

**SYNTHESIS AND ASSESSMENT REPORT ON THE
GREENHOUSE GAS INVENTORIES SUBMITTED IN
2012****Note by the secretariat**

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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 Convention¹ (Annex I Parties) to be applied from the year 2003. As part of the inventory review process, the COP 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.

2. As part of the annual inventory review process under the guidelines for review under Article 8 of the Kyoto Protocol², 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, under the direction of the expert review team, a standardized set of data comparisons to be performed on the common reporting format (CRF) submissions to be used in the review process.

3. The COP, by its decision 14/CP.11, updated the UNFCCC reporting guidelines on annual inventories³ and decided that Annex I Parties shall use the CRF tables for the purpose of submission of the annual inventory due in and after 2007. Similarly, the CMP, by its decision 6/CMP.3, decided that Parties shall use, for reporting information supplementary to annual GHG inventory information in the first commitment period of the Kyoto Protocol, tables to be included in an annex to the national inventory report (NIR), as well as the tables of the CRF for the purpose of submission of information on anthropogenic greenhouse gas emissions by sources and removals by sinks from land use, land-use change and forestry (LULUCF) activities under Article 3, paragraph 3, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol.⁴

4. The synthesis and assessment is prepared in two parts. Part I provides information to allow comparisons across Annex I Parties, as well as descriptions of common methodological issues. Part II provides a preliminary analysis of individual Annex I Party inventories, in particular identifies outstanding issues requiring clarification during the individual review stage of the process.

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, including the standardized set of data comparisons requested in decision 22/CMP.1, covering the 2012 submissions of the national GHG inventories of Annex I Parties, in accordance with the

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/KP/CMP/2005/8/Add.3.

³ The full text of the guidelines is contained in document FCCC/SBSTA/2006/9.

⁴ The full text of the guidelines and the tables are contained in document FCCC/KP/CMP/2007/9/Add.2.

UNFCCC reporting guidelines adopted by decision 14/CP.11. It contains also the 2012 inventory information on anthropogenic greenhouse gas emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol, 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 2012 submission. It does not cover information contained in the NIRs, 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 2012 submission, as at 27 May, 43 Parties submitted their national GHG inventory, including all 42 Annex I Parties and Kazakhstan, which is an Annex I Party for the purposes of the Kyoto Protocol, while remaining a Party not included in the Annex I to the Convention for the purposes of the Convention.

9. Three Parties, Denmark, the European Union and France, provided more than one set of CRF tables, considering different geographical areas used for reporting under the Convention and for reporting under the Kyoto Protocol. For the purposes of the synthesis and assessment of the information submitted under decision 14/CP.11 which is contained in pages 14–94 of this report, the following inventory submissions reported under the Convention are used: (a) Denmark covering the Kingdom of Denmark (Denmark, Greenland and Faroe Islands); (b) France covering metropolitan France, the French Overseas Departments, the French Overseas Collectivities and New Caledonia; and (c) the European Union covering the twenty seven member states, as well as its fifteen member states which are Parties to the Kyoto Protocol.

10. For the purposes of conducting the standardized set of data comparisons of the information submitted under decision 15/CMP.1 and in accordance with decision 6/CMP.3, which are contained in pages 95–133 of this report, only the information submitted by Annex I Parties with quantified emission limitation or reduction commitments listed in Annex B to the Kyoto Protocol has been taken into account. This report uses the information submitted by Denmark covering Denmark and Greenland, the information submitted by France covering metropolitan France and the French Overseas Departments, and the information submitted by the European Union covering the original fifteen member states that agreed to fulfill their commitments under Article 3 of the Kyoto Protocol jointly for information submitted under Article 7, paragraph 1, of the Kyoto Protocol, in accordance with Article 4 thereof.

11. This synthesis and assessment report contains GHG inventory information 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 Parties for both the base year or period and for the year 2010.

12. 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).

13. 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.

14. The 2012 report has been shortened compared to previous years following a recommendation made at the 9th meeting of the Inventory Lead Reviewers to streamline the report.⁵ In particular, the 2012 report does not include tables with trend information, as well as those graphs for which discrepancies between Parties’ data were not shown in sufficient detail to allow for clear comparisons to be made.

15. The information formerly displayed in those tables and graphs is however publicly available and retrievable from the GHG interface on the secretariat website.⁶ The use of the GHG data interface has the additional advantage of containing the most recent data, as the interface is updated at least three times per year by the secretariat. Users are particularly encouraged to use the “flexible queries” module, which allows for the selection of multiple filters and the download of data in the Excel format, both tabular and graphical presentation of the data being possible.⁷ The online help section contains explanations, guidance and tips, which may be particularly helpful for new users.⁸

B. Explanatory notes to the tables

16. Blank cells in a 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.

17. 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.

18. 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).

19. Key categories identified by the secretariat’s analysis are indicated by “L” for level and “T” for trend assessments in the “key category” columns.

20. The column “Share of national total” in tables indicates the contribution of that category to the Party’s national total of GHG emissions in terms of CO₂ equivalent, excluding emissions and removals from LULUCF.

⁵ See paragraph 35 of the conclusions and recommendations of the ninth meeting of the inventory lead reviewers, which took place in Bonn, Germany, in March 2012 at http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/con_rec9.pdf

⁶ http://unfccc.int/ghg_data/items/3800.php

⁷ <http://unfccc.int/di/FlexibleQueries.do>

⁸ http://unfccc.int/ghg_data/online_help/data_interface_help/items/4142.php

21. 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 or 0.00) 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 “_”.

22. 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		

23. Where Parties used notation keys (R, NO, NR, IE) these have been reproduced verbatim from the tables provided by Parties. The notations keys, as described in decision 6/CMP.3 (FCCC/KP/CMP/2007/9/Add.2), are as follows:

R	Reported	NR	Not Reported
NO	Not occurring	IE	Included elsewhere

24. 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 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.

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

C	carbon
CF ₄	perfluoromethane
C ₂ F ₆	perfluoroethane
C ₃ F ₈	perfluoropropane
C ₄ F ₁₀	perfluorobutane
c-C ₄ F ₈	perfluorocyclobutane
C ₅ F ₁₂	perfluoropentane
C ₆ F ₁₄	perfluorohexane
CH ₄	methane

CO ₂	carbon dioxide
HFCs	hydrofluorocarbons
N ₂ O	nitrous oxide
PFCs	perfluorocarbons
SF ₆	sulphur hexafluoride

26. 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
T2	IPCC tier 2	M	Model
T3	IPCC tier 3	OTH	Other
CR	CORINAIR		
CS	Country specific		
M	Model		
OTH	Other		

27. 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)

ft³ cubic feet

Btu British thermal unit

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

A actual emissions

AB area burned

AD activity data

BB biomass burned

CAP maximum level of additions to and subtractions from the assigned amount resulting from forest management under Article 3, paragraph 4, for the first commitment period of the Kyoto Protocol as listed in the annex to decision 6/CMP.1

CL cropland

CM cropland management

CP commitment period

COP/MOP Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

CRF common reporting format

CSC carbon stock change

dm dry matter

DOM dead organic matter

EF emission factor

FAO Food and Agriculture Organization of the United Nations

FM forest management

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 volatilises as NH₃ and NO_x

Frac_{GASM} fraction of livestock nitrogen excretion that volatilises as NH₃ 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
GM	grazing land management
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
LU	land use
LULUCF	land use, land use change and forestry
N	nitrogen
NCV	net calorific value
NGL	natural gas liquids
NH ₃	ammonia
NIR	national inventory report
NMVO	non-methane volatile organic compounds
NO _x	nitrogen oxides
P	potential emissions
RV	revegetation
T	trend (key source applying the IPCC good practice guidance tier 1 trend assessment)
yr	year

C. List of sectoral tables with information submitted under decision 14/CP.11

1. General

<u>Table number</u>	<u>Table name</u>
Figure G.1	GHG emissions by gas (including LULUCF): base year and 2010
Figure G.2	GHG emissions by gas (excluding LULUCF): base year and 2010
Figure G.3	GHG emissions by sector: base year and 2010
G.1	Submissions used in the Synthesis and Assessment report: Part I
G.2	Key categories: base year
G.3	Key categories: 2010
G.4	Reported recalculations by year for total GHG emissions excluding LULUCF (%)
G.5a	Reported recalculations by gas: base year and 2009 (%)

G.5b Reported recalculations by gas: base year and 2009 (%)

2. Energy

<u>Table number</u>	<u>Table name</u>
Figure 1.1	Contribution of subsectors to total GHG emissions in the Energy sector
1.1	CO ₂ emissions from fuel combustion: reference approach and sectoral approach
1.2	Stationary combustion: liquid fuels – CO ₂ (2010)
1.3	Stationary combustion: solid fuels – CO ₂ (2010)
1.4	Stationary combustion: gaseous fuels – CO ₂ (2010)
1.5	Stationary combustion: other fuels – CO ₂ (2010)
1.6	Contribution of fuels to total energy consumption in stationary combustion (%)
1.7	Contribution of fuels to CO ₂ emissions from energy industries (%)
1.8	Contribution of fuels to CO ₂ emissions from manufacturing industries and construction (%)
1.9	Contribution of fuels to CO ₂ emissions from other sectors (%)
1.10	Road Transportation - CO ₂ and N ₂ O (2010)
1.11	Civil aviation, navigation and international bunkers – CO ₂ (2010)
1.12	Domestic and international aviation – activity data (2010)
1.13	Domestic and international navigation – activity data (2010)
1.14	Fugitive emissions from fuels: coal mining and handling – CH ₄ (2010)
1.15a	Fugitive emissions from fuels: oil and natural gas – CH ₄ , CO ₂ (2010)
1.15b	Fugitive emissions from fuels: oil and natural gas – oil – CH ₄ , CO ₂ (2010)
1.15c	Fugitive emissions from fuels: oil and natural gas – natural gas – CH ₄ , CO ₂ (2010)
1.15d	Fugitive emissions from fuels: oil and natural gas – venting and flaring – CH ₄ , CO ₂ (2010)

3. Industrial Processes

<u>Table number</u>	<u>Table name</u>
Figure 2.1	Contribution of subsectors to total GHG emissions in the Industrial Processes sector
2.1	Mineral products – CO ₂ (2010)
2.2	Chemical industry – CO ₂ and N ₂ O (2010)
2.3	Metal production – CO ₂ (2010)
2.4	Metal production – PFCs and SF ₆ (2010)
2.5	Production of halocarbons and SF ₆ – HFCs, PFCs and SF ₆ (2010)

2.6a–c	Consumption of halocarbons and SF ₆ – HFCs (2010)
2.7a–b	Consumption of halocarbons and SF ₆ – PFCs (2010)
2.8	Consumption of halocarbons and SF ₆ – SF ₆ (2010)

4. Solvent and other product use

<u>Table number</u>	<u>Table name</u>
3.1	Solvent and other product use – CO ₂ and N ₂ O (2010)

5. Agriculture

<u>Table number</u>	<u>Table name</u>
Figure 4.1	Contribution of subsectors to total GHG emissions in the Agriculture sector
4.1	Enteric fermentation – CH ₄ (2010)
4.2	Manure management – CH ₄ (2010)
4.3	Manure management – N ₂ O (2010)
4.4	Agricultural soils – N ₂ O (2010)
4.5	Agricultural soils: parameters (fractions) used to estimate N ₂ O emissions in the agricultural soils category (2010)

6. Land Use, Land-use Change and Forestry

<u>Table number</u>	<u>Table name</u>
5.1a–b	Methods and emission factors used (2010)
5.2a–b	Forest land remaining forest land – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.3a–b	Land converted to forest land – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.4a–b	Cropland remaining cropland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2008/2010)
5.5a–b	Land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.6a–b	Forest land converted to cropland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.7a–b	Grassland remaining grassland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.8a–b	Land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.9a–b	Forest land converted to grassland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2010)
5.10	Direct N ₂ O emissions from N-fertilization – AD, IEFs and N ₂ O emissions (base year and 2010)
5.11	N ₂ O emissions from disturbance associated with land-use conversion to cropland – AD, IEFs and N ₂ O emissions (base year and 2010)

5.12	CO ₂ emissions from agricultural lime application in cropland and grassland (base year and 2010)
5.13	Biomass burning – CO ₂ emissions from forest land (base year and 2010)
5.14	Land area (2010)

7. Waste

<u>Table number</u>	<u>Table name</u>
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 (2010)

D. List of tables with information submitted under Article 7, paragraph 1, of the Kyoto Protocol in accordance with decision 15/CMP.1 and decision 6/CMP.3

1. Supplementary Information for Land Use, Land-Use Change and Forestry Activities under the Kyoto Protocol

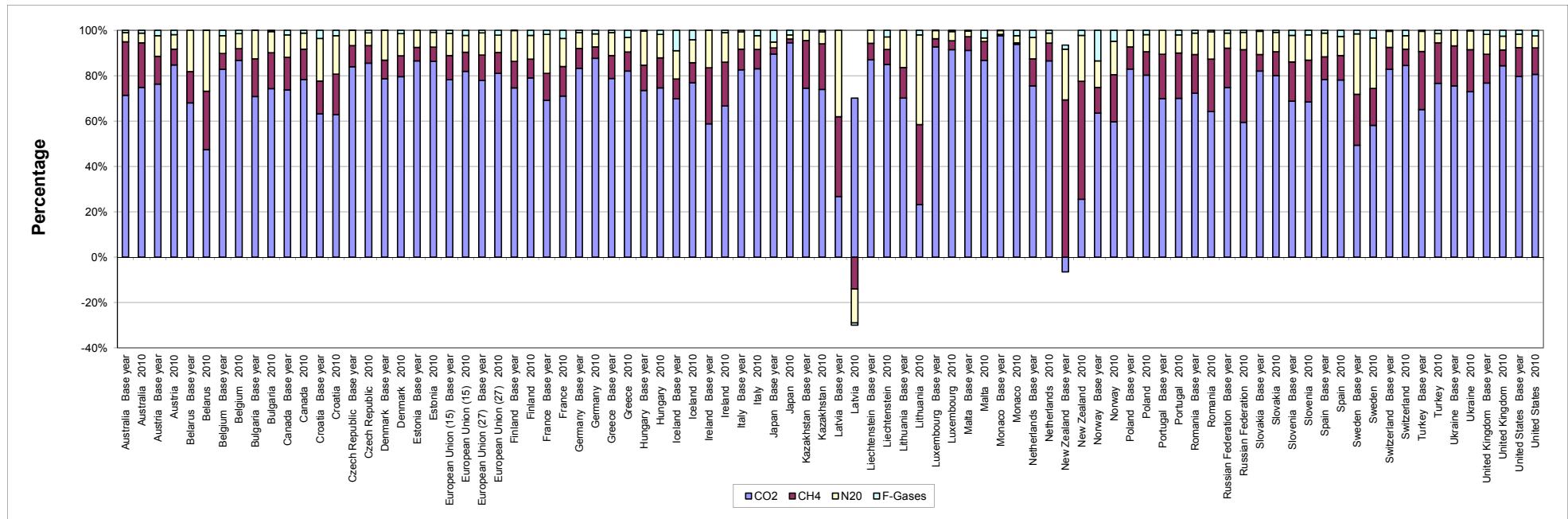
<u>Table number</u>	<u>Table name</u>
7.1	Selected values (forest parameters), elected activities under Article 3, paragraph 4, of the Kyoto Protocol, accounting period, forest management cap and geographical coverage
7.2(a)	Activity coverage in the reporting of information relating to activities under Article 3.3 for 2010
7.2(b)	Activity coverage in the reporting of information relating to elected activities under Article 3.4 for 2010
7.2(c)	Activity coverage in the reporting of information relating to elected activities under Article 3.4 for 2010
7.3(a)	Afforestation and reforestation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
7.3(b)	Afforestation and reforestation (units of land not harvested since the beginning of the commitment period) - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
7.3(c)	Afforestation and reforestation (units of land harvested since the beginning of the commitment period) - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
7.3(d)	Deforestation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
7.3(e)	Forest management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

- 7.3(f) Cropland management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
- 7.3(g) Cropland management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year
- 7.3(h) Grazing land management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
- 7.3(i) Grazing land management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year
- 7.3(j) Revegetation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010
- 7.3(k) Revegetation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year
- 7.4 Direct N₂O emissions from N fertilization for 2010
- 7.5 N₂O emissions from drainage of soils for 2010
- 7.6(a) N₂O emissions from disturbance associated with land-use conversion to cropland (deforestation) for 2010
- 7.6(b) N₂O emissions from disturbance associated with land-use conversion to cropland (cropland management) for 2010
- 7.6(c) N₂O emissions from disturbance associated with land-use conversion to cropland (cropland management) for the base year
- 7.6(d) N₂O emissions from disturbance associated with land-use conversion to cropland (deforestation: units of land otherwise subject to elected activities under Article 3.4) for 2010
- 7.7(a) Carbon emissions from lime application on Article 3.3 activities for 2010
- 7.7(b) Carbon emissions from lime application on Article 3.3 activities for the base year
- 7.7(c) Carbon emissions from lime application on Article 3.4 activities for 2010
- 7.7(d) Carbon emissions from lime application on Article 3.4 activities for the base year
- 7.8(a) Emissions from biomass burning on afforestation and reforestation land for 2010
- 7.8(b) Emissions from biomass burning on afforestation and reforestation (units of land not harvested since the beginning of the commitment period) land for 2010
- 7.8(c) Emissions from biomass burning on afforestation and reforestation (units of land harvested since the beginning of the commitment period) land for 2010
- 7.8(d) Emissions from biomass burning on deforestation land for 2010

- 7.8(e) Emissions from biomass burning on total Article 3.3 land for 2010
- 7.8(f) Emissions from biomass burning on forest management land for 2010
- 7.8(g) Emissions from biomass burning on cropland management land for 2010
- 7.8(h) Emissions from biomass burning on cropland management land for the base year
- 7.8(i) Emissions from biomass burning on grazing land management land for 2010
- 7.8(j) Emissions from biomass burning on grazing land management land for the base year
- 7.8(k) Emissions from biomass burning on revegetation land for 2010
- 7.8(l) Emissions from biomass burning on revegetation land for the base year
- 7.8(m) Emissions from biomass burning on total Article 3.4 land for 2010
- 7.8(n) Emissions from biomass burning on total Article 3.4 land for the base year

Figure G.1

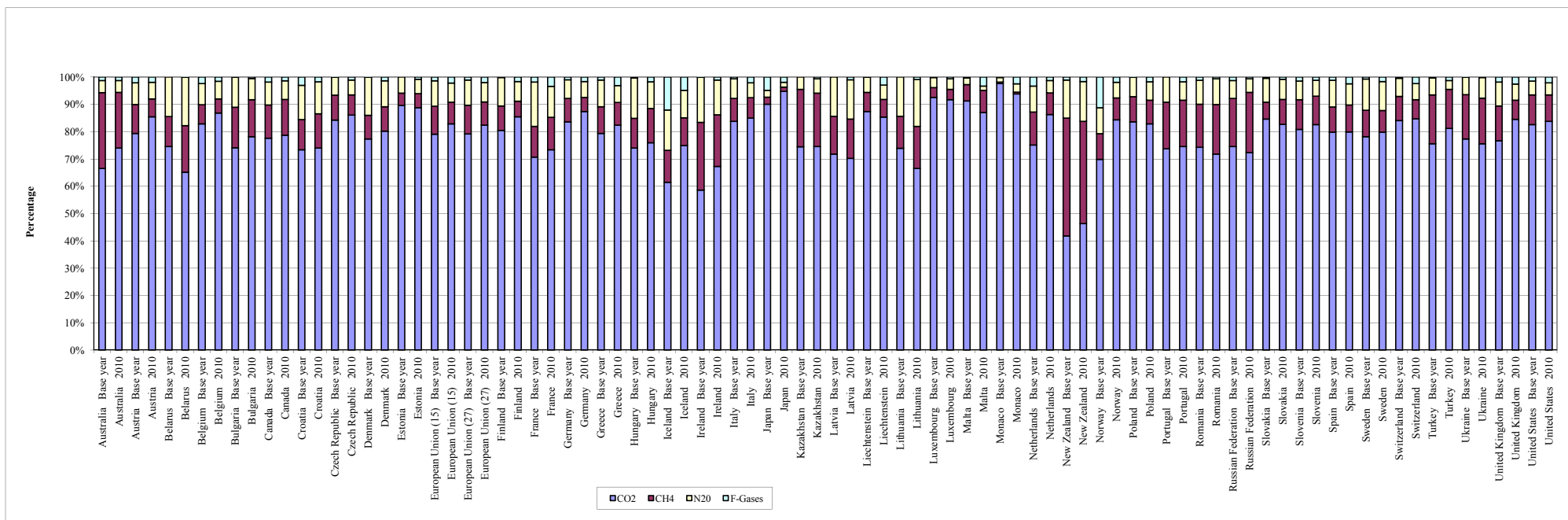
GHG emissions by gas (including LULUCF): base year^a and 2010



^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

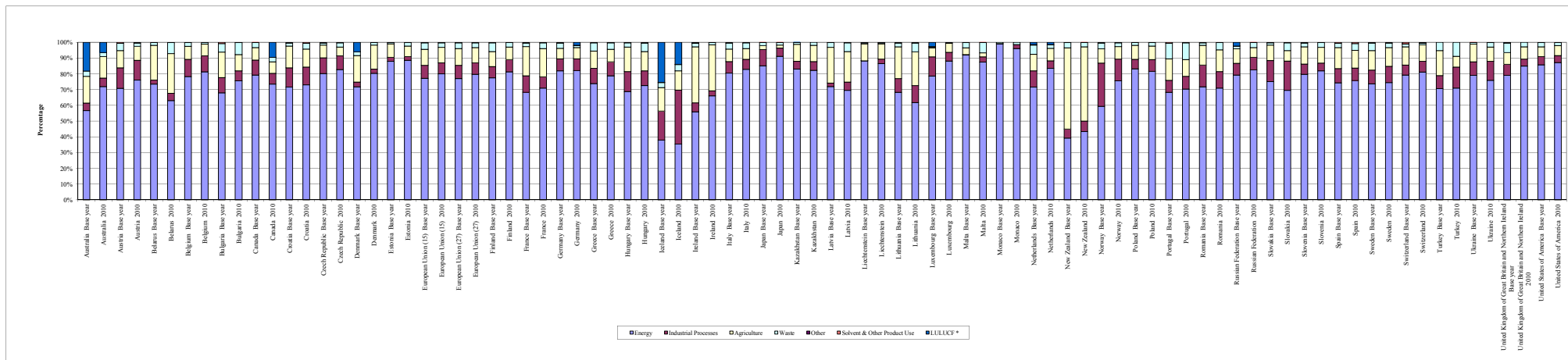
GHG emissions by gas (excluding LULUCF): base year^a and 2010



^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 sector: base year^a and 2010 (%)



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

^b 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.1**Submissions 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)	CRF KP LULUCF ^a submission date and version used in the S&A report	CRF KP LULUCF ^a Reporter version (version used in S&A report)
Australia	14 April 2012	1990-2010	√	14 April 2012 (1.1)	CRF Reporter v. 3.5.2	14 April 2012 (1.1)	CRF Reporter v. 3.5.2
Austria	12 April 2012	1990-2010	√	12 April 2012 (1.3)	CRF Reporter v. 3.5.2	12 April 2012 (1.3)	CRF Reporter v. 3.5.2
Belarus	14 April 2012	1990-2010	√	14 April 2012 (1.2)	CRF Reporter v. 3.6.2	14 April 2012 (1.2)	CRF Reporter v. 3.6.2
Belgium	15 April 2012	1990-2010	√	15 April 2012 (1.4)	CRF Reporter v. 3.5.2	15 April 2012 (1.4)	CRF Reporter v. 3.5.2
Bulgaria	12 April 2012	1988-2010	√	12 April 2012 (1.3)	CRF Reporter v. 3.5.2	12 April 2012 (1.3)	CRF Reporter v. 3.5.2
Canada	11 April 2012	1990-2010	√	11 April 2012 (1.1)	CRF Reporter v. 3.5.2	11 April 2012 (1.1)	CRF Reporter v. 3.5.2
Croatia	13 April 2012	1990-2010	√	25 May 2012 (2.1)	CRF Reporter v. 3.5.2	25 May 2012 (2.1)	CRF Reporter v. 3.5.2
Czech Republic	15 April 2012	1990-2010	√	15 April 2012 (1.1)	CRF Reporter v. 3.6.2	15 April 2012 (1.1)	CRF Reporter v. 3.6.2
Denmark	13 April 2012	1990-2010	√	13 April 2012 (1.1)	CRF Reporter v. 3.5.2	2 May 2012 (1.2)	CRF Reporter v. 3.5.2
Estonia	13 April 2012	1990-2010	√	13 April 2012 (1.3)	CRF Reporter v. 3.5.2	13 April 2012 (1.3)	CRF Reporter v. 3.5.2
European Union (15)	13 April 2012	1990-2010	√	25 May 2012 (1.2)	CRF Reporter v. 3.5.2	25 May 2012 (1.2)	CRF Reporter v. 3.5.2
European Union (27)	13 April 2012	1990-2010	√	25 May 2012 (1.2)	CRF Reporter v. 3.5.2	25 May 2012 (1.2)	CRF Reporter v. 3.5.2
Finland	12 April 2012	1990-2010	√	12 April 2012 (1.3)	CRF Reporter v. 3.5.2	12 April 2012 (1.3)	CRF Reporter v. 3.5.2
France	4 April 2012	1990-2010	√	4 April 2012 (1.2)	CRF Reporter v. 3.4	4 April 2012 (1.2)	CRF Reporter v. 3.4
Germany	13 April 2012	1990-2010	√	13 April 2012 (1.2)	CRF Reporter v. 3.5.2	13 April 2012 (1.2)	CRF Reporter v. 3.5.2
Greece	11 April 2012	1990-2010	√	11 April 2012 (1.4)	CRF Reporter v. 3.4	11 April 2012 (1.4)	CRF Reporter v. 3.4
Hungary	14 April 2012	1985-1987, 1985-2010	√	4 May 2012 (1.4)	CRF Reporter v. 3.5.2	4 May 2012 (1.4)	CRF Reporter v. 3.5.2
Iceland	14 April 2012	1990-2010	√	14 April 2012 (1.1)	CRF Reporter v. 3.5.2	14 April 2012 (1.1)	CRF Reporter v. 3.5.2
Ireland	13 April 2012	1990-2010	√	13 April 2012 (1.3)	CRF Reporter v. 3.6.2	13 April 2012 (1.3)	CRF Reporter v. 3.6.2
Italy	11 April 2012	1990-2010	√	11 April 2012 (1.3)	CRF Reporter v. 3.5.2	11 April 2012 (1.3)	CRF Reporter v. 3.5.2
Japan	12 April 2012	1990-2010	√	12 April 2012 (1.2)	CRF Reporter v. 3.5.2	12 April 2012 (1.2)	CRF Reporter v. 3.5.2
Kazakhstan	13 April 2012	1990-2010		13 April 2012 (1.1)	CRF Reporter v. 3.4	NA	NA
Latvia	14 April 2012	1990-2010	√	14 April 2012 (1.4)	CRF Reporter v. 3.5.2	14 April 2012 (1.2)	CRF Reporter v. 3.5.2
Liechtenstein	13 April 2012	1990-2010	√	13 April 2012 (1.1)	CRF Reporter v. 3.5.2	13 April 2012 (1.1)	CRF Reporter v. 3.5.2
Lithuania	13 April 2012	1990-2010	√	25 May 2012 (2.6)	CRF Reporter v. 3.6.2	25 May 2012 (2.6)	CRF Reporter v. 3.6.2
Luxembourg	5 April 2012	1990-2010	√	5 April 2012 (1.2)	CRF Reporter v. 3.5.2	5 April 2012 (1.2)	CRF Reporter v. 3.5.2
Malta	13 April 2012	1990-2010	√	15 May 2012 (1.11)	CRF Reporter v. 3.5.2	NA	NA
Monaco	29 March 2012	1990-2010	√	29 March 2012 (1.2)	CRF Reporter v. 3.5.2	29 March 2012 (1.2)	CRF Reporter v. 3.5.2
Netherlands (The)	14 April 2012	1990-2010	√	14 April 2012 (1.1)	CRF Reporter v. 3.5.2	14 April 2012 (1.1)	CRF Reporter v. 3.5.2
New Zealand	12 April 2012	1990-2010	√	12 April 2012 (1.2)	CRF Reporter v. 3.5.2	12 April 2012 (1.2)	CRF Reporter v. 3.5.2
Norway	15 April 2012	1990-2010	√	25 May 2012 (1.2)	CRF Reporter v. 3.5.2	25 May 2012 (1.2)	CRF Reporter v. 3.5.2
Poland	13 April 2012	1988-2010	√	25 May 2012 (2.1)	CRF Reporter v. 3.6.2	25 May 2012 (2.1)	CRF Reporter v. 3.6.2
Portugal	13 April 2012	1990-2010	√	25 May 2012 (1.3)	CRF Reporter v. 3.5.2	25 May 2012 (1.3)	CRF Reporter v. 3.5.2
Romania	21 March 2012	1989-2010	√	21 March 2012 (1.2)	CRF Reporter v. 3.5.2	21 March 2012 (1.2)	CRF Reporter v. 3.5.2
Russian Federation	13 April 2012	1990-2010	√	13 April 2012 (1.1)	CRF Reporter v. 3.5.2	13 April 2012 (1.1)	CRF Reporter v. 3.5.2
Slovakia	14 April 2012	1990-2010	√	14 April 2012 (1.3)	CRF Reporter v. 3.6.2	14 April 2012 (1.3)	CRF Reporter v. 3.6.2
Slovenia	12 April 2012	1986-2010	√	12 April 2012 (1.3)	CRF Reporter v. 3.6.2	12 April 2012 (1.3)	CRF Reporter v. 3.6.2
Spain	17 April 2012	1990-2010	√	17 April 2012 (1.4)	CRF Reporter v. 3.5.2	17 April 2012 (1.4)	CRF Reporter v. 3.5.2
Sweden	26 March 2012	1990-2010	√	26 March 2012 (1.1)	CRF Reporter v. 3.5.2	26 March 2012 (1.1)	CRF Reporter v. 3.5.2
Switzerland	12 April 2012	1990-2010	√	12 April 2012 (1.6)	CRF Reporter v. 3.5.2	12 April 2012 (1.6)	CRF Reporter v. 3.5.2
Turkey	14 April 2012	1990-2010	√	14 April 2012 (1.1)	CRF Reporter v. 3.5.2	NA	NA
Ukraine	13 April 2012	1990-2010	√	13 April 2012 (1.1)	CRF Reporter v. 3.5.2	13 April 2012 (1.1)	CRF Reporter v. 3.5.2
United Kingdom	13 April 2012	1990-2010	√	13 April 2012 (1.2)	CRF Reporter v. 3.5.2	13 April 2012 (1.2)	CRF Reporter v. 3.5.2
United States	13 April 2012	1990-2010	√	13 April 2012 (1.1)	CRF Reporter v. 3.5.2	NA	NA

^a the tables of the common reporting format for the purpose of submission of information on anthropogenic greenhouse gas emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, and, if any, elected activities under Article 3, paragraph 4, in accordance with Article 5, paragraph 2, of the Kyoto Protocol. These tables are contained in the annex to decision 6/CMP.3.

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	2007	2008	2009
Australia	-0.11	-0.11	-0.01	-0.06	-0.22	-0.48	-0.34	-0.14	0.10	0.14	-0.04	-0.40	-0.54	-0.58	-0.27	-0.23	-0.02	-0.12	-0.18	-0.26	0.30
Austria	-0.01	-0.01	-0.01	-0.09	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	0.00	-0.19	-0.01	0.58	0.00	-0.05	-0.01	-0.01	-0.40
Belarus	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	0.00	0.00	0	0.00
Belgium	-0.12	-0.12	-0.02	0.31	0.33	0.26	0.24	0.29	0.28	0.28	0.34	0.47	0.36	0.58	0.36	0.45	0.59	0.76	0.73	1.09	0.54
Bulgaria	3.12	2.57	2.80	2.26	1.69	1.30	0.86	0.72	0.49	0.05	-0.50	-0.73	-1.01	-0.80	-0.98	-1.62	-1.12	-1.31	-1.20	-0.62	-1.01
Canada	-0.33	-0.33	-0.19	-1.43	-0.06	-0.10	-0.16	-0.18	-0.15	0.05	-0.01	0.00	0.11	0.15	-0.07	0.94	0.86	0.64	0.15	-0.42	-0.26
Croatia	0.09	0.09	-0.03	0.12	0.18	0.14	0.28	0.53	0.51	0.15	0.53	0.30	0.14	0.28	0.05	0.16	-0.10	0.28	0.62	0.28	0.66
Czech Republic	-0.32	-0.32	-0.38	-0.32	-0.28	-0.24	-2.54	-4.11	-1.57	-0.81	-3.68	-1.58	-3.15	-3.11	-0.33	0.31	0.65	1.19	0.76	1.31	0.84
Denmark	0.84	0.84	0.80	0.82	0.71	0.61	0.49	0.33	0.39	0.33	0.38	0.32	0.27	0.30	0.33	0.24	0.16	0.06	0.11	-0.19	-0.37
Estonia	-0.92	-0.92	-1.05	-0.78	-0.09	-0.73	-0.96	-1.00	-1.43	-1.72	-2.69	-2.74	-2.59	-2.24	-2.36	-2.52	-2.45	-2.89	-2.15	-2.17	-1.60
European Union (15)	-0.37	-0.37	-0.30	-0.22	-0.22	-0.18	-0.15	-0.11	-0.10	-0.06	-0.05	-0.02	-0.06	-0.13	0.10	0.08	0.06	0.12	0.08	0.02	-0.13
European Union (27)	-0.10	-0.10	-0.04	-0.28	-0.45	-0.35	-0.37	-0.33	-0.21	-0.14	-0.22	-0.15	-0.27	-0.37	-0.10	-0.06	0.00	0.07	0.15	0.11	-0.10
Finland	0.00	0.00	0.00	0.02	0.01	0.02	0.04	0.03	0.04	-0.14	-0.07	0.10	0.09	0.09	0.27	0.25	0.20	0.14	0.05	-0.26	-0.34
France	-0.69	-0.69	-0.65	-0.71	-0.87	-0.75	-0.77	-0.63	-0.70	-0.67	-0.55	-0.36	-0.78	-1.18	-0.37	-0.54	-0.34	-0.11	-0.47	-0.35	-0.50
Germany	-0.14	-0.14	-0.14	-0.12	-0.17	-0.13	-0.22	-0.28	-0.29	-0.30	-0.33	-0.29	-0.30	-0.39	0.02	-0.19	-0.25	-0.34	-0.29	-0.52	-0.86
Greece	0.42	0.42	0.41	0.45	0.49	0.53	0.56	0.60	0.61	0.61	0.72	0.70	0.30	0.33	0.46	0.38	0.82	0.91	1.10	1.96	1.60
Hungary	0.56	0.38	0.56	0.62	0.57	0.63	0.59	0.60	0.77	0.60	0.56	0.58	0.48	0.26	0.23	0.35	-0.06	-0.03	0.29	0.18	0.12
Iceland	2.53	2.53	2.60	2.40	3.01	2.65	2.21	2.20	2.16	2.19	2.02	2.10	2.08	2.44	2.70	2.72	2.46	1.91	1.44	1.61	1.78
Ireland	0.62	0.62	0.58	0.55	0.42	0.36	0.48	0.49	0.47	0.23	-0.10	0.35	0.52	0.42	0.53	0.56	0.14	0.31	0.39	-0.37	-1.05
Italy	0.02	0.02	0.09	0.10	0.16	0.31	0.37	0.50	0.48	0.47	0.43	-0.01	0.00	0.01	0.10	0.13	-0.03	0.01	0.22	-0.03	0.08
Japan	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.05	-0.15
Kazakhstan	-4.35	-4.35	-4.55	-2.20	0.36	4.90	1.59	3.28	1.70	1.59	-2.10	-2.01	-4.38	-3.43	-3.12	-9.40	-8.57	-11.16	-10.00	-10.63	-9.84
Latvia	-0.25	-0.25	-0.32	-0.45	-0.62	-0.77	-0.90	-0.96	-1.05	-1.17	-1.25	-0.89	-1.41	-1.63	-1.65	-1.63	-1.60	-1.59	-1.51	-1.73	2.11
Liechtenstein	0.47	0.47	0.53	0.45	0.42	0.42	0.35	0.55	0.39	0.38	0.14	0.24	0.24	0.46	0.40	0.29	0.33	0.43	0.45	0.45	0.46
Lithuania	-0.44	-0.44	-0.32	0.22	-0.08	-0.13	-0.19	-0.20	0.26	-0.69	-0.37	-0.78	-1.07	-0.70	-1.22	-1.20	-1.05	-3.24	-0.89	-1.33	-2.25
Luxembourg	0.05	0.05	-0.01	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.08	-0.11	-1.74	-1.93	-1.67	-1.61	-1.58	-1.54	-1.69	-1.51	-1.73	-1.45
Malta	-1.43	-1.43	-1.32	-1.17	-1.20	-1.11	-0.99	-0.89	0.09	0.42	0.67	-0.44	-0.10	0.32	0.55	1.02	3.41	1.83	2.57	2.84	5.23
Monaco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0.01	0.01	0.00	0.02	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.04	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.05	-0.07
New Zealand	1.16	1.16	0.99	1.04	0.98	1.10	1.25	1.52	1.12	0.79	0.60	1.27	1.59	1.85	1.62	2.05	1.94	1.68	1.95	1.86	1.30
Norway	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.10	0.08	0.11	0.11	0.12	0.11	0.15	-0.26	0.19	0.51	0.14	0.35
Poland	-0.06	0.87	0.66	0.35	-1.13	-1.08	-1.86	-0.66	-1.36	-1.12	-0.82	-1.42	-1.43	-1.48	-1.15	-0.23	-0.17	0.03	0.81	0.32	-0.38
Portugal	1.10	1.10	1.12	1.26	1.53	1.24	1.44	1.28	1.18	1.52	1.08	1.23	0.98	1.02	0.94	0.46	0.56	0.20	-0.21	-0.25	-0.39
Romania	0.33	-1.24	-0.12	-6.05	-7.13	-5.81	-4.93	-6.86	-5.08	-4.15	-4.45	-2.83	-3.76	-5.41	-5.58	-5.38	-4.43	-4.62	-3.85	-3.02	-5.01
Russian Federation	-0.61	-0.61	-0.70	-0.61	-0.68	-0.70	-0.68	-0.69	-0.59	-0.71	-0.67	-0.72	-0.69	-0.75	-0.73	0.24	-0.71	-0.70	-0.73	-0.71	-0.74
Slovakia	-3.20	-3.20	-3.97	-5.42	-4.64	-5.49	-0.19	2.52	5.02	2.85	2.05	0.12	3.37	4.03	2.72	2.04	2.19	2.14	2.17	3.91	1.84
Slovenia	-0.03	-0.07	-0.18	-0.11	-0.04	-0.02	0.02	0.01	-0.08	-0.07	-0.05	-0.05	-0.04	-0.05	-0.01	0.22	0.22	0.27	0.32	0.30	0.17
Spain	-0.12	-0.12	-0.08	-0.12	-0.26	-0.23	-0.22	-0.26	0.11	0.21	0.07	0.13	0.22	0.10	0.15	0.16	0.14	0.05	-0.40	-0.72	-0.87
Sweden	0.30	0.30	0.04	-0.07	0.14	0.03	0.09	0.57	0.05	-0.03	0.01	0.01	0.21	-0.02	-0.12	-0.47	-0.40	-0.12	-0.40	-0.07	-0.66
Switzerland	-0.12	-0.12	0.01	-0.24	-0.16	-0.13	-0.30	-0.02	-0.20	-0.19	-0.06	-0.13	-0.01	0.06	0.06	0.33	0.38	0.48	0.54	0.66	0.98
Turkey	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ukraine	-0.40	-0.40	-0.80	-3.81	-3.26	-2.90	-2.56	-2.77	-3.78	-0.13	0.03	-1.16	0.09	-1.62	-1.82	-2.04	-3.12	-2.80	-2.02	-2.51	-2.36
United Kingdom	-1.56	-1.56	-1.30	-0.90	-0.78	-0.75	-0.56	-0.44	-0.42	-0.21	-0.15	0.01	0.08	0.16	0.22	0.51	0.46	0.76	0.91	0.92	1.06
United States	-0.09	-0.09	-0.09	-0.09	-0.10	-0.10	-0.08	-0.08	-0.05	-0.05	-0.05	-0.06	-0.12	-0.17	-0.14	-0.15	-0.09	-0.01	-0.01	-0.10	-0.31

