0.7	-0.4	1.8	2.3	1.7	1.7	1.5	-1.4	3.4	12.0
Estonia	98	126	0	1.1	5.5	2.3	6.6	-2.8	5.8	6.6	-1.0	0.4	3.7	2.7	3.8	0.6	28.4
European Community	92	110	2.0	1.3	0.2	1.2	0.7	1.2	1.0	1.0	1.2	1.0	0.8	1.3	0.6	1.1	19.9
Finland	97	122	0.9	1.3	0.4	2.0	0.5	1.6	3.3	1.6	1.8	1.1	1.6	0.5	1.3	1.6	25.9
France	105	118	1.2	1.2	0.4	0.9	0.5	0.6	0.5	-0.3	1.1	0.0	0.6	1.6	-0.1	0.5	12.6
Germany	72	92	1.8	1.4	0.8	0.2	1.7	2.1	1.8	2.2	0.2	2.1	0.4	1.4	0.5	1.4	28.5
Greece	81	96	0.9	1.5	0.4	0.1	0.6	-0.4	0.9	0.3	2.1	0.2	-0.4	1.6	1.3	1.2	18.8
Hungary	108	121	-1.4	1.2	-0.1	1.2	1.8	-0.1	-0.1	1.1	2.3	-0.1	0.5	1.1	1.1	1.0	11.8
Iceland	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	102	110	0.2	1.0	1.4	0.1	0.4	-0.7	0.6	1.6	-0.1	1.0	-0.4	-1.7	2.4	0.1	8.0
Italy	93	113	5.3	0.9	1.5	0.9	-0.3	-0.1	-0.9	-0.7	4.3	0.0	2.2	1.3	0.3	0.0	22.0
Japan	98	108	0.3	0.9	0.9	0.7	0.8	0.6	0.4	0.1	0.2	0.1	0.1	0.6	1.1	0.9	9.7
Latvia	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	111	121	0.2	0.7	0.1	1.3	0.9	0.5	1.5	2.4	0.6	0.3	1.7	-0.8	-0.3	-0.1	9.1
Lithuania	91	102	-2.8	1.0	1.0	1.3	2.1	-1.8	5.2	2.6	1.1	0.1	1.7	1.4	1.8	3.4	12.1
Luxembourg	106	127	0.2	1.9	0.4	1.3	0.5	1.1	1.6	1.4	1.2	1.3	1.2	0.9	0.8	-0.9	20.0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	110	129	0.7	0.1	-2.0	3.1	0.0	1.8	0.8	1.7	-1.5	2.6	1.2	1.2	1.1	0.9	16.8
New Zealand	69	77	3.3	-0.3	3.6	0.8	-2.0	3.7	1.7	0.5	-0.9	3.9	-2.1	1.2	-0.4	-2.0	11.3
Norway	135	112	-2.2	-0.7	-0.4	-2.4	-2.8	1.3	-5.0	1.7	2.8	-2.4	-1.0	-4.3	2.2	-3.6	-17.0
Poland	93	96	-1.6	-0.4	0.9	0.9	-0.1	-0.5	1.1	1.6	0.2	0.5	0.6	0.7	0.3	1.7	3.6
Portugal	95	119	-0.3	3.1	2.4	0.8	2.0	9.0	1.0	2.0	2.0	-2.4	0.1	4.6	0.8	-0.3	25.4
Romania	71	92	2.9	2.3	0.8	0.5	-0.4	-0.5	-1.6	1.2	1.6	1.6	4.4	-1.7	1.9	-0.8	29.4
Russian Federation	101	100	-1.8	0.4	-2.1	3.1	-0.2	-2.6	3.3	5.5	0.0	-0.8	1.9	1.0	0.6	0.3	-0.6
Slovakia	74	109	2.7	2.4	2.4	1.1	4.5	1.2	2.3	2.7	2.7	1.3	0.3	2.8	3.6	2.6	48.8
Slovenia	86	97	2.0	0.7	2.8	0.6	0.5	0.7	1.5	0.7	1.5	-0.5	-0.8	2.5	0.9	0.1	12.5
Spain	72	98	6.8	4.1	-2.4	0.4	0.6	4.4	3.0	1.8	-0.3	2.8	1.7	1.9	2.0	2.3	35.4
Sweden	120	132	0.3	1.6	-1.9	1.2	-0.5	0.5	-0.2	1.7	0.1	0.3	0.7	0.4	1.4	0.5	9.8
Switzerland	102	111	0.8	0.4	-0.3	1.4	0.9	0.4	0.8	0.6	0.2	0.4	0.9	0.1	0	0.8	8.7
Turkey	56	65	0	0	0	0	0	0	0	0	0	0	0	0	0	15.7	15.7
Ukraine	96	95	-1.1	-2.7	-0.4	-0.3	4.2	-4.3	1.2	2.6	3.9	-2.3	2.5	2.1	4.0	-2.5	-0.2
United Kingdom	88	105	-0.1	1.2	0.9	2.9	0.0	0.4	1.0	1.1	3.7	0.9	0.1	1.8	-0.8	2.2	19.3
United States	111	115	1.3	0.8	-3.6	1.2	0.7	0.7	1.0	0.5	0.2	1.0	0.2	1.0	0.4	0.8	3.9

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation. For these Parties, CH4 IEF from mature dairy cattle are included in this table.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.4a

CH_4 emissions from enteric fermentation: non-dairy cattle - trend information

CH_4 Emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1,565	1,748	2.0	0.6	0.8	0.8	-0.5	0.7	0.8	2.4	-0.7	0.9	0.7	2.0	0.6	0.3	11.7
Austria	81	83	-0.2	12.9	-2.5	-7.2	-3.5	2.0	8.2	-1.0	-3.0	1.1	1.8	-1.8	-0.2	-0.1	1.6
Belarus	258	143	-7.6	-9.5	-3.6	-0.3	-2.2	-10.9	-2.7	-3.1	-0.5	-1.0	3.7	2.8	2.8	2.6	-44.8
Belgium	102	98	3.0	1.7	-0.5	-1.1	-2.9	0.6	-0.8	1.6	-4.8	-4.1	-0.4	-0.9	-0.7	0.1	-3.7
Bulgaria	56	15	-12.7	-11.2	-11.5	-7.7	5.5	5.5	-5.3	-1.1	28.1	16.5	-4.3	-13.8	-4.3	-1.4	-72.8
Canada	646	913	2.7	6.0	2.4	0.5	1.0	0.1	3.0	3.5	0.8	0.5	4.7	2.4	-3.1	-2.0	41.3
Croatia	1	0	-1.1	3.1	-22.9	-13.3	-29.2	-8.2	15.7	-28.3	-6.0	-9.1	97.9	-42.0	16.7	0	-74.2
Czech Republic	102	42	-4.4	-0.5	-1.3	-5.0	-9.4	1.5	-5.3	1.9	-4.1	-3.8	-3.5	-4.6	-3.2	1.4	-59.1
Denmark	53	41	-0.3	-1.2	-0.1	-3.5	-2.3	-3.9	-0.7	4.7	-7.3	-4.6	-5.2	-7.0	-1.2	16.2	-21.9
Estonia	14	5	-0.6	-13.6	-6.4	-5.9	-7.7	-9.0	-6.2	2.4	10.2	-0.5	-1.6	3.5	1.4	4.1	-67.2
European Community	2,854	2,730	-0.5	1.9	1.3	-1.4	-0.4	0.1	-0.5	-0.2	-2.6	-0.9	-1.4	-0.7	-0.5	1.2	-4.3
Finland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	781	778	0.3	1.5	0.9	-0.8	-0.7	0.2	1.9	0.7	-2.4	-2.6	-2.2	-0.1	1.4	1.1	-0.4
Germany	512	366	-13.6	0.6	1.4	-4.1	0.6	0.7	-0.5	1.9	-6.3	-3.0	-4.6	-0.7	-0.7	0.2	-28.6
Greece	21	23	-4.5	0.8	0.5	0.7	2.3	3.2	3.6	1.7	0.5	-1.1	0.3	1.5	3.5	1.6	10.4
Hungary	65	23	-4.4	0.8	-3.3	-4.3	-3.4	-1.9	-8.5	-6.2	3.8	-0.8	-0.9	-1.0	2.0	3.3	-64.0
Iceland	2	2	7.9	3.3	3.0	2.8	2.2	-0.1	-2.6	-2.5	-3.9	-2.6	-2.2	3.0	4.2	3.3	4.6
Ireland	264	266	1.4	0.6	3.8	3.9	2.2	-3.2	-6.0	-0.9	0.1	-0.7	-0.1	1.1	-0.3	-3.6	0.7
Italy	233	205	13.8	-2.0	-1.8	0.8	-3.4	1.3	-1.6	-7.1	-1.8	0.1	-3.5	-0.9	-6.1	6.7	-12.0
Japan	158	168	3.0	-1.0	-0.8	0.0	0.6	0.4	0.5	-0.1	-0.3	-1.3	-0.7	0.3	1.9	1.6	6.2
Latvia	51	12	-5.8	2.5	-4.5	-8.5	-10.3	-10.4	-5.7	8.5	4.0	5.5	-4.2	8.2	-2.5	12.3	-75.8
Liechtenstein	0.002	0.038	27.0	13.0	11.5	10.3	9.3	8.5	7.9	50.7	33.6	33.6	40.2	29.7	11.9	15.1	2230.0
Lithuania	67	16	-9.2	-10.4	-0.8	-6.6	-8.4	6.9	-21.9	0.9	8.6	10.7	-3.2	3.9	19.5	-17.9	-76.2
Luxembourg	1	2	12.6	7.6	3.8	-1.7	-1.3	2.6	1.0	2.8	-3.3	-4.4	-1.7	1.2	-0.8	2.4	30.7
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	8	10	17.5	0.7	-2.7	0.6	-0.1	8.5	6.5	-1.1	-6.3	2.6	1.3	2.5	-4.9	2.1	34.3
New Zealand	233	252	4.0	0.9	-4.1	-0.1	-7.7	2.8	2.6	0.5	-1.8	2.0	-2.3	0.8	1.9	-3.2	8.2
Norway	21	26	5.4	2.5	1.8	5.2	6.2	-5.4	2.3	-4.8	-7.1	5.4	1.8	7.9	-7.0	6.6	25.9
Poland	219	139	-18.6	-1.2	-1.9	8.4	4.4	-8.4	-4.3	-9.6	0.2	-4.6	-1.1	4.7	4.7	4.6	-36.5
Portugal	49	63	3.9	8.7	3.6	-4.1	3.1	2.2	2.7	2.4	-1.8	-0.2	4.0	1.3	-1.6	0.6	28.0
Romania	232	68	-19.8	-7.0	1.9	-0.5	-9.4	-9.8	-16.4	-6.1	8.0	0.7	3.9	-1.4	5.2	-3.2	-70.8
Russian Federation	1,831	634	-3.7	-11.3	-13.0	-12.5	-12.4	-15.9	1.3	4.2	3.0	-1.9	-3.6	-6.7	-4.5	2.1	-65.4
Slovakia	45	16	-10.2	14.4	-10.0	-16.1	-5.0	-7.3	-4.3	10.5	-11.4	-5.1	-9.1	2.0	-2.8	-0.6	-64.5
Slovenia	14	19	-8.1	8.0	14.9	-8.6	2.7	5.3	12.7	-2.4	-2.7	-2.9	-2.8	6.1	3.2	5.8	31.5
Spain	192	304	3.7	13.1	5.7	-1.5	4.3	3.8	-0.1	6.0	1.8	3.9	-1.1	-2.3	-1.0	4.6	58.5
Sweden	59	65	4.1	-1.9	2.4	-0.6	-1.6	-2.1	-0.5	-1.7	-0.8	-1.5	1.9	-0.8	-0.6	-0.7	9.3
Switzerland	NO	8	*	*	*	*	*	*	8.8	12.8	14.8	12.1	7.4	12.1	11.2	7.2	*
Turkey	456	300	3.4	-2.9	0.0	-6.2	-1.8	-0.3	-3.4	-2.9	-8.6	-1.2	1.4	2.7	-0.9	-16.0	-34.3
Ukraine	29	8	4.4	-1.6	2.3	-12.5	-18.3	-1.4	-31.6	4.7	5.6	-25.4	-4.6	0.8	-4.0	-14.9	-73.2
United Kingdom	391	353	-1.3	0.2	2.4	-2.9	-0.9	-0.8	-2.3	-4.9	-2.6	2.2	1.9	-1.9	-0.7	-0.2	-9.7
United States	4,504	4,772	0.2	3.1	-0.6	-2.5	-1.3	-0.7	-2.4	-0.8	0.1	0.0	-0.9	1.2	1.6	0.2	6.0

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation. For these Parties, emissions from mature non-dairy cattle are included in this table.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.4b

CH_4 implied emission factors for enteric fermentation: non-dairy cattle - trend information

CH_4 IEF (kg/head/yr)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	71	72	0.1	-0.4	-0.3	0.0	0.0	0.4	0.1	0.3	0.1	0.7	0.3	0.0	0.0	0.4	1.3
Austria	48	56	1.1	5.9	0.3	-1.1	-1.2	1.2	2.6	-0.1	-0.2	0.0	0.5	0.6	-0.1	-0.1	15.6
Belarus	56	56	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0
Belgium	42	46	0.6	0.2	-0.2	1.4	0.1	0.3	0.4	1.9	0.4	0.1	0.6	0.1	0.2	0.3	8.6
Bulgaria	56	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	61	65	0.6	-0.3	-1.6	0.3	1.3	1.2	1.8	0.1	0.3	0.5	-2.7	0.1	0.6	0.0	5.9
Croatia	66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	44	50	1.4	4.9	0.6	1.0	0.0	5.4	0.3	0.7	0.8	0.5	-0.2	-0.9	-1.6	-0.7	13.5
Denmark	35	40	0.1	0.0	-0.5	0.8	-0.4	0.8	0.5	0.5	0.3	0.3	-1.2	0.1	0.9	12.1	13.7
Estonia	62	62	0.0	0	0.0	0.0	0	0.0	-0.1	0.3	0.1	-0.2	0.0	-0.2	0.1	-0.2	-0.3
European Community	45	47	0.8	0.6	0.6	0.1	0.0	-0.1	0.4	0.7	-0.4	0.2	-0.2	0.1	-0.1	0.5	5.2
Finland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	48	49	0.5	0.2	0.5	0.4	-0.1	-0.1	0.1	-0.3	-0.4	-0.1	-1.0	-0.3	0.2	-0.1	1.8
Germany	39	42	-1.3	0.8	2.3	-0.7	1.5	0.5	1.1	1.1	-1.4	0.0	-0.7	0.5	0.8	0.8	8.8
Greece	56	56	0.0	0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0	0	0	0.0
Hungary	53	53	0	0.0	0	0	0.0	0.0	0	0.0	0	0.0	0	0.0	0.0	0	0.0
Iceland	48	48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
Ireland	57	54	-1.8	-1.3	1.4	-0.2	-2.0	-4.4	0.5	3.1	-1.5	0.4	2.2	1.1	-0.3	-0.1	-5.2
Italy	46	46	4.2	-2.6	0.0	0.8	-1.9	0.8	-0.7	-0.6	-0.5	0.3	-0.8	0.3	-3.6	3.2	1.2
Japan	64	66	-0.1	0.3	0.6	0.8	0.9	0.8	0.5	0.1	0.0	-0.2	-0.1	-0.1	0.0	0.0	3.3
Latvia	56	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	81	81	0.0	0.0	0.0	0	0.0	0.0	0	0	0.0	0.0	0	0.0	0	0	0.0
Lithuania	45	43	-1.6	0.5	2.4	0	3.1	2.0	1.7	0.9	0.2	2.2	-1.6	-3.1	4.3	-3.9	-6.2
Luxembourg	54	55	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.9
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	65	72	0.7	0.9	-2.8	2.0	-0.7	3.4	-0.5	0.5	-0.2	7.6	0.4	-1.8	0.8	1.4	11.5
New Zealand	51	57	2.2	-1.7	2.5	0.9	0.1	-1.9	3.7	1.6	-0.6	-1.0	1.6	1.3	1.6	-2.2	13.1
Norway	75	96	1.9	-0.3	-0.3	3.3	4.4	-4.1	6.9	-2.3	-3.0	4.7	2.1	6.9	-2.5	5.8	27.9
Poland	40	48	-2.1	1.6	-0.5	4.3	16.7	-0.4	0.5	-1.1	2.8	-2.1	0.2	-0.4	1.1	0.0	20.5
Portugal	50	56	1.9	7.0	1.8	-4.9	1.9	0.5	1.1	1.5	-1.4	-0.3	2.8	-0.6	-2.8	-0.4	12.1
Romania	56	56	0.0	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0
Russian Federation	48	53	0.3	3.6	-2.6	1.3	-0.8	-4.9	2.1	6.0	1.2	-1.1	2.8	1.4	1.9	1.0	9.1
Slovakia	45	56	1.6	1.5	1.5	-5.4	11.5	-0.3	-0.2	13.2	-6.9	-4.9	2.4	5.4	0.3	0.5	25.7
Slovenia	45	52	1.6	1.3	3.5	1.6	-0.1	0.2	2.8	1.0	-0.3	1.2	-2.0	1.3	0.4	-0.6	15.4
Spain	55	54	-0.9	0.7	-0.7	-1.4	0.1	-0.1	1.0	0.4	-0.6	0.4	-1.0	0.1	-0.1	-0.2	-2.0
Sweden	52	54	0.9	-0.2	0.1	0.3	0.2	-0.1	0.1	0.1	0.2	-0.1	0.2	0.3	0.1	0.4	4.9
Switzerland	NO	81	*	*	*	*	*	*	0	0	0	0	0	0	0	0	*
Turkey	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ukraine	70	75	0.3	1.4	3.4	2.4	0.1	1.6	0.0	-1.2	0.4	-0.2	-2.6	0.1	-0.6	0.1	7.4
United Kingdom	42	43	0.0	0.0	0.3	0.3	0.1	0.1	-0.2	0.2	0.2	-0.4	0.2	0.2	0.3	-0.5	1.3
United States	52	54	-1.1	1.1	-0.5	-0.4	0.4	0.1	-1.5	-0.1	0.9	1.1	-0.1	0.5	0.5	0.4	4.1

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.A Enteric fermentation. For these Parties, CH4 IEF from mature non-dairy cattle are included in this table.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.5

Manure management - CH_4 (2007)

	Key category	Share of national total	Methods and EF used[a]		Cattle		Sheep	Swine
					Dairy cattle[b]	Non-dairy cattle[b]		
		(%)	Methods	EF	CH_4 IEF (kg/head/yr)			
IPCC default EF[c]					6 to 81	1 to 38	0.19 to 0.37	3 to 20
Australia		0.3	CS, M, T2	CS, D	8.90	0.04	0.00	23.11
Austria	L, T	1.0	T1, T2	CS, D	20.36	7.36	0.19	5.90
Belarus		0.9	T1	D	6.00	4.00	0.19	4.00
Belgium	L	1.2	T2	CS	15.70	2.63	0.68	9.53
Bulgaria	T	0.6	T1, T2	CS, D	18.30	12.21	0.28	9.95
Canada		0.4	T1, T2	CS, D	24.49	2.86	0.30	4.97
Croatia		0.5	T1	D	6.00	4.00	0.10	4.00
Czech Republic	T	0.3	T1	D	14.00	6.00	0.19	3.00
Denmark	L, T	1.5	T2	CS	18.79	1.72	0.32	2.60
Estonia		0.3	T1	CS, D	9.76	4.48	0.19	3.25
European Community	L, T	1.1	CR, CS, D, T1, T2	CS, D	20.36	9.35	0.19	9.20
Finland		0.4	T2	CS	14.60	IE	0.19	3.62
France	L, T	2.6	CR, T1	CS, D	18.31	20.20	0.28	20.97
Germany	L	0.6	D, T1, T2	CS, D	19.62	5.68	0.30	4.55
Greece		0.4	T1	D	19.00	13.00	0.28	7.00
Hungary	L, T	1.4	T1, T2	CS	6.96	1.89	0.25	10.87
Iceland		0.5	T1	D	14.00	6.00	0.19	3.00
Ireland	L, T	3.1	T1, T2	CS, D	20.60	11.05	0.15	12.50
Italy	L	0.6	T1, T2	CS, D	13.63	7.04	0.22	7.16
Japan		0.2	CS, T1	CS, D	62.62	1.79	0.28	1.41
Latvia		0.7	T1	D	6.00	4.00	0.19	4.00
Liechtenstein		0.7	T2	D	24.24	8.05	0.36	3.08
Lithuania		0.7	T1, T2	CS, D	6.93	2.48	0.19	4.51
Luxembourg		0.8	T1, T2	CS, D	42.83	9.07	0.19	19.52
Monaco		-	NA	NA	NO	NO	NO	NO
Netherlands	L, T	1.3	T2	CS	39.19	3.45	0.18	4.42
New Zealand	L	1.0	T1, T2	CS, D	3.31	0.70	0.11	20.00
Norway	L	0.6	T2	CS	14.41	11.91	0.76	1.99
Poland	L, T	0.9	T1, T2	CS, D	10.40	4.81	0.17	6.54
Portugal	L, T	1.4	T2	CS	4.94	1.60	0.30	21.34
Romania	L, T	1.3	T1	D	19.00	13.00	0.16	7.00
Russian Federation		0.1	CS, T1, T2	CS, D	4.72	2.73	0.19	3.83
Slovakia		0.3	T1, T2	D	4.00	3.80	0.19	4.00
Slovenia	L, T	2.2	T1, T2	CS, D	47.02	20.90	0.19	15.45
Spain	L	2.1	CS, T1, T2	CS, D	15.27	1.17	0.23	15.27
Sweden	L, T	0.7	T1, T2	CS, D	19.49	6.65	0.19	3.24
Switzerland	L	1.0	T2	CS, D	24.19	8.05	0.35	3.08
Turkey		0.5	T1	D	16.14	1.00	0.12	2.54
Ukraine	T	0.2	T1, T2	CS, D, OTH	5.12	6.64	0.19	3.19
United Kingdom	L	0.4	T1, T2	CS, D	25.79	4.18	0.11	7.06
United States	L, T	0.6	M, T1, T2	CS, D, M	65.12	1.32	0.60	14.46

[a] Information on methods and emission factors in this table is a reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for the various livestock types within the category 4.B Manure management - CH4

[b] Information on implied emission factors reported by Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine refers to mature dai cattle and mature non-dairy respectively, as these Parties are using Option B to report livestock types within the category 4.B manure management.

[c] Source of default emission factors: IPCC Guidelines,volume 3, tables 4-5 and 4-6 (pages 4.12–4.13). Default emission factors are provided according to climate regions (cool, temperate, warm), as shown below.

Default IPCC emission factors according to climate regions

	Dairy cattle			Non-dairy cattle			Swine		
	cool	temperate	warm	cool	temperate	warm	cool	temperate	warm
North America	36	54	76	1	2	3	10	14	18
Western Europe	14	44	81	6	20	38	3	10	19
Eastern Europe	6	19	33	4	13	23	4	7	11
Oceania	31	32	33	5	6	7	20	20	20
Asia	7	16	27	1	1	2	1	4	7

	Sheep		
	cool	temperate	warm
Developed countries	0.19	0.28	0.37

Table 4.6

Manure management - N_2O (2007)

	Key category	Share of national total	Methods and EF used[a]		Animal waste management systems (AWMS)				N excretion rates				
					Anaerobic lagoons	Liquid systems	Solid storage and dry lot	Other	Dairy cattle	Non-dairy cattle	Sheep	Swine	Poultry
		(%)	Methods	EF	N_2O IEF (kg N2O-N/kg N)				(kg N / head / year)				
IPCC default EF					0.001[b]	0.001[b]	0.02[b]	0.005[c]	60 to 100[d]	40 to 70[d]	16 to 20[d]	12 to 20[d]	0.6[d]
Australia	T	0.3	CS, M, T1, T2	D	0.001	0.001	0.020	0.018	120	40	7	12	0.7
Austria	L, T	1.0	T1	CS	NO	0.001	0.020	0.005	96	46	13	14	0.5
Belarus		0.0	T1	D	NO	0.001	0.201	NO	70	50	16	20	0.6
Belgium		0.6	T2		NO	0.001	0.019	0.001					
Bulgaria	T	0.5	D	D	0.001	0.001	0.020	0.005	70	50	16	20	0.6
Canada	L	0.6	T1	D	NE	0.001	0.020	0.005	103	64	4	11	0.4
Croatia	L, T	0.7	T1	D	0.001	0.001	0.020	0.005	70	50	16	20	0.6
Czech Republic		0.2	T1	D	NO	0.001	0.020	0.005	100	70	20	20	0.6
Denmark	L	0.9	CS	D	NO	0.001	0.020	NO	138	45	17	9	0.6
Estonia		0.5	T1	D	0.001	0.001	0.020	0.020	94	52	20	13	0.6
European Community	L, T	0.5	CR, CS, D, T1, T2	CS, D	0.001	0.002	0.018	0.010	110	51	8	11	0.6
Finland	L, T	0.6	D	D	NO	0.001	0.020	NE	122	48	9	19	0.6
France	L	1.1	CR, T1	CS, D	NA	0.001	0.020	NA	100	57	18	16	0.6
Germany		0.3	CS, T1	D	NO	0.003	0.005	NO	124	50	7	13	0.7
Greece		0.2	D	D	NA	0.001	0.020	0.005	70	50	12	16	0.6
Hungary	L, T	1.5	T1	CS, D	NO	0.001	0.020	0.005	100	70	20	20	0.6
Iceland		0.6	T1	D	NO	0.001	0.020	NO	60	34	6	13	0.4
Ireland		0.6	T1	D	NO	0.001	0.020	NO	85	65	6	8	0.3
Italy	L	0.7	T2	CS, D	NO	0.001	0.020	0.020	116	50	16	12	0.5
Japan		0.4	CS, D	CS, D	NO	0.001	0.020	0.017	85	48	12	13	1.0
Latvia	L, T	1.4	T1, T2	CS, D	NA	0.001	0.020	0.005	71	50	6	10	0.6
Liechtenstein		0.7	CS	D	NO	0.001	0.019	NO	114	80	6	11	0.7
Lithuania	L, T	1.1	T1	D	NA	0.001	0.020	0.003	70	50	16	20	0.6
Luxembourg		0.2	T1	D	NO	0.001	0.020	0.001	102	68	17	12	0.6
Monaco		-	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands		0.4	T2	D	NO	0.001	0.020	NO	137	83	6	9	0.6
New Zealand		0.1	T1	D	0.001	NO	0.020	0.005	114	74	15	16	0.6
Norway		0.2	CS, T1	D	NA	0.001	0.018	NA	82	35	10	6	0.2
Poland	L	1.5	T2	CS, D	NO	0.001	0.020	NA	70	50	16	20	0.6
Portugal	L, T	0.7	D	D	0.001	0.001	0.020	NO	88	48	8	8	0.8
Romania	L	1.1	T1	D	0.001	0.001	0.020	0.004	70	50	16	20	0.6
Russian Federation	L, T	0.9	T1	CS, D	NO	0.001	0.020	NO	93	57	16	23	0.8
Slovakia	L, T	0.9	T2	D	NO	0.001	0.020	NO	100	60	16	16	0.8
Slovenia	L, T	0.8	D	CS, D	0.001	0.001	0.020	0.003	111	42	20	12	0.6
Spain	L	0.7	CS, D	D	NO	0.001	0.020	NO	67	52	5	9	0.7
Sweden	L, T	0.7	T2	CS	NO	1.000	0.084	0.780	126	42	6	9	0.4
Switzerland	L	0.8	CS	D	NO	0.001	0.020	NO	107	IE	6	10	0.5
Turkey	T	0.6	T1	D	NA	NA, NO	NA	NA	83	45	14	7	NE
Ukraine		0.6	T2	D	0.001	0.001	0.020	0.005	74	68	16	13	0.3
United Kingdom		0.3	T1	D	NO	0.001	0.020	0.016	112	49	5	11	0.5
United States		0.2	M, T1, T2	D	0.005	0.007	0.019	0.004	84	45	11	8	0.4

Note: Information on N excretion rates reported by Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine refers to mature dairy cattle and mature non-dairy respectively, as these Parties are using Option B t

[a] Information on methods and emission factors in this table is a reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method or type of emission factor used for all subcategories within the category N2O from 4.B Manure management.

[b] Source of default emission factors: IPCC good practice guidance, tables 4.12 (page 4.43).

[c] Source of default emission factors: IPCC Guidelines, volume 3, table 4-22 (pages 4.104).

[d] Source of default N excretion rates: IPCC Guidelines, volume 3, table 4-20 (pages 4.99). Default values are provided by regions as shown below.

IPCC defaults:

	North America	Western Europe	Eastern Europe	Oceania	Asia
Dairy cattle	100		70	80	60
Non-dairy cattle	70		50	60	40
Sheep	16	20	16	20	12
Swine	20			16	
Poultry	0.6				

Table 4.7a

CH_4 emissions from manure management - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	73	89	0.1	2.0	1.0	4.3	4.2	2.7	1.6	2.9	1.4	-0.9	-2.0	-0.2	-1.0	-6.1	20.7
Austria	50	42	-1.4	-0.8	-1.9	-0.1	1.0	-5.2	-2.7	0.5	-3.2	0.2	-3.1	0.2	-0.6	1.2	-16.5
Belarus	57	36	-5.3	-5.4	-3.8	-1.0	-1.2	-5.4	-2.8	-2.7	-2.0	-1.9	1.7	2.2	0.8	-0.4	-37.3
Belgium	81	75	-2.0	2.4	-0.3	0.7	3.3	0.7	-3.6	-6.0	-1.9	-3.2	-2.6	-0.9	-0.7	-0.2	-8.3
Bulgaria	73	23	-12.1	-0.6	-8.5	-11.6	6.1	2.2	-10.6	-28.7	16.2	8.7	-1.3	-5.4	1.5	-2.5	-69.0
Canada	116	143	0.0	5.3	1.3	0.3	1.8	1.6	3.1	3.3	3.1	0.0	1.0	1.1	-1.0	-2.9	23.2
Croatia	11	8	-1.2	-9.7	-1.3	-2.0	-1.5	10.7	-7.2	0.6	1.5	4.8	7.8	-12.9	1.8	5.2	-26.9
Czech Republic	48	23	-4.0	-5.2	0.5	-3.0	-4.9	-0.8	-5.5	-0.6	-4.0	-3.0	-4.7	-3.8	-1.3	0.0	-51.4
Denmark	36	50	5.2	-0.2	1.6	1.5	4.2	-1.4	3.8	3.8	1.6	0.7	2.6	-1.3	1.7	0.5	39.5
Estonia	7	3	-6.9	-7.9	-16.5	1.2	0.5	-11.4	0.6	6.9	-3.6	0.2	-0.3	-0.1	-0.5	3.5	-59.0
European Community	2,117	2,170	-2.1	1.0	0.2	1.2	1.2	-0.4	0.1	0.4	-0.9	-0.8	0.0	-0.1	0.8	0.3	2.5
Finland	11	14	-4.3	6.1	1.0	5.4	-1.1	-1.3	1.4	-2.9	5.3	2.5	-0.1	2.0	2.2	0.3	23.5
France	663	670	-1.0	0.6	0.8	-0.4	0.3	0.1	1.2	1.2	-0.6	-1.4	0.1	0.2	-0.1	0.5	1.0
Germany	297	261	-13.0	-0.9	1.4	-1.0	2.1	0.7	-1.7	1.5	-1.7	-1.3	-2.5	1.9	-1.6	1.7	-12.1
Greece	24	23	-1.5	-0.3	-0.1	0.2	0.5	0.5	-0.1	0.1	-0.5	-0.2	-0.1	0.0	0.5	-0.1	-2.0
Hungary	114	52	-13.2	2.2	6.6	-8.4	6.7	2.9	-6.6	-3.7	4.0	-0.4	-11.9	-7.8	-2.3	1.6	-54.3
Iceland	1	1	-0.8	-0.3	0.7	0.2	1.3	-1.9	-2.5	-0.3	-4.1	-2.4	-1.9	2.5	3.9	1.6	-7.9
Ireland	111	103	0.9	-0.4	3.5	2.4	1.3	-3.7	-5.0	0.0	0.0	-1.6	-0.6	-0.3	-0.9	-3.3	-7.3
Italy	165	146	0.0	2.0	0.3	-0.4	1.1	1.0	-2.1	2.0	-2.4	-0.4	-3.0	-0.1	-3.8	0.9	-11.7
Japan	148	114	-0.2	-1.7	-1.2	-1.5	-1.6	-1.9	-1.5	-1.0	-0.8	-1.3	-1.7	-1.8	-2.6	-2.2	-22.9
Latvia	13	4	-6.3	2.9	-10.4	-6.2	-6.3	-8.7	-2.7	7.1	3.0	-2.5	-1.5	0.6	-1.3	2.4	-69.9
Liechtenstein	0	0	0.2	-1.7	0.3	-2.3	-0.6	-1.1	-5.1	8.1	-1.7	0.0	-4.9	4.3	4.1	1.0	-8.3
Lithuania	20	9	-8.1	-1.8	-6.5	2.6	-4.9	-13.5	-8.9	11.1	4.1	2.2	0.5	2.7	1.7	-2.4	-55.6
Luxembourg	4	5	8.5	4.7	0.5	2.6	3.4	9.5	-4.2	-1.8	-2.5	-2.8	-2.5	3.7	-1.5	-6.2	14.8
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	143	125	0.7	8.4	-1.3	3.6	-7.8	-1.8	-1.8	-2.6	-3.6	-4.3	1.7	-0.1	-0.1	1.5	-12.1
New Zealand	28	35	1.1	3.2	1.7	1.9	-0.8	-0.6	4.4	1.7	1.0	3.7	0.7	-1.9	0.9	0.1	26.0
Norway	14	15	2.7	1.7	1.8	0.2	1.3	-0.8	-0.9	-2.5	-2.0	1.1	0.7	1.4	-2.7	2.4	5.3
Poland	163	174	9.1	4.4	-6.3	-0.1	4.1	2.9	-6.5	-0.6	14.2	-2.7	-7.4	4.8	4.4	-2.4	6.7
Portugal	56	56	4.2	-1.2	-3.6	-0.5	0.1	0.6	0.0	0.3	0.0	-1.3	0.2	0.2	0.9	0.0	-0.5
Romania	203	96	-5.5	-9.6	1.4	0.6	-9.5	-10.7	-10.0	-4.0	6.6	1.1	8.7	2.0	2.4	-3.4	-52.5
Russian Federation	353	153	-2.6	-10.0	-10.3	-10.2	-7.6	-7.5	-0.4	-0.7	-0.3	0.9	-4.7	-9.6	-2.7	5.6	-56.6
Slovakia	18	7	-7.0	2.7	-4.9	-8.2	-11.7	-3.3	-3.5	1.2	1.1	-4.9	-15.3	-2.3	-2.2	-8.6	-61.0
Slovenia	24	22	-7.8	-8.1	-5.0	1.4	3.9	-9.0	10.4	-1.6	6.8	-5.0	-6.8	1.2	2.6	1.7	-10.0
Spain	297	450	-0.4	2.1	-1.4	5.9	6.0	0.6	6.0	1.5	0.1	1.7	2.9	-0.8	6.4	0.5	51.8
Sweden	17	22	-2.2	2.4	1.3	-2.2	-1.1	-0.3	-4.1	10.1	-0.6	5.1	0.1	7.5	-1.9	-0.3	35.3
Switzerland	27	24	-0.5	-1.2	-0.7	-1.0	0.9	-3.4	0.0	1.3	-0.6	-1.8	-0.8	1.3	0.2	-0.1	-10.1
Turkey	29	84	7.7	-3.0	-1.1	-6.8	9.3	7.3	-10.4	8.7	-11.3	0.3	9.0	9.6	7.2	97.8	188.1
Ukraine	844	51	-14.8	-18.6	-42.7	-53.8	-36.7	2.4	-22.4	5.9	8.8	-17.9	-7.6	-7.2	9.6	15.3	-93.9
United Kingdom	171	137	-0.7	-2.2	0.4	0.9	0.2	-3.2	-5.0	-4.8	-1.5	-1.9	0.0	-3.5	0.7	-2.6	-20.0
United States	1,447	2,093	4.3	2.9	-3.9	5.0	9.2	-1.3	1.0	3.7	2.9	-0.5	-1.2	5.2	0.1	5.0	44.7

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.B Manure management.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.7b