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 2009 (%)**

	Energy						Industrial Processes						Solvents			
	CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		N ₂ O	
	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009
Australia	0.00	0.68	1.41	1.24	3.55	-2.00	0.20	-0.38	0	0	0	-7.32				
Austria	-0.01	-0.78	0.04	-2.54	-0.08	-1.40	-0.03	2.02	0	0.00	0	0	0	0.27	0	0
Belarus	0	0	0	0	0	0	0	0.00	0	0	0	0			0	0
Belgium	0.12	-0.46	0.61	4.14	2.46	-1.52	0.28	9.11	0	17	0	0.00			0	0
Bulgaria	2.21	-0.44	4.65	-30.42	3.90	-4.65	0	0	0	0	0	0	0	0	0	0
Canada	-0.31	-1.09	-0.01	-0.43	0.13	-4.04	-2.57	13.80	0.00	-0.10	0	-0.02			0	0
Croatia	0.00	0.55	0.08	0.08	1.53	2.72	-0.35	0.45	131.48	-96.71	0	0	14.16	20.15	0	0
Czech Republic	0.37	2.48	0.00	-15.12	0.08	-0.21	0	0	5	-0.18	0	0	0	0	0	0
Denmark	0.39	0.39	-1.30	-3.07	0.39	-0.67	0	0.00			0		-31.66	0.05	38.47	-52.09
Estonia	0.48	0.64	-67.33	-44.03	3.94	15.63	0	0.00					0	6.93		0.07
European Union (15)	0.08	-0.10	0.87	-3.17	3.67	0.85	0.15	2	-8.63	1.07	-0.05	0.89	-0.63	-2.47	0.01	-0.29
European Union (27)	0.55	0.16	-2.31	-6.34	3.25	1.67	0.65	1.26	-5.81	-1.12	0.12	-4.40	-0.49	-1.92	1.84	-0.02
Finland	0.02	-0.60	0.01	2.13	0.01	-0.01	0.74	2.42	0	0	0	0	0	3.86	0	0
France	0.38	0.61	-0.34	1.26	-0.38	-5.78	0.02	-2.87	-49	7.19	0	0	0.11	-2.07	0.00	0.04
Germany	0.04	-0.84	2.25	-5.51	7.43	2.52	0.08	4.04	0	0	0	0.02	0	-10.87	0	0
Greece	0	-0.13	0.78	1.07	2.63	7.63	-0.08	4	0	0	0	0	0	0	0	0
Hungary	-4.40	-3.62	-0.22	2.44	-5.01	0.63	59.05	57	102	14.55	0	0	0	0	0	0
Iceland	-0.30	-1	6	139	0	-2	0	0	0	0	0	0	-61	-36.47	0	251
Ireland	-0.13	-1.87	-0.01	0.02	-0.02	2.75	0	0			0		0.00	0.01		
Italy	-0.22	-0.45	0.65	4.27	2.78	6.03	0.13	0.48	0	-2.31	0	0	0	-5.00	0	2
Japan	0	-0.05	0.01	-0.50	-0.40	-1.12	0	0.01	0	0.01	0	0			0	0
Kazakhstan	-4.54	-14.24	-0.05	-0.07	-5.33	-14.92	0	-5.70	0	0	0	0				
Latvia	0	6.11	0	0.15	0	4.65	0	0.00	0	0	0	0	0	-2.15		0
Liechtenstein	0	0.00	5	1.98	28	-4.78							-94.55	-62.79	0	1.96
Lithuania	0.29	0.26	4.31	11.83	-7.95	-10.14	0.28	0.58	0		2	-10	0	0	0	0
Luxembourg	0.08	-1.87	0.02	-0.55	0.03	14.05	0	0					0	0	0	2
Malta	1	4.69	21	23.56	72	107.93	0	0							0	0
Monaco	0	0	0	0	0	0										
Netherlands	-0.01	0.00	0.05	-0.09	3.13	0.16	0	0.00	0	-0.19	0	4.32	0	6.61	0	0.03
New Zealand	0.03	0.44	6.41	7.51	19.32	7.83	0.23	0.40							0	0
Norway	-0.05	0.12	0.02	2.71	0.25	1.56	0.31	0.32	0	0.32	0	0.00	0.00	-7.64	0.00	0.00
Poland	0.00	-0.31	0	-0.30	0	0.41	0	-2.95	0	0.00	0	0	0	1.49	0	0
Portugal	1.57	1.02	0.17	-10.54	1.54	-5.22	0.32	2.31	0	0	-9	131.48	-5.89	-7.12	0	-12.77
Romania	14	3.68	-20	-20.66	2	0.37	-9.21	-4.62	0	0	0	0	0	0	0	0
Russian Federation	0.00	0.00	-4.64	-4.48	-0.71	10.49	-0.04	-0.37	0	0.07	0	14			0	0
Slovakia	-1.92	7.00	-24	-1.80	-4.27	1.39	-10.97	-11.81	-95	-94	3	-12	0	0	0	0
Slovenia	0.27	-0.17	0.00	7.38	0.20	2.86	3	7.76	0	0					0	0
Spain	0.00	-0.53	-0.97	-1.60	-0.22	0.59	0.00	-0.40	0	0.00	0	0.00	0.00	7.86	0.00	1.34
Sweden	0.45	-0.07	18.29	10.70	4.49	0.20	0.23	1.23	0	0.38	0	0	0	17.54	0	-11.81
Switzerland	-0.17	0.51	0.71	0.38	-9.97	7.42	-0.15	4.17	-3.68	-5.89	0	0	1.20	0.66	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0				
Ukraine	7.24	11.02	-2.84	-13.68	-29.14	-38.33	-38.18	-40.66	0	0	0	0			0	0
United Kingdom	0.10	0.95	-0.02	-9.78	2.56	-2.20	0.81	-2.81	0	-0.05	0	0.00				
United States	0.02	-0.06	-0.10	-0.51	-0.99	17.66	0.02	-0.76	0	-1.12	-0.19	4.96			0	0

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 2009 (%)

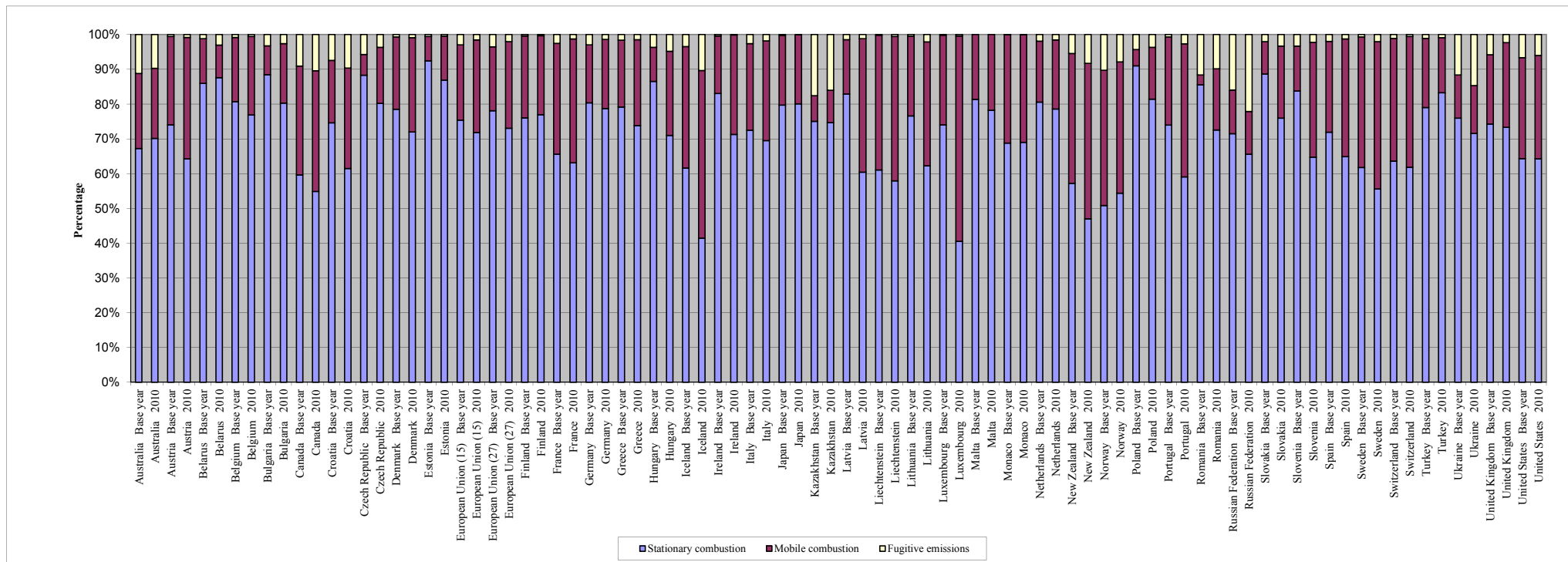
	Agriculture				LULUCF						Waste					
	CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O	
	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009	Base year ^a	2009
Australia	0	0.11	-4	-4.25	137.11	-16.55	-0.52	-1.04	6.78	5.95	0	0	-3.49	-2.27	0	1.88
Austria	0.01	0.33	0.00	0.12	-26.96	-78.98	0	0	-6.29	-1.13	0	-67	0	-0.11	0	-0.69
Belarus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium	0.15	-0.29	2.83	7.31	-19.39	-28.74	100.00		100.00	100.00	0	0	-3	31.73	-0.28	0.45
Bulgaria	37.91	7.14	-5.30	-2.25	0.25	-24.81	0	0	0	0	0	0	1.26	2.42	6.41	8.20
Canada	-0.87	0.40	-0.01	0.24	0.00	-0.06	0	0	0	0	0	-0.03	0.89	-2.56	33	36.62
Croatia	0	0.10	0.08	2.15	-2.71	-8.91	2,099,900.00	2,099,900	31,167,470.80	32,787,871	0	0	0	0.13	0	0
Czech Republic	-11	-12	-4	-5	-0.31	0.00	0	0	0	0	-61.21	-35.06	0.00	2.79	-0.62	-1.80
Denmark	-0.09	-0.54	0.76	-1.30	40.44	-21.43	100.00	100.00	2.50	1.75	-15.00	-20.99	30.13	-23.25	-0.24	-0.71
Estonia	2.19	-2.44	23.17	3.35	-10.34	1.21	-90.14	-96.39	-67.57	-69.04			-58	-39.67	7.51	-5.35
European Union (15)	-2.01	-1.14	-1.47	-1.08	-26.79	-31.92	15.10	5.01	-11.11	0.41	-0.44	-13.15	-8	-2.05	-0.74	-4.07
European Union (27)	-0.17	-0.73	-4.52	-3.76	-16.63	-20.52	6.04	-0.25	-7.80	3.45	-1.16	-13.81	-5.72	-2.04	3.32	-0.23
Finland	0	0	-0.90	-0.25	4.60	-10.90	15	32.51	13.62	17.22			0	-0.09	0	-0.38
France	-6.74	-2.43	-2.57	-0.25	-47.43	-41.31	-0.66	0.53	8.18	2.05	0	-15.58	-4.39	-8.69	-0.62	-17.39
Germany	-2.70	-3.03	-4.95	-7.06	-12.46	-1.14	0	0	-66.05	-36.13			0	13.97	0	-0.25
Greece	0	-0.43	0	0.30	1.88	-6.79	8	-7	8	-7	46	2	10.77	27.30	0.97	2.60
Hungary	3.40	0.29	1.68	-0.39	0.43	9.69	0	0	0	-0.63			4	0	0	-0.98
Iceland	-4	1	49	40	8.68	12.73	0	0	-7.61	2.69	-44	37,865.65	-15	0.75	-1	-0.10
Ireland	0.71	0.67	4.02	5.44	-130.69	-50.31	140	171	45	52.67			0	-29.79	0	0
Italy	1	1.32	0.00	0.49	-44.01	-40.86	25	25	-33.28	33	-6	-12.61	0.00	3.14	-0.04	-0.05
Japan	0.00	-1.04	-0.25	3.17	0.72	0.47	2	-1.29	0.02	-0.13	0	-11.96	1.31	7.24	3.36	6.35
Kazakhstan	0.06	-4.76	-16.56	65.51	-100.26	-30.84	0	0	0	0	-100.00	-99.51	0	2.10	0	0
Latvia	0	-0.11	0.01	-1.81	5.28	0.51	0	0	0	0			-8	-20.56	0	0
Liechtenstein	22.69	16.38	-4.68	-3.96	0.00	-2.14					0	0	8	13	2.73	-2.70
Lithuania	-3	-8	4.54	-2.56	45.21	190.44	1,223.02	645.36	20.27	120.60	0	0	-29.20	-20.28	0.00	5.09
Luxembourg	0	0.01	0	2.37	0	0			0	0			0	0.03	-1	-1.29
Malta	0	0	0	-0.09	0	0					0	0	-45.17	-13.29	0	0
Monaco					0	0			0	0				0	0	0
Netherlands	0.16	0.21	0.00	-2.53	11.44	15.78							0	-0.13	0	1.06
New Zealand	2.00	2.56	1.64	0.77	16.80	-1.66	-1.19	-2.68	142.41	87.40	0	1	0.67	0.72	-7	0.13
Norway	0.00	0.00	1.37	3.10	1.40	6.54	0	0	0	0.11	0		0.06	3.57	0	0.00
Poland	0	-1.16	-0.97	-0.56	8.13	11.89	0	-4	11	64	0	0	0	0	0	0
Portugal	1	-7.45	1.22	1.58	-23.94	-15.38	26,402.65	1,443.75	-31.10	10.91	0	740	0.00	-9.66	0.54	5.94
Romania	9	12	-46.24	-47.55	0	1	0	0	0	-6	-4.83	0	46	16.04	0	1
Russian Federation	0	0.00	0.00	0.01	-0.36	0.32	0.00	0.07	0.00	0.07			0.05	0.00	0	0
Slovakia	1	0	0.00	0.00	246.27	108.71	0	0	0	0	0	0.78	0	0.00	0	3.08
Slovenia	0	-0.03	0	0.00	0	0.14		-39.70	3,014.02	2,416.53		0	-15	-2	0	0
Spain	-1	0.70	0	-1.47	0.25	-0.29	0	0	0	0	0	-45.91	-1	-9.70	0	-1.77
Sweden	-3.03	-4.56	-1.18	-5.53	-7.73	-14.13	0.00	0.00	2.07	-7.93	0	0	0	0	0	1.81
Switzerland	-0.06	-0.01	0.43	0.30	40.89	-1,415.92	0	0	-0.06	1.10	1.99	-31.00	-0.36	-2.76	3	3
Turkey	0	0	0	0	26	-10.76	0	0	0	0			0	0	0	0
Ukraine	2.47	1.73	-1.81	-0.41	-0.26	-5.07	0	0	14.69	2.85			25	13	4	4
United Kingdom	0.65	-0.55	0.08	3.22	-0.65	2.64	-29.29	-18.59	-0.12	0.36	1.25	-3.20	-23.08	-4.25	-6.61	-15.23
United States	0.99	2.05	1.17	1.35	2.38	4.78	-21.05	-25.86	-15.02	-21.93			-4.25	-9.98	-5.68	-2.09

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 1 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**CO2 emissions from Fuel combustion: reference approach and sectoral approach**

	Reference approach (Gg CO2)	Sectoral approach	Difference (%)	Explanation of the differences as reported in table 1.A(c) of the CRF
Australia Base year	253,483	252,799	0.27	1.AA Fuel Combustion - Sectoral Approach: Estimates are based on Gross Calorific Values (GCV)
Australia 2010	375,854	372,563	0.88	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, 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.
Austria Base year	57,207	54,070	5.80	1.AA Fuel Combustion - Sectoral Approach: 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 1A 1a 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 and 1991. Gaseous fuels: CO2 emissions: National approach 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 2010	67,585	62,851	7.53	1.AA Fuel Combustion - Sectoral Approach: 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".
Belarus Base year	133,508	100,211	33.23	
Belarus 2010	53,995	54,277	-0.52	
Belgium Base year	109,034	110,014	-0.89	
Belgium 2010	108,947	106,048	2.73	1.AC Difference - Reference and Sectoral Approach: See more explanation in section 3.2.1 of the NIR 2011. The reference approach is based on the national energy statistics, while the sectoral approach is based on regional energy balances.
Bulgaria Base year^a	86,601	83,719	3.44	
Bulgaria 2010	46,076	44,683	3.12	
Canada Base year	415,164	411,966	0.81	1.AA Fuel Combustion - Sectoral Approach: Refer to section A4-4 in Annex 4 of the NIR for a discussion on fuel categorization 1.AB Fuel Combustion - Reference Approach: Refer to Annex 4 of the NIR for a detail discussion and comparison of RA and SA results. 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. 1.AB Gaseous Fuels: See NIR, Annex 4, Table A4-2 for fuel source data.
Canada 2010	481,476	488,311	-1.33	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	21,024	20,561	2.25	1.AA Fuel Combustion - Sectoral Approach: CO2 emissions from Biomass are excluded from Total Fuel Combustion
Croatia 2010	19,111	18,637	2.54	1.AC Gaseous Fuels: Gas works gas is excluded from Reference Approach as recommended (ERT 2010).
Czech Republic Base year	148,802	145,894	1.99	1.AC Difference - Reference and Sectoral Approach: Detailed comparison of the results from Sectoral and Reference Approach (SA and RA), respectively, is
Czech Republic 2010	107,046	109,181	-1.96	given in NIR Annex 4 Reference Approach and Comparison with Sectoral Approach.

Table 1.1 (continued)

CO2 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 CO2)			
Denmark Base year	52,005	52,511	-0.96	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.
Denmark 2010	48,551	48,978	-0.87	CO2 emission from the plastic part of municipal wastes is included in the Danish National Approach.
Estonia Base year	35,897	35,552	0.97	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, leather and clthing industry" and Other industry.
Estonia 2010	18,284	17,866	2.52	1.AA Fuel Combustion - Sectoral Approach/1990:Energy Balance 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 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 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
European Union (15) Base year	3,055,230	3,132,397	-2.46	
European Union (15) 2010	2,929,698	2,952,842	-0.78	
European Union (27) Base year	4,089,686	4,095,624	-0.14	
European Union (27) 2010	3,625,493	3,631,838	-0.17	
Finland Base year	54,354	52,954	2.64	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').
Finland 2010	59,292	59,109	0.31	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'). 1.AC Other Fuels:Allocation of Peat is different in SA ('Other fuels') compared to RA ('Solid fuels').
France Base year	368,790	365,106	1.01	
France 2010	361,318	363,932	-0.72	
Germany Base year	971,673	977,713	-0.35	1.AB Solid Fuels:Data for Coal Oils and Tars only.
Germany 2010	741,056	762,283	-0.62	
Greece Base year	75,940	75,171	1.02	
Greece 2010	90,068	90,846	-0.86	
Hungary Base year ^a	75,190	74,708	0.78	1.AC Difference - Reference and Sectoral Approach:Analysis of the differences for each fuel type can be found in NIR, chapter 3.2.1. Transformation losses, inputs of different fuel transformation and non-energy use of fuels affect the relationship of the two approaches.
Hungary 2010	46,170	45,870	1.57	1.AC Liquid Fuels:Analysis of the differences for each fuel type can be found in NIR, chapter 3.2.1. Transformation losses, inputs of different fuel transformation and non-energy use of fuels affect the relationship of the two approaches. 1.AC Solid Fuels:The difference is the result of transformation losses in gas coke distillation and briquetting.
Iceland Base year	1,677	1,685	-0.47	1.AA Fuel Combustion - Sectoral Approach:1A2f Other manufacturing industries & construction includes: mineral industry, construction and other industries not included above.
Iceland 2010	1,603	1,616	-0.80	
Ireland Base year	29,586	30,154	-1.88	
Ireland 2010	39,717	39,897	-0.41	1.AC Liquid Fuels:See section 3.4 of NIR 2012 for an explanation to the difference between the Reference Approach and the Sectoral Approach
Italy Base year	395,686	401,084	-1.35	
Italy 2010	394,577	401,699	-1.77	
Japan Base year	1,057,427	1,068,260	-1.01	
Japan 2010	1,151,863	1,137,551	1.26	
Kazakhstan Base year	258,901	244,405	5.93	
Kazakhstan 2010	191,724	180,195	6.40	

Table 1.1 (continued)

CO2 emissions from Fuel combustion: reference approach and sectoral approach

	Reference approach (Gg CO2)	Sectoral approach	Difference (%)	Explanation of the differences as reported in table 1.A(c) of the CRF
Latvia Base year	18,526	18,408	0.64	1.AA Fuel Combustion - Sectoral Approach: Emissions from fuel combustion for energy production in stationary and mobile combustion installations are reported in this sector. Emissions are reported by taking into account used or sold amount of fuel reported by fuel consumers to Central Statistical Bureau or taken from household surveys carried out by Central Statistical Bureau once in 5 years. 1.AB Fuel Combustion - Reference Approach: CO2 emissions estimated with Reference Approach methodology is reported. Activity data - production, import export, stock changes and international bunkering data, are taken from Annual Questionnaires 2010 prepared by Central Statistical Bureau for EUROSTAT. IPCC 1996 emission estimation methodology - Tier1 and Tier2, is used to estimate the emissions. Carbon emission factor is estimated from estimated CO2 emission factor that can be default, country specific or plant specific. 1.AB Other Fuels: Used tires consumption is reported in this category.
Latvia 2010	7,159	7,921	-9.19	1.AC Difference - Reference and Sectoral Approach: Difference in fuel consumption data and estimated CO2 emissions are mainly due to statistical difference, interproducts transfer and distribution losses that are reported by Central Statistical Bureau but can't be taken into account in Reference Approach emissions estimation. Paraffin Wax and White Spirit fuel consumption is reported in Reference Approach table but can't be taken out from CO2 emissions estimation because these fuel types aren't included in 1.A(d) and therefore can't be taken be considered as feedstocks in Reference Approach emissions estimation.
Liechtenstein Base year	202	202	0.01	
Liechtenstein 2010	199	199	0.04	1.AC Difference - Reference and Sectoral Approach/2010: While congruence between Reference and Sectoral Approach for energy consumption is very high, the difference concerning CO2 is bigger. The probable explanation for this, is the fact, that a small fraction of the gas consumed is not burnt but lost before in the distribution network. Therefore these emissions are more climate relevant as they are emitted as CH4 with higher warming potential (21 CO2 eq) than if burnt and emitted as CO2. Therefore the Reference Approach where this fact is considered, becomes bigger in comparison to the Sectoral Approach. As the importance of gas is increasing in Liechtenstein, also the differences between the two approaches are increasing.
Lithuania Base year	32,615	33,086	-1.42	1.AC Difference - Reference and Sectoral Approach: Emissions in case of reference approach include feedstocks which causes excessive difference compared to emissions evaluated in sectoral approach (see Section 3.2.1 of the NIR)
Lithuania 2010	12,283	12,255	0.23	
Luxembourg Base year	10,282	10,256	1.83	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 2010; (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 default one too. 1.AB Liquid Fuels: a) AD: Import, export, stock change are from IEA Questionnaire on OIL as communicated by Stavec. ATTENTION: different sign convention between IPCC and IEA for stock changes. signs were changed accordingly. b) EF: default from IPCC 2006 (Vol2, Ch1, Tab1.4, p.1.23) as applied in sectoral approach. c) Fraction of carbon oxidised: all carbon is supposed to be oxidised as in sectoral approach (2006 IPCC GL) d) conversion factor: NCV: country-specific as applied in SA. 1.AB Solid Fuels: Coke Oven Coke is mainly used in Blast Furnaces and transformed into BFG, but also used in Manufacturing Industry - Iron&Steel. Some is also used as reducing agent, and thus is accounted under Industrial Processes in the Sectoral Approach. a) AD: Import, export, stock change are from IEA Questionnaire on Coal (sheets Other Bituminous Coal, Anthracite) as communicated by Stavec. ATTENTION: different sign convention between IPCC and IEA for stock changes. signs were changed accordingly. b) EF: default 29.2 from 2006 IPCC Guidelines (Vol2, Ch2, Tab1.4, p1.23) as applied in sectoral approach. c) Fraction of carbon oxidised: all carbon is supposed to be oxidised as in sectoral approach (2006 IPCC GL) d) conversion factor: NCV: country-specific as applied in SA. 1.AB Other Fuels: 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 the SA only considers the non-biogenic fraction. 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 the SA only considers the non-biogenic fraction. 1.AC Liquid Fuels: Apparent consumption = sectoral approach + Biodiesel & Biogasoline. These are included in the RA, and are declared in the IEA Questionnaires as fossil fuels and are included in Diesel oil and Motor gasoline respectively. 1.AC Solid Fuels: Apparent energy consumption = total sectoral approach + MSW (fossil fraction) as declared under the sectoral approach (other solid fuels - MSW fossil fraction).
Luxembourg 2010	10,432	10,476	2.95	1.AC Other Fuels: RA: municipal solid waste is reported under solid fuels.

Table 1.1 (continued)

CO2 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 CO2)		(%)	
Malta Base year	NA, NE	1,858	-100.00	1.AA Fuel Combustion - Sectoral Approach:Methods details will be available in NIR
Malta 2010	2,479	2,640	-6.07	1.AB Fuel Combustion - Reference Approach:Methods details will be available in NIR
Monaco Base year	79	105	-0.31	1.AB Solid Fuels:M
Monaco 2010	58	82	-0.31	
Netherlands Base year	155,641	149,874	4.25	1.AB Fuel Combustion - Reference Approach:NE; NOT INCLUDED IN ENERGY STATISTICS:Ethane INCLUDED IN LPGPetroleum Coke INCLUDED IN Other oilRefinery Feedstocks INCLUDED IN the other primary and secondary fuelsAnthracite INCLUDED IN Other Bit. CoalCoking Coal INCLUDED IN Other Bit. CoalLignite INCLUDED IN Other Bit. Coal
Netherlands 2010	175,836	172,596	3.31	1.AB Other non-specified:Activity data and emissions refer to the combustion of fossil wastes as reported under 1A1a under other fuels 1.AC Difference - Reference and Sectoral Approach:In 1A but not in RA:1A1a-other fuels: CO2 from fossil waste incineration (AVIs)Not in NA-1A:CO2 fossil fuel sources in sector 1B:1. B. 1. b. Solid Fuel Transformation1.B.2.c FlaringCO2 fossil fuel sources in sector 2:2A4 Soda Ash Production2B1. Ammonia production2B5. Other chemicals, excl. activated carbon2C1. Coke and coal inputs in blast furnace (net)2D1. Pulp and Paper2G. Process emissions in other economic sectorsAfter these corrections, the differences are between -1.2% and +0.7%
New Zealand Base year	21,839	21,799	0.19	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 of gas produced at each field (info from the Energy Data file).
New Zealand 2010	29,393	28,122	4.52	
Norway Base year	26,250	25,946	1.17	1.AB Liquid Fuels:Production of condensate is included with crude oil. Import, export, and stock change of condensate is included with gasoline. In the energy balance, also the production of condensate is included with gasoline.Production of NGL is included with LPG in the energy balance.Ethane is included with LPG.Naphta is included with gasoline.
Norway 2010	51,750	36,714	40.95	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 1990-2010 are displayed in section 3.6.1, Table 3.32 in NIR 2012. Generally, the main reason for the deviation between the SA and RA is statistical differences.
Poland Base year ^a	457,941	442,614	3.46	
Poland 2010	314,134	309,663	1.44	
Portugal Base year	40,892	39,785	2.78	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. Furthermore, 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 material differences in the Energy Balance and the energy activity data used by the inventory – where data collected directly from emission units (Large Point Sources) play a very representative role – and a different approach to account for emissions from carbon stored in product Specific LHV values for LPS are not always considered in the Energy Balance;
Portugal 2010	46,756	47,489	-1.55	The per cent of feed-stocks which carbon is stored in products are default values and not specific of the national conditions reflected in the inventory; The energy balance as been updated in order to follow the IPCC criteria to distinguish between domestic and international fuel use. This improvement contributes to decrease the difference betw
Romania Base year ^a	191,421	180,344	6.14	1.AB Other Fuels/2010:EUROSTAT instead of domestic version of the Romanian Energy Balance was used. It was added the reporting of the EU-ETS operators using the industrial wastes in the cement installations. Romanian Institute for Statistics registered these operators under biomass section.
Romania 2010	74,663	75,500	-0.54	1.AB Other Fuel/2010:EUROSTAT instead of domestic version of the Romanian Energy Balance was used. 1.AC Difference - Reference and Sectoral Approach:The difference between 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.
Russian Federation Base year	2,487,509	2,264,438	9.85	1.AB Fuel Combustion - Reference Approach:Explanation of lacking data and notation keys to be added in the following inventory submission
Russian Federation 2010	1,436,689	1,406,577	2.13	1.AB Industrial waste/2010:Activity data are in thousand ton of coal equivalent
Slovakia Base year	56,377	52,469	7.45	
Slovakia 2010	33,577	30,649	9.55	
Slovenia Base year ^a	15,077	15,210	-0.87	
Slovenia 2010	15,268	15,297	-0.19	
Spain Base year	206,260	203,236	1.49	1.AB Other non-specified:No information on other fuels, not specified in the CRF Reporter, is available. 1.AC Difference - Reference and Sectoral Approach:As stated in Appendix 4 of NIR, the differences between Sectoral Approach (SA) and Reference Approach (RA) are motivated mainly by the combined effect of - Default values may be applied to those primary fuels which are consumed mainly or exclusively for processing and transformation into secondary fuels (as for coking coal and crude oil). Given the high order of magnitude of the crude oil processed, the estimate drawn from the reference approach is extremely sensitive to any variations on the parameters applied - CO2 emissions from non-energy use of fuel accounted in RA, such as coke-made anode consumption for aluminium production or use of coal and coke as reductant agent in elec steel plants and glass production
Spain 2010	258,663	262,533	-1.47	- Statistical differences in the fuel balance of the inventory
Sweden Base year	50,020	51,369	-1.35	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 2010	43,959	46,347	-1.65	
Switzerland Base year	39,630	41,044	0.58	1.AB Fuel Combustion - Reference Approach: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 1.AC Difference - Reference and Sectoral Approach:Differences in energy consumption: allocation problem: 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. 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).
Switzerland 2010	40,841	43,352	0.89	Other: Waste fuels from waste incineration (energy use) and waste fuels from cement production (energy use). In the reference approach subsumed in "Solid fuels" (Other oil):

Table 1.1 (continued)

CO2 emissions from Fuel combustion: reference approach and sectoral approach

	Reference approach (Gg CO2)	Sectoral approach	Difference (%)	Explanation of the differences as reported in table 1.A(c) of the CRF
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 2010	290,620	277,316	4.80	
Ukraine Base year	740,193	643,745	14.98	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 t 1.AB Solid Fuels: In 1991-1997 emissions for each fuel type were estimated using splicing techniques on disaggregated subcategories level to make the time series consistent. 1.AC Difference - Reference and Sectoral Approach: For explanation of reasons of the differences between two approaches please see NIR Annex 4. 1.AC Liquid Fuels: See NIR Annex 4.
Ukraine 2010	275269.7198	246614.6752	11.62	1.AC Solid Fuels: See NIR Annex 4. 1.AC Gaseous Fuels: See NIR Annex 4. 1.AC Other Fuels: See NIR Annex 4.
United Kingdom of Great Britain and Northern Ireland Base year	560,456	565,367	-0.87	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: (1) 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. 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/2010: 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 -0.1%. 1.AC Solid Fuels: So
United Kingdom of Great Britain and Northern Ireland 2010	490,598	487,310	0.67	
United States of America Base year	4,804,684	4,865,954	-1.26	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. 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 include these sources.
United States of America 2010	5257265.485	5524973.83	-4.85	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

Stationary combustion: liquid fuels - CO₂ (2010)

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	L, T	6.5	GCV	T2	CS, PS	70.85	72.09	68.32	72.56	T2	CS	71.96	T2	CS	78.38	71.90	268.37	72.48			29.37
Austria	L, T	14.0	NCV	T2	CS, PS	72.78	78.34	71.11	NO	T2, T3	CS, PS	75.76	T2, T3	CS	74.55	74.62	74.69	73.75			NA
Belarus	L, T	9.1	NCV	T1	CS, D	76.46	76.46	IE	IE	T1	CS, D	73.45	T1	CS, D	70.41	71.30	63.17	72.25			71.45
Belgium	L, T	17.9	NCV	CS, T1, T3	CS, D, PS	64.17	74.08	63.74	NO	CS, T1, T3	D, PS	75.16	T1	D	73.03	72.90	72.99	73.63			NA
Bulgaria	L, T	5.6	NCV	T1	D	111.40	254.39	72.43	NO	T1	D	85.82	T1	D	71.76	72.49	63.40	73.04			NO
Canada*	L, T	3.3	GCV	T2	CS	75.59	76.56	77.42	73.19	T2	CS	76.41	T2	CS	74.31	74.12	73.89	76.81			NA
Croatia	L, T	16.0	NCV	T1, T2	D, PS	74.90	76.46	74.41	NO	T1	D	80.85	T1	D	71.43	71.97	69.68	73.05			NO
Czech Republic	L, T	5.2	NCV	T1	D	67.66	76.46	65.68	73.36	T1	D	72.88	T1	D	71.13	72.80	62.79	72.08			NO
Denmark	L, T	13.1	NCV	CR, T1	CS, D, PS	67.16	76.80	57.98	73.33	CR, T1	CS, D, PS	78.04	CR, T1	CS, D	73.80	73.15	73.46	74.14			NA
Estonia	L, T	3.6	NCV	T1, T2	CS, D	75.30	75.30	NO	NO	T1, T2	CS, D	73.06	T1, T2	CS, D	72.60	69.44	69.68	73.34			NO
European Union (15)	L, T	12.9	NCV	CR, CS, T1, T2, T3	CR, CS, D, PS	70.33	75.79	68.41	75.42	CR, CS, M, T1, T2, T3	CR, CS, D, PS	76.49	CR, CS, M, T1, T2, T3	CR, CS, D	72.78	73.01	72.43	73.50			71.45
European Union (27)	L, T	11.6	NCV	CR, CS, D, T1, T2, T3	CR, CS, D, PS	69.94	76.98	67.30	74.35	CR, CS, D, M, T1, T2, T3	CR, CS, D, PS	76.30	CR, CS, D, M, T1, T2, T3	CR, CS, D	72.63	72.91	72.21	73.41			71.92
Finland	L, T	14.6	NCV	T3	CS, D, PS	69.09	77.99	64.26	NO	CS, M, T3	CS	65.57	M, T1	CS	74.14	75.09	73.81	73.95			70.77
France	L, T	16.0	NCV	T2, T3	CS	69.41	76.41	64.81	NO	T2, T3	CS	75.61	T2	CS	73.53	73.99	73.07	73.93			NO
Germany	L, T	10.4	NCV	CS	CS	69.70	77.24	68.09	79.53	CS	CS	76.14	CS	CS	73.46	73.08	73.56	73.75			73.98
Greece	L, T	17.9	NCV	T2	PS	71.12	74.98	67.34	NO	T2	PS	72.00	T2	D	73.00	71.57	73.05	73.54			NO
Hungary	L, T	4.3	NCV	T2	D, PS	79.08	77.95	79.54	NA	T1, T2	D	82.59	T1	D	69.40	62.45	62.44	72.92			NO
Iceland	L, T	16.3	NCV	T1	D	73.33	73.33	NO	NO	T1	D	74.11	T1	D	73.93	69.10	69.07	74.08			NO
Ireland	L, T	14.6	NCV	T3	PS	69.62	78.42	60.22	NO	T1	CS	74.99	T1	CS	72.23	73.18	71.71	73.30			NO
Italy	L, T	12.8	NCV	T3	CS	73.97	75.40	73.74	75.66	T2	CS	81.22	T2	CS	70.68	67.70	69.71	72.90			NA
Japan*	L, T	20.4	GCV	T1	CS	68.08	73.78	56.33	63.06	T1	CS	70.92	T1	CS	69.99	71.07	68.01	72.70			NO
Kazakhstan	L, T	9.4	NCV	T1, T2	CS, D	71.20	75.13	70.44	72.57	T1, T2	CS, D	74.81	T1, T2	CS, D	53.33	31.16	64.17	73.26			72.83
Latvia	L, T	7.7	NCV	T1	CS	76.01	76.61	NO	74.00	T1	CS	75.34	T1	CS	72.40	73.21	68.65	74.00			NO
Liechtenstein	L, T	22.7	NCV	NA	NA	NO	NO	NO	NO	T2	CS	73.70	T1, T2	CS	73.64	73.62	73.70	73.61			NO
Lithuania	L, T	11.1	NCV	T1	CS, D	71.00	80.50	68.44	72.89	T1	CS, D	75.76	T1	CS	68.50	76.28	66.69	73.10			IE, NO
Luxembourg	L	8.9	NCV	T2	CS	73.48	73.48	NO	NO	T1, T2	CS, D	73.70	T2	CS	73.04	71.52	73.35	73.48			NO
Malta	L, T	68.3	NCV	D, T1	D	76.89	76.89	NO	NO	D, T1	D	73.77	D, T1	D	69.01	71.15	63.61	74.06			NA
Monaco	L, T	23.6	NCV	T1	D	78.41	78.41	NO	NO	NA	NA	NA, NO	T1	D	73.33	IE	73.33	NO			NO
Netherlands	L, T	9.0	NCV	T2	CS	76.75	61.56	78.84	74.27	T2	CS	69.90	T2	CS	72.96	67.65	71.93	73.94			NA
New Zealand*	L, T	5.0	GCV	D	CS, D	66.18	72.74	66.12	72.02	D	CS	71.44	D	CS	71.27	70.13	63.22	72.79			NA
Norway	L, T	14.2	NCV	T1, T2, T3	CS, PS	63.98	71.16	54.25	73.55	T1, T2, T3	CS	63.99	T2	CS	74.53	73.32	79.91	73.45			72.66
Poland	L, T	4.6	NCV	T2	D	73.44	76.25	73.11	73.44	T2	D	71.68	T2	D	70.91	71.91	64.41	72.89			IE
Portugal	L, T	16.5	NCV	T2	CR, D, PS	69.65	76.42	66.12	NO	T2	CR, D, PS	78.36	T2	CR, D	68.50	72.26	64.70	73.24			NO
Romania	L, T	8.5	NCV	T1, T2	CS, D	70.49	70.95	70.43	70.14	T1, T2	CS, D	73.84	T1, T2	CS, D	67.59	70.00	62.64	71.99			73.29291586
Russian Federation	L, T	6.5	NCV	T1, T2	CS, D	72.97	76.43	69.10	73.24	T1	D	73.06	T1	D	69.20	77.06	62.72	72.48			72.89
Slovakia	L, T	3.1	NCV	T2	CS	9.38	79.84	8.69	73.62	T2	CS	79.45	T2	CS	71.87	71.88	NO	71.85			77.07
Slovenia	L, T	11.1	NCV	T1	D	73.48	73.49	73.30	73.30	T1	D	76.27	T1	D	71.98	71.76	72.01	72.50			NA
Spain	L, T	18.5	NCV	T2	CR, CS, PS	68.24	76.05	61.48	98.30	T2, T3	CR, CS, PS	84.14	T2, T3	CR	71.52	72.16	69.73	72.98			IE
Sweden	L, T	20.8	NCV	T2	CS	64.53	74.91	57.28	74.26	T1, T2, T3	CS, PS	67.71	T1, T2	CS	71.95	68.87	72.46	72.66			NO
Switzerland	L, T	30.7	NCV	CS, T2	CS	65.76	73.85	65.44	NO	CS, T2	CS	74.51	CS, T2	CS	73.53	73.53	73.52	73.63			NA
Turkey	L, T	9.1	NCV	T1	D	72.95	73.40	72.60	IE	T1	D	82.87	T1	D	72.60	IE	68.68	73.65			NA, NO
Ukraine	L, T	0.7	NCV	T1	D	65.85	75.56	63.89	72.35	T1	D	75.21	T1	D	65.26	72.52	62.76	69.17			74.66
United Kingdom	L, T	8.7	NCV	T2	CS	69.82	76.58	68.49	69.91	T2	CS	75.18	T2	CS	71.95	76.57	70.92	74.16			NA
United States*	L, T	8.8	GCV	T2	CS	85.15	85.15	IE	IE	T2	CS	74.78	T2	CS	69.07	71.15	67.81	IE			31.19

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).

* Australia, Canada, Japan, New Zealand and United States reported energy data on a gross calorific value (GCV) basis. Hence, 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 1.3
Stationary combustion: solid fuels - CO₂ (2010)

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	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fisheries	Methods	EF	Stationary
Australia	L, T	35.1	GCV	T2	CS, PS	95.43	95.52	NA	88.40	T2	CS	84.60	T2	CS	95.91	95.91	NO	NO			NO		
Austria	L, T	10.7	NCV	T2	CS, PS	93.31	93.31	NO	NO	T2	CS, PS	101.02	T2	CS	93.97	96.13	93.79	93.83			NA		
Belarus	L, T	2.7	NCV	T1	CS, D	97.90	97.90	IE	IE	T1	CS, D	102.43	T1	CS, D	92.88	93.45	92.75	93.17			103.56		
Belgium	L, T	11.5	NCV	CS, T3	CS, D, PS	128.71	139.50	NO	40.53	CS, T1, T3	D, PS	61.54	T1	D	92.70	92.70	92.70	92.71			NA		
Bulgaria	L, T	47.7	NCV	T2	CS, D	102.59	102.59	NO	97.36	T2	CS, D	98.06	T2	CS, D	94.73	96.74	94.69	94.34			NO		
Canada ^e	L, T	14.1	GCV	T2	CS	93.75	94.35	86.67	90.60	T2	CS	89.29	T2	CS	95.04	95.54	90.65	NO			NA		
Croatia	L, T	9.4	NCV	T2	PS	92.71	92.71	NO	NO	T1	D	94.58	T1	D	96.33	94.56	96.68	NO			NO		
Czech Republic	L, T	47.8	NCV	T1	CS, D	94.12	96.49	NO	46.51	T1	CS, D	94.77	T1	CS, D	97.09	98.47	97.00	98.01			NO		
Denmark	L, T	24.4	NCV	CR	CS, D, PS	93.62	93.62	NO	NO	CR	CS, D, PS	98.15	CR	CS, D	94.60	NO	94.69	94.60			NO		
Estonia	L, T	65.8	NCV	T1, T2, T3	CS, D, PS	92.27	100.44	NO	36.67	T1, T2	CS, D	98.23	T1, T2	CS, D	95.40	96.12	95.38	NO			NO		
European Union (15)	L, T	18.9	NCV	CR, CS, T1, T2, T3	CR, CS, D, PS	103.54	102.67	106.32	125.26	CR, CS, T1, T2, T3	CR, CS, D, PS	112.72	CR, CS, T1, T2, T3	CR, CS, D	95.40	95.87	95.33	95.15			98.88		
European Union (27)	L, T	23.3	NCV	CR, CS, T1, T2, T3	CR, CS, D, PS	101.36	101.25	106.45	104.17	CR, CS, D, T1, T2, T3	CR, CS, D, OTH, PS	110.66	CR, CS, T1, T2, T3	CR, CS, D, OTH	94.71	95.25	94.66	94.47			99.89		
Finland	L, T	21.7	NCV	T3	CS, D, PS	92.13	92.19	NO	89.25	T3	CS, PS	137.13	T1, T3	CS, D	92.19	NO	89.87	92.37			NO		
France	L, T	8.6	NCV	T2, T3	CS	108.61	101.79	261.00	191.01	T2, T3	CS	123.27	T2	CS	95.00	95.00	95.00	NO			NO		
Germany	L, T	34.6	NCV	CS	CS	106.17	106.02	40.00	111.92	CS	CS	133.71	CS	CS	98.30	100.82	97.66	98.04			98.88		
Greece	L, T	34.1	NCV	T2	CS	124.87	124.87	NO	NO	T2	PS	96.17	T2	D	99.18	NO	99.18	NO			NO		
Hungary	L, T	13.1	NCV	T2, T3	CS, D, PS	102.00	104.78	NO	49.81	T1, T2	CS, D, PS	74.00	T1	CS, D	97.82	93.10	97.92	94.15			NO		
Iceland	T	0.2	NCV	NA	NA	NO	NO	NO	NO	T1	D	94.95	NA	NA	NO	NO	NO	NO			NO		
Ireland	L, T	13.6	NCV	T1, T3	CS, PS	100.49	100.74	NO	89.95	T1	CS	94.60	T1	CS	98.95	NO	98.95	NO			NO		
Italy	L, T	11.0	NCV	T3	CS	101.14	91.91	NO	164.03	T2	CS	69.80	T2	CS	91.91	NO	91.91	NO			NA		
Japan ^e	L, T	34.3	GCV	T1	CS	94.08	94.84	NO	78.16	T1	CS	97.77	T1	CS	97.07	97.07	NO	113.40			NO		
Kazakhstan	L, T	42.6	NCV	T1	CS, D	92.96	92.96	92.71	92.73	T1	D	89.41	T1	D	92.11	91.26	92.71	0			94.14		
Latvia	L, T	3.4	NCV	T1	CS	92.47	92.47	NO	NO	T1	CS, OTH	91.99	T1	CS, OTH	92.31	92.20	92.41	92.20			NO		
Liechtenstein		0.0	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	CS	CS	94.00	NO	94.00	NO			NO		
Lithuania	L, T	3.9	NCV	T1	CS, D	99.41	99.41	NO	NA, NO	T1, T2	CS, D	95.04	T1	CS, D	95.76	95.29	96.15	96.83			IE, NO		
Luxembourg	L, T	1.6	NCV	NA	NA	NO	NO	NO	NO	T1	D	94.90	T1	D	97.50	NO	97.50	NO			NO		
Malta	T	-	NCV	NA	NA	NA, NO	NA	NO	NO	NA	NA	IE, NO	NA	NA	NO	NO	NO	NO			NA		
Monaco		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NA, NO	NA	NA	NO	NO	NO	NO			NO		
Netherlands	L, T	13.5	NCV	T2	CS	109.12	109.12	NO	NO	T2	CS	130.52	T2	CS	96.02	101.20	94.68	NO			NA		
New Zealand ^e	L, T	4.9	GCV	D	CS	94.08	94.08	NO	NO	D	CS	93.82	D	CS	94.73	95.03	96.34	94.06			NA		
Norway	L, T	1.3	NCV	T1, T2, T3	CS, PS	91.33	91.33	NO	NO	T1, T2, T3	CS	101.73	T2	CS	103.42	NO	103.42	NO			NO		
Poland	L, T	54.5	NCV	T2	CS, D	98.17	99.38	94.64	51.88	T2	CS, D	108.85	T2	CS, D	94.20	94.85	94.09	94.33			IE		
Portugal	L, T	8.8	NCV	T2	CR, D, PS	94.20	94.20	NO	NO	T2	CR, D, PS	97.99	NA	NA	NO	NO	NO	NO			NO		
Romania	L, T	23.0	NCV	T1, T2	CS, D	89.73	89.73	NO	89.04	T1, T2	CS, D	115.48	T1, T2	CS, D	96.06	89.04	89.38	104.91			NO		
Russian Federation	L, T	13.8	NCV	T1, T2	CS, D	95.04	95.84	49.17	93.65	T1	D	30.07	T1	D	93.85	91.58	93.98	96.24			93.46		
Slovakia	L, T	24.2	NCV	T2	CS	112.95	100.30	107.21	193.05	T2, T3	CS, PS	118.86	T2	CS	96.12	99.67	95.77	102.08			102.42		
Slovenia	L, T	31.1	NCV	T2	CS	101.56	101.56	NO	NO	T1	CS, D, PS	100.63	T1	D	99.20	99.20	NO	NO			NA		
Spain	L, T	8.9	NCV	T2	CS, PS	99.66	100.32	NA	81.02	T2	CR, CS, PS	126.58	T2	CR	95.25	84.02	100.26	NA			NA		
Sweden	L, T	10.8	NCV	T2	CS	133.55	140.39	NO	76.98	T2, T3	CS, PS	127.41	NA	NA	NO	NO	NO	NO			NO		
Switzerland	L, T	1.0	NCV	NA	NA	NO	NO	NO	NO	CS, T2	CS	93.46	CS, T2	CS	92.70	NO	92.70	NO			NA		
Turkey	L, T	29.7	NCV	T1	D	98.72	98.72	NO	IE	T1	D	125.40	T1	D	126.19	IE	126.22	28.67691339			NA, NO		
Ukraine	L, T	28.4	NCV	T1, T2	CS, D, PS	87.39	91.59	90.91	55.10	T1	CS, D	95.23	T1	CS, D	91.44	91.49	91.42	90.98			90.93		
United Kingdom	L, T	19.3	NCV	T2	CS	91.29	91.32	NO	89.63	T2	CS	134.76	T2	CS	90.05	92.58	89.66	NO			NA		
United States ^e	L, T	28.5	GCV	T2	CS	95.30	95.30	IE	IE	T2	CS	94.45	T2	CS	94.07	94.07	94.07	IE			82.60		

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. Hence, 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: gaseous fuels - CO₂ (2010)

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)		
Australia	L, T	11.9	GCV	T2	CS, PS	56.59	56.38	56.76	56.84	T2	CS	56.84	T2	CS	56.85	56.84			NO							
Austria	L, T	21.4	NCV	T2	CS, PS	55.40	55.40	55.40	55.40	T2	CS, PS	55.37	T2	CS	55.40	55.40	55.40	55.40	NA							
Belarus	L, T	43.0	NCV	T1	CS, D	55.86	55.86	IE	IE	T1	CS, D	57.20	T1	CS, D	55.82	55.82	55.82	56.22								
Belgium	L, T	27.7	NCV	CS, T1, T3	CS, D, PS	55.89	55.90	55.82	NO	CS, T1, T3	D, PS	55.88	T1	D	55.75	55.61	55.81	NA								
Bulgaria	L, T	6.6	NCV	T2	CS	54.97	54.97	54.97	54.97	T2	CS	54.97	T2	CS	54.97	54.97	54.97	NO								
Canada ^e	L, T	26.2	GCV	T2	CS	58.76	54.58	53.60	63.88	T2	CS	55.33	T2	CS	55.17	55.36	54.91	NA								
Croatia	L, T	18.9	NCV	T1, T2	D, PS	55.82	55.82	55.82	55.82	T1	D	56.03	T1	D	55.77	55.75	55.78	NO								
Czech Republic	L, T	12.3	NCV	T1	D	55.82	55.82	55.82	55.82	T1	D	55.82	T1	D	55.82	55.82	55.82	NO								
Denmark	L, T	16.9	NCV	CR	CS	56.88	56.74	NO	57.31	CR	CS	56.74	CR	CS	56.74	56.74	56.74	NO								
Estonia	L, T	6.3	NCV	T2	CS	54.98	54.98	NO	NO	T2	CS	54.98	T2	CS	54.98	54.98	54.98	NO								
European Union (15)	L, T	23.3	NCV	CR, CS, T1, T2, T3	CR, CS, D, PS	56.80	56.41	56.31	62.18	CR, CS, T1, T2, T3	CR, CS, D, PS	56.45	CR, CS, T1, T2	CR, CS, D	56.64	56.65	56.64	55.55								
European Union (27)	L, T	21.2	NCV	CR, CS, T1, T2, T3	CR, CS, D, PS	56.68	56.34	56.14	61.71	CR, CS, T1, T2, T3	CR, CS, D, PS	56.34	CR, CS, T1, T2	CR, CS, D	56.53	56.53	56.53	55.29								
Finland	L, T	10.9	NCV	T3	CS	54.77	54.77	54.76	NO	T3	CS	54.76	T1	CS, D	54.76	54.76	54.76	54.76								
France	L, T	18.2	NCV	T2, T3	CS	56.47	56.45	56.57	NO	T2, T3	CS	57.00	T2	CS	57.00	57.00	57.00	NO								
Germany	L, T	17.7	NCV	CS	CS	55.99	55.99	56.00	55.72	CS	CS	56.00	CS	CS	56.00	56.00	56.00	56.00								
Greece	L, T	5.6	NCV	T2	PS	55.18	55.17	IE	56.72	T2	CS	55.31	T2	CS	55.31	55.31	55.31	NO								
Hungary	L, T	32.8	NCV	T1, T2	D	55.82	55.82	55.82	55.82	T1, T2	D	55.82	T1	D	55.82	55.82	55.82	NO								
Iceland		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO								
Ireland	L, T	18.1	NCV	T3	PS	57.23	57.23	NO	NO	T1	CS	57.10	T1	CS	57.10	57.10	57.10	NO								
Italy	L, T	31.7	NCV	T3	CS	57.24	57.24	57.24	57.24	T2	CS	57.24	T2	CS	57.24	57.24	57.24	NA								
Japan ^e	L, T	16.8	GCV	T1	CS	54.93	54.92	55.87	55.70	T1	CS	55.62	T1	CS	55.85	55.72	56.08	NO								
Kazakhstan	L, T	9.1	NCV	T1, T2	CS	54.87	54.87	54.87	54.87	T2	CS	54.72	T2	CS, D	55.09	54.87	54.87	54.87								
Latvia	L, T	27.9	NCV	T2	CS	55.28	55.28	NO	55.28	T2	CS	55.28	T2	CS	55.28	55.28	55.28	NO								
Liechtenstein	L, T	26.9	NCV	T2	CS	55.00	55.00	NO	NO	T2	CS	55.00	T2	CS	55.00	55.00	55.00	NO								
Lithuania	L, T	22.1	NCV	T1	CS	56.90	56.90	56.90	56.90	T1	CS	56.90	T1	CS	56.90	56.90	56.90	IE, NO								
Luxembourg	L, T	23.8	NCV	T2	CS	56.71	56.71	NO	NO	T2	CS	56.71	T2	CS	56.71	56.71	56.71	NO								
Malta		-	NCV	NA	NA	NA, NO	NA	NO	NO	NA	NA	IE, NO	NA	NA	NO	NO	NO	NA								
Monaco	L, T	13.8	NCV	T1	D	56.72	56.72	NO	NO	NA	NA	NA, NO	T1	D	56.72	IE	56.72	NO								
Netherlands	L, T	42.0	NCV	T2	CS	56.83	56.60	56.60	60.44	T2	CS	56.60	T2	CS	56.60	56.60	56.60	NA								
New Zealand ^e	L, T	10.2	GCV	D	CS	58.41	58.36	58.66	58.79	D	CS	59.02	D	CS	58.92	58.92	58.92	NA								
Norway	L, T	23.7	NCV	T1, T2, T3	CS, PS	57.82	60.47	NO	57.48	T1, T2, T3	CS	68.50	T2	CS	56.06	56.06	56.06	56.06								
Poland	L, T	6.2	NCV	T2	D	55.82	55.82	55.82	55.82	T2	D	55.82	T2	D	55.82	55.82	55.82	IE								
Portugal	L, T	14.3	NCV	T2	CR, D, PS	56.18	56.23	55.82	NO	T2	CR, D, PS	55.82	T2	CR, D	55.82	55.82	55.82	NO								
Romania	L, T	18.5	NCV	T2	CS	55.43	55.43	55.43	55.43	T2	CS	55.43	T2	CS	55.43	55.43	55.43	NO								
Russian Federation	L, T	32.5	NCV	T1	D	55.29	55.26	55.82	55.82	T1	D	55.82	T1	D	55.82	55.82	55.82	55.82								
Slovakia	L, T	24.6	NCV	T2	CS	55.11	55.11	55.11	55.11	T2	CS	55.11	T2	CS	55.11	55.11	55.11	55.11								
Slovenia	L, T	9.2	NCV	T1	CS	55.02	55.02	55.01	NO	T1	CS	55.02	T1	CS	55.02	55.02	55.02	NO								
Spain	L, T	20.4	NCV	T2	CS, PS	55.91	55.91	55.86	56.00	T2	CS	56.00	T2	CS	56.00	56.00	56.00	IE								
Sweden	L, T	4.7	NCV	T2	CS	56.74	56.74	56.74	NO	T1, T2	CS	56.74	T1	CS	56.74	56.74	56.74	NO								
Switzerland	L, T	12.6	NCV	CS, T2	CS	55.00	55.00	NO	NO	CS, T2	CS	55.00	CS, T2	CS	55.00	55.00	55.00	NA								
Turkey	L, T	19.2	NCV	T1	D	56.07	56.09	55.8195	IE	T1	D	55.82	T1	D	55.82	IE	55.82	55.8195								
Ukraine	L, T	24.8	NCV	T1	CS	55.35	55.35	55.35	55.35	T1	CS, D	55.35	T1	CS	55.35	55.35	55.35	55.35								
United Kingdom	L, T	33.3	NCV	T2	CS	57.78	56.37	56.66	64.87	T2	CS	56.84	T2	CS	56.84	56.84	56.84	NA								
United States ^e	L, T	18.1	GCV	T2	CS	55.82	55.82	IE	IE	T2	CS	55.82	T2	CS	55.82	55.82	55.82	26.73								

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. Hence, 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: other fuels - CO₂ (2010)

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		-	GCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NO	
Austria	L, T	1.9	NCV	T2	CS, PS	54.06	54.06	NO	NO	T2	D, PS	41.10	T2	D	104.17	104.17	NO	NO	NO	
Belarus		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	
Belgium	L, T	4.7	NCV	CS, T1, T3	CS, D	94.24	94.24	NO	NO	CS, T1, T3	D, PS	54.73	T1	D	65.54	65.50	66.00	NO	NO	
Bulgaria		0.0	NCV	NA	NA	NO	NO	NO	NO	T2	CS	85.85	NA	NA	NO	NO	NO	NO	NO	
Canada ^e		0.1	GCV	NA	NA	NA	NA	NA	NA	CS, T2	OTH	85.00	NA	NA	NA	NA	NA	NA	NA	
Croatia		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NO	
Czech Republic	T	0.4	NCV	T1	D	132.79	132.79	NO	NO	T1	CS	82.96	NA	NA	NO	NO	NO	NO	NO	
Denmark	L, T	2.3	NCV	CR, CS	CS	82.29	82.29	NO	NO	CR	CS, PS	88.49	CR	CS	82.22	82.22	NO	NO	NO	
Estonia		0.2	NCV	NA	NA	NO	NO	NO	NO	T3	PS	78.10	NA	NA	NO	NO	NO	NO	NO	
European Union (15)	L, T	1.6	NCV	CR, CS, OTH, T1, T2, T3	CR, CS, D, PS	77.63	77.55	117.71	56.53	CR, CS, T1, T2, T3	CR, CS, D, PS	63.47	CR, T1, T2	CS, D	113.68	114.20	94.36	100.98	NA, NO	
European Union (27)	L, T	1.3	NCV	CR, CS, OTH, T1, T1a, T2, T3	CR, CS, D, PS	77.80	77.73	105.156293	56.53	CR, CS, T1, T2, T3	CR, CS, D, PS	64.10	CR, T1, T2	CS, D	113.68	114.20	94.36	100.98	IE, NA, NO	
Finland	L, T	13.9	NCV	T3	CS	99.50	99.50	NO	NO	T3	CS	87.43	T1	CS	100.98	100.98	100.98	100.98	NO	
France	L, T	1.1	NCV	T2, T3	CS	99.60	100.32	61.84	56.53	T2, T3	CS	51.62	NA	NA	NO	NO	NO	NO	NO	
Germany	L, T	2.2	NCV	CS	CS	91.41	91.41	NO	NA	CS	CS	70.27	NA	NA	NO	NO	NO	NO	NO	
Greece		0.0	NCV	NA	NA	NO	NO	NO	NO	T2	PS	25.81	NA	NA	NO	NO	NO	NO	NO	
Hungary	L, T	0.6	NCV	T2	D, PS	61.61	62.28	51.86	NO	T2	D, PS	62.25	NA	NA	NO	NO	NO	NO	NO	
Iceland		0.1	NCV	T1	D	60.69	60.69	NO	NO	NA	NA	NO	T1	D	60.69	60.69	NO	NO	NO	
Ireland		0.0	NCV	NA	NA	NO	NO	NO	NO	T3	PS	46.66	NA	NA	NO	NO	NO	NO	NO	
Italy	L, T	1.2	NCV	T3	CS	94.00	94.00	NO	NO	T2	CS	50.21	T2	CS	116.30	116.30	NO	NO	NA	
Japan ^e	L, T	1.1	GCV			29.56	29.14	49.44	48.42			44.69	NA	NA	NO	NO	NO	NO	NO	
Kazakhstan	T	0.0	NCV	NA	NA	NO	NO	NO	NO			72.60	NA	NA	NO	NO	NO	NO	NO	
Latvia		0.3	NCV	NA	NA	NO	NO	NO	NO	T2	PS	35.79	NA	NA	NO	NO	NO	NO	NO	
Liechtenstein		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NO	
Lithuania		-	NCV	NA	NA, NO	NA	NA	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	IE, NO	
Luxembourg	L	0.9	NCV	T2	D	95.45	95.45	NO	NO	T1	PS	86.111977	NA	NA	NO	NO	NO	NO	NO	
Malta		-	NCV	NA	NA, NO	NA	NA	NA	NO	NA	NA	IE, NA, NO	NA	NA	NO	NO	NO	NO	NA	
Monaco	L, T	27.9	NCV	T1	D	55.57	55.57	NO	NO	NA	NA	NA, NO	NA	NA	NO	NO	NO	NO	NO	
Netherlands	L, T	1.2	NCV	T2	CS	82.58	82.58	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NA	
New Zealand ^e		-	GCV	NA	NA	IE, NO	NO	IE	NO	NA	NA	NA, NO	NA	NA	NO	NO	NO	NO	NA	
Norway	L, T	1.0	NCV	T1, T2, T3	CS, PS	51.59	51.59	NO	NO	T1, T2, T3	CS	43.33	NA	NA	NO	NO	NO	NO	NO	
Poland		-	NCV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	IE	
Portugal	L, T	1.0	NCV	T2	CR, D, PS	133.24	133.24	NO	NO	T2	CR, D, PS	58.09	NA	NA	NO	NO	NO	NO	NO	
Romania	T	0.3	NCV	NA	NA	NO	NO	NO	NO	T1, T2	D, PS	109.37502	NA	NA	NO	NO	NO	NO	NO	
Russian Federation	L, T	1.1	NCV	T1	D	142.29	142.29	142.29	NA	T1	D	142.29	T1	D	142.29	142.29	NO	NO	138.16	
Slovakia		0.4	NCV	T1a, T2	CS, D	107.71	107.71	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NO	
Slovenia	T	0.4	NCV	T1	D	73.30	73.30	NO	NO	T1	D, PS	61.39	NA	NA	NA, NO	NO	NA	NO	NA	
Spain	L, T	0.5	NCV	T2	CR, CS, PS	52.50	48.23	133.91	NA	T2	CR	70.81	NA	NA	NA	NA	NA	NA	NA	
Sweden	L, T	2.4	NCV	T2	CS	27.81	27.81	NO	NO	T2	CS	60.00	NA	NA	NO	NO	NO	NO	NO	
Switzerland	L, T	5.3	NCV	CS, T2	CS	99.40	99.40	NO	NO	CS, T2	CS	67.06	NA	NA	NO	NO	NO	NO	NA	
Turkey		-	NCV	NA	NA	NO	NO	NO	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NA, NO	
Ukraine	T	0.2	NCV	T1	D	83.76	103.32	71.87	71.87	T1	D	71.87	T1	D	71.87	71.87	NO	71.87	NO	
United Kingdom	T	0.3	NCV	OTH, T1	CS	30.47	30.47	NO	NO	T2	CS	105.00	NA	NA	NA, NO	NO	NA	NO	NA	
United States ^e		0.2	GCV	T2	CS	39.52	39.52	NA	NA	NA	NA	NA	NA	NA	IE, NA	NA	NA	IE	NA, NA	

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. Hence, 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**Contribution of fuels to total energy consumption in stationary combustion (%)**

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels		Biomass	
	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010
Australia	14.7	12.8	53.7	51.6	24.0	30.9	-	-	7.7	4.7
Austria	30.6	19.7	21.8	11.5	31.2	40.2	1.4	4.2	15.0	24.4
Belarus	50.9	12.9	8.3	2.9	39.0	78.8	0.1	-	1.7	5.4
Belgium	33.0	24.4	35.8	13.2	26.7	48.5	2.8	7.5	1.7	6.4
Bulgaria	32.4	8.5	44.6	65.9	22.2	16.9	-	0.1	0.8	8.6
Canada	13.6	5.7	21.5	19.7	54.2	63.7	0.0	0.1	10.8	11.0
Croatia	48.5	30.0	10.9	14.2	31.8	47.7	-	-	8.7	8.0
Czech Republic	11.4	8.2	73.3	58.3	13.9	25.3	0.0	0.5	1.4	7.7
Denmark	31.3	18.3	46.2	26.7	13.8	30.6	1.3	2.8	7.4	21.5
Estonia	23.3	4.7	62.9	68.0	11.5	10.9	-	0.3	2.3	16.1
European Union (15)	30.7	20.1	36.7	20.6	27.0	47.0	0.8	2.4	4.8	9.8
European Union (27)	27.4	18.4	41.2	26.3	26.8	43.3	0.6	2.0	4.0	9.9
Finland	30.2	17.2	21.6	18.3	13.5	16.5	8.2	11.8	26.5	36.1
France	41.9	30.1	18.3	10.4	26.5	44.0	0.7	1.7	12.5	13.8
Germany	20.5	15.9	54.7	35.2	21.5	35.1	0.9	3.0	2.3	10.7
Greece	45.3	38.6	51.4	42.6	0.3	15.8	-	0.1	3.0	2.9
Hungary	24.3	6.5	34.6	14.9	39.4	66.6	0.2	1.1	1.4	10.9
Iceland	96.2	98.3	3.8	1.1	-	-	-	0.5	-	-
Ireland	32.0	29.8	47.2	20.3	19.3	47.1	-	0.1	1.5	2.7
Italy	47.8	19.0	14.7	13.1	35.9	61.2	0.2	1.3	1.3	5.4
Japan	52.1	28.4	27.2	34.8	17.1	31.2	2.1	3.1	1.6	2.6
Kazakhstan	19.9	18.2	60.3	59.0	17.8	21.2	1.7	1.3	0.4	0.2
Latvia	38.8	9.7	11.9	3.4	38.6	46.5	-	0.7	10.8	39.7
Liechtenstein	69.7	34.7	0.1	0.0	27.1	55.1	-	-	3.2	10.2
Lithuania	43.6	20.1	8.8	5.3	44.4	50.0	-	-	3.2	24.5
Luxembourg	26.1	20.3	43.3	2.9	27.7	70.5	0.5	1.7	2.3	4.6
Malta	64.4	99.9	35.6	-	-	-	-	-	-	0.1
Monaco	44.3	29.5	-	-	13.9	22.2	41.1	46.0	0.7	2.3
Netherlands	18.9	11.8	15.7	11.5	63.2	70.6	0.5	1.4	1.7	4.8
New Zealand	19.6	18.5	14.1	13.3	50.4	47.0	-	-	16.0	21.1
Norway	47.2	28.0	3.2	1.8	34.8	54.6	1.6	2.7	13.3	13.0
Poland	5.6	8.1	86.4	70.0	6.6	14.0	-	-	1.4	7.9
Portugal	54.8	30.3	22.8	12.5	-	34.2	0.3	1.6	22.1	21.4
Romania	18.7	14.2	25.5	29.0	54.8	40.0	-	0.3	1.1	16.4
Russian Federation	29.6	10.3	24.5	20.5	43.4	67.6	0.5	0.9	2.0	0.8
Slovakia	20.0	14.2	44.4	25.3	34.2	53.5	0.2	0.4	1.2	6.6
Slovenia	22.0	19.9	49.9	40.1	15.7	22.0	0.1	0.9	12.3	17.1
Spain	44.2	32.8	38.1	11.5	9.8	48.3	0.2	1.1	7.8	6.4
Sweden	55.5	31.1	14.2	8.2	4.6	8.4	3.2	8.3	22.5	44.0
Switzerland	64.6	49.4	3.4	1.3	16.3	27.0	3.8	6.7	11.9	15.6
Turkey	40.0	14.9	49.5	33.7	10.5	42.9	-	-	-	8.5
Ukraine	17.2	1.3	30.6	40.3	51.0	56.9	0.8	0.3	0.5	1.2
United Kingdom	21.2	12.9	44.8	21.4	33.5	62.4	0.1	0.8	0.5	2.5
United States	23.2	19.0	35.4	35.7	36.2	41.2	0.8	0.6	4.3	3.5

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 1.7**Contribution of fuels to CO₂ emissions from energy industries (%)**

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010
Australia	6.4	5.5	84.2	78.1	9.4	16.5	-	-
Austria	23.1	20.6	45.3	27.3	30.7	46.3	0.9	5.8
Belarus	60.6	3.7	3.5	2.1	35.9	94.2	-	-
Belgium	16.6	14.6	71.6	28.9	9.3	50.3	2.5	6.2
Bulgaria	23.8	5.5	60.8	87.5	15.4	7.0	-	-
Canada	10.4	3.6	60.3	57.8	29.3	38.5	-	-
Croatia	66.3	32.5	8.3	35.1	25.5	32.3	-	-
Czech Republic	3.1	2.0	93.6	93.6	3.2	4.0	0.1	0.5
Denmark	8.1	8.2	84.1	61.6	5.8	24.5	2.1	5.7
Estonia	16.8	2.6	76.3	90.5	6.9	6.9	-	-
European Union (15)	19.4	13.2	72.5	55.1	7.0	28.2	1.2	3.4
European Union (27)	17.2	11.6	74.0	62.2	8.0	23.6	0.8	2.6
Finland	14.9	9.4	50.6	43.5	13.7	19.0	20.7	28.2
France	30.7	29.1	64.0	45.0	2.6	17.3	2.8	8.6
Germany	5.9	6.3	87.7	78.7	5.3	11.8	1.1	3.2
Greece	17.9	14.7	81.9	76.3	0.2	9.0	-	-
Hungary	19.7	7.8	54.0	46.6	25.9	43.8	0.4	1.8
Iceland	100.0	30.1	-	-	-	-	-	69.9
Ireland	11.4	5.5	71.8	44.1	16.9	50.4	-	-
Italy	58.7	22.0	29.0	32.9	12.1	44.8	0.1	0.2
Japan	46.8	13.6	27.5	53.2	23.7	31.5	2.0	1.7
Kazakhstan	15.6	6.8	72.5	80.4	11.4	12.8	0.5	-
Latvia	49.1	3.2	8.0	1.8	42.9	95.1	-	-
Liechtenstein	-	-	-	-	100.0	100.0	-	-
Lithuania	55.8	38.3	1.4	0.5	42.8	61.2	-	-
Luxembourg	-	4.8	-	-	-	90.3	100.0	4.9
Malta	55.1	100.0	44.9	-	-	-	-	-
Monaco	4.1	0.1	-	-	-	1.1	95.9	98.8
Netherlands	19.4	11.0	49.1	36.4	30.3	48.9	1.1	3.7
New Zealand	13.2	12.3	7.8	18.3	79.0	69.4	-	-
Norway	20.4	14.7	3.0	0.9	75.2	81.1	1.4	3.3
Poland	2.9	3.5	96.3	94.0	0.8	2.6	-	-
Portugal	51.3	19.1	48.7	41.5	-	36.5	-	2.9
Romania	24.1	13.7	46.1	62.5	29.8	23.8	-	-
Russian Federation	20.3	8.4	34.8	29.0	44.2	60.1	0.7	2.4
Slovakia	6.1	4.1	76.6	57.8	16.3	36.3	1.0	1.8
Slovenia	4.6	0.4	92.5	93.8	2.9	5.5	-	0.3
Spain	21.9	25.4	77.1	36.6	0.9	36.5	0.1	1.5
Sweden	31.2	32.2	58.2	40.4	5.0	15.7	5.6	11.6
Switzerland	27.8	23.6	1.8	-	9.4	13.2	61.0	63.2
Turkey	20.8	5.1	63.2	54.7	16.0	40.1	-	-
Ukraine	19.5	1.3	35.4	71.2	44.8	27.1	0.3	0.4
United Kingdom	17.1	10.8	78.4	47.7	4.4	40.8	0.1	0.7
United States	5.3	1.4	84.6	80.5	9.6	17.6	0.5	0.5

^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 1.8**Contribution of fuels to CO₂ emissions from manufacturing industries and construction (%)**

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010
Australia	33.1	32.2	30.0	26.5	36.9	41.4	-	-
Austria	24.7	18.6	39.5	32.0	33.6	44.3	2.1	5.1
Belarus	54.6	36.3	13.1	4.3	30.7	59.4	1.6	-
Belgium	24.1	13.1	45.8	29.5	23.9	38.2	6.2	19.2
Bulgaria	35.7	30.8	64.3	29.1	-	39.4	-	0.8
Canada	21.0	7.4	9.9	11.9	68.9	80.3	0.2	0.4
Croatia	36.5	30.3	28.7	18.2	34.8	51.5	-	-
Czech Republic	19.5	25.3	67.6	49.0	12.8	24.3	-	1.4
Denmark	49.3	43.7	26.3	10.4	24.4	44.5	0.0	1.4
Estonia	31.3	24.8	57.4	49.6	11.3	16.9	-	8.7
European Union (15)	31.3	26.2	39.8	24.6	27.7	45.2	1.2	4.1
European Union (27)	28.7	25.0	41.5	28.6	28.9	42.9	0.9	3.6
Finland	34.5	31.1	36.8	31.4	16.6	20.0	12.1	17.4
France	39.0	29.5	33.1	24.4	27.6	45.1	0.4	1.0
Germany	14.8	9.6	57.6	38.3	25.9	43.9	1.6	8.2
Greece	58.9	73.9	41.1	10.0	-	15.8	-	0.3
Hungary	24.4	13.6	24.6	12.9	51.0	70.2	-	3.2
Iceland	86.0	94.6	14.0	5.4	-	-	-	-
Ireland	55.8	53.3	22.1	9.0	22.1	37.3	-	0.4
Italy	40.3	27.4	22.0	18.7	37.5	52.4	0.2	1.4
Japan	39.4	28.9	57.8	62.3	2.1	6.7	0.7	2.1
Kazakhstan	23.0	12.1	60.3	76.2	15.7	11.5	1.0	0.2
Latvia	58.5	25.1	3.6	16.9	37.9	54.8	-	3.2
Liechtenstein	53.2	45.9	-	-	46.8	54.1	-	-
Lithuania	61.6	7.8	3.0	30.7	35.4	61.5	-	-
Luxembourg	4.7	16.9	84.2	14.3	11.1	65.0	-	3.8
Malta	100.0	100.0	-	-	-	-	-	-
Monaco	-	-	-	-	-	-	-	-
Netherlands	27.1	34.1	15.2	15.2	57.6	50.7	-	-
New Zealand	18.4	21.9	46.9	39.3	34.7	38.8	-	-
Norway	82.9	62.1	17.1	16.6	-	19.7	-	1.6
Poland	10.6	12.4	75.1	64.1	14.2	23.5	-	-
Portugal	70.4	56.0	28.8	2.4	-	38.5	0.8	3.1
Romania	11.8	21.3	34.5	38.6	53.6	38.3	-	1.8
Russian Federation	32.4	19.4	18.2	22.6	45.2	56.9	4.2	1.1
Slovakia	23.0	11.2	49.9	55.6	27.1	33.2	-	-
Slovenia	38.1	21.6	33.2	13.6	28.4	61.2	0.3	3.6
Spain	53.2	38.1	28.5	7.0	18.3	53.8	-	1.1
Sweden	71.7	69.0	21.6	21.7	6.0	7.7	0.7	1.5
Switzerland	60.8	48.6	19.3	8.8	17.8	37.3	2.1	5.3
Turkey	33.5	25.0	61.9	44.9	4.6	30.1	-	-
Ukraine	20.9	1.2	35.3	53.4	41.8	45.0	2.0	0.5
United Kingdom	29.6	24.7	42.7	30.0	27.7	44.8	0.0	0.5
United States	33.2	37.0	18.3	12.4	48.4	50.7	-	-

^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 1.9**Contribution of fuels to CO₂ emissions from other sectors (%)**

	Liquid Fuels		Solid Fuels		Gaseous Fuels		Other Fuels	
	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010	Base year ^a	2010
Australia	45.9	48.4	4.4	0.7	49.7	50.9	-	-
Austria	59.5	55.2	19.3	2.2	18.7	42.5	2.5	0.0
Belarus	36.5	45.2	47.0	13.7	16.5	41.2	0.1	-
Belgium	64.1	52.1	7.2	2.4	28.5	45.1	0.2	0.4
Bulgaria	45.1	33.6	54.9	45.9	-	20.5	-	-
Canada	27.9	16.1	0.3	0.3	71.8	83.6	-	-
Croatia	67.4	47.3	14.3	0.7	18.3	51.9	-	-
Czech Republic	8.1	0.7	77.7	21.5	14.2	77.7	-	-
Denmark	81.1	60.0	3.3	1.3	15.3	38.7	0.3	0.0
Estonia	55.6	50.6	36.9	7.3	7.5	42.1	-	-
European Union (15)	47.1	36.3	16.6	2.4	36.1	60.5	0.2	0.8
European Union (27)	41.5	33.1	25.2	7.9	33.1	58.3	0.1	0.7
Finland	96.2	91.8	0.6	0.3	1.5	4.7	1.7	3.2
France	63.2	45.7	5.3	0.5	31.5	53.8	-	-
Germany	44.8	44.7	32.8	4.0	22.4	51.3	-	-
Greece	98.5	90.3	1.5	0.1	-	9.6	-	-
Hungary	29.2	8.0	50.5	4.5	20.3	87.5	-	-
Iceland	100.0	100.0	-	-	-	-	-	0.0
Ireland	37.8	54.1	57.3	19.9	4.9	26.0	-	-
Italy	50.6	20.3	1.2	0.0	47.5	74.6	0.7	5.1
Japan	84.8	62.2	2.9	1.3	12.3	36.5	-	-
Kazakhstan	20.5	41.8	70.5	36.8	8.8	21.4	0.2	-
Latvia	39.2	41.1	36.6	13.6	24.3	45.3	-	-
Liechtenstein	87.2	47.3	0.1	0.0	12.7	52.7	-	-
Lithuania	26.0	12.7	49.0	37.1	25.0	50.2	-	-
Luxembourg	72.1	47.9	2.0	0.2	25.9	52.0	-	-
Malta	100.0	100.0	-	-	-	-	-	-
Monaco	80.0	63.7	-	-	20.0	36.3	-	-
Netherlands	10.4	5.2	0.5	0.1	89.1	94.7	-	-
New Zealand	61.2	60.9	19.2	12.3	19.6	26.8	-	-
Norway	99.1	96.7	0.9	0.0	-	3.3	0.1	-
Poland	5.1	14.7	88.6	62.8	6.3	22.5	-	-
Portugal	100.0	75.0	-	-	-	25.0	-	-
Romania	31.6	16.7	18.3	0.8	50.0	82.5	-	-
Russian Federation	30.4	20.7	47.0	7.2	22.2	71.9	0.4	0.2
Slovakia	3.7	0.3	68.7	11.3	27.6	88.4	-	-
Slovenia	38.0	84.4	60.4	0.1	1.6	15.4	-	-
Spain	85.8	62.7	9.0	3.0	5.2	34.3	-	-
Sweden	96.5	87.9	1.5	-	2.0	12.1	-	-
Switzerland	86.3	75.7	0.3	0.2	13.4	24.1	-	-
Turkey	51.2	25.9	48.5	50.6	0.4	23.5	-	-
Ukraine	8.8	1.4	66.6	9.7	24.6	88.8	0.0	0.1
United Kingdom	16.6	13.3	18.1	3.3	65.3	83.4	-	-
United States	29.1	23.4	2.7	1.1	68.2	75.6	-	-

^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 1.10

Road transportation - CO₂, N₂O (2010)

Key category	Share of national total	CO ₂ emissions						N ₂ O emissions						
		Methods and EF used ^a		CO ₂ IEF				Key category	Share of national total	Method and EF used ^a		N ₂ O 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	L, T	12.84	T2	CS	GCV	68.00	72.84		0.28	T1, T3	CS, D	GCV	6.98	1.76
Austria	L, T	25.61	CS, M	CS	NCV	73.33	73.67		0.25	CS, M	CS	NCV	3.76	1.89
Belarus	L, T	4.23	D, T1	CS, D	NCV	68.61	73.33		0.01	D, T1	CS, D	NCV	0.60	0.60
Belgium	L, T	17.53	T1	CR, CS, D	NCV	68.61	73.33		0.17	M, T2	CR, CS	NCV	1.13	2.50
Bulgaria	L, T	12.08	T2	D	NCV	70.62	74.50		0.12	T1, T2	D	NCV	1.89	2.16
Canada ^c	L, T	18.79	CS, T1, T3	CS	GCV	68.84	73.19		0.50	CS, T1, T3	CS	GCV	6.62	4.14
Croatia	L, T	19.84	T3	CR	NCV	70.39	73.05		0.21	T1, T3	CR, D	NCV	3.44	1.89
Czech Republic	L, T	11.69	T1	D	NCV	73.34	73.92	L, T	0.49	T1, T2	CS, D	NCV	18.69	5.06
Denmark	L, T	19.53	OTH, T1	CS, D	NCV	72.99	74.00		0.19	OTH, T1	D, OTH	NCV	1.58	2.79
Estonia	L, T	10.00	T1	CS, D	NCV	72.97	73.33		0.09	T1, T3	CS, D	NCV	3.02	1.45
European Union (15)	L, T	19.7	CR, CS, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV	71.28	73.60		0.18	CR, CS, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV	1.62	2.37
European Union (27)	L, T	18.34	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV	71.26	73.59		0.20	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV	2.41	2.54
Finland	L, T	15.8	M, T1	CS	NCV	72.90	73.60		0.22	CS, M, T1	CS, D	NCV	2.64	3.53
France	L, T	23.65	T3	CS	NCV	72.35	74.70		0.24	T3	CS	NCV	2.33	2.25
Germany	L, T	15.53	CS, T1, T2	CS, D	NCV	72.00	74.00		0.13	T1, T3	CS, M	NCV	0.91	2.56
Greece	L, T	15.98	T1	CS, D	NCV	68.61	73.31		0.16	M, T1	D, M	NCV	2.53	1.83
Hungary	L, T	16.57	T1	D	NCV	68.61	73.33	T	0.54	T1, T2	CS, D	NCV	13.73	4.13
Iceland	L, T	17.73	T1	D	NCV	70.98	72.47		0.81	T2	D	NCV	15.37	3.51
Ireland	L, T	17.86	T1	CS	NCV	69.96	73.30		0.15	T3	M	NCV	1.82	1.99
Italy	L, T	21.68	M	CS	NCV	71.15	73.15		0.21	M	CS	NCV	1.64	2.36
Japan ^c	L, T	16.24	T1	CS	GCV	70.59	72.29		0.18	T2	CS	GCV	1.98	3.75
Kazakhstan	L, T	6.01	T2	CS, D	NCV	70.14	73.26		0.01	T2	D	NCV	0.33	0.39
Latvia	L, T	24.32	M	CS, M	NCV	68.60	74.00		0.18	M, T1	M, OTH	NCV	1.66	1.60
Liechtenstein	L, T	34.11	T1	CS	NCV	73.90	73.60		0.20	T3	CS, D	NCV	1.14	1.95
Lithuania	L, T	19.59	T2	CS	NCV	72.97	72.89		0.16	T1, T3	CR, D	NCV	2.47	2.11
Luxembourg	L, T	51.36	T3	CS	NCV	68.75	73.48		0.54	T1, T3	D, OTH	NCV	2.61	2.38
Malta	L, T	17.07	D, T1	D	NCV	69.30	74.10		0.26	D, T1	D	NCV	3.20	3.90
Monaco	L, T	26.25	T1	D	NCV	73.00	74.00		1.01	T1	D	NCV	13.10	3.81
Netherlands	L, T	16.07	T1, T2	CS, D	NCV	72.00	74.29		0.21	T1, T2	CS, D	NCV	3.85	2.34
New Zealand ^c	L, T	17.22	D	CS	GCV	69.43	72.57		0.21	D, T3	CS, D	GCV	3.58	1.50
Norway	L, T	18.59	T1, T2	CS, PS	NCV	70.85	69.43		0.11	CS, T2, T3	CR, CS, D	NCV	1.44	1.32
Poland	L, T	11.59	T2	CS	NCV	70.36	73.16		0.14	T1, T2	D	NCV	2.68	3.40
Portugal	L, T	25.56	T2	CS	NCV	73.00	74.00		0.25	T3	CR	NCV	2.24	2.18
Romania	L, T	11.12	T2	OTH	NCV	73.50	73.85	T	0.41	T2	OTH	NCV	13.30	6.35
Russian Federation	L, T	5.79	T1	D	NCV	68.61	73.33		0.17	T1	CS, D	NCV	7.30	3.67
Slovakia	L, T	14.06	M	D	NCV	71.53	74.17		0.15	D, M, T1	D	NCV	3.65	1.85
Slovenia	L, T	26.34	M	M	NCV	71.36	73.23	T	0.39	M, T1	D, M	NCV	4.82	2.65
Spain	L, T	23.31	CR, CS, T3	CR	NCV	71.09	72.63		0.24	CR, CS, T3	CR	NCV	1.40	2.60
Sweden	L, T	28.63	T1	CS	NCV	72.00	72.02		0.16	M, T1	CS, M	NCV	0.92	1.59
Switzerland	L, T	29.38	T2	CS	NCV	73.90	73.60		0.24	D, T2	CS	NCV	2.72	0.70
Turkey	L, T	9.78	T1	D	NCV	69.30	74.10		0.13	T1	D	NCV	4.03	3.90
Ukraine	L, T	7.54	T1	CS, D	NCV	68.61	73.33		0.06	CR, M, T1	CR, CS, D	NCV	1.71	1.75
United Kingdom	L, T	18.81	T3	CS	NCV	70.06	72.98		0.14	T3	CS	NCV	1.14	2.21
United States ^c	L, T	21.79	T2	CS	GCV	71.18	73.79	T	0.25	M, T1, T2	CS, D, M	GCV	3.35	0.26

^a Information on methods and emission factors in this table is 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. Hence, 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 1.11

Civil aviation, navigation and international bunkers - CO₂ (2010)