N_2O emissions from manure management - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1.7	5.1	10.8	7.3	0.3	11.2	8.5	14.2	5.9	0.3	-0.1	1.3	7.0	8.0	4.3	-1.2	204.1
Austria	3.2	2.8	-1.2	2.2	-1.8	-1.2	-0.2	-1.3	-1.3	-0.9	-2.1	-0.8	-0.4	-1.1	-0.2	0.3	-12.7
Belarus	0.0	0.1	-5.1	-5.9	-3.8	-1.1	-1.8	-6.3	-2.4	-3.1	-2.2	-2.1	1.2	1.5	0.4	891.2	489.8
Belgium	3.1	2.6	-0.3	1.7	-0.2	-0.3	-0.7	0.5	-2.3	-1.1	-3.7	-6.8	1.8	-1.9	-2.2	-5.0	-17.4
Bulgaria	3.4	1.2	-10.6	-2.7	-6.9	-8.5	7.0	3.3	-8.0	-25.3	14.9	7.1	-1.1	-5.4	-0.9	-2.5	-66.2
Canada	11.4	15.5	1.6	4.8	1.3	0.8	2.0	1.0	3.5	3.3	0.9	0.3	2.1	1.7	-2.1	-1.3	35.1
Croatia	1.2	0.7	-4.4	-5.3	-5.9	-1.9	-2.0	2.0	-3.1	1.0	-2.0	4.3	3.9	-2.3	-1.5	-1.6	-41.2
Czech Republic	2.2	1.1	-3.7	-5.2	0.8	-2.5	-4.2	-0.5	-5.5	-0.8	-4.0	-2.8	-5.0	-3.9	-1.2	-0.2	-49.1
Denmark	2.2	1.9	-0.6	-3.2	0.1	0.1	1.4	-3.3	-4.6	0.2	-2.2	-3.8	2.0	-0.9	-6.1	9.1	-14.4
Estonia	1.0	0.4	-6.4	-9.8	-10.2	0.8	-1.2	-12.5	-0.7	4.8	-5.4	0.3	1.7	-0.3	-0.5	0.2	-60.0
European Community	78.8	71.8	-1.9	0.6	0.6	0.3	0.7	0.1	-2.1	0.6	-2.0	-2.5	-0.5	-0.6	-1.5	0.9	-8.8
Finland	2.1	1.6	-8.2	-0.3	1.9	3.9	-2.1	-3.9	-1.3	-4.4	-0.9	-1.6	-2.2	0.5	0.4	-3.0	-25.2
France	22.2	19.5	-1.7	0.2	0.2	-1.0	-0.7	-0.8	0.5	0.8	-1.7	-2.6	-2.5	-0.9	-0.5	0.2	-12.0
Germany	9.3	7.7	-11.9	0.2	1.2	-1.9	0.2	0.1	-1.5	1.5	-2.9	-0.6	-2.5	0.6	-1.7	1.2	-16.3
Greece	1.0	0.9	-2.8	-0.3	-0.2	0.0	0.7	1.2	1.0	0.9	0.2	-0.6	-0.6	0.0	1.1	0.4	-2.4
Hungary	8.0	3.6	-7.2	-0.9	-2.3	-2.2	1.5	-1.1	1.4	-2.3	-1.0	0.6	-4.9	-3.4	-3.1	-1.0	-54.9
Iceland	0.1	0.1	-4.0	-7.7	3.3	1.0	0.3	-1.8	-6.5	-0.5	-2.8	-2.2	-0.5	1.0	2.5	0.6	-19.2
Ireland	1.3	1.2	3.1	1.6	1.2	2.1	2.9	1.1	-5.2	-3.5	-2.5	-0.8	-0.6	-0.1	-0.6	-3.5	-3.4
Italy	12.6	12.2	-0.2	2.2	1.1	0.9	2.1	1.5	-3.3	3.6	-3.8	-0.8	-2.2	-0.1	-2.9	4.9	-3.2
Japan	18.3	15.7	-0.9	-1.9	-1.2	-1.1	-0.8	-1.0	-1.0	-0.9	-0.6	-0.6	-0.6	-0.1	0.1	0.1	-14.1
Latvia	1.8	0.5	-4.0	-0.8	-7.3	-6.3	-8.1	-11.2	-2.4	5.8	1.5	-3.1	-3.0	1.8	-1.0	3.9	-70.3
Liechtenstein	0.0	0.0	-0.1	1.1	1.8	-0.4	0.6	-1.1	-5.2	5.3	-1.7	2.2	2.5	2.4	5.2	1.9	7.0
Lithuania	2.8	0.9	-5.8	-6.3	-2.6	-2.3	-8.3	-5.4	-15.2	3.1	3.8	3.8	-1.7	1.7	3.9	-17.8	-68.7
Luxembourg	0.1	0.1	-14.1	3.3	1.3	-3.9	-5.3	-15.8	-2.4	-0.1	-4.8	1.6	-0.5	-2.8	-4.9	23.1	-36.8
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	2.6	2.8	7.8	2.4	-1.5	-1.4	4.2	3.8	-4.9	-3.4	2.2	-17.6	10.8	7.3	-1.6	2.7	7.1
New Zealand	0.1	0.2	0.5	7.8	0.4	4.2	3.6	0.9	5.6	4.0	3.8	1.1	-1.4	-5.4	-3.5	6.9	52.4
Norway	0.4	0.4	6.5	0.9	0.7	-2.9	-0.2	-0.2	2.0	-0.6	-2.7	-10.9	-2.2	0.3	-2.5	2.9	-7.8
Poland	30.1	19.6	-3.2	-1.3	-5.5	1.8	0.4	-5.0	-6.5	-1.5	-1.2	-3.8	-6.0	3.0	4.0	-0.3	-34.9
Portugal	1.9	1.8	1.3	1.5	0.7	0.3	2.1	1.2	1.0	-2.0	-2.2	-3.7	-1.0	-0.5	-0.4	-1.7	-0.4
Romania	10.2	5.5	-1.8	-8.3	1.1	-0.3	-8.6	-9.1	-6.6	-2.9	5.0	1.0	6.2	2.5	1.7	-3.1	-45.7
Russian Federation	156.2	63.2	-2.7	-11.8	-12.5	-10.7	-9.5	-10.3	-0.7	1.5	0.9	-1.1	-3.2	-5.3	-2.2	3.9	-59.6
Slovakia	3.5	1.3	-9.3	5.1	-7.5	-8.4	-11.7	-4.7	-2.2	-3.1	-1.2	-3.0	-6.7	-3.5	-2.9	-2.3	-63.0
Slovenia	0.9	0.6	-5.4	1.9	-2.6	-1.1	-2.2	-1.3	-0.9	-1.3	2.8	-6.8	-6.0	0.5	-0.4	7.0	-35.0
Spain	8.0	9.6	1.4	2.4	2.5	4.3	0.7	-0.3	-1.7	3.8	0.4	-0.8	4.8	-1.2	-2.7	1.3	21.0
Sweden	2.3	1.5	-2.8	-5.0	-0.2	2.1	0.1	-6.4	-2.1	-7.2	-0.1	-5.5	1.2	-7.0	-0.4	-1.9	-34.3
Switzerland	1.4	1.3	-0.3	-1.6	0.8	-2.1	-0.8	-2.1	0.2	-2.1	0.3	-0.7	-0.2	1.3	0.2	1.3	-8.9
Turkey	NA	7.5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	24.4	9.0	-2.7	-7.5	-10.3	-12.4	-3.2	-6.4	-13.1	5.6	0.2	-12.7	-9.2	0.2	0.0	-9.2	-63.2
United Kingdom	6.9	5.4	-0.1	-2.2	-0.2	0.9	2.8	3.5	-8.1	-2.5	-3.9	-1.6	-2.0	-2.7	-0.8	-2.2	-21.7
United States	38.9	47.4	4.6	0.8	-1.7	3.6	2.0	0.8	3.7	2.3	-0.6	-2.6	1.3	1.2	2.5	0.9	21.8

Note: Croatia, Estonia, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine are using Option B to report livestock types and emissions within the category 4.B Manure management.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.8
Agricultural soils - N_2O (2007)

	Methods and EF used[a]		Direct soil emissions								Pasture, range and paddock manure			Indirect soil emissions					
					Synthetic fertilizers		Animal manure	N-fixing crops	Crop residue	Cultivation of histosols						Atmospheric deposition		Nitrogen leaching and run-off	
					Activity data														
	Methods	EF	Key category	Share of national total	Use of synthetic fertilizers	N_2O IEF	N_2O IEF				Key category	Share of national total	N_2O IEF	Key category	Share of national total	Activity data	N_2O IEF	Activity data	N_2O IEF
				(%)	(kg N / year)	(kg N_2O-N / kg N)				(kg N_2O-N / ha)		(%)	(kg N_2O-N / kg N)		(%)	(kg N / year)	(kg N_2O-N / kg N)	(kg N / year)	(kg N_2O-N / kg N)
IPCC default EF						0.0125 (0.0025-0.0225)[b]		0.0125[b]		8, 16 (2-15)[c]			0.02 (0.005-0.03)[d]				0.01 (0.002-0.2)[e]		0.025 (0.002-0.12)[e]
Australia	CS, T1, T2	CS, D	L, T	0.9	811,980,371	0.0073	0.0100	0.0125	0.0125	8.00	L, T	0.7	0.004	L, T	1.1	734,030,040	0.010	429,585,873	0.012
Austria	T1	D	L, T	1.9	99,636,879	0.0125	0.0125	0.0125	0.0125	NO		0.3	0.020	L, T	1.3	35,823,427	0.010	76,390,682	0.025
Belarus	T1a, T1b	D	L, T	8.0	402,570,000	0.0125	0.0125	0.0125	0.0125	8.00		0.0	0.020	L	2.3	44,795,097	0.010	134,287,645	0.025
Belgium	T1a		L	1.6	146,404,501	0.0125	0.0125	0.0125	0.0125	8.00		0.6	0.020	L	0.7	43,749,890	0.010	56,900,601	0.025
Bulgaria	D	D	L, T	1.8	160,142,400	0.0125	0.0125	0.0125	0.0125	8.00	T	0.6	0.020	L, T	1.2	40,983,023	0.010	58,776,623	0.025
Canada	CS, T1, T2	CS, D	L, T	2.0	1,539,945,000	0.0094	0.0112	NO	0.0096	8.00		0.5	0.020	L, T	1.4	573,733,950	0.010	643,630,920	0.025
Croatia	T1, T1b	D	L, T	3.7	114,434,179	0.0125	0.0125	0.0125	0.0125	8.00		0.6	0.020	L, T	2.6	23,169,956	0.010	59,211,137	0.025
Czech Republic	T1	D	L, T	1.7	201,314,700	0.0125	0.0125	0.0125	0.0125	NO		0.2	0.020	L, T	1.2	60,277,560	0.010	123,968,790	0.025
Denmark	CS	CS	L, T	4.3	190,910,264	0.0125	0.0125	0.0125	0.0125	2.86		0.3	0.020	L, T	3.5	91,530,936	0.010	160,546,448	0.025
Estonia	T1	D	L	2.2	24,982,000	0.0112	0.0125	0.0125	0.0125	8.00		0.2	0.020	L, T	0.9	6,807,099	0.010	13,963,751	0.025
European Community	CR, CS, D, T1, T1a, T1b, T2, T3	CR, CS, D	L	2.3	7,773,274,776	0.0117	0.0124	0.0113	0.0117	7.45	L, T	0.6	0.018	L	1.5	2,534,490,580	0.010	5,897,603,712	0.017
Finland	D	CS, D	L, T	3.1	147,891,296	0.0125	0.0125	0.0125	0.0125	7.85		0.2	0.020	L, T	0.8	38,467,490	0.010	33,644,027	0.025
France	CR, T1	CS, D	L, T	4.2	2,001,780,484	0.0125	0.0125	0.0125	0.0125	NO	L, T	1.4	0.020	L, T	3.3	592,637,229	0.010	1,225,604,824	0.025
Germany	CR, D, T1, T2	CR, D	L, T	2.1	1,599,788,000	0.0100	0.0101	NO	0.0100	8.00		0.2	0.017	L	0.6	510,843,773	0.010	862,728,365	0.008
Greece	D, T1a, T1b	D	L, T	1.1	171,000,000	0.0125	0.0125	0.0125	0.0125	8.00	L, T	2.6	0.020	L, T	2.0	97,924,452	0.010	175,386,678	0.025
Hungary	T1	D	L, T	4.3	288,000,000	0.0125	0.0125	0.0125	0.0125	NO		0.2	0.020	L, T	3.0	71,941,573	0.010	155,912,360	0.025
Iceland	T1b	D	L, T	2.2	11,947,289	0.0125	0.0125	NO	0.0125	NE	L	1.0	0.020	L, T	2.3	3,325,187	0.010	6,978,995	0.025
Ireland	T1a, T1b	CS, D	L, T	3.5	316,641,217	0.0125	0.0125	0.0125	0.0125	NO	L, T	3.9	0.020	L, T	1.8	84,856,642	0.010	67,209,777	0.025
Italy	D	CS, D	L, T	1.6	689,044,429	0.0125	0.0125	0.0125	0.0125	8.00		0.3	0.020	L, T	1.4	329,878,774	0.010	486,123,873	0.025
Japan	CS, T1, T1b	CS, D		0.2	448,581,000	0.0066	0.0062	0.0062	0.0125	1.23		0.0	NE		0.2	267,899,051	0.010	276,752,774	0.012
Latvia	T1, T1a	CS, D	L	6.4	41,490,000	0.0125	0.0125	0.0125	0.0125	8.00	L, T	0.9	0.020	L, T	2.8	10,954,840	0.010	23,347,260	0.025
Liechtenstein	CS, T1b	D	L	2.3	159,531	0.0125	0.0125	0.0125	0.0125	8.00		0.3	0.020	L	1.0	179,774	0.010	134,568	0.025
Lithuania	T1, T1a	D	L, T	6.2	123,000,000	0.0112	0.0100	0.0125	0.0125	8.00		0.7	0.020	L, T	3.4	26,977,676	0.010	58,916,514	0.025
Luxembourg	T1, T1a, T1b	D	L	1.3	12,630,600	0.0125	0.0125	0.0125	0.0125	NO		0.4	0.020	L	0.9	4,006,980	0.010	8,115,570	0.025
Monaco	NA	NA		-	NO	NO	NO	NO	NO	NO		-	NO		-	NO	NO	NO	NO
Netherlands	T1, T1b, T2, T3	CS, D	L, T	2.3	247,613,832	0.0106	0.0200	0.0100	0.0100	4.70	T	0.3	0.016	L, T	1.5	100,259,785	0.010	216,420,279	0.025
New Zealand	D, T1a	CS, D	L, T	2.2	284,328,000	0.0100	0.0100	0.0100	0.0100	8.00	L, T	9.7	0.010	L	4.3	343,722,741	0.010	1,876,573,706	0.002
Norway	CS, T1, T1a, T1b	D	L, T	2.4	106,530,357	0.0125	0.0125	0.0125	0.0125	8.00		0.4	0.020	L	0.8	15,828,466	0.010	27,773,860	0.025
Poland	CS, T1, T1a, T1b	CS, D	L	2.8	950,400,000	0.0089	0.0100	0.0100	0.0100	8.00	T	0.1	0.020	L	1.1	113,672,688	0.010	328,909,033	0.025
Portugal	T1a	D	L, T	1.0	48,679,297	0.0125	0.0125	0.0125	0.0125	NO	L	0.9	0.020	L, T	1.1	37,925,918	0.010	61,609,039	0.025
Romania	T1	D	L, T	3.0	238,500,000	0.0125	0.0125	0.0125	0.0125	NO		1.1	0.020	L, T	2.3	132,967,260	0.010	239,200,890	0.025
Russian Federation	CS, T1, T1a, T1b	CS, D	L, T	2.4	930,051,000	0.0142	0.0125	IE	0.0125	8.00		0.2	0.020	T	0.7	623,779,826	0.010	1,090,678,239	0.025
Slovakia	T2	CS, D	L, T	2.8	80,041,860	0.0125	0.0125	0.0125	0.0125	NO		0.2	0.020	L, T	0.8	21,050,553	0.010	20,960,865	0.025
Slovenia	D, T1, T1a, T1b	CS, D	L	1.9	26,651,700	0.0125	0.0125	0.0125	0.0125	8.00		0.3	0.020	L	1.5	11,177,568	0.010	21,208,302	0.025
Spain	CS, T1a, T1b	D	L, T	2.3	953,739,000	0.0117	0.0102	0.0125	0.0125	NO		0.4	0.010	L, T	1.8	219,483,861	0.010	1,880,260,512	0.007
Sweden	CS, T1, T1a, T1b, T2	CS, D	L	4.5	166,500,000	0.0079	0.0250	0.0125	0.0125	8.00		0.5	0.016	L, T	1.4	36,445,000	0.010	60,897,000	0.025
Switzerland	CS, T1b	D	L, T	2.4	50,666,000	0.0125	0.0125	0.0125	0.0125	8.00		0.3	0.020	L, T	1.4	48,570,353	0.010	37,422,599	0.025
Turkey	T1	D	L, T	1.5	1,355,754,728	0.0064	0.0064	NE	NE	NA		-	NE		-	NA	NA	NE	NE
Ukraine	CS, T1, T1a, T2	D	L, T	2.1	494,326,800	0.0125	0.0125	0.0125	0.0125	8.00		0.5	0.020	L, T	0.8	133,705,680	0.010	239,897,757	0.025
United Kingdom	T1, T1a, T2	CS, D	L, T	1.7	988,387,214	0.0125	0.0125	0.0125	0.0125	8.00	L	0.7	0.020	L	1.2	312,839,012	0.010	530,279,743	0.025
United States	CS, D, M, T1, T3	CS, D, M	L	1.1	11,111,690,528	0.0089	0.0085	IE	0.0057	9.21		0.1	0.005	L, T	0.5	5,644,600,346	0.005	8,419,465,311	0.005

[a] Information on methods and emission factors is included in this table as reported by Parties in table Summary 3 of the CRF. It may therefore not reflect the actual method or type of emission factor used for all subcategories within the category 4.D Agricultural soils - N_2O.

[b] Source of default emission factors: IPCC good practice guidance, table 4-17, page 4.60 (see also IPCC Guidelines, volume 3; table 4-18, page 4.89). IEFs for N-fixing crops and crop residues are shown in the unit kg N_2O-N/kg N. The unit of the IPCC default emission factor is also kg N_2O-N/kg N.

[c] For cultivation of histosols the two default values refer to temperate and tropical, respectively. It should be noted that default emission factors for histosols have been updated from 5 to 8 and from 10 to 16 for temperate and tropical, respectively (table 4.17, page 4.60 of IPCC good practice guidance). The values in parenthesis indicate the range as presented in the IPCC Guidelines, volume 3; table 4-18, page 4.89.

[d] Source of default emission factor: IPCC Guidelines, volume 3, table 4-22, page 4.104 (Pasture range and paddock). See also IPCC good practice guidance, table 4.12, page 4.43.

[e] Source of default emission factor: IPCC Guidelines, volume 3, table 4-23, page 4.105 (default emission factors for indirect emissions). See also IPCC good practice guidance, table 4.12, page 4.43.

Table 4.9

N_2O emissions from agricultural soils - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	44	48	0.7	2.5	2.1	4.0	2.2	4.4	4.9	3.0	-2.9	-2.2	0.0	0.4	-2.8	-5.2	11.2
Austria	11	10	7.9	1.8	-10.5	1.5	0.7	-2.0	-4.3	0.0	-0.3	-4.8	-3.6	0.4	1.8	1.4	-11.2
Belarus	35	27	-3.1	-11.8	14.8	9.3	1.5	-5.6	3.0	-8.0	-4.1	9.4	6.5	11.4	11.1	-5.8	-22.7
Belgium	15	12	-1.5	0.9	-1.8	0.1	0.6	0.5	-4.4	-1.6	-1.5	-4.6	-0.4	-1.8	-0.9	-4.7	-18.8
Bulgaria	28	9	-28.9	-16.4	-3.0	2.3	-14.6	14.0	-3.7	-7.2	1.7	-6.0	11.6	-5.4	-3.9	4.7	-67.9
Canada	82	94	-2.8	1.8	4.6	-0.5	1.7	1.3	0.0	-5.9	-2.6	8.1	3.2	-1.9	0.1	-1.9	14.4
Croatia	8	7	-0.5	-4.2	2.0	13.0	-12.0	9.5	-0.2	8.7	-0.5	-8.3	7.2	3.0	-3.0	0.7	-10.4
Czech Republic	29	15	-15.8	1.6	-7.1	1.3	-3.6	-0.8	-1.0	3.9	-2.7	-10.0	8.9	-5.1	-0.9	3.3	-48.0
Denmark	27	18	-1.9	-2.4	-4.7	-1.1	-0.5	-6.3	-3.5	-2.5	-3.6	-3.7	1.8	-0.3	-4.8	4.9	-32.0
Estonia	5	2	-3.0	-12.9	-8.6	7.5	3.3	-11.0	11.5	-9.0	-9.1	13.5	1.2	-3.5	3.0	9.5	-52.1
European Community	689	583	-2.0	0.6	1.4	0.9	-0.2	-0.5	-0.6	-3.8	-1.1	-1.5	0.1	-2.5	-1.8	-1.2	-15.4
Finland	14	10	-6.9	5.1	-3.3	-1.9	-2.5	-2.4	1.4	-1.7	-1.3	-1.5	-2.6	-0.5	-0.8	-0.6	-25.9
France	181	153	-3.7	0.9	1.3	2.9	-0.1	-1.3	0.9	-4.8	0.9	-4.3	1.0	-1.1	-3.0	0.0	-15.4
Germany	101	88	-6.6	4.7	0.6	0.0	0.9	2.6	1.6	-1.7	-3.0	-1.2	3.1	-1.6	-0.9	-3.1	-13.3
Greece	31	24	-1.4	3.8	1.2	-1.5	0.1	-1.4	-2.3	-0.9	-1.0	-1.4	0.3	-4.2	-2.1	-2.6	-23.4
Hungary	35	18	-27.0	-5.1	3.6	-1.2	9.1	2.9	-5.1	6.2	2.8	-4.2	4.8	-7.3	2.6	1.1	-48.0
Iceland	1	1	-2.5	-4.4	5.0	-2.0	0.4	3.6	-1.8	-1.2	-7.0	-5.2	-3.1	0.0	13.6	8.2	0.3
Ireland	23	21	0.0	2.6	0.3	-2.3	6.7	0.0	-5.9	-4.9	-1.4	2.8	-2.5	-1.7	-2.4	-4.5	-9.2
Italy	63	57	3.1	-3.2	-1.7	5.2	-3.4	1.0	-1.4	-1.9	-1.1	-0.9	0.8	-3.3	-1.0	-0.4	-8.5
Japan	26	20	-2.2	-2.7	-3.1	-2.0	-1.3	-0.6	-0.5	-0.8	-0.6	-0.6	-0.5	-1.4	-0.8	-0.7	-20.1
Latvia	10	4	-8.0	-21.1	3.0	2.1	-3.9	-8.3	1.8	11.1	-1.1	6.7	-1.8	10.1	2.8	2.1	-59.9
Liechtenstein	0.03	0.03	0.8	0.4	-2.5	-0.2	-2.4	-0.3	-2.3	2.6	-0.9	0.7	0.4	0.9	2.0	1.0	-5.1
Lithuania	16	8	-10.5	-2.7	19.1	0.9	-2.3	0.2	-2.8	3.0	6.5	3.7	0.0	-1.1	-0.4	2.0	-49.4
Luxembourg	1	1	1.5	2.9	1.7	0.4	-0.4	-1.1	1.5	-8.1	-0.4	-11.4	16.2	-9.8	0.3	2.5	-10.1
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	36	28	2.0	4.2	-1.6	-1.4	-3.6	-2.9	-7.8	-4.9	-5.7	-2.7	-1.3	-0.2	-0.6	-1.2	-22.7
New Zealand	32	40	0.3	2.3	1.0	1.7	-0.9	1.7	3.9	3.5	2.3	2.5	0.6	0.9	-0.8	-3.0	22.4
Norway	7	6	0.3	1.7	0.9	0.3	0.0	-2.7	0.7	-3.6	-0.9	1.7	0.3	0.4	-2.5	2.3	-2.6
Poland	73	52	-21.8	2.8	-2.0	2.1	-0.1	-2.8	-2.7	0.8	-4.2	-2.3	2.0	0.4	6.5	3.2	-29.7
Portugal	11	8	0.4	-2.6	6.8	-0.6	-3.3	0.4	6.0	-4.0	1.0	-15.2	5.1	-7.7	-6.9	-9.1	-27.6
Romania	70	32	-22.3	-3.4	-5.7	1.7	-9.0	-5.6	-11.1	9.0	-2.4	2.3	10.3	-0.3	-4.1	-6.6	-54.7
Russian Federation	507	236	-6.3	-9.5	-6.2	-3.8	-12.1	-4.7	4.8	0.1	0.3	-3.7	-1.2	-2.5	-0.7	2.7	-53.4
Slovakia	12	6	-19.7	1.8	-0.7	1.2	-7.5	-8.8	3.0	1.7	3.2	-3.7	-2.9	-0.1	-1.6	5.2	-51.2
Slovenia	3	2	-7.0	-0.6	-1.8	3.6	2.5	0.0	2.2	-1.0	2.2	-3.2	-5.7	-0.1	1.8	0.6	-3.4
Spain	62	64	-1.4	-4.9	17.0	-5.1	6.9	3.2	5.1	-5.8	-4.9	9.1	-5.1	-9.0	2.9	1.5	3.4
Sweden	17	15	-2.7	-1.6	-0.3	1.2	-1.4	-4.6	-0.1	0.8	-0.9	-0.9	0.0	-1.1	-0.8	-0.1	-9.6
Switzerland	8	7	0.0	-3.1	1.6	-4.4	-0.5	-0.6	0.2	-0.9	-0.2	-2.9	0.1	-0.2	-0.5	1.7	-12.7
Turkey	NA, NE	18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	137	48	-7.3	-8.9	-18.8	-2.0	-9.3	-10.7	-11.5	10.6	-3.0	-14.4	9.7	-2.0	3.6	-1.1	-64.6
United Kingdom	98	75	-0.5	0.6	0.5	3.3	-3.2	-2.2	-3.8	-6.1	2.2	-2.4	-0.4	-1.4	-4.3	-3.5	-23.5
United States	646	671	2.6	-0.4	8.5	-6.0	5.9	-10.4	4.4	7.8	-5.8	-2.3	4.1	-0.3	-1.0	-0.3	3.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 4.10

Agricultural soils: parameters (fractions) used to estimate N2O emissions in the agricultural soils category (2007)

	$Frac_{BURN}$	$Frac_{FUEL}$	$Frac_{GRAZ}$	$Frac_{NCRBF}$	$Frac_{NCRO}$	$Frac_{R}$	$Frac_{GASF}$	$Frac_{GASM}$	$Frac_{LEACH}$
	(kg N / kg crop-N)	(kg N / kg N excreted)		(kg N / kg of dry biomass)	(kg N / kg of dry biomass)	(kg N / kg crop-N)	(NH_3-N + NO_X-N / kg of synth. fert. N applied)	(NH_3-N + NO_X-N / kg N excreted)	(kg N / kg of fertilizer or manure N)
IPCC default EF	0.1[a]	no default[b]	no default[b]	0.03[a]	0.015[a]	0.45[a]	0.1[a]	0.2[a]	0.3 (0.1-0.8)[a]
Australia	NA	NO	NA	NA	NA	NA	0.10	0.21	0.30
Austria	0.00	0	0.14	0.03	0.009	0.34	0.04	0.20	0.30
Belarus	0.01	NO	0.02	0.03	0.020	0.45	0.10	0.20	0.30
Belgium	NO	NO							
Bulgaria	0.10	0	0.46	0.03	0.020	0.45	0.10	0.20	0.20
Canada	0	0	0.36	0.01	0.006	0.48	0.10	0.30	0.18
Croatia	NO	NO	0.24	0.03	0.015	0.45	0.10	0.20	0.30
Czech Republic	NO	NO	0.14	0.015	0.03	0.15	0.10	0.20	0.30
Denmark	NO	NO	0.09	NE	NE	0.24	0.02	0.20	0.33
Estonia	0.10	0	0.20	0.03	0.020	0.45	0.10	0.20	0.30
European Community	NA	NA	0.37	0.03	0.010	0.44	0.06	0.25	0.27
Finland	0.00	NA	0.20	0.04	0.010	0.45	0.01	0.33	0.15
France	NA	NO	0.41	0.03	NA	NA	0.10	0.20	0.30
Germany	NO	NO	0.12	0.01	0.007	0.57	0.05	0.28	0.30
Greece	0.10	0	0.88	0.01	0.005	0.52	0.10	0.20	0.30
Hungary	0	0	0.10	0	0	0	0.10	0.20	0
Iceland	NO	NO	0	NO	0	0	0	0	0
Ireland	NO	NO	0.66	NO	NO	NO	0.02	0.19	0.10
Italy	0.10	NO	0.19	0.03	0.015	0.45	0.09	0.29	0.30
Japan	0.10	NA	NA	NA	NA	NA	0.10	0.20	0.30
Latvia	NO	NO	0.34	0.02	0.030	0.45	0.10	0.20	0.30
Liechtenstein	NE	NE	NE	NE	NE	NE	NE	NE	NE
Lithuania	NO	NO	0.23	0.03	0.012	0.45	0.10	0.20	0.30
Luxembourg	NO	NO	0.45	0.03	0.015	0.45	0.1	0.2	0.3
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NO	NO	0.17	NE	NE	NE	0.05	0.23	0.30
New Zealand	0.30	0	IE	0.03	0.02	0.45	0.10	0.20	0.07
Norway	0.08	NO	0.28	0.01	0.011	0.65	0.01	0.20	0.18
Poland	0	NO	0.05	0.05	0.010	NE	0.10	0.20	0.30
Portugal	0.05	NO	0.47	0.02	0.013	0.71	0.06	0.21	0.32
Romania	NA	NA	0.32	0.03	0.015	0.50	0.10	0.20	0.30
Russian Federation	NO	NO	0.18	NE	NE	NE	0.10	0.20	0.30
Slovakia	NO	NO	0.14	0.71	0.145	NE	0.10	0.24	0.14
Slovenia	NO	NO	0.14	0.02	0.007	0.47	0.10	0.20	0.30
Spain	0.18	NO	0.38	0.02	0.005	NA	0.06	0.34	0.30
Sweden	0	0	0.32	0.02	0.005	0.20	0.01	0.33	0.23
Switzerland	NO	NO	0.12	0.03	0.008	0.67	0.07	0.33	0.20
Turkey	NE	NE	NE	NE	NE	NE	NE	NE	NE
Ukraine	NO	NO	NA	0.24	NA	NA	0.15	0.33	0.24
United Kingdom	0	0	0.52	0.30	0.015	0.45	0.10	0.20	0.30
United States	NA	NA	NA	NA	NA	NA	NA	NA	NA

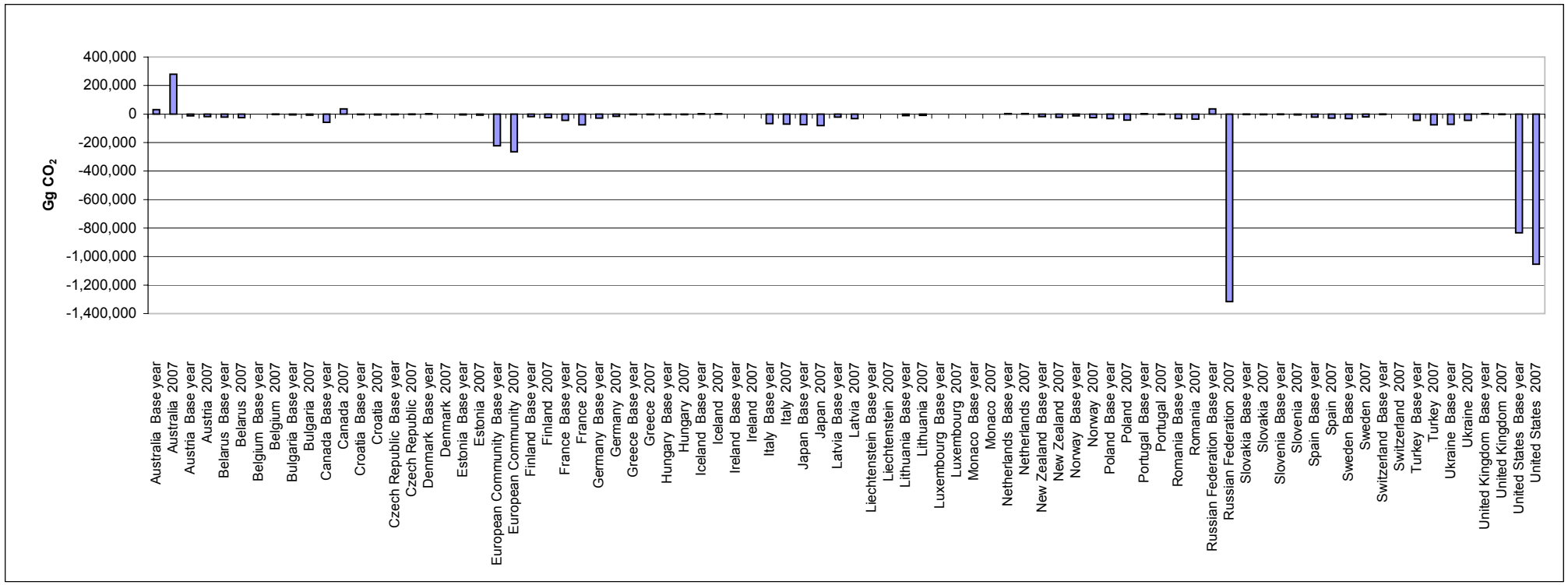
Abbreviations of fractions:

$Frac_{FUEL}$	Fraction of livestock N excretion in excrements burned for fuel	$Frac_{BURN}$	Fraction of crop residue burned
$Frac_{GRAZ}$	Fraction of livestock N excreted and deposited onto soil during grazing	$Frac_{GASF}$	Fraction of synthetic fertilizer N applied to soils that volatises as NH_3 and NO_X
$Frac_{NCRBF}$	Fraction of total above-ground biomass of N-fixing crop that is N	$Frac_{GASM}$	Fraction of livestock N excretion that volatilises as NH_3 and NO_X
$Frac_{NCRO}$	Fraction of residue dry biomass that is N	$Frac_{LEACH}$	Fraction of N input to soils that is lost through leaching and run-off
$Frac_{R}$	Fraction of total above-ground crop biomass that is removed from the field as a crop product		

[a] Source of IPCC default fractions: IPCC Guidelines, volume 3, tables 4.19 and 4.24 (pages 4.94 and 4.106). (See also IPCC good practice guidance, table 4.19, page 4.74).

[b] Countries are recommended to obtain country-specific data.

Figure 5.1
Net CO_2 emissions/removals from LULUCF[a]



Note: The presentations of national totals without emissions and removals from the LULUCF sector exclude emissions and removals associated with carbon stock changes and other emission sources covered in the LULUCF sector.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.1

Net CO_2 emissions/removals from LULUCF - trend information

CO_2 emissions/removals (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	30,472	278,652	314.5	-303.0	-120.1	215.9	-304.5	-139.8	89.3	-11.7	-429.2	-61.5	-289.7	-133.0	-84.1	2544.4	814.4
Austria	-13,430	-17,398	44.0	-3.3	-31.3	79.9	-9.3	24.1	-23.8	15.6	-18.8	8.5	0.3	-1.1	0.1	-0.2	29.5
Belarus	-22,035	-24,956	9.6	1.5	-0.7	-5.7	3.1	4.4	1.4	-0.2	-5.2	-6.4	-1.7	5.8	3.7	-4.1	13.3
Belgium	-1,422	-1,473	-16.9	-7.2	0.4	1.3	-9.0	-5.1	27.3	84.4	-17.9	-26.7	-32.1	-67.9	186.7	38.9	3.6
Bulgaria	-5,050	-6,802	25.1	2.9	-13.8	5.6	2.2	5.0	24.2	5.3	-12.9	-15.5	13.0	-13.1	0.1	0.2	34.7
Canada	-57,630	35,424	-29.2	-1107.6	-134.3	54.7	-205.4	-92.7	-1336.8	7.5	-172.7	-38.4	148.1	-68.0	-2.9	15.2	-161.5
Croatia	-4,185	-6,303	107.9	5.7	3.7	-13.6	-16.6	19.2	-35.2	55.5	-0.1	-23.5	25.9	-2.2	-3.1	-15.9	50.6
Czech Republic	-4,693	-1,919	116.9	0.8	5.6	-10.7	4.1	1.6	4.5	3.9	-2.5	-21.6	6.5	6.7	-41.2	-58.3	-59.1
Denmark	552	-1,127	-406.0	3.2	-27.1	-3.1	65.7	-36.8	-232.1	-147.2	157.2	15.7	-64.0	-119.5	-642.9	28.8	-304.3
Estonia	-6,374	-7,905	-1.3	1.2	4.8	-23.8	-7.9	-75.2	12.9	187.0	-8.3	44.9	57.1	-13.7	18.3	-11.6	24.0
European Community	-222,685	-265,233	17.4	2.3	7.9	0.0	-1.6	4.4	-8.4	7.7	4.6	7.0	-7.1	1.5	-2.7	-9.9	19.1
Finland	-17,960	-25,489	76.4	-4.1	54.7	-23.2	-15.6	11.5	-0.6	16.6	4.6	0.0	3.6	21.3	13.7	-21.4	41.9
France	-44,941	-76,350	-10.3	1.1	7.1	3.1	0.5	3.0	-22.7	18.0	12.2	6.2	2.8	4.0	-0.4	1.8	69.9
Germany	-28,306	-16,790	1.6	0.5	0.6	2.3	0.0	1.4	-0.3	-33.4	4.1	-11.4	21.6	-6.0	-28.2	3.4	-40.7
Greece	-3,248	-3,808	10.7	24.0	-9.4	-0.9	-9.3	23.5	-40.6	89.1	5.9	-4.7	2.2	-2.7	1.8	-25.2	17.2
Hungary	-3,629	-4,165	12.6	-3.6	-59.6	1.2	63.3	-56.6	-65.8	202.0	-31.1	153.4	-6.4	9.8	-10.9	0.6	14.8
Iceland	1,180	874	-0.5	-1.5	-1.2	-1.6	-2.0	-2.2	-1.9	-1.3	-1.7	-2.0	-3.0	-2.8	-2.9	-1.8	-25.9
Ireland	235	-1,019	42.4	492.4	37.3	-18.3	-129.2	41.9	-193.0	-61.5	-491.4	56.2	-16.4	126.2	1.0	92.7	-533.3
Italy	-67,651	-71,127	26.5	5.7	7.3	-12.1	-5.5	6.3	-2.5	16.8	3.2	32.6	-27.6	3.8	-5.5	-21.1	5.1
Japan	-74,364	-81,363	-0.1	5.1	0.4	0.3	-0.1	0.3	0.5	0.2	12.7	0.3	0.3	-6.6	-4.5	-0.5	9.4
Latvia	-21,439	-32,019	6.4	0.3	4.1	-5.5	-1.6	0.2	4.3	22.7	-14.0	1.6	7.2	0.6	15.2	-1.7	49.3
Liechtenstein	-8	-7	0.4	0.4	0.4	-42.0	-0.2	-0.2	-0.2	-0.2	-0.2	32.3	0.3	0.3	0.3	0.3	-21.1
Lithuania	-10,757	-9,307	-2.2	-19.2	6.5	5.7	4.6	0.4	-6.4	-2.6	-6.5	5.2	3.6	5.4	1.9	0.1	-13.5
Luxembourg	208	-391	-85.0	36.8	45.3	7.4	-42.5	36.1	0.3	15.0	0.7	2.4	-7.3	-4.7	-21.2	0.5	-287.6
Monaco	0	0	1.4	1.4	0.3	0.3	0	0.5	0.0	0.2	0.3	-1.2	-0.8	0.5	-0.5	2.8	12.6
Netherlands	2,597	2,537	-15.2	6.3	-7.7	12.3	-4.0	1.4	6.8	-3.4	-3.7	-0.7	1.0	1.6	0.9	5.7	-2.3
New Zealand	-18,194	-23,915	-4.8	-0.1	4.8	11.7	1.3	1.5	4.3	1.9	-1.6	6.0	17.0	1.7	-5.5	-0.1	31.4
Norway	-12,304	-25,895	-6.5	7.7	-5.6	2.9	-1.5	23.5	23.8	10.9	25.1	8.4	0.7	7.9	-19.2	14.8	110.5
Poland	-32,935	-42,885	24.7	-3.3	6.1	6.4	-0.3	3.3	-0.6	-1.2	22.4	3.5	9.8	3.5	13.7	0.0	30.2
Portugal	1,366	-2,370	-83.9	14.5	33.8	3.7	11.4	-8.8	8.2	-6.0	7.6	-193.6	-129.6	-68.4	285.6	13.2	-273.5
Romania	-32,433	-36,229	4.1	-1.9	-2.5	1.0	5.4	-3.1	-3.1	2.6	-6.3	-1.0	-1.9	4.8	0.1	-2.6	11.7
Russian Federation	36,239	-1,315,985	29.7	-9.0	0.8	10.2	-140.3	-306.3	-210.6	-62.4	-555.3	46.2	-25.2	-81.8	-116.8	-6,972.6	-3731.4
Slovakia	-2,407	-3,219	45.7	-18.7	-10.2	-42.1	38.4	-15.7	46.9	117.4	0.3	-7.8	-12.0	-79.4	247.7	5.5	33.8
Slovenia	-1,589	-5,774	23.2	11.6	-2.2	-9.8	9.8	6.9	1.9	1.9	4.2	-3.2	6.1	-3.8	-12.8	22.0	263.3
Spain	-21,479	-28,035	0.0	3.0	4.0	3.5	3.5	2.1	2.8	1.8	0.8	0.9	0.6	0.6	0.8	0.5	30.5
Sweden	-32,134	-20,578	4.0	1.0	17.2	15.0	5.5	-5.1	3.6	-9.6	7.0	-2.6	-4.5	-9.0	-12.1	-20.0	-36.0
Switzerland	-2,360	-655	-29.0	-3.8	-14.6	-44.5	-32.9	-18.2	-154.0	-71.5	76.9	-522.2	-118.6	191.3	24.6	-161.2	-72.3
Turkey	-44,871	-76,274	25.5	-0.6	1.0	3.1	2.0	1.2	1.7	6.8	-4.6	-1.8	11.2	-7.4	9.2	0.4	70.0
Ukraine	-73,157	-43,590	8.5	-4.5	9.9	-25.0	16.9	9.8	-11.1	-10.5	-23.9	33.2	-19.0	-8.1	1.1	23.7	-40.4
United Kingdom	2,929	-1,815	-3.0	35.5	-19.5	-30.7	-88.9	-361.9	68.3	35.7	112.3	5.3	72.0	9.2	-6.1	-0.1	-162.0
United States	-833,313	-1,053,548	2.1	-6.8	-9.7	9.8	-12.4	-6.2	3.2	4.0	38.3	23.3	2.4	-13.4	-6.5	1.1	26.4

Note: The presentations of national totals without emissions and removals from the LULUCF sector exclude emissions and removals associated with carbon stock changes and other emission sources covered in the LULUCF sector.

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.2a

Methods and emission factors used (2007)

	Forest Land						Cropland						Grassland					
	CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		CH_4		N_2O	
	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]
Australia	CS, T1, T2, T3	CS, M	CS	CS	CS	CS	T3	M	CS	CS	CS, T2	CS	T2, T3	CS, M	CS	CS	CS	CS
Austria	T1, T3	CS	T1	CS, D	T1	CS, D	T1, T3	CS, D	NA	NA	T1	CS, D	T1, T3	CS, D	NA	NA	NA	NA
Belarus	T1	CS, D	T1	D	T1	D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium			NA	NA					NA	NA	NA	NA			NA	NA	NA	NA
Bulgaria			NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	T3	CS					CS, T2, T3	CS	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA
Croatia	T1	D	T1	D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	CS, T1, T2	CS, D	CS, T1	CS, D	CS, T1	CS, D	CS, T1, T2	CS, D	NA	NA	T1, T2	CS, D	CS, T1, T2	CS, D	NA	NA	NA	NA
Denmark			NA	NA	CS	CS	CS, T1, T2	CS, D	NA	NA	NA	NA	CS	CS	NA	NA	NA	NA
Estonia	T1	CS, D	T1	D	T1	D	T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA
European Community	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2	CS, D	CR, CS, D, T1, T2	CS, D	CS, D, T1, T2, T3	CS, D	CS, T2	CS	CR, CS, D, T2	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2	CS, D	CR, D, T1, T2	CS, D
Finland	T2, T3	CS, D	T2	D	D, T1, T2	CS, D	D, T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA
France	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS
Germany			NA	NA	NA	NA	CS, D, T2	CS	NA	NA	CS	CS			NA	NA	NA	NA
Greece	CS, D, T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	NA	NA	NA	NA	T1	D	T1	D
Hungary	D, T2	CS, D	T1	D	T1	D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	T3	CS	NA	NA	T1	D	CS, T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA
Ireland	D, T1, T3	CS, D	D, T1	D	D, T1	D	T1	D	NA	NA	D, T1	D	T1	D	NA	NA	NA	NA
Italy	T1, T2	CS, D	T1	D	T1	D	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA
Japan	T1, T2, T3	CS, D	T1	D	T1	D	T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	NA	NA
Latvia	T2	CS	T2	CS	T2	CS	D, T1, T2	CS, D	NA	NA	NA	NA	T1, T2	CS, D	T1	D	T1	D
Liechtenstein	T2	CS	NA	NA	NA	NA			NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Lithuania	T1	CS, D	T1	D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	T1, T2	CS, D	NA	NA			T1	CS, D	NA	NA	T1	D	T1	D	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	CS	CS	NA	NA					NA	NA	NA	NA			NA	NA	NA	NA
New Zealand	T1, T2	CS, D	T1	D	T1	D	T1	D	NA	NA	T1	CS, D	T1	D	T1	D	T1	D
Norway	T1, T3	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1, T3	CS	NA	NA	NA	NA
Poland			D, T1	CS, D	D, T1	CS, D	D, T1	CS, D	NA	NA	NA	NA			D, T1	D	D, T1	CS, D
Portugal	CS, T2	CS, D	D	D	D	D	T2	CS, D	NA	NA	D	D	T2	CS, D	NA	NA	NA	NA
Romania	T1, T2	CS, D	T1	D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation	T2	CS	T1, T2	CS, D	T1, T2	CS, D	T1	D	NA	NA	NA	NA	CS, T1	CS, D	NA	NA	NA	NA
Slovakia	CS, T2	CS, PS	T2	PS	T2	PS	T1	D	NA	NA	NA	NA	CS	CS	NA	NA	NA	NA
Slovenia	D, T2	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	CS, D, T1	CS, D	CS	D	CS	D	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA
Sweden	T1, T3	CS	T1	CS	T1	CS	T1, T3	CS	NA	NA	CS	CS	T1, T3	CS	T1	CS	T1	CS
Switzerland	T2	CS	T1	CS	T1	D	T2	CS	NA	NA	T1	D	T2	CS	NA	NA	NA	NA
Turkey	T1, T2	CS, D	T1, T2	CS, D	T1	CS, D												
Ukraine	T1, T2	CS, D	T1	D	T1	D	CS, T1	CS, D	NA	NA	NA	NA	CS, T1	CS, D	NA	NA	NA	NA
United Kingdom	CS, D, T3	CS	D	CS	D, T1	CS	CS	CS	NA	NA	NA	NA	CS, D	CS	D	CS	D	CS
United States	T3	CS	T2	D	D, T2	D	T1, T2, T3	CS, D	NA	NA	NA	NA	T2, T3	CS	NA	NA	NA	NA

[a] Information on methods and emission factors in this table is presented as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method used or type of emission factor for all subcategories within each category.

Table 5.2b

Methods and emission factors used (2007)

	Wetlands						Settlements						Other Land					
	CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		CH_4		N_2O	
	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]	Method[a]	EF[a]
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	T1, T3	CS	NA	NA	NA	NA	T1, T3	CS	NA	NA	NA	NA	T1, T3	CS	NA	NA	NA	NA
Belarus	T2	CS	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	CS, T2, T3	CS	NA	NA	NA	NA	CS, T1, T3	CS			CS, T3	CS	NA	NA	NA	NA	NA	NA
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark	CS	D	T1	CS	CS	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	T1	D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T1	D	NA	NA	NA	NA
European Community	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2	CS	CR, CS, D, T1, T2	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T2	CS	CR, D, T2	CS	CS, D, T1, T2, T3	CS, D	CS, T2	CS	CR, T2	CS
Finland	D	CS	D	CS	D	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS	CR, CS, T2	CS	CS, T2	CS	CR, T2	CS
Germany			NA	NA	NA	NA			NA	NA	NA	NA			NA	NA	NA	NA
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland			RA, T2	CS	NA	NA	T3	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	T1	CS, D	NA	NA	D, T1	D	T1, T2	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	T2	CS, D	NA	NA	NA	NA	T1a, T1b, T2	CS, D	NA	NA	NA	NA	T2	CS, D	NA	NA	NA	NA
Latvia			NA	NA	NA	NA			NA	NA	NA	NA			NA	NA	NA	NA
Liechtenstein	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Lithuania	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	T1a	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands			NA	NA	NA	NA			NA	NA	NA	NA			NA	NA	NA	NA
New Zealand	T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA
Norway	T1	CS	NA	NA	T1	D	T3	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland			D, T1	CS, D	D, T1	CS, D			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	D, T2	CS, D	NA	NA	NA	NA	D, T2	CS, D	NA	NA	NA	NA	D, T2	CS, D	NA	NA	NA	NA
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden			NA	NA	NA	NA	T3	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Turkey																		
Ukraine	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NA	NA	NA	NA	NA	NA	D	CS	D	CS	D	CS	NA	NA	NA	NA	NA	NA
United States	T1	D	NA	NA	T1	D			NA	NA	D	D	NA	NA	NA	NA	NA	NA

[a] Information on methods and emission factors in this table is presented as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method used or type of emission factor for all subcategories within each category.

Table 5.3a

Forest land remaining forest land - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
			CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
	Total area (kha)	Area of organic soil (kha)	Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	105,570.09	NA, NO	0.15	-0.06	0.09	-0.09	NA, NO	NA, NO
Austria	3,373.09	NA	3.13	-1.81	1.32	0.05	NO	NO
Belarus	7,874.10	NE	1.40	-0.50	0.90	NE	NE	NE
Belgium	620.98		3.54	-2.20	1.35		0.04	
Bulgaria	4,108.49	NE	0.93	-0.47	0.46	NE	NE	NE
Canada	229,402.27	IE	3.46	-3.64	-0.19	0.21	0.03	IE
Croatia	1,889.64	NE	2.35	-1.34	1.01	NE	NE	NE
Czech Republic	2,559.70	18.67	3.10	-2.76	0.35			
Denmark	498.95	17.63	3.60	-2.09	1.51	NE	NE	NE
Estonia	2,212.70	480.07	1.72	-0.83	0.89	NE	NO	-0.16
European Community	114,284.32	10,628.17	1.40	-0.73	0.67	0.02	0.09	-0.37
Finland	22,039.15	5,939.88	1.58	-1.17	0.40	0.04	0.06	-0.31
France	14,392.60		2.89	-1.42	1.46	-0.12	0.01	
Germany	10,402.57	IE	1.94	NA	1.94	NO	NO	NO
Greece	6,513.07		0.28	-0.20	0.08	0.03		
Hungary	1,777.16	NE	0.63	IE	0.63	NE	NE	NE
Iceland	53.98	0.68	0.27	NE	0.27	NE	NE	-0.16
Ireland	276.17	NE	1.43	IE	1.43	0.05	NE	NE
Italy	10,782.32	NO	2.50	-1.92	0.58	0.13	0.64	NO
Japan	24,576.81	IE	0.89	IE, NA	0.89	0.00	0.02	IE
Latvia	3,257.15	707.36	3.42	-0.85	2.57	0.20	NE	-0.43
Liechtenstein	6.14	NE	3.10	-2.27	0.83	0.00	0.01	IE
Lithuania	1,817.91	129.68	2.18	-1.00	1.18	NE	NE	-0.68
Luxembourg	87.56	NO	3.10	-1.87	1.23	NE	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	341.56	9	2.69	-1.21	1.48	0.25	NE	NE
New Zealand	8,800.11	IE, NE	0.32	-0.12	0.20	0.09	IE, NE	IE, NE
Norway	9,220.88	245.51	1.10	-0.46	0.65	0.07	0.10	-0.16
Poland	8,626.62	231.32	2.71	-1.47	1.24	NO	0.37	NO
Portugal	3,338.60	NO	2.06	-1.79	0.27	0.00	0.00	NO
Romania	6,731.05	NE	2.35	-0.88	1.47	NE	NE	NE
Russian Federation	618,315.50	NE	0.41	-0.02	0.39	0.08	0.16	NE
Slovakia	1,880.00	4.89	2.23	-1.84	0.40	NE	NE	NE
Slovenia	1,183.25	NE	2.48	-1.15	1.33	NE	NE	NE
Spain	13,522.73	NO	0.43	IE	0.43			NO
Sweden	27,284.19	4,661.37	0.19	0.00	0.19	0.05	0.07	-0.44
Switzerland	1,208.60	IE, NO	2.97	-2.77	0.20	0.19	IE, NO	IE, NO
Turkey	20,663.11	NO	0.90	-0.27	0.62	0.05	NE	NO
Ukraine	9,079.74	NE	1.97	-0.60	1.37	NE	NE	NE
United Kingdom	810.76	IE	NO	NO	NO	NO	NO	NO
United States	257,000.82	NA	0.58	IE	0.58	0.11	NE	NA

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.3b

Forest land remaining forest land - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	15,634.94	-6,531.56	9,103.38	-8,983.12	NA, NO	NA, NO	-440.92
Austria	10,573.65	-6,110.30	4,463.35	163.95	NO	NO	-16,966.78
Belarus	11,038.03	-3,930.87	7,107.16	NE	NE	NE	-26,059.60
Belgium	2,200.81	-1,363.38	837.42		26.95		-3,169.37
Bulgaria	3,839.90	-1,932.73	1,907.18	NE	NE	NE	-6,992.98
Canada	792,938.23	-835,882.58	-42,944.35	48,485.64	7,346.57	IE	-47,255.51
Croatia	4,432.98	-2,528.75	1,904.23	NE	NE	NE	-6,982.17
Czech Republic	7,945.41	-7,058.19	887.22				-3,253.13
Denmark	1,798.36	-1,043.30	755.06	NE	NE	NE	-2,768.55
Estonia	3,798.64	-1,840.38	1,958.26	NE	NO	-76.81	-6,898.64
European Community	159,454.41	-83,416.72	76,037.69	2,258.67	9,603.49	-3,905.57	-307,979.02
Finland	34,721.47	-25,812.63	8,908.85	891.65	988.55	-1,834.17	-32,834.54
France	41,569.09	-20,493.66	21,075.43	-1,768.56	174.63		-71,432.15
Germany	20,199.14	NA	20,199.14	NO	NO	NO	-74,063.51
Greece	1,799.54	-1,305.59	493.95	174.73			-2,451.82
Hungary	1,116.63	IE	1,116.63	NE	NE	NE	-4,094.32
Iceland	14.32	NE	14.32	NE	NE	-0.11	-52.10
Ireland	395.13	IE	395.13	14.34	NE	NE	-1,501.40
Italy	26,940.03	-20,723.79	6,216.24	1,427.12	6,916.03	NO	-53,384.43
Japan	21,819.16	IE, NA	21,819.16	10.35	423.79	IE	-81,595.45
Latvia	11,150.59	-2,765.19	8,385.40	643.29	NE	-306.15	-31,982.63
Liechtenstein	19.03	-13.92	5.11	0.02	0.06	IE	-19.03
Lithuania	3,958.92	-1,810.69	2,148.23	NE	NE	-88.18	-7,553.53
Luxembourg	271.43	-163.38	108.05	NE	NO	NO	-396.18
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	918.75	-412.77	505.98	85.04	NE	NE	-2,167.08
New Zealand	2,814.80	-1,034.77	1,780.03	759.47	IE, NE	IE, NE	-9,311.50
Norway	10,179.10	-4,203.82	5,975.28	678.61	938.21	-39.28	-27,693.64
Poland	23,379.07	-12,689.42	10,689.64	NO	3,098.14	NO	-50,555.19
Portugal	6,893.19	-5,987.92	905.27	-2.14	1.25	NO	-3,316.04
Romania	15,836.23	-5,935.64	9,900.59	NE	NE	NE	-36,302.17
Russian Federation	253,251.09	-14,672.18	238,578.91	49,171.32	99,156.04	NE	-1,418,656.32
Slovakia	4,201.18	-3,453.65	747.53	NE	NE	NE	-2,740.94
Slovenia	2,937.68	-1,362.85	1,574.82	NE	NE	NE	-5,774.35
Spain	5,856.51	IE	5,856.51			NO	-21,473.89
Sweden	5,317.30	0.00	5,317.30	1,272.54	1,496.09	-2,071.40	-22,053.28
Switzerland	3,588.45	-3,351.56	236.89	232.96	IE, NO	IE, NO	-1,722.75
Turkey	18,544.97	-5,669.98	12,874.99	1,029.38	NE	NO	-50,982.71
Ukraine	17,893.51	-5,466.50	12,427.02	NE	NE	NE	-45,565.73
United Kingdom	NO	NO	NO	NO	NO	NO	NO
United States	148,123.19	IE	148,123.19	29,354.76	NE	43,330.65	-809,631.52

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.4

Net CO_2 emissions/removals from forest land remaining forest land - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	-47,415	-441	-138.0	3.0	-11.0	-10.1	-9.4	29.4	-25.8	49.2	-110.3	1659.0	-187.2	-35.3	14.1	-99.5	-99.1
Austria	-11,511	-16,967	51.3	-4.7	-32.5	95.2	-9.5	26.6	-24.6	17.3	-19.4	10.3	0.0	0.0	0.0	0.0	47.4
Belarus	-25,132	-26,060	7.0	1.7	-0.7	-5.0	2.4	3.0	1.0	0.0	-4.7	-5.9	-1.5	6.2	2.9	-4.2	3.7
Belgium	-3,205	-3,169	-8.9	-5.4	1.7	0.7	-3.8	-1.9	10.8	39.4	-9.6	-15.2	-16.1	-27.8	32.6	14.1	-1.1
Bulgaria	-5,133	-6,993	24.0	3.1	-13.4	5.4	-0.2	4.9	24.7	5.5	-12.1	-15.2	12.9	-12.2	0	0.0	36.2
Canada	-126,258	-47,256	6.2	0.3	13.1	-7.9	3.4	-27.1	20.6	23.9	-27.8	-3.6	-45.9	-4.1	15.1	-18.2	-62.6
Croatia	-4,931	-6,982	91.6	-1.2	7.7	-10.0	-7.2	-1.2	-2.6	10.8	-3.8	-7.7	0.9	-2.1	-2.7	-8.0	41.6
Czech Republic	-6,643	-3,253	63.9	-0.4	6.4	-7.2	4.7	-1.6	1.8	3.9	-2.0	-16.4	3.5	5.1	-35.2	-41.2	-51.0
Denmark	-2,831	-2,769	6.2	-3.7	2.3	2.8	4.7	-0.3	-81.8	483.3	7.5	-8.1	-2.9	-50.7	58.6	6.5	-2.2
Estonia	-8,089	-6,899	-3.8	-1.3	1.9	-26.9	-5.5	-81.2	-19.8	271.4	-13.4	91.0	58.3	1.9	13.2	-16.0	-14.7
European Community	-279,402	-307,979	14.5	1.5	6.0	-0.3	-1.8	4.4	-8.8	9.0	3.5	-4.5	2.0	1.1	1.0	-11.4	10.2
Finland	-23,223	-32,835	62.4	1.3	39.1	-22.2	-10.5	10.0	4.5	16.9	0.4	-1.2	3.2	18.2	12.0	-19.4	41.4
France	-48,990	-71,432	-14.3	-0.1	6.3	2.9	0.5	2.8	-23.1	16.8	12.3	5.5	0.9	3.1	-2.7	2.1	45.8
Germany	-74,064	-74,064	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	-2,043	-2,452	14.8	32.0	-2.2	-6.3	-16.7	26.4	-47.6	138.8	5.7	1.6	-3.1	-1.1	-1.3	-34.2	20.0
Hungary	-3,393	-4,094	11.8	0.0	-58.3	1.4	55.2	-61.6	-39.3	151.8	-14.2	81.9	-14.9	31.1	-16.1	-8.3	20.7
Iceland	-17	-52	7.3	6.4	6.5	5.8	6.1	6.2	6.3	5.5	5.5	5.5	5.3	8.3	9.8	9.6	203.7
Ireland	-1,015	-1,501	14.6	-29.8	-13.2	-31.4	117.0	8.7	-82.2	-88.0	3000.4	225.9	-38.9	19.2	-5.3	74.6	47.9
Italy	-52,546	-53,384	40.4	7.2	3.2	-10.4	-3.6	11.2	-8.9	12.3	8.1	-12.7	8.3	3.2	0.7	-34.8	1.6
Japan	-75,127	-81,595	0.3	5.2	0.3	0.3	0.2	0.2	0.3	0.3	11.8	0.1	0.1	-5.6	-4.5	-0.4	8.6
Latvia	-21,847	-31,983	6.4	0.4	4.1	-5.1	-1.3	0.4	4.2	21.1	-13.6	1.5	6.9	0.7	15.4	-2.6	46.4
Liechtenstein	-19	-19	0.1	0.1	0.1	5.2	-0.1	-0.1	-0.1	-0.1	-0.1	-3.2	0.0	0.0	0.0	0.0	2.1
Lithuania	-8,994	-7,554	-2.1	-22.2	8.8	7.2	5.2	0.6	-7.5	-3.1	-7.7	5.2	3.4	4.7	2.9	-0.8	-16.0
Luxembourg	205	-396	-86.3	36.2	44.8	7.5	-42.2	35.4	0.4	15.0	0.9	2.3	-7.3	-4.4	-21.1	0.5	-292.9
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	-2,529	-2,167	14.6	-4.7	6.9	-9.2	3.1	-2.3	-8.5	1.9	2.8	-0.3	-2.5	-3.2	-2.3	-8.1	-14.3
New Zealand	-5,614	-9,312	0.8	8.2	17.6	18.6	-2.3	4.2	16.1	7.3	8.0	-4.0	-7.6	-26.2	-30.3	46.4	65.8
Norway	-14,967	-27,694	-5.5	6.5	-4.7	2.3	-1.5	17.7	23.8	7.6	23.3	8.5	0.6	6.0	-18.2	10.6	85.0
Poland	-42,705	-50,555	16.6	-0.7	2.1	5.8	-0.4	0.9	0.6	-1.8	16.1	2.1	6.1	3.0	10.5	-0.6	18.4
Portugal	-211	-3,316	671.9	24.7	16.0	0.6	15.5	-10.0	11.4	-7.5	8.7	-133.6	-220.6	-28.0	49.7	0	1468.1
Romania	-32,435	-36,302	4.1	-1.9	-2.5	1.0	5.5	-3.1	-2.9	2.5	-6.2	-1.2	-1.9	4.8	0.1	-2.5	11.9
Russian Federation	-220,404	-1,418,656	0	0.0	0	0	-92.2	1144.3	-142.7	-93.2	-5328.3	36.5	-22.8	-69.5	-59.9	1488.6	543.7
Slovakia	-4,614	-2,741	21.0	-15.0	-9.3	-30.4	14.4	-9.6	52.0	27.6	1.6	-8.1	-33.7	-94.7	1279.1	6.3	-40.6
Slovenia	-1,589	-5,774	23.2	11.6	-2.2	-9.8	9.8	6.9	1.9	1.9	4.2	-3.2	6.1	-3.8	-12.8	22.0	263.3
Spain	-21,474	-21,474	0	0.0	0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sweden	-35,965	-22,053	9.6	-4.9	24.5	10.1	-0.2	-4.0	-1.2	-5.0	2.7	0.3	-14.4	-10.4	-6.6	-16.5	-38.7
Switzerland	-3,362	-1,723	-19.5	-3.4	-12.1	-35.7	-22.9	-10.7	-88.2	180.0	-19.1	302.2	-70.0	-57.4	-68.5	1554.6	-48.8
Turkey	-44,319	-50,983	2.4	-1.0	0.5	3.8	1.8	1.4	-0.4	3.4	-1.0	1.7	-0.5	-6.3	5.2	-1.1	15.0
Ukraine	-54,097	-45,566	4.4	-5.9	-4.2	0.6	4.3	0.8	-2.3	-1.0	-2.4	-2.6	-2.9	0.4	-0.9	-2.6	-15.8
United Kingdom	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	-529,273	-809,632	8.0	0.8	-4.4	4.3	-11.7	-13.0	-8.2	22.6	53.9	36.4	1.6	-16.6	-9.2	2.3	53.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.5

Area of forest land remaining forest land - trend information

Area (kha)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	111,944.60	105,570.09	0.0	0.0	-0.1	-0.1	-0.1	0.1	0.1	-0.7	-0.7	-0.8	-0.8	-1.0	-0.9	-1.1	-5.7
Austria	3,170.67	3,373.09	0.4	-1.2	0.8	0.8	0.7	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	6.4
Belarus	7,028.00	7,874.10	0.5	1.7	0.4	1.0	1.0	-0.3	1.6	1.6	0.4	0.5	0.7	-0.1	0.5	0.5	12.0
Belgium	641.11	620.98	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.1	-0.5	0	0	0	0	0	0	-3.1
Bulgaria	3,259.00	4,108.49	0.1	0.1	-0.1	-0.1	16.3	-13.6	0.8	2.0	0.7	1.7	14.5	0.3	0	0.8	26.1
Canada	230,080.88	229,402.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3
Croatia	1,825.34	1,889.64	0	0	-4.2	0	0	0	0	0	0	0	0	0	8.1	0	3.5
Czech Republic	2,524.29	2,559.70	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.4
Denmark	411.39	498.95	0	0	0	0	0	0	7.1	0	0	0	0	0	0	13.2	21.3
Estonia	2,163.00	2,212.70	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-1.4	-1.7	2.3
European Community	111,770.78	114,284.32	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.3	-0.1	-0.1	-0.1	2.2
Finland	21,770.18	22,039.15	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	-0.4	-0.4	-0.4	-0.5	1.2
France	13,736.32	14,392.60	-0.7	0.1	-0.1	-0.3	0.4	-0.3	0.5	0.4	0.6	0.3	0.8	0.3	0.4	0.4	4.8
Germany	10,478.60	10,402.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7
Greece	6,513.07	6,513.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	1,515.12	1,777.16	0.7	0.7	0.5	0.7	0.8	0.9	-0.5	1.6	0.3	1.4	1.8	1.1	0.8	1.0	17.3
Iceland	52.01	53.98	0.1	0.4	0.5	0.6	0.4	0.4	0.3	0.3	0.1	0.2	0.0	-0.1	-0.1	-0.2	3.8
Ireland	194.73	276.17	-2.8	-3.5	-0.4	5.6	6.1	4.3	1.1	3.0	5.4	6.8	2.4	2.8	4.0	7.0	41.8
Italy	9,153.77	10,782.32	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	17.8
Japan	23,583.42	24,576.81	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	4.2
Latvia	3,142.37	3,257.15	0.2	0.2	0.3	0.3	0.3	0.3	0.2	1.0	-0.8	0.2	0.2	0.3	0.1	0.3	3.7
Liechtenstein	6.04	6.14	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	1.7
Lithuania	1,612.21	1,817.91	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	12.8
Luxembourg	82.61	87.56	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	380.61	341.56	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-10.3
New Zealand	8,398.56	8,800.11	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.3	4.8
Norway	8,892.87	9,220.88	0.0	-0.1	-0.1	0.0	-0.1	-0.1	1.2	0.5	0.5	0.3	0.5	0.2	0.5	0.5	3.7
Poland	8,864.00	8,626.62	0.4	0.4	0.3	0.1	0.3	0.1	0.9	0.1	0.1	0.3	0.3	0.1	0.1	0.1	-2.7
Portugal	3,214.59	3,338.60	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0	3.9
Romania	6,542.00	6,731.05	1.9	0.0	0.0	0.1	-0.2	0.0	-3.2	0.0	2.9	0.1	1.4	-0.1	0.0	-0.1	2.9
Russian Federation	609,460.58	618,315.50	0.3	-0.1	-0.1	-0.1	-0.1	0.3	0.2	0	0.1	0.3	0.4	0.2	-0.2	-0.2	1.5
Slovakia	1,921.71	1,880.00	0.3	-0.1	0.0	-0.2	0.0	0.1	0.3	0.0	0.1	0.0	-2.4	-0.1	0	0	-2.2
Slovenia	1,053.45	1,183.25	0.9	0.3	0.1	1.0	0.1	0.4	1.7	0.8	0.6	0.7	0.5	0.5	0.4	0.8	12.3
Spain	13,522.73	13,522.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweden	27,671.83	27,284.19	0.2	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.7	-0.6	-0.8	-1.1	-1.4
Switzerland	1,173.21	1,208.60	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.0
Turkey	20,570.33	20,663.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.5
Ukraine	9,514.45	9,079.74	0.2	-5.0	0.1	0.4	0.3	0.5	0.0	0.3	0.3	0.1	0.1	-0.2	0.4	0.2	-4.6
United Kingdom	828.56	810.76	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-2.1
United States	245,696.94	257,000.82	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.5	0.3	0.3	4.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.6a

Land converted to forest land - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil[b] (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	1,256.01	NO	3.97	IE, NO	3.97	0.62	NO	NO
Austria	227.56	NO	1.18	-0.20	0.98	NO	2.10	NO
Belarus	210.00	NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE	NE
Canada	163.46	IE, NE, NO	1.93	-0.65	1.27	0.28	0.05	IE, NO
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	38.49	NA, NO	2.87	NA	2.87		0.16	NA, NO
Denmark	35.84	NA, NO	1.55	-0.11	1.44	0.15	NE	NE, NO
Estonia	NE	NE	NE	NE	NE	NE	NE	NE
European Community	6,003.35	280.08	3.16	-1.52	1.64	0.22	0.30	0.38
Finland	IE	IE	IE	IE	IE	IE	IE	IE
France	1,922.35		1.46	NO	1.46	0.45	0.05	
Germany	420.68	IE	3.47	NA	3.47	NE	NE	NE
Greece	50.14	NO	2.85	NE, NO	2.85	NE, NO		NO
Hungary	48.80	NO	0.68	IE, NO	0.68	NE, NO	IE, NO	NO
Iceland	23.63	3.07	0.35	0.00	0.35	NE, NO	NE, NO	-0.14
Ireland	301.99	10.00	0.41	NO	0.41	0.01	-0.27	-3.95
Italy	96.80	NO	2.52	-1.94	0.58	0.13	5.49	NO
Japan	405.81	IE	0.89	IE	0.89	-0.04	0.01	IE
Latvia	133.95	IE, NE	0.11	IE, NE, NO	0.11	0.07	IE, NE	IE, NE
Liechtenstein	0.02	IE, NO	1.70	NO	1.70	NO	NO	NO
Lithuania	222.05	NA, NE	0.71	NA	0.71	1.52	NE	NE
Luxembourg	6.06	NO	0.01	0.00	0.01	NE, NO	0.00	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	53.35	4.23	2.94	NE	2.94	NE	NE	NE
New Zealand	1,193.08	NA, NE	6.06	-2.92	3.14	0.72	-0.37	NA, NE
Norway	53.53	21.18	1.71	-0.03	1.68	NE	NA, NE, NO	NA, NE, NO
Poland	387.82	9.18	0.54	NE, NO	0.54	NE, NO	2.02	NE, NO
Portugal	137.17	NO	1.84	-0.94	0.90	-0.07	0.31	NO
Romania	9.86	NE	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE
Russian Federation	IE, NE	NE	IE, NE	IE, NE	IE, NE	NE	IE, NE	IE, NE
Slovakia	52.90	IE, NO	IE	IE	IE	2.71	IE, NO	IE, NO
Slovenia	IE, NO	IE, NE, NO	IE, NO	IE, NO	IE, NO	NE, NO	IE, NE, NO	IE, NE, NO
Spain	685.17	NO	2.57	IE, NO	2.57			NO
Sweden	384.01	NE	0.71	-0.13	0.58	NE	NE	NE
Switzerland	49.59	NO	1.43	-1.16	0.27	-0.11	NO	NO
Turkey	671.32	NO	1.10	-0.15	0.95	NE, NO	NE, NO	NO
Ukraine	705.89	NE, NO	1.63	NA, NO	1.63	0.43	0.44	NE, NO
United Kingdom	1,682.23	265.85	6.78	-5.17	1.61	0.25	0.45	0.55
United States	NA	NA	NE	NE	NE	NE	NE	NE

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.6b

Land converted to forest land - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	4,984.43	IE, NO	4,984.43	783.84	NO	NO	-21,150.32
Austria	267.61	-44.56	223.05	NO	478.50	NO	-2,572.35
Belarus	IE, NE, NO	IE, NE, NO	IE, NE, NO	NE, NO	NE, NO	NE, NO	IE, NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE
Canada	314.86	-107.02	207.85	45.69	8.93	IE, NO	-962.37
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	110.40	NA	110.40		6.25	NA, NO	-427.72
Denmark	55.40	-3.92	51.48	5.38	NE	NE, NO	-208.48
Estonia	NE	NE	NE	NE	NE	NE	NE
European Community	18,946.86	-9,106.46	9,840.39	1,293.30	1,701.51	107.40	-47,456.17
Finland	IE	IE	IE	IE	IE	IE	IE
France	2,812.45	NO	2,812.45	857.02	94.82		-13,802.41
Germany	1,459.40	NA	1,459.40	NE	NE	NE	-5,351.14
Greece	142.79	NE, NO	142.79	NE, NO			-523.57
Hungary	32.97	IE, NO	32.97	NE, NO	IE, NO	NO	-120.89
Iceland	8.38	-0.02	8.36	NE, NO	NE, NO	-0.43	-29.06
Ireland	122.84	NO	122.84	3.61	-79.69	-39.50	-26.56
Italy	244.02	-187.73	56.29	12.93	531.85	NO	-2,203.92
Japan	360.82	IE	360.82	-16.41	2.38	IE	-1,271.57
Latvia	14.77	IE, NE, NO	14.77	8.79	IE, NE	IE, NE	-86.38
Liechtenstein	0.03	NO	0.03	NO	NO	NO	-0.10
Lithuania	156.94	NA	156.94	337.36	NE	NE	-1,812.45
Luxembourg	0.09	-0.01	0.07	NE, NO	0.01	NO	-0.29
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	156.77	NE	156.77	NE	NE	NE	-574.83
New Zealand	7,228.50	-3,480.75	3,747.75	857.05	-444.69	NA, NE	-15,253.73
Norway	91.45	-1.46	90.00	NE	NA, NE, NO	NA, NE, NO	-329.98
Poland	209.56	NE, NO	209.56	NE, NO	765.98	NE, NO	-3,576.99
Portugal	252.12	-129.01	123.11	-8.95	43.12	NO	-576.72
Romania	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE	NA, NE
Russian Federation	IE, NE	IE, NE	IE, NE	NE	IE, NE	IE, NE	IE, NE
Slovakia	IE	IE	IE	143.28	IE, NO	IE, NO	-525.36
Slovenia	IE, NO	IE, NO	IE, NO	NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO
Spain	1,763.21	IE, NO	1,763.21			NO	-6,465.10
Sweden	271.55	-50.45	221.10	NE	NE	NE	-810.70
Switzerland	70.76	-57.35	13.41	-5.55	NO	NO	-28.85
Turkey	739.73	-102.61	637.12	NE, NO	NE, NO	NO	-2,336.10
Ukraine	1,147.59	NA, NO	1,147.59	306.05	312.74	NE, NO	-6,476.75
United Kingdom	11,398.62	-8,690.79	2,707.83	423.31	632.91	146.90	-14,340.11
United States	NE	NE	NE	NE	NE	NE	NE