	Methods and EF used ^a		IEF in CRF based on GCV or NCV	Civil aviation				Aviation bunkers		Navigation				Marine bunkers	
				Key category	Share of national total	CO ₂ IEF		CO ₂ IEF		Key category	Share of national total	CO ₂ IEF		CO ₂ IEF	
	Methods	EF				Jet kerosene	Aviation gasoline	Jet kerosene	Aviation gasoline			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	T2	CS, D	GCV	L, T	1.12	72.53	69.79	72.53	NO	T	0.51	76.74	72.84	76.74	72.84
Austria	CS, M, T2, T3	CS	NCV		0.08	72.82	72.75	72.82	NO		0.01	NO	73.67	NO	67.61
Belarus	D, T1	CS, D	NCV		0.00	70.79	68.61	70.79	NO		0.02	NO	73.33	NO	NE
Belgium	CS, M, T1	CR, CS, D	NCV		0.01	70.80	69.16	70.79	NO		0.36	IE	73.32	76.59	73.46
Bulgaria	T1, T2	CS, D	NCV		0.08	71.50	69.30	71.50	NO		-	NO	NO	77.40	74.10
Canada ^c	CS, T1, T2, T3	CS	GCV	L, T	0.88	71.32	73.55	71.32	NA	L, T	0.92	77.37	73.19	77.37	73.19
Croatia	T1, T3	CR, D	NCV		0.28	70.79	68.61	70.79	NO		0.40	76.59	73.33	76.59	73.33
Czech Republic	T1	D	NCV		0.01	74.22	73.33	74.22	NO		0.01	NO	73.40	NO	NO
Denmark	CR, OTH, T1	CS, D	NCV		0.33	71.72	72.55	72.00	73.00	L	1.04	77.97	73.97	78.00	73.87
Estonia	T1, T2	CS, D	NCV		0.01	NO	74.38	73.22	NO		0.11	NO	73.33	76.59	73.33
European Union (15)	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, OTH	NCV	L	0.44	71.94	70.82	72.03	69.55	L	0.49	76.87	73.58	77.20	73.62
European Union (27)	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, M, OTH	NCV		0.36	71.92	70.85	14.99	69.49	L	0.40	76.87	73.56	77.21	73.64
Finland	M, T1, T3	CS, D	NCV	T	0.34	73.20	71.30	73.20	NO	L, T	0.76	78.80	73.60	78.80	74.10
France	T1, T2, T3	CS	NCV	L, T	0.88	71.59	73.00	71.59	NO		0.27	78.00	74.91	78.00	75.00
Germany	CS, T1, T2	CS, D	NCV		0.21	73.26	69.30	73.26	NO		0.08	NO	74.00	78.00	74.00
Greece	T1, T2	CS, D	NCV	L, T	1.11	70.64	68.61	70.65	NO	L, T	1.93	76.59	73.33	76.59	73.33
Hungary	T1	D	NCV		-	NO	IE	70.79	NO		0.00	NO	73.33	NA	NA
Iceland	T1	D	NCV		0.47	70.79	68.61	70.79	69	T	0.77	76.59	73.33	76.59	73.33
Ireland	T1, T2	CS	NCV		0.07	71.40	69.96	71.40	NO		0.32	NO	73.30	76.00	73.30
Italy	D, M, T1, T2	CS	NCV	L	0.46	71.50	70.00	71.50	NO	L	1.02	76.54	73.27	76.54	73.27
Japan ^c	T1	CS	GCV	L, T	0.73	70.67	70.59	70.67	NO	L, T	0.87	IE	72.29	IE	72.29
Kazakhstan	T1, T2	CS, D	NCV	T	0.33	72.53	70.14	NE	NE		0.02	NO	73.25	0	0
Latvia	M, T1, T2	CR, CS, D, M	NCV		0.00	74.95	70.20	72.91	NO		0.18	NO	74.00	76.60	74.00
Liechtenstein	T1	CS	NCV		0.06	73.20	NO	73.20	NO		-	NO	NO	NO	NO
Lithuania	T1, T2	CS, D	NCV		0.01	72.24	70.00	72.24	NO		0.08	NO	72.89	81.29	72.89
Luxembourg	T1, T2, T3	CS, D	NCV		0.00	NO	69.30	71.50	69.30		0.01	NO	73.48	NO	73.48
Malta	D, T1	D	NCV		0.03	71.50	69.30	71.50	69.30	L, T	1.58	NA	74.07	77.40	74.10
Monaco	T1	D	NCV		-	NO	NO	70.79	NO	L, T	2.38	NO	74.00	NO	74.00
Netherlands	CS, T1, T2	CS, D	NCV		0.02	71.50	72.00	71.50	NO		0.28	NO	74.30	77.40	74.30
New Zealand ^c	D	CS	GCV	L, T	1.37	71.46	68.67	71.46	NO		0.36	76.15	NO	76.78	72.57
Norway	T1, T2	CS, PS	NCV	L, T	2.02	73.09	71.30	73.09	NO	L, T	3.88	78.82	73.55	78.82	73.55
Poland	T1, T2	CS, D	NCV		0.02	73.26	72.10	73.26	NO		0.00	77.60	73.82	77.60	74.10
Portugal	CR, T1, T2	CR, CS, D, OTH	NCV		0.56	70.60	69.51	70.60	69.51		0.32	76.59	73.33	76.59	73.33
Romania	T2	CS, D, OTH	NCV	T	0.27	70.68	69.30	0.07	68.61		0.15	NO	72.55	NO	72.48
Russian Federation	T1	D	NCV		0.40	70.79	IE	71.50	NO	T	0.05	76.59	73.33	77.40	74.10
Slovakia	CS, M, T1, T2	D	NCV		0.01	72.75	73.60	72.75	73.60		0.00	NO	75.01	NO	75.01
Slovenia	M, T1	D, M	NCV		0.01	IE	71.50	71.50	NO		-	NO	IE	77.60	NO
Spain	CR, CS, T1, T2, T3	CR, D	NCV	L, T	0.99	72.65	72.65	72.65	NA	L, T	1.00	76.78	72.64	76.78	72.64
Sweden	T1, T2	CS	NCV	L, T	0.70	71.50	70.00	71.50	NO	L, T	1.10	77.61	74.45	77.61	74.45
Switzerland	T1, T2, T3	CS, D	NCV	T	0.23	73.20	IE	73.20	IE		0.22	NO	73.59	NO	73.60
Turkey	T1, T2	D	NCV	L	0.75	74.88	NO	71.50	NA		0.42	77.40	74.10	76.97	74.07
Ukraine	T1, T3	CS, D, OTH	NCV		0.04	71.50	68.61	71.50	NO		0.03	76.59	73.33	76.59	73.33
United Kingdom	CS, T1, T2, T3	CS	NCV		0.34	71.76	69.55	69.95	69.98		0.39	78.35	73.93	78.35	74.13
United States ^c	T2	CS	GCV	L, T	1.89	72.06	68.98	72.06	NA	L	0.55	74.92	71.02	74.92	73.79

^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 inland 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. Hence, 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 1.12

Domestic and international aviation - activity data (2010)

Activity data in CRF based on GCV or NCV	Civil aviation						Aviation bunkers						Total jet kerosene and aviation gasoline		
	Jet kerosene			Aviation gasoline			Jet kerosene			Aviation gasoline			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	85,940	90335	5.1	2,704	2,498	-7.6	148,600	142,578	-4.1	NO	0	237,244	235,411	-0.8
Austria	NCV	746	1419	90.2	126	0	-100.0	28,147	27,950	-0.7	NO	0	29,019	29,369	1.2
Belarus	NCV	34	0	-100.0	25	0	-100.0	3,249	0	-100.0	NO	0	3,308	0	-100.0
Belgium	NCV	3,949	0	-100.0	141	88	-37.8	59,591	64,414	8.1	NO	0	59,736	64,502	8.0
Bulgaria	NCV	602	602	0.0	44	44	0.0	7,009	7,009	0.0	NO	0	7,655	7,655	0.0
Canada	GCV	87,486	173006	97.8	2,581	2,464	-4.5	132,526	44,778	-66.2	NA	0	222,593	220,248	-1.1
Croatia	NCV	1,119	2198	96.4	27	44	60.9	3,422	2,330	-31.9	NO	0	4,568	4,572	0.1
Czech Republic	NCV	36	1161	3137.1	88	88	0.5	13,387	13,029	-2.7	NO	0	13,511	14,278	5.7
Denmark	NCV	2,846	1548	-45.6	77	88	14.7	33,634	33,798	0.5	1	0	36,557	35,434	-3.1
Estonia	NCV	NO	43		24	0	-100.0	1,550	1,548	-0.1	NO	0	1,574	1,591	1.1
European Union (15)	NCV	227,763	265611	16.6	4,566	4356	-4.6	1,741,039	1,712,518	-1.6	164	0	1,973,533	1,982,485	0.5
European Union (27)	NCV	233,996	271858	16.2	5,171	4,752	-8.1	8,777,018	1,797,809	-79.5	180	176	9,016,365	2,074,595	-77.0
Finland	NCV	3,418	5805	69.8	43	88	105.6	22,589	22,446	-0.6	NO	0	26,050	28,339	8.8
France	NCV	63,589	48203	-24.2	990	924	-6.7	226,148	230,609	2.0	NO	0	290,728	279,736	-3.8
Germany	NCV	26,622	27004	1.4	568	572	0.7	335,129	339,743	1.4	NO	0	362,319	367,319	1.4
Greece	NCV	18,275	9933	-45.6	240	0	-100.0	29,614	28,552	-3.6	NO	0	48,130	38,485	-20.0
Hungary	NCV	NO	0		1E	0		9,618	9,847	2.4	NO	0	9,618	9,847	2.4
Iceland	NCV	270	258	-4.6	29	44	51.6	5,329	5,160	-3.2	0	0	5,629	5,462	-3.0
Ireland	NCV	528	1075	103.7	40	88	118.7	32,425	30,229	-6.8	NO	0	32,993	31,392	-4.9
Italy	NCV	31,621	29111	-7.9	835	836	0.2	132,033	132,612	0.4	NO	0	164,489	162,559	-1.2
Japan	GCV	136,865	130029	-5.0	65	45	-31.5	242,270	231,133	-4.6	NO	0	379,199	361,207	-4.7
Kazakhstan	NCV	12,053	5848	-51.5	51	0	-100.0	0	3,526	100.0	0	0	12,105	9,374	-22.6
Latvia	NCV	2	0	-100.0	4	0	-100.0	4,907	4,926	0.4	NO	0	4,913	4,926	0.3
Liechtenstein	NCV	2			NO			11			NO		12		
Lithuania	NCV	5	0	-100.0	18	0	-100.0	2,012	2,029	0.8	NO	0	2,035	2,029	-0.3
Luxembourg	NCV	NO	0		8	0	-100.0	17,983	18,017	0.2	1	0	17,991	18,017	0.1
Malta	NCV	8	0	-100.0	3	0	-100.0	4,453	4,257	-4.4	1	0	4,465	4,257	-4.7
Monaco	NCV	NO			NO			38			NO		38		
Netherlands	NCV	230	1978	759.2	342	132	-61.4	142,214	141,341	-0.6	NO	0	142,786	143,451	0.5
New Zealand	GCV	14,014	14151	1.0	516	491	-5.0	33,946	32,574	-4.0	NO	0	48,476	47,216	-2.6
Norway	NCV	14,812	14534	-1.9	81	88	8.7	17,800	18,017	1.2	NO	0	32,694	32,639	-0.2
Poland	NCV	1,064	0	-100.0	176	0	-100.0	21,435	21,285	-0.7	NO	176	22,675	21,461	-5.4
Portugal	NCV	5,571	6364	14.2	70	132	89.5	36,786	37,195	1.1	156	0	42,583	43,691	2.6
Romania	NCV	4,441	4441	0.0	220	220	0.1	6,957,081	6,957	-99.9	14	0	6,961,755	11,618	-99.8
Russian Federation	NCV	125,289	0	-100.0	1E	0		108,972	0	-100.0	NO	0	234,261	0	-100.0
Slovakia	NCV	75	0	-100.0	5	0	-100.0	1,421	1,720	21.0	1	0	1,502	1,720	14.5
Slovenia	NCV	IE	0		23	44	87.8	1,022	1,075	5.2	NO	0	1,045	1,119	7.1
Spain	NCV	48,057	98169	104.3	304	352	16.0	179,670	127,452	-29.1	NO	0	228,030	225,973	-0.9
Sweden	NCV	6,482	6321	-2.5	21	132	517.4	28,896	28,853	-0.1	NO	0	35,400	35,306	-0.3
Switzerland	NCV	1,688	2451	45.2	1E	176		58,118	58,781	1.1	1E	0	59,805	61,408	2.7
Turkey	NCV	40,043	17286	-56.8	NO	0		6,055	50,912	740.8	NA	0	46,098	68,198	47.9
Ukraine	NCV	1,973	0	-100.0	7	0	-100.0	12,478	0	-100.0	NO	0	14,458	0	-100.0
United Kingdom	NCV	26,913	28681	6.6	852	924	8.4	450,661	449,307	-0.3	5	0	478,431	478,912	0.1
United States	GCV	1,853,611	2032868	9.7	29,157	26,746	-8.3	1,059,733	913,319	-13.8	NA	0	2,942,501	2,972,932	1.0

^a Data provided by IEA on 9 May 2012.

^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 gasoline' and 'motor gasoline'.

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

^e No IEA data for European Union (27) does not include Cyprus

^f 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.

^g No IEA data for Liechtenstein are available. These data are included in the data of Switzerland.

^h IEA data for Monaco are included in the data of France.

ⁱ IEA data for the Netherlands excludes data for the following territories: Suriname and the Netherlands Antilles.

Table 1.13

Domestic and international navigation - activity data (2010)

	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	6,600	6,475	-1.9	18,957	22,152	16.9	27,000	26,668	-1.2	3,100	2,854	-7.9	33,600	33,143	-1.4	22,057	25,006	13.4
Austria	NCV	NO	0		35	426	1,125.0	NO	0		460	0	-100.0	NO	0		495	426	-14.0
Belarus	NCV	NO	0		234	0	-100.0	NO	0		NE	0		NO	0		234	0	-100.0
Belgium	NCV	IE	0		6,423	6,305	-1.8	253,393	296,920	17.2	20,964	20,959	0.0	253,393	296,920	17.2	27,387	27,264	-0.4
Bulgaria	NCV	NO	0		NO	0		2,024	1,840	-9.1	2,200	2,200	0.0	2,024	1,840	-9.1	2,200	2,200	0.0
Canada	GCV	54,574	50,089	-8.2	32,252	30,544	-5.3	29,431	27,014	-8.2	1,563	1,491	-4.6	84,006	77,104	-8.2	33,815	32,035	-5.3
Croatia	NCV	80	80	0.0	1,486	1,495	0.6	225	241	7.2	30	43	42.8	305	322	5.3	1,516	1,538	1.4
Czech Republic	NCV	NO	0		171	170	-0.4	NO	0		NO	0		NO	0		171	170	-0.4
Denmark	NCV	2,761	840	-69.6	5,448	5,666	4.0	15,968	17,200	7.7	15,182	11,459	-24.5	18,729	18,040	-3.7	20,630	17,125	-17.0
Estonia	NCV	NO	0		319	341	6.8	8,216	8,200	-0.2	898	895	-0.4	8,216	8,200	-0.2	1,217	1,235	1.5
European Union (15)	NCV	98,486	82,400	-16.3	124,842	148,844	19.2	1,627,211	1,652,120	1.5	239,127	266,250	11.3	1,725,697	1,734,520	0.5	363,970	415,094	14.0
European Union (27)	NCV	98,495	82,400	-16.3	129,015	152,424	18.1	1,696,866	1,737,480	2.4	263,334	289,401	9.9	1,795,361	1,819,880	1.4	392,349	441,825	12.6
Finland	NCV	2,315	2,240	-3.2	2,593	3,280	26.5	5,801	6,080	4.8	2,683	2,684	0.0	8,116	8,320	2.5	5,276	5,964	13.0
France	NCV	1,651	0	-100.0	7,306	2,556	-65.0	93,591	93,320	-0.3	10,014	8,264	-17.5	95,242	93,320	-2.0	17,320	10,820	-37.5
Germany	NCV	NO	0		10,213	10,906	6.8	93,058	92,240	-0.9	21,605	22,280	3.1	93,058	92,240	-0.9	31,818	33,185	4.3
Greece	NCV	18,568	18,480	-0.5	11,641	11,545	-0.8	98,224	97,760	-0.5	14,777	14,654	-0.8	116,792	116,240	-0.5	26,418	26,199	-0.8
Hungary	NCV	NO	0		42	43	1.4	NA	0		NA	0		NA,NO	0		42	43	1.4
Iceland	NCV	105	120	14.3	367	341	-7.1	1,132	1,120	-1.1	1,304	1,278	-2.0	1,237	1,240	0.2	1,671	1,619	-3.1
Ireland	NCV	NO	800		2,699	43	-98.4	1,609	80	-95.0	4,197	3,408	-18.8	1,609	880	-45.3	6,897	3,451	-50.0
Italy	NCV	29,713	21,200	-28.7	32,157	26,029	-19.1	86,046	112,600	30.9	4,012	10,096	151.7	115,759	133,800	15.6	36,169	36,125	-0.1
Japan	GCV	IE	96,191		6,221	44,176	610.1	IE	189,613		223	3,323	1,390.3	IE	285,803		6,444	47,499	637.1
Kazakhstan	NCV	NO	0		764	767	0.3	0	0	0	0	0	0	0	0	0	764	767	0.3
Latvia	NCV	NO	0		297	297	-0.2	7,592	7,592	0.0	2,932	2,923	-0.3	7,592	7,592	0.0	3,229	3,220	-0.3
Liechtenstein	NCV	NO	0		NO	0		NO	0		NO	0		NO	0		NO	0	
Lithuania	NCV	NO	0		235	258	10.0	5,025	5,051	0.5	756	775	2.5	5,025	5,051	0.5	991	1,034	4.3
Luxembourg	NCV	NO	0		16	0	-100.0	NO	0		1	0	-100.0	NO	0		18	0	-100.0
Malta	NCV	NA	0		635	0	-100.0	33,995	49,720	46.3	9,348	11,332	21.2	33,995	49,720	46.3	9,984	11,332	13.5
Monaco	NCV	NO	25		25	0		NO	0		294	0		NO	0		319	0	
Netherlands	NCV	NO	0		8,014	6,603	-17.6	517,986	506,480	-2.2	38,911	65,476	68.3	517,986	506,480	-2.2	46,925	72,079	53.6
New Zealand	GCV	3,519	724	-79.4	NO	2,641		13,077	12,269	-6.2	1,399	1,661	18.7	16,596	12,993	-21.7	1,399	4,303	207.5
Norway	NCV	2,458	2,440	-0.7	24,235	29,777	22.9	6,693	8,160	21.9	11,747	8,009	-31.8	9,150	10,600	15.8	35,982	37,786	5.0
Poland	NCV	9	0	-100.0	8	0	-100.0	6,650	6,680	0.4	3,380	2,300	-31.9	6,659	6,680	0.3	3,389	2,300	-32.1
Portugal	NCV	2,138	3,240	51.5	860	1,874	117.9	18,114	17,000	-6.2	3,147	2,130	-32.3	20,253	20,240	-0.1	4,007	4,004	-0.1
Romania	NCV	NO	0		2,464	2,471	0.3	NO	157		1,948	469	-75.9	NO	157		4,412	2,939	-33.4
Russian Federation	NCV	6,499	0	-100.0	7,724	0	-100.0	1,573	0	-100.0	26,120	0	-100.0	8,071	0	-100.0	33,844	0	-100.0
Slovakia	NCV	NO	0		1	0	-100.0	NO	0		448	0	-100.0	NO	0		449	0	-100.0
Slovenia	NCV	NO	0		IE	0		768	760	-1.1	NO	0		768	760	-1.1	IE,NO	0	
Spain	NCV	32,502	5,200	-84.0	14,472	38,766	167.9	287,006	285,720	-0.4	63,720	62,835	-1.4	319,508	290,920	-8.9	78,192	101,601	29.9
Sweden	NCV	6,423	5,960	-7.2	2,064	1,874	-9.2	78,929	73,440	-7.0	7,851	7,625	-2.9	85,352	79,400	-7.0	9,915	9,500	-4.2
Switzerland ^d	NCV	NO	0		981	341	-65.2	NO	0		446	426	-4.5	NO	0		1,426	767	-46.2
Turkey	NCV	90	2,040	2,166.7	22,569	22,961	1.7	59	5,520	9,255.9	10,098	9,926	-1.7	149	7,560	4,973.8	32,667	32,887	0.7
Ukraine	NCV	131	0	-100.0	1,278	0	-100.0	284	0	-100.0	1,378	0	-100.0	415	0	-100.0	2,656	0	-100.0
United Kingdom	NCV	3,606	24,440	577.7	22,936	32,972	43.8	80,071	53,280	-33.5	37,090	34,378	-7.3	83,677	77,720	-7.1	60,026	67,351	12.2
United States	GCV	355,736	2,975	-99.2	182,481	0	-100.0	653,932	851,597	30.2	124,901	237,410	90.1	1,009,667	854,572	-15.4	307,382	237,410	-22.8

^a Data provided by IEA on 9 May 2012.

^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 IEA data for European Union (27) does not include Cyprus.

^e No IEA data for Liechtenstein are available. These data are included in the data of Switzerland.

^f IEA data for Monaco are included in the data of France.

^g IEA data for the Netherlands excludes data for the following territories: Suriname and the Netherlands Antilles.

Table 1.14

Fugitive emissions from fuels: coal mining and handling - CH₄ (2010)

	Key category	Share of national total (%)	Methods and EF used ^a		Activity data					CH ₄ IEF			
					CRF			IEA	Difference	Underground mines		Surface mines	
					Underground mines	Surface mines	Total	Total		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	4.77	CS, T2, T3	CS, PS	114.8	429.1	543.8	424.1	-22.0	6.35	0.36	1.08	NE
Austria		-	NA	NA	NO	NO	NO	0.0	-	NO	NO	NO	IE
Belarus		-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Belgium		-	T1	D	NO	NO	NO	0	-	NO	NO	NO	NO
Bulgaria	L	1.21	T1	D	0.8	28.6	29.4	29.4	0	12.06	1.68	0.80	0.07
Canada	T	0.15	CS	CS	1.6	87.7	89.3	67.9	-24.0	2.20	IE	0.51	IE
Croatia		-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Czech Republic	L, T	2.35	T1, T2	CS, D	11.4	43.8	55.2	55.2	0	8.75	1.64	0.77	0.07
Denmark		-	NA	NA	NO	NE, NO	NE, NO	0	-	NO	NO	NE, NO	NE, NO
Estonia		-	NA	NA	NO	NO	NO	18.3	-	NO	NO	NO	NO
European Union (15)	T	0.17	CR, CS, OTH, T1, T2, T3	CR, CS, D, OTH	25.4	242.3	267.7	278.4	4.0	10.19	0.95	0.26	0.00
European Union (27)	L, T	0.40	CR, CS, D, OTH, T1, T2, T3	CR, CS, D, OTH, PS	115.2	409.9	525.1	561.1	6.9	6.21	0.65	0.36	0.02
Finland		-	NA	NA	NO	NO	NO	7.4	-	NO	NO	NO	NO
France	T	-	T1, T2, T3	CS	NA	NA	NA	0	-	NA	NO	NA	NO
Germany	T	0.30	CS, T2, T3	CS	12.9	169.4	182.3	182.3	0.0	9.50	0.58	0.01	IE
Greece	L	1.01	T1	D	NO	56.5	56.5	56.5	0	NO	NO	1.01	IE
Hungary	T	0.02	D, T2	CS, PS	0.8	8.3	9.1	9.1	0	0.62	0.06	NA	NA
Iceland		-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Ireland		-	NA	NA	NO	NO	NO	5.1	-	NO	NO	NO	NO
Italy		0.00	T1	CR, CS, D	0.1	NO	0.1	0.1	0	10.05	0.30	NO	NA
Japan	T	0.00	T1, T3	D, OTH	0.6	0.6	1.1	0	-100.0	1.17	1.64	0.77	0.07
Kazakhstan	L, T	9.43	T1, T2, T3	CS, D	11.7	99.2	110.9	110.9	0.0	30.36	0.67	8.30	NO
Latvia		-	NA	NA	NO	NO	NO	0.0	-	NO	NO	NO	NO
Liechtenstein		-	NA	NA	NO	NO	NO		-	NO	NO	NO	NO
Lithuania		-	NA	NA	NO	NO	NO	0.0	-	NO	NO	NO	NO
Luxembourg		-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Malta		-	NA	NA	NA	NA	NA	0	-	NA	NA	NA	NA
Monaco		-	NA	NA	NO	NO	NO		-	NO	NO	NO	NO
Netherlands		-	OTH	OTH	NA	NA	NA	0	-	NA	NA	NA	NA
New Zealand	T	0.77	T1	D	1.4	4.0	5.3	5.3	0.0	15.39	1.60	0.77	0.07
Norway		0.06	T2	CS	0.1	2.0	2.0	1.9	-4.9	7.16	IE	0.54	IE
Poland	L, T	1.78	CS, T1	CS	69.2	56.5	125.7	132.7	5.6	4.55	0.36	0.01	IE
Portugal		-	NA	NA	NO	NO	NO	0	-	NO	IE	NO	IE
Romania	L, T	0.65	T1	D	0.8	30.3	31.1	31.1	0	12.06	1.68	0.80	0.07
Russian Federation	L, T	2.10	T2	CS	103.7	217.9	321.6	0	-100.0	12.29	1.96	3.70	IE
Slovakia	L	0.70	T2	CS	2.4	NO	2.4	2.4	0.3	5.83	0.60	NO	NO
Slovenia	L, T	1.28	T3	CS	4.4	NO	4.4	4.4	0.0	1.88	0.80	NO	NO
Spain	T	0.15	CR, CS, T2	CR, CS	5.0	6.0	11.0	8.4	-23.4	2.94	1.62	0.28	0.04
Sweden		-	T2	CS	NO	NO	NO	0.8	-	NO	NO	NO	NO
Switzerland		-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Turkey		0.50	T1	D	2.5	70.9	73.4	73.4	0.0	11.73	2	0.80	0
Ukraine	L, T	5.12	T1, T2, T3	CS, D, M	76.8	0.0	76.8	0	-100.0	12.10	1.23	0.94	0.13
United Kingdom	T	0.30	T3	CS, OTH	7.4	10.4	17.8	17.8	0.0	16.30	1.16	0.34	IE
United States	L, T	1.07	T2, T3	CS	305.9	693.7	999.6	982.0	-1.8	11.12	0.88	0.90	0.15

^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.B.1 Solid fuels.

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

Table 1.15a

Fugitive emissions from fuels: oil and natural gas - CH₄, CO₂ (2010)

	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	1.00	CS, T1, T2, T3	CS, PS	L, T	1.24	CS, T1, T2, T3	CS, PS
Austria		0.33	CS, T1, T2, T3	CS, D, PS		0.28	CS, T2	CS, D, PS
Belarus	L, T	1.92	CS, D	CS, D		0.00	D	CS, D
Belgium		0.33	CS, M, T1	CS, D		0.08	T1, T3	D, PS
Bulgaria	L	0.76	T1	D		0.01	T1	D
Canada	L, T	6.21	CS	CS	L, T	2.11	CS	CS
Croatia	L, T	5.34	T1	D	L, T	1.70	CS	CS
Czech Republic	L	0.51	T1, T2	CS, D		0.01	T1, T2	CS, D
Denmark		0.17	CR, CS, T1	CR, CS, PS		0.57	CR, CS, T1	CS, D, PS
Estonia		0.41	T1	D		-	NA	NA
European Union (15)	L, T	0.55	CR, CS, D, M, OTH, T1, T1b, T2, T3	CR, CS, D, OTH, PS	L	0.45	CR, CS, D, T1, T2, T3	CS, D, PS
European Union (27)	L, T	0.78	CR, CS, D, M, OTH, T1, T1b, T2, T3	CR, CS, D, OTH, PS	L	0.39	CR, CS, D, T1, T2, T3	CS, D, PS
Finland		0.05	CS, T1, T2	CS, D, PS		0.19	CS	CS, D
France		0.22	T1, T2, T3	CS	L	0.65	T1, T2, T3	CS
Germany	L	0.70	CS, T1, T2, T3	CS, D		0.15	CS, T1, T2	CS, D
Greece		0.16	T1	D		0.01	T1	D
Hungary	L, T	3.15	CS, D	CS, D, OTH		0.32	D	D, PS
Iceland		0.08	CS	OTH	L, T	4.16	CS	OTH
Ireland		0.05	CS, T1	CS, D		-	NA	NA
Italy	L, T	1.00	T1, T2	CS, D	L, T	0.46	T1, T2	CS, D
Japan		0.03	CS, T1	CS, D, OTH		0.00	T1	D
Kazakhstan	L, T	2.74	CS, D, T1	CS, D	L, T	0.97	CS, T1	CS, D
Latvia	L	0.84	CS	PS		-	NA	NA
Liechtenstein	T	0.46	T3	CS		-	NA	NA
Lithuania	L, T	1.25	T1	D		0.05	T1	D
Luxembourg		0.37	T1	D		0.00	T1	D
Malta		-	NA	NA		-	NA	NA
Monaco		0.02	T1	D		-	NA	NA
Netherlands	T	0.34	D, T1b, T2, T3	CS, D, PS	L, T	0.49	CS, D, T1, T2, T3	CS, D, PS
New Zealand	L, T	0.79	D	CS, D	L, T	2.02	D	CS, D
Norway	L, T	1.19	T2	CS	L, T	4.69	T2	CS, PS
Poland	L, T	1.11	CS, T1	CS, D		0.05	CS, D, T1	CS, D
Portugal	L, T	0.85	CR, OTH	CR, OTH	L, T	1.01	D	CS, D
Romania	L, T	5.80	T1	D		0.54	T1	D
Russian Federation	L, T	14.66	T1, T1b, T2	CS, D	L, T	1.51	T1, T1b	D
Slovakia	L, T	1.58	T1	CS		0.00	T1	CS
Slovenia		0.15	T1, T3	CS, D		0.00	T1, T3	CS
Spain		0.15	CR, CS, T1	CR, CS, D	L	0.61	CS, T1, T2	CS, D, PS
Sweden		0.14	CS, T1, T2	CS, D, PS	L, T	1.33	T1, T2, T3	CS, D, PS
Switzerland	T	0.32	CS	CS		0.14	CS	CS
Turkey		0.08	T1	D		0.03	T1	D
Ukraine	L, T	5.78	T1	CS, D		0.08	T1	CS, D
United Kingdom	L, T	0.87	T2, T3	CS, PS	L	0.74	T2, T3	CS, PS
United States	L	3.62	M	M	L, T	0.48	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 1.15b

Fugitive emissions from fuels: oil and natural gas - oil - CH₄, CO₂ (2010)

	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	Unit	Description	Value	Unit	Unit	Description	Value	Unit	Unit	Description	Value	Unit	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	0.3	3,200	t	NA	3,814	NA	PJ	Crude oil and ORF produced	753	NA	PJ	Quantity shipped	1,076	181,041	PJ	Oil refined
Austria	IE	IE	Not specified	number of wells drilled	6,892,216	155,374,889	Mt	Oil throughput	IE	IE	Not specified	oil loaded in tankers	31,663	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)	150	14	Not specified	(PJ)	69	NA	PJ	(e.g. PJ oil refined)
Bulgaria	194	9,102	10 ³ m ³	number of wells drilled	2,650	7,672	PJ	(e.g. PJ of oil produced)	NO	NO	PJ	(e.g. PJ oil loaded in tankers)	880	NO	PJ	(e.g. PJ oil refined)
Canada	IE	IE	Not specified	NA	2,267	1,892	10 ³ m ³	Conventional Oil, Heavy Oil and Crude Oil Production	12	0	m ³	Convention, Heavy, and Crude Oil Production	12	3	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	NO	NO	Not specified	(e.g. number of wells drilled)	5,288	7,305	PJ	(e.g. PJ of oil produced)	146	13	PJ	(e.g. PJ oil loaded in tankers)	1,150	NE	PJ	(e.g. PJ oil refined)
Denmark	698	5,700	Not specified	(e.g. number of wells drilled)	0	0	Mg	Oil produced	IE, NE, NO	NA, NE, NO	Mg	Oil produced	299	NA, NO	kt	Oil refined
Estonia	NO	NO	PJ	Shale Oil	IE	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)
European Union (15)	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated
European Union (27)	NE	NE	Not specified		NE	NE	Not specified	Not estimated	NE	NE	Not specified	Not estimated	NE	NE	Not 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		39,167	7,050	PJ	PJ Produced	NA	NA	PJ	PJ Loaded	79	926,884	PJ	PJ Refined
Germany	64	0	Not specified	number of wells drilled	0	1	t	oil produced	0	NA	t	oil transported in pipelines	0	IE	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	7,425	PJ	oil produced	6	1	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	Not 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)	110	NO	PJ	(e.g. PJ oil refined)
Italy	IE	IE	Not specified	number of wells drilled	1,600	8	Gg	(Gg of oil produced)	IE	IE	Not specified	oil loaded in tankers	24	15,238	Gg	(Gg oil refined)
Japan	203	4,275	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
Kazakhstan	0	0	Not specified		106	NA	kt	oil produced	30	NE	kt	oil transported by rail/sea	35	NA	kt	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	Not specified	oil refined
Lithuania	270	5,700	Not specified	(wells drilled)	1,450	270	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	Not specified	oil refined
Malta	NA	NA	Not specified		NA	NA	Not specified		NA	NA	Not specified		NA	NA	Not specified	
Monaco	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified	
Netherlands	IE	IE	Not specified	number of wells drilled/tested	IE	IE	PJ	Refery input: crude oil, NGL	6	1	t	oil transported by pipeline	184	417,656	PJ	Refery input: crude oil, NGL
New Zealand	IE	IE	Not specified	(e.g. number of wells drilled)	IE	IE	Not specified	(e.g. PJ of oil produced)	1	0	TJ	(e.g. PJ oil loaded in tankers)	1	NA	TJ	(e.g. PJ oil refined)
Norway	IE	IE	kg	number of wells drilled	IE	IE	10 ⁶ m ³	oil produced	2,100	26,747	PJ	Oil loaded	4,505	1,779,216	PJ	Oil refined
Poland	NA	NA	Not specified	NA	61,800	6,315,000	PJ	Production	6	1	Gg	oil transported 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	7,860	Mt	Production (crude and other materials)
Romania	50,195	2,371,646	PJ	number of wells drilled	545,159	69,257	PJ	(e.g. PJ of oil produced)	152	14	PJ	(e.g. PJ oil loaded in tankers)	880	NA	PJ	(e.g. PJ oil refined)
Russian Federation	73,518	201,093	Not specified	number of producing and capable wells	1,690,371	314,759	Mt	oil produced	6,295	571	Mt	(oil transported in pipelines)	36,871	NE	Mt	oil refined
Slovakia	NO	NO	Not specified	(e.g. number of wells drilled)	36,145	196	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	0	NO	Not specified		1,706,000	317,994	Tg	Crude oil produced	27,000	NA	Tg	Transport of crude oil	774	32,924,151	Tg	Oil refined
Sweden	1	136,629	TJ		NO	NO	Not specified		745	NE	PJ	(PJ oil loaded in tank ships)	23,383	11,627,533	Mt	Petroleum coke
Switzerland	NO	NO	Not specified		NO	NO	Not specified		NO	NO	Not specified		1,183	35,646	PJ	Crude oil used
Turkey	NE	NE	Not specified		NE	NE	Not specified		NE	NE	Not specified		NE	NA	Not specified	
Ukraine	70	153	Not specified	number of wells drilled and operated	1,450	270	10 ³ m ³	oil produced	5	0	10 ³ m ³	Crude oil transported by pipeline	1,200	NE	PJ	Oil refined
United Kingdom	25	3,200	t	Well testing fuel use	927	99,580	PJ	Oil produced.	76	NO	Gg	Offshore loading of oil only	224	NO	PJ	Oil refinery throughput
United States	IE	NA	Not specified	IE	728,137	161,092	10 ⁶ Bbl(oil US)	(e.g. Domestic Oil Production)	937	NA	10 ⁶ Bbl(oil US)	Refinery Feed	3,458	2,841	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 CH₄ and implied emissions factors on CO₂ and N₂O also look at the IPCC good practice guidance, table 2.16, pages 2.86-2.87.

Table 1.15c

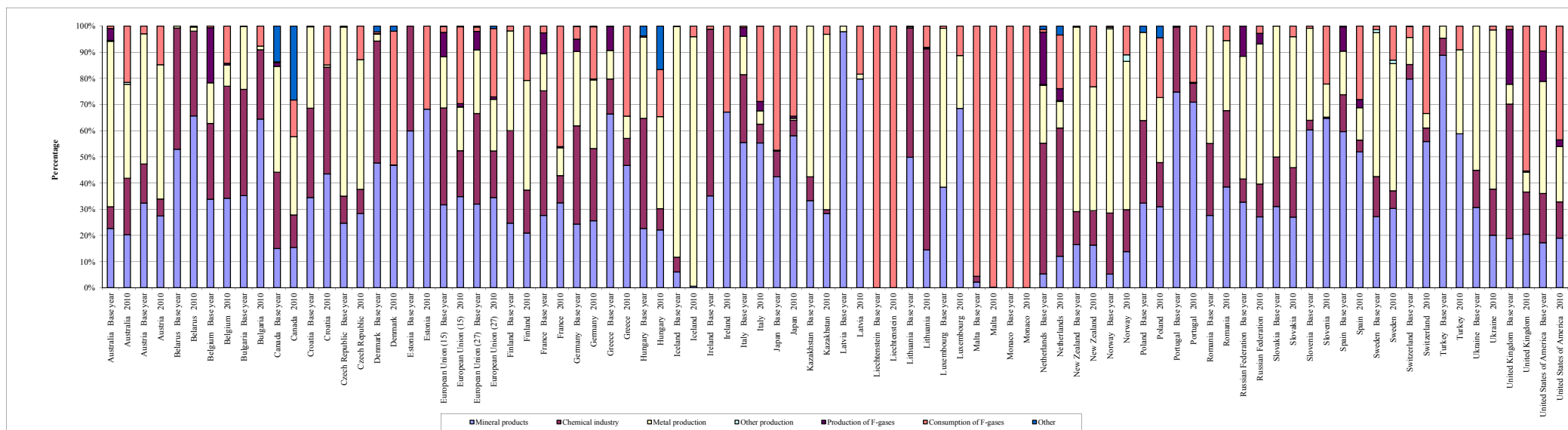
Fugitive emissions from fuels: oil and natural gas - natural gas - CH₄, CO₂ (2010)

	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	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	1,987	IE	PJ	Gas produced	11,326	545	PJ	Gas transmitted	248,469	14,988	PJ	Utility sales	IE	IE	Not specified	NE
Austria	IE	50,661	10 ⁶ m ³	gas produced	495	25	km	Pipelines length (km)	113	NA	km	Distribution network length	NO	NO	PJ	Gas consumed
Belarus	288,000	NA	PJ	PJ gas produced	7,823	NA	PJ	PJ gas consumed	IE	NA	Not specified	PJ gas consumed	83,958	NA	PJ	PJ gas consumed
Belgium	NO	NO	Not specified	(spec)	7,166	IE	PJ	(e.g. PJ gas consumed)	22,186	665	PJ	PJ gas consumed	NO	NO	Not specified	(spec)
Bulgaria	227,000	5,683	PJ	(e.g. PJ gas produced)	1,340	16	km	Pipeline length	670	41	km	Pipeline length	262,261	NO	PJ	(e.g. PJ gas consumed)
Canada	1,322	43	10 ⁶ m ³	Gross New Production of Natural Gas (also includes oil and Gas Well Drilling and Servicing)	3,236	24	km	Transmission Length	358	NE	km	Distribution Length	974	191	Not specified	
Croatia	458,000	5,190,211	PJ	(e.g. PJ gas produced)	IE	NO	PJ	(e.g. PJ gas consumed)	IE	NO	Not specified	(e.g. PJ gas consumed)	248,175	NO	Not specified	(e.g. PJ gas consumed)
Czech Republic	39,354	16	PJ	(e.g. PJ gas produced)	10,088	40	PJ	(e.g. PJ gas consumed)	109,937	438	PJ	(e.g. PJ gas consumed)	14,758	59	PJ	(e.g. PJ gas consumed)
Denmark	IE, NO	NA, NO	10 ⁶ m ³	Gas produced	4	0	10 ⁶ m ³	Gas transmission	57	1	10 ⁶ m ³	Gas distributed	IE, NO	NA, NO	Not specified	Incl. in transmission
Estonia	NO	NO	PJ	(e.g. PJ gas produced)	NO	NO	PJ	(e.g. PJ gas consumed)	165,017	NO	PJ	Natural Gas	IE	NO	PJ	
European Union (15)	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	
European Union (27)	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	not estimated	NE	NE	Not specified	
Finland	NO	NO	Not specified	(e.g. PJ gas produced)	1,913	5,260	PJ	PJ gas consumed	127,242	358,590	PJ	PJ gas distributed via local networks	NO	NO	Not specified	t of natural gas released from pipelines
France	195	2,784,075	PJ	PJ Production	29,582	NA	PJ	PJ Consumed	IE	IE	Not specified		NO	NO	Not specified	
Germany	6	2,904	TJ	production and processing	13	NO	TJ	pipelines and containers	422	NO	km	distribution net	44	NO	TJ	gas consumed
Greece	455	120	10 ⁶ m ³	Natural gas production	2,538	16	km	Length of transmission pipeline	615	NA	km	Length of distribution mains	IE	IE	Not specified	(e.g. PJ gas consumed)
Hungary	108,909	1,371,139	PJ	gas produced	3,400	NO	km	Transmission pipeline length	520	0	km	Distribution 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	514	NO	PJ	PJ of Gas produced	IE	IE	Not specified	(e.g. PJ gas consumed)	18,814	NO	PJ	PJ of gas consumed	NO	NO	PJ	(e.g. PJ gas consumed)
Italy	1,537	95	10 ⁶ m ³	(Mm3 gas produced)	407	9	10 ⁶ m ³	(Mm3 gas transported)	4,965	111	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	463	NA	PJ	LNG & NG Consumption with Town Gas Production	IE	NA	Not specified	not estimated
Kazakhstan	2,100	16	10 ⁶ m ³	gas produced	584	NE	10 ⁶ m ³	gas transported, including transit	19,973	NE	10 ⁶ m ³	gas consumed	37,109	NE	Not specified	
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	546	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	IE	IE	PJ	(e.g. PJ gas consumed)
Luxembourg	NO	NO	Not specified	gas produced	13,070	24	PJ	gas consumed	30	1	TJ	gas consumed	IE	IE	Not specified	
Malta	NA	NA	Not specified		NA	NA	Not specified		NA	NA	Not specified		NO	NO	Not specified	
Monaco	NO	NO	Not specified		NO	NO	Not specified		1	NO	m ³	Gaz naturel	NO	NO	Not specified	
Netherlands	IE	NO	PJ	gas produced	2,070	59	PJ	gas transported	103,393	3,192	10 ³ km	natural gas distribution network	IE	NE	Not specified	
New Zealand	IE	IE	Not specified	(e.g. PJ gas produced)	413,946	52,800	TJ	(e.g. PJ gas consumed)	13,856	1,976	TJ	(e.g. PJ gas consumed)	78	NA	Not specified	(e.g. PJ gas consumed)
Norway	IE	IE	10 ⁶ m ³	gas produced	IE	IE	Not specified	gas consumed	NE	IE	Not specified	gas consumed	NA, NE	NA, NE	Not specified	
Poland	89,294	19,923	PJ	Production	53,644	530	PJ	gas consumed	310,538	1,182	PJ	gas consumed	1,323	10	Not specified	NA
Portugal	NO	NO	Not specified		4,541	12,501	Gg	gas consumed	IE	IE	Gg	gas consumed	IE	IE	Not specified	
Romania	74,454	2,572	PJ	(e.g. PJ gas produced)	41,551	432	PJ	gas consumed	770	IE	km	pipeline network	220,692	NA	PJ	(e.g. PJ gas consumed)
Russian Federation	3,629	122	10 ⁶ m ³	gas produced	8,903	5	kt	(total gas transmission)	20,906	NE	10 ⁶ m ³	gas consumed	8,817	NE	10 ⁶ m ³	gas consumed
Slovakia	388,877	2,106	PJ	production	2,900	16	km	transfer	710	4	km	distribution	IE	IE	PJ	consumed
Slovenia	39	0	TJ	PJ gas produced	203	0	km	length of transport pipelines	141	0	km	length of pipelines	1	0	Not specified	(e.g. PJ gas consumed)
Spain	70,658	2,441	PJ	PJ gas produced (NCV)	650	9	PJ	PJ gas (NCV)	16,160	216	PJ	PJ gas consumed (NCV)	NE	NE	Not specified	(e.g. PJ gas consumed)
Sweden	NO	NO	Not specified		2,900	16	km	Length of pipeline	615	NA	km	Length of pipeline	NO	NO	Not specified	
Switzerland	NO	NO	Not specified		369	158	km	See documentation box	IE	IE	Not specified		IE	IE	Not specified	
Turkey	NA	NA	Not specified		NE	NE	Not specified		NE	NE	Not specified		NE	NE	Not specified	
Ukraine	3,780	122	10 ⁶ m ³	Natural Gas Produced	2,907,220	26,105	10 ³ km	Length of natural gas transmission pipeline	820,000	7,428	10 ³ km	Length of natural gas distribution network	235,001	2,074	PJ	Residential and Non-residential Gas Consumed
United Kingdom	1,078	76,179	PJ	(e.g. PJ gas produced)	IE	IE	Not specified	(e.g. PJ gas consumed)	59,335	2,240	PJ	Gas consumed	1	0	Not specified	(e.g. PJ gas consumed)
United States	318,474	1,041,742	10 ⁹ ft ³	(e.g. Total Natural Gas Produced)	86,446	2,710	10 ⁹ ft ³	(e.g. Total Natural Gas Consumed)	56,321	1,685	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 CH₄ and implied emissions factors on CO₂ and N₂O also look at the IPCC good practice guidance, table 2.16, pages 2.86-2.87.