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.7

Net CO_2 emissions/removals from land converted to forest land - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	-2,046	-21,150	92.0	9.6	10.3	9.8	12.6	4.2	12.9	14.3	14.3	8.4	2.4	5.5	-0.7	-7.2	933.9
Austria	-4,402	-2,572	3.1	-5.2	-7.4	-8.0	-8.7	-3.9	-4.0	-4.2	-4.4	-4.6	-1.3	-1.3	-1.3	-1.3	-41.6
Belarus	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	-5	NE	-68.4	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	-1,193	-962	-3.0	2.4	-4.5	-1.3	-0.6	-1.2	1.1	-1.2	0.2	-5.9	0.7	-2.0	2.3	-7.6	-19.3
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	-407	-428	2.4	-5.2	0.7	-1.5	3.1	-9.2	1.0	-3.9	13.7	1.1	3.9	2.5	2.2	3.2	5.0
Denmark	NA, NE, NO	-208	*	31.4	45.9	38.9	36.5	26.0	32.8	22.6	18.1	20.5	13.9	13.0	16.5	13.5	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	-23,972	-47,456	-4.4	11.3	-2.3	5.8	10.1	3.4	6.8	4.3	5.0	-1.8	10.9	2.0	1.5	-2.8	98.0
Finland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	-6,585	-13,802	5.6	6.6	6.4	6.1	2.8	1.4	2.4	2.0	0.9	2.9	-0.9	3.3	16.6	-0.4	109.6
Germany	-336	-5,351	33.4	26.7	21.1	17.4	14.8	12.9	11.4	10.3	9.3	8.5	7.8	5.5	7.5	6.8	1492.9
Greece	NE, NO	-524	*	133.3	53.6	69.8	12.3	24.4	11.7	57.4	6.4	6.6	5.9	5.8	5.0	4.7	*
Hungary	-142	-121	100.0	-117.6	954.8	-29.2	-107.7	260.6	-605.7	-28.3	50.2	-95.7	-1110.6	-299.3	-58.5	-161.7	-14.7
Iceland	-4	-29	21.6	13.4	13.3	10.6	13.1	12.0	11.9	9.6	8.8	8.6	8.4	14.2	14.5	13.5	665.4
Ireland	659	-27	27.9	-40.8	-19.1	-116.7	-310.3	-80.1	-2467.3	68.9	-31.4	-141.1	-80.2	-123.6	1434.4	-77.6	-104.0
Italy	-1,003	-2,204	24.5	8.5	7.2	0.4	2.3	7.5	0.5	7.2	6.9	-0.4	5.7	4.6	4.1	-6.6	119.7
Japan	-5,651	-1,272	-4.1	-2.9	-6.2	-6.8	-6.6	-6.9	-8.0	-8.4	-2.3	-3.0	-4.5	-32.5	-16.4	-14.2	-77.5
Latvia	-23	-86	12.5	9.5	11.6	18.9	4.2	7.9	9.9	13.0	-0.2	0	0	0.2	0	18.8	273.2
Liechtenstein	0	0	0	0	0	-30.5	0	0	0	0	0	40.9	0	0	0	0	-2.0
Lithuania	-1,936	-1,812	-3.1	-3.6	-3.7	-2.6	0.6	0.6	-0.3	-0.8	0.9	3.4	4.0	7.4	1.7	0.0	-6.4
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	-3	-575	200.0	40.0	33.3	28.6	25.0	22.2	43.0	18.2	16.7	15.4	14.3	13.3	12.5	11.8	20281.6
New Zealand	-13,059	-15,254	-6.8	-5.9	-5.7	4.7	5.6	-0.9	-8.4	-5.1	-16.6	24.6	53.8	27.2	7.8	-16.4	16.8
Norway	-178	-330	0	0	0	0	0	292.8	-79.9	167.1	-27.8	-31.1	62.6	-28.0	-7.2	62.1	85.0
Poland	NE, NO	-3,577	-6.7	-7.1	1.2	4.9	-2.5	7.8	-17.7	7.8	4.6	1.3	3.1	6.7	6.2	4.3	*
Portugal	-577	-577	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	IE, NE	IE, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	IE, NE, NO	-525	*	*	*	*	*	*	*	*	*	*	*	10.8	1.0	1.1	*
Slovenia	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	-6,465	*	140.7	80.2	41.1	29.8	14.2	17.0	9.4	3.9	4.2	2.9	2.5	3.7	1.9	*
Sweden	477	-811	475.0	-79.3	472.6	-8.5	-92.9	1.4	-325.3	-70.1	711.0	-172.7	-472.2	20.9	-51.9	-46.2	-269.8
Switzerland	-126	-29	-25.4	6.6	-9.6	-31.9	-19.4	-15.4	-2.1	18.8	-9.8	10.1	-54.9	-71.2	-153.2	-446.9	-77.2
Turkey	-551	-2,336	16.7	10.0	9.1	8.3	7.7	7.1	6.7	6.2	5.9	5.6	5.3	22.9	-5.2	9.1	323.7
Ukraine	-1,397	-6,477	-10.1	117.8	-0.8	-0.6	9.3	-3.4	-2.7	-0.5	0.6	0.8	0.6	-12.8	-13.3	0.2	363.7
United Kingdom	-12,202	-14,340	4.2	-1.7	-1.6	-1.5	-0.8	0.7	2.2	3.9	4.9	4.0	4.2	-3.5	-3.2	-5.9	17.5
United States	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.8

Area of land converted to forest land - trend information

Area (kha)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	85.27	1,256.01	101.1	12.8	11.4	10.2	11.8	10.9	12.9	11.4	10.3	9.4	7.5	5.0	4.2	4.1	1373.0
Austria	386.59	227.56	2.9	-6.6	-7.1	-7.7	-8.3	-3.7	-3.8	-4.0	-4.1	-4.3	-1.2	-1.2	-1.2	-1.2	-41.1
Belarus	50.60	210.00	10.3	7.3	30.0	23.1	18.7	15.8	1.1	0	0	0	0	0	23.2	0	315.0
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	2.46	NE	-43.1	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	219.52	163.46	-0.1	-0.5	-1.6	-1.2	-1.4	-1.7	-1.5	-1.8	-2.1	-1.9	-0.9	-0.8	-5.9	-6.3	-25.5
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	52.60	38.49	-1.3	-8.1	-2.6	-3.7	-3.2	-10.1	-2.1	-5.4	12.8	2.2	3.4	1.9	1.8	1.5	-26.8
Denmark	0.73	35.84	137.0	23.1	19.4	26.9	13.1	36.5	16.7	11.0	10.9	10.7	4.9	12.2	12.4	3.0	4809.6
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	4,296.13	6,003.35	0.7	4.0	3.9	3.5	2.0	1.7	2.1	1.8	1.1	1.4	-0.3	0.9	1.3	1.4	39.7
Finland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	1,522.64	1,922.35	1.7	4.0	3.9	3.7	-0.5	-0.9	-0.3	0.1	-1.3	0.9	-2.6	1.2	0.2	0.3	26.3
Germany	24.28	420.68	33.4	27.9	21.8	17.9	15.2	13.2	11.6	10.4	9.5	8.6	7.9	5.5	7.1	7.3	1632.6
Greece	NE, NO	50.14	*	133.3	53.6	69.8	12.3	24.4	11.7	57.4	6.4	6.6	5.9	5.8	5.0	4.7	*
Hungary	32.66	48.80	-1.4	12.4	20.4	12.0	-0.6	1.7	1.7	15.9	16.2	4.8	-0.2	1.0	3.9	5.7	49.4
Iceland	2.70	23.63	29.3	18.4	15.8	14.0	14.1	12.9	11.9	10.3	9.6	8.1	7.4	6.5	5.6	4.8	775.8
Ireland	175.43	301.99	5.2	7.0	5.6	1.3	2.0	2.0	3.8	3.5	3.2	1.1	1.2	3.1	2.4	1.9	72.1
Italy	95.73	96.80	0	0	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
Japan	1,366.84	405.81	-4.4	-6.4	-6.1	-6.8	-6.5	-6.8	-7.9	-8.3	-10.2	-3.0	-4.4	-4.1	-12.5	-13.8	-70.3
Latvia	228.65	133.95	-0.5	13.4	-3.3	-7.6	-14.9	-7.5	-5.8	-3.2	6.0	-17.2	18.4	6.6	-1.3	-23.8	-41.4
Liechtenstein	0.02	0.02	0	0	0	-42.9	0	0	0	0	0	70.8	0	0	0	0	-2.4
Lithuania	242.00	222.05	-3.1	-3.6	-3.7	-2.6	0.6	0.6	0.6	-0.8	0.4	2.4	4.0	6.9	1.8	-1.0	-8.2
Luxembourg	6.06	6.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	2.96	53.35	100.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	1700.0
New Zealand	970.39	1,193.08	-0.1	5.3	5.1	3.6	2.4	1.2	0.3	-0.2	-0.9	-0.9	-1.3	-1.5	-1.8	-2.3	22.9
Norway	6.95	53.53	0	0	0	0	0	1094.1	-58.0	0.8	-2.1	2.1	-28.7	71.6	-10.9	39.8	670.2
Poland	NE, NO	387.82	-6.7	-7.1	0.8	4.5	-3.0	7.2	-18.0	7.4	3.4	0.3	1.8	5.6	5.0	4.0	*
Portugal	137.17	137.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	16.20	9.86	-98.7	-48.3	653.3	-81.4	-90.5	60250.0	-99.2	19460.0	-91.7	519.1	-68.2	-87.9	260.5	-29.3	-39.2
Russian Federation	IE, NE	IE, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	IE, NO	52.90	*	*	*	*	*	*	*	*	*	*	*	6.0	0.7	1.7	*
Slovenia	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	685.17	*	139.2	70.8	38.2	26.0	13.4	13.5	7.1	3.9	4.0	3.5	3.3	3.4	2.5	*
Sweden	528.93	384.01	-8.7	-0.4	-2.8	-3.0	1.2	1.7	2.4	0.3	4.3	0.3	-6.8	-9.4	1.6	3.6	-27.4
Switzerland	65.31	49.59	-0.1	-1.7	-1.6	-1.6	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.9	-2.2	-2.0	-2.2	-24.1
Turkey	185.52	671.32	16.7	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	5.6	5.3	4.7	-4.8	8.9	261.9
Ukraine	577.30	705.89	-3.0	78.9	-20.9	-5.0	3.8	-11.8	-4.9	-0.5	0.6	0.8	0.6	-12.5	-13.3	0.2	22.3
United Kingdom	1,415.60	1,682.23	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.2	0.9	0.8	0.7	0.7	0.5	0.6	18.8
United States	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.9a

Cropland remaining cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
			CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
	Total area (kha)	Area of organic soil (kha)	Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	21,170.00	NO	IE	-0.12	-0.12	-0.06	-0.03	NO
Austria	926.06	NO	IE	-0.09	-0.09	NO	0.07	NO
Belarus	5,473.60	NE	NE	NE	NE	NE	NE	NE
Belgium	855.86		NE		NE		-0.18	
Bulgaria	3,538.02	NE	0.11	-0.08	0.03	NE	NE	NE
Canada	47,077.62	16.15	0.00	0.00	0.00	-0.01	0.08	-5.00
Croatia	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	3,224.25	NO	0.00		0.00		0.00	NO
Denmark	2,477.10	62.75	0.01	0.00	0.01	NA, NE	-0.07	-4.49
Estonia	606.98	35.67	0.03	-0.09	-0.06	NE	NE	-3.67
European Community	81,965.99		0.10	-0.06	0.04	0.00	0.00	
Finland	2,255.30	257.02	0.00	0.00	0.00	NE	0.21	-5
France	14,031.74		0.15	-0.15		NO		
Germany	13,307.92	575.43	NO	NO	NO	NO	NO	-11.00
Greece	3,720.70	6.66	0.07	-0.01	0.06	NO	0.02	-10.00
Hungary	4,790.10	NO	0.08	-0.09	0.00	NE	0.00	NO
Iceland	129.00	NE	NA	NA	NA	NA	NE	IE
Ireland	319.68	NO	NO	NO	NO	NO	0.06	NO
Italy	9,543.70	9.00	0.57	-0.24	0.32		NO	-10.00
Japan	3,953.94	IE	NA	NA	NA	NE	NA	NA
Latvia	1,839.20	78.82	0.01	NE	0.01	NE	NE	-1.00
Liechtenstein	1.88	IE	NO	NO	NO	NO	-0.65	IE
Lithuania	2,987.93	NE	NE	NE	NE	NA	NE	NE
Luxembourg	1.53	NO	2.10	-2.30	-0.20	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	902.52	26.91	NE	NE	NE	NE	NE	IE
New Zealand	421.93	NE	0.45	NE	0.45	NE	NE	NE
Norway	977.96	8.50	0.00	NA, NO	0.00	NA	0.04	-6.67
Poland	12,741.00	553.66	0.00	NO	0.00	NA	-0.14	-1.00
Portugal	4,216.44	NO	0.03	-0.02	0.01	0.00	0.00	NO
Romania	9,847.90	NE	NE	NE	NE	NE	NE	NE
Russian Federation	90,885.80	1,363.29	0.02	-0.01	0.01	NE	-0.32	-1.00
Slovakia	1,409.70	4.89	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE	NE
Spain	20,444.25	NO	NE	NE	NE	NE	NE	NO
Sweden	2,991.45	249.80	0.03	0.00	0.03	0.00	-0.01	-3.00
Switzerland	452.15	15.45	NO	NO	NO	NO	NO	-9.52
Turkey	NA		NA	NA	NA	NA	NA	
Ukraine	24,396.54	35.35	0.06	NE	0.06	NE	-0.14	-10.00
United Kingdom	5,971.74	150.00	0.03	NA, NO	0.03	IE, NO	NO	-2.05
United States	145,201.22	720.00	NE	NE	NE	NE	0.09	-10.48

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.9b

Cropland remaining cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE	-2,482.74	-2,482.74	-1,343.74	-732.52	NO	16,716.32
Austria	IE	-79.30	-79.30	NO	64.80	NO	53.18
Belarus	NE	NE	NE	NE	NE	NE	NE
Belgium	NE		NE		-157.60		577.86
Bulgaria	398.82	-286.56	112.26	NE	NE	NE	-411.63
Canada	25.56	-30.15	-4.59	-465.89	3,610.10	-80.76	-11,215.82
Croatia	NE	NE	NE	NE	NE	NE	NE
Czech Republic	0.64		0.64		4.28	NO	-18.04
Denmark	31.91	-2.76	29.15	NA, NE	-180.32	-281.71	1,587.23
Estonia	18.01	-52.48	-34.47	NE	NE	-130.80	606.00
European Community	8,256.87	-4,691.09	3,565.78	-0.61	180.03	-9,085.53	19,581.22
Finland	1.08	-0.31	0.77	NE	418.44	-1,259.38	3,080.60
France	2,165.31	-2,165.31		NO			NO
Germany	NO	NO	NO	NO	NO	-6,329.74	23,209.06
Greece	260.19	-27.50	232.70	NO	61.01	-66.65	-832.57
Hungary	394.59	-411.29	-16.70	NE	6.70	NO	36.65
Iceland	NA	NA	NA	NA	NE	IE	IE, NA, NE
Ireland	NO	NO	NO	NO	18.23	NO	-66.86
Italy	5,406.34	-2,327.27	3,079.07		NO	-90.00	-10,959.93
Japan	NA	NA	NA	NE	NA	NA	NA, NE
Latvia	22.99	NE	22.99	NE	NE	-78.82	204.70
Liechtenstein	NO	NO	NO	NO	-1.21	IE	4.45
Lithuania	NE	NE	NE	NA	NE	NE	NA, NE
Luxembourg	3.22	-3.53	-0.31	NO	NO	NO	1.12
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	NE	IE	IE, NE
New Zealand	187.85	NE	187.85	NE	NE	NE	-688.78
Norway	4.75	NA, NO	4.75	NA	38.81	-56.73	48.28
Poland	25.39	NO	25.39	NA	-1,662.68	-553.66	8,033.50
Portugal	134.42	-85.11	49.31	-0.77	-3.89	NO	-163.70
Romania	NE	NE	NE	NE	NE	NE	NE
Russian Federation	1,910.79	-642.60	1,268.19	NE	-28,219.15	-1,363.30	103,818.94
Slovakia	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE
Spain	NE	NE	NE	NE	NE	NO	NE, NO
Sweden	79.75	0.00	79.75	0.16	-40.65	-750.06	2,606.27
Switzerland	NO	NO	NO	NO	NO	-147.06	539.23
Turkey	4,769.96	NA	4,769.96	NA	157.13		-18,066.03
Ukraine	1,527.54	NE	1,527.54	NE	-3,415.22	-353.54	8,217.80
United Kingdom	174.65	NA, NO	174.65	IE, NO	NO	-308.00	488.94
United States	NE	NE	NE	NE	12,905.73	-7,545.77	-19,653.19

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.10

Net CO_2 emissions/removals from cropland remaining cropland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	-24,503	16,716	-30.5	-62.2	-47.2	173.0	-152.2	-182.7	207.7	4.3	-314.4	-166.7	10.9	49.9	-117.7	98.4	-168.2
Austria	-178	53	0.6	-6.2	-38.8	-19.6	-14.5	-36.0	-16.5	-10.6	116.2	-85.5	214.7	-35.6	46.0	-316.9	-129.9
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	480	578	-0.4	3.5	1.7	2.3	2.0	0.4	1.7	-3.3	2.4	0.0	0.7	1.2	-0.1	0.4	20.5
Bulgaria	-556	-412	-1.3	-3.0	-1.5	0.6	37.4	0.7	-7.5	-3.4	-11.7	-0.3	-2.6	-11.4	1.1	3.9	-25.9
Canada	-1,636	-11,216	1.8	16.2	13.7	13.0	12.6	10.9	9.8	8.6	9.0	7.6	7.0	6.3	5.9	5.6	585.5
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	-19	-18	-19.4	-4.2	14.9	0.1	18.6	-24.1	1.6	-16.9	0.7	17.0	60.1	-35.6	-6.3	7.1	-3.2
Denmark	2,722	1,587	-71.9	-28.8	86.6	4.7	-27.4	67.5	12.3	27.7	-38.5	-37.6	151.1	-31.1	-1.3	-3.6	-41.7
Estonia	685	606	-0.8	-4.0	-1.2	-3.1	5.2	33.3	-31.5	-31.2	58.8	57.6	-62.0	332.9	-29.8	-33.4	-11.5
European Community	21,019	19,581	5.7	11.6	5.4	-1.0	-5.6	7.4	-6.0	-0.7	-11.7	-4.4	16.0	-9.9	1.6	-2.4	-6.8
Finland	6,797	3,081	-23.8	36.0	2.5	-6.5	-8.6	-5.8	-7.7	-5.3	-10.5	-7.3	-7.3	-9.0	-10.5	4.9	-54.7
France	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Germany	24,547	23,209	0.3	-0.3	0.2	-0.6	-0.1	-0.2	-0.1	-8.4	0.1	0.4	-0.5	0.4	4.8	-0.4	-5.5
Greece	-1,205	-833	3.8	7.0	-28.8	9.5	7.7	17.5	-33.4	9.5	6.3	-33.6	30.9	-14.1	15.6	-4.1	-30.9
Hungary	-236	37	-17.6	-1.2	-5.5	-21.8	-6.9	-24.5	-54.2	-135.1	297.7	-29.0	-78.5	338.5	-43.1	-62.9	-115.6
Iceland	IE, NA, NE	IE, NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	-17	-67	-32.1	-1.6	-33.3	-14.6	9.5	45.2	-41.9	15.5	-6.2	21.9	-32.8	-48.8	193.2	-15.5	301.4
Italy	-16,876	-10,960	-29.5	-7.7	2.7	-6.0	7.4	-12.0	6.8	-6.3	5.4	-4.0	-19.9	14.3	3.7	4.0	-35.1
Japan	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	401	205	-0.4	-22.2	6.0	1.7	-2.0	-7.2	-3.4	-1.2	0.9	-3.1	5.6	11.2	12.3	13.7	-49.0
Liechtenstein	4	4	-0.1	-0.1	-0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	2.9
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	1	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	IE, NE	IE, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	-539	-689	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	27.9
Norway	188	48	-8.2	6.3	-3.4	-3.8	-5.1	-5.7	-61.2	-26.2	150.6	-18.0	-11.0	25.3	-15.4	-10.2	-74.4
Poland	8,165	8,034	-0.5	-0.4	-1.6	-1.1	-0.6	-0.4	-1.1	-1.9	0.1	-2.7	-0.3	-2.0	0.9	4.7	-1.6
Portugal	-164	-164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	256,490	103,819	4.7	37.4	1.1	-20.9	61.5	-12.1	-15.2	-17.5	7.5	-7.4	-2.1	-9.2	3.0	-10.2	-59.5
Slovakia	3,286	NE	-2.3	-24.3	0	56.4	-44.3	-4.8	156.9	-77.2	17.1	20.7	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	3,902	2,606	-4.8	2.6	7.2	-10.4	18.0	2.1	-23.1	31.9	-12.5	-24.7	-1.0	-2.3	7.0	-5.6	-33.2
Switzerland	551	539	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-2.2
Turkey	NA	-18,066	*	0.3	0.6	0.3	2.8	-0.4	2.2	22.4	-18.1	-16.3	29.9	4.0	6.9	4.0	*
Ukraine	-19,673	8,218	14.7	-2760.8	-158.7	-670.8	-34.7	-54.4	129.3	49.7	72.5	-53.6	66.1	12.5	-9.9	-56.0	-141.8
United Kingdom	1,010	489	-3.6	-4.2	-4.4	-4.6	-4.9	-5.1	-5.4	-3.4	-3.5	-3.7	-3.8	-4.0	-4.1	-4.3	-51.6
United States	-29,410	-19,653	7.9	-39.2	32.3	-3.0	-33.1	-74.2	494.6	-57.2	-11.0	53.8	2.5	0.8	4.5	3.0	-33.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.11

Area of cropland remaining cropland - trend information

Area (kha)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	21,170.00	21,170.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Austria	1,021.37	926.06	1.7	-1.0	-0.1	0.7	0.7	-3.9	-1.0	-1.0	-0.1	0.2	-1.2	-0.1	0.0	-1.7	-9.3
Belarus	5,023.70	5,473.60	-0.2	0.2	0.1	-0.9	0.4	0.0	-0.9	-6.6	-2.3	-0.2	0.3	0.0	18.0	-0.2	9.0
Belgium	772.87	855.86	1.9	4.9	-1.3	1.2	0.8	-0.1	1.0	-3.4	0.0	0.3	0.6	0.3	-0.2	-0.2	10.7
Bulgaria	4,311.21	3,538.02	1.1	-0.2	-7.7	1.0	22.9	0.6	-2.3	-1.9	-3.9	14.9	-25.5	-18.1	1.4	-4.6	-17.9
Canada	47,455.82	47,077.62	-0.3	-0.1	-0.1	0.1	0.1	0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.8
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	3,336.00	3,224.25	-0.9	-0.2	-1.0	0.1	0.0	0.0	-0.4	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-3.3
Denmark	2,575.44	2,477.10	-0.5	3.5	0.2	0.1	-0.3	-1.2	-0.1	0.9	-0.5	-0.3	-0.3	1.7	0.3	-2.2	-3.8
Estonia	750.45	606.98	6.7	-6.5	-1.2	0.9	5.0	-6.2	-2.2	-16.4	-9.0	6.2	-5.0	12.5	-5.8	7.6	-19.1
European Community	82,507.85	81,965.99	0.3	-0.3	0.0	0.1	0.4	0.3	0.2	-0.1	0.2	-1.4	-0.1	-0.4	0.2	-0.4	-0.7
Finland	2,271.00	2,255.30	1.4	-7.0	-0.9	0.1	1.9	0.5	0.5	0.0	0.8	0.4	0.3	0.7	1.1	-0.1	-0.7
France	10,622.25	14,031.74	2.6	-0.8	2.1	1.9	2.9	2.6	2.7	2.6	2.6	0.1	0.7	-0.5	1.1	1.1	32.1
Germany	14,205.40	13,307.92	0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-1.2	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-6.3
Greece	3,930.00	3,720.70	0.4	-0.2	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.6	-0.1	-0.2	-1.1	-1.0	-5.3
Hungary	5,088.78	4,790.10	-0.6	-0.5	-0.3	-0.2	-0.4	-0.5	-1.0	0.0	0	0.0	0.0	-0.1	-0.1	-0.1	-5.9
Iceland	148.00	129.00	0	0	0	0	0	-12.8	0	0	0	0	0	0	0	0	-12.8
Ireland	404.56	319.68	-0.7	-0.3	-0.1	-0.6	-1.5	-1.8	-0.2	-0.2	-0.2	-0.1	-3.4	-10.7	-1.6	-0.5	-21.0
Italy	11,027.75	9,543.70	-0.4	0.3	-0.7	0.1	0.6	0.9	-0.2	-1.3	-0.5	-9.1	-1.3	-1.2	0.5	-1.9	-13.5
Japan	4,120.47	3,953.94	-0.1	-0.2	-0.3	-0.3	-0.3	-0.5	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-4.0
Latvia	1,723.00	1,839.20	0	0.3	0.2	-0.1	5.0	2.2	0.5	-0.3	1.4	-2.0	-0.6	-1.5	-0.8	1.8	6.7
Liechtenstein	1.95	1.88	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-3.9
Lithuania	2,314.00	2,987.93	30.6	10.6	0.0	0.4	0.4	-0.3	-0.2	-0.1	0.0	-0.1	0.0	0.0	2.5	0.0	29.1
Luxembourg	1.62	1.53	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-5.2
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	999.34	902.52	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-9.7
New Zealand	406.65	421.93	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.8
Norway	1,068.58	977.96	0.0	-0.3	-0.3	-0.3	-0.3	-1.1	-0.7	-0.4	-0.2	-1.0	-0.5	-0.6	-0.4	-1.7	-8.5
Poland	14,231.34	12,741.00	-0.1	-0.1	-1.6	-1.0	-0.4	-0.7	-1.3	-0.9	0.0	-2.9	0.0	-3.1	1.9	4.6	-10.5
Portugal	4,289.45	4,216.44	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-1.7
Romania	10,054.60	9,847.90	-0.2	-0.2	-0.1	0.0	0.0	-0.1	0.1	0.1	-0.1	-0.3	-0.1	0.1	-0.1	-0.1	-2.1
Russian Federation	132,532.50	90,885.80	-1.0	-1.9	-2.1	-2.6	-3.6	-3.9	-2.3	-1.2	-1.3	-4.9	-1.2	-2.5	-1.5	-1.1	-31.4
Slovakia	1,509.00	1,409.70	0	0.1	-0.5	0.5	-0.2	-1.3	-0.7	-0.1	-0.6	-0.7	-0.9	0.4	-0.9	0	-6.6
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	21,359.01	20,444.25	-0.1	-0.4	-0.5	-0.5	-0.5	-0.3	-0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-4.3
Sweden	3,056.06	2,991.45	-0.5	-0.3	-0.4	-0.3	-0.4	-0.6	-0.4	-0.4	-0.5	-0.4	2.0	-1.3	3.6	-1.1	-2.1
Switzerland	478.09	452.15	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-5.4
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	33,238.84	24,396.54	-1.0	0.5	-6.2	1.4	-7.4	-1.6	-5.2	4.3	-2.7	-10.6	12.0	-1.3	0.0	-5.7	-26.6
United Kingdom	5,971.74	5,971.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United States	154,741.02	145,201.22	-0.4	-0.5	-0.5	-0.6	-2.4	0.0	0.0	-0.1	0.4	0.8	0	0	0	0	-6.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.12a

Land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	4335.37	NO	IE, NO	-0.58	-0.58	-0.14	0.34	NO
Austria	547.83	NO	0.09	-0.01	0.08	NO	-1.02	NO
Belarus	845.00	NE	NE, NO	NE, NO	NE, NO	NE, NO	NE	NE
Belgium	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE	NE
Canada	631.73	IE, NE, NO	NE, NO	-2.08	-2.08	-0.17	-0.08	IE, NE, NO
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	46.94	NO	0.00	-0.06	-0.06		-0.36	NA, NO
Denmark	NO	NO	NA	NA	NA	NA	NA	NA
Estonia	NE	NE	NE	NE	NE	NE	NE	NE
European Community	10455.29	IE, NA, NE, NO	0.08	-0.18	-0.10	-0.01	-0.91	IE, NA, NE, NO
Finland	NE	NA, NE	NE	NE	NE	IE, NE	NE	NE
France	4058.55		NO	-0.15	-0.15	-0.01	-0.84	
Germany	80.89	8.77	9.83	-14.05	-4.22	NE	-21.70	-11.00
Greece	NO		NO	NO	NO	NO	NO	NO
Hungary	IE, NO	NO	IE, NO	IE, NO	IE, NO	IE, NO	IE, NE, NO	NO
Iceland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Ireland	57.62	NO	NO	NO	NO	NO	-0.60	NO
Italy	NO	NO	NO	NO	NO	NO	NO	NO
Japan	72.06	IE	IE, NA	-0.43	-0.43	-0.38	-0.20	IE, NE
Latvia	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.00	IE, NO	5.66	-7.37	-1.71	NO	-7.48	IE, NO
Lithuania	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE
Luxembourg	0.47	NO	0.20	-0.95	-0.74	NE, NO	-0.57	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	14.32	0.59	NE	-0.67	-0.67	-0.24	NE	NE
New Zealand	0.91	NA, NE	2.18	-11.80	-9.61	NA, NE	-29.06	NA, NE
Norway	2.34	0.90	NA, NO	NA, NO	NA, NO	NA, NE	NA, NE	IE, NA
Poland	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
Portugal	51.59	NO	0.77	-1.38	-0.61	-0.12	-1.14	NO
Romania	NA	NE	NA	NA	NA	NA	NE	NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	IE, NE, NO	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	97.42	NE	0.05	-0.05	0.00	NE	NE	NE
Switzerland	17.35	0.12	0.05	-0.07	-0.02	0.00	-0.18	-9.52
Turkey								
Ukraine	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	5546.61	IE, NO	IE, NO	-0.01	-0.01	IE, NO	-0.69	IE, NO
United States	17583.59	30.00	NE	NE	NE	NE	-0.05	-24.00

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.12b

Land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE, NO	-2,518.87	-2,518.87	-590.38	1,478.36	NO	5,979.92
Austria	47.36	-5.25	42.12	NO	-557.80	NO	1,890.85
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE	NE	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE
Canada	NE, NO	-1,314.00	-1,314.00	-109.32	-50.14	IE, NE, NO	5,402.70
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	0.14	-3.05	-2.91		-16.82	NA, NO	72.34
Denmark	NA	NA	NA	NA	NA	NA	NA
Estonia	NE	NE	NE	NE	NE	NE	NE
European Community	887.84	-1,899.67	-1,011.83	-69.26	-9,486.02	-96.46	39,099.78
Finland	NE	NE	NE	IE, NE	NE	NE	IE, NE
France	NO	-605.67	-605.67	-59.54	-3,427.83		15,007.81
Germany	795.51	-1,136.50	-340.99	NE	-1,565.13	-96.46	7,342.82
Greece	NO	NO	NO	NO	NO	NO	NO
Hungary	IE, NO	IE, NO	IE, NO	IE, NO	IE, NE, NO	NO	IE, NE, NO
Iceland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Ireland	NO	NO	NO	NO	-34.52	NO	126.58
Italy	NO	NO	NO	NO	NO	NO	NO
Japan	IE, NA	-30.78	-30.78	-27.02	-14.59	IE, NE	265.44
Latvia	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.02	-0.02	-0.01	NO	-0.02	IE, NO	0.11
Lithuania	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE	NA, NE
Luxembourg	0.10	-0.44	-0.35	NE, NO	-0.27	NO	2.25
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	-9.59	-9.59	-3.41	NE	NE	47.69
New Zealand	1.98	-10.70	-8.72	NA, NE	-26.37	NA, NE	128.68
Norway	NA, NO	NA, NO	NA, NO	NA, NE	NA, NE	IE, NA	IE, NA, NE, NO
Poland	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
Portugal	39.93	-71.19	-31.26	-6.30	-59.00	NO	354.08
Romania	NA	NA	NA	NA	NE	NE	NA, NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	4.95	-4.60	0.35	NE	NE	NE	-1.28
Switzerland	0.82	-1.14	-0.32	-0.03	-3.17	-1.16	17.16
Turkey							
Ukraine	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	IE, NO	-66.43	-66.43	IE, NO	-3,841.48	IE, NO	14,328.98
United States	NE	NE	NE	NE	-902.00	-720.00	5,947.33

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.13

Net CO_2 emissions/removals from land converted to cropland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	23,024	5,980	-15.7	-17.1	2.3	-16.6	40.5	-28.2	-25.4	4.9	131.5	-68.6	-18.9	-19.0	265.7	-46.3	-74.0
Austria	1,823	1,891	0.4	-0.5	0.0	0.0	0.0	0.3	0.3	-0.1	1.8	0.7	-0.6	1.3	0.5	-1.3	3.7
Belarus	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	9,997	5,403	-3.4	-9.3	-0.9	-5.6	2.5	-8.1	-0.9	-6.7	2.4	-3.4	0.3	-5.6	3.2	-5.0	-46.0
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	226	72	19.5	-1.9	-2.6	-1.0	70.4	-55.7	-3.7	-18.2	-17.2	21.0	-3.2	-0.9	-18.0	-13.9	-68.0
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	921	NE	-17.4	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	45,659	39,100	-2.9	-2.9	-4.4	-0.8	4.8	0.3	-13.5	17.0	-2.3	1.8	-5.0	1.2	1.4	-7.5	-14.4
Finland	IE, NE	IE, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	28,937	15,008	-4.9	-2.9	-2.5	-2.7	-3.6	-4.8	-5.8	-7.4	-7.0	-1.5	-4.0	-0.3	-4.4	-4.9	-48.1
Germany	498	7,343	12.8	0.9	12.8	-3.7	2.9	-0.7	9.2	1242.8	2.8	11.9	-15.7	6.0	-13.2	0	1375.3
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	127	*	0	163.9	-38.8	0	0	0	194.8	-2.6	35.3	-27.8	0	0	0	*
Italy	NO	NO	*	-19.8	*	*	691.7	41.9	*	*	*	*	*	*	*	*	*
Japan	2,058	265	-21.3	-6.8	-13.3	-16.4	-4.0	-6.6	-18.7	-13.1	-12.6	-6.0	-16.9	-14.9	-1.0	3.4	-87.1
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	0	0	0	0	0	115.9	0	0	0	0	0	-53.7	0	0	0	0	0
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	35	48	2.1	2.3	2.2	2.3	2.1	2.1	-1.7	2.3	2.3	2.3	1.9	1.8	1.7	1.7	37.5
New Zealand	37	129	14.4	9.1	8.4	7.7	7.2	6.7	6.3	5.9	5.6	5.3	5.0	4.8	4.6	4.4	244.5
Norway	77	NA, NE, NO	0	0	0	0	0	107.4	*	*	*	*	-99.8	46533.8	*	*	*
Poland	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	354	354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	-24	-1	-24.2	-181.2	-273.5	-42.8	-12.2	-209.8	134.5	-76.4	-98.5	10365.5	-55.4	-7.9	102.3	-97.3	-94.7
Switzerland	37	17	-2.6	-10.6	-3.0	-3.1	-3.2	-3.3	-3.4	-3.6	-3.7	-3.9	-4.0	-2.6	-7.2	-6.6	-53.3
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	14,034	14,329	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.1
United States	2,150	5,947	6.0	-150.4	-23.9	15.2	-254.8	-187.2	-31.8	79.1	13.4	23.4	0	0	0	0	176.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.14

Area of land converted to cropland - trend information

Area (kha)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	3,148.31	4,335.37	2.8	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	2.0	1.8	2.0	1.9	37.7
Austria	506.93	547.83	0.3	0.1	0.2	0.2	0.2	0.4	0.3	1.5	0.1	-0.2	1.1	0.3	-0.4	2.7	8.1
Belarus	1,081.20	845.00	-0.1	-0.1	-0.6	-0.6	-0.6	-0.6	0	-3.5	-3.7	-3.8	-3.9	3.5	-9.3	0	-21.8
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	112.50	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	1,343.33	631.73	-2.9	-3.7	-3.9	-4.1	-4.3	-4.5	-4.7	-5.0	-5.4	-5.7	-5.5	-5.4	-5.1	-4.5	-53.0
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	118.99	46.94	-2.5	-8.9	-15.2	-14.6	15.6	-7.9	-2.8	-7.8	-6.1	-4.5	-4.1	-2.4	-2.2	-3.4	-60.6
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	215.32	NE	-17.4	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	12,571.05	10,455.29	-0.2	-1.1	-1.0	-0.7	-1.1	-2.2	-3.5	-1.8	-2.8	0.3	-0.6	0.9	-0.7	-1.8	-16.8
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	8,059.43	4,058.55	-1.6	-3.1	-2.7	-2.9	-4.3	-6.0	-6.8	-7.4	-8.1	-1.7	-3.7	-0.1	-5.1	-5.4	-49.6
Germany	7.48	80.89	0	0	0	0	0	0	0	1146.0	0.0	0	0	0	-13.2	0	981.1
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	57.62	*	0	61.4	0	0	0	0	73.0	24.7	30.0	0	0	0	0	*
Italy	NO	NO	*	-19.8	*	*	691.7	41.9	*	*	*	*	*	*	*	*	*
Japan	475.93	72.06	-8.1	-11.0	-11.2	-11.2	-11.9	-9.4	-11.3	-10.7	-9.1	-9.8	-8.8	-11.4	-10.0	-13.1	-84.9
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	0.00	0.00	0	0	0	115.0	0	0	0	0	0	-53.5	0	0	0	0	0
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.47	0.47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	14.32	14.32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	0.91	0.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	1.14	2.34	0	0	0	0	0	-20.7	*	*	-56.5	100.0	35.0	207.4	-39.8	-48.0	105.9
Poland	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	51.59	51.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA	NA	-76.9	33.3	100.0	-75.0	1050.0	243.5	62.0	7.0	-81.8	24.0	241.9	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	31.36	97.42	16.8	8.3	6.8	9.6	0.4	1.1	8.2	8.6	8.3	8.1	9.8	7.4	19.9	-15.4	210.7
Switzerland	23.71	17.35	-0.4	-2.2	-2.0	-2.1	-2.1	-2.1	-2.2	-2.2	-2.3	-2.4	-2.4	-0.9	-2.5	-2.5	-26.8
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	3,899.47	5,546.61	2.5	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	42.2
United States	15,268.92	17,583.59	1.9	1.2	2.0	0.6	8.6	-2.7	-2.4	-1.5	-4.7	-7.8	0	0	0	0	15.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.15a

Forest land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	4,335.37	NO	IE	-0.58	-0.58	-0.14	0.34	NO
Austria	5.48	NO	IE	-0.88	-0.88	NO	-2.94	NO
Belarus	NO	NE	NO	NO	NO	NO	NE	NE
Belgium	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE	NE
Canada	628.24	IE, NO	NO	-2.09	-2.09	-0.17	-0.08	IE, NO
Croatia	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	2.58	NO		-0.81	-0.81		-0.41	NO
Denmark	NO	NO	NA	NA	NA	NA	NA	NA
Estonia	NE	NE	NE	NE	NE	NE	NE	NE
European Community	262.83	IE, NA, NE, NO	0.37	-4.42	-4.05	-0.25	-1.05	IE, NA, NE, NO
Finland	NE	NA, NE	NE	NE	NE	IE	NE	NE
France	152.23		NO	-3.98	-3.98	-0.37	-1.03	
Germany	4.45	0.21	15.83	-109.06	-93.23	NE	-19.20	-11.00
Greece	NO		NO	NO	NO	NO	NO	NO
Hungary	IE	NO	IE	IE	IE	IE	NE	NO
Iceland	NE	NE	NE	NE	NE	NE	NE	NE
Ireland	NO	NO	NO	NO	NO	NO	NO	NO
Italy	NO	NO	NO	NO	NO	NO	NO	NO
Japan	24.68	IE	NA	-1.25	-1.25	-1.09	-0.47	IE
Latvia	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NA	NA	NA	NA	NA	NA	NE	NE
Luxembourg	0.05	NO	0.25	-6.25	-6.00	NE	-0.40	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	0.11	0.00	NE	-83.70	-83.70	-29.77	NE	NE
New Zealand	0.04	NA, NE	2.14	-221.29	-219.14	NA, NE	-10.12	NA, NE
Norway	0.90	NE	NO	NO	NO	NE	NA	NA
Poland	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	21.24	NO	1.04	-2.59	-1.55	-0.25	-0.98	NO
Romania	NA	NE	NA	NA	NA	NA	NE	NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	NE	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	7.55	NE	0.66	0.00	0.66	NE	NE	NE
Switzerland	0.04	0.00	NO	-3.60	-3.60	-0.65	-0.68	-9.52
Turkey								
Ukraine	NO	NO	NO	NO	NO	NO	NO	NO
United Kingdom	71.71	IE	IE, NO	IE, NO	IE, NO	IE	-0.02	IE
United States	IE	IE	NE	NE	NE	NE	IE	IE

[a] Changes introdcued by the new LULUCF tables included in decision 14/CP.11 have been used for the first time in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.15b

Forest land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE	-2,518.87	-2,518.87	-590.38	1,478.36	NO	5,979.92
Austria	IE	-4.81	-4.81	NO	-16.10	NO	76.68
Belarus	NO	NO	NO	NO	NE	NE	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE
Canada	NO	-1,314.00	-1,314.00	-109.32	-47.94	IE, NO	5,394.63
Croatia	NE	NE	NE	NE	NE	NE	NE
Czech Republic		-2.09	-2.09		-1.06	NO	11.56
Denmark	NA	NA	NA	NA	NA	NA	NA
Estonia	NE	NE	NE	NE	NE	NE	NE
European Community	97.44	-1,160.68	-1,063.24	-64.63	-276.81	-2.26	5,158.76
Finland	NE	NE	NE	IE	NE	NE	IE, NE
France	NO	-605.67	-605.67	-55.82	-156.97		3,001.02
Germany	70.43	-485.31	-414.87	NE	-81.48	-2.26	1,828.25
Greece	NO	NO	NO	NO	NO	NO	NO
Hungary	IE	IE	IE	IE	NE	NO	IE, NE, NO
Iceland	NE	NE	NE	NE	NE	NE	NE
Ireland	NO	NO	NO	NO	NO	NO	NO
Italy	NO	NO	NO	NO	NO	NO	NO
Japan	NA	-30.75	-30.75	-27.02	-11.69	IE	254.70
Latvia	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	NO	NO	NO	NO	NO	NO	NO
Lithuania	NA	NA	NA	NA	NE	NE	NA, NE
Luxembourg	0.01	-0.33	-0.32	NE	-0.02	NO	1.24
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	-9.59	-9.59	-3.41	NE	NE	47.69
New Zealand	0.09	-9.54	-9.45	NA, NE	-0.44	NA, NE	36.23
Norway	NO	NO	NO	NE	NA	NA	NA, NE, NO
Poland	NO	NO	NO	NO	NO	NO	NO
Portugal	22.05	-54.96	-32.92	-5.40	-20.91	NO	217.16
Romania	NA	NA	NA	NA	NE	NE	NA, NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	4.95	0.00	4.95	NE	NE	NE	-18.15
Switzerland	NO	-0.16	-0.16	-0.03	-0.03	-0.04	0.91
Turkey							
Ukraine	NO	NO	NO	NO	NO	NO	NO
United Kingdom	IE, NO	IE, NO	IE, NO	IE	-1.33	IE	4.87
United States	NE	NE	NE	NE	IE	IE	IE, NE

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.16

Net CO_2 emissions/removals from forest land converted to cropland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	23,024	5,980	-15.7	-17.1	2.3	-16.6	40.5	-28.2	-25.4	4.9	131.5	-68.6	-18.9	-19.0	265.7	-46.3	-74.0
Austria	131	77	2.3	-12.0	-5.6	-5.9	-6.3	-2.7	-2.8	-2.9	-3.0	-3.1	-2.5	-2.5	-2.6	-2.7	-41.5
Belarus	NE,NO	NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	9,928	5,395	-3.3	-9.3	-0.9	-5.6	2.6	-8.1	-0.9	-6.7	2.5	-3.4	0.3	-5.6	3.2	-5.0	-45.7
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	39	12	133.0	25.6	15.9	23.0	68.8	-65.7	-12.9	-29.6	-34.4	75.2	18.2	6.9	-42.2	-48.7	-70.4
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	4,596	5,159	-20.3	-3.2	3.7	-1.0	0.5	2.9	0.5	53.4	0.8	-0.6	-2.7	0.3	-8.8	-0.5	12.3
Finland	IE,NE	IE,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	4,119	3,001	-22.9	-0.5	0.3	0.1	1.0	3.2	0.7	-5.9	0.1	0.1	-4.6	0.1	0.4	-0.6	-27.1
Germany	80	1,828	1.7	0.2	2.2	-0.4	0.2	0.0	0.4	2654.1	0.4	1.6	-1.8	0.5	-21.3	0	2178.8
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE,NE,NO	IE,NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	1,898	255	-22.2	-4.5	-11.1	-14.2	-3.6	-6.7	-18.9	-13.3	-13.0	-6.5	-17.4	-15.3	-0.8	3.7	-86.6
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA	NA,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	35	48	2.1	2.3	2.2	2.3	2.1	2.1	-1.7	2.3	2.3	2.3	1.9	1.8	1.7	1.7	37.5
New Zealand	35	36	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.4
Norway	77	NA,NE,NO	0	0	0	0	0	107.4	*	*	*	*	-99.8	46533.8	*	*	*
Poland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	217	217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA,NE	NA,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	0	-18	-17,777,866.7	-4,290.9	-149.5	-83.8	-127.0	-300.0	0.0	0.0	1,005.0	-181.0	-100.6	0.0	-6,700.1	50.0	54,999,888.9
Switzerland	3	1	-3.4	-34.0	0.6	0.4	0.3	0.1	0.3	-0.2	-0.1	-0.1	0.1	-35.6	-0.2	-0.1	-72.8
Turkey																	
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	12	5	-5.4	-5.2	-5.2	-5.2	-5.2	-5.1	-5.1	-5.1	-5.1	-5.0	-5.0	-5.0	-5.0	-4.9	-59.2
United States	IE,NE	IE,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.17

Area of forest land converted to cropland - trend information

Area (kha)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	3,148.31	4,335.37	2.8	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	2.0	1.8	2.0	1.9	37.7
Austria	9.65	5.48	2.8	-6.2	-6.6	-7.1	-7.6	-3.3	-3.5	-3.6	-3.7	-3.9	-3.1	-3.2	-3.3	-3.4	-43.2
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	1,309.08	628.24	-2.3	-3.8	-3.9	-4.1	-4.3	-4.5	-4.7	-4.9	-5.2	-5.5	-5.3	-5.1	-4.8	-4.5	-52.0
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	6.13	2.58	-2.4	-6.8	-9.2	-14.0	8.3	-1.4	-0.9	-11.5	-6.0	-4.5	-6.1	-4.0	-2.0	-2.4	-58.0
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	326.20	262.83	-0.3	-1.5	-1.3	-1.4	-1.4	-1.2	-2.1	-0.7	-3.9	0.6	-1.6	-0.7	-2.0	-1.0	-19.4
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	221.67	152.23	-0.6	-2.0	-1.6	-1.8	-2.2	-1.7	-3.8	-3.7	-5.6	1.1	-2.9	-0.8	-3.3	-3.4	-31.3
Germany	0.18	4.45	0	0	0	0	0	0	0	2860.0	0.0	0	0	0	-15.5	0	2401.7
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	174.21	24.68	-3.9	-6.8	-8.5	-11.2	-9.7	-7.2	-10.3	-10.8	-13.8	-10.9	-19.6	-17.7	-13.3	-13.3	-85.8
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.05	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	0.11	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	0.04	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0.76	0.90	0	0	0	0	0	-40.3	*	*	*	*	-80.0	1051.7	*	*	19.3
Poland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	21.24	21.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	1.59	7.55	0	10.3	0	0	52.3	0	50.0	0	-27.0	3.5	24.9	-7.3	30.2	68.5	374.8
Switzerland	0.11	0.04	-0.2	-19.6	-3.3	-3.4	-3.5	-3.6	-3.8	-3.9	-4.1	-4.3	-4.5	-17.9	-7.9	-6.3	-62.3
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	71.71	71.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United States	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.18a

Grassland remaining grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	435,973.18	NO	IE	-0.01	-0.01	-0.05	-0.07	NO
Austria	1,288.78	IE	NO	NO	NO	NO	-0.01	IE
Belarus	3,194.30	NE	NE	NE	NE	NE	NE	NE
Belgium	507.20		NE		NE		-0.60	
Bulgaria	2,098.70	NE	NO	NO	NO	NE	NE	NE
Canada	NE	NE	NE	NE	NE	NE	NE	NE
Croatia	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	857.30	NO					0.00	NO
Denmark	196.63	18.35	NA	NA	NA	NA	IE	-1.25
Estonia	522.39	106.36	NE	NE	NE	NE	NO	-0.25
European Community	35,717.92	1,305.74	0.08	-0.08	0.00	0.00	-0.04	-3.73
Finland	391.90	44.54	NE	NE	NE	NA	-3.15	0
France	7,305.22		0.40	-0.40		NO		
Germany	6,378.33	698.18	NO	NO	NO	NE	NO	-5.00
Greece	1,636.17		NO	NO	NO	NO		
Hungary	1,016.90	NO	NE	NE	NE	NE	IE	NO
Iceland	4,408.25	IE	NE	NE	NE	NA	NE	IE
Ireland	3,842.52	289.03	NO	NO	NO	NO	NO	-0.25
Italy	7,374.55	NO	NO	NO	NO	NO	NO	NO
Japan	760.86	IE	NA	NA	NA	NE	NA	NA
Latvia	894.74	8.42	0.02	NO	0.02	NE	NE	-0.25
Liechtenstein	4.95	IE	0.03	-0.03	0.00	NO	-0.10	IE
Lithuania	476.60	NE	NE	NE	NE	NE	NE	NE
Luxembourg	59.90	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	1,364.08	201.33	NE	NE	NE	NE	NE	-5.75
New Zealand	14,202.24	NE	NE	NE	NE	NE	NE	NE
Norway	96.62	76.50	NA	NA	NA	NA	NA, NE	-6.67
Poland	3,068.82	147.18	NO	NO	NO	NO	NO	-0.25
Portugal	293.52	NO	NO	NO	NO	NO	NO	NO
Romania	4,854.90	NE	NE	NE	NE	NE	NE	NE
Russian Federation	70,092.00	2,102.76	NO	NO	NO	NA	0.01	-0.25
Slovakia	793.00	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE	NE
Spain	4,662.95	NO	NE	NE	NE	NE	NE	NO
Sweden	407.07	45.21	0.09	0.00	0.09	-0.03	0.17	NO
Switzerland	1,364.82	2.23	0.01	0.00	0.00	NO	0.01	-6.79
Turkey	NA		NA	NA	NA	NA	NA	
Ukraine	1,467.45	32.75	NE	NE	NE	NE	0.25	-2.50
United Kingdom	9.10	9.10	NE, NO	NE, NO	NE, NO	IE, NO	NO	-12.91
United States	187,081.35	477.70	NE	NE	NE	NE	0.01	-2.11

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.18b

Grassland remaining grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE	-5,711.08	-5,711.08	-20,842.29	-31,470.13	NO	212,752.81
Austria	NO	NO	NO	NO	-12.29	IE	45.07
Belarus	NE	NE	NE	NE	NE	NE	NE
Belgium	NE		NE		-304.92		1,118.02
Bulgaria	NO	NO	NO	NE	NE	NE	NE, NO
Canada	NE	NE	NE	NE	NE	NE	NE
Croatia	NE	NE	NE	NE	NE	NE	NE
Czech Republic					0.01	NO	-0.02
Denmark	NA	NA	NA	NA	IE	-22.93	84.09
Estonia	NE	NE	NE	NE	NO	-26.59	97.49
European Community	2,925.08	-2,887.08	38.00	-12.33	-1,351.03	-4,872.70	22,726.24
Finland	NE	NE	NE	NA	-1,095.36	-11.14	4,057.14
France	2,887.08	-2,887.08		NO			NO
Germany	NO	NO	NO	NE	NO	-3,490.89	12,799.93
Greece	NO	NO	NO	NO			NO
Hungary	NE	NE	NE	NE	IE	NO	IE, NE, NO
Iceland	NE	NE	NE	NA	NE	IE	IE, NA, NE
Ireland	NO	NO	NO	NO	NO	-72.26	264.95
Italy	NO	NO	NO	NO	NO	NO	NO
Japan	NA	NA	NA	NE	NA	NA	NA, NE
Latvia	14.77	NO	14.77	NE	NE	-2.10	-46.44
Liechtenstein	0.17	-0.15	0.02	NO	-0.51	IE	1.80
Lithuania	NE	NE	NE	NE	NE	NE	NE
Luxembourg	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	NE	-1,158.00	4,246.00
New Zealand	NE	NE	NE	NE	NE	NE	NE
Norway	NA	NA	NA	NA	NA, NE	-510.00	1,870.00
Poland	NO	NO	NO	NO	NO	-36.79	134.91
Portugal	NO	NO	NO	NO	NO	NO	NO
Romania	NE	NE	NE	NE	NE	NE	NE
Russian Federation	NO	NO	NO	NA	1,015.08	-525.70	-1,794.40
Slovakia	NE	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE
Spain	NE	NE	NE	NE	NE	NO	NE, NO
Sweden	38.00	0.00	38.00	-12.33	61.53	NO	-319.73
Switzerland	10.33	-5.18	5.14	NO	9.97	-15.13	0.08
Turkey	63.50	NA	63.50	NA	1,269.92		-4,889.22
Ukraine	NE	NE	NE	NE	354.37	-81.88	-999.14
United Kingdom	NE, NO	NE, NO	NE, NO	IE, NO	NO	-117.48	430.77
United States	NE	NE	NE	NE	2,277.43	-1,006.68	-4,659.41

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.19

Net CO_2 emissions/removals from grassland remaining grassland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	-18,265	212,753	-225.5	-688.9	-103.6	825.9	-374.5	-123.9	192.8	-50.5	-543.5	-116.0	231.6	-249.6	-76.7	570.9	-1264.8
Austria	39	45	1.0	-0.6	-1.2	-1.2	0.2	0.8	0.8	4.2	3.1	3.5	2.5	0.8	-0.1	-1.0	15.2
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	1,304	1,118	-3.4	-7.0	3.4	-0.6	-0.1	0.5	-1.9	0	5.4	-0.2	-1.3	-2.5	-0.7	-2.0	-14.2
Bulgaria	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	7	0	-8.9	-3.1	-16.8	-9.5	-5.1	-4.0	-40.3	9.8	-57.8	78.8	-21.7	-51.9	-68.0	-108.7	-100.3
Denmark	93	84	-2.4	8.4	-6.9	-13.1	-6.8	2.1	4.2	4.5	2.2	0.1	-2.9	11.8	-1.9	3.8	-9.5
Estonia	67	97	0.3	9.9	3.5	1.6	-12.7	-2.9	-7.5	17.6	11.4	-6.2	-0.2	-9.7	4.7	1.5	46.5
European Community	17,048	22,726	7.4	-2.8	-1.1	0.7	2.4	5.9	5.3	1.3	-2.2	4.9	-0.8	1.6	2.8	0.3	33.3
Finland	-2,131	4,057	-60.8	424.6	28.7	-35.2	-115.9	963.8	98.8	26.2	-11.3	24.1	13.2	14.2	23.2	-4.3	-290.4
France	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Germany	13,304	12,800	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-3.8
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	IE, NA, NE	IE, NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	304	265	-1.0	-2.5	-0.1	-1.7	0	0	0	0	-0.2	-0.2	-0.8	0	-0.4	0	-12.7
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	-5	-46	29.2	9.9	15.1	30.9	5.3	15.0	9.5	12.6	-0.2	3.3	3.0	-5.0	-0.3	42.3	871.7
Liechtenstein	2	2	-0.5	-0.6	-0.6	3.4	-1.4	-1.4	-1.4	-1.4	-1.5	-5.9	-0.9	-0.9	-1.0	-1.0	-15.6
Lithuania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	4,246	4,246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	1,870	1,870	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	4,531	135	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	3.4	-97.0
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	-9,519	-1,794	7.0	136.5	20.7	-3.2	14.1	3.4	-30.8	-10.2	8.0	6.9	12.2	-80.0	100.7	-77.2	-81.1
Slovakia	536	NE	-26.1	57.1	-63.6	-153.3	-240.7	-281.0	530.5	10.4	-0.8	56.0	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	-500	-320	1.0	-4.4	-7.0	26.8	21.6	-16.4	-22.6	15.2	6.8	-70.9	213.1	10.0	24.4	-48.8	-36.0
Switzerland	-22	0	3.2	-9.3	-3.3	-3.4	-3.6	-3.7	-3.8	-4.0	-4.2	-4.4	-4.5	86.8	-40.9	-98.4	-100.3
Turkey	NA	-4,889	*	*	*	*	*	*	*	-58.0	262.0	43.4	766.3	-86.7	685.6	0.3	*
Ukraine	-1,255	-999	-34.3	1.5	46.3	-8.0	13.0	25.0	8.2	-13.4	6.8	3.6	-23.0	23.1	-16.7	10.8	-20.4
United Kingdom	390	431	1.7	15.3	-14.8	-11.6	-25.1	37.2	-1.0	9.1	-36.0	68.8	-29.5	14.0	4.3	2.1	10.6
United States	-46,745	-4,659	-37.2	-50.1	-165.8	-183.6	-168.4	-257.8	137.8	-46.5	56.9	-89.6	0.9	1.1	0.8	0.8	-90.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.20

Area of grassland remaining grassland - trend information

Area (kha)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	436,874.52	435,973.18	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	-0.2
Austria	1,391.96	1,288.78	-0.5	0.3	0.6	0.6	-0.1	-0.4	-0.4	-2.1	-1.6	-1.9	-1.4	-0.5	0.0	0.6	-7.4
Belarus	3,156.80	3,194.30	-0.3	-0.5	-0.1	1.0	0.3	-0.7	0.7	8.3	1.3	0.3	-0.2	0.3	-0.1	-3.1	1.2
Belgium	578.48	507.20	-3.8	-7.0	3.7	-0.5	0.1	0.7	-1.6	0	5.7	-0.1	-1.1	-2.1	-0.3	-1.9	-12.3
Bulgaria	1,798.90	2,098.70	0.1	-2.2	0.0	-3.1	0	0.1	3.2	8.7	8.4	1.7	0.8	4.7	-5.1	0	16.7
Canada	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	840.84	857.30	0.0	0.4	-0.2	-0.1	-0.8	0.5	0.2	-0.1	0.0	-0.1	0.2	0.4	0.6	0.5	2.0
Denmark	217.24	196.63	-2.4	8.4	-6.9	-13.1	-6.8	2.1	4.2	4.5	2.2	0.1	-2.9	11.8	-1.9	3.8	-9.5
Estonia	512.49	522.39	0.3	1.4	-8.2	-5.1	-4.3	0.3	-3.8	-2.2	-0.7	-0.4	1.5	0.7	0.7	-3.2	1.9
European Community	34,287.78	35,717.92	-2.3	0.7	0.3	0.0	-0.1	0.5	0.9	0.8	1.1	2.4	0.4	-0.2	0.2	1.0	4.2
Finland	676.78	391.90	-7.1	24.8	-0.1	-3.6	-8.7	-5.4	-6.1	-3.1	-6.6	-4.6	-3.8	-5.2	-8.4	-3.1	-42.1
France	3,944.21	7,305.22	2.3	6.8	3.1	4.4	4.6	8.6	8.0	7.0	7.5	-0.1	3.1	-1.3	4.2	4.1	85.2
Germany	7,049.63	6,378.33	-10.3	0.1	0.1	0.1	0.1	0.1	0.1	-1.9	0.3	0.3	0.3	0.3	0.2	0.1	-9.5
Greece	1,636.17	1,636.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	1,234.13	1,016.90	-1.1	0.0	0.0	0.0	0.0	-0.1	-8.4	1.0	0.2	-0.1	-0.2	-0.3	-4.0	0.2	-17.6
Iceland	4,434.61	4,408.25	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.6
Ireland	4,122.87	3,842.52	-0.4	-1.0	0.0	-0.7	0	0	0	0	-0.3	-0.3	-1.0	0	-0.5	0	-6.8
Italy	7,659.46	7,374.55	-0.7	-1.9	-0.4	-1.6	-2.5	-2.9	-1.3	0.6	-0.8	13.7	0.3	0.2	-2.1	1.1	-3.7
Japan	646.47	760.86	7.4	0.9	0.5	1.8	0.6	-0.8	-0.8	0.0	-0.3	0.0	0.3	-0.3	-0.2	0.8	17.7
Latvia	880.53	894.74	-0.6	-2.1	-2.5	-1.8	-19.2	-9.7	-0.9	-5.7	1.3	6.8	3.2	8.0	2.1	29.4	1.6
Liechtenstein	5.31	4.95	-0.5	-0.5	-0.5	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-6.8
Lithuania	1,111.00	476.60	-63.9	21.3	1.3	-1.4	1.1	1.4	0.8	0.6	-0.1	0.2	-0.3	0.4	6.1	-0.9	-57.1
Luxembourg	60.47	59.90	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.9
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	1,485.04	1,364.08	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-8.1
New Zealand	14,663.19	14,202.24	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-3.1
Norway	71.48	96.62	0	0.4	0.4	0.4	0.4	-0.8	10.1	12.5	-3.7	-0.8	6.8	-5.8	2.9	7.8	35.2
Poland	3,910.66	3,068.82	-0.2	0.0	0.0	1.4	-2.6	-1.6	0.0	-0.6	-6.1	-8.5	0.0	3.1	-4.6	-0.2	-21.5
Portugal	324.45	293.52	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-9.5
Romania	4,401.10	4,854.90	0.5	0.4	0.4	0.0	0.1	-1.2	-0.1	2.0	0.1	-1.8	-0.2	0.2	0.2	0.0	10.3
Russian Federation	80,100.00	70,092.00	-0.5	1.2	0	-1.4	-10.2	4.2	0	-0.6	-0.8	-0.1	-0.8	-0.6	-0.6	0.1	-12.5
Slovakia	813.00	793.00	-0.6	0	0.8	-0.9	0.0	2.6	1.0	-0.1	-0.1	2.3	-10.3	0.0	0	0	-2.5
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	4,662.95	4,662.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweden	469.96	407.07	-1.2	-1.3	-1.5	-1.3	-0.5	-1.6	-0.9	-2.2	-2.2	-2.2	-2.7	6.3	2.3	-1.1	-13.4
Switzerland	1,398.20	1,364.82	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-2.4
Turkey		NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	2,359.16	1,467.45	-8.7	0.7	7.5	-2.9	-5.1	2.4	-2.4	-7.0	-7.0	1.3	-10.5	8.2	-11.6	-1.0	-37.8
United Kingdom	8.11	9.10	2.0	17.0	-16.3	-13.0	-28.4	44.1	-1.2	10.3	-40.2	82.5	-32.7	16.2	4.9	2.4	12.1
United States	199,284.05	187,081.35	-0.5	-0.4	-0.5	-0.5	-1.1	-0.2	-0.3	-0.3	0.2	0.1	0	0	0	0	-6.1

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.21a

Land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	12,470.31	NO	IE, NO	-1.00	-1.00	-0.24	-0.24	IE, NO
Austria	549.33	NO	IE, NO	-0.15	-0.15	NO	0.80	NO
Belarus	IE, NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Canada	NO	NO	NE, NO	NE, NO	NE, NO	NE, NO	NO	NO
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	219.39	NO	0.03	-0.03	0.00		0.48	NA, NO
Denmark	NO	NO	NO	NO	NO	NO	NA	NA
Estonia	228.53	IE, NE	NE	NE	NE	NE	1.36	IE, NE
European Community	11,268.68	18.56	0.11	-0.31	-0.20	-0.01	0.90	-3.04
Finland	NE	NE	NE	NE	NE	NE	NE	NE
France	5,101.43		NO	-0.06	-0.06	-0.01	0.71	
Germany	156.55	10.94	7.13	-16.23	-9.10	NE	7.72	-5.00
Greece	180.46		NO	NO	NO	NO		
Hungary	IE, NO	NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NE, NO	IE, NO	NO
Iceland	584.47	364.00	0.02	NE, NO	0.02	IE, NE, NO	0.59	-1.10
Ireland	151.29	6.86	0.01	NO	0.01	NE, NO	0.51	-0.25
Italy	173.91	NO	NO	-1.95	-1.95	NO	14.12	NO
Japan	150.08	IE	0.13	-0.03	0.10	-0.07	1.09	IE
Latvia	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.01	IE, NE	7.49	-27.66	-20.17	-0.59	0.86	IE
Lithuania	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Luxembourg	0.44	NO	0.30	-0.87	-0.57	NE, NO	1.05	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	15.52	0.76	NE	-6.89	-6.89	-2.63	NE	NE
New Zealand	1.08	NA, NE	3.09	-126.05	-122.95	NA, NE	12.30	NA, NE
Norway	16.04	2.70	0.00	-0.09	-0.09	NA, NE	NA	NA
Poland	55.00	NE, NO	NE, NO	NE, NO	NE, NO		1.67	NE, NO
Portugal	8.02	NO	0.22	-0.51	-0.29	-0.02	1.15	NO
Romania	6.50	NE	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE
Russian Federation	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NA, NO	NE, NO	NE, NO
Slovakia	100.20	NO	NE	NE	NE	1.20	NO	NO
Slovenia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Spain	103.95	NO	NE, NO	NE, NO	NE, NO	NO	0.251948052	NO
Sweden	96.31	NE	0.69	-0.38	0.31	NE	NE	NE
Switzerland	64.45	0.30	0.10	-0.80	-0.69	-0.36	0.70	-7.97
Turkey	NA		NA	NA	NA	NA	NA	
Ukraine	NO	NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	4,731.45	IE, NO	0.01	-0.01	0.00	IE, NO	0.50	IE, NO
United States	17,091.14	66.00	NE	NE	NE	NE	0.44	-3.66

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.21b

Land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE, NO	-12,412.41	-12,412.41	-3,027.51	-3,041.80	IE, NO	67,766.31
Austria	IE, NO	-83.32	-83.32	NO	440.78	NO	-1,310.69
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Canada	NE, NO	NE, NO	NE, NO	NE, NO	NO	NO	NE, NO
Croatia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Czech Republic	6.57	-6.74	-0.16		105.79	NA, NO	-387.29
Denmark	NO	NO	NO	NO	NA	NA	NA, NO
Estonia	NE	NE	NE	NE	310.57	IE, NE	-1,138.75
European Community	1,243.31	-3,490.92	-2,247.61	-94.63	10,153.64	-56.40	-28,435.00
Finland	NE	NE	NE	NE	NE	NE	NE
France	NO	-331.13	-331.13	-53.60	3,641.68		-11,942.15
Germany	1,115.69	-2,540.50	-1,424.82	NE	1,124.23	-54.68	1,302.65
Greece	NO	NO	NO	NO			NO
Hungary	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NE, NO	IE, NO	NO	IE, NA, NE, NO
Iceland	14.55	NE, NO	14.55	IE, NE, NO	130.98	-400.40	934.50
Ireland	1.44	NO	1.44	NE, NO	73.81	-1.72	-269.62
Italy	NO	-339.13	-339.13	NO	2,455.43	NO	-7,759.75
Japan	19.34	-4.77	14.57	-10.12	163.25	IE	-614.90
Latvia	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.09	-0.33	-0.24	-0.01	0.01	IE	0.87
Lithuania	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Luxembourg	0.13	-0.38	-0.25	NE, NO	0.46	NO	-0.76
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	-107.03	-107.03	-40.85	NE	NE	542.24
New Zealand	3.33	-135.71	-132.38	NA, NE	13.25	NA, NE	436.83
Norway	0.07	-1.48	-1.41	NA, NE	NA	NA	5.17
Poland	NE, NO	NE, NO	NE, NO		91.61		-335.91
Portugal	1.79	-4.12	-2.33	-0.18	9.26	NO	-24.74
Romania	NA, NE	NA, NE	NA, NE	NA, NE	NE	NE	NA, NE
Russian Federation	NE, NO	NE, NO	NE, NO	NA, NO	NE, NO	NE, NO	NA, NE, NO
Slovakia	NE	NE	NE	119.85	NO	NO	-439.45
Slovenia	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Spain	NE, NO	NE, NO	NE, NO	NO	26.19	NO	-96.03
Sweden	66.45	-36.60	29.85	NE	NE	NE	-109.45
Switzerland	6.55	-51.25	-44.70	-23.23	44.83	-2.42	93.55
Turkey		NA	NA				NA
Ukraine	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	57.82	-48.71	9.11	IE, NO	2,381.81	IE, NO	-8,766.69
United States	NE	NE	NE	NE	7,524.00	-241.30	-26,703.23

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.22

Net CO_2 emissions/removals from land converted to grassland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	104,146.06	67,766.31	-12.9	-13.4	-4.2	-0.6	10.5	-8.8	12.2	-3.2	0.3	-17.2	13.2	31.1	-7.6	-3.0	-34.9
Austria	-1,060.66	-1,310.69	-1.0	11.7	1.9	1.8	1.8	0.8	0.8	-0.9	5.0	-0.6	2.5	-1.9	1.7	-1.7	23.6
Belarus	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	-186.89	-387.29	67.8	8.3	62.0	-29.7	-25.0	26.4	15.3	-4.5	-1.4	-3.8	3.2	-1.4	1.4	-2.5	107.2
Denmark	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE, NO	-1,138.75	*	160.2	84.4	24.9	-34.4	-14.9	-24.0	129.6	40.6	-16.1	-3.6	-31.9	17.4	14.2	*
European Community	-32,762.19	-28,435.00	3.6	-0.4	6.6	-10.8	-3.2	-3.3	-3.8	3.4	-16.8	181.9	-58.0	-3.2	-15.1	30.2	-13.2
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	-23,951.00	-11,942.15	0.3	-1.9	-3.8	-4.3	-6.5	-6.2	-7.6	-7.6	-8.8	0.5	0.1	2.2	-6.4	-6.9	-50.1
Germany	-247.04	1,302.65	-68.3	43.7	1.1	71.4	-14.7	32.3	-15.6	-758.3	-30.7	79.4	-49.7	41.3	-49.0	0	-627.3
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	1,198.86	934.50	-0.7	-1.3	-1.1	-1.3	-1.7	-1.8	-1.6	-0.9	-1.3	-1.8	-2.6	-2.1	-2.0	-1.6	-22.1
Ireland	-128.42	-269.62	-79.6	-2.7	-13.7	-48.3	53.9	-7.9	-39.9	24.6	-66.2	6.2	149.6	113.4	-36.9	39.2	109.9
Italy	-385.17	-7,759.75	372.8	*	*	*	*	*	*	1428.1	-67.5	2202.1	-88.2	-7.2	*	*	1914.6
Japan	-516.21	-614.90	-5.0	-3.7	-0.5	-5.3	-2.6	7.9	15.9	3.0	-1.7	3.9	9.6	12.0	4.6	-1.0	19.1
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	-0.08	0.87	0	0	0	-2829.8	0	0	0	0	0	-59.3	0	0	0	0	-1210.6
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	-0.76	-0.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	394.47	542.24	2.1	2.3	2.2	2.3	2.1	2.1	-1.8	2.3	2.3	2.3	1.8	1.8	1.7	1.7	37.5
New Zealand	482.70	436.83	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-9.5
Norway	17.15	5.17	80.1	0.0	0.0	0.0	-44.5	80.1	459.0	-85.7	-83.2	6737.0	-74.7	-55.8	-37.1	-74.1	-69.8
Poland	NE, NO	-335.91	*	*	*	*	*	*	*	*	*	*	*	-76.6	*	*	*
Portugal	-24.74	-24.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE, NO	-439.45	*	*	*	*	*	*	*	*	*	*	*	18.3	-0.5	0	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	-5.34	-96.03	100.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	1699.6
Sweden	-148.13	-109.45	-105.8	-3.5	-108.7	-327.3	908.0	42.6	6.9	-37.7	-93.6	84.2	780.7	-110.0	-2639.8	-80.9	-26.1
Switzerland	39.63	93.55	1.5	7.1	2.7	1.7	1.5	0.7	1.6	0.8	1.2	1.1	0.6	27.0	-6.6	-12.3	136.1
Turkey		NA	*	*	*	*	*	*	*	0	0	0	0	98.1	*	*	*
Ukraine	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	-7,205.39	-8,766.69	1.6	1.3	1.2	1.6	1.2	-0.2	0.1	0.2	1.6	1.3	1.4	1.0	1.2	1.4	21.7
United States	-22,257.16	-26,703.23	-8.6	-3.9	6.9	4.2	5.4	-0.3	21.4	-5.4	-6.6	-5.5	0	0	0	0	20.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.23