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 - CO2 (2010)

	Methods and EF used ^a		Cement production				Lime production			
	Methods	EF	Key category	Share of national total (%)	Activity data (production)			Key category	Share of national total (%)	CO ₂ IEF (t/t)
					Description ^b	Value	CO ₂ IEF			
						(kt)	(t/t)			
IPCC default EF ^c							0.499 (cement)			
IPCC default EF ^d							0.51 (clinker)		0.59-0.86	
Australia	T2	CS	L, T	0.7	Clinker production	6,470	0.55		0.2	0.8
Austria	CS, T1, T3	CS, D, PS	L, T	1.9	Clinker Production [kt]	3,097	0.52	L, T	0.7	0.8
Belarus	D, T1, T2	D	L, T	2.2	Used clinker production data	3,772	0.52		0.7	0.7
Belgium	T3	CS, PS	L	1.9	2.A.1-Cement Production,,,Activity Data,,, (kt)	4,740	0.54	L, T	1.2	0.8
Bulgaria	T1, T2	CS, D, PS	L, T	1.3	Klinker - kt	1,515	0.53	L, T	1.5	0.8
Canada	T1, T2	CS, D	L, T	0.8	Clinker Production Data	11,019	0.52		0.2	0.7
Croatia	T1, T2	CS, D	L, T	4.2	(e.g. cement or clinker production)	2,367	0.51		0.5	0.8
Czech Republic	CS, T1, T3	CR, CS, D, PS	L, T	1.1	(clinker production)	2,748	0.53	L	0.5	0.7
Denmark	CS, T1	CS, D, PS	L	1.1	2.A.1-Cement Production,,,Activity Data,,, (kt)	1,314	0.51		0.1	0.7
Estonia	T1, T2	D, PS	L, T	1.5	Clinker production	577	0.54		0.1	0.7
European Union (15)	CR, CS, D, OTH, T1, T2, T3	CR, CS, D, OTH, PS	L, T	1.7	2.A.1-Cement Production,,,Activity Data,,, (kt)	NE	NE		0.4	NE
European Union (27)	CR, CS, D, OTH, T1, T2, T3	CR, CS, D, OTH, PS	L, T	1.7	2.A.1-Cement Production,,,Activity Data,,, (kt)	NE	NE	L	0.4	NE
Finland	T2	CS, D	L, T	0.7	clinker production	1,049	0.50	L	0.6	0.8
France	T2, T3	D, PS	L, T	1.5	kt of Clinker	14,901	0.53		0.4	0.7
Germany	T1, T2	CS, D	L	1.3	(clinker production)	22,996	0.53	L	0.5	0.8
Greece	CS, T1	CS, D, PS	L, T	3.6	clinker production	7,927	0.53	T	0.2	0.8
Hungary	CS, D, T2	CS, D, PS	L, T	1.1	Clinker Production	1,433	0.51		0.3	0.8
Iceland	D, T2	D, PS	T	0.2	clinker production	18	0.54		-	NO
Ireland	T2	D, PS	L	1.8	Clinker production	2,053	0.54		0.3	0.8
Italy	T2	CS, D, PS	L, T	2.6	(clinker production)	25,239	0.53		0.4	0.7
Japan	CS, D, T2	CS, D	L, T	1.9	Clinker produced	47,279	0.50		0.5	0.4
Kazakhstan	D, T1a	D	T	0.6	clinker produced	3,298	0.50		0.3	0.8
Latvia	CR, T1, T2, T3	D, PS	L, T	3.6	clinker production	835	0.52		0.1	0.8
Liechtenstein	NA	NA	-	-	Production	NO	NO		-	NO
Lithuania	CS, T1, T2	CS, D, PS	L, T	1.4	(clinker production)	536	0.54	T	0.1	0.8
Luxembourg	CS, T2	CS, PS	L, T	3.2	clinker production	736,019	0.53		-	NO
Malta	CS, D	CS, D	-	-	(not occurring)	NO	NO		-	NO
Monaco	NA	NA	-	-		NO	NO		-	NO
Netherlands	CS	CS, D, PS		0.2	Clinker production	701	0.50		-	IE
New Zealand	T1a, T2	D, PS	L	0.8	Cement production	C	C		0.2	0.7
Norway	T2	CS	L, T	1.4	Production quantity	1,434	0.53	L, T	0.5	0.4
Poland	T1, T2, T3	CS, D, OTH, PS	L, T	1.6	Clinker production	11,768	0.53	T	0.3	0.8
Portugal	CR, D, OTH, T3	CR, CS, D, OTH	L, T	4.8	Total clinker production	6,484	0.52	L	0.6	0.7
Romania	CR, CS, D, OTH, T2	CR, D, PS	L, T	2.3	(clinker production data)	5,199	0.53	L	1.3	C
Russian Federation	D, T2	CS, D	L, T	1.0	(clinker production)	43,155	0.53		0.3	0.7
Slovakia	T3	PS	L	1.8	Clinker Production	1,636	0.52	L, T	1.6	0.8
Slovenia	CS, D, T2	CS, D	L, T	1.9	Clinker produced	681	0.54	T	0.5	0.7
Spain	CS, D, T2	CS, D, PS	L, T	3.1	Clinker production	21,229	0.53		0.4	0.7
Sweden	CS, D, T2	CS, D, PS	L, T	2.0	Produced amount of clinker	2,454	0.55	L, T	0.8	0.8
Switzerland	CS, D, T2	CS, D	L, T	3.6	clinker production	3,642	0.53		0.1	C
Turkey	T1, T2	CS, D	L, T	7.2	clinker	55,600	0.52	L, T	0.7	0.7
Ukraine	T1, T2, T3	CS, D	L, T	0.7	clinker production	5,584	0.51		0.7	0.7
United Kingdom	T2	CS, D	L, T	0.6	clinker production kt	C	C		0.0	0.4
United States	CS, T1, T2	CS, D	T	0.4	Clinker Production	59,000	0.52		0.2	0.8

^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 2.2

Chemical industry - CO₂ and N₂O (2010)

	CO ₂						N ₂ O								
	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 ₂ O IEF	Key category	Share of national total	N ₂ O 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	CS, T1b, T2	CS, D		-	C	IE	CS, T3	CS		-	C	IE		-	NO
Austria	CS, T2, T3	CS, PS	L	0.6	495	1.1	CS	PS	T	0.1	548	0.000		-	NO
Belarus	T2	CS	L	1.5	1,017	1.3	T1	D		0.0	1	0.005		-	NO
Belgium	T3	D, PS	L, T	0.8	904	1.1	T3	PS	L, T	1.4	2,043	0.003		-	NO
Bulgaria	D, T2	D, PS	L, T	1.2	C	C	T3	PS	T	0.4	C	C		-	NO
Canada	D	CS	L	0.8	4,141	1.3	CS, T3	CS		0.2	863	0.004	T	-	NA
Croatia	T1a	PS	L, T	1.8	439	1.1	T1	PS	L, T	2.9	337	0.008		-	NO
Czech Republic	T1	CS		0.4	257	2.4	CS, T1	CS, PS	T	0.3	442	0.003		-	NO
Denmark	CS	D		-	NO	NO	NA	NA	T	-	NO	NA, NO		-	NO
Estonia	NA	NA	T	-	NO	NO	NA	NA		-	NO	NO		-	NO
European Union (15)	CS, D, T1, T1a, T1b, T2, T3	CS, D, OTH, PS	L	0.4	NE	NE	CS, D, T2, T3	CR, CS, D, OTH, PS	T	0.3	NE	NE	T	0.0	NE
European Union (27)	CS, D, T1, T1a, T1b, T2, T3	CR, CS, D, OTH, PS	L	0.6	NE	NE	CS, D, T1, T2, T3	CR, CS, D, OTH, PS	T	0.3	NE	NE	T	0.0	NE
Finland	CS, T2	CS, D, PS		-	NO	NO	T2	PS	T	0.2	566	0.001		-	NO
France	T2	PS	T	0.3	956	1.5	T2	PS	T	0.2	2,362	0.002	T	0.1	C
Germany	CS, T2, T3	CS, D, PS	L, T	0.8	3,128	2.4	T3	PS		0.3	2,513	0.004	T	0.1	C
Greece	T1, T1a	CS		0.3	159	1.9	D	D	T	0.4	197	0.007		-	NO
Hungary	D, T2	D	L, T	0.7	193	2.4	T2	PS	T	0.0	481	0.000		-	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, T2	PS	T	0.2	505	1.9	T2	D, PS	T	0.0	417	0.001	T	0.1	0.02
Japan	T1	CS		0.2	1,212	1.7	D, T1	CS, PS		0.0	506	0.004	T	0.0	C
Kazakhstan	T1, T2	D		0.1	92	1.5	NA	NA		-	NO	NO		-	NO
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	5.5	527	2.2	T2	PS	L, T	2.8	936	0.002		-	NO
Luxembourg	NA	NA		-	NO	NO	NA	NA		-	NO	NO		-	NO
Malta	D	D		-	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	T	0.1	C	C		-	NO
New Zealand	T2	CS, PS		0.5	252	1.5	NA	NA		-	NO	NO		-	NO
Norway	T2	CS, D	L, T	0.7	379	1.5	CS, T2, T3	PS	L, T	0.7	1,650	0.001		-	NO
Poland	T1, T2	CR, CS, D	L	0.9	2,059	1.8	T1	CS	T	0.2	2,209	0.001		-	NO
Portugal	D	CS	T	-	C	NO	D	CR, OTH, PS	T	0.4	C	C		-	NO
Romania	T1a	PS	L, T	2.1	1,082	2.4	D	CR, D	L, T	0.9	1,055	0.004	T	-	NO
Russian Federation	D, T1a, T3	CS, D	L, T	0.7	13,295	1.2	D	D		0.2	7,349	0.002		-	NO
Slovakia	T2	CS, PS	L	1.1	234	2.1	T1, T2	D, PS	L, T	2.0	511	0.006		-	NO
Slovenia	D	D		-	NO	NO	NA	NA		-	NO	NO		-	NO
Spain	D, T3	PS		0.2	526	1.3	T3	PS	T	0.1	659	0.002		-	NA
Sweden	CS, D	PS		-	NO	NO	CS, T2	PS	L, T	0.5	257	0.004		-	NO
Switzerland	CS	CS		-	C	IE	T2	CS		0.1	C	C		-	NO
Turkey	NA	NA	T	-	C	C	NA	NA		-	C	C		-	NO
Ukraine	T1, T3	D, PS	L, T	1.3	4,156	1.2	T1	CS, OTH	T	0.7	1,798	0.005		0.1	C
United Kingdom	CS, T1	CS, OTH		0.2	26	36.9	CS	CS	T	0.2	1,210	0.004	T	-	NO
United States	CS, T1	CS, D	T	0.1	10,084	1.2	T2, T3	CS, D, OTH		0.2	6,931	0.008	T	0.0	0.01

^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 2.3

Metal production - CO2 (2010)

	Methods and EF used ^a		Iron and steel ^b						Aluminium production				
			Key category	Share of national total (%)	CO ₂ IEF t/t	Steel		Pig iron		Key category	Share of national total (%)	Activity Data (production) (kt)	CO ₂ IEF t/t
	Activity Data (production) (kt)	CO ₂ IEF t/t				Activity Data (production) (kt)	CO ₂ IEF t/t						
IPCC default EF^c					1.5-1.6								1.5-1.8
Australia	T1b, T2	CS	L, T	1.4	0.9	5,635	NA	NO	NO	L	0.6	1,926	1.6
Austria	CS, T1, T2	D, PS	L, T	6.5	0.3	6,570	0.1	5,644	0.8	T	-	NO	NO
Belarus	D, T1	D		0.0	IE, NO	IE	IE	IE	IE		-	NO	NO
Belgium	CS, D, T3	PS	L, T	0.8	0.1	8,133	0.0	4,688	0.2		-	NO	NO
Bulgaria	D, T2	CS, D, PS	T	0.1	0.1	746	0.1	NO	NO		-	12	NO
Canada	CS, T2	CS, OTH	L, T	1.3	0.4	13,003	0.1	7,666	1.0	L, T	0.7	2,963	1.7
Croatia	T2	D		0.1	0.3	103	0.3	NO	NO	T	-	NO	NO
Czech Republic	T1	D	L, T	4.3	0.4	5,274	1.1	3,987	IE		-	NO	NO
Denmark	NA	NA		-	NA, NO	NO	NA, NO	NO	NA, NO		-	NO	NO
Estonia	NA	NA		-	NA, NO	NO	NO	NO	NO		-	NO	NO
European Union (15)	CS, D, T1, T1a, T2, T3	CR, CS, D, PS	L	1.0	NE	NE	NE	NE	NE		0.1	NE	NE
European Union (27)	CS, D, T1, T1a, T1b, T2, T3	CR, CS, D, PS	L, T	1.3	NE	NE	NE	NE	NE		0.1	NE	NE
Finland	CS, T1, T2, T3	CS, D	L, T	3.2	0.5	4,040	0.6	IE	IE		-	NO	NO
France	T2	CS, PS	L	0.5	0.1	15,989	0.1	10,066	0.1		0.1	C	C
Germany	CS, T2, T3	CS	L	1.9	0.3	43,830	0.4	28,560	IE		0.1	403	1.4
Greece	CS	CS, PS		0.1	0.1	1,824	0.1	NO	NO		0.2	130	1.6
Hungary	CS, T1	D	L	3.3	0.6	1,678	0.1	1,325	0.1		-	NO	NO
Iceland	T1, T2	D		-	NA, NO	NO	NO	NO	NO	L, T	26.8	819	1.5
Ireland	NA	NA		-	NO	NO	NO	NO	NO		-	NO	NO
Italy	D, T2	CR, CS, PS	T	0.2	0.0	25,750	0.0	8,555	0.1		0.0	130	1.9
Japan	CS	OTH		0.0	NA, NE	NE	IE	NE	IE		-	5	IE
Kazakhstan	T1a, T2	D, PS	L, T	2.2	0.9	3,300	0.1	2,894	1.9		0.1	225	1.5
Latvia	T2	PS		0.1	0.1	91	0.1	NO	NO		-	NO	NO
Liechtenstein	NA	NA		-	NO	NO	NO	NO	NO		-	NO	NO
Lithuania	T1	D		0.0	1.1	NO	NO	4	1.1		-	NO	NO
Luxembourg	CS, T2	CS	L, T	1.1	0.1	2,634	0.1	NO	NO		-	NO	NO
Malta	NA	NA		-	NA, NO	NO	NO	NO	NO		-	NO	NO
Monaco	NA	NA		-	NA, NO	NO	NO	NO	NO		-	NO	NO
Netherlands	T1a, T2	CS	T	0.3	0.1	6,679	0.0	NO	NO		0.1	215	1.4
New Zealand	T2	D, PS	L, T	2.3	C, IE, NO	C	C	IE	IE	L	0.8	344	1.7
Norway	T2, T3	CS, PS		0.0	0.0	516,907	0.0	NO	NO	L, T	3.3	1,102	1.6
Poland	CS, T1, T2, T3	CS, D	L	1.7	0.3	IE	IE	3,638	0.8		0.0	16	1.8
Portugal	T2	PS		0.0	0.0	2,082	0.0	IE	IE		-	NO	NO
Romania	T1b, T2, T3	CS, D, PS	L, T	2.5	0.4	3,735	0.0	1,722	1.7		0.3	207	1.5
Russian Federation	T1b, T2, T3	CS, D, PS	L, T	3.6	0.6	66,846	0.1	48,009	1.5		0.3	C	C
Slovakia	T2, T3	CS, PS	L, T	8.3	0.4	4,402	0.9	3,649	IE	T	0.5	163	1.5
Slovenia	D, T2	D, PS		0.2	0.1	641	0.1	NO	NO		0.3	40	1.5
Spain	D, T2	CS, PS	L, T	0.6	0.1	16,217	0.1	C	C		0.2	C	C
Sweden	CS, D, T2	PS	L, T	4.1	0.1	1,517	0.1	3,570	0.7		0.2	96	1.4
Switzerland	CS	CS		0.3	0.1	1,218	0.1	NO	NO	T	-	NO	NO
Turkey	T2	D	L, T	4.3	0.0	29,153	0.1	C	IE		-	NA	C
Ukraine	T1, T2, T3	CS, D, PS	L, T	6.5	0.4	32,682	0.1	27,366	0.8		-	C	IE
United Kingdom	T2, T3	CS		0.2	0.1	2,411	0.0	7,233	IE		0.0	186	1.5
United States	T1, T2	CS, D	L, T	0.8	0.6	49,339	0.2	28,187	0.7		0.0	1,727	1.7

^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 CO₂ emission estimates from sinter (2.C.1.3) were reported by Belgium, European Union, Poland, Spain, Sweden and the United States; CO₂ emission estimates from coke (2.C.1.4) were reported by Australia, European Union, Finland, Hungary, Poland, Turkey and the United States.

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

Table 2.4
Metal production - PFCs and SF6 (2010)

	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) (kt)	IEF				Ratio IEF CF ₄ / IEF C ₂ F ₆	Key category	Share of national total (%)	Activity data (production)		SF ₆ IEF (kg/t)	Actual SF ₆ emissions ^c (t)
	CF ₄	C ₂ F ₆				Description	Value (t)									
IPCC default EF ^c	Methods	EF														
						0.31-1.7	0.04-0.17							1 ^d		
Australia	T1c	CS	T	0.0	1,926	0.02	0.00	9.2	NA	NA	-	(SF6 consumption)	NO	NO	NO	
Austria	NA	NA	T	-	NO	NO	NO	-	T1	D	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	-	2.C.4.2-Magnesium	NO	NO	NO	
Bulgaria	NA	NA		-	12	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Canada	CS	OTH	T	0.2	2,963	0.07	0.01	12.5	D, T3	D	0.0	SF6 use	8	1,000	8.1	
Croatia	NA	NA	T	-	NO	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Czech Republic	NA	NA		-	NO	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Denmark	NA	NA		-	NO	NO	NO	-	NA	NA	-	2.C.4.2-Magnesium	NO	NO	NO	
Estonia	NA	NA		-	NO	NO	NO	-	NA	NA	-	(Magnesium Foundries)	NO	NO	NO	
European Union (15)	CS, T2, T3	CS, D, PS	T	0.0	NE	NE	NE	-	D, T1, T2	CS, D, PS	0.0	2.C.4.2-Magnesium	NE	NE	15.6	
European Union (27)	CS, T1c, T2, T3	CS, D, PS	T	0.0	NE	NE	NE	-	D, T1, T2	CS, D, PS	0.0	2.C.4.2-Magnesium	NE	NE	15.8	
Finland	NA	NA		-	NO	NO	NO	-	NA	NA	-	(SF6 consumption)	C	C	C	
France			T	0.0	C	C	C	-	T2	CS, PS	0.0	SF6 consumption	NA	NA	10.1	
Germany	T3	CS	T	0.0	403	0.04	0.01	8.3	D	D	0.0	Consumption Mg-Production	3	1,000	3.3	
Greece	T3	PS		0.0	130	0.03	0.00	8.3	NA	NA	-	NO	NO	NO	NO	
Hungary	NA	NA		-	NO	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Iceland	T2	D	L, T	3.2	819	0.02	0.00	7.8	NA	NA	-	NO	NO	NO	NO	
Ireland	NA	NA		-	NO	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Italy	T2	PS	T	0.0	130	0.09	0.01	8.3	D	PS	0.0	consumption of SF6	1	1,000	0.7	
Japan	T1b	CS		0.0	5	0.30	0.03	10.0	CS	CS	0.0	SF6 consumption	13	1,000	12.9	
Kazakhstan			T	0.5	225	0.68	0.10	6.8	NA	NA	-	(country specific)	NO	NO	NO	
Latvia	NA	NA		-	NO	NO	NO	-	NA	NA	-	NO	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	NO	
Luxembourg	NA	NA		-	NO	NO	NO	-	NA	NA	-	magnesium production	NO	NO	NO	
Malta	NA	NA		-	NO	NO	NO	-	NA	NA	-	(Not occuring)	NO	NO	NO	
Monaco	NA	NA		-	NO	NO	NO	-	NA	NA	-	NO	NO	NO	NO	
Netherlands	T2	PS	T	0.0	215	0.04	0.00	9.1	NA	NA	-	NO	NO	NO	NO	
New Zealand	T2	D	T	0.1	344	0.02	0.00	8.3	NA	NA	-	SF6 consumption	NO	NA	NA	
Norway	T2	CS	T	0.4	1,102	0.02	0.00	9.2	NA	NA	T	NO	NO	NO	NO	
Poland	T1c	D		0.0	16	0.61	0.06	10.0	T1	D	0.0	Magnesium alloy used for cast	182	1	0.2	
Portugal	NA	NA		-	NO	NO	NO	-	NA	NA	-	(SF6 consumption)	NO	NO	NO	
Romania	T2	D, PS	T	0.0	207	0.00	0.00	8.3	NA	NA	-	(SF6 consumption)	NO	NO	NO	
Russian Federation	T2	D, PS	T	0.1	C	C	C	-	NA	NA	-	(SF6 consumption)	NO	NO	NO	
Slovakia	T3	PS	T	0.0	163	0.02	0.00	10.0	NA	NA	-	NO	NO	NO	NO	
Slovenia	T3	PS	T	0.1	40	0.04	0.01	7.8	NA	NA	-	NO	NO	NO	NO	
Spain	T2	PS	T	0.0	C	C	C	-	NA	NA	-	NO	NO	NA	NA	
Sweden	T2	D	T	0.2	96	0.21	0.03	7.8	D	D	0.1	SF6 consumption	1	1,000	1.4	
Switzerland	NA	NA	T	-	NO	NO	NO	-	T1	CS	0.1	(specify)	1	1,000	1.2	
Turkey	NA	NA	T	-	NA	C	C	-	NA	NA	-	NA	NA	NA	NA	
Ukraine	T3	CS		0.0	C	C	C	-	NA	NA	-	Magnesium Foundries	NO	NO	NO	
United Kingdom	CS	CS, PS		0.0	186	0.08	0.01	7.8	T2	PS	-	SF6 consumption	1E	1E	1E	
United States	T2	CS	T	0.0	1,727	0.11	0.02	5.9	D	CS	T	0.0	Magnesium Production and Processing	C	C	53.4

^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 SF₆ 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 SF₆ emission factor is 1 kg/t magnesium produced or smelted.

^e IPCC good practice guidance state that SF₆ emissions equal consumption in Magnesium Smelters and Foundries (IPCC good practice, page 3.48).

Table 2.5

Production of halocarbons and SF₆ - HFCs, PFCs and SF₆ (2010)

	HFCs							PFCs		SF ₆		
	Methods and EF used ^a		Key category	Share of national total (%)	Production of HCFC-22			Methods and EF used ^a	Methods and EF used ^a			
	Methods	EF			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	-14.5	NO	NA	NA	NA	NA	
Austria	NA	NA		-	NO		NA	NA	NA	NA	NA	
Belarus	NA	NA		-	NO		NO	NA	NA	NA	NA	
Belgium	NA	NA		-	NO		NO			NA	NA	
Bulgaria	NA	NA		-	NO		NO	NA	NA	NA	NA	
Canada	NA	NA	T	-	NA	45	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 ^e	NA	NA		-	NO		NO	NA	NA	NA	NA	
Estonia	NA	NA		-	NO		NO	NA	NA	NA	NA	
European Union (15)	T1, T2, T3	PS	T	0.0	C, NA, NE, NO	1184.9	C, NA, NE, NO	CS, T2	PS	T3	PS	
European Union (27)	T1, T2, T3	PS	T	0.0	C, NA, NE, NO	1,183	C, NA, NE, NO	CS, T2	PS	T3	PS	
Finland	NA	NA		-	NO		NO	NA	NA	NA	NA	
France	T2	PS	T	0.0	C	584	C	T2	PS	NA	NA	
Germany	T3	PS		-	NE	176	C	NA	NA	T3	PS	
Greece	NA	NA	T	-	NO		NO	NA	NA	NA	NA	
Hungary	NA	NA		-	NO	-1.2	NO	NA	NA	NA	NA	
Iceland	NA	NA		-	NO		NO	NA	NA	NA	NA	
Ireland	NA	NA		-	NA		NA	NA	NA	NA	NA	
Italy	NA	NA		-	C		NA	CS	PS	NA	NA	
Japan	CS	CS		0.0	46,149	400	20.1	CS	CS	CS	CS	
Kazakhstan	NA	NA		-	NO		NO	NA	NA	NA	NA	
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	
Malta	NA	NA		-	NO		NO	NA	NA	NA	NA	
Monaco	NA	NA		-	NO		NO	NA	NA	NA	NA	
Netherlands ^d	T1, T2	PS	T	0.2	C	334	C	NA	NA	NA	NA	
New Zealand	NA	NA		-	NO		NO	NA	NA	NA	NA	
Norway	NA	NA		-	NO		NO	NA	NA	NA	NA	
Poland	NA	NA		-	NO	-0.2	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, T2	D, PS	T	0.3	28,382	553	46.0	D	D	D	PS	
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	93	C	NA	NA	NA	NA	
Sweden	NA	NA		-	NO	-1	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 ^f	T2	PS		-	IE		IE	T2	PS	NA	NA	
United States	M, T2	CS, M	T	0.1	138,900	2,348	5.0	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 SF₆ for all subcategories within the category 2.E Production of halocarbons and SF₆.

^b Source of data for HCFC production: Ozone secretariat, downloaded from http://ozone.unep.org/Data_Reporting/Data_Access on 22 March 2012. Data are for total HCFC production in units of ODP (ozone depleting potential).

^c Data for Denmark includes Greenland since 1991 and Faroe Islands since October 2007.

^d Data for the Netherlands excludes data for the following territories: Suriname and the Netherlands Antilles.

^e Source of default emission factors: IPCC Guidelines, volume 3, page 2.35.

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

Table 2.6a

Consumption of halocarbons and SF6 - HFCs (2010)

	Methods and EF used ^a		HFC-23			HFC-32			HFC-41			HFC-43-10mcc			HFC-125		
	Methods	EF	p ^b	A ^c	Ratio P / A	p ^b	A ^c	Ratio P / A	p ^b	A ^c	Ratio P / A	p ^b	A ^c	Ratio P / A	p ^b	A ^c	Ratio P / A
			2.F(p) (Gg CO ₂ equivalent)	2.F(a)		2.F(p) (Gg CO ₂ equivalent)	2.F(a)		2.F(p) (Gg CO ₂ equivalent)	2.F(a)		2.F(p) (Gg CO ₂ equivalent)	2.F(a)		2.F(p) (Gg CO ₂ equivalent)	2.F(a)	
Australia	M	D	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	123.51	IE, NO	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	1,557.35	IE, NO
Austria	CS	CS	90.82	38.54	2.36	28.37	10.85	2.62	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	660.10	292.27	2.26
Belarus			NE, NO	0.23	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	T1, T2	CS, D, PS	0.09	1.7082	0.054794521	51.62	16.08	3.21	NO	NO	NO	NO	NO	NO	850.18	408.58	2.08
Bulgaria	T2	D	IE, NA, NO	NO	IE, NA, NO	IE, NA, NO	10.20	IE, NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	IE, NA, NO	62.49	IE, NA, NO
Canada	T2	D	8.96	8.29	1.08	126.30	68.27	1.85	IE, NA, NO	IE, NA, NO	IE, NA, NO	1.52	2.11	0.72	2,148.39	1,453.39	1.48
Croatia	T2	D	766.35	NO	NO	7.65	5.88	1.30	NO	NO	NO	NO	NO	NO	155.93	58.65	2.66
Czech Republic	D, T1, T2	D	3.51	3.51	1.00	296.01	28.14	10.52	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	1,595.30	386.60	4.13
Denmark			4.21	4.21	1.00	13.15	11.58	1.14	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	201.54	210.17	0.96
Estonia	T2	CS	NE, NO	0.44	NE, NO	NE, NO	2.30	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	43.22	NE, NO
European Union (15)	CS, D, OTH, T1, T2, T3	CS, D, OTH, PS	231.79	2,193.38	0.11	995.02	1,169.78	0.85	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	378.63	485.88	0.78	11,922.77	14,362.63	0.83
European Union (27)	CS, D, M, OTH, T1, T1a, T1b, T2, T3	CS, D, M, OTH, PS	IE	2,200.79	IE	IE	1,284.12	IE	IE	IE, NA, NO	IE, NA, NO	IE	485.88	IE	IE	16,561.54	IE
Finland	T1, T2	D	1.46	0.95	1.54	42.47	18.59	2.28	NO	NO	NO	NO	NO	NO	606.18	382.40	1.59
France			105.73	28.24	3.74	258.01	191.30	1.35	NA	NO	NA, NO	378.63	378.63	1.00	2,056.44	3,104.92	0.66
Germany	CS, T2	CS, D	C, IE, NO	254.74	C, IE, NO	262.90	73.04	3.60	NO	NO	NO	C, IE, NO	C, IE, NO	C, IE, NO	3,578.20	1,831.82	1.95
Greece	CS, T2	D	NE	167.83	NE	NE	127.96	NE	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	883.63	NE
Hungary	CS, D, T1, T2	CS, D	1.22	0.60	2.04	23.98	14.31	1.68	NO	NO	NO	NO	NO	NO	407.51	268.08	1.52
Iceland	T1, T2	D	NE, NO	0.01	NE, NO	0.13	0.10	1.34	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	70.60	24.68	2.86
Ireland	T1, T2, T3	CS	45.87	9.27	4.95	13.46	3.36	4.00	NO	NO	NO	NO	NO	NO	261.34	64.58	4.05
Italy	CS, T2	CS, PS	NA, NO	34.43	NA, NO	224.30	428.20	0.52	NA, NO	NO	NA, NO	NA, NO	NA, NO	NA, NO	1,462.28	3,014.18	0.49
Japan	CS, T1	CS, D	10,852.92	5.39	2,015.01	IE, NE	546.98	IE, NE	NO	IE, NA, NE	IE, NA, NE, NO	IE, NE	IE, NA, NO	IE, NA, NE, NO	IE, NE	2,357.14	IE, NE
Kazakhstan	CS	CS	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
Latvia	T2	D, OTH	NO	0.05	NO	2.22	0.37	5.98	NO	NO	NO	NO	NO	NO	105.15	8.70	12.09
Liechtenstein	CS	CS, D	NO	NO	NO	NO	0.07	NO	NO	NO	NO	NO	NO	NO	NO	1.93	NO
Lithuania	D, T1, T2	CS, D	NE, NO	NO	NE, NO	0.69	0.08	9.06	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	91.36	24.25	3.77
Luxembourg	CS	CS	NE	NA, NO	NA, NE, NO	NE	0.86	NE	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	16.56	NE
Malta	CS, M	CS, M	NE, NO	0.00	NE, NO	2.15	4.14	0.52	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	31.79	25.45	1.25
Monaco	T1a	D	NO	NA, NO	NA, NO	0.32	0.22	1.45	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1.52	1.03	1.47
Netherlands	CS, T2	CS	NE, NO	IE, NO	IE, NE, NO	NE, NO	13.33	NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	365.47	NE, NO
New Zealand	T1a, T2	CS, D	0.24	0.24	1.00	63.17	18.67	3.38	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	548.74	323.17	1.70
Norway			1.76	1.76	1.00	10.03	6.05	1.66	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	179.89	168.15	1.07
Poland	T1, T1a, T1b, T2	D	1.99	1.99	1.00	41.56	41.56	1.00	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1,182.77	1,182.77	1.00
Portugal			1.25	2.22	0.56	80.09	48.04	1.67	NO	NO	NO	NO	NO	NO	2,018.85	300.16	6.73
Romania	OTH, T2	D, OTH	NE, NO	IE, NO	IE, NE, NO	NE, NO	0.09	NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	2.35	NE, NO
Russian Federation	T1, T1a, T2	D	792.58	222.36	3.56	183.47	55.25	3.32	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	4,489.73	1,026.89	4.37
Slovakia	D	CS	0.47	0.82	0.57	15.24	7.74	1.97	NO	NO	NO	NO	NO	NO	147.84	83.72	1.77
Slovenia	T1, T2	CS, D	NO	NO	NO	0.85	1.18	0.72	NO	NO	NO	NO	NO	NO	17.08	28.35	0.60
Spain	D, T1, T2	D	NE, NO	1,631.36	NE, NO	C, NE	NA	C, NA, NE	NE, NO	NA	NA, NE, NO	NE, NO	NA	NA, NE, NO	NE, NO	746.22	NE, NO
Sweden	CS, T2	CS, D, PS	NA, NE, NO	0.80	NA, NE, NO	20.67	5.22	3.96	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	229.91	82.83	2.78
Switzerland	T1, T2	CS, D	1.58	4.88	0.32	51.55	15.03	3.43	NA, NO	NO	NA, NO	0.98	0.88	1.11	646.08	264.53	2.44
Turkey	T1	D	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	T1, T1a, T2	CS, D	NE, NO	NA, NO	NA, NE, NO	15.31	2.64	5.80	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	302.66	90.90	3.33
United Kingdom	OTH, T2, T3	CS, OTH	IE, NE, NO	19.08	IE, NE, NO	IE, NA, NE	222.46	IE, NA, NE, NO	IE, NA, NE	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE	107.25	IE, NA, NE, NO	IE, NA, NE, NO	2,670.92	IE, NA, NE, NO
United States	M, T2	CS, M	350.98	361.22	0.97	11,155.53	2,499.34	4.46	NE, NO	NA, NO	NA, NE, NO	C, IE, NE	C, NA, NO	NO	69,455.17	22,175.20	3.13

^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 2.6b

Consumption of halocarbons and SF6 - HFCs (2010)

	Methods and EF used ^a		HFC-134			HFC-134a			HFC-152a			HFC-143			HFC-143a		
	Methods	EF	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A
			2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(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, NO	IE, NA, NO	IE, NA, NO	IE, NO	4,567.47	IE, NO	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	68.77	IE, NO
Austria		CS	NE, NO	NO	NE, NO	443.13	471.16	0.94	17.94	19.03	0.94	NE, NO	NO	NE, NO	570.07	327.17	1.74
Belarus			NE, NO	0.01	NE, NO	NE, NO	12.86	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	T1, T2	CS, D, PS	NO	NO	NO	1,296.66	790.31	1.64	49.62	49.42	1.00	NO	NO	NO	866.18	524.51	1.65
Bulgaria	T2	D	NA, NO	NO	NA, NO	IE, NA, NO	142.23	IE, NA, NO	IE, NA, NO	38.36	IE, NA, NO	NA, NO	NO	NA, NO	IE, NA, NO	25.18	IE, NA, NO
Canada	T2	D	IE, NA, NO	0.00	IE, NA, NO	7,189.55	3,842.19	1.87	117.20	92.84	1.26	IE, NA, NO	IE, NA, NO	IE, NA, NO	2,247.19	1,599.22	1.41
Croatia	T2	D	NO	NO	NO	132.01	347.60	0.38	5.05	NE, NO	NE, NO	NO	NO	NO	191.75	52.17	3.68
Czech Republic	D, T1, T2	D	NA, NE, NO	NO	NA, NE, NO	1,288.56	465.99	2.77	NA, NE, NO	0.00	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	589.38	537.76	1.10
Denmark			NE, NO	NE, NO	NE, NO	160.65	345.95	0.46	2.10	0.61	3.42	NE, NO	NE, NO	NE, NO	225.35	246.35	0.91
Estonia	T2	CS	NE, NO	NO	NE, NO	NE, NO	50.88	NE, NO	NE, NO	6.41	NE, NO	NE, NO	NO	NE, NO	NE, NO	52.09	NE, NO
European Union (15)	CS, D, OTH, T1, T2, T3	CS, D, OTH, PS	IE, NA, NE, NO	1.37	IE, NA, NE, NO	12,028.83	36,840.23	0.33	340.93	300.70	1.13	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	11,053.79	13,374.62	0.83
European Union (27)	CS, D, M, OTH, T1, T1a, T1b, T2, T3	CS, D, M, OTH, PS	IE	1.37	IE	IE	43,085.22	IE	IE	347.56	IE	IE	7.16	IE	IE	15,284.26	IE
Finland	T1, T2	D	NO	NO	NO	576.51	325.84	1.77	1.45	C, IE, NA, C, IE, NA, NO	NO	NO	NO	515.71	369.70	1.39	
France			NA	NO	NA, NO	5,495.28	9,475.91	0.58	41.59	56.65	0.73	NA	NO	NA, NO	1,471.49	3,301.70	0.45
Germany	CS, T2	CS, D	NO	NO	NO	C, IE, NO	6,555.08	C, IE, NO	51.55	51.60	1.00	NO	NO	NO	3,882.52	2,391.05	1.62
Greece	CS, T2	D	NE	NA, NO	NA, NE, NO	NE	1,883.57	NE	NE	32.25	NE	NE	NA, NE, NO	NE	421.95	NE	
Hungary	CS, D, T1, T2	CS, D	NO	NO	NO	510.40	316.18	1.61	0.12	0.12	1.00	NO	NO	NO	425.16	290.57	1.46
Iceland	T1, T2	D	NE, NO	NA, NE, NO	NA, NE, NO	40.70	11.41	3.57	NE, NO	0.04	NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	128.74	32.74	3.93
Ireland	T1, T2, T3	CS	NO	NO	NO	1,111.60	358.17	3.10	8.10	0.35	23.31	NO	NO	NO	283.47	69.67	4.07
Italy	CS, T2	CS, PS	NA, NO	NO	NA, NO	1,237.67	3,210.46	0.39	141.24	NO	NO	NA, NO	NO	NA, NO	1,428.94	1,688.43	0.85
Japan	CS, T1	CS, D	NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	3,525.76	IE, NE	IE, NE	181.86	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	IE, NA, NE, IE, NA, NE, NO		
Kazakhstan	CS	CS	NO	NA, NO	NA, NO	NO	455.00	NO	NO	NA, NO	NA, NO	NO	NA, NO	NO	NA, NO	NA, NO	NA, NO
Latvia	T2	D, OTH	NO	NO	NO	88.25	85.10	1.04	NO	0.01	NO	NO	NO	NO	125.84	10.90	11.55
Liechtenstein	CS	CS, D	NO	NO	NO	NO	2.68	NO	NO	NO	NO	NO	NO	NO	NO	1.97	NO
Lithuania	D, T1, T2	CS, D	NE, NO	NO	NE, NO	5.89	108.31	0.05	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	141.70	38.31	3.70
Luxembourg	CS	CS	NE	NA, NO	NA, NE, NO	NE	32.64	NE	NE	0.04	NE	NE	NA, NO	NA, NE, NO	NE	16.37	NE
Malta	CS, M	CS, M	NE, NO	NO	NE, NO	35.81	40.32	0.89	0.65	0.36	1.80	NE, NO	NO	NE, NO	31.95	25.52	1.25
Monaco	T1a	D	NO	NA, NO	NA, NO	2.83	0.68	4.17	NO	NA, NO	NO	NA, NO	NO	NA, NO	0.15	0.12	1.30
Netherlands	CS, T2	CS	NE, NO	IE, NO	IE, NE, NO	NE, NO	546.71	NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	435.64	NE, NO
New Zealand	T1a, T2	CS, D	NO	NA, NO	NA, NO	467.31	394.72	1.18	0.00	NA, NE, NO	NA, NE, NO	NO	NA, NO	NA, NO	391.59	348.65	1.12
Norway			0.04	0.09	0.40	781.32	390.56	2.00	21.66	6.06	3.58	0.60	0.53	1.14	166.24	169.22	0.98
Poland	T1, T1a, T1b, T2	D	NO	NA, NO	NA, NO	1,418.91	4,696.70	0.30	62.95	1.28	49.09	NO	NA, NO	NA, NO	814.11	814.11	1.00
Portugal			NO	NO	NO	1,158.65	716.70	1.62	1.26	40.15	0.03	NO	NO	NO	1,613.00	120.70	13.36
Romania	OTH, T2	D, OTH	NE, NO	IE, NO	IE, NE, NO	8.81	2.54	3.46	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	3.01	NE, NO
Russian Federation	T1, T1a, T2	D	NE, NO	NA, NO	NA, NE, NO	4,161.01	2,024.71	2.06	36.41	18.97	1.92	NE, NO	NA, NO	NA, NE, NO	3,396.60	933.26	3.64
Slovakia	D	CS	NO	NO	NO	196.17	149.54	1.31	1.90	0.30	6.27	NO	NO	NO	107.92	76.00	1.42
Slovenia	T1, T2	CS, D	NO	NO	NO	137.06	131.56	1.04	NO	NO	NO	NO	NO	NO	21.17	36.19	0.58
Spain	D, T1, T2	D	NE, NO	NA	NA, NE, NO	NE, NO	3,525.51	NE, NO	NE, NO	11.38	NE, NO	NE, NO	NA	NA, NE, NO	C, NE	1,072.72	C, NE
Sweden	CS, T2	CS, D, PS	NO	NA, NO	NA, NO	549.49	657.91	0.84	27.53	22.45	1.23	NO	NA, NO	NA, NO	200.51	80.11	2.50
Switzerland	T1, T2	CS, D	NA, NO	NO	NA, NO	984.95	498.89	1.97	0.03	0.16	0.17	NA, NO	NO	NA, NO	496.04	286.39	1.73
Turkey	T1	D	NA, NE	NA, NE	NA, NE	NA, NE	4,009.30	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	T1, T1a, T2	CS, D	NO	NA, NO	NA, NO	920.42	360.23	2.56	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	162.30	56.65	2.87
United Kingdom	OTH, T2, T3	CS, OTH	IE, NA, NE, NO	1.37	IE, NA, NE, NO	NO	7,975.24	IE, NA, NE, NO	NO	16.78	IE, NA, NE, NO	NO	IE, NA, NE, NO	NO	NO	2,320.32	IE, NA, NE, NO
United States	M, T2	CS, M	NE, NO	C, NA, NO	C, NA, NE, NO	98,752.88	66,849.46	1.48	C, IE, NE	C, NA, NO	C, IE, NA, NE, NO	NE, NO	C, NA, NO	C, NA, NE, NO	27,292.64	14,670.66	1.86

^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 2.6c
Consumption of halocarbons and SF6 - HFCs (2010)

	Methods and EF used ^a		HFC-227ea			HFC-236fa			HFC-245ca			Unspecified HFCs			Total				
			Methods	EF	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A
					2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)	
					(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)					
Australia	M	D	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	IE, NA, NO	IE, NA, NO	IE, NO	IE, NA, NO	IE, NA, NO	10,628.78	341.28	31.14	10,628.78	6,658.38	1.60		
Austria	CS	CS	7.53	0.00	12,290.63	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	19.61	1.62	12.08	1,837.57	1,160.63	1.58		
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	13.10	NE, NO		
Belgium	T1, T2	CS, D, PS	9.05	11.94	0.76	NO	NO	NO	NO	NO	NO	NO	NO	NO	3,123.40	1,802.54	1.73		
Bulgaria	T2	D	IE, NA, NO	2.48	IE, NA, NO	IE, NA, NO	NO	IE, NA, NO	NA, NO	NO	NA, NO	NA, NO	NA, NO	NA, NO	IE, NA, NO	280.94	17.28		
Canada	T2	D	37.17	6.24	5.96	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NE	IE, NA, NE	NA, NO	NA, NO	NA, NO	11,876.28	7,072.55	1.68		
Croatia	T2	D	15.17	1.62	9.34	NO	NO	NO	NO	NO	NO	NO	NO	NO	1,273.93	465.91	2.73		
Czech Republic	D, T1, T2	D	48.37	48.47	1.00	32.38	32.38	1.00	1.01	0.51	1.96	NA, NE, NO	NO	NA, NE, NO	3,854.52	1,503.36	2.56		
Denmark			NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	0.25	0.25	1.00	607.27	819.12	0.74		
Estonia	T2	CS	NE, NO	0.99	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	156.33	NE, NO		
European Union (15)	CS, D, OTH, T1, T2, T3	CS, D, OTH, PS	-69.85	1,559.45	-0.04	60.25	26.80	2.25	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE	109,165.77	827.32	131.95	146,107.92	71,142.17	2.05		
European Union (27)	CS, D, M, OTH, T1, T1a, T1b, T2, T3	CS, D, M, OTH, PS	IE	1,664.53	IE	IE	60.22	IE	IE	0.51	IE	161,748.74	1,516.17	106.68	161,748.74	82,499.32	1.96		
Finland	T1, T2	D	NO	NO	NO	NO	NO	NO	NO	NO	NO	66.48	NO	NO	1,743.77	1,163.96	1.50		
France			699.13	147.30	4.75	NA	NO	NA, NO	NA	NO	NA, NO	1,041.56	NO	NO	11,547.86	16,779.00	0.69		
Germany	CS, T2	CS, D	C, IE, NO	77.50	C, IE, NO	60.25	10.44	5.77	NO	NO	NO	9,674.28	NA, NO	NA, NO	17,509.69	11,245.26	1.56		
Greece	CS, T2	D	NE	40.73	NE	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	3,557.92	NE		
Hungary	CS, D, T1, T2	CS, D	47.26	24.41	1.94	NO	NO	NO	NO	NO	NO	NO	NO	NO	1,415.66	914.26	1.55		
Iceland	T1, T2	D	NE, NO	0.02	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	240.17	69.00	3.48		
Ireland	T1, T2, T3	CS	323.95	57.64	5.62	NO	NO	NO	NO	NO	NO	NO	NO	NO	2,047.79	563.04	3.64		
Italy	CS, T2	CS, PS	-1,119.89	160.27	-6.99	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	4,299.20	8,753.65	0.49		
Japan	CS, T1	CS, D	NO	97.44	NO	NO	IE, NA, NE	IE, NA, NE, NO	NO	IE, NA, NE, NO	IE, NA, NE	36,607.82	11,413.59	3.21	47,460.74	18,128.16	2.62		
Kazakhstan	CS	CS	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NO	455.00	NO		
Latvia	T2	D, OTH	NO	0.04	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	321.45	105.17	3.06		
Liechtenstein	CS	CS, D	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	6.64	17.47		
Lithuania	D, T1, T2	CS, D	NE, NO	0.08	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	1.25	NE, NO	239.64	172.28	1.39		
Luxembourg	CS	CS	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	66.47	NE		
Malta	CS, M	CS, M	0.62	1.69	0.37	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	102.99	97.50	1.06		
Monaco	T1a	D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	4.83	2.05	2.35		
Netherlands	CS, T2	CS	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	440.89	NE, NO	NE, NO	1,802.04	NE, NO		
New Zealand	T1a, T2	CS, D	9.24	1.73	5.35	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1,480.30	1,087.17	1.36		
Norway			11.24	4.24	2.65	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1,172.77	746.66	1.57		
Poland	T1, T1a, T1b, T2	D	101.85	24.11	4.22	46.87	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	3,671.01	6,762.52	0.54		
Portugal			NO	3.90	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	4,873.09	1,231.87	3.96		
Romania	OTH, T2	D, OTH	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	IE, NO	IE, NE, NO	NE, NO	687.05	NE, NO	8.81	695.05	0.01		
Russian Federation	T1, T1a, T2	D	741.44	159.87	4.64	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	13,801.24	4,441.32	3.11		
Slovakia	D	CS	7.40	1.53	4.82	5.17	1.03	5.00	1.15	NO	NO	NO	NO	NO	484.84	321.06	1.51		
Slovenia	T1, T2	CS, D	0.29	1.26	0.23	NO	NO	NO	NO	NO	NO	NO	NO	NO	176.46	198.54	0.89		
Spain	D, T1, T2	D	NE, NO	260.51	NE, NO	NE, NO	16.36	NE, NO	NE, NO	NA	NA, NE, NO	NE, NO	NA	NA, NE, NO	C, NE, NO	7,264.07	C, NE, NO		
Sweden	CS, T2	CS, D, PS	10.39	0.12	89.09	NO	NA, NO	NO	NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	1,038.49	849.43	1.22		
Switzerland	T1, T2	CS, D	3.43	2.21	1.55	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	2,184.62	1,072.97	2.04		
Turkey	T1	D	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	4,009.30	NA, NE		
Ukraine	T1, T1a, T2	CS, D	30.89	5.48	5.64	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	123.47	142.16	0.87	1,555.04	658.05	2.36		
United Kingdom	OTH, T2, T3	CS, OTH	IE, NA, NE	NO	799.75	IE, NA, NE	NO	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NA, NO	97,486.57	85.69	1,137.67	97,486.57	14,218.86	6.86		
United States	M, T2	CS, M	C, IE, NE	C, NA, NO		1,392.43	918.92	1.52	C, NE, NO	C, NA, NO	C, NA, NE, NO	22,205.66	7,419.32	2.99	230,605.29	114,894.12	2.01		

^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 2.7a

Consumption of halocarbons and SF6 - PFCs (2010)

	Methods and EF used ^b		CF ₄			C ₂ F ₆			C ₃ F ₈			C ₄ F ₁₀			c-C ₄ F ₈				
			Methods	EF	P ^c	A ^d	Ratio P / A	P ^c	A ^d	Ratio P / A	P ^c	A ^d	Ratio P / A	P ^c	A ^d	Ratio P / A	P ^c	A ^d	Ratio P / A
					2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)	
					(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)		
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	5.91	5.91	1.00	IE, NE, NO	NO	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	T2	PS	4.01	4.0105	1.00	1.27	1.2696	1.00	113.58	2.3233	48.89	NO	NO	NO	NO	NO	NO		
Bulgaria	T2	D	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	IE, NA, NO	0.04	IE, NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO		
Canada	T2	D	31.81	5.81	5.47	0.84	3.74	0.23	0.11	0.51	0.21	NA, NO	NA, NE, NO	NA, NE, NO	0.27	0.07	3.70		
Croatia	NA	NA	0.02	NO	NO	NO	NO	NO	0.01	NO	NO	NO	NO	NO	NO	NO	NO		
Czech Republic	D	D	NA, NE, NO	NO	NA, NE, NO	44.25	29.43	1.50	NA, NE, NO	IE, NO	IE, NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO		
Denmark			2.34	2.34	1.00	NE, NO	NE, NO	NE, NO	NA, NE, NO	7.01	NA, NE, NO	NE, NO	NE, NO	NE, NO	3.92	3.92	1.00		
Estonia	NA	NA	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		
European Union (15)	CS, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	328.15	216.31	1.52	1,109.06	299.70	3.70	452.58	296.67	1.53	IE, NA, NE, NO	4.40	IE, NA, NE, NO	126.50	32.12	3.94		
European Union (27)	CS, D, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	IE	216.37	IE	IE	329.13	IE	IE	297.07	IE	IE	18.59	IE	IE	32.12	IE		
Finland	T1	D	C, NO	C, NA, NO	C, NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NO	C, NO	C, NO	C, NO	C, NO		
France			170.22	70.26	2.42	271.59	63.07	4.31	98.43	4.92	20.00	NA	NO	NA, NO	16.08	0.38	42.00		
Germany	CS, T2	CS, D	C, IE, NO	54.47	C, IE, NO	670.50	73.06	9.18	537.20	44.38	5.23	NO	NO	C, IE, NO	2.00	C, IE, NO	C, IE, NO		
Greece	T2	D	NE	NA, NO	NA, NE, NO	NE	67.80	NE	NE	NA, NO	NA, NE, NO	NE	NO	NE, NO	NE	NA, NO	NA, NE, NO		
Hungary	T2	CS	NO	NO	NO	NO	NO	NO	1.16	0.36	3.26	NO	NO	NO	NO	NO	NO		
Iceland			NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	0.00	NE, NO	NE, NO	0.00	NE, NO	NE, NO	NA, NE, NO	NA, NE, NO	NE, NO	NA, NE, NO	NA, NE, NO		
Ireland	T1a	CS	15.44	10.79	1.43	62.61	22.93	2.73	NO	NO	NO	NO	NO	NO	10.37	3.31	3.14		
Italy	CS	PS	136.15	58.51	2.33	103.09	20.72	4.97	0.59	0.03	22.48	NO	NO	NO	96.14	22.41	4.29		
Japan	CS, T1	CS, D	7,273.50	IE, NA, NE, NO	IE, NA, NE, 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		
Kazakhstan	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		
Latvia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
Liechtenstein	CS	CS	NO	NO	NO	NO	NO	NO	NO	0.07	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	CS	CS	NO	NO	NO	NO	NO	NO	NO	0.20	NO	NO	NO	NO	NO	NO	NO		
Malta	CS	CS	NO	NO	NO	NO	0.00	NO	NO	0.00	NO	NO	NO	NO	NO	NO	NO		
Monaco	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	IE, NA, NO	NA, NO	IE, NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO		
Netherlands			C, NE	NA, NO	C, NA, NE, NO	C, NE	NA, NO	C, NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO		
New Zealand	T2	CS	IE, NA, NO	NA, NO	IE, NA, NO	0.22	0.22	1.00	NA, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO		
Norway	T2	CS	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	-0.04	0.04	-1.03	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO		
Poland	T1	D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	14.20	NO	NO	NA, NO	NA, NO		
Portugal			NO	NO	NO	NO	NO	NO	0.05	0.00	200.60	NO	NO	NO	NO	NO	NO		
Romania	T2	D	NE, NO	0.05	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	167.54	1.33	125.61	0.90	NA, NO	NA, NO	7.98	2.87	2.78	NE, NO	NA, NO	NA, NE, NO	-232.48	111.70	-2.08		
Slovakia	NA	NA	0.04	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
Slovenia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
Spain	T1, T2	D	NE, NO	NA	NA, NE, NO	NE, NO	NA	NA, NE, NO	NE, NO	228.45	NE, NO	NE, NO	4.40	NE, NO	NE, NO	NA	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	1.79	1.01	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO		
Switzerland	T1, T2	CS, D	35.48	17.85	1.99	29.81	2.33	12.77	0.41	7.43	0.06	NA, NO	NO	NA, NO	2.00	1.48	1.35		
Turkey	NA	NA	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE		
Ukraine	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		
United Kingdom	OTH, T1, T2, T3	CS, OTH	IE, NE, NO	15.94	IE, NE, NO	IE, NA, NE, NO	50.85	IE, NA, NE, NO	IE, NA, NE, NO	1.66	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE, NO	0.10	IE, NA, NE, NO		
United States	M, T2	CS, M	912.55	1,607.58	0.57	1,167.63	2,426.88	0.48	63.24	32.78	1.93	C, IE, NE, NO	C, NA, NO	NO	267.12	30.97	8.62		

^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 SF₆.

^b P = Potential emissions

^c A = Actual emissions

Table 2.7b

Consumption of halocarbons and SF6 - PFCs (2010)

	Methods and EF used ^f		C ₅ F ₁₂			C ₆ F ₁₄			Unspecified PFCs			Total		
	Methods	EF	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A	P ^b	A ^c	Ratio P / A
			2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)		2.F(p)	2.F(a)	
			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)			(Gg CO ₂ equivalent)		
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	343.47	63.93	5.37	349.38	69.85	5.00
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	T2	PS	NO	NO	NO	315.98	NO	NO	NO	NO	NO	434.84	7.6034	57.19
Bulgaria	T2	D	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	IE, NA, NO	0.04	IE, NA, NO
Canada	T2	D	NA, NO	0.01	NA, NO	NA, NO	0.04	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO	33.02	10.19	3.24
Croatia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.03	NA, NO	NA, NO
Czech Republic	D	D	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	NA, NE, NO	NO	NA, NE, NO	44.25	29.43	1.50
Denmark			NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	6.26	13.27	0.47
Estonia	NA	NA	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	NA, NO	NA, NE, NO
European Union (15)	CS, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	3,958.72	187.54	21.11	502.00	215.84	2.33	6,477.01	1,252.58	5.17
European Union (27)	CS, D, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	IE	0.03	IE	IE	187.54	IE	6,522.46	215.84	30.22	6,522.46	1,296.69	5.03
Finland	T1	D	NO	NO	NO	NO	NO	NO	2.88	0.75	3.84	2.88	0.75	3.84
France			NA	NO	NA, NO	3,642.74	187.54	19.42	NA	NO	NA, NO	4,199.06	326.16	12.87
Germany	CS, T2	CS, D	NO	NO	NO	NO	NO	NO	IE, NO	NA, NO	IE, NA, NO	902.70	173.91	5.19
Greece	T2	D	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	NA, NO	NA, NE, NO	NE	67.80	NE
Hungary	T2	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	1.16	0.36	3.26
Iceland			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	0.00	NE, NO
Ireland	T1a	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	88.42	37.02	2.39
Italy	CS	PS	NO	NO	NO	NO	NO	NO	NO	NO	NO	335.96	101.67	3.30
Japan	CS, T1	CS, D	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	IE, NE	IE, NA, NE, NO	IE, NA, NE, NO	9,849.64	3,194.63	3.08	17,123.14	3,194.63	5.36
Kazakhstan	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
Latvia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Liechtenstein	CS	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.07	12.47
Lithuania	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Luxembourg	CS	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.20	NO
Malta	CS	CS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO
Monaco	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	IE, NO	NA, NO	IE, NA, NO
Netherlands			NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	C, NE	151.16	C, NE	C, NE, NO	151.16	C, NE, NO
New Zealand	T2	CS	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.22	0.22	1.00
Norway	T2	CS	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	-0.04	0.04	-1.03
Poland	T1	D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	14.20	NO
Portugal			NO	NO	NO	NO	NO	NO	NO	NO	NO	0.05	0.00	200.60
Romania	T2	D	NE, NO	0.03	NE, NO	NE, NO	NO	NE, NO	NE, NO	NO	NE, NO	NE, NO	0.08	NE, NO
Russian Federation	T1	D	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	NE, NO	NA, NO	NA, NE, NO	-56.06	115.90	-0.48
Slovakia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.04	NA, NO	NA, NO
Slovenia	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO
Spain	T1, T2	D	NE, NO	NA	NA, NE, NO	NE, NO	NA	NA, NE, NO	NE, NO	NA	NA, NE, NO	NE, NO	232.84	NE, NO
Sweden	CS	CS, D	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	1.82	1.79	1.01
Switzerland	T1, T2	CS, D	NA, NO	NO	NA, NO	15.24	7.41	2.06	NA, NO	NA, NO	NA, NO	82.94	36.51	2.27
Turkey	NA	NA	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	NA	NA	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO	NO	NA, NO	NA, NO
United Kingdom	OTH, T1, T2, T3	CS, OTH	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	155.66	0.03	6,066.06	155.66	68.57	2.27
United States	M, T2	CS, M	C, IE, NE, NO	C, NA, NO	C, IE, NA, NE, NO	C, IE, NE, NO	C, NA, NO	C, IE, NA, NE, NO	IE, NE, NO	NA, NO	IE, NA, NE, NO	2,410.54	4,098.21	0.59

^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 SF₆.

^b P = Potential emissions

^c A = Actual emissions

Table 2.8**Consumption of halocarbons and SF₆ - SF₆ (2010)**

	Methods and EF used ^a		SF ₆		Ratio P / A
	Methods	EF	P ^b	A ^c	
			2.F(p)	2.F(a)	
(Gg CO ₂ equivalent)					
Australia	T1	CS	NE, NO	145.19	NE, NO
Austria	CS	CS	614.38	344.73	1.78
Belarus	D	D	NE, NO	2.42	NE, NO
Belgium	T2	CS, D, PS	3.08	104.91	0.03
Bulgaria	T2	D	IE, NA, NO	13.07	37.10
Canada	T1, T3	OTH	NE, NO	196.57	1.03
Croatia	T2	PS	86.00	14.11	6.09
Czech Republic	D, T3	D	16.73	16.22	1.03
Denmark			91.30	38.05	2.40
Estonia	T2, T3	CS	NE, NO	1.81	NE, NO
European Union (15)	CS, D, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	20,578.82	5,448.50	3.78
European Union (27)	CS, D, OTH, T1, T1a, T2, T3	CS, D, OTH, PS	21,654.29	5,885.96	3.68
Finland	T1, T2	D	91.61	31.24	2.93
France			8,126.00	323.94	25.09
Germany	CS, T2, T3	CS, D	5,876.22	3,052.51	1.93
Greece	CS	CS	NA, NE	6.14	NA, NE
Hungary	T1	CS, D	234.94	234.94	1.00
Iceland	T1	CR, D	NE, NO	4.95	NE, NO
Ireland	T1, T1a	CS	80.99	34.51	2.35
Italy	CS, T3	CS, PS	2,666.76	355.80	7.50
Japan	CS, T1	CS, D	53,559.90	1,356.15	39.49
Kazakhstan	T3		NO	0	NO
Latvia	T2	D	NE, NO	12.25	1.04
Liechtenstein	T3	CS	1.26	0.02	51.26
Lithuania	T1, T2	CS	IE, NE, NO	10.70	0.93
Luxembourg	CS	CS	NE	7.39	NE
Malta	CS	CS, PS	NE, NO	1.78	NE, NO
Monaco	D	D	0.07	0.08	0.82
Netherlands	CS, T2, T3	D, PS	C, NE	184.10	C, NE
New Zealand	T2, T3	CS	111.56	20.16	5.53
Norway	T2	CS	362.94	74.81	4.85
Poland	T1	D	140.01	32.73	4.28
Portugal			1,632.10	7.12	229.18
Romania	T2	D	NE, NO	5.09	NE, NO
Russian Federation	T2	D	4,911.34	155.35	31.61
Slovakia	T2	CS	70.74	19.90	3.55
Slovenia	T2	CS, D	32.98	16.54	1.99
Spain	T2	D	NE, NO	361.06	NE, NO
Sweden	CS, D	CS, D, PS	586.41	39.04	15.02
Switzerland	T2, T3	CS, D, PS	177.02	120.59	1.47
Turkey	T1	D	1,029.68	875.78	1.18
Ukraine	T2	D	558.35	10.18	54.85
United Kingdom	OTH, T3	CS, OTH	809.98	559.89	1.45
United States	M, T2, T3	CS, M	19,222.17	12,761.26	1.51

^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 SF₆ for all subcategories within the category 2.F Consumption of halocarbons and SF₆.

^b P = Potential emissions

^c A = Actual emissions

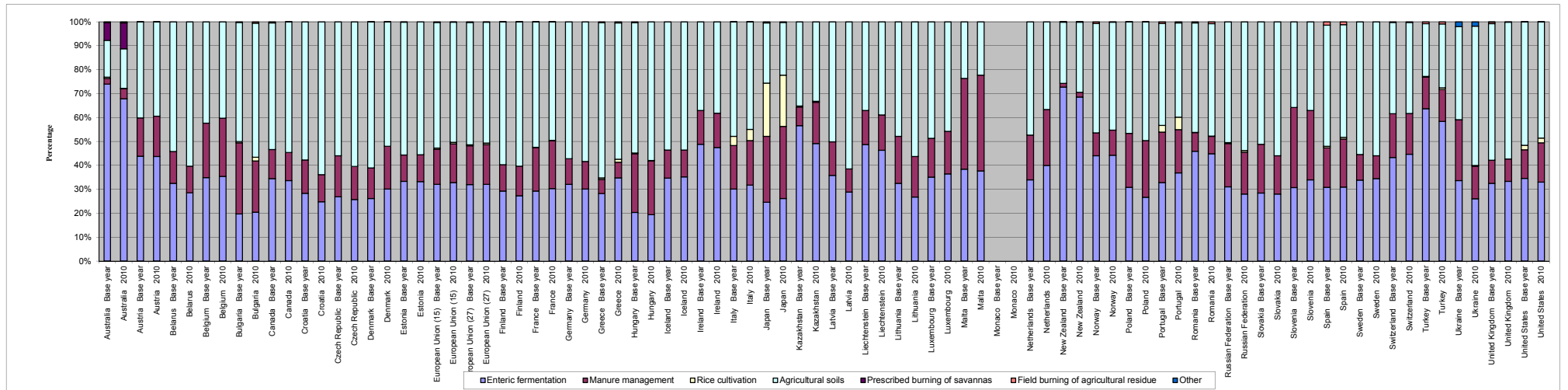
Table 3.1

Solvent and other product use - CO₂ and N₂O (2010)

	Methods and EF used ^a		Key category (CO ₂)	Methods and EF used ^a		Key category (N ₂ O)	Paint application		Degreasing and dry cleaning					
	CO ₂			N ₂ O			CO ₂		CO ₂		N ₂ O			
	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 ₂ O IEF (t/t)	Share of national total (%)	N ₂ O 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		T1	CS		-	NA	-	NA	-	NA		
Bulgaria	D, T1	D	T	D	CS, D		0.0	1.39	0.0	0.91	-	NA		
Canada	NA	NA		T1	OTH		-	IE	-	IE	-	NA		
Croatia	OTH	OTH		T1	D		0.0	0.73	0.0	NA	-	NE		
Czech Republic	CR	CS		D	D		0.1	3.04	0.0	3.32	-	NA		
Denmark	CS, OTH	CS, OTH		CS, OTH	D, OTH		0.0	0.16	0.0	0.00	-	NA, NE		
Estonia	T1	D		T2	CS		0.0	2.20	0.0	2.20	-	NO		
European Union (15)	CS, D, M, OTH,	CR, CS, D, M, OTH, PS		CS, D, OTH, T1	CS, D, OTH		0.1	NE	0.0	NE	-	NA, NE, NO		
European Union (27)	CR, CS, D, M, OTH, T1, T2, T3	CR, CS, D, M, OTH, PS		CS, D, OTH, T1, T2	CS, D, OTH, PS		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	T	T1	CS		0.1	2.60	0.0	0.88	-	NA		
Germany	CS	CS		CS	CS		0.1	NE	0.0	NE	-	NO		
Greece	CR	CR		OTH	OTH		0.0	0.00	0.0	0.00	-	NA		
Hungary	CS	CS		CS, T2	PS		0.0	0.44	0.0	0.06	-	NO		
Iceland	T1, T2	D		T1	D		0.0	0.72	0.0	1.38	-	NA		
Ireland	CR, CS	CR		CR	NA		0.0	3.12	0.0	3.12	-	NA		
Italy	CR, CS	CR, CS		CS	CS		0.1	0.52	0.0	2.36	-	NA		
Japan	NA	NA		CS	OTH		-	NA	-	NE	-	NA		
Kazakhstan	NA	NA		NA	NA		-	NE	-	NE	-	NE		
Latvia	T3	CS		CS	CS		0.1	C	0.0	C	-	NO		
Liechtenstein	CS	CS		CS	CS		0.0	0.06	0.0	NA	-	NO		
Lithuania	CR	D		D	D		0.2	3.12	0.1	3.12	-	NE		
Luxembourg	M	M		CS	CS		0.0	1.48	0.0	1.51	-	NA		
Malta	NA	NA		CS	CS		-	NA	-	NA	-	NA		
Monaco	NA	NA		NA	NA		-	NE	-	NE	-	NE		
Netherlands	CS	CS		CS	CS		0.0	2.64	0.0	0.59	-	NO		
New Zealand	NA	NA		D	D		-	NE	-	NE	-	NA		
Norway	T2	CS		CS	CS		0.1	3.00	0.0	3.00	-	NA		
Poland	CS	CS		CS	CS		0.1	3.12	0.0	3.12	-	NA		
Portugal	CR, D	CR, CS, OTH		D	D		0.1	NE	0.0	NE	-	NO		
Romania	CR	CR		NA	NA		0.0	NE	0.0	NE	-	NE		
Russian Federation	NA	NA		CS	CS		-	NE	-	NE	-	NE		
Slovakia	T1	D		D	CS		0.1	1.60	0.0	NA	-	NO		
Slovenia	NA	NA		D	D	T	-	NO	-	NE	-	NE		
Spain	D	CR		CS	D, CS	L, T	0.1	0.60	0.0	2.82	-	NA		
Sweden	CS	CS		CS	CS		0.0	1.66	0.0	0.62	-	NA		
Switzerland	CS	CS	T	CS	CS		0.1	0.36	0.0	1.88	-	NA		
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 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 - CH₄ (2010)

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)
IPCC default EF ^c							56-118 ^d	44-56 ^d				8.0			1.5		
Australia	L, T	9.9	CS, T1, T2	CS, D	25,849	26,733	3.4	115	72	69,513	68,086	-2.1	6.9	2,297	2,289	-0.3	1.4
Austria	L, T	3.8	T1, T2	CS, D	2,013	2013.28	0.0	116	56	358	358	-0.1	8.0	3,134	3,134	0.0	1.5
Belarus	L, T	7.2	T1, T2	CS, D	4,152	4,151	0.0	109	51	52	52	0.6	8.0	3,832	3,782	-1.3	1.5
Belgium	L	2.7	T1, T2	CS, D	2,645	2,593	-2.0	126	45	103	120	16.3	8.0	6,606	6,430	-2.7	1.5
Bulgaria	L, T	2.1	T1, T2	CS, D	542	563	3.9			1,384	1,400	1.2	6.7	697	730	4.7	1.5
Canada	L, T	2.7	T1, T2	CS, D	13,440	13,013	-3.2	127	58	923	803	-13.0	8.0	11,808	11,835	0.2	1.5
Croatia	L, T	2.8	T1, T2	CS, D	444	444	-0.1	104	66	629	630	0	8.0	1,231	1,231	0.0	1.5
Czech Republic	L, T	1.4	T1, T2	CS, D	1,349	1,329	-1.5	114	48	197	206	4.6	8.0	1,909	1,908	-0.1	1.5
Denmark	L, T	4.6	T1, T2	CS, D, OTH	1,573	1,573	0.0	134	40	211	247	17.3	13.1	13,173	13,173	0.0	1.1
Estonia	L, T	2.2	T1, T2	CS, D	236	235	-0.7	130	65	79	77	-2.7	8.0	372	365	-1.8	1.0
European Union (15)	L	3.2	CS, T1, T2, T3	CS, D, OTH	76,040	75,945	-0.1	120	47	85,533	86,608	1.3	7.2	118,221	122,717	3.8	1.2
European Union (27)	L, T	3.1	CR, CS, D, T1, T2, T3	CR, CS, D, OTH	88,636	89,160	0.6	116	48	8,089,304	99,791	-98.8	0.1	1,736,064	152,562	-91.2	0.1
Finland	L, T	2.2	T1, T2	CS, D, OTH	926	926	0	128	IE	126	126	0	8.4	1,367	1,367	0.0	1.5
France	L	5.4	T3	CS	19,721	19,621	-0.5	119	50	7,979	7,977	0.0	9.5	14,619	14,532	-0.6	0.9
Germany	L	2.2	CS, T1, T2	CS, D	12,809	12,810	0.0	124	46	2,089	2,089	0.0	8.0	22,244	26,509	19.2	1.2
Greece	L, T	2.7	T1, T2	CS, D	650	625	-3.8	120	56	8,832	8,966	1.5	9.1	875	950	8.6	1.5
Hungary	L, T	2.4	T1, T2	CS, D	699	700	0.2	134	58	1,203	1,223	1.7	8.0	3,208	3,247	1.2	1.5
Iceland	L, T	5.0	T1, T2	CS, D, OTH	74	74	0			748	480	-35.9	7.8	41	40	-1.2	1.5
Ireland	L, T	13.9	CS, T1, T2	CS, D	6,508	6,607	1.5	112	47	4,315	4,642	7.6	6.1	1,509	1,518	0.6	1.1
Italy	L, T	2.1	T1, T2	CS, D	5,832	6,103	4.6	120	46	7,900	8,013	1.4	8.0	9,321	9,157	-1.8	1.5
Japan	L	0.5	CS, T1	CS, D	4,279	4,376	2.3	102	55	14	12	-15.1	4.1	9,790	9,800	0.1	1.1
Kazakhstan	L, T	5.1	T1, T2	CS, D	6854.58	6,095	-11.1	87	45	20,506	14,661	-28.5	8.0	1,707	1,326	-22.3	1.5
Latvia	L, T	5.6	T1, T2	CS, D	380	378	-0.3	118	52	77	71	-7.9	8.0	390	377	-3.4	1.5
Liechtenstein	L, T	4.5	T2	CS	6	6	1.8	120	81	4	4	9.4	10.4	2	2	7.7	1.4
Lithuania	L, T	5.7	T1, T2	CS, D, OTH	708	759	7.3	103	51	56	53	-5.8	10.2	929	928	-0.1	1.1
Luxembourg	L	2.1	T1, T2	CS, D, OTH	198.83	199	0	120	55	9,084	9	0	8.0	83,774	84	0	1.5
Malta	T	1.0	CR, D	CR, CS, D	14,954	16	8.8	100	48	12,379	13	4.1	8.0	70,583	66	-6.6	1.5
Monaco	-	-	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	L, T	3.2	T1, T2	CS, D	3,975	3,972	-0.1	129	72	1,130	1,128	-0.1	8.0	12,255	12,252	0.0	1.5
New Zealand	L, T	32.3	T1, T2	CS, D	9,889	9,864	-0.2	79	60	32,563	32,563	0	11.4	335	335	0	1.1
Norway	L, T	3.5	T1, T2	CS, D	867	875	0.9	98	87	1,516	2,308	52.3	14.4	715	850	18.9	1.5
Poland	L, T	2.3	T1, T2	CS, D	5,724	5,724	0.0	97	49	258	258	0.1	7.9	14,865	14,865	0	1.5
Portugal	L, T	3.9	T1, T2	CS, D	1,483	1,391	-6.2	139	55	2,384	2,906	21.9	9.0	1,938	2,325	20.0	1.4
Romania	L, T	6.2	T2	CS	1,953,275	2,512	-99.9	0	0	7,999,676	9,142	-99.9	0.0	1,593,855	5,793	-99.6	0.0
Russian Federation	L, T	1.7	CS, T1, T2	CS, D	21,165	20,671	-2.3	100	54	21,299	19,851	-6.8	8.0	18,144	17,231	-5.0	1.5
Slovakia	L, T	1.9	T1, T2	CS, D	467	472	1.0	105	54	394	377	-4	9.8	687	687	0	1.5
Slovenia	L, T	3.4	T1, T2	CS, D	470	473	0.6	103	51	130	138	6.4	8.0	396	415	5.0	1.6
Spain	L, T	3.5	CS, T1, T2	CS, D	6,174	6,075	-1.6	103	55	18,552	18,552	0.0	8.8	25,203	25,343	0.6	0.9
Sweden	L, T	4.1	CS, T1, T2	CS, D	1,537	1,537	0.0	132	55	565	565	0.0	8.0	1,520	1,520	0.0	1.5
Switzerland	L, T	4.7	T2	CS	1,591	1,603	0.7	122	81	434	426	-2	10.0	1,589	1,583	-0.4	1.3
Turkey	L, T	3.94	T1	D	11,405	10,724	-6.0	66	44	23,090	21,795	-5.6	5.1	2	1.9	21.7	1.0
Ukraine	L, T	2.3	T1, T2, T3	CS, D, OTH	4,661	4,827	3.6	110	76	1,149	1,197	4.2	9.4	7,769	7,577	-2.5	1.5
United Kingdom	L	2.6	T1, T2	CS, D	10,109	9,901	-2.1	111	43	31,086	31,000	-0.3	4.8	4,468	4,423	-1.0	1.5
United States	L, T	2.1	M, T1, T2	CS, D, M	98,832	93,881	-5.0	115	56	5,573	5,620	1	8.0	64,693	64,887	0.3	1.5

Note: Bulgaria, Croatia, Estonia, Iceland, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine have used Option B to report livestock types and emissions within the category 4.A Enteric fermentation. Cattle population and the CH₄ IEFs are included in this table for these Parties.

^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 the various livestock types within the category 4.A Enteric fermentation - CH₄.

^b Source of international statistics: FAOSTAT data, downloaded on 21 March 2012 from <http://faostat.fao.org/site/573/default.aspx>. Time series population data on cattle, swine and sheep for Belarus, Croatia, Estonia, Kazakhstan, Latvia, 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 CH₄/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
Manure management - CH4 (2010)

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/vr)				
				6 to 81	1 to 38	0.19 to 0.37	3 to 20	
IPCC default EF ^c								
Australia		0.3	CS, M, T2	CS, D	8.84	0.04	0.00	23.03
Austria	L, T	0.4	T1, T2	CS, D	9.00	4.13	0.19	1.18
Belarus		0.8	T1, T2	CS, D	5.14	2.39	0.19	4.45
Belgium	L	1.3	T2	CS, D	16.66	2.61	0.63	9.69
Bulgaria	L, T	1.5	T1, T2	CS, D			0.14	39.46
Canada		0.4	T1, T2	CS, D	27.55	2.72	0.26	5.05
Croatia		0.6	T1	D	6.00	4.00	0.19	4.00
Czech Republic	T	0.3	T1	D	14.00	6.00	0.19	3.00
Denmark	L, T	2.1	CS, T1, T2	CS, D, OTH	33.19	9.48	1.58	2.20
Estonia		0.2	T1, T2	CS, D	10.43	3.42	0.19	2.06
European Union (15)	L	1.1	CS, T1, T2	CS, D, OTH	28.28	7.62	0.25	7.09
European Union (27)	L	1.0	CR, CS, T1, T2	CR, CS, D, OTH	24.22	7.28	0.00	0.59
Finland		0.4	T2	CS	14.97	IE	0.19	IE
France	L, T	2.6	T2	D	43.15	14.69	0.28	15.32
Germany	L	0.6	T1, T2	CS, D	26.43	6.55	0.27	4.14
Greece		0.3	T1, T2	CS, D	9.56	1.69	0.25	7.00
Hungary	L, T	1.4	T1, T2	CS	7.72	2.08	0	10.87
Iceland		0.7	T1, T2	CS, D			0.50	3.00
Ireland	L, T	3.5	T1, T2	CS, D	20.75	9.87	0.16	12.82
Italy	L	0.5	T1, T2	CS, D	11.23	5.78	0.22	5.88
Japan		0.2	CS, T1	CS, D	62.23	1.52	0.28	0.58
Kazakhstan		0.4	T1	D	6.00	4.00	0.19	4.00
Latvia		0.8	T1, T2	CS, D	10.60	4.00	0.19	4.00
Liechtenstein	L	0.8	T2	D	24.64	11.20	1.28	5.47
Lithuania	L, T	2.2	T1, T2	CS, D	20.94	8.82	0.19	11.56
Luxembourg	L	0.8	T1, T2	CS, D, OTH	37.33	9.51	0.19	19.52
Malta		0.9	CR	CR, CS	44.00	20.00	0.28	10.00
Monaco		-	NA	NA	NO	NO	NO	NO
Netherlands	L	1.4	T2	CS	42.58	3.45	0.16	4.13
New Zealand	L, T	0.9	T1, T2	CS, D	3.39	0.75	0.12	5.94
Norway	L	0.6	T2	CS	14.41	11.91	0.76	1.97
Poland	L, T	0.8	T1, T2	CS, D	13.76	2.56	0.16	5.97
Portugal	L, T	1.5	T2	CS	7.81	1.35	1.84	21.30
Romania		0.4	T2	CS	0.00	0.00	0.00	0.01
Russian Federation		0.2	CS, T1, T2	CS, D	4.65	4.13	0.19	5.95
Slovakia	T	0.3	T1, T2	D	4.00	3.80	0.19	4.00
Slovenia	L	2.2	T1, T2	CS, D	57.38	22.23	0.19	14.60
Spain	L	1.5	CS, T1, T2	CS, D	15.95	1.16	0.22	9.09
Sweden	T	0.4	T1, T2	CS, D	8.52	5.90	0.19	1.40
Switzerland	L, T	1.19	T2	CS, D	25.84	13.30	1.21	5
Turkey	T	0.3	T1	D	10.19	1.00	0.12	3.33
Ukraine	T	0.4	T1, T2	CS, D	6.15	9.11	0.41	5.21
United Kingdom	L, T	0.5	T1, T2	CS, D	33.80	2.70	0.14	5.50
United States	L, T	0.8	M, T1, T2	CS, D, M	91.06	1.58	0.54	14.65

^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 the various livestock types within the category 4.B Manure management - CH4.