Area of land converted to grassland - trend information

Area (kha)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	7,561.13	12,470.31	4.5	2.9	2.8	2.7	2.8	2.8	2.9	2.8	2.3	2.1	2.9	2.8	2.5	2.6	64.9
Austria	600.80	549.33	0.5	-1.1	-1.0	-1.0	-1.1	-0.4	-0.4	0.2	-0.9	-0.3	-1.5	0.2	-1.0	-1.4	-8.6
Belarus	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	89.92	219.39	35.5	7.7	30.2	4.4	0.5	-0.7	4.6	2.5	1.2	1.3	-0.1	-0.6	-1.3	-1.1	144.0
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE, NO	228.53	*	160.2	84.4	24.9	-34.4	-14.9	-24.0	129.6	40.6	-16.1	-3.6	-31.9	17.4	14.2	*
European Community	13,391.97	11,268.68	-0.5	0.2	-1.1	-1.7	-2.1	-2.0	-2.4	-0.7	-4.2	9.5	-8.1	2.1	-2.4	0.2	-15.9
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	9,423.75	5,101.43	-2.3	-1.0	-3.2	-3.1	-4.6	-5.0	-6.1	-6.1	-7.4	0.0	-3.6	1.6	-5.0	-5.4	-45.9
Germany	19.20	156.55	0	0	0	0	0	0	0	810.3	0	0	0	0	-10.4	0	715.5
Greece	21.30	180.46	-66.7	9.1	11.1	20.9	29.1	10.9	5.4	-4.8	5.2	23.8	0.1	4.3	37.8	25.9	747.2
Hungary	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	475.70	584.47	0.6	1.0	0.9	1.0	1.3	5.1	1.1	0.7	0.8	1.2	1.6	1.3	1.2	0.9	22.9
Ireland	26.30	151.29	146.4	8.6	-19.9	-7.2	-6.8	14.4	24.0	-29.3	-30.8	-4.5	-2.9	77.4	3.2	13.0	475.2
Italy	8.63	173.91	372.8	*	*	*	*	*	*	1428.1	-67.5	2202.1	-88.2	-7.2	*	*	1914.6
Japan	283.86	150.08	-16.1	-4.2	-3.5	-10.2	-5.7	2.0	8.6	-2.6	-5.9	-2.3	3.2	5.4	-1.1	-6.1	-47.1
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	0.01	0.01	0	0	0	113.4	0	0	0	0	0	-26.1	0	0	0	0	57.6
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.44	0.44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	15.52	15.52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	1.08	1.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0.20	16.04	55.7	0	0	0	-35.8	3540.4	4.9	-87.0	96.7	231.7	-49.3	83.8	105.9	27.1	7801.0
Poland	NE, NO	55.00	*	*	*	*	*	*	*	*	*	*	*	-76.6	*	*	*
Portugal	8.02	8.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	303.20	6.50	104.5	-16.2	-97.9	2525.0	21.0	-98.4	59500.0	-97.3	112.5	-82.4	666.7	263.0	-91.8	136.4	-97.9
Russian Federation	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	100.20	*	*	*	*	*	*	*	*	*	*	*	9.1	-0.4	0	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	5.78	103.95	100.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.2	5.9	1700.0
Sweden	29.07	96.31	17.9	9.7	1.5	13.0	6.2	16.8	10.1	8.6	2.3	7.5	8.0	2.3	6.5	-0.1	231.3
Switzerland	51.39	64.45	0.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	0.5	1.5	1.4	25.4
Turkey		NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	3,233.17	4,731.45	2.7	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	46.3
United States	10,054.97	17,091.14	2.6	2.4	1.1	3.0	23.5	0.1	1.3	2.4	-3.0	-3.7	0	0	0	0	70.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.24a

Forest land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Activity data		IEF (Mg C/ha)					
	Total area (kha)	Area of organic soil (kha)	CSC[b] in living biomass/area			Net CSC[b] in DOM[c]/area	Net CSC[b] in soils/area	
			Increase	Decrease	Net Change		Mineral soils	Organic soils
Australia	12,470.31	NO	IE	-1.00	-1.00	-0.24	-0.24	NO
Austria	58.06	NO	IE	-0.88	-0.88	NO	-0.85	NO
Belarus	NO	NE	NO	NO	NO	NO	NE	NE
Belgium	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE	NE
Canada	NO	NO	NO	NO	NO	NO	NO	NO
Croatia	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	2.69	NO		-2.51	-2.51		0.06	NO
Denmark	NO	NO	NO	NO	NO	NO	NA	NA
Estonia	NE	NE	NE	NE	NE	NE	NE	NE
European Community	721.21	0.72	0.11	-2.37	-2.26	-0.13	-0.10	-4.40
Finland	NE	NE	NE	NE	NE	NE	NE	NE
France	267.47		NO	-1.24	-1.24	-0.20	0.07	
Germany	11.01	0.63	7.12	-103.31	-96.18	NE	NO	-5.00
Greece	NO		NO	NO	NO	NO	NO	
Hungary	IE	NO	IE	IE	IE	IE	IE	NO
Iceland	NO	NO	NO	NO	NO	NO	NO	NO
Ireland	NO	NO	NO	NO	NO	NO	NO	NO
Italy	NO	NO	NO	NO	NO	NO	NO	NO
Japan	9.24	IE	0.04	-0.52	-0.48	-1.09	2.50	IE
Latvia	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.00	IE	7.67	-71.66	-63.99	-1.66	-35.14	IE
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	1.28	0.09	NE	-83.70	-83.70	-31.95	NE	NE
New Zealand	1.02	NE	2.90	-132.79	-129.89	NE	12.40	NE
Norway	1.80	NE	0.04	-0.82	-0.78	NE	NA	NA
Poland	NE	NE	NE	NE	NE	NE	NE	NE
Portugal	0.18	NO	0.22	-2.86	-2.64	-0.28	0.75	NO
Romania	6.50	NE	NE	NE	NE	NE	NE	NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	NO	NO	NE	NE	NE	NE	NO	NO
Slovenia	NE	NE	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	41.27	NE	0.00	-0.89	-0.89	NE	NE	NE
Switzerland	14.43	0.02	NO	-3.51	-3.51	-1.61	-0.19	NO
Turkey								
Ukraine	NO	NO	NO	NO	NO	NO	NO	NO
United Kingdom	341.93	IE	IE, NO	-0.13	-0.13	IE	-0.12	IE
United States	IE	IE	NE	NE	NE	NE	IE	IE

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO_2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.24b

Forest land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2007)[a]

	Emissions/Removals (Gg C)						Net CO_2 (Gg)
	CSC[b] in living biomass			Net CSC[b] in DOM[c]	Net CSC[b] in soils		
	Gains	Losses	Net Change		Mineral soils	Organic soils	
Australia	IE	-12,412.41	-12,412.41	-3,027.51	-3,041.80	NO	67,766.31
Austria	IE	-51.02	-51.02	NO	-49.53	NO	368.68
Belarus	NO	NO	NO	NO	NE	NE	NE, NO
Belgium	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE
Canada	NO	NO	NO	NO	NO	NO	NO
Croatia	NE	NE	NE	NE	NE	NE	NE
Czech Republic		-6.74	-6.74		0.15	NO	24.16
Denmark	NO	NO	NO	NO	NA	NA	NA, NO
Estonia	NE	NE	NE	NE	NE	NE	NE
European Community	78.45	-1,708.61	-1,630.15	-94.50	-71.33	-3.15	6,596.84
Finland	NE	NE	NE	NE	NE	NE	NE
France	NO	-331.13	-331.13	-53.60	19.97		1,337.43
Germany	78.41	-1,137.30	-1,058.89	NE	NO	-3.15	3,894.16
Greece	NO	NO	NO	NO			NO
Hungary	IE	IE	IE	IE	IE	NO	IE, NO
Iceland	NO	NO	NO	NO	NO	NO	NO
Ireland	NO	NO	NO	NO	NO	NO	NO
Italy	NO	NO	NO	NO	NO	NO	NO
Japan	0.35	-4.77	-4.42	-10.12	23.08	IE	-31.34
Latvia	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	0.03	-0.31	-0.27	-0.01	-0.15	IE	1.58
Lithuania	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	-107.03	-107.03	-40.85	NE	NE	542.24
New Zealand	2.96	-135.71	-132.75	NE	12.67	NE	440.28
Norway	0.07	-1.48	-1.41	NE	NA	NA	5.17
Poland	NE	NE	NE	NE	NE	NE	NE
Portugal	0.04	-0.52	-0.48	-0.05	0.14	NO	1.46
Romania	NE	NE	NE	NE	NE	NE	NE
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NE	NE	NE	NE	NO	NO	NE, NO
Slovenia	NE	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	0.00	-36.60	-36.60	NE	NE	NE	134.20
Switzerland	NO	-50.72	-50.72	-23.23	-2.69	NO	280.99
Turkey							
Ukraine	NO	NO	NO	NO	NO	NO	NO
United Kingdom	IE, NO	-45.01	-45.01	IE	-41.91	IE	318.67
United States	NE	NE	NE	NE	IE	IE	IE, NE

[a] Changes introduced by the LULUCF tables included in decision 14/CP.11 have been incorporated in this S&A report, part I. The main changes introduced include splitting of soils into mineral and organic components, and the inclusion of a 'Net CO2' column.

[b] CSC = carbon stock change.

[c] DOM = dead organic matter.

Table 5.25

Net CO_2 emissions/removals from forest land converted to grassland - trend information

CO_2 emissions/removals[b] (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	104,146	67,766	-12.9	-13.4	-4.2	-0.6	10.5	-8.8	12.2	-3.2	0.3	-17.2	13.2	31.1	-7.6	-3.0	-34.9
Austria	608	369	1.5	-19.6	-4.1	-4.3	-4.5	-1.9	-1.9	-2.0	-2.0	-2.1	-1.6	-1.7	-1.7	-1.7	-39.4
Belarus	NE,NO	NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	25	24	287.5	-4.1	353.1	-51.4	138.6	-80.7	86.6	-45.2	-25.2	148.1	-50.9	40.8	-31.7	17.8	-3.9
Denmark	NA,NO	NA,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	3,315	6,597	-19.5	-1.5	4.5	1.3	-5.9	13.0	-3.7	209.2	0.3	1.2	-7.1	1.9	-20.7	1.6	99.0
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	2,261	1,337	-35.2	4.3	-1.2	4.2	3.5	2.2	6.1	0.9	-2.5	-4.1	-23.3	1.5	1.4	0.3	-40.8
Germany	24	3,894	2.3	0.2	0.0	-0.3	0.1	-1.5	1.3	22760.1	-1.7	3.5	-2.0	0.1	-29.8	0	16127.2
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE,NO	IE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	1	-31	-6469.5	-8.6	3.5	-9.6	-13.7	7.9	32.7	-0.1	-12.1	-10.1	-12.2	-4.9	-16.0	-16.6	-5138.6
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	1	2	0	0	0	433.2	0	0	0	0	0	-44.0	0	0	0	0	198.6
Lithuania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	394	542	2.1	2.3	2.2	2.3	2.1	2.1	-1.8	2.3	2.3	2.3	1.8	1.8	1.7	1.7	37.5
New Zealand	484	440	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-9.1
Norway	17	5	0	0	0	0	0	0	808.8	*	*	*	-72.2	-70.6	-89.3	150.6	-69.8
Poland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA,NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE,NO	NE,NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	-126	134	-100.0	3.0	-99.9	0	113,502.3	-82.9	796.4	-40.3	-106.6	-45.6	-1259.5	-150.8	-102.3	-14740.1	-206.1
Switzerland	229	281	0.3	3.3	0.9	0.6	0.5	0.3	0.6	0.3	0.5	0.4	0.3	7.9	-2.6	-4.5	22.7
Turkey																	
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	153	319	2.5	7.4	7.2	-11.4	2.5	75.6	32.8	22.3	-7.9	-3.9	-6.6	1.8	-4.6	-11.1	108.3
United States	IE,NE	IE,NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Only net CO_2 emissions from carbon stock change are included in this table.

Table 5.26

Area of forest land converted to grassland - trend information

Area (kha)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	7,561.13	12,470.31	4.5	2.9	2.8	2.7	2.8	2.8	2.9	2.8	2.3	2.1	2.9	2.8	2.5	2.6	64.9
Austria	102.29	58.06	2.8	-6.2	-6.6	-7.1	-7.6	-3.3	-3.5	-3.6	-3.7	-3.9	-3.1	-3.2	-3.3	-3.4	-43.2
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	1.90	2.69	15.7	1.8	13.7	5.9	11.5	-3.2	-1.8	-2.1	-3.0	0.9	-2.5	1.6	-5.9	-6.6	41.1
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	1,039.47	721.21	-1.6	-2.4	-3.3	-3.3	3.1	-1.8	-3.4	1.0	-3.1	-1.8	-3.1	-1.9	-5.3	-2.7	-30.6
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	590.34	267.47	-3.4	-3.9	-5.1	-5.0	7.3	-3.6	-6.8	-5.3	-6.1	-3.7	-7.6	-3.4	-8.2	-9.0	-54.7
Germany	0.06	11.01	0	0	0	0	0	0	0	50458.3	0	0	0	0	-63.7	0	18275.9
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	21.74	9.24	-10.4	-1.5	-3.1	-12.8	-3.9	4.3	9.7	-3.7	-11.5	-5.9	-11.1	-4.9	-6.2	-8.0	-57.5
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	0.00	0.00	0	0	0	501.5	0	0	0	0	0	-43.1	0	0	0	0	242.2
Lithuania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	1.28	1.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	1.02	1.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0.20	1.80	0	0	0	0	0	210.8	257.1	*	*	366.4	-53.6	38.5	66.6	-33.3	787.7
Poland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	0.18	0.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NA	6.50	*	*	*	*	*	*	*	*	*	*	*	*	-94.0	225.0	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	3.80	41.27	0	44.6	5.2	0	23.5	26.6	18.7	18.2	0	7.6	19.0	-5.5	24.5	28.2	985.8
Switzerland	12.79	14.43	-0.1	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	1.0	0.9	12.8
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	341.52	341.93	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
United States	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.27

Direct N_2O emissions from N-fertilization - AD, IEFs and N_2O emissions (base year and 2007)

	Forest Land remaining Forest Land						Land converted to Forest Land					
	Base year[a]			2007			Base year[a]			2007		
	Total amount of fertilizer applied	N_2O-N emissions per unit of fertilizer	N_2O emissions	Total amount of fertilizer applied	N_2O-N emissions per unit of fertilizer	N_2O emissions	Total amount of fertilizer applied	N_2O-N emissions per unit of fertilizer	N_2O emissions	Total amount of fertilizer applied	N_2O-N emissions per unit of fertilizer	N_2O emissions
	(Gg N/yr)	(kg N_2O-N/kg N)	(Gg)	(Gg N/yr)	(kg N_2O-N/kg N)	(Gg)	(Gg N/yr)	(kg N_2O-N/kg N)	(Gg)	(Gg N/yr)	(kg N_2O-N/kg N)	(Gg)
Australia	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Austria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Belarus	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Belgium	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Canada	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Croatia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Denmark	IE	NO	NO	IE	NO	NO	IE	NO	NO	IE	NO	NO
Estonia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
European Community	14.88	0.01	0.27	9.47	0.01	0.17	1.66	0.01	0.02	0.32	0.01	0.00
Finland	4.40	0.01	0.09	2.74	0.01	0.05	IE	IE	IE	IE	IE	IE
France	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Greece	NO	NO	NO	NO	NO	NO	IE	IE	IE	IE	IE	IE
Hungary	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Iceland	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.02	0.01	0.00
Ireland	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Italy	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Japan	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Latvia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
Luxembourg	NO	NO	NO	NO	NO	NO	NE	NE	NE	NE	NE	NE
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
New Zealand	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Norway	1.12	0.003	0.00	0.31	0.00	0.00	IE	IE	IE	IE	IE	IE
Poland	IE, NE	IE, NE	IE, NE	NO	NO	NO				NO	NO	NO
Portugal	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Romania	NA	NA	NA	NA	NA	NA	IE	IE	IE	IE	IE	IE
Russian Federation	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Slovakia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Slovenia	NO	NO	NO	NO	NO	NO	IE	IE	IE	IE	IE	IE
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	10.48	0.01	0.19	6.73	0.01	0.12	IE	IE	IE	IE	IE	IE
Switzerland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Turkey	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ukraine	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
United Kingdom	NO	NO	NO	NO	NO	NO	1.66	0.01	0.02	0.32	0.01	0.00
United States	9.61	0.01	0.15	63.99	0.01	1.01	NE	NE	NE	NE	NE	NE

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.28

Direct N_2O emissions from N-fertilization (Gg) - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	0.292	0.177	-33.2	-5.9	-5.0	2.0	4.2	1.0	-0.3	-6.7	-16.3	7.5	13.6	23.2	23.4	17.0	-39.5
Finland	0.087	0.054	-24.5	-43.8	18.4	63.5	6.9	-29.1	1.5	13.3	5.6	-2.6	5.8	-8.0	66.3	-8.4	-37.7
France	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Germany	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	0.007	0.011	20.2	58.9	-11.4	31.5	27.7	-9.4	-8.6	6.6	9.5	53.4	12.6	9.1	2.3	-34.4	65.5
Ireland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	IE, NA	IE, NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	0.004	0.001	52.8	-1.6	-1.4	11.6	-7.7	0	-35.7	-18.2	36.9	-55.8	1.4	26.6	-54.7	69.3	-68.7
Poland	IE, NE	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	IE, NA	IE, NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	IE, NO	IE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	0.185	0.119	-41.6	16.9	-10.1	-21.0	2.0	30.0	-1.5	-15.6	-31.5	18.9	25.0	49.1	7.3	35.2	-35.7
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	0.021	0.004	5.6	-0.4	-15.5	-7.3	3.8	-13.6	2.0	-12.5	-10.3	0.7	-16.6	-14.7	-15.8	-7.2	-80.8
United States	0.151	1.006	-3.6	37.8	49.7	28.2	10.9	34.7	-15.4	3.2	17.7	-5.9	-18.3	0	0	0	565.8

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.29

N_2O emissions from disturbance associated with land-use conversion to cropland - AD, IEF and N_2O emissions (base year and 2007)

	Base year[a]			2007		
	Land area converted	N_2O-N emissions per area converted	N_2O emissions	Land area converted	N_2O-N emissions per area converted	N_2O emissions
	(kha)	(kg N_2O-N/ha)	(Gg)	(kha)	(kg N_2O-N/ha)	(Gg)
Australia	3,148.31	0.04	0.18	4,335.37	0.01	0.06
Austria	497.28	1.04	0.81	542.35	1.04	0.89
Belarus	1,081.20	IE, NE, NO	IE, NE, NO	845.00	IE, NE, NO	IE, NE, NO
Belgium	NE	NE	NE	NE	NE	NE
Bulgaria	NE	NE	NE	NE	NE	NE
Canada	1,345.27	0.02	0.05	632.21	0.04	0.04
Croatia	NE	NE	NE	NE	NE	NE
Czech Republic	110.79	0.39	0.07	36.08	0.39	0.02
Denmark	NA, NO	NA	NA	NA, NO	NA	NA
Estonia	NE	NE	NE	NE	NE	NE
European Community	7,935.09	0.96	12.01	4,314.80	1.43	9.73
Finland	NE	NE	NE	NE	NE	NE
France	7,379.02	0.94	10.89	3,589.66	1.16	6.52
Germany	6.84	15.37	0.17	73.30	16.88	1.94
Greece	NO	NO	NO	NO	NO	NO
Hungary	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Iceland	NE	NE	NE	NE	NE	NE
Ireland	NO	NA, NO	NA, NO	57.62	0.50	0.05
Italy	NO	NO	NO	NO	NO	NO
Japan	475.93	0.29	0.22	72.06	0.22	0.03
Latvia	IE, NE	NE	NE	IE, NE	NE	NE
Liechtenstein	0.00	NO	NO	0.00	NO	NO
Lithuania	NE	NE	NE	NE	NE	NE
Luxembourg	0.38	0.72	0.00	0.38	0.72	0.00
Monaco	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	NE	NE
New Zealand	0.91	1.34	0.00	0.91	24.22	0.03
Norway	151.64	0.01	0.00	51.27	0.01	0.00
Poland	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Portugal	51.58	0.96	0.08	51.58	0.96	0.08
Romania	NE	NE	NE	NE	NE	NE
Russian Federation	NO	NO	NO	NO	NO	NO
Slovakia	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO
Sweden	IE, NE	IE, NE	0.07	IE, NE	IE, NE	0.25
Switzerland	21.36	0.68	0.02	15.34	0.63	0.02
Turkey						
Ukraine	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO
United Kingdom	NE	NE	NE	NE	NE	NE
United States	IE	IE	IE	IE	IE	IE

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.30

N_2O emissions from disturbance associated with land-use conversion to cropland - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	0.18	0.06	-57.6	*	-22.4	-57.7	286.9	3.6	-39.0	-34.0	123.2	48.0	-98.9	4507.8	-99.9	27013.0	-64.5
Austria	0.81	0.89	0.3	0.3	0.4	0.4	0.3	0.4	0.4	1.6	0.1	-0.1	1.2	0.4	-0.3	2.7	9.1
Belarus	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	0.05	0.04	-3.6	-0.7	-0.6	-0.7	-0.6	-0.4	-0.3	-0.2	0.1	0.2	0.2	0.3	0.3	0.7	-9.1
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	0.07	0.02	-2.6	-9.8	-16.2	-17.3	9.3	-10.3	-4.3	-9.0	-6.6	-5.3	-5.7	-4.0	-2.4	-2.9	-67.8
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	12.01	9.73	-0.4	-2.9	-6.3	0.2	9.5	-0.7	-19.2	14.7	-6.4	2.9	-1.3	-1.1	3.4	-11.9	-19.1
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	10.89	6.52	-0.6	-2.1	-1.4	-1.5	-0.4	-6.3	-6.3	-7.5	-9.4	3.9	-2.3	-1.8	-4.8	-5.1	-40.1
Germany	0.17	1.94	0	0	0	0	0	0	0	1248.2	0	0	0	0	-12.7	0	1077.4
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NA, NO	0.05	*	0	61.4	0	0	0	0	73.0	24.7	30.0	0	0	0	0	*
Italy	NO	NO	*	-19.8	*	*	691.7	41.9	*	*	*	*	*	*	*	*	*
Japan	0.22	0.03	-6.3	-12.8	-17.1	-20.0	-10.5	-6.8	-10.1	-10.3	-12.4	-9.1	-17.1	-16.9	-11.8	-11.4	-88.5
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	0	21.7	0.8	-14.1	-42.0	*	*	-40.0	71.6	-2.2	*	*	*
Lithuania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	0.00	0.03	100.4	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.9	1706.1
Norway	0.00	0.00	-9.7	-11.3	-5.0	-5.5	-6.5	-7.5	-7.7	-21.9	-12.3	3.7	1.7	-8.8	-12.2	-8.3	-78.4
Poland	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	0.08	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	0.07	0.25	25.7	9.7	6.6	9.0	1.9	-0.6	8.1	7.5	6.5	8.6	10.2	4.6	11.3	-8.3	261.4
Switzerland	0.02	0.02	-0.8	-2.4	-2.4	-2.5	-2.6	-2.6	-2.7	-2.8	-2.8	-2.9	-3.0	-2.3	-4.0	-3.3	-34.0
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NA, NE, NO	NA, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.31

CO_2 emissions from agricultural lime application in cropland and grassland (base year and 2007)

	Cropland						Grassland					
	Base year[a]			2007			Base year[a]			2007		
	Total amount of lime applied	CO_2 emissions per unit of lime	CO_2 emissions	Total amount of lime applied	CO_2 emissions per unit of lime	CO_2 emissions	Total amount of lime applied	CO_2 emissions per unit of lime	CO_2 emissions	Total amount of lime applied	CO_2 emissions per unit of lime	CO_2 emissions
	(Mg/yr)	($MgCO_2$-C/Mg)	(Gg)	(Mg/yr)	($MgCO_2$-C/Mg)	(Gg)	(Mg/yr)	($MgCO_2$-C/Mg)	(Gg)	(Mg/yr)	($MgCO_2$-C/Mg)	(Gg)
Australia	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Austria	205,230	0.12	90.30	204,642	0.12	90.04	IE	IE	IE	IE	IE	IE
Belarus	5,221,200	0.12	2,297.33	2,091,100	0.12	920.08	NO	NO	NO	NO	NO	NO
Belgium	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Bulgaria	112,286	0.12	49.41	NE, NO	NE, NO	NE, NO	NO	NO	NO	NO	NO	NO
Canada	442,755	0.13	203.62	626,204	0.13	287.76	IE	IE	IE	IE	IE	IE
Croatia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	2,517,500	0.12	1,107.70	165,496	0.12	72.82	118,280	0.12	52.04	8,710	0.12	3.83
Denmark	1,285,300,000	0.00	565.53	436,300,000	0.00	191.97	IE	IE	IE	IE	IE	IE
Estonia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
European Community	1,296,523,484	0.00	6,439.72	444,293,544	0.00	4,157.73	2,156,502	0.12	970.32	1,369,041	0.12	609.40
Finland	1,344,769	0.13	617.87	551,698	0.12	248.65	IE	IE	IE	IE	IE	IE
France	2,384,305	0.12	1,051.08	2,124,492	0.12	935.58	NO	NO	NO	NO	NO	NO
Germany	5,109,681	0.17	3,129.40	3,711,267	0.15	2,062.00	IE	IE	IE	IE	IE	IE
Greece	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Hungary	320,135	0.12	141.44	31,726	0.12	13.96	NO	NO	NO	NO	NO	NO
Iceland	NE	NE	NE	11,261	0.12	4.80	NO	NO	NO	NO	NO	NO
Ireland	83,308	0.12	36.66	84,597	0.12	37.22	723,592	0.12	318.38	771,691	0.12	339.54
Italy	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Japan	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Latvia	10,500	0.12	4.62	10,700	0.12	4.71	NE	NE	NE	NE	NE	NE
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	200,000	0.13	93.43	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	1340	0.12	0.59	7000	0.12	3.08	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NA	NA	NA	NA	NA	NA	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
New Zealand	52,336	0.12	23.03	88,884	0.12	39.11	797,281	0.12	350.80	1,354,040	0.12	595.78
Norway	492,407	0.12	216.66	155,859	0.12	68.58	IE, NO	IE, NO	IE, NO	IE, NO	IE, NO	IE, NO
Poland	NE	NE	NE	868,926	0.12	386.10	IE	IE	IE	IE	IE	IE
Portugal	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Romania	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Russian Federation	21,980,000	0.12	9,671.20	1,470,000	0.12	646.80	IE	IE	IE	IE	IE	IE
Slovakia	1,000	0.12	0.44	4,500	0.12	2.00	NE	NE	NE	NE	NE	NE
Slovenia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	383,760	0.12	169.79	268,490	0.12	118.75	IE	IE	IE	IE	IE	IE
Switzerland	45,000	0.12	19.80	45,000	0.12	19.80	NO	NO	NO	NO	NO	NO
Turkey												
Ukraine	6,930,700	0.12	3,049.51	300,300	0.12	132.13	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
United Kingdom	1,711,090	0.12	778.51	1,041,357	0.12	470.43	1,432,910	0.12	651.94	597,351	0.12	269.85
United States	24,666,866	0.08	7,083.85	23,948,960	0.09	8,007.06	IE	IE	IE	IE	IE	IE

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.32

CO_2 emissions from agricultural lime application (all land-use categories) - trend information

CO_2 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	169.87	1,497.74	39.3	-9.9	-12.2	26.0	20.6	23.0	2.4	3.3	34.2	10.1	9.8	10.1	10.1	0	781.7
Austria	90.30	90.04	0.8	1.4	0.0	0.1	-0.5	0.0	-1.4	-0.1	0.0	0.0	-0.1	0.1	-0.2	-0.1	-0.3
Belarus	2,297.33	920.08	-11.5	13.1	2.3	20.3	-10.6	-29.2	-10.3	10.2	16.2	10.8	7.1	12.9	-9.3	-7.7	-59.9
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	49.41	NE, NO	-81.5	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	203.62	287.76	25.4	-0.8	10.5	-8.6	11.9	-1.7	-11.3	7.6	9.2	-7.9	0	0	0	0	41.3
Croatia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	1,159.74	76.65	-73.6	7.9	2.6	-17.8	-3.1	-3.6	6.2	0.6	-6.8	-12.1	-8.3	-9.4	11.9	10.2	-93.4
Denmark	565.53	191.97	-18.2	35.1	-20.8	19.5	-46.3	5.1	-1.7	-23.0	16.2	-3.0	-30.3	39.4	-11.8	-0.9	-66.1
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	8,236.30	5,556.39	-10.0	17.2	-1.0	1.4	-8.4	-0.3	-1.3	-7.0	3.0	-1.9	-4.9	-4.2	-0.5	2.3	-32.5
Finland	617.87	248.65	-30.2	-14.0	17.5	3.1	-8.5	0.3	-24.0	21.2	6.9	-34.2	-9.3	5.2	12.7	-16.6	-59.8
France	1,051.08	935.58	-6.7	12.8	-5.2	17.9	-8.4	-0.7	-10.8	-6.1	13.1	-6.4	3.2	-4.3	-4.3	-4.9	-11.0
Germany	3,772.51	2,780.19	-18.4	14.7	0.6	2.1	8.3	2.1	8.4	-9.4	2.9	-6.0	1.1	-6.6	-0.3	4.3	-26.3
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	141.44	13.96	-57.6	-28.5	33.4	-14.2	-89.8	-98.3	56869.4	11.9	-14.9	30.0	-40.0	14.2	4.1	-56.6	-90.1
Iceland	NA, NE, NO	4.80	*	*	*	*	*	*	*	*	*	*	6.6	37.2	2.4	35.6	*
Ireland	355.04	376.77	-11.2	83.4	-2.1	-12.5	-27.8	25.4	-4.4	5.2	-28.9	41.2	-37.7	10.8	-4.5	47.8	6.1
Italy	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	550.22	230.34	-4.2	3.7	-3.6	3.7	-1.2	-2.2	13.4	-25.7	9.1	-8.7	-4.1	-2.1	-0.4	0	-58.1
Latvia	4.62	4.71	0	0	-25.5	-61.5	56.2	4.3	108.2	-93.1	4589.9	63.5	-95.9	50.0	-9.1	256.7	1.9
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	93.43	NA	-14.3	-33.3	-50.0	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	0.59	3.08	20.1	-18.3	-11.8	48.0	38.0	-44.3	67.6	21.2	26.9	-3.0	-14.1	61.5	-22.0	1.0	422.4
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	183.15	71.08	-19.9	2.5	12.6	-0.5	-5.5	-18.9	15.7	-18.0	5.8	2.1	-8.6	-5.4	8.5	-12.4	-61.2
New Zealand	373.83	634.89	7.6	-1.1	-0.6	9.7	8.8	8.1	7.5	7.0	-2.8	-7.6	3.6	-3.8	-6.1	0	69.8
Norway	226.78	85.12	-13.0	11.3	-7.2	0.2	-11.0	-1.0	-13.4	1.9	-2.0	-8.5	-11.1	-1.0	-4.8	-17.4	-62.5
Poland	IE, NE	386.10	-24.1	25.4	-6.1	11.4	-5.5	-19.8	-8.7	-1.0	-4.9	-3.8	-0.1	-4.7	-38.8	-31.1	*
Portugal	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	9,671.20	646.80	-7.6	-36.7	-29.0	-25.0	-30.3	8.7	12.0	-3.6	-8.0	3.7	-8.4	-4.1	3.6	-10.3	-93.3
Slovakia	0.44	2.00	0	0	0	0	0	0	143.8	0	0	0	0	0	0	84.7	350.4
Slovenia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	169.79	118.75	-21.0	8.1	14.0	-9.6	-24.9	19.6	-0.1	-12.3	-4.4	-2.1	-4.4	-4.6	-22.2	30.7	-30.1
Switzerland	19.80	19.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	3,049.51	132.13	-47.9	0	-77.9	-74.5	1.8	*	*	12.6	-24.8	-8.2	68.8	9.1	16.6	6.0	-95.7
United Kingdom	1,430.45	740.28	23.9	20.4	-0.9	-11.1	-21.4	-16.2	-10.5	-8.8	2.0	24.2	-11.2	-11.7	7.0	-3.8	-48.2
United States	7,083.85	8,007.06	3.4	3.3	-1.3	0.2	10.0	-2.5	0.9	3.8	9.3	-3.4	-8.5	4.0	0.4	1.5	13.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.33

Biomass burning - CO_2 emissions from forest land (base year and 2007)

	Base year[a]					2007				
	Activity Data			CO_2 IEF	CO_2 Emission	Activity Data			CO_2 IEF	CO_2 Emission
	Description	Unit	Value	(Mg/activity data unit)	(Gg)	Description	Unit	Value	(Mg/activity data unit)	(Gg)
Australia	Area burned	ha	1,401,416	IE	IE	Area burned	ha	1,554,554	IE	IE
Austria		Not specified	200	IE, NO	IE, NO		Not specified	37	IE, NO	IE, NO
Belarus	Biomass burned	kg dm	27	1,349.01	36.61	Biomass burned	kg dm	23	1,526.98	35.48
Belgium	Area burned	ha	NE, NO	NE, NO	NE, NO	Area burned	ha	NE, NO	NE, NO	NE, NO
Bulgaria	Biomass burned	kg dm	NE	NE	NE	Biomass burned	kg dm	NE	NE	NE
Canada	Area burned	ha	336,792	128.61	43,315.73	Area burned	ha	659,852	116.61	76,943.94
Croatia		Not specified	NA	NA	746.37		Not specified	NA	NA	679.52
Czech Republic		Not specified	NA	NA	1,063.18		Not specified	NA	NA	1,905.82
Denmark		Not specified	NO	NO	NO		Not specified	NO	NO	NO
Estonia	Area burned	ha	1,010	51.48	52.00	Area burned	ha	191	72.93	13.96
European Community	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	823.96	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	313.22
Finland	Area burned	ha	4,188	0.78	3.26	Area burned	ha	1,047	4.69	4.91
France		Not specified	13,809	NO	NO		Not specified	NO	NO	NO
Germany	Area burned	ha	NE	IE, NO	IE, NO	Area burned	ha	256	IE, NO	IE, NO
Greece	Area burned	ha	33,734	IE, NO	IE, NO	Area burned	ha	112,763	IE, NO	IE, NO
Hungary		Not specified	NA	IE, NE, NO	IE, NE, NO		Not specified	NA	IE, NE, NO	IE, NE, NO
Iceland		Not specified	NE, NO	NE, NO	NE, NO		Not specified	NE, NO	NE, NO	NE, NO
Ireland	Area burned	ha	431	45.66	19.68	Area burned	ha	225	45.66	10.27
Italy	Area burned	ha	96,157	IE, NO	IE, NO	Area burned	ha	116,602	IE, NO	IE, NO
Japan	Biomass burned	kg dm	49,465,963	IE	IE	Biomass burned	kg dm	11,393,182	IE	IE
Latvia	Biomass burned	kg dm	120,921	1.74	210.12	Biomass burned	kg dm	185,124	1.83	338.44
Liechtenstein	Biomass burned	kg dm	NO	NO	NO	Biomass burned	kg dm	NO	NO	NO
Lithuania	Area burned	ha	134	51.97	6.96	Area burned	ha	38	63.19	2.40
Luxembourg	Biomass burned	kg dm	NE, NO	NE, NO	NE, NO	Biomass burned	kg dm	NE, NO	NE, NO	NE, NO
Monaco		Not specified	NO	NO	NO		Not specified	NO	NO	NO
Netherlands		Not specified	NA	NE, NO	NE, NO		Not specified	NA	NE, NO	NE, NO
New Zealand	Biomass burned	kg dm	265,594,418	IE, NO	IE, NO	Biomass burned	kg dm	442,176,000	IE, NO	IE, NO
Norway	Area burned	ha	936	IE, NO	IE, NO	Area burned	ha	128	IE, NO	IE, NO
Poland		Not specified		NE	NE		Not specified		NE, NO	NE, NO
Portugal	Area burned	ha	79,672	9.26	737.75	Area burned	ha	10,725	9.88	105.92
Romania	Area burned	ha	93	24.77	2.30	Area burned	ha	2,949	24.77	73.03
Russian Federation	Area burned	ha	1,377,364	IE, NO	IE, NO	Area burned	ha	1,036,100	IE, NO	IE, NO
Slovakia	Biomass burned	kg dm	87,388	1.83	160.21	Biomass burned	kg dm	113,324	IE, NO	IE, NO
Slovenia		Not specified	NE, NO	NE, NO	NE, NO		Not specified	NE, NO	NE, NO	NE, NO
Spain		Not specified	NA	IE, NO	IE, NO		Not specified	NA	IE, NO	IE, NO
Sweden	Area burned	ha	1,673	9.78	16.36	Area burned	ha	2,442	10.40	25.39
Switzerland	Area burned	ha	1,102	IE, NO	IE, NO	Area burned	ha	234	IE, NO	IE, NO
Turkey		Not specified		IE, NE, NO	IE, NE, NO		Not specified		IE, NE, NO	IE, NE, NO
Ukraine	Biomass burned	kg dm	32,163	2.64	84.96	Biomass burned	kg dm	526,560	2.03	1,069.43
United Kingdom	Biomass burned	kg dm	25,585,498	0.00	46.91	Biomass burned	kg dm	90,944,976	0.00	166.73
United States	Area burned	ha	447,233	IE, NE	IE, NE	Area burned	ha	2,565,936	IE, NE	IE, NE

[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Romania (1989) and Slovenia (1986).