^b Information on implied emission factors reported by Bulgaria, Croatia, Estonia, Iceland, Liechtenstein, Luxembourg, Netherlands, Norway, Switzerland and Ukraine refers to mature dairy cattle and mature non-dairy respectively, as these Parties have used 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^d

	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 4.3

Manure management - N2O (2010)

	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
					N ₂ O IEF (kg N ₂ O-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	0.00	0.020	0.018	122	39	7	12	0.7
Austria	L, T	1.1	T1	D	NO	0.001	0.020	0.014	97	47	13	9	0.5
Belarus	L	2.0	T1	D	NO	0.001	0.020	NO	77	36	16	10	0.6
Belgium	L	0.6	T1	D	NO	0.001	0.020	0.001	117	54	8	10	0.6
Bulgaria		0.7	D	D	0.001	0.001	0.020	0.001			15	9	0.6
Canada		0.5	T1	D	NE	0.001	0.020	0.003	102	44	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	L, T	0.5	T1, T2	CS, D	NO	0.001	0.020	0.005	133	69	20	20	0.6
Denmark		0.7	CS, D, T1, T2	CS, D	NO	0.001	0.020	0.016	139	43	15	8	0.6
Estonia		0.5	T2	D	NO	0.001	0.020	NO	120	62	16	10	0.6
European Union (15)	L	0.5	CS, D, T1, T2	CS, D	0.001	0.002	0.017	0.009	114	51	8	9	0.6
European Union (27)	L	0.6	CS, D, T1, T2	CS, D	0.001	0.002	0.018	0.008	107	52	8	10	0.6
Finland	L	0.6	D	D	NO	0.001	0.016	0.020	129	52	10	1E	0.6
France	L, T	1.0	T2	D	NA	0.001	0.018	NA	113	59	17	7	0.6
Germany		0.2	T1, T2	D	NO	0.004	0.005	NO	114	44	8	12	0.7
Greece		0.3	D	D	NA	0.001	0.020	0.005	100	46	11	16	0.6
Hungary	L, T	1.3	T1	CS, D	NO	0.001	0	0.001	114	49	20	8	0.6
Iceland	L	0.9	T1	D	NO	0.001	0.020	NO			14	9	0.7
Ireland		0.7	T1	D	NO	0.001	0.020	NO	102	49	7	9	0.4
Italy	L	0.7	T2	CS, D	NO	0.001	0.020	0.020	116	50	16	11.7	0.5
Japan		0.4	CS, D	CS, D	NO	0.001	0.020	0.018	85	51	12	13.1	1.0
Kazakhstan	L, T	1.4	T1	D	NA	NA	0.020	NA	70	50	16	20	0.6
Latvia	L, T	1.1	T1	CS, D	NA	0.001	0.020	0.001	70	50	13	10	0.6
Liechtenstein		0.6	CS	D	NO	0.001	0.020	NO	113	80	8	11	0.7
Lithuania	L, T	1.4	T1	D	0.001	0.001	0.020	0.005	99	50	16	11	0.6
Luxembourg		0.2	T1	D	NO	0.001	0.020	0.001	102	68	17	12	0.7
Malta		0.1	CS	CS	NO	NE, NO	NE, NO	NO	NE	NE	NE	NE	NE
Monaco		-	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	L	0.5	T2	D	NO	0.001	0.018	NO	130	83	7	9	0.6
New Zealand		0.1	T1	D	0.001	NO	0.020	0.005	117	77	16	11	NA
Norway		0.2	CS, T1	D	NA	0.001	0.015	NA	82	35	10	6	0.2
Poland	L	1.3	T2	CS, D	NO	0.001	0.020	NO	87	58	7	14	0.3
Portugal	T	0.4	D	D	0.001	0.001	0.020	NO	117	51	8	9	0.6
Romania	L	0.6	D	D	0.001	0.001	0.020	0.005	54	38	4	18	1.1
Russian Federation	L, T	0.9	T1	CS, D	NO	0.001	0.020	NO	93	58	16	21	0.8
Slovakia	L, T	0.8	T2	D	NO	0.001	0.020	NO	100	60	16	15.857219	0.7
Slovenia	L, T	0.7	D	CS, D	0.001	0.001	0.020	0.002	110	43	20	12	0.6
Spain	L	0.7	CS, D, T2	D	NO	0.001	0.020	0.007	68	52	5	9	0.5
Sweden	L, T	0.7	T1, T2	CS, D	NO	0.001	0.020	0.020	126	42	6	9	0.4
Switzerland	L, T	0.60	CS	D	NO	0.001	0.020	NO	111	80	8	9	0.5
Turkey	T	0.6	T1	D	NA	NA, NO	NA	NA	83	45	14	7	NE
Ukraine	L	0.8	T2	D	0.001	0.001	0.020	0.005	75	68	9	13	0.3
United Kingdom		0.3	T1	D	NO	0.001	0.020	0.017	121	54	5	10	0.6
United States		0.3	M, T1, T2	D	0.005	0.007	0.019	0.004	124	74	11	10	0.4

Note: Bulgaria, Croatia, Estonia, Iceland, 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 Information on methods and emission factors in this table is 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 NO 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 4.5

Agricultural soils: parameters (fractions) used to estimate N₂O emissions in the agricultural soils category (2010)

	Frac _{BURN} (kg N / kg crop-N)	Frac _{FUEL} (kg N / kg N excreted)	Frac _{GRAZ}	Frac _{NCRBF} (kg N / kg of dry biomass)	Frac _{NCRO} (kg N / kg of dry biomass)	Frac _R (kg N / kg crop-N)	Frac _{GASF} (NH ₃ -N + NO _x -N / kg of synth. fert. N applied)	Frac _{GASM} (NH ₃ -N + NO _x -N / kg N excreted)	Frac _{LEACH} (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	0.30
Austria	0.00	0	0.06	0.03	0.009	0.34	0.04	0.27	0.30
Belarus	NO	NO	0.27	NA	NA	NA	0.10	0.20	0.30
Belgium	NO	NO	0.31	0.03	0.015	0.50	0.04	0.21	0.12
Bulgaria	0.03	0	0.34	0.03	0.015	0.45	0.10	0.20	0.30
Canada	IE	NO	0.34	0.01	0.006	0.47	0.10	0.30	0.18
Croatia	NO	NO	0.26	0.03	0.017	0.45	0.07	0.20	0.30
Czech Republic	NO	NO	0.15	0.03	0.015	0.45	0.10	0.20	0.30
Denmark	0	NO	0	0	0	1	0	0	0
Estonia	NO	NO	0.31	0.03	0.015	0.45	0.10	0.20	0.30
European Union (15)	NA	NA	0.35	0.03	0.013	0.55	0.06	0.22	0.25
European Union (27)	NA	NA	0.28	0.03	0.015	0.51	0.08	0.21	0.27
Finland	0.00	NA	0.18	0.04	0.006	0.45	0.02	0.25	0.15
France	0.01	NO	0.41	0.03	0.008	NA	0.10	0.20	0.30
Germany	NO	NO	0.11	0.04	0.023	0.63	0.04	0.30	0.30
Greece	0.10	0	0.79	0.01	0.005	0.52	0.10	0.20	0.30
Hungary	NO	NO	0.13	0.02	0.009	NO	0.10	0.20	0.30
Iceland	NO	NO	0	NO	0	0	0	0	0
Ireland	NO	NO	0.62	0.01	0.005	NO	0.03	0.17	0.10
Italy	0.10	NO	0.19	0.03	0.015	0.45	0	0.29	0.30
Japan	0.10	NA	NA	NA	NA	NA	0.10	0.20	0.30
Kazakhstan	0	0	0.60	0.01	0.850	1.30	0.05	0.09	0
Latvia	NO	NO	0.29	0.02	0.030	0.45	0.10	0.20	0.30
Liechtenstein	NO	NO	0	0	0.01	1	0	0	0.2
Lithuania	NO	NO	0.29	0.03	0.015	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
Malta	NE	NE	NE	NE	NE	NE	NE	NE	NE
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NO	NO	0.16	NE	NE	NE	0.05	0.09	0.12
New Zealand	0.49	NO	IE	NA	NA	NA	0.10	0.10	0.07
Norway	0.08	NO	0.26	0.01	0.011	0.65	0.01	0.18	0.18
Poland	0.03	NO	0.07	0.03	0.014	0.53	0.10	0.20	0.30
Portugal	0.05	NO	0.54	0.02	0.013	0.71	0.06	0.19	0.32
Romania	0.10	NO	0.35	0.03	0.016	NA	0.10	0.20	0.30
Russian Federation	NO	NO	0.17	NE	NE	NE	0.10	0.20	0.30
Slovakia	NO	NO	0.15	0.07	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	0.20	NO	0.38	0.02	0.005	NA	0.06	0.20	0.30
Sweden	NO	NO	0.33	0.01	0.010	0.64	0.01	0.33	0.20
Switzerland	NO	NO	0.19	0.02	0.016	0.72	0.04	0.33	0.20
Turkey	NE	NE	NE	NE	NE	NE	NE	NE	NE
Ukraine	NO	NO	0.33	NE	NE	NE	0.15	0.20	0.21
United Kingdom	0	0.36	0.57	0.03	0.015	0.52	0.10	0	0
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 volatilises as NH ₃ and NO _x
Frac _{NCRBF}	Fraction of N in N-fixing crop	Frac _{GASM}	Fraction of livestock N excretion that volatilises as NH ₃ and NO _x
Frac _{NCRO}	Fraction of N in non-N-fixing crop	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.

Table 5.1a
Methods and emission factors used (2010)

	Forest Land						Cropland						Grassland					
	CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O	
	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	T1, T2, T3	CS, M	CS	CS	CS	CS	T3	M	CS	CS	CS	CS	T2, T3	CS, M	CS	CS	CS	CS
Austria	T2, T3	CS	T1	CS, D	T1	CS, D	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T2	CS	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	CS, T1, T2	CS	NA	NA	NA	NA	CS, T1, T2	CS	NA	NA	CS, T2	CS	CS, T1, T2	CS	NA	NA	NA	NA
Bulgaria	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	T2	CS	T1	CS	NA	NA	NA	NA
Canada	T3	CS	T2	CS	T2	CS	T1, T2, T3	CS, D	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA
Croatia	T1, T2	D	T1	D	T1	D	T1	D	NA	NA	T1	D	T1	D	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	CS, T2	CS, D	NA	NA	CS	CS	T1, T2, T3	CS, D	NA	NA	T1	CS	T2	CS, D	T2, T3	CS, D	T2, T3	CS, D
Estonia	T1, T2	D	T2	D	T1, T2	D	T1, T2	D	NA	NA	NA	NA	T1, T2	D	T1	D	T1	D
European Union (15)	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	D, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D
European Union (27)	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D, PS	CS, D, T1, T2, T3	CS, D, PS	CS, D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D
Finland	T2, T3	CS, D	T2	D	T1, T2	CS, D	D, T1, T3	CS, D	NA	NA	T1	CS, D	CS, D, T1, T3	CS, D	NA	NA	NA	NA
France	T2, T3	CS	T2, T3	CS	T2, T3	CS	CS, T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS
Germany	CS, T1, T2	CS, D	T1	D	T1	CS, D	CS, D, T2	CS	NA	NA	CS, T1	D	CS	CS	NA	NA	NA	NA
Greece	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	NA	NA	T2	CS	T1	D	T1	D
Hungary	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	T1	D	T1	D
Iceland	D, T2, T3	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	NA	NA	T1, T2, T3	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, T3	CS, D	NA	NA	NA	NA
Italy	T1, T2, T3	CS, D	T1	D	T1	D	T1, T2, T3	CS, D	NA	NA	T1	D	T1, T2, T3	CS, D	NA	NA	NA	NA
Japan	T2, T3	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	NA	NA
Kazakhstan			T1	D	T1	D	T2	CS	NA	NA	NA	NA			NA	NA	NA	NA
Latvia	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	D, T1, T2	CS, D	NA	NA	NA	NA	T1	D	T1	D	T1	D
Liechtenstein	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	T2	CS	T2	CS	NA	NA	NA	NA
Lithuania	T1, T2	CS, D	T1	D	T1	D	T1	CS, D	T1	D	T1, T2	CS, D	T1	CS, D	T1	D	T1	D
Luxembourg	T1, T2	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	T1	D	T1	CS, D	NA	NA	NA	NA
Malta	CS	D	NA	NA	NA	NA	D	D	NA	NA	NA	NA	NA	NA	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	T1, T2	CS, D	NA	NA	NA	NA
New Zealand	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D
Norway	T1, T3	CR, CS, D	T1	D	T1	D	T1, T2, T3	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	NA	NA
Poland	D, T2	CS, D	D, T2	CS, D	D, T1, T2	CS, D	D, T1, T2	CS, D	NA	NA	NA	NA	D, T1, T2	CS, D	D, T1	CS, D	D, T1	CS, D
Portugal	CS, T2	CS, D	D	D	D	D	D, T2	CS, D	D	D	D	D	T2	CS, D	D	D	D	D
Romania	T1, T2, T3	CS, D	T1	D	T1	D	CS, T1, T2	CS, D	NA	NA	T1	D	T1	CS	NA	NA	NA	NA
Russian Federation	CS, T2	CS	T1, T2	CS, D	T1, T2	CS, D	T1	D	NA	NA	NA	NA	CS, T1, T3	CS, D	T1	D	T1	D
Slovakia	T2	CS	T2	PS	T2	PS	T1, T2	CS, D	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Slovenia	CS, D, T1, T2, T3	CS, D	D, T1	D	D, T1	D	D, T1, T2	CS, D	NA	NA	D, T1	D	D, T1, T2	CS, D	NA	NA	NA	NA
Spain	CS, T1, T2	CS, D	CS	D	CS	D	T2	CS, D	NA	NA	NA	NA	T2	CS, D	NA	NA	NA	NA
Sweden	T1, T2, T3	CS	T1	D	T1	D	T1, T2, T3	CS, D	NA	NA	CS, T1	CS, D	T1, T2, T3	CS	T1	D	T1	D
Switzerland	T1, 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	T2	D	NA	NA	NA	NA			NA	NA	NA	NA
Ukraine	T1, T2	CS, D	T1	D	T1	D	CS, T1	CS, D	NA	NA	NA	NA	CS, T2	CS, D	NA	NA	NA	NA
United Kingdom	CS, D, T3	CS	D	CS	D, T1	CS	CS, D, T3	CS	D	CS	D	CS	CS, D, T3	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 5.1b

Methods and emission factors used (2010)

	Wetlands						Settlements						Other Land					
	CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O	
	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	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	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	CS, T1	CS	NA	NA	NA	NA	CS, T1	CS	NA	NA	NA	NA	CS, T1	CS	NA	NA	NA	NA
Bulgaria	T1	CS	NA	NA	NA	NA	T1	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	T2, T3	CS	NA	NA	NA	NA	T1, T2, T3	CS	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA
Croatia	T1	D	NA	NA	NA	NA	T1, T2	D	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	T1	CS	NA	NA	CS	CS	T1	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	T1	D	NA	NA	T1	D	T1, T2	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	CS, D, T1, T2, T3	CS, D	T2, T3	CS	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	D, T2, T3	CS	D, T2, T3	CS	CS, D, T1, T2, T3	CS, D	T2, T3	CS	T2, T3	CS
European Union (27)	CS, D, T1, T2, T3	CS, D	D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	CS, D, T1, T2, T3	CS, D	D, T2, T3	CS	D, T2, T3	CS	CS, D, T1, T2, T3	CS, D	T2, T3	CS	T2, T3	CS
Finland	T2	CS	T2	CS	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS	T2, T3	CS
Germany	CS	CS	NA	NA	T1	CS	CS, D, T2	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	NA	NA	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Hungary	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	RA, T2	CS	RA, T2	CS	NA	NA	T3	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	T1	D	NA	NA	D, T1	D	T1, T2	CS, D	NA	NA	NA	NA	D, T1, T2	CS, D	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
Kazakhstan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	T1	D	NA	NA	T1	D	T2	CS	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	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA
Malta	NA	NA	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	T1a	D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA
Netherlands	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1	D	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA
Norway	T1	D	NA	NA	T1	D	T3	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	T1, T2	D	D, T1	CS, D	D, T1	CS, D	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	T2	CS, D	NA	NA	NA	NA	T2	CS, D	NA	NA	NA	NA	T2	CS, D	NA	NA	NA	NA
Romania	T1	D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA
Russian Federation	T1	D	NA	NA	T1	D	CS	CS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	D, T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	NA	NA	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	T2	CS	NA	NA	NA	NA	T1, T2, 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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	T1, T2	CS, D	NA	NA	T1	D	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA
United Kingdom	D	CS	NA	NA	D	CS	CS, D, T3	CS	D	CS	D	CS	NA	NA	NA	NA	NA	NA
United States	T1	D	NA	NA	T1	D	T2, T3	CS	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 5.2a**Forest land remaining forest land - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	105,656.97	NA, NO	0.14	-0.01	0.13	-0.04	0.00	NA, NO	
Austria	3,780.84	NA, NO	2.49	-2.14	0.34	0.06	-0.19	NO	
Belarus	8,010.00	NE	1.53	-0.51	1.03	NE	NE	NE	
Belgium	693.94	NO	0.84	-0.16	0.69	0.01	0.57	NO	
Bulgaria	3,612.05	NO	0.74	IE, NO	0.74	NO	NO	NO	
Canada	229,320.32	IE	3.48	-3.55	-0.07	0.15	0.03	IE	
Croatia	1,674.91	NO	2.64	-1.21	1.43	NO	NO	NO	
Czech Republic	2,562.71	18.67	3.06	-2.35	0.71	NO	NO	NA, NO	
Denmark	533.07	26.67	2.35	IE, NA	2.35	0.58	NA	-0.34	
Estonia	2,192.17	483.59	0.18	IE	0.18	0.04	NO	-0.07	
European Union (15)	119,889.85	11,045.97	1.23	-0.74	0.49	0.03	0.05	-0.40	
European Union (27)	153,966.00	12,641.76	1.38	-0.81	0.58	0.03	0.07	-0.38	
Finland	21,838.47	5,897.54	1.60	-1.17	0.43	IE	0.09	-0.29	
France	22,246.66	NO	1.79	-1.16	0.63	-0.06	NO	NO	
Germany	10,584.98	224.17	0.43	IE	0.43	0.09	NO	-0.68	
Greece	3,355.26	NO	0.15	IE	0.15	NA	NA	NA	
Hungary	1,882.03	NO	0.29	IE	0.29	NE	NE	NE	
Iceland	56.80	0.05	0.62	-0.11	0.51	NE	NE	-0.16	
Ireland	472.85	320.65	1.43	IE	1.43	0.01	NO	-0.35	
Italy	8,994.68	NO	2.63	-1.61	1.02	0.16	NE, NO	NO	
Japan	24,941.19	IE	0.81	0.00	0.81	-0.01	0.03	IE, NA	
Kazakhstan	14,333.30	NO	0.13	NO	0.13	NE	NE	NO	
Latvia	3,135.80	428.50	3.40	-1.78	1.62	NO	NO	-0.68	
Liechtenstein	6.16	NE	3.11	-2.30	0.81	0.00	0.01	IE	
Lithuania	2,059.77	340.06	1.45	NA	1.45	0.18	NA	-0.34	
Luxembourg	86.16	NO	3.07	-1.81	1.26	NO	NO	NO	
Malta	0.82	NO	16.15	NE	16.15	NE	NO	NE	
Monaco	NO	NO	NO	NO	NO	NO			
Netherlands	341.15	9	2.66	-0.94	1.72	0.00	NE	NE	
New Zealand	9,199.72	24.65	0.81	-1.18	-0.37	0.18	NA	-0.08	
Norway	11,733.57	593.06	0.95	-0.32	0.63	0.08	0.12	-0.07	
Poland	8,647.00	229.63	2.43	-1.65	0.78	0.02	0.52	NO	
Portugal	3,912.17	NO	2.07	-1.27	0.80	0.00	-0.10	NO	
Romania	6,589.16	95.33	1.80	-0.89	0.92	NE, NO	NO	NO	
Russian Federation	777,796.64	1,950.20	0.30	-0.12	0.19	0.03	0.03	-0.16	
Slovakia	1,982.03	NO	2.73	-2.06	0.67	NO	NO	NO	
Slovenia	1,239.42	NA	2.29	NA	2.29	0.11	NA	NA	
Spain	12,599.69	NO	0.41	IE	0.41	NE	NE	NO	
Sweden	27,851.40	4,333.27	0.28	IE	0.28	0.04	0.16	-0.58	
Switzerland	1,139.21	3.47	2.94	-2.74	0.19	0.03	IE, NO	-0.68	
Turkey	20,755.87	NO	0.91	-0.29	0.62	0.12	NE	NO	
Ukraine	10,359.00	192.30	1.80	-0.50	1.30	0.16	NO	-0.68	
United Kingdom	2,602.17	234.35	3.68	-3.44	0.24	0.26	0.27	0.58	
United States	283,713.13	NA	0.52	IE	0.52	0.12	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 CO₂' column.

^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.2bForest land remaining forest land - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	14,579.77	-1,026.55	13,553.22	-4,144.42	305.24	NA, NO	-35,618.14
Austria	9,401.13	-8,105.64	1,295.49	230.26	-716.29	NO	-2,968.01
Belarus	12,293.68	-4,065.69	8,227.99	NE	NE	NE	-30,169.30
Belgium	584.64	-107.83	476.81	6.24	398.13	NO	-3,230.99
Bulgaria	2,659.17	IE, NO	2,659.17	NO	NO	NO	-9,750.27
Canada	798,048.06	-814,691.15	-16,643.09	35,351.64	7,699.35	IE	-96,828.97
Croatia	4,420.43	-2,031.74	2,388.69	NO	NO	NO	-8,758.54
Czech Republic	7,833.09	-6,013.45	1,819.64	NO	NO	NA, NO	-6,672.02
Denmark	1,253.18	IE, NA	1,253.18	307.52	NA	-9.06	-5,689.34
Estonia	389.65	IE	389.65	84.31	NO	-35.04	-1,609.38
European Union (15)	146,932.10	-88,622.91	58,309.19	3,364.09	5,163.88	-4,386.29	-228,986.54
European Union (27)	213,226.78	-124,380.15	88,846.63	4,142.68	9,561.06	-4,829.06	-358,311.48
Finland	34,931.21	-25,643.23	9,287.98	IE	1,478.14	-1,715.40	-33,185.96
France	39,803.58	-25,848.53	13,955.06	-1,308.74	NO	0	-46,369.82
Germany	4,501.93	IE	4,501.93	992.32	NO	-152.44	-19,586.63
Greece	506.05	IE	506.05	NA	NA	NA	-1,855.51
Hungary	543.98	IE	543.98	NE	NE	NE	-1,994.60
Iceland	35.13	-6.37	28.76	NE	NE	-0.01	-105.44
Ireland	678.02	IE	678.02	3.66	NO	-112.54	-2,086.82
Italy	23,662.62	-14,518.77	9,143.85	1,426.44	NE, NO	NO	-38,757.73
Japan	20,274.17	-10.24	20,263.93	-197.92	762.75	IE, NA	-76,372.11
Kazakhstan	1,792.00	NO	1,792.00	NE	NE	NO	-6,570.67
Latvia	10,654.39	-5,568.73	5,085.66	NO	NO	-291.38	-17,579.03
Liechtenstein	19.20	-14.21	4.99	0.01	0.04	IE	-18.48
Lithuania	2,985.34	NA	2,985.34	369.39	NA	-116.36	-11,874.05
Luxembourg	264.36	-155.94	108.41	NO	NO	NO	-397.51
Malta	13.28	NE	13.28	NE	NO	NE	-48.69
Monaco	NO	NO	NO	NO	NO	NO	
Netherlands	908.03	-322.17	585.86	-0.53	NE	NE	-2,146.22
New Zealand	7,442.62	-10,866.05	-3,423.43	1,669.30	NA	-2.04	6,439.31
Norway	11,126.90	-3,743.16	7,383.74	949.13	1,373.39	-39.27	-35,445.62
Poland	21,038.29	-14,255.16	6,783.14	192.94	4,397.18	NO	-41,701.96
Portugal	8,081.65	-4,961.33	3,120.32	-10.24	-385.30	NO	-9,990.85
Romania	11,878.39	-5,833.79	6,044.60	NE, NO	NO	NO	-22,163.53
Russian Federation	237,028.23	-91,898.94	145,129.29	24,767.09	22,637.52	-312.03	-704,813.53
Slovakia	5,414.84	-4,086.12	1,328.73	NO	NO	NO	-4,872.00
Slovenia	2,834.71	NA	2,834.71	131.95	NA	NA	-10,877.75
Spain	5,111.26	IE	5,111.26	NE	NE	NO	-18,741.30
Sweden	7,667.19	IE	7,667.19	1,043.25	3,756.68	-2,531.78	-36,429.55
Switzerland	3,344.00	-3,122.03	221.97	38.32	IE, NO	-2.36	-945.76
Turkey	18,895.77	-6,009.32	12,886.45	2,462.96	NE	NO	-56,281.17
Ukraine	18,673.64	-5,193.86	13,479.78	1,685.03	NO	-130.76	-55,124.84
United Kingdom	9,585.29	-8,959.46	625.83	674.87	634.78	134.93	-7,591.55
United States	147,640.35	IE	147,640.35	34,230.95	NE	51,644.65	-856,225.12

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.3a**Land converted to forest land - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	1141.63	NO	3.46	IE, NO	3.46	0.89	-0.22	NO
Austria	219.02	NO	1.18	-0.13	1.05	1.27	0.72	NO
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	21.03	NO	2.31	NO	2.31	NO	1.38	NO
Bulgaria	235.21	NO	2.25	-0.41	1.84	0.27	-0.56	NO
Canada	88.31	IE, NO	3.19	-1.17	2.02	0.47	-0.19	IE, NO
Croatia	18.25	NO	2.19	-0.38	1.81	NO	0.14	NO
Czech Republic	41.52	NA, NO	1.87	NA, NO	1.87	NA, NO	0.16	NA, NO
Denmark	46.87	1.82	1.40	-1.15	0.25	-0.38	0.15	-0.34
Estonia	61.29	6.91	10.45	IE	10.45	0.27	NE, NO	-0.16
European Union (15)	6261.04	362.39	1.31	-0.28	1.04	0.17	0.20	-0.68
European Union (27)	7943.49	391.98	1.50	-0.23	1.27	0.17	0.36	-0.65
Finland	158.09	59.92	0.44	IE, NO	0.44	IE, NO	-0.49	-2.13
France	1274.17	NO	1.26	-0.14	1.11	0.32	0.12	NO
Germany	348.86	20.38	4.15	-0.03	4.12	0.46	-0.28	-0.68
Greece	33.25	NO	2.88	NE, NO	2.88	NE, NO	IE, NO	NO
Hungary	164.36	NO	1.92	-0.06	1.86	NE, NO	NE, NO	NO
Iceland	34.44	2.92	0.85	-0.02	0.83	0.14	0.39	-0.16
Ireland	264.59	156.22	NO	-0.40	-0.40	0.04	NO	-0.43
Italy	1559.28	NO	0.13	-0.08	0.05	0.01	0.15	NO
Japan	25.03	IE	2.80	-0.05	2.75	0.93	-0.37	IE
Kazakhstan	1406.80	NO	NO	NO	NO	NE, NO	NE, NO	NO
Latvia	213.58	5.21	0.65	NO	0.65	NE, NO	NE, NO	-0.68
Liechtenstein	0.01	IE, NO	1.36	NO	1.36	NO	NO	NO
Lithuania	106.24	NA	1.10	NA	1.10	NA	NA	NA
Luxembourg	8.25	NO	1.65	-0.17	1.48	NO	0.92	NO
Malta	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	55.75	3.97	2.93	-0.26	2.68	NE	NE	NE
New Zealand	920.39	1.13	9.39	-0.11	9.29	-0.01	-0.39	-0.68
Norway	517.40	105.17	0.25	NO	0.25	IE	-0.03	NE
Poland	657.77	17.47	2.44	IE, NO	2.44	0	1.97	NO
Portugal	305.17	NO	1.98	-0.91	1.06	0.09	1.60	NO
Romania	168.43	NO	1.27	NO	1.27	0.98	2.08	NO
Russian Federation	119538.16	IE, NO	0.01	0.00	0.01	0.00	0.00	NE, NO
Slovakia	29.22	NO	1.55	NO	1.55	0.42	2.33	NO
Slovenia	4.84	NA, NO	5.29	NA	5.29	NA	9.85	NA, NO
Spain	1077.81	NO	1.51	IE, NO	1.51	NE, NO	0.15	NO
Sweden	582.65	90.65	0.58	IE	0.58	0.31	0.01	-0.57
Switzerland	57.41	0.14	4.46	-1.01	3.44	1.55	0.73	-0.07
Turkey	781.23	NO	0.95	-0.17	0.78	0.11	NE, NO	NO
Ukraine	242.10	NO	0.42	0.00	0.42	0.14	0.02	NO
United Kingdom	306.29	29.42	5.51	-3.04	2.46	0.09	0.19	0.44
United States	NA	NA	IE	IE	IE	IE	IE	IE

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.3b**Land converted to forest land - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	3,948.48	IE, NO	3,948.48	1,014.94	-256.45	NO	-17,258.91
Austria	257.56	-28.07	229.49	278.29	158.51	NO	-2,443.08
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	48.56	NO	48.56	NO	28.96	NO	-284.23
Bulgaria	529.21	-95.81	433.40	63.27	-132.49	NO	-1,335.34
Canada	281.84	-103.27	178.57	41.41	-17.16	IE, NO	-743.65
Croatia	40.04	-6.95	33.10	NO	2.47	NO	-130.41
Czech Republic	77.58	NA, NO	77.58	NA, NO	6.52	NA, NO	-308.36
Denmark	65.63	-53.97	11.66	-17.82	6.68	-0.62	0.37
Estonia	640.19	IE	640.19	16.50	NE, NO	-1.11	-2,403.78
European Union (15)	8,219.94	-1,734.63	6,485.30	1,089.22	1,155.37	-248.22	-31,099.47
European Union (27)	11,925.88	-1,839.61	10,086.27	1,351.11	2,753.59	-252.86	-51,106.40
Finland	69.93	IE, NO	69.93	IE, NO	-48.38	-127.71	389.26
France	1,603.11	-183.12	1,419.99	409.34	155.13	0	-7,276.38
Germany	1,447.15	-11.16	1,435.99	161.65	-90.88	-13.86	-5,473.98
Greece	95.63	NE, NO	95.63	NE, NO	IE, NO	NO	-350.63
Hungary	315.65	-9.17	306.49	NE, NO	NE, NO	NO	-1,123.79
Iceland	29.41	-0.74	28.67	4.86	12.31	-0.47	-166.35
Ireland	NO	-105.04	-105.04	10.19	NO	-67.36	594.77
Italy	205.40	-126.76	78.63	12.21	233.61	NO	-1,189.69
Japan	70.08	-1.14	68.94	23.34	-9.15	IE	-304.80
Kazakhstan	NO	NO	NO	NE, NO	NE, NO	NO	NE, NO
Latvia	138.35	NO	138.35	NE, NO	NE, NO	-3.54	-494.31
Liechtenstein	0.02	NO	0.02	NO	NO	NO	-0.07
Lithuania	117.21	NA	117.21	NA	NA	NA	-429.76
Luxembourg	13.61	-1.37	12.24	NO	7.58	NO	-72.66
Malta	NA	NA	NA	NA	NA	NA	NA
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	163.51	-14.31	149.21	NE	NE	NE	-547.09
New Zealand	8,646.35	-99.67	8,546.68	-11.96	-354.28	-0.77	-29,992.13
Norway	130.20	NO	130.20	IE	-12.74	NE	-430.69
Poland	1,603.31	IE, NO	1,603.31	5	1,258.71	NO	-10,513.80
Portugal	602.95	-279.14	323.80	28.40	488.30	NO	-3,081.85
Romania	213.46	NO	213.46	164.62	349.64	NO	-2,668.30
Russian Federation	1,348.00	-444.84	903.16	228.45	280.62	NE, NO	-5,178.17
Slovakia	45.36	NO	45.36	12.13	68.14	NO	-460.61
Slovenia	25.63	NA	25.63	NA	47.71	NA, NO	-268.89
Spain	1,623.19	IE, NO	1,623.19	NE, NO	158.90	NO	-6,534.33
Sweden	337.09	IE	337.09	178.94	5.35	-51.67	-1,722.28
Switzerland	255.77	-58.13	197.64	89.08	41.95	-0.01	-1,205.09
Turkey	745.95	-132.98	612.97	82.92	NE, NO	NO	-2,551.59
Ukraine	102.71	-0.48	102.23	33.10	4.45	NO	-512.53
United Kingdom	1,686.63	-931.69	754.94	28.00	51.61	13.00	-3,107.66
United States	IE	IE	IE	IE	IE	IE	IE

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.4a**Cropland remaining cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	21,691.76	NO	IE	-0.04	-0.04	NA	-0.05	NO	
Austria	1,332.95	NO	0.12	-0.16	-0.04	NO	0.04	NO	
Belarus	122.10	NE	2.10	NO	2.10	NE	NE	NE	
Belgium	850.10	NO	NE	NO	NE, NO	NO	-0.29	NO	
Bulgaria	3,483.27	NO	0.13	-0.22	-0.09	NO	0.00	NO	
Canada	46,948.15	16.15	0.00	0.00	0.00	-0.01	0.09	-5.00	
Croatia	134.84	NE	2.10	-2.17	-0.07	NO	0.00	IE	
Czech Republic	3,202.39	NO	0.00	NO	0.00	NO	0.00	NO	
Denmark	2,774.52	41.82	0.06	-0.07	-0.01	NA	-0.12	-11.27	
Estonia	1,067.64	20.50	IE	-0.01	-0.01	NE	NE	-1.00	
European Union (15)	79,212.01	1,234.60	0.12	-0.07	0.05	0.00	-0.01	-7.44	
European Union (27)	121,077.94	1,900.22	0.10	-0.06	0.03	0.00	0.00	-5.22	
Finland	2,324.42	278.46	0.00	0.00	0.00	NE	0.11	-5	
France	14,725.04	NO	0.11	-0.11	0	NO	0	NO	
Germany	13,567.21	579.70	NO	NO	NO	NO	NO	-11.00	
Greece	3,681.16	6.66	0.06	-0.02	0.04	NO	0.02	-10.00	
Hungary	5,125.26	NO	0.07	-0.07	0.00	NO	0.06	NO	
Iceland	124.54	55.21	NO	NO	NO	NO	NE	-5.00	
Ireland	268.19	NO	NO	NO	NO	NO	0.06	NO	
Italy	9,508.42	9.00	0.65	-0.28	0.37	0.00	NE, NO	-10.00	
Japan	3,903.67	178.54	NA	NA	NA	NA	NE	NE	
Kazakhstan	35,772.00	NO	0.00	NO	0.00	NE	NO	NO	
Latvia	1,144.13	59.32	NO	NO	NO	NO	NO	-1.00	
Liechtenstein	1.86	IE	NO	NO	NO	NO	-0.65	IE	
Lithuania	2,087.73	8.35	0.00	NA	0.00	NA	NA	-1.00	
Luxembourg	44.85	NO	0.16	-0.18	-0.02	NO	NO	NO	
Malta	1.32	NE	2.10	NE	2.10	NE	0	NE	
Monaco	NO	NO	NO	NO	NO	NO			
Netherlands	896.64	28.20	NE	NE	NE	NE	0	IE	
New Zealand	403.47	8.58	0.01	0.00	0.01	NE, NO	0.02	-9.88	
Norway	893.12	7.30	0.00	NO	0.00	NO	0.06	-6.67	
Poland	14,187.45	550.65	0.02	-0.03	-0.01	0	0.00	-1.00	
Portugal	2586.20	NO	0.01	0.00	0.01	NO	0.02	NO	
Romania	9727.46	19.92	0.12	-0.06	0.06	0.00	0.00	-1.00	
Russian Federation	90428.40	1356.43	0.01	-0.01	0.00	NE	-0.29	-1.00	
Slovakia	1512.31	NO	0.15	NO	0.15	NO	NO	NO	
Slovenia	222.70	6.88	IE	-0.12	-0.12	NA	-0.02	-10.00	
Spain	19796.14	NO	0.04	-0.04	0.00	NE	0.05	NO	
Sweden	2877.14	140.76	0.03	IE	0.03	0.00	0.00	-3.76	
Switzerland	399.52	11.25	NO	NO	NO	NO	NO	-9.52	
Turkey	3847.18	NE	1.40	NA	1.40	NA	NE	NA	
Ukraine	34728.43	125.66	0.04	0.00	0.04	NO	-0.12	-10.00	
United Kingdom	3979.01	150.43	0.04	NA, NO	0.04	IE, NO	-0.35	-1.93	
United States	161451.62	732.20	NE	NE	NE	NE	0.07	-10.31	

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.4b**Cropland remaining cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	-880.26	-880.26	NA	-1,147.07	NO	7,433.51
Austria	156.49	-207.10	-50.61	NO	57.11	NO	-23.81
Belarus	256.41	NO	256.41	NE	NE	NE	-940.17
Belgium	NE	NO	NE, NO	NO	-246.27	NO	903.00
Bulgaria	449.28	-766.04	-316.75	NO	12.39	NO	1,115.99
Canada	30.32	-30.15	0.17	-455.54	4,158.36	-80.76	-13,281.50
Croatia	282.73	-292.10	-9.37	NO	0.00	IE	34.38
Czech Republic	0.67	NO	0.67	NO	4.31	NO	-18.26
Denmark	162.64	-189.80	-27.16	NA	-314.31	-471.27	2,980.03
Estonia	IE	-6.93	-6.93	NE	NE	-20.50	100.55
European Union (15)	9,341.92	-5,577.83	3,764.09	6.39	-478.98	-9,187.84	21,619.92
European Union (27)	11,783.99	-7,669.34	4,114.65	8.82	-185.24	-9,915.41	21,916.32
Finland	1.13	-0.36	0.77	NE	226.48	-1,364.45	4,169.72
France	1,617.40	-1,617.40	0	NO	0	0	NO
Germany	NO	NO	NO	NO	NO	-6,376.73	23,381.36
Greece	209.66	-80.73	128.93	NO	61.01	-66.65	-452.08
Hungary	370.65	-363.43	7.22	NO	312.45	NO	-1,172.12
Iceland	NO	NO	NO	NO	NE	-276.07	1,012.25
Ireland	NO	NO	NO	NO	16.56	NO	-60.72
Italy	6,158.52	-2,673.56	3,484.96	8.83	NE, NO	-90.00	-12,480.58
Japan	NA	NA	NA	NA	NE	NE	NA, NE
Kazakhstan	14.00	NO	14.00	NE	NO	NO	-51.33
Latvia	NO	NO	NO	NO	NO	-59.32	217.52
Liechtenstein	NO	NO	NO	NO	-1.22	IE	4.46
Lithuania	3.74	NA	3.74	NA	NA	-8.35	16.91
Luxembourg	7.24	-7.93	-0.69	NO	NO	NO	2.54
Malta	2.78	NE	2.78	NE	0	NE	-10.18
Monaco	NO	NO	NO	NO	NO	NO	
Netherlands	NE	NE	NE	NE	0	IE	IE, NE
New Zealand	3.27	-1.09	2.18	NE, NO	8.25	-84.72	272.38
Norway	4.25	NO	4.25	NO	50.71	-48.66	-23.10
Poland	232.18	-386.98	-154.80	0	-49.46	-550.65	2,767.96
Portugal	29.60	-0.01	29.59	NO	62.03	NO	-335.91
Romania	1,148.80	-541.17	607.63	2.43	18.57	-19.92	-2,231.96
Russian Federation	1,218.84	-878.41	340.43	NE	-25,420.54	-1,356.43	96,933.99
Slovakia	233.97	NO	233.97	NO	NO	NO	-857.89
Slovenia	IE	-26.97	-26.97	NA	-4.52	-68.84	367.87
Spain	726.89	-800.94	-74.05	NE	1,006.82	NO	-3,420.14
Sweden	97.71	IE	97.71	-2.44	5.11	-528.74	1,570.70
Switzerland	NO	NO	NO	NO	NO	-107.11	392.73
Turkey	5,386.05	NA	5,386.05	NA	NE	NA	-19,748.85
Ukraine	1,525.65	-25.20	1,500.45	NO	-4,133.33	-1,256.62	14,261.50
United Kingdom	174.65	NA, NO	174.65	IE, NO	-1,353.51	-290.43	5,387.39
United States	NE	NE	NE	NE	11,798.36	-7,545.77	-15,592.83

^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 5.5a**Land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	4,382.99	NO	0.08	-0.35	-0.27	-0.13	-0.32	NO
Austria	101.46	NO	0.38	-0.43	-0.05	-0.17	-1.00	NO
Belarus	1,267.60	NE	NE, NO	NE, NO	NE, NO	NE, NO	NE	NE
Belgium	116.99	NO	NO	-0.15	-0.15	-0.01	-1.86	NO
Bulgaria	312.15	NO	0.39	-0.32	0.07	NO	-0.95	NO
Canada	453.48	IE, NE, NO	NE, NO	-2.12	-2.12	-0.18	-0.14	IE, NE, NO
Croatia	12.38	IE, NO	0.62	-0.39	0.23	NO	1.00	NE, NO
Czech Republic	45.25	NO	0.00	-0.22	-0.22	0.00	-0.35	NA, NO
Denmark	10.74	0.54	0.27	-0.33	-0.06	-0.03	0.02	-8.72
Estonia	10.69	0.52	IE, NO	IE, NO	IE, NO	NO	NE, NO	-1.00
European Union (15)	6,570.34	92.73	0.04	-0.20	-0.15	-0.02	-0.88	-7.60
European Union (27)	7,210.19	95.39	0.06	-0.21	-0.15	-0.02	-0.91	-7.41
Finland	112.44	43.81	0.00	-1.01	-1.01	-0.01	-0.52	-4.90
France	3,850.82	NO	NO	-0.19	-0.19	-0.02	-0.82	NO
Germany	635.61	42.70	0.12	-0.18	-0.06	0.00	-0.64	-11.00
Greece	0.09	NO	IE, NO	-0.91	-0.91	NO	IE, NO	NO
Hungary	97.53	NO	0.15	-0.11	0.04	0.00	-0.64	NO
Iceland	5.40	2.87	0.10	-0.75	-0.65	IE, NE, NO	0.10	-5.00
Ireland	116.41	NO	NO	NO	NO	NO	-0.60	NO
Italy	2.41	NO	NO	NO	NO	NO	-1.07	NO
Japan	57.96	IE	IE, NA	-1.46	-1.46	-0.47	-0.20	IE, NE
Kazakhstan	NO	NO	NE, NO	NO	NE, NO	NE, NO	NE, NO	NO
Latvia	19.62	1.02	NO	IE, NO	IE, NO	-0.28	-3.37	-1.00
Liechtenstein	0.00	IE, NO	5.66	-7.02	-1.36	NO	-3.91	IE, NO
Lithuania	5.59	NE, NO	3.80	NA, NO	3.80	NA, NO	-1.36	NA, NO
Luxembourg	7.15	NO	0.48	-0.59	-0.11	0.00	-0.58	NO
Malta	0.10	NO	2.10	NO	2.10	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	22.32	1.43	5.00	-6.89	-1.89	-0.12	NE	NE
New Zealand	34.29	0.15	0.49	-0.22	0.27	0.00	-0.80	-10.00
Norway	37.40	0.90	NE, NO	-0.02	-0.02	IE, NE	-0.17	NE, NO
Poland	28.86	1.12	NA, NO	NA, NO	NA, NO	NO	-0.98	NO
Portugal	106.49	NO	0.17	-0.56	-0.38	-0.05	-0.82	NO
Romania	89.53	NO	NO	NO	NO	NO	-0.06	NO
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	25.50	NO	NO	-0.47	-0.47	-0.01	-1.00	NO
Slovenia	5.04	NA, NO	NA, NO	-20.67	-20.67	-1.68	-42.66	NA, NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	87.05	4.26	0.21	-0.12	0.09	-0.07	-0.29	-3.73
Switzerland	18.78	0.27	0.03	-0.08	-0.05	0.00	-0.22	-9.17
Turkey	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	170.57	NO	NO	NO	NO	NO	NO	NO
United Kingdom	1,402.84	0.11	0.00	-0.03	-0.02	IE, NO	-1.19	-1.00
United States	14,897.88	30.39	NE	NE	NE	NE	-0.06	-23.69