Table 5.34

CH_4 emissions from biomass burning in forest land - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	79.24	100.09	22.6	28.1	-2.0	26.9	-21.3	-16.0	-4.6	88.9	193.7	-5.6	-11.5	-72.4	101.7	2.6	26.3
Austria	0.01	0.00	-73.5	-44.8	-9.4	-31.0	365.0	-91.4	425.0	-42.9	700.0	-4.7	-90.7	82.4	138.7	-50.0	-81.5
Belarus	0.20	0.17	-40.6	14.3	120.0	-80.0	12.8	-7.0	70.4	-48.7	534.0	-45.6	-60.7	-6.5	75.5	-36.6	-13.3
Belgium	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	159.59	282.68	59.4	215.2	-76.8	-64.6	839.1	-57.8	-79.8	125.9	292.3	-17.9	11.9	-47.9	9.7	-5.6	77.1
Croatia	0.00	0.00	0	-83.0	302.8	57.8	90.3	-93.7	2804.8	-75.0	-48.7	360.0	-95.7	5.9	34.6	584.6	-9.0
Czech Republic	4.64	8.32	-25.9	-6.6	31.5	7.9	-13.5	-7.9	-8.0	3.9	7.8	25.6	-8.6	-4.4	23.9	30.0	79.3
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	0.23	0.06	-98.8	-50.2	8.6	58.7	-24.7	6.8	54.0	-66.4	480.2	-85.5	82.7	-74.6	2341.6	-87.2	-73.2
European Community	61.17	46.19	-0.6	-20.5	-23.7	16.9	16.7	-24.7	43.4	-29.3	9.6	51.7	-37.1	28.8	8.4	-21.0	-24.5
Finland	0.19	0.05	-57.5	-16.0	-29.5	45.8	-62.8	151.7	-54.3	195.0	4.7	-27.6	-72.8	180.8	55.9	-56.9	-75.5
France	36.84	26.93	-3.9	3.4	-3.1	0.7	0.9	-3.8	2.4	-7.6	8.6	2.4	-10.0	3.9	-9.2	-1.2	-26.9
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	2.29	6.43	-51.1	-40.4	-43.9	104.5	204.8	-92.5	1705.8	-86.9	-85.8	31.5	176.1	-35.6	138.7	715.0	180.7
Hungary	1.43	1.17	-2.4	5.0	8.6	1.8	-2.6	5.3	6.7	-3.9	0	0.8	0.8	3.2	-3.1	-5.7	-18.2
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	0.09	0.04	0	9.1	-3.8	-36.1	-79.4	-6.0	413.6	152.5	-63.4	265.3	-22.8	-80.2	187.6	-50.1	-47.8
Italy	6.80	9.37	-74.4	-55.0	-19.0	234.1	16.4	-50.8	104.9	-36.6	-44.0	110.1	-46.7	-1.3	-10.4	542.7	37.7
Japan	0.40	0.09	-25.2	-51.2	227.7	21.0	-68.9	-51.3	49.0	59.2	66.4	-81.0	211.0	-24.5	-73.3	-21.5	-77.0
Latvia	0.92	1.48	16.5	23.2	0.2	28.2	11.3	11.6	1.5	-44.1	18.4	-4.7	-8.4	3.0	3.2	-13.3	61.0
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	0.03	0.01	-51.7	1.2	1.1	0.1	-82.5	542.1	-3.0	-65.7	548.7	-38.8	-41.6	-79.8	2261.2	-96.7	-65.5
Luxembourg	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	1.06	1.61	-4.9	-26.3	17.7	-21.8	-12.4	-6.0	-0.6	-4.5	-27.3	2.6	-14.7	49.6	-15.4	103.2	51.8
Norway	0.08	0.01	68.2	-51.2	352.9	68.8	-68.2	-69.0	101.3	-47.7	144.4	328.3	-87.6	196.2	1009.1	-96.7	-86.3
Poland	IE, NE	0.15	-64.8	-21.8	103.1	196.1	-80.9	11.5	-41.5	171.5	-52.3	259.1	-63.3	-15.0	-7.5	3.3	*
Portugal	6.53	0.88	58.4	497.7	-64.9	-62.5	401.8	-46.3	120.4	-34.0	43.8	341.6	-80.3	120.6	-69.0	-72.3	-86.5
Romania	0.01	0.32	-37.6	-33.3	9.1	-70.0	101.5	176.6	851.7	-71.7	252.0	-78.8	-83.7	71.0	346.2	211.7	3070.6
Russian Federation	172.98	111.29	-50.5	-34.5	430.1	-57.7	223.5	-66.1	57.1	-42.3	69.7	66.0	-73.8	11.4	76.6	-15.8	-35.7
Slovakia	0.70	0.91	-37.2	12.0	11.1	5.9	-1.3	14.4	9.8	1.5	-2.5	10.1	12.6	30.0	-15.8	0.7	29.6
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	8.14	1.65	43.0	-72.6	-70.8	199.6	-2.5	-37.1	106.3	-59.1	57.6	37.9	-19.6	107.8	116.3	-93.2	-79.7
Sweden	0.07	0.11	-7.8	0.7	7.7	463.1	-95.2	615.7	-2.2	1.3	57.6	24.3	-6.3	-7.6	147.4	-80.8	55.2
Switzerland	0.39	0.08	-86.6	49.6	-46.8	548.4	-83.5	-96.4	296.9	3.1	1007.6	37.6	-96.4	133.8	115.7	131.3	-78.8
Turkey	0.00	0.00	-41.2	-79.9	94.7	-57.6	6.5	-13.7	353.3	-71.9	14.6	-21.8	-26.4	-68.4	536.0	62.3	16.0
Ukraine	0.40	5.03	-41.9	-69.8	163.9	-93.0	422.0	32.6	-81.3	311.7	-20.9	-49.8	-84.4	498.4	70.2	1081.6	1158.8
United Kingdom	0.20	0.73	68.6	682.1	-48.0	31.3	-44.6	-84.2	249.4	38.3	-15.4	-15.6	32.4	-78.4	1028.4	14.1	255.5
United States	218.36	1,381.15	-12.9	-44.3	184.4	-80.5	34.1	254.9	27.2	-41.7	50.5	-35.9	-43.3	115.6	120.1	-7.2	532.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.35

N_2O emissions from biomass burning in forest land - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1.46	1.85	22.6	28.1	-2.0	26.9	-21.3	-16.0	-4.6	88.9	193.7	-5.6	-11.5	-72.4	101.7	2.6	26.3
Austria	0.00	0.00	-73.5	-44.8	-9.4	-31.0	365.0	-91.4	425.0	-42.9	700.0	-4.7	-90.7	82.4	138.7	-50.0	-81.5
Belarus	0.00	0.00	-38.3	16.7	114.3	-80.0	7.8	-1.0	66.7	-46.3	516.3	-47.2	-60.7	-9.1	80.0	-33.3	-11.1
Belgium	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	6.69	11.89	58.7	215.6	-76.8	-64.7	841.3	-57.8	-79.8	125.8	292.7	-18.0	11.9	-47.9	9.7	-5.6	77.6
Croatia	0.00	0.00	0	-83.0	302.8	57.8	90.3	-93.7	2804.8	-75.0	-48.7	360.0	-95.7	5.9	34.6	584.6	-9.0
Czech Republic	0.03	0.06	-25.9	-6.6	31.5	7.9	-13.5	-7.9	-8.0	3.9	7.8	25.6	-8.6	-4.4	23.9	30.0	79.3
Denmark	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	0.00	0.00	-98.8	-50.2	8.6	58.7	-24.7	6.8	54.0	-66.4	480.2	-85.5	82.7	-74.6	2341.6	-87.2	-73.2
European Community	0.53	0.33	-18.0	-19.6	-23.9	20.2	13.8	-25.1	44.2	-28.6	19.8	54.1	-45.0	31.1	2.3	-20.1	-37.7
Finland	0.00	0.00	-57.5	-16.0	-29.6	46.0	-62.8	151.9	-54.4	195.3	4.6	-27.5	-72.8	180.6	56.0	-56.9	-75.5
France	0.36	0.20	-28.4	1.7	-6.0	6.4	-0.9	-6.9	7.4	-9.2	21.8	16.9	-32.3	9.3	-17.1	-0.4	-45.4
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	0.02	0.04	-51.1	-40.4	-43.9	104.5	204.8	-92.5	1705.8	-86.9	-85.8	31.5	176.1	-35.6	138.7	715.0	180.7
Hungary	0.01	0.01	-2.3	4.3	8.3	2.6	-2.5	5.1	7.3	-4.5	0	1.2	1.2	2.3	-3.4	-5.4	-18.5
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	0.00	0.00	0	9.1	-3.8	-36.1	-79.4	-6.0	413.6	152.5	-63.4	265.3	-22.8	-80.2	187.6	-50.1	-47.8
Italy	0.05	0.06	-74.4	-55.0	-19.0	234.1	16.4	-50.8	104.9	-36.6	-44.0	110.1	-46.7	-1.3	-10.4	542.7	37.7
Japan	0.00	0.00	-25.2	-51.2	227.7	21.0	-68.9	-51.3	49.0	59.2	66.4	-81.0	211.0	-24.5	-73.3	-21.5	-77.0
Latvia	0.01	0.01	14.0	26.9	2.4	24.0	10.0	17.1	0.6	-45.8	31.8	-12.7	-9.0	0.6	23.3	-26.6	59.4
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	0.00	0.00	-51.7	1.2	1.1	0.1	-82.5	542.1	-3.0	-65.7	548.7	-38.8	-41.6	-79.8	2261.2	-96.7	-65.5
Luxembourg	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	0.01	0.01	-4.9	-26.3	17.7	-21.8	-12.4	-6.0	-0.6	-4.5	-27.3	2.6	-14.7	49.6	-15.4	103.2	51.8
Norway	0.00	0.00	66.7	0	200.0	66.7	-60.0	-50.0	0	0	0	500.0	-88.0	177.8	1100.0	-95.8	-83.3
Poland	IE, NE	0.00	-64.8	-41.5	171.5	-52.3	-37.2	110.1	-15.0	-50.5	53.6	321.8	-82.3	59.9	3.5	-55.0	*
Portugal	0.04	0.01	58.4	497.7	-64.9	-62.5	401.8	-46.3	120.4	-34.0	43.8	341.6	-80.3	120.6	-69.0	-72.3	-86.5
Romania	0.00	0.00	-37.6	-33.3	9.1	-70.0	101.5	176.6	851.7	-71.7	252.0	-78.8	-83.7	71.0	346.2	211.7	3070.6
Russian Federation	1.19	0.77	-50.4	-34.9	428.6	-57.4	222.2	-66.0	56.5	-42.6	71.0	66.0	-73.9	10.9	78.4	-15.4	-35.3
Slovakia	0.01	0.01	-32.7	15.9	0	0	0	37.0	0	0	0	0	12.0	53.8	-40.6	22.4	13.9
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	0.06	0.01	42.9	-72.7	-70.2	192.9	-2.4	-37.5	108.0	-59.6	61.9	35.3	-19.6	108.1	116.9	-93.4	-80.4
Sweden	0.00	0.00	-7.8	0.7	7.7	463.1	-95.2	615.7	-2.2	1.3	57.6	24.3	-6.3	-7.6	147.4	-80.8	55.2
Switzerland	0.01	0.00	-86.8	50.0	-46.3	544.8	-83.4	-96.8	300.0	25.0	920.0	37.3	-97.1	200.0	100.0	141.7	-78.7
Turkey	0.00	0.00	-41.7	-79.4	85.7	-53.8	0	-16.7	360.0	-69.6	14.3	-25.0	-33.3	-75.0	800.0	55.6	16.7
Ukraine	0.01	0.09	-41.9	-69.8	163.9	-93.0	422.0	32.6	-81.3	311.7	-20.9	-49.8	-84.4	498.4	70.2	1081.6	1158.8
United Kingdom	0.00	0.01	68.6	682.1	-48.0	31.3	-44.6	-84.2	249.4	38.3	-15.4	-15.6	32.4	-78.4	1028.4	14.1	255.5
United States	1.50	9.50	-12.9	-44.3	184.4	-80.5	34.1	254.9	27.2	-41.7	50.5	-35.9	-43.3	115.6	120.1	-7.2	532.5

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.36

CH_4 emissions from biomass burning in land converted to cropland - trend information

CH_4 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	43.66	31.75	-12.1	-13.5	4.8	-2.0	2.2	-6.7	5.6	-2.8	2.9	-5.6	15.2	10.2	0.7	-3.5	-27.3
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	13.50	7.17	-4.7	-16.9	3.8	-5.2	6.6	-4.4	0.5	-1.8	4.1	-4.5	6.0	-6.5	5.7	-7.0	-46.9
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	3.80	3.38	-10.4	0.0	0.2	0.1	-0.2	1.4	0.4	-3.1	2.1	-0.7	-1.5	0.0	0.4	-0.1	-11.0
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	3.80	3.38	-10.4	0.0	0.2	0.1	-0.2	1.4	0.4	-3.1	2.1	-0.7	-1.5	0.0	0.4	-0.1	-11.0
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NE	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.37

N_2O emissions from biomass burning in land converted to cropland - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	0.81	0.59	-12.1	-13.5	4.8	-2.0	2.2	-6.7	5.6	-2.8	2.9	-5.6	15.2	10.2	0.7	-3.5	-27.3
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	0.56	0.29	-5.1	-16.5	3.5	-5.2	6.7	-4.4	0.7	-2.4	4.2	-4.4	6.2	-7.8	7.3	-7.9	-48.2
Croatia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	0.03	0.02	-10.4	0.0	0.2	0.1	-0.2	1.4	0.4	-3.1	2.1	-0.7	-1.5	0.0	0.4	-0.1	-11.0
Finland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	0.03	0.02	-10.4	0.0	0.2	0.1	-0.2	1.4	0.4	-3.1	2.1	-0.7	-1.5	0.0	0.4	-0.1	-11.0
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hungary	NE	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.38

CH_4 emissions from biomass burning in grassland - trend information

CH_4 emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	119.93	81.66	-8.4	-15.6	-5.1	0.0	-0.7	5.8	7.6	3.4	-4.5	-19.5	12.3	44.7	-10.3	-3.8	-31.9
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	11.12	10.12	12.6	-0.9	5.8	-4.0	3.1	-3.3	2.2	-3.2	-7.2	5.3	-1.7	0.3	-2.1	0.3	-9.0
Finland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	10.88	9.31	12.7	1.0	4.8	-6.1	3.7	-2.8	-2.5	-3.0	-6.0	5.9	-1.0	0.6	-1.7	-2.6	-14.4
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	0.09	0.37	9.8	-81.3	165.8	180.6	-8.5	-87.7	685.6	-71.2	-88.5	144.2	-0.7	-99.3	4401.2	4286.2	332.1
Hungary	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NE, NO	0.01	*	436.2	132.8	-52.9	117.8	114.0	-15.8	112.3	140.6	24.1	-53.1	-68.9	1135.4	-84.3	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	1.31	1.34	0	0	0	0	0	0	-19.6	-12.8	25.6	35.0	-3.1	-5.6	4.4	-9.8	2.4
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	NA, NO	0.18	0	44.7	-65.0	37.6	-50.3	106.9	-63.7	16.4	67.8	50.1	-36.5	-4.5	116.5	53.8	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	0.01	0.00	0	0	0	60.7	-85.4	5.1	89.4	26.0	143.9	25.8	-73.7	-3.2	13.5	-46.9	-72.4
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	0.15	0.43	6.8	11.3	17.8	-17.0	4.4	147.5	50.1	31.7	-13.1	-5.8	-10.8	0.7	-10.1	-15.7	194.8
United States	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 5.39

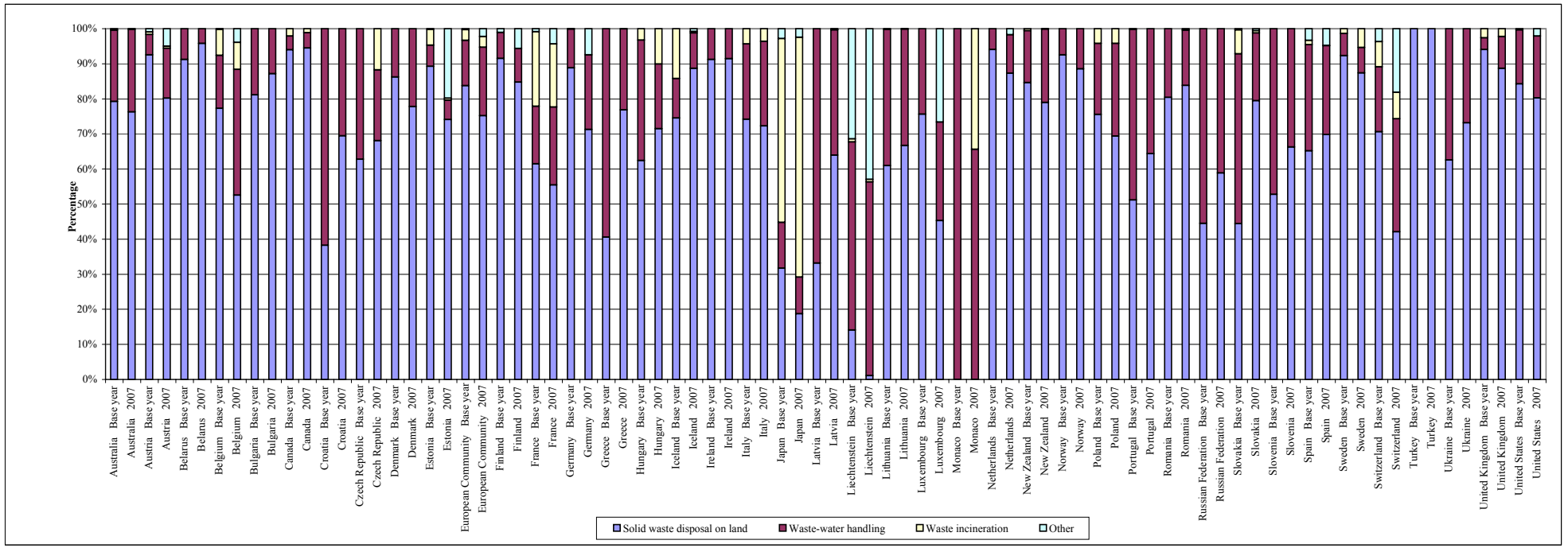
N_2O emissions from biomass burning in grassland - trend information

N_2O emissions (Gg)			Relative change (%)													
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2.22	1.51	-8.4	-15.6	-5.1	0.0	-0.7	5.8	7.6	3.4	-4.5	-19.5	12.3	44.7	-10.3	-3.8	-31.9
Austria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croatia	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Czech Republic	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Denmark	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	0.08	0.07	12.6	-0.9	5.8	-4.0	3.1	-3.3	2.2	-3.2	-7.2	5.3	20.6	-18.1	-2.3	0.3	-9.0
Finland	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	0.07	0.06	12.7	1.0	4.8	-6.1	3.7	-2.8	-2.5	-3.0	-6.0	5.9	-1.0	0.6	-1.7	-2.6	-14.4
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	0.00	0.00	9.8	-81.3	165.8	180.6	-8.5	-87.7	685.6	-71.2	-88.5	144.2	8486.8	-99.3	-48.0	4286.2	332.1
Hungary	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iceland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ireland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Japan	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Latvia	NE, NO	0.00	*	436.2	132.8	-52.9	117.8	114.0	-15.8	112.3	140.6	24.1	-53.1	-68.9	1135.4	-84.3	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	0.01	0.01	0	0	0	0	0	0	-19.6	-12.8	25.6	35.0	-3.1	-5.6	4.4	-9.8	2.4
Norway	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Poland	NA, NO	0	0	44.7	-65.0	37.6	-50.3	106.9	-63.7	16.4	67.8	50.1	-36.5	-4.5	116.5	0	*
Portugal	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Romania	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	NE, NO	NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sweden	0.00	0.00	0	0	0	60.7	-85.4	5.1	89.4	26.0	143.9	25.8	-73.7	-3.2	13.5	-46.9	-72.4
Switzerland	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Turkey			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	0.00	0.00	6.8	11.3	17.8	-17.0	4.4	147.5	50.1	31.7	-13.1	-5.8	-10.8	0.7	-10.1	-15.7	194.8
United States	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure 6.1

Contribution of subsectors to total GHG emissions in Waste[a]



[a] In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.1

Solid waste disposal on land, waste-water handling and waste incineration (2007)

	Activity data		Solid waste disposal on land							Waste-water handling											Waste incineration			
			CH_4							CH_4										N_2O from human sewage		CO_2 from non-biogenic waste			
	Population (million)		Methods and EF used[a]		Key category	Share of national total	Emissions per capita	CH_4 IEF		Methods and EF used[b]		Key category	Share of national total	Emissions per capita	CH_4 IEF					Emissions per capita	N_2O IEF	Methods and EF used[c]		Key category	Share of national total
															Domestic / commercial		Industrial								
	CRF	World Bank[d]	Methods	EF				Managed	Unmanaged	Methods	EF				Waste-water	Sludge	Waste-water	Sludge				Methods	EF		
						(%)	(kg)	(t/t)	(t/t)				(%)	(kg)	(kg / kg DC)					(kg)	(kg N_2O -N/kg sewage N)				(%)
IPCC default EF[e]																					0.01				
Australia	21	21	T2	D	L, T	2.05	25	0.03	NA	T2	CS, D	T	0.53	6.44	0.08	0.19	0.06	0.03		0.09	0.01	T2	CS, D		0.01
Austria	8	8	T2	CS, D	L, T	1.98	10	0.18	NO	D	CS, D		0.04	0.18	0.00	IE	NA	IE		0.09	0.01	D	CS, D		0.01
Belarus	10	10	T1	D	L, T	6.55	26	NO	0.06	NA	NA		-	NE	NE	NE	NE	NE		0.08	0.01	NA	NA		-
Belgium	11	11			T	0.44	3	0.03	NO				0.09	0.55	NA	IE	NE, NO	NE, NO		0.08	0.01				0.06
Bulgaria	8	8	T2	CS, D	L, T	8.81	41	0.11	NE	D	CS, D	L, T	1.11	5.22	0.15	0.15	0.04	0.04		0.06	0.01	NA	NA		-
Canada	33	33	CS	CS	L, T	2.70	29	0.06	NE	CS	CS		0.03	0.38	NA	NE	NE	NE		0.07	0.00	CS	CS		0.03
Croatia	4	4	T2	CS	L, T	1.86	6	0.02	IE	T1	D	T	0.55	1.93	0.08	NE	0.00	NO		0.06	0.01	T1	D		0.00
Czech Republic	10	10	T2	CS, D	L, T	1.60	11	0.04	NO	CS, T1, T2	CS, D		0.34	2.37	0.09	0.26	0.06	0.06		0.06	0.01	T1	CS, D	T	0.27
Denmark	5	6	CS, T2	CS	L, T	1.56	9	0.06	NO	CS, D	CS	T	0.38	2.21	0.15	IE	IE	IE		0.02	NE	NA	NA		-
Estonia	1	1	T1	D	L, T	2.35	18	0.09	NO	NA	NA		-	IE, NA, NO	NO	IE	NO	IE		0.09	0.01	NA	NA		-
European Community	393	391	CR, CS, T2, T3	CR, CS, D	L, T	1.94	10	0.10	0.13	CR, CS, D, T1, T2	CS, D	T	0.25	1.24	NE	NE	NE	NE		0.08	NE	CR, D, M, T2	CR, CS, D, PS		0.06
Finland	5	5	T2	CS, D	L, T	2.63	19	0.06	NO	D	CS, D		0.17	1.19	0.13	IE	0.00	IE		0.05	0.00	NA	NA		-
France	64	62	CR, T2	CS	L, T	1.04	4	0.03	30,418,830,701	CR, T2	CS		0.23	0.96	0.10	NE	NO	NE		0.05	NA	CR	CS, PS	T	0.28
Germany	82	82	T2	CS, D	L, T	0.86	5	NO	NO	D	CS, D	T	0.01	0.06	0.00	NO	NO	NO		0.09	0.01	NA	NA		-
Greece	11	11	T2	CS, D	L	1.86	10	0.03	0.06	D	D	T	0.27	1.52	0.06	IE	0.25	NE		0.11	0.01	D	D		0.00
Hungary	10	10	T2	D	L, T	3.89	14	0.04	NA, NO	CS, D	CS, D	L	0.73	2.63	0.14	NE	0.02	IE		0.07	0.01	T2	D	T	0.51
Iceland	0	0	T2	D	L, T	4.51	31	0.04	IE	CS, T1	D		0.33	2.28	NE	NE	NE	NE		0.08	0.01			T	0.00
Ireland	4	4	T2	D	L	2.56	19	0.11	0.03	T1	D		0.04	0.27	NO	0.01	NO	0.02		0.10	0.01	NA	NA		-
Italy	60	59	T2	CS	L, T	2.41	11	0.05	NO	D	D	L	0.44	1.95	0.60	0.60	0.25	IE		0.11	0.01	D	CS		0.05
Japan	128	128			T	0.33	2	0.21	NA	CS, D	CS, D		0.10	0.51	NE	IE	NE	IE		0.00	NE	CS	CS	L	1.04
Latvia	2	2	T2	D	L, T	4.41	11	0.04	NO	D	D	L	2.06	5.20	0.24	NE	0.26	NA		0.07	0.01	D	D		0.01
Liechtenstein	0	0	T2	CS		0.01	0	NO	NO	CS	CS		0.01	0.04	IE	NA	IE	NO		0.09	0.01	T2	CS		0.00
Lithuania	3	3	T2	D	L, T	3.67	13	0.05	0.03	T1	D	L	1.52	5.31	0.27	IE	IE	IE		0.07	0.01	T1	D		0.01
Luxembourg	0	0	T2	D		0.19	2	0.03	NO	T1	CS		0.03	0.37	0.10	NE	NO	NE		NA	NA	NA	NA		-
Monaco	0	0	NA	NA		-	NA, NO	NO	NO	NA	NA		-	NA, NO	NO	NO	NO	NO		0.07	0.01	NA	NA		-
Netherlands	16	16	T2	CS	L, T	2.53	15	0.16	NO	T2	CS		0.10	0.59	0.06	IE	NE	NE		0.02	NA	NA	NA		-
New Zealand	4	4	T2	D	L, T	1.90	16	0.04	NE	D, OTH	OTH		0.27	2.28	0.36	IE	NE	IE		0.08	0.01	D	D		0.00
Norway	5	5	T2	CS, D	L, T	2.15	12	0.11	IE	T1	D		0.02	0.10	0.01	IE	IE	IE		IE	IE	NA	NA		-
Poland	38	38	OTH	D	L, T	1.41	7	IE	0.03	CS, D	CS, D		0.26	1.32	0.03	0.49	0.02	0.06		0.09	0.01	D	CS		0.08
Portugal	11	11	T2	CS, D	L, T	6.04	22	0.04	NO	D	CS, D	L, T	2.64	9.69	0.14	0.46	0.03	IE		0.11	0.01	D	CS, D		0.00
Romania	9	22	T1	D	L, T	3.50	12	0.05	0.03	D	D	T	0.46	1.55	0.01	0.58	0.01	IE		0.04	0.01	D	D		0.02
Russian Federation	142	142	T2	CS, D	L, T	1.71	13	0.04	NA, NO	D	CS, D	L, T	1.02	7.47	0.08	0.12	0.06	IE		0.09	0.01	NA	NA		-
Slovakia	5	5	T1, T2	CS, D	L, T	3.84	16	0.04	NO	T1	CS	L	0.80	3.33	0.12	IE	0.03	IE		NA	NA	T1a	D		0.02
Slovenia	2	2	T2	D	L, T	2.19	11	0.04	NO	T1	D	L, T	0.81	3.95	0.01	0.49	0.00	0.09		0.10	0.01	NA	NA		-
Spain	44	45	CS, T2	CR, CS, D	L, T	2.20	10	0.03	0.07	D	CS, D	L	0.52	2.46	0.00	0.10	0.03	0.04		0.09	0.01	CR	CR, CS		0.00
Sweden	9	9	T3	CS, D	L, T	2.56	9	0.33	NO	NA	NA		-	IE, NE, NO	NE	IE	NE	IE		0.01	0.00	M	PS		0.16
Switzerland	8	8	CS, D	CS, D	L, T	0.54	2	NO	NO	D	CS, D		0.02	0.08	0.00	NO	IE	IE		0.09	0.01	CS	CS		0.03
Turkey	71	74	T1	D	L, T	8.55	21	0.08	0.05	NA	NA		-	NA, NE	NE	NA	NE	NE		NE	NE	NA	NA		-
Ukraine	46	47	T2	CS, D	L, T	1.59	7	0.03	0.03	T2	CS, D		0.35	1.54	0.05	0.30	0.02	0.13		0.07	0.01	NA	NA		-
United Kingdom	61	61	OTH, T2	CS	L, T	3.17	16	0.07	NA	CS, OTH	CS, OTH		0.13	0.63	IE	0.09	NE	NE		0.07	0.01	T1, T2	CS		0.07
United States	306	302	M	M	L, T	1.87	21	0.04	NE	D	D		0.34	3.85	0.08	NE	0.03	NE		0.05	0.01	NA	NA		-

[a] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method used or type of emission factor for all subcategories within the category 6.A Solid waste disposal on land.

[b] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method used or type of emission factor for all subcategories within the category 6.B Waste-water handling.

[c] Information on methods and emission factors in this table is as reported by Parties in table Summary 3 of the CRF. It may not reflect the actual method used or type of emission factor for all subcategories within the category 6.C Waste incineration.

[d] Source of population data: HNPStats - The World Bank Group: World Development Indicators (WDI) database, http://go.worldbank.org/IW6ZUUHUZ0. Downloaded 27 April 2009.

[e] Source of default emission factors: IPCC Guidelines, volume 3, page 6.28.

Table 6.2

CH_4 emissions from solid waste disposal on land - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	710	529	-0.1	0.7	-8.3	-0.9	-4.5	1.5	-0.9	0.2	0.9	-6.9	-3.6	-1.8	-2.0	2.0	-25.5
Austria	161	83	-0.2	-5.5	-5.4	-4.7	-3.7	-4.2	-4.3	-3.7	-1.8	2.3	-6.5	-6.1	-4.7	-6.5	-48.3
Belarus	112	250	0.2	2.9	22.6	1.0	4.1	7.2	1.3	1.6	3.3	34.5	10.2	3.6	11.3	7.3	123.1
Belgium	125	28	-0.7	-3.2	-10.3	-1.1	-6.4	-8.1	-7.3	-19.0	-15.3	-11.5	-4.6	-17.9	-15.3	-14.6	-77.9
Bulgaria	504	318	-0.9	-2.4	-3.0	-3.5	-4.1	-3.8	-3.4	-3.3	-3.1	-2.9	-2.9	-2.6	-3.3	-2.52	-37.0
Canada	844	962	2.1	-0.3	-0.5	1.4	0.8	0.9	-0.5	-0.7	1.3	1.3	1.3	1.4	2.5	-1.27	14.0
Croatia	11	29	5.6	5.9	6.0	6.3	6.2	6.6	6.2	6.7	7.1	7.3	7.5	9.2	-0.5	7.57	172.5
Czech Republic	79	115	4.6	3.5	1.0	-2.0	2.2	2.8	2.5	2.1	1.4	0.5	2.4	2.2	0.9	2.13	45.4
Denmark	64	51	1.8	-3.3	-0.7	-4.7	-3.4	2.1	0.1	-0.5	-4.5	2.0	-8.0	-0.6	0.4	-1.68	-20.4
Estonia	29	25	-1.9	-7.1	0.0	11.0	7.3	0.4	5.2	-0.9	-5.5	-3.8	-2.0	-7.5	-3.3	-4.73	-13.9
European Community	6,812	3,744	1.2	-2.1	-2.8	-5.3	-4.2	-5.2	-4.2	-6.2	-5.3	-6.6	-5.8	-3.7	-2.5	-2.50	-45.0
Finland	174	98	1.3	-1.7	-2.4	-2.6	-4.5	-2.2	-6.4	-4.4	-7.7	-6.8	-5.7	-9.2	2.8	-4.58	-43.5
France	355	266	4.9	2.9	2.5	-13.5	0.2	-2.0	-3.4	-4.6	-5.0	-2.9	-3.2	-3.7	-6.1	-4.74	-24.9
Germany	1,710	391	1.1	-6.8	-7.9	-9.0	-9.7	-10.0	-10.4	-11.0	-11.1	-12.3	-12.4	-14.4	-7.8	-8.64	-77.1
Greece	86	117	4.0	1.7	4.0	3.8	2.6	-4.2	4.6	4.8	1.2	4.1	0.1	-1.2	4.4	-1.22	35.6
Hungary	91	141	3.0	1.9	1.7	1.3	1.8	2.0	2.1	1.8	1.7	0.9	1.1	1.0	0.2	-0.06	54.2
Iceland	6	10	3.0	2.2	2.5	1.0	0.9	1.6	2	3.9	-5.3	2.6	-0.3	1.2	11.6	8.60	51.0
Ireland	63	84	2.5	3.7	-4.0	-13.6	5.8	2.6	6.2	-10.8	12.6	9.5	-0.4	-1.3	3.3	6.06	32.9
Italy	633	635	6.4	5.0	1.4	1.5	-1.2	0.3	4.8	-1.0	-3.6	-4.1	-5.9	-0.4	-5.5	-2.18	0.3
Japan	395	215	-0.9	-2.8	-2.7	-3.1	-3.9	-3.9	-4.5	-4.4	-4.6	-4.1	-4.1	-5.0	-6.1	-5.59	-45.5
Latvia	13	25	7.2	6.5	6.3	5.5	4.5	3.9	4.5	5.1	0.9	-5.8	-2.6	3.1	3.4	3.67	91.1
Liechtenstein	0	0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0	-12.98	-90.6
Lithuania	51	43	3.1	2.3	-1.1	-1.5	-1.3	-0.7	-3.6	-2.9	-2.9	-2.9	-3.3	-2.0	-1.5	-1.12	-15.8
Luxembourg	2	1	-3.5	-3.1	-0.8	-2.5	-2.5	-3.3	0.6	-14.2	-15.4	-0.4	-3.9	-0.1	-0.5	-2.03	-47.8
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	572	250	0.1	-5.1	-3.4	-3.2	-4.3	-8.5	-5.8	-6.0	-4.7	-6.5	-4.5	-6.5	-6.5	-7.12	-56.2
New Zealand	98	68	1.3	-9.4	1.0	-0.6	-3.4	-7.6	1.0	-2.8	-2.5	-0.9	-3.9	-3.0	-2.4	-0.13	-30.3
Norway	80	56	-0.5	-2.0	-1.7	-2.0	-6.3	-7.3	4.0	-3.5	-4.1	-0.9	-0.6	-4.1	-1.9	-1.60	-29.9
Poland	511	268	1.7	0.8	0.5	1.0	-52.1	1.6	1.4	-3.9	-1.0	-1.2	-0.2	-1.2	-2.8	2.87	-47.5
Portugal	144	235	4.6	4.4	4.5	4.6	5.4	5.2	-12.6	12.6	7.1	1.4	0.5	-0.2	1.7	-0.82	63.1
Romania	112	254	0.4	32.0	7.6	3.9	-13.5	27.9	15.3	1.3	13.5	-1.6	-5.0	12.1	0.1	-2.91	126.9
Russian Federation	1,163	1,789	3.5	2.6	2.4	2.2	2.1	2.0	2.1	1.8	2.2	2.5	2.8	2.7	3.0	3.18	53.9
Slovakia	22	86	4.8	11.2	9.6	30.4	31.5	24.5	-20.4	4.3	58.1	-7.1	6.0	-8.7	6.4	-5.33	283.7
Slovenia	14	22	1.6	0.8	1.3	3.6	3.6	3.5	3.6	3.1	2.6	1.4	2.5	0.8	-2.1	-4.82	51.7
Spain	226	464	9.1	7.0	5.7	6.5	5.3	4.4	4.2	5.5	2.7	-1.5	-3.3	1.8	3.0	2.70	105.5
Sweden	137	80	1.5	-0.3	-0.9	-1.0	-1.6	-4.3	-3.1	-1.8	-6.6	-5.7	-1.0	-7.0	-4.0	-9.21	-41.7
Switzerland	33	13	-2.4	-1.6	-3.6	-1.3	-6.8	-4.6	-8.1	-6.8	-5.0	-13.5	4.0	-3.2	-8.1	-2.92	-59.7
Turkey	304	1,517	52.5	22.4	11.7	10.7	6.2	4.8	3.8	0.2	-2.4	3.3	-6.2	8.0	1.1	5.94	398.7
Ukraine	251	330	3.4	0.4	0.6	0.8	1.2	1.6	1.5	1.6	2.3	2.2	1.8	1.2	2.2	1.68	31.4
United Kingdom	2,372	965	-1.5	-3.3	-3.4	-7.9	-6.3	-8.5	-6.2	-12.8	-8.7	-12.3	-6.9	-1.2	0.0	-0.19	-59.3
United States	7,105	6,327	1.0	-4.2	-2.3	-5.0	-5.0	-1.2	-2.7	-2.3	2.0	5.3	-1.6	1.3	2.0	1.87	-10.9