^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 5.5b**Land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	361.71	-1,544.16	-1,182.45	-579.55	-1,413.15	NO	11,642.23
Austria	38.35	-43.22	-4.87	-17.10	-101.84	NO	453.99
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE	NE	NE, NO
Belgium	NO	-17.26	-17.26	-0.63	-217.18	NO	861.93
Bulgaria	120.86	-99.89	20.98	NO	-296.84	NO	1,011.50
Canada	NE, NO	-960.94	-960.94	-83.59	-64.33	IE, NE, NO	4,065.80
Croatia	7.66	-4.87	2.79	NO	12.38	NE, NO	-55.63
Czech Republic	0.17	-9.98	-9.81	-0.19	-15.77	NA, NO	94.51
Denmark	2.91	-3.59	-0.67	-0.33	0.23	-4.69	20.04
Estonia	IE, NO	IE, NO	IE, NO	NO	NE, NO	-0.52	1.92
European Union (15)	274.10	-1,286.06	-1,011.95	-110.06	-5,729.01	-704.91	27,705.11
European Union (27)	430.79	-1,522.91	-1,092.12	-124.86	-6,446.94	-706.45	30,691.38
Finland	0.40	-114.12	-113.73	-1.23	-35.96	-214.66	1,340.45
France	NO	-728.71	-728.71	-73.88	-3,138.84	NO	14,451.88
Germany	78.77	-115.68	-36.91	-2.19	-378.50	-469.68	3,253.37
Greece	IE, NO	-0.08	-0.08	NO	IE, NO	NO	0.29
Hungary	14.19	-10.78	3.42	-0.37	-62.36	NO	217.51
Iceland	0.55	-4.06	-3.51	IE, NE, NO	0.26	-14.33	64.43
Ireland	NO	NO	NO	NO	-69.74	NO	255.72
Italy	NO	NO	NO	NO	-2.57	NO	9.44
Japan	IE, NA	-84.46	-84.46	-27.45	-11.47	IE, NE	452.41
Kazakhstan	NE, NO	NO	NE, NO	NE, NO	NE, NO	NO	NE, NO
Latvia	NO	IE, NO	IE, NO	-5.49	-62.74	-1.02	253.92
Liechtenstein	0.02	-0.03	-0.01	NO	-0.02	IE, NO	0.08
Lithuania	21.25	NA, NO	21.25	NA, NO	-7.61	NA, NO	-50.00
Luxembourg	3.42	-4.21	-0.79	-0.03	-4.13	NO	18.17
Malta	0.22	NO	0.22	NO	NO	NO	-0.80
Monaco	NO	NO	NO	NO	NO	NO	
Netherlands	111.58	-153.70	-42.12	-2.63	NE	NE	164.06
New Zealand	16.68	-7.48	9.20	-0.06	-27.28	-1.49	71.94
Norway	NE, NO	-0.61	-0.61	IE, NE	-6.33	NE, NO	25.42
Poland	NA, NO	NA, NO	NA, NO	NO	-27.22	NO	99.79
Portugal	18.50	-59.47	-40.97	-5.53	-87.83	NO	492.58
Romania	NO	NO	NO	NO	-4.98	NO	18.26
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NO	-12.09	-12.09	-0.27	-25.52	NO	138.90
Slovenia	NA, NO	-104.13	-104.13	-8.47	-214.89	NA, NO	1,200.78
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	17.95	-10.30	7.66	-6.51	-24.29	-15.88	143.11
Switzerland	0.58	-1.45	-0.86	-0.02	-4.00	-2.50	27.07
Turkey	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	NO	NO	NO	NO	NO	NO	NO
United Kingdom	2.22	-36.94	-34.72	IE, NO	-1,674.43	-0.11	6,267.28
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 5.6a**Forest land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	4,382.99	NO	0.08	-0.35	-0.27	-0.13	-0.32	NO
Austria	8.67	NO	IE	-1.54	-1.54	-1.97	-1.12	NO
Belarus	NO	NE	NO	NO	NO	NO	NE	NE
Belgium	1.99	NO	NO	-8.68	-8.68	-0.32	-2.56	NO
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO
Canada	450.09	IE, NO	NO	-2.14	-2.14	-0.19	-0.14	IE, NO
Croatia	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	2.61	NO	NO	-3.41	-3.41	-0.07	-0.40	NO
Denmark	0.94	0.05	0.16	-1.83	-1.67	-0.35	-0.14	-8.73
Estonia	NO	NO	NO	NO	NO	NO	NO	NO
European Union (15)	329.27	29.29	0.04	-2.87	-2.83	-0.33	-0.92	-5.38
European Union (27)	354.00	30.31	0.03	-2.97	-2.94	-0.35	-1.20	-5.23
Finland	81.40	26.716	0.00	-1.40	-1.40	-0.02	-0.41	-4.9
France	134.75	NO	NO	-5.41	-5.41	-0.55	-1.06	NO
Germany	46.15	2.31	0.02	-0.07	-0.06	-0.05	-0.10	-11.00
Greece	0.01	NO	NO	NO	NO	NO	IE	NO
Hungary	1.27	NO	IE	-1.52	-1.52	-0.29	-0.46	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	22.21	IE	NA	-3.80	-3.80	-1.24	-0.44	NE
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	19.62	1.02	NO	IE	IE, NO	-0.28	-3.37	-1.00
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	0.87	NO	0.59	-2.61	-2.02	-0.04	-0.83	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	0.10	0.01	5.00	-90.35	-85.35	-27.00	NE	NE
New Zealand	0.27	NO	0.67	NO	0.67	NO	0.26	NO
Norway	10.54	NO	NO	-0.06	-0.06	IE	-0.60	NO
Poland	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	49.69	NO	0.14	-1.07	-0.93	-0.10	-1.75	NO
Romania	NO	NO	NO	NO	NO	NO	NO	NO
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	0.40	NO	NO	-7.95	-7.95	-0.69	-2.45	NO
Slovenia	0.84	NA	NA	-110.77	-110.77	-10.09	-54.16	NA
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	4.29	0.21	0.75	IE	0.75	-1.50	0.45	-3.73
Switzerland	0.04	0.01	NO	-2.36	-2.36	-0.41	-0.78	-9.52
Turkey	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	3.87	NO	NO	NO	NO	NO	NO	NO
United Kingdom	0.40	IE, NO	IE, NO	-4.91	-4.91	IE, NO	-14.30	IE, NO
United States	IE	IE	NE	NE	NE	NE	IE	IE

^a Changes introduced 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 CO₂' column.

^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.6b**Forest land converted to cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	361.71	-1,544.16	-1,182.45	-579.55	-1,413.15	NO	11,642.23
Austria	IE	-13.36	-13.36	-17.10	-9.74	NO	147.44
Belarus	NO	NO	NO	NO	NE	NE	NE, NO
Belgium	NO	-17.26	-17.26	-0.63	-5.09	NO	84.25
Bulgaria	NO	NO	NO	NO	NO	NO	NO
Canada	NO	-960.94	-960.94	-83.59	-62.00	IE, NO	4,057.26
Croatia	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	-8.90	-8.90	-0.19	-1.05	NO	37.17
Denmark	0.15	-1.72	-1.57	-0.33	-0.13	-0.41	8.96
Estonia	NO	NO	NO	NO	NO	NO	NO
European Union (15)	11.93	-944.51	-932.58	-109.53	-276.58	-157.47	5,412.61
European Union (27)	11.93	-1,051.48	-1,039.55	-124.33	-387.40	-158.49	6,269.17
Finland	0.01	-114.12	-114.11	-1.23	-22.18	-130.91	984.24
France	NO	-728.71	-728.71	-73.88	-143.40	NO	3,468.62
Germany	0.70	-3.25	-2.55	-2.19	-4.39	-25.37	126.48
Greece	NO	NO	NO	NO	IE	NO	IE, NO
Hungary	IE	-1.93	-1.93	-0.37	-0.59	NO	10.59
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	-84.46	-84.46	-27.45	-9.85	NE	446.46
Kazakhstan	NO	NO	NO	NO	NO	NO	NO
Latvia	NO	IE	IE, NO	-5.49	-62.74	-1.02	253.92
Liechtenstein	NO	NO	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NO	NO	NO	NO
Luxembourg	0.51	-2.27	-1.76	-0.03	-0.72	NO	9.20
Malta	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	0.49	-8.79	-8.31	-2.63	NE	NE	40.09
New Zealand	0.18	NO	0.18	NO	0.07	NO	-0.93
Norway	NO	-0.61	-0.61	IE	-6.33	NO	25.42
Poland	NO	NO	NO	NO	NO	NO	NO
Portugal	6.86	-53.06	-46.20	-5.07	-87.08	NO	507.25
Romania	NO	NO	NO	NO	NO	NO	NO
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NO	-3.14	-3.14	-0.27	-0.97	NO	16.06
Slovenia	NA	-93.01	-93.01	-8.47	-45.47	NA	538.83
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	3.21	IE	3.21	-6.44	1.84	-0.78	7.99
Switzerland	NO	-0.09	-0.09	-0.02	-0.03	-0.06	0.71
Turkey	NA	NA	NA	NA	NA	NA	NA
Ukraine	NO	NO	NO	NO	NO	NO	NO
United Kingdom	IE, NO	-1.96	-1.96	IE, NO	-5.70	IE, NO	28.08
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 5.7a**Grassland remaining grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	434824.42	NO	0.00	IE	0.00	0.00	-0.02	NO
Austria	1710.93	IE	NO	NO	NO	NO	0.01	IE
Belarus	3240.60	NE	NE	NE	NE	NE	NE	NE
Belgium	575.23	NO	NO	NO	NO	NO	-0.17	NO
Bulgaria	1567.53	NO	NO	NO	NO	NO	NO	NO
Canada	NE	NE	NE	NE	NE	NE	NE	NE
Croatia	1164.54	0.29	NO	NO	NO	NO	NO	-2.50
Czech Republic	874.52	NO	NO	NO	NO	NO	0.00	NO
Denmark	348.20	36.16	0.00	-0.01	-0.01	NA	NA	-1.00
Estonia	301.89	33.92	IE	-0.13	-0.13	-0.01	NE	-0.25
European Union (15)	53911.19	1196.63	0.10	-0.09	0.01	0.00	0.02	-3.71
European Union (27)	69525.40	2151.91	0.08	-0.07	0.01	0.00	0.02	-2.16
Finland	173.38	49.67	NE	NE	NE	NA	0.08	-3.20
France	10703.81	NO	0.20	-0.20	0	NO	NO	NO
Germany	5861.25	623.03	0.02	-0.01	0.01	NO	0.00	-4.75
Greece	4791.62	NO	NO	0.00	0.00	NO	NO	NO
Hungary	1091.24	NO	NO	NO	NO	NO	-0.10	NO
Iceland	4997.36	319.65	0.00	0.00	0.00	NO	NE, NO	-0.25
Ireland	3600.97	265.57	NO	NO	NO	NO	0.00	-0.25
Italy	9141.76	NO	0.35	-0.29	0.06	0.01	NE, NO	NO
Japan	952.83	40.44	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NE
Kazakhstan	187242.00	NO	NO	0.00	0.00	NO	NE	NO
Latvia	631.16	65.22	NE	NE	NE	NO	NO	-0.25
Liechtenstein	4.89	IE	0.05	-0.05	0.01	NO	-0.10	IE
Lithuania	1578.88	604.71	NA	NA	NA	NA	NA	-0.25
Luxembourg	71.93	NO	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	1355.23	196.52	NE	NE	NE	NE	0	-5.89
New Zealand	14436.38	176.51	0.00	0.00	0.00	0.00	0.00	-2.21
Norway	106.60	65.69	NO	NO	NO	NO	NO	-6.67
Poland	3881.01	150.32	NO	NO	NO	0	-0.03	-0.25
Portugal	504.98	NO	NO	NO	NO	NO	NO	NO
Romania	4523.32	101.10	NO	NO	NO	NO	NO	NO
Russian Federation	86329.97	2103.11	NA, NE	NA, NE	NA, NE	NA, NE	0.02	-0.25
Slovakia	766.66	NO	NO	NO	NO	NO	NO	NO
Slovenia	397.99	IE	NA	NA	NA	NA	NA	NA
Spain	4422.64	NO	NE	NE	NE	NE	NE	NO
Sweden	384.65	33.17	0.17	IE	0.17	0.22	0.18	-1.60
Switzerland	1356.30	6.15	0.01	-0.01	0.00	NO	0.01	-8.83
Turkey	37.42	NE	NE	NA	NA, NE	NA	1.04	NE
Ukraine	6940.29	428.23	NO	NO	NO	NO	0.04	-2.50
United Kingdom	10506.61	1104.44	NO	NO	NO	NO	0.14	NO
United States	169203.58	477.70	NE	NE	NE	NE	0.02	-2.11

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.7b**Grassland remaining grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	1,320.24	IE	1,320.24	329.31	-9,024.28	NO	27,040.66
Austria	NO	NO	NO	NO	23.50	IE	-86.18
Belarus	NE	NE	NE	NE	NE	NE	NE
Belgium	NO	NO	NO	NO	-99.68	NO	365.51
Bulgaria	NO	NO	NO	NO	NO	NO	NO
Canada	NE	NE	NE	NE	NE	NE	NE
Croatia	NO	NO	NO	NO	NO	-0.73	2.67
Czech Republic	NO	NO	NO	NO	0.23	NO	-0.84
Denmark	0.04	-1.98	-1.94	NA	NA	-36.16	139.70
Estonia	IE	-38.61	-38.61	-2.68	NE	-8.48	182.50
European Union (15)	5,501.42	-4,871.71	629.71	192.09	1,261.56	-4,433.85	8,618.49
European Union (27)	5,501.42	-4,910.32	591.10	189.41	1,044.57	-4,647.72	10,349.68
Finland	NE	NE	NE	NA	10.34	-158.94	544.89
France	2,156.53	-2,156.53	0	NO	NO	NO	NO
Germany	97.99	-62.15	35.84	NO	4.80	-2,961.54	10,709.95
Greece	NO	-0.04	-0.04	NO	NO	NO	0.16
Hungary	NO	NO	NO	NO	-110.54	NO	405.31
Iceland	6.27	-1.34	4.93	NO	NE, NO	-79.91	274.95
Ireland	NO	NO	NO	NO	-14.16	-66.39	295.37
Italy	3,181.30	-2,651.10	530.19	107.10	NE, NO	NO	-2,336.73
Japan	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NE	NA, NE
Kazakhstan	NO	-160.00	-160.00	NO	NE	NO	586.67
Latvia	NE	NE	NE	NO	NO	-16.30	59.78
Liechtenstein	0.27	-0.23	0.03	NO	-0.50	IE	1.70
Lithuania	NA	NA	NA	NA	NA	-151.18	554.32
Luxembourg	NO	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	0	-1,158.00	4,246.00
New Zealand	41.61	-55.43	-13.82	-7.71	11.69	-390.04	1,466.23
Norway	NO	NO	NO	NO	NO	-437.92	1,605.72
Poland	NO	NO	NO	0	-106.68	-37.90	530.12
Portugal	NO	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	NO	NO	NO	NO
Russian Federation	NA, NE	NA, NE	NA, NE	NA, NE	1,324.76	-525.80	-2,929.52
Slovakia	NO	NO	NO	NO	NO	NO	NO
Slovenia	NA	NA	NA	NA	NA	NA	NA
Spain	NE	NE	NE	NE	NE	NO	NE, NO
Sweden	65.60	IE	65.60	85.00	64.17	-53.15	-592.60
Switzerland	9.69	-7.04	2.65	NO	7.06	-54.32	163.58
Turkey	NE	NA	NA, NE	NA	38.80	NE	-142.25
Ukraine	NO	NO	NO	NO	254.96	-1,070.57	2,990.55
United Kingdom	NO	NO	NO	NO	1,272.59	NO	-4,666.16
United States	NE	NE	NE	NE	3,277.72	-1,006.68	-8,327.14

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.8a**Land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^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	13,146.64	NO	0.08	-0.31	-0.23	-0.19	-0.46	IE, NO
Austria	85.24	NO	0.13	-1.01	-0.89	-1.01	0.72	NO
Belarus	IE, NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	94.57	NO	NO	-0.34	-0.34	-0.03	1.73	NO
Bulgaria	249.43	NO	0.32	-0.39	-0.07	NO	0.93	NO
Canada	NO	NO	NE, NO	NE, NO	NE, NO	NE, NO	NO	NO
Croatia	54.79	NO	0.21	-0.53	-0.32	NO	1.62	NO
Czech Republic	210.16	NO	0.04	-0.04	0.00	0.00	0.48	NA, NO
Denmark	58.97	2.95	0.19	-0.31	-0.12	-0.01	-0.02	-1.25
Estonia	44.44	4.34	2.10	IE, NO	2.10	0.03	NE, NO	-0.25
European Union (15)	9,042.38	54.48	0.09	-0.13	-0.04	-0.02	0.73	-2.87
European Union (27)	10,734.16	60.10	0.09	-0.16	-0.07	-0.02	0.68	-2.62
Finland	69.75	14.56	0.00	-0.45	-0.45	0.00	0.94	-3.20
France	3,528.40	NO	NO	-0.09	-0.09	-0.01	0.73	NO
Germany	406.60	25.53	1.04	-0.38	0.66	-0.03	0.76	-3.65
Greece	230.02	NO	NO	0.00	0.00	NO	IE, NO	NO
Hungary	108.18	NO	0.05	-0.69	-0.64	0.00	0.54	NO
Iceland	298.36	37.80	0.09	IE, NO	0.09	IE, NO	0.48	-0.80
Ireland	132.48	1.84	0.18	-0.01	0.17	0.00	0.58	-0.22
Italy	1,520.86	NO	NO	-0.12	-0.12	NO	1.07	NO
Japan	37.23	IE	0.26	-0.39	-0.13	-0.13	1.84	IE, NE
Kazakhstan	NO	NO	NO	NO	NO	NE, NO	NE, NO	NO
Latvia	628.59	IE, NO	NO	NO	NO	NO	NE, NO	IE, NO
Liechtenstein	0.02	IE, NE	6.23	-27.22	-20.98	-0.68	1.46	IE
Lithuania	3.20	NE, NO	1.13	NA, NO	1.13	NA, NO	0.85	NE, NO
Luxembourg	13.76	NO	0.30	-2.08	-1.79	-0.03	1.24	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	29.63	1.92	6.51	-7.57	-1.06	-1.32	NE	NE
New Zealand	167.18	0.70	0.08	-2.01	-1.94	-0.30	0.59	-2.43
Norway	105.53	NO	NE, NO	-0.19	-0.19	NE, NO	NE	NO
Poland	33.00	1.28	NO	NO	NO	NO	1.00	IE, NO
Portugal	787.31	NO	NO	-0.03	-0.03	0.00	0.23	NO
Romania	295.16	NO	NO	NO	NO	NO	-0.12	NO
Russian Federation	35,974.03	NE, NO	NE, NO	NE, NO	NE, NO	NA, NE, NO	0.61	NE, NO
Slovakia	109.82	NO	0.06	-0.20	-0.14	-0.02	0.97	NO
Slovenia	9.83	NA	IE, NA	-32.62	-32.62	-2.03	25.13	NA
Spain	122.18	NO	NE, NO	NE, NO	NE, NO	NO	2.09	NO
Sweden	89.19	7.69	0.56	IE, NO	0.56	-0.24	0.38	-1.60
Switzerland	56.80	0.59	0.12	-1.07	-0.96	-0.41	0.64	-8.53
Turkey	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	952.51	NO	NO	0.00	0.00	0.00	0.00	NO
United Kingdom	1,888.75	IE, NE, NO	0.03	-0.04	0.00	IE, NE, NO	0.66	IE, NE, NO
United States	13,557.40	60.58	NE	NE	NE	NE	0.49	-3.98

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.8b**Land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	1,052.96	-4,046.16	-2,993.20	-2,485.49	-6,110.40	IE, NO	42,493.33
Austria	10.91	-86.46	-75.55	-86.30	61.78	NO	366.93
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NO	-31.90	-31.90	-2.84	163.43	NO	-471.87
Bulgaria	79.82	-97.11	-17.30	NO	231.83	NO	-786.64
Canada	NE, NO	NE, NO	NE, NO	NE, NO	NO	NO	NE, NO
Croatia	11.37	-29.01	-17.63	NO	88.79	NO	-260.90
Czech Republic	8.86	-8.04	0.82	-0.18	101.20	NA, NO	-373.44
Denmark	11.04	-18.30	-7.26	-0.66	-1.38	-3.69	47.61
Estonia	93.24	IE, NO	93.24	1.45	NE, NO	-1.08	-343.25
European Union (15)	782.23	-1,156.96	-374.73	-211.06	6,517.44	-156.22	-21,176.56
European Union (27)	980.00	-1,679.78	-699.79	-232.20	7,261.80	-157.60	-22,631.47
Finland	0.03	-31.25	-31.22	-0.34	51.88	-46.58	96.30
France	NO	-314.05	-314.05	-46.11	2,565.16	NO	-8,084.97
Germany	423.19	-153.64	269.55	-11.89	288.32	-93.24	-1,660.02
Greece	NO	-0.07	-0.07	NO	IE, NO	NO	0.27
Hungary	5.79	-74.93	-69.15	-0.29	58.81	NO	38.97
Iceland	26.48	IE, NO	26.48	IE, NO	125.23	-30.21	-445.50
Ireland	23.98	-0.90	23.08	-0.12	76.20	-0.40	-362.11
Italy	NO	-175.62	-175.62	NO	1,626.83	NO	-5,321.10
Japan	9.78	-14.68	-4.90	-4.77	68.54	IE, NE	-215.86
Kazakhstan	NO	NO	NO	NE, NO	NE, NO	NO	NE, NO
Latvia	NO	NO	NO	NO	NE, NO	IE, NO	IE, NE, NO
Liechtenstein	0.14	-0.62	-0.48	-0.02	0.03	IE	1.69
Lithuania	3.59	NA, NO	3.59	NA, NO	2.72	-0.30	-22.05
Luxembourg	4.12	-28.69	-24.58	-0.36	17.01	NO	29.05
Malta	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	192.99	-224.45	-31.45	-39.21	NE	NE	259.11
New Zealand	12.67	-336.23	-323.56	-50.38	98.48	-1.69	1,016.24
Norway	NE, NO	-20.32	-20.32	NE, NO	NE	NO	74.50
Poland	NO	NO	NO	NO	31.60	IE, NO	-115.87
Portugal	NO	-27.34	-27.34	-1.59	177.93	NO	-546.33
Romania	NO	NO	NO	NO	-35.52	NO	130.26
Russian Federation	NE, NO	NE, NO	NE, NO	NA, NE, NO	21,852.57	NE, NO	-80,126.08
Slovakia	6.46	-22.28	-15.81	-2.13	106.84	NO	-325.94
Slovenia	IE, NA	-320.46	-320.46	-19.99	246.89	NA	343.04
Spain	NE, NO	NE, NO	NE, NO	NO	254.79	NO	-934.23
Sweden	49.89	IE, NO	49.89	-21.65	31.20	-12.31	-172.82
Switzerland	6.55	-60.90	-54.35	-23.40	35.77	-5.06	172.45
Turkey	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	NO	0.00	0.00	0.00	0.00	NO	0.01
United Kingdom	66.09	-72.04	-5.96	IE, NE, NO	1,243.45	-0.08	-4,537.19
United States	NE	NE	NE	NE	6,674.00	-241.30	-23,586.57

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.9a**Forest land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)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	13,146.64	NO	0.08	-0.31	-0.23	-0.19	-0.46	NO
Austria	61.71	NO	IE	-1.18	-1.18	-1.40	0.62	NO
Belarus	NO	NE	NO	NO	NO	NO	NE	NE
Belgium	6.14	NO	NO	-5.20	-5.20	-0.46	-0.46	NO
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NO	NO	NO	NO	NO	NO	NO	NO
Croatia	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	2.76	NO	NO	-2.91	-2.91	-0.06	0.05	NO
Denmark	4.56	0.23	0.05	-0.76	-0.71	-0.15	-0.16	-1.25
Estonia	5.26	0.50	17.71	IE	17.71	0.20	NO	-0.25
European Union (15)	601.92	11.14	0.05	-1.16	-1.10	-0.35	0.13	-2.48
European Union (27)	654.85	11.64	0.19	-1.45	-1.26	-0.35	0.01	-2.39
Finland	13.22	1.75	0.00	-2.36	-2.36	-0.03	0.00	-3.20
France	357.16	NO	NO	-0.88	-0.88	-0.13	0.02	NO
Germany	94.49	6.28	0.21	-0.19	0.02	-0.13	0.67	-2.86
Greece	0.23	NO	NO	-0.32	-0.32	NO	NO	NO
Hungary	1.17	NO	IE	-0.68	-0.68	-0.25	NO	NO
Iceland	NO	NO	NO	NO	NO	NO	NO	NO
Ireland	3.94	0.48	0.06	-0.23	-0.17	-0.03	NO	-0.13
Italy	NO	NO	NO	NO	NO	NO	NO	NO
Japan	3.25	IE	0.20	-4.52	-4.32	-1.47	2.48	NE
Kazakhstan	NO	NO	NO	NO	NO	NE	NE	NO
Latvia	NO	NO	NO	NO	NO	NO	NO	NO
Liechtenstein	0.01	IE	9.54	-93.72	-84.18	-2.56	-22.99	IE
Lithuania	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	4.75	NO	0.30	-5.57	-5.27	-0.07	0.35	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO		
Netherlands	1.28	0.06	6.80	-90.35	-83.55	-30.55	NE	NE
New Zealand	129.15	0.51	0.09	-2.60	-2.51	-0.39	0.76	-2.40
Norway	21.09	NO	NO	NO	NO	NE	NE	NO
Poland	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	14.23	NO	NO	-1.63	-1.63	-0.10	-1.48	NO
Romania	38.45	NO	NO	NO	NO	NO	-1.75	NO
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	3.30	NO	NO	-6.75	-6.75	-0.65	-1.40	NO
Slovenia	1.98	NA	NA	-112.32	-112.32	-10.09	2.60	NA
Spain	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	27.09	2.34	0.09	IE	0.09	-0.76	0.22	-1.60
Switzerland	14.89	0.02	0.00	-4.06	-4.06	-1.57	-0.38	-6.32
Turkey	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	4.28	NO	NO	0.00	0.00	0.00	0.00	NO
United Kingdom	13.10	IE, NO	IE, NO	-4.45	-4.45	NO	-1.10	IE, NO
United States	IE	IE	NE	NE	NE	NE	IE	IE

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.9b**Forest land converted to grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2010)^a**

	CSC ^b in living biomass			Net CSC ^b in DOM ^c	Emissions/Removals (Gg C)		Net CO ₂ (Gg)
	Gains	Losses	Net Change		Net CSC ^b in soils		
					Mineral soils	Organic soils	
Australia	1,052.96	-4,046.16	-2,993.20	-2,485.49	-6,110.40	NO	42,493.33
Austria	IE	-72.76	-72.76	-86.30	38.32	NO	442.70
Belarus	NO	NO	NO	NO	NE	NE	NE, NO
Belgium	NO	-31.90	-31.90	-2.84	-2.85	NO	137.80
Bulgaria	NO	NO	NO	NO	NO	NO	NO
Canada	NO	NO	NO	NO	NO	NO	NO
Croatia	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	-8.04	-8.04	-0.18	0.13	NO	29.64
Denmark	0.21	-3.45	-3.24	-0.66	-0.69	-0.29	17.88
Estonia	93.24	IE	93.24	1.05	NO	-0.13	-345.29
European Union (15)	32.59	-695.93	-663.34	-209.99	73.88	-27.64	3,032.66
European Union (27)	125.84	-949.61	-823.78	-231.53	7.24	-27.76	3,944.70
Finland	0.01	-31.25	-31.24	-0.34	0.04	-5.60	136.19
France	NO	-314.05	-314.05	-46.11	8.09	NO	1,290.95
Germany	19.40	-17.67	1.73	-11.89	59.27	-17.96	-114.22
Greece	NO	-0.07	-0.07	NO	NO	NO	0.27
Hungary	IE	-0.80	-0.80	-0.29	NO	NO	4.02
Iceland	NO	NO	NO	NO	NO	NO	NO
Ireland	0.24	-0.90	-0.66	-0.12	NO	-0.06	3.09
Italy	NO	NO	NO	NO	NO	NO	NO
Japan	0.66	-14.68	-14.02	-4.77	8.05	NE	39.38
Kazakhstan	NO	NO	NO	NE	NE	NO	NE, NO
Latvia	NO	NO	NO	NO	NO	NO	NO
Liechtenstein	0.06	-0.57	-0.51	-0.02	-0.14	IE	2.43
Lithuania	NO	NO	NO	NO	NO	NO	NO
Luxembourg	1.44	-26.46	-25.02	-0.36	1.66	NO	86.96
Malta	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO
Netherlands	8.73	-115.96	-107.24	-39.21	NE	NE	536.97
New Zealand	11.16	-335.63	-324.47	-50.96	98.03	-1.21	1,021.62
Norway	NO	NO	NO	NE	NE	NO	NE, NO
Poland	NO	NO	NO	NO	NO	NO	NO
Portugal	NO	-23.22	-23.22	-1.45	-21.06	NO	167.65
Romania	NO	NO	NO	NO	-67.29	NO	246.72
Russian Federation	NO	NO	NO	NO	NO	NO	NO
Slovakia	NO	-22.28	-22.28	-2.13	-4.63	NO	106.49
Slovenia	NA	-222.56	-222.56	-19.99	5.15	NA	870.46
Spain	NO	NO	NO	NO	NO	NO	NO
Sweden	2.57	IE	2.57	-20.72	5.57	-3.74	59.84
Switzerland	0.00	-60.46	-60.46	-23.40	-5.60	-0.11	328.40
Turkey	NA	NA	NA	NA	NA	NA	NA
Ukraine	NO	0.00	0.00	0.00	0.00	NO	0.01
United Kingdom	IE, NO	-58.24	-58.24	NO	-14.46	IE, NO	266.57
United States	NE	NE	NE	NE	IE	IE	IE, NE

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^b CSC = carbon stock change.

^c DOM = dead organic matter.

Table 5.10**Direct N₂O emissions from N-fertilization - AD, IEFs and N₂O emissions (base year and 2010)**

	Forest Land remaining Forest Land						Land converted to Forest Land					
	Base year ^a			2010			Base year ^a			2010		
	Total amount of fertilizer applied	N ₂ O-N emissions per unit of fertilizer	N ₂ O emissions	Total amount of fertilizer applied	N ₂ O-N emissions per unit of fertilizer	N ₂ O emissions	Total amount of fertilizer applied	N ₂ O-N emissions per unit of fertilizer	N ₂ O emissions	Total amount of fertilizer applied	N ₂ O-N emissions per unit of fertilizer	N ₂ O emissions
	(Gg N/yr)	(kg N ₂ O-N/kg N)	(Gg)	(Gg N/yr)	(kg N ₂ O-N/kg N)	(Gg)	(Gg N/yr)	(kg N ₂ O-N/kg N)	(Gg)	(Gg N/yr)	(kg N ₂ O-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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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, NE, NO	IE, NA, NE	IE, NA, NE	IE, NE, NO	IE, NA, NE	IE, NA, NE	IE, NE, NO	IE, NA, NE	IE, NA, NE	IE, NE, NO	IE, NA, NE	IE, NA, NE
Estonia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
European Union (15)	14.88	0.01	0.27	15.72	0.01	0.29	1.66	0.01	0.02	0.35	0.01	0.00
European Union (27)	14.88	0.01	0.27	15.72	0.01	0.29	1.66	0.01	0.02	0.35	0.01	0.00
Finland	4.40	0.01	0.09	3.72	0.01	0.07	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	NO	NA	NA	NO	NA	NA
Hungary	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Iceland	NO	NO	NO	NO	NO	NO	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
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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	NO	NA	NA	NO	NA	NA	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	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	0.00	0.00	0.27	0.00	0.00	IE	IE	IE	IE	IE	IE
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Romania	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Russian Federation	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Slovakia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	10.48	0.01	0.19	12.00	0.01	0.21	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
United Kingdom	NO	NO	NO	NO	NO	NO	1.66	0.01	0.02	0.35	0.01	0.00
United States	13.25	0.01	0.21	73.54	0.01	1.16	NE	IE	IE	NE	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 5.11**N₂O emissions from disturbance associated with land-use conversion to cropland - AD, IEF and N₂O emissions (base year and 2010)**

	Base year ^a			2010		
	Land area converted	N ₂ O-N emissions per area converted	N ₂ O emissions	Land area converted	N ₂ O-N emissions per area converted	N ₂ O emissions
	(kha)	(kg N ₂ O-N/ha)	(Gg)	(kha)	(kg N ₂ O-N/ha)	(Gg)
Australia	3,065.87	0.11	0.54	4,382.99	0.07	0.49
Austria	82.88	1.01	0.13	101.46	1.01	0.16
Belarus	1,171,600.00	IE, NE, NO	IE, NE, NO	1,267,600.00	IE, NE, NO	IE, NE, NO
Belgium	10.75	1.58	0.03	114.57	1.65	0.30
Bulgaria	312.15	1.07	0.52	312.15	1.07	0.52
Canada	1,313.70	0.02	0.04	453.97	0.06	0.04
Croatia	7.33	1.34	0.02	12.38	1.38	0.03
Czech Republic	110.79	0.39	0.07	33.94	0.39	0.02
Denmark	0.88	7.47	0.01	0.11	11.25	0.00
Estonia	NO	NO	NO	NO	NO	NO
European Union (15)	9,299.82	0.62	9.10	10,185.83	0.52	8.30
European Union (27)	9,985.16	0.65	10.23	10,709.62	0.55	9.21
Finland	76.59	0.18	0.02	123.17	0.20	0.04
France	4,630.95	0.73	5.32	3,850.82	0.74	4.45
Germany	615.26	0.67	0.64	530.93	0.72	0.60
Greece	NO	NO	NO	NO	NO	NO
Hungary	10.83	0.62	0.01	97.27	0.53	0.08
Iceland	43.65	IE, NA, NE, NO	IE, NA, NE, NO	5.40	IE, NA, NE, NO	IE, NA, NE, NO
Ireland	NO	NA, NO	NA, NO	104.26	0.50	0.08
Italy	13.95	13.23	0.29	NO	NO	0.27
Japan	493.13	0.37	0.29	57.96	0.22	0.02
Kazakhstan	33.60	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Latvia	1.91	76.68	0.23	NE, NO	NE, NO	NE, NO
Liechtenstein	0.00	NO	NO	0.00	2.37	0.00
Lithuania	0.40	0.72	0.00	5.59	0.72	0.01
Luxembourg	6.87	0.85	0.01	6.25	0.84	0.01
Malta	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	NE	NE
New Zealand	36.76	1.05	0.06	34.29	0.53	0.03
Norway	0.94	1.49	0.00	38.30	0.01	0.00
Poland	NO	NO	NO	NO	NO	NO
Portugal	85.94	0.38	0.05	101.83	0.97	0.15
Romania	223.12	0.00	0.00	70.28	0.00	0.00
Russian Federation	NO	NO	NO	NO	NO	NO
Slovakia	NO	NO	NO	NO	NO	NO
Slovenia	4.57	37.71	0.27	4.57	37.71	0.27
Spain	NO	NO	NO	NO	NO	NO
Sweden	19.13	2.50	0.08	58.79	2.50	0.23
Switzerland	20.91	0.60	0.02	16.83	0.53	0.01
Turkey	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Ukraine	0.04	NA, NO	NA, NO	96.00	NA, NO	NA, NO
United Kingdom	3,756.61	0.43	2.52	5,193.65	0.25	2.01
United States	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 5.12

CO2 emissions from agricultural lime application in cropland and grassland (base year and 2010)

	Cropland						Grassland					
	Base year ^a			2010			Base year ^a			2010		
	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	200,039	0.12	88.02	IE	IE	IE	IE	IE	IE
Belarus	5,221,200	0.12	2,297.33	1,887,100	0.12	830.32	NO	NO	NO	NO	NO	NO
Belgium	82,139	0.12	36.14	72,259	0.12	31.79	63,519	0.12	27.95	48,895	0.12	21.51
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	442,755	0.13	203.62	626,205	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	127,831	0.12	56.25	118,280	0.12	52.04	6,728	0.12	2.96
Denmark	1,416,684	0.12	622.92	421,341	0.12	185.27	19	0.13	0.01	9	0.13	0.00
Estonia	136,000	0.12	59.84	1,650	0.12	0.73	NO	NO	NO	NO	NO	NO
European Union (15)	10,384,102	0.12	4,623.73	8,558,425	0.12	3,781.54	2,315,915	0.12	1,039.21	1,643,126	0.12	731.32
European Union (27)	19,432,360	0.12	8,618.90	9,746,643	0.12	4,310.65	2,434,195	0.12	1,091.25	1,649,854	0.12	734.28
Finland	1,329,669	0.13	610.95	511,149	0.12	230.15	15,100	0.13	6.92	33,000	0.13	15.13
France	2,390,843	0.12	1,053.95	2,200,496	0.12	969.57	NO	NO	NO	NO	NO	NO
Germany	2,635,649	0.12	1,158.93	3,725,342	0.12	1,638.09	IE	IE	IE	IE	IE	IE
Greece	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Hungary	320,135	0.12	143.78	15,558	0.12	6.86	NO	NO	NO	NO	NO	NO
Iceland	NE	NE	NE	5,550	0.11	2.28	NO	NO	NO	NO	NO	NO
Ireland	83,308	0.12	36.66	72,924	0.12	32.09	723,592	0.12	318.38	625,536	0.12	275.24
Italy	NO	NO	NO	30,650	0.12	13.49	NO	NO	NO	NO	NO	NO
Japan	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	10,500	0.12	4.62	4,300	0.12	1.89	IE	IE	IE	IE	IE	IE
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	900,000	0.12	396.00	6,000	0.12	2.64	NO	NO	NO	NO	NO	NO
Luxembourg	1340	0.12	0.59	9260	0.12	4.07	IE, NO	IE, NO	IE, NO	IE, NO	IE, NO	IE, NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	IE	IE, NA	IE, NA	IE	IE, NA	IE, NA	IE	IE	IE	IE	IE	IE
New Zealand	52,336	0.12	23.03	88,395	0.12	38.89	797,281	0.12	350.80	1,346,593	0.12	592.50
Norway	492,407	0.12	216.66	147,977	0.12	65.11	NO	NO	NO	NO	NO	NO
Poland	5,205,545	0.12	2,337.30	839,740	0.13	386.96	IE	IE	IE	IE	IE	IE
Portugal	28,184	0.12	12.60	27,940	0.12	12.49	IE	IE	IE	IE	IE	IE
Romania	101234.157	0.12	44.54	58150.49	0.12	25.59	NO	NO	NO	NO	NO	NO
Russian Federation	21,980,000	0.12	9,671.20	1,434,580	0.12	631.22	IE	IE	IE	IE	IE	IE
Slovakia	101,400	0.03	12.17	34,988	0.03	4.20	NO	NO	NO	NO	NO	NO
Slovenia	100,000	0.12	44.00	100,000	0.12	44.00	IE	IE	IE	IE	IE	IE
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	383,760	0.12	169.79	205,720	0.12	91.03	IE	IE	IE	IE	IE	IE
Switzerland	51,300	0.12	22.57	74,050	0.12	32.58	NO	NO	NO	NO	NO	NO
Turkey	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	6,931	120.00	3,049.51	341	120.00	149.86	NO	NO	NO	NO	NO	NO
United Kingdom	1,828,561	0.12	831.57	1,082,512	0.12	486.12	1,518,269	0.12	687.97	940,019	0.12	421.35
United States	24,666,866	0.08	7,083.85	23,588,674	0.09	8,049.73	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 5.13**Biomass burning - CO2 emissions from forest land (base year and 2010)**

	Base year ^a					2010				
	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	1165765	IE	IE	Area burned	ha	1565361	IE	IE
Austria	Area burned	ha	200	IE, NO	IE, NO	Area burned	ha	49	IE, NO	IE, NO
Belarus	Biomass burned	kg dm	44364355	0.00	36.31	Biomass burned	kg dm	31084220	0.00	39.94
Belgium	Area burned	ha	19	166.65	3.17	Area burned	ha	NE, NO	NE, NO	NE, NO
Bulgaria	Area burned	ha	462	30.31	14.00	Area burned	ha	6529	30.31	197.93
Canada	Area burned	ha	336792	113.11	38,095.73	Area burned	ha	1206569	122.06	147,271.62
Croatia		Not specified	NA	NA	128.34		Not specified	NA	NA	13.52
Czech Republic		Not specified	NA	NA	1,091.49		Not specified	NA	NA	1,399.06
Denmark		Not specified	NA, NO	NA, NE, NO	NA, NE, NO		Not specified	NA, NO	NA, NE, NO	NA, NE, NO
Estonia	Area burned	ha	117	IE, NO	IE, NO	Area burned	ha	21	IE, NO	IE, NO
European Union (15)	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	4,044.07	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	2,452.32
European Union (27)	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	5,706.81	Biomass burned	kg dm	IE, NA, NE, NO	IE, NA, NE, NO	4,202.56
Finland	Area burned	ha	4188	0.92	3.86	Area burned	ha	694	7.27	5.05
France		Not specified	NA	NA	1,594.01		Not specified	NA	NA	307.41
Germany	Area burned	ha	1606	IE, NO	IE, NO	Area burned	ha	522	IE, NO	IE, NO
Greece	Area burned	ha	7569	IE, NO	IE, NO	Area burned	ha	397	IE, NO	IE, NO
Hungary		Not specified	NA	IE, NO	IE, NO		Not specified	NA	IE, NO	IE, NO
Iceland		Not specified	NE, NO	NE, NO	NE, NO		Not specified	NE, NO	NE, NO	NE, NO
Ireland	Area burned	ha	389	75.58	29.40	Area burned	ha	1013	75.58	76.57
Italy	Area burned	ha	98410	IE, NO	IE, NO	Area burned	ha	19357	IE, NO	IE, NO
Japan	Biomass burned	kg