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.3

Solid waste disposal on land: kg CH_4/capita - trend information

CH_4 emissions per capita (kg/capita)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	41.6	25.2	-1.4	-0.5	-9.5	-2.0	-5.5	0.4	-2.1	-1.1	-0.4	-8.0	-4.7	-3.1	-3.4	0.4	-39.5
Austria	20.9	10.0	-1.3	-5.8	-5.5	-4.8	-3.8	-4.4	-4.4	-4.1	-2.3	1.9	-7.2	-6.8	-5.3	-6.8	-52.1
Belarus	11.0	25.7	0.1	3.3	23.0	1.4	4.6	7.5	1.6	1.9	3.8	35.2	10.8	4.1	11.8	7.6	134.3
Belgium	12.6	2.6	-1.0	-3.4	-10.5	-1.3	-6.6	-8.3	-7.5	-19.2	-15.6	-11.9	-5.0	-18.4	-15.8	-15.3	-79.3
Bulgaria	56.1	41.5	0.1	-2.0	-2.5	-3.0	-3.4	-3.2	-1.6	-1.5	-2.6	-2.3	-2.4	-2.0	-2.8	-2.02	-26.1
Canada	30.4	29.2	0.7	-1.1	-1.5	0.4	-0.1	0.1	-1.4	-1.7	0.4	0.3	0.3	0.4	1.5	-2.25	-3.9
Croatia	2.2	6.5	11.9	5.4	10.3	4.4	7.9	5.4	9.2	6.4	7.1	7.3	7.5	9.1	-0.4	7.66	193.6
Czech Republic	7.6	11.1	5.1	3.5	1.1	-1.9	2.3	2.9	2.6	2.6	1.6	0.5	2.4	2.0	0.5	1.49	45.8
Denmark	12.2	9.2	1.5	-3.7	-1.4	-5.1	-3.7	1.8	-0.3	-0.8	-4.8	1.7	-8.2	-0.9	0.0	-2.11	-25.0
Estonia	18.2	18.3	-1.4	-5.5	1.5	12.2	8.4	1.2	5.7	-0.5	-5.2	-3.4	-1.6	-7.3	-3.1	-4.60	0.7
European Community	18.7	9.6	0.7	-2.3	-3.0	-5.5	-4.4	-5.4	-4.5	-6.5	-5.8	-7.2	-6.4	-4.2	-3.0	-3.07	-48.8
Finland	34.8	18.6	0.8	-2.1	-2.7	-2.9	-4.7	-2.5	-6.6	-4.6	-7.9	-7.0	-6.0	-9.5	2.4	-4.98	-46.7
France	6.2	4.3	4.5	2.6	2.1	-13.8	-0.2	-2.4	-3.8	-5.1	-5.7	-3.8	-3.8	-4.3	-6.8	-5.29	-30.9
Germany	21.5	4.8	0.4	-7.0	-8.2	-9.2	-9.7	-10.1	-10.5	-11.1	-11.3	-12.4	-12.4	-14.3	-7.7	-8.52	-77.9
Greece	8.5	10.4	3.0	0.9	3.3	3.2	2.1	-4.6	4.3	4.5	0.9	3.8	-0.3	-1.6	4.0	-1.62	23.1
Hungary	8.7	14.0	3.0	2.0	1.9	1.5	2.1	2.3	2.4	2.0	2.0	1.2	1.3	1.2	0.4	0.10	61.5
Iceland	25.0	31.0	1.7	1.4	1.8	0.3	0.2	0.3	1	2.4	-6.3	2.0	-1.2	-0.4	9.0	6.08	23.7
Ireland	18.1	19.3	1.9	2.6	-4.8	-14.5	4.7	1.5	4.8	-12.2	10.7	7.7	-2.2	-3.5	0.9	3.50	6.7
Italy	11.2	10.7	6.4	5.0	1.3	1.4	-1.2	0.3	4.7	-1.0	-3.9	-4.9	-6.8	-1.1	-6.1	-2.89	-4.2
Japan	3.2	1.7	-1.2	-3.2	-3.0	-3.3	-4.1	-4.0	-4.7	-4.6	-4.9	-4.3	-4.1	-5.0	-6.1	-5.60	-47.3
Latvia	5.0	11.1	7.6	7.9	7.3	7.2	6.3	4.8	5.2	5.7	1.8	-5.3	-2.1	3.6	4.0	4.21	124.3
Liechtenstein		0.0				*	-14.2	-14.5	-14.1	-14.4	-14.3	-14.0	-13.9	-13.7	-13.7	-13.54	*
Lithuania	13.9	12.8	2.9	3.0	-0.3	-0.8	-0.6	0.0	-2.8	-2.4	-2.5	-2.5	-2.8	-1.4	-0.9	-0.58	-7.8
Luxembourg	6.0	2.5	-4.8	-4.5	-2.2	-3.8	-3.7	-4.5	-0.7	-14.5	-16.2	-1.8	-4.6	-0.9	-3.9	-3.53	-58.5
Monaco		NA, NO										*	*	*	*	*	*
Netherlands	38.3	15.3	-0.7	-5.6	-3.7	-3.8	-4.8	-9.1	-6.6	-6.7	-5.3	-6.9	-4.8	-6.8	-6.7	-7.32	-60.0
New Zealand	28.5	16.2	-0.1	-10.8	-0.6	-1.9	-4.3	-8.0	0.4	-3.4	-4.2	-2.8	-5.3	-4.1	-3.6	-1.16	-43.2
Norway	18.9	12.0	-1.0	-2.5	-2.2	-2.5	-6.9	-7.8	3.3	-4.0	-4.6	-1.4	-1.1	-4.7	-2.7	-2.61	-36.9
Poland	13.5	7.0	1.4	0.7	0.5	0.9	-52.1	1.6	1.9	-3.4	-0.9	-1.1	-0.2	-1.2	-2.7	2.92	-47.9
Portugal	14.6	22.2	4.2	4.1	4.2	4.3	5.0	4.7	-13.1	11.9	6.4	0.6	-0.1	-0.6	1.4	-1.05	52.1
Romania	4.8	11.8	0.5	32.3	7.9	4.1	-13.3	28.1	15.4	2.7	15.2	-1.3	-4.7	12.4	0.4	-2.73	143.8
Russian Federation	7.8	12.6	3.3	2.7	2.7	2.5	2.4	2.4	2.1	2.1	2.6	3.0	3.3	3.2	3.5	3.47	60.6
Slovakia	4.2	15.9	4.8	10.8	9.4	30.2	31.4	24.4	-20.4	4.5	58.1	-7.2	6.0	-8.7	6.3	-5.43	275.6
Slovenia	7.2	10.7	1.4	0.8	1.2	3.8	3.8	3.4	3.4	2.9	2.5	1.4	2.4	0.6	-2.4	-5.35	48.9
Spain	5.8	10.3	8.8	6.7	5.5	6.2	4.9	3.9	3.4	4.4	1.2	-3.1	-4.9	0.2	1.4	0.95	77.9
Sweden	16.0	8.7	0.8	-0.8	-1.0	-1.1	-1.7	-4.3	-3.3	-2.1	-6.9	-6.0	-1.4	-7.3	-4.6	-9.88	-45.5
Switzerland	4.9	1.8	-3.6	-2.3	-4.1	-1.5	-7.1	-5.0	-8.7	-7.4	-5.8	-14.1	3.3	-3.9	-8.6	-3.77	-64.2
Turkey	5.4	20.5	49.6	20.2	9.7	8.7	4.4	3.0	2.1	-1.4	-4.0	1.8	-6.7	6.6	-0.2	4.63	279.0
Ukraine	4.8	7.1	3.1	1.2	1.5	1.7	2.1	2.5	2.6	2.7	3.3	3.0	2.5	1.9	2.9	2.29	46.7
United Kingdom	41.4	15.8	-1.8	-3.5	-3.6	-8.2	-6.6	-8.8	-6.6	-13.1	-9.0	-12.6	-7.4	-1.7	-0.6	-0.84	-61.8
United States	28.5	21.0	-0.4	-5.3	-3.5	-6.2	-6.1	-2.3	-3.8	-3.3	1.0	4.4	-2.6	0.4	1.0	0.90	-26.3

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.4

CH_4 recovered from managed solid waste disposal sites - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2	216	0.0	-18.7	221.9	7.4	32.7	-6.7	6.5	1.1	-1.8	37.0	12.2	5.1	7.0	-2.9	9330.7
Austria	4	15	19.3	23.4	19.3	7.8	0.9	4.5	4.0	4.6	0.7	-6.4	-3.0	-6.8	-12.0	-5.0	286.6
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	NA	36	*	48.1	74.2	-5.3	8.4	15.6	2.8	42.3	2.2	-4.9	-13.3	5.8	-2.1	-3.8	*
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	193	330	1.5	9.0	8.7	1.2	1.5	1.5	6.7	6.3	-0.1	-0.1	0.2	0.2	-2.8	8.29	71.3
Croatia	NO	2	*	*	*	*	*	*	*	*	*	*	*	*	-35.0	23.27	*
Czech Republic	3	21	0	0	74.8	95.5	10.8	4.7	-2.3	5.3	9.8	3.4	2.6	4.0	13.9	6.70	536.9
Denmark	1	8	39.3	60.6	9.7	36.5	18.2	-12.9	-3.9	-9.1	11.8	-29.1	38.6	-11.6	-18.3	-3.64	1423.0
Estonia	NO	3	*	*	29.4	-11.8	-27.8	52.9	-29.0	7.9	36.6	0.9	-25.7	74.4	0	17.33	*
European Community	773	4,408	22.7	13.8	11.0	16.8	11.1	11.9	7.5	12.0	7.7	7.6	5.5	2.0	0.1	0.46	470.3
Finland	NO	31	*	45.3	51.9	48.0	61.1	-5.2	70.2	16.2	43.4	18.5	9.3	22.5	-13.6	5.89	*
France	31	453	12.1	26.4	23.0	99.4	15.2	17.2	17.0	16.3	12.3	7.8	7.4	4.7	1.9	2.49	1385.6
Germany	268	575	14.6	11.0	8.6	6.5	5.1	4.4	3.7	2.9	2.9	1.7	2.0	0.2	-7.8	-8.73	114.3
Greece	NO	54	*	29.7	6.5	7.7	17.0	58.3	4.8	3.1	15.4	4.2	16.8	17.9	1.0	12.23	*
Hungary	NO	2	*	*	*	*	*	*	*	*	*	*	*	*	2181.7	84.78	*
Iceland	NO	0	*	*	*	*	128.6	45.4	23	-5.3	172.2	3.2	22.5	10.7	-41.9	-54.44	*
Ireland	NO	44	*	*	*	212.3	-3.9	9.6	2.6	68.3	-1.8	3.4	18.9	11.1	0.9	-2.82	*
Italy	107	422	4.3	3.1	5.1	5.8	19.5	9.2	-2.7	20.6	14.8	10.8	14.0	1.3	11.8	5.99	292.5
Japan	1	0	-38.0	102.7	6.7	13.1	-5.5	18.3	-29.9	-11.9	-7.1	-20.4	1.1	-89.1	711.7	-19.03	-57.9
Latvia	NO	5	*	*	*	*	*	*	*	*	*	251.5	45.2	2.2	3.5	8.34	*
Liechtenstein	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Luxembourg	NO	0	*	*	*	*	*	*	*	*	92.9	-14.8	0	0	0	0	*
Monaco	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	26	57	37.0	14.9	-6.3	-14.2	-9.4	23.4	-0.8	1.4	-6.1	-0.2	-16.5	-9.8	-3.4	24.69	118.6
New Zealand	NO	56	*	180.3	3.8	9.9	19.9	30.0	-0.9	10.1	8.9	5.4	11.7	9.3	7.4	3.33	*
Norway	1	22	182.5	28.1	16.7	14.7	44.0	33.2	-15.1	9.4	7.7	-3.0	-4.8	7.4	0	0	2224.2
Poland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Portugal	NO	11	*	*	*	*	*	*	*	*	*	*	*	164.4	-11.2	107.25	*
Romania	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Russian Federation	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	IE	1	*	*	*	*	*	*	*	*	*	*	*	1400.0	75.6	46.84	*
Slovenia	NO	8	167.0	38.0	24.9	7.3	6.8	6.4	6.0	5.7	6.6	8.1	-0.9	5.0	17.4	19.91	*
Spain	3	122	26.2	6.9	26.8	10.6	30.1	11.9	37.0	-1.2	30.7	63.3	52.8	8.9	3.0	3.05	4100.5
Sweden	12	25	12.5	0	0	0	0	10.0	3.0	-4.7	10.9	1.4	-17.3	-2.4	-16.5	-0.06	104.6
Switzerland	9	5	8.8	-3.6	-0.6	-4.3	-2.6	0	-2.0	-11.6	-16.2	-6.4	-25.5	-19.7	-14.1	-12.60	-49.7
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	NO	NO	*	*	*	*	*	*	*	*	*	*	0	*	*	*	*
United Kingdom	322	2,561	35.7	15.6	12.0	18.7	13.1	13.9	8.8	13.7	7.7	8.7	4.4	1.5	0.7	0.63	696.5
United States	878	5,812	18.0	32.4	15.3	20.8	16.8	7.8	9.8	9.3	4.0	1.2	10.5	5.4	3.5	3.02	562.2

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.5

Waste generation rate - trend information

Waste generation (kg/person/day)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	2.66	2.80	2.7	0.6	0.3	1.9	5.1	-3.6	2.7	-4.1	0.6	1.0	2.6	-2.8	-0.4	2.7	5.5
Austria	0.95	0.18	-7.8	-4.3	4.9	-1.5	0.6	3.4	-1.8	-2.2	6.2	14.6	-72.2	-9.6	8.3	-15.2	-81.2
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bulgaria	2.36	1.07	6.2	-23.4	-9.8	-9.4	-11.3	1.0	3.8	-0.5	0.7	0.9	-3.1	5.3	-14.6	8.60	-54.9
Canada	1.68	3.03	10.0	3.8	3.6	3.4	9.4	1.3	1.1	1.4	1.3	1.7	1.6	3.1	2.9	2.85	80.2
Croatia	0.57	1.04	3.5	5.1	8.1	3.0	5.8	2.7	-2.7	6.8	6.4	6.0	1.1	0	12.8	3.55	82.4
Czech Republic	1.00	1.10	2.3	2.4	2.5	2.5	2.4	-7.6	0.2	2.9	10.4	-1.9	0.0	-4.7	-10.6	3.23	9.5
Denmark	5.43	7.74	2.1	2.9	11.9	-0.9	-5.2	-0.4	6.2	-2.4	2.3	-4.0	5.6	6.1	8.4	-0.78	42.7
Estonia	0.93	1.25	0.0	12.2	9.7	6.5	-5.0	2.3	6.7	-29.9	8.7	4.9	4.7	3.0	4.7	-15.89	34.0
European Community	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Finland	1.56	1.34	-8.0	-2.4	-2.4	1.2	1.8	4.2	0.2	-8.1	1.1	-4.7	1.8	2.9	4.3	-0.42	-14.5
France	0.82	0.94	2.5	2.4	1.8	-1.2	2.7	0.3	1.4	0.8	0.6	-0.8	-0.8	-0.8	-0.8	-0.84	15.4
Germany	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	0.82	1.21	0.6	3.0	2.9	3.0	3.3	3.2	3.0	3.1	1.5	1.2	1.2	1.0	1.1	0.99	47.3
Hungary	1.10	1.25	-3.1	1.0	3.0	6.7	2.7	1.8	5.2	1.6	0.8	1.6	-2.4	1.6	1.6	-2.32	13.7
Iceland	3.36	4.40	0.5	11.4	2.0	1.3	0.9	0.7	1	1.3	1.0	1.8	1.8	3.5	1.4	1.43	31.1
Ireland	1.15	2.09	3.5	3.0	2.9	2.1	1.5	10.8	9.3	5.6	-0.7	5.5	1.3	-0.4	8.0	-2.15	81.8
Italy	1.07	1.50	5.0	-4.3	0.5	2.3	0.8	5.5	1.8	1.3	1.2	0.2	3.4	1.4	2.1	-0.74	40.2
Japan	1.12	1.12	-0.2	-0.1	0.8	-0.2	0.5	-0.6	1.9	-0.7	-1.2	-0.5	-1.8	4.1	-1.3	0	-0.4
Latvia	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liechtenstein	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lithuania	1.47	0.90	1.6	-22.0	-5.4	0.3	4.9	-28.6	4.6	-3.2	-4.0	-8.7	14.2	0.5	6.1	2.24	-38.7
Luxembourg	NE	NE	*	*	-0.3	-1.2	1.8	3.1	2.0	-1.0	1.1	3.6	0.0	-1.1	*	*	*
Monaco	NO	0.36	*	-2.0	2.4	7.0	-0.6	-8.7	6.4	-5.2	-5.0	10.3	5.7	-14.9	-20.1	26.53	*
Netherlands	1.52	1.70	0	-2.2	2.6	4.7	0.5	1.0	2.9	-0.1	1.2	-1.9	2.0	0	-0.3	0	11.8
New Zealand	2.35	2.05	0	0	-5.3	-5.6	-5.9	1.2	1.2	1.2	1.2	-0.1	2.3	-1.6	-1.6	0	-12.6
Norway	1.29	2.25	5.1	14.5	0.9	-2.0	4.4	-7.9	3.3	3.3	6.5	3.0	3.9	4.9	4.4	3.78	73.8
Poland	0.87	0.69	-4.5	-0.3	5.7	4.8	0.7	0.4	0.3	-9.1	-5.3	-5.5	-1.6	-4.1	1.4	1.03	-21.3
Portugal	0.76	1.14	3.0	3.5	3.4	3.3	3.3	3.2	1.9	4.6	1.7	1.8	-1.1	-1.8	4.2	2.19	51.2
Romania	0.57	1.16	-0.2	29.0	7.4	3.6	8.7	8.0	2.6	2.8	5.9	5.9	1.6	0.0	0.2	-0.04	105.6
Russian Federation	0.66	1.17	1.1	1.7	1.7	1.8	1.7	2.0	6.2	-1.7	6.7	7.1	7.9	2.7	7.9	5.59	76.2
Slovakia	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovenia	1.29	1.18	0	0	0	0	-0.4	0.4	-2.7	-0.1	-2.9	1.6	-4.0	-2.1	-1.4	3.24	-8.3
Spain	0.85	1.56	11.6	1.0	0.8	13.7	3.4	2.4	2.3	-0.7	0.3	-0.8	5.3	2.3	4.0	4.19	82.6
Sweden	1.02	1.41	0	0	-0.3	12.1	5.0	-1.9	-0.5	3.5	5.9	-0.1	-1.1	4.1	2.8	4.03	38.1
Switzerland	1.98	2.26	-3.0	1.1	1.6	3.2	4.6	5.4	2.3	-0.5	-0.9	0	2.3	4.5	6.4	-8.87	14.1
Turkey	NE	NE	*	*	5.8	8.9	-0.5	-9.2	-1.7	0.5	-1.5	-1.1	-5.6	4.1	-0.8	*	*
Ukraine	0.79	1.01	-12.7	9.6	7.0	6.6	7.7	7.1	5.3	11.4	1.1	1.1	1.1	16.5	-3.8	-0.98	27.8
United Kingdom	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United States	2.04	2.10	-1.1	-2.8	-2.0	3.7	0.9	2.6	-1.1	-2.4	0.4	-0.2	2.6	-0.6	0.4	-0.65	2.7

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.6a

CH_4 emissions from waste-water handling - trend information

CH_4 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	159	135	-0.1	-2.3	-5.8	-1.9	-2.1	-1.3	-1.0	5.0	-1.3	-3.0	1.0	-3.5	-1.7	6.0	-14.7
Austria	5	1	-0.3	-4.1	-8.0	-8.8	-9.7	-8.0	-8.7	-9.1	-10.3	-10.8	0.7	0.7	-24.8	0.4	-69.3
Belarus	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	10	6	0.5	-1.6	-1.6	-2.9	-3.3	-13.4	-4.4	-14.6	-3.2	0.6	-5.2	0.1	-3.9	-2.9	-44.0
Bulgaria	102	40	-18.6	23.6	-4.1	-11.9	-10.5	-9.0	-4.4	-13.8	-3.6	106.7	0.2	-38.9	-8.4	0.43	-60.9
Canada	11	12	-8.0	-2.5	12.6	-7.4	-0.2	20.8	-12.7	0.7	-0.1	1.6	1.7	1.8	1.9	1.78	16.1
Croatia	13	9	-2.5	125.5	-9.8	-27.9	-25.0	2.2	-4.3	13.3	-32.0	124.3	-25.4	-34.2	34.6	-6.62	-35.6
Czech Republic	39	24	-3.6	-4.1	-6.9	3.9	-2.2	-7.0	-6.1	-3.6	7.3	-7.8	-0.6	-0.5	2.2	-1.48	-37.7
Denmark	6	12	-2.4	16.3	14.2	22.8	1.8	-6.2	-8.3	6.6	34.1	-3.2	-8.5	-4.8	-5.1	3.01	103.6
Estonia	IE, NA, NO	IE, NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	601	486	-2.3	-0.3	-2.3	-0.3	-0.7	-2.1	-6.2	-5.3	0.7	-0.6	-0.5	0.0	0.8	0.12	-19.2
Finland	7	6	-5.8	1.8	-2.6	-1.3	-2.5	-2.9	-1.7	-1.3	3.3	-0.9	0.7	-2.7	1.7	0.00	-13.7
France	38	59	6.2	4.8	4.6	4.4	4.3	4.3	-4.1	-4.3	2.0	2.1	1.9	1.9	1.9	0.59	57.0
Germany	106	5	-23.3	-5.3	-25.2	-33.7	-50.8	-9.7	-10.7	-12.0	-5.0	-5.3	-5.5	-5.9	-6.2	-6.65	-95.2
Greece	110	17	-2.2	-2.5	-1.8	-3.8	-3.0	-6.4	-19.7	-38.5	-13.9	-17.0	-18.2	-15.7	-9.0	-9.62	-84.6
Hungary	40	26	-0.8	-0.1	-0.1	-1.0	-1.8	0.3	-2.5	-8.8	8.0	-7.5	-2.6	-2.6	-7.6	-7.03	-34.4
Iceland	1	1	-2.4	9.2	5.2	0.1	-7.4	4.6	3	-1.4	6.8	7.9	-9.3	-11.5	-0.7	-11.50	10.2
Ireland	1	1	0.6	-2.6	0.7	37.5	1.1	6.3	1.7	3.7	1.8	-4.6	5.1	1.6	1.6	1.56	67.3
Italy	95	116	4.0	-0.1	0.9	1.4	0.5	0.2	0.9	1.0	0.4	-0.5	0.4	0.5	2.2	1.73	22.5
Japan	101	65	-2.0	-3.2	-1.9	-2.6	-2.6	-2.8	-2.9	-3.2	-3.2	-2.7	-2.4	-3.4	-2.6	0	-35.4
Latvia	24	12	-3.5	-4.5	-1.5	0.7	1.8	-3.7	4.7	6.3	-2.8	2.0	7.3	-1.1	-15.8	3.26	-50.8
Liechtenstein	0	0	4.8	-9.4	6.7	1.8	8.2	7.7	0.9	-3.8	-4.2	3.6	4.4	-3.8	8.2	7.65	55.8
Lithuania	29	18	-16.3	-4.9	2.1	11.7	8.3	-28.8	22.0	5.1	-20.9	24.2	11.1	-6.0	9.5	6.76	-37.8
Luxembourg	0	0	-2.5	-2.8	-3.5	-3.6	-3.7	-3.9	-4.0	-2.9	-3.0	-3.1	-3.1	-3.9	-1.5	-0.43	-39.7
Monaco	NA, NO	NA, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	14	10	33.4	-14.3	-1.4	-2.5	-0.5	2.4	-6.5	-0.3	2.3	-6.1	2.5	-5.1	-2.2	1.21	-29.8
New Zealand	10	10	2.6	1.4	1.4	0.9	-0.9	-1.1	-0.7	-0.8	-3.3	1.1	-1.1	-2.4	-2.9	0.47	-2.2
Norway	1	0	-4.3	-5.5	-5.8	-6.2	-6.7	-7.2	-7.9	-8.8	-9.7	-14.2	20.1	2.7	4.6	-2.10	-50.9
Poland	82	50	13.0	-7.7	1.5	9.1	7.3	4.6	-57.2	-0.5	1.7	2.5	1.6	1.5	1.5	2.11	-38.7
Portugal	116	103	2.5	1.1	-5.6	1.8	2.1	-5.4	-12.7	-0.9	0.3	0.6	-0.1	0.4	0.7	-4.90	-11.6
Romania	19	33	-11.8	-22.1	-3.8	-1.1	-4.0	0.6	76.4	17.7	12.3	15.4	15.6	7.6	0.2	1.25	75.6
Russian Federation	1,192	1,061	-8.5	5.9	-10.4	0.9	3.1	11.9	8.6	3.8	3.7	4.2	4.1	4.6	3.6	1.88	-11.0
Slovakia	20	18	-0.5	-3.4	-0.4	-0.5	0.6	0.0	0.8	-1.1	0.0	-0.2	-1.0	-1.4	-0.2	-0.45	-8.9
Slovenia	10	8	-7.1	-0.5	-1.3	13.2	3.2	2.5	2.5	-2.2	1.5	-1.1	0.7	0.3	-4.6	0.98	-19.8
Spain	59	111	3.6	3.3	2.7	6.1	4.7	3.7	2.9	3.3	4.4	3.8	2.9	3.2	3.2	5.01	87.1
Sweden	IE, NE, NO	IE, NE, NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Switzerland	0	1	2.4	1.3	1.2	1.1	1.4	1.2	0.8	2.3	0.8	1.0	1.0	60.9	5.3	34.62	177.6
Turkey	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	76	72	1.6	0.0	-0.2	-1.3	-1.6	-1.4	-1.5	-0.8	-1.0	-0.4	-0.5	0.0	-0.7	-0.29	-5.8
United Kingdom	34	39	-6.3	-4.5	2.7	2.6	2.6	-3.0	2.4	0.7	0.6	0.6	0.6	0.6	0.4	0.34	14.6
United States	1,120	1,160	1.6	0.6	0.3	1.3	0.0	0.4	-0.5	-1.9	-0.2	-0.6	0.1	-0.9	0.5	-0.41	3.6

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.6b

N_2O emissions from waste-water handling - trend information

N_2O emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	1.5	1.9	1.4	1.1	1.4	1.2	1.0	1.1	1.2	1.2	1.3	1.2	1.3	1.1	1.1	1.9	23.1
Austria	0.3	0.9	-0.5	12.8	12.9	7.1	8.7	9.2	13.9	13.2	0.3	0.2	7.1	6.6	6.1	0.4	157.7
Belarus	0.7	0.7	-2.7	-4.6	6.5	4.5	4.3	4.2	0	1.3	0	-4.2	1.6	1.4	0.4	-1.8	1.4
Belgium	0.9	0.9	1.8	-0.9	-0.5	0.1	1.4	2.2	-14.9	1.2	-0.9	2.7	0.7	0.3	0.7	0.3	-7.0
Bulgaria	1.0	0.5	-9.8	-7.5	-4.8	-11.0	11.6	2.9	-5.4	-4.7	1.5	0.4	-0.8	-1.9	-1.5	-0.31	-53.5
Canada	1.7	2.2	2.6	2.0	1.2	2.9	1.8	1.8	1.9	2.5	0.8	-0.5	1.5	-0.8	1.0	1.88	30.3
Croatia	0.3	0.3	-3.8	9.4	-4.6	0.1	-3.2	4.9	-4.5	7.1	5.6	-2.1	-2.1	-2.1	-2.3	-2.39	8.3
Czech Republic	0.5	0.6	-0.5	0.0	-0.2	-0.1	-0.1	-0.1	25.0	-0.8	0.0	0.0	0.1	0.2	0.3	0.60	24.5
Denmark	0.3	0.2	-4.7	-7.6	-18.5	-6.1	1.2	-6.1	5.6	-12.4	1.7	-14.5	6.9	-5.0	-1.1	-5.11	-45.9
Estonia	0.1	0.1	-0.2	-2.0	-1.6	-1.3	-0.9	-1.0	-0.5	-0.4	-0.4	-0.4	11.8	-0.3	-0.2	-0.17	-4.1
European Community	30.9	33.0	0.3	-1.3	0.4	1.6	0.3	0.0	0.8	0.6	-0.1	0.1	0.8	0.3	0.6	0.70	7.0
Finland	0.5	0.3	-4.5	0.5	-3.0	-1.3	-5.0	-3.9	-0.3	-0.1	-4.6	1.5	-1.5	-3.2	-1.0	-1.26	-29.7
France	3.9	3.2	2.4	-0.4	-2.1	-2.8	-4.1	-3.8	1.0	-2.0	-3.8	0.3	0.2	-1.2	-1.0	-0.70	-16.1
Germany	7.2	7.5	0.7	0.3	0.2	0.1	0.0	0.2	0.1	1.2	0.1	0.0	0.0	-0.1	-0.1	-0.12	5.2
Greece	1.0	1.2	1.9	0.9	-0.3	2.2	0.2	2.4	-0.6	-0.7	0.1	0.3	0.3	1.6	0.5	0.52	16.0
Hungary	0.7	0.7	-2.9	0	-6.5	0	-1.7	3.5	5.1	-3.2	0	10.0	1.5	0.2	-1.0	-0.11	-0.8
Iceland	0.0	0.0	1.5	0.4	0.7	0.9	1.2	1.4	1	1.2	0.7	0.8	1.0	2.1	2.6	1.83	22.4
Ireland	0.4	0.5	1.4	-3.1	1.1	3.0	2.1	2.8	4.2	-0.8	1.3	1.6	1.6	2.1	2.6	2.34	23.7
Italy	6.0	6.5	1.2	-0.6	2.7	-0.2	2.1	2.6	1.0	-1.4	0.1	0.6	0.7	0.7	1.0	1.13	8.3
Japan	4.2	3.7	1.7	-1.4	1.7	0.8	-1.3	-2.9	-1.0	-1.5	-1.3	0.6	0.7	-2.3	-0.8	0.0	-10.1
Latvia	0.2	0.2	-0.4	-1.6	-1.2	-1.0	-1.0	-0.9	-0.9	0.0	-0.8	-0.7	-0.3	-0.9	-0.5	-0.58	-14.3
Liechtenstein	0.0	0.0	1.2	1.0	0.7	0.6	2.2	1.3	1.3	2.0	1.0	1.3	0.9	0.9	0.8	0.56	21.8
Lithuania	0.3	0.2	0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.3	-0.1	-0.2	-0.3	-0.4	-0.4	-0.32	-5.0
Luxembourg	0.0	0.0	1.9	-0.4	-6.2	1.9	3.6	3.0	4.0	3.1	-9.6	1.4	7.9	1.4	2.5	2.60	26.2
Monaco	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.62	11.6
Netherlands	1.5	1.5	0.9	-4.8	-1.2	1.9	0.9	-1.4	0.2	0.7	0.5	-2.4	0.6	2.1	0.2	2.75	-2.1
New Zealand	0.5	0.6	1.7	0.9	0.9	0.6	0.4	0.3	0.3	0.6	1.1	4.0	2.5	-1.1	0.7	0.56	16.8
Norway	0.4	0.5	-0.4	2.4	5.0	6.2	0.0	0.7	-8.9	1.8	-6.1	5.8	0.4	1.3	4.3	2.97	22.9
Poland	3.7	3.5	1.9	1.1	1.3	-1.2	1.9	-0.2	-1.1	-1.0	0.8	0.4	5.E+25	0.0	-0.1	0.00	-5.2
Portugal	1.4	1.9	2.6	0.3	-0.6	2.1	6.1	1.7	0.6	1.6	0.0	1.1	0.6	0.5	0.5	0.43	31.0
Romania	0.6	0.9	-0.3	-12.6	-0.4	-0.1	5.9	1.1	8.2	16.0	5.1	8.7	10.5	7.4	2.4	1.02	71.4
Russian Federation	17.5	12.8	-14.1	-1.2	-1.5	1.3	-0.6	-2.1	-1.7	2.5	2.8	1.0	0.4	2.4	-0.7	1.41	-27.0
Slovakia	0.3	0.2	-3.9	2.2	0.9	-1.4	-1.8	-4.9	-9.2	-2.6	17.5	-19.5	0.7	-0.5	-3.6	-0.08	-36.6
Slovenia	0.2	0.2	-6.1	3.4	5.2	-1.8	-1.9	8.9	-2.4	-1.9	0.9	-2.5	9.2	0.3	0.4	0.77	7.6
Spain	3.5	3.9	-3.8	-3.6	0.1	4.5	1.0	0.6	2.6	2.0	3.5	-0.9	3.5	-0.4	-0.1	2.85	13.9
Sweden	0.6	0.4	-3.6	2.3	-4.8	-5.0	-5.0	-5.0	-3.8	-2.8	-1.6	-0.7	-1.1	1.7	0.9	-1.30	-28.9
Switzerland	0.6	0.6	1.2	0.6	0.3	0.1	0.3	0.5	0.6	1.1	0.8	0.8	0.7	0.6	0.8	0.78	12.1
Turkey	NA, NE	NA, NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	5.0	3.4	-6.6	-6.2	-3.8	-2.3	0	-4.4	0.9	1.5	3.6	-2.6	2.1	-0.9	0.3	-2.33	-33.1
United Kingdom	3.3	4.1	-0.9	-6.4	3.4	11.1	-1.1	-3.4	3.0	3.1	-0.6	0.4	0.0	0.1	2.6	0.64	21.5
United States	11.9	15.7	2.3	0.1	2.0	0.1	2.4	3.4	2.1	2.8	-1.7	1.0	2.1	2.4	1.0	1.40	32.0

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 6.7

CO_2 emissions from waste incineration - trend information

CO_2 emissions (Gg)			Relative change (%)														
	Base year[a]	2007	1990 to 1991	1994 to 1995	1995 to 1996	1996 to 1997	1997 to 1998	1998 to 1999	1999 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	Base year[a] to 2007
Australia	73	29	0.2	7.7	-27.0	-51.9	1.2	1.8	-3.9	0.5	0.6	0.6	0.6	0.5	0.5	0.9	-60.6
Austria	27	12	-13.0	3.0	2.9	2.9	2.8	2.7	0	0	0	0	0	0	0	0	-54.4
Belarus	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Belgium	253	85	-51.5	-26.0	1.2	17.4	-24.9	31.4	11.4	2.4	7.6	14.9	-31.0	-15.7	-27.4	8.9	-66.4
Bulgaria	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Canada	267	193	-4.7	-2.4	-2.8	-3.2	-3.5	-9.2	1.9	0.0	-12.0	1.8	1.8	2.0	1.8	1.94	-27.8
Croatia	0	0	-5.5	0.4	-3.7	1.7	-1.6	1.2	-3.8	1.3	0.1	0.0	2.4	-18.2	19.4	103.95	89.5
Czech Republic	IE, NE	413	*	0	0	0	0	0	0	0	0	3.2	-11.3	9.8	7.8	6.97	*
Denmark	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Estonia	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
European Community	4,436	2,445	-3.4	-5.2	-2.0	-14.6	-5.4	-7.3	-4.2	-0.8	1.5	-0.8	-5.7	4.6	0.9	-8.28	-44.9
Finland	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
France	2,274	1,518	-0.8	-2.1	-4.0	-9.4	-6.9	-5.5	3.5	-3.7	-0.4	-0.5	-5.1	5.7	5.3	-15.69	-33.2
Germany	NO	NO	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greece	0	3	0	0	0	0	0	0	0	0	173.3	90.9	24.6	90.7	21.0	35.76	1936.7
Hungary	98	388	67.1	-2.3	0.2	2.7	5.0	-1.2	-1.2	1.4	-27.0	-7.0	73.4	83.5	20.8	1.63	297.6
Iceland	19	0	-0.8	-11.8	-10.4	-3.6	-15.3	-18.2	-6	-7.3	-7.1	-14.7	-53.0	-98.9	0	0	-99.9
Ireland	NE	NE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Italy	537	270	4.7	-7.8	-2.3	7.5	-0.7	-22.0	-48.8	10.3	10.2	-11.9	-7.7	22.8	9.3	1.00	-49.7
Japan	12,174	14,227	0.5	2.0	2.9	3.8	0.2	-1.2	1.1	-7.0	-3.3	10.0	-12.0	-4.6	0.2	0.03	16.9
Latvia	NE, NO	1	*	*	*	*	*	*	59.9	98.6	-87.2	22.2	20.1	-0.1	244.2	-21.79	*
Liechtenstein	0	0	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-2.9	2.8	0.86	4.2
Lithuania	4	2	8.4	261.1	-66.2	-0.9	5.1	-56.6	195.4	32.1	-8.2	169.0	-48.5	87.1	-5.4	-71.59	-61.0
Luxembourg	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Monaco	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Netherlands	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
New Zealand	13	1	0	-1.3	-2.9	-0.7	-0.9	-5.3	-48.4	0	-9.9	-10.9	-5.4	-18.9	-33.4	-61.41	-92.8
Norway	0	NA, NO	0	-18.3	-8.3	5.0	5.5	-16.2	-40.8	0	-41.1	0	0	0	*	*	*
Poland	579	312	-9.9	1.1	1.3	-0.3	6.1	-16.0	26.2	-4.2	3.8	-17.4	-21.0	9.0	-2.8	0.72	-46.2
Portugal	10	1	0.0	0.0	11.7	16.4	-24.7	-11.7	-32.1	-54.5	-12.0	-15.2	-23.4	-30.5	-43.8	0.19	-94.0
Romania	NE, NO	28	*	24.7	19.8	16.5	14.2	12.4	37.2	13.2	4.8	9.7	25.0	66.6	114.2	-92.62	*
Russian Federation	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Slovakia	67	8	0	0	0	-28.0	101.0	-30.6	-0.7	-16.9	-28.7	-16.5	-22.7	-50.8	79.6	-62.53	-87.4
Slovenia	NO	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Spain	85	4	-30.3	-48.3	3.9	-57.8	0.0	8.1	-1.4	-2.0	-1.8	-40.4	-48.2	-3.8	2.9	10.54	-95.0
Sweden	44	103	19.0	-12.9	14.9	3.0	-2.8	-2.0	-7.8	6.8	27.9	26.0	16.2	2.6	-22.7	46.57	135.7
Switzerland	53	15	-8.1	-11.9	-7.3	-7.9	-8.6	-9.4	-10.4	-11.6	-13.1	-0.4	-0.4	0	0	0	-71.1
Turkey	NA	NA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ukraine	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
United Kingdom	1,207	465	-0.5	-3.7	1.7	-42.8	0.9	-7.9	1.3	4.5	-0.2	-3.9	0.2	-0.6	-8.2	4.06	-61.5
United States	IE	IE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

[a] In accordance with the UNFCCC reporting guidelines on annual GHG inventories of Annex I Parties, the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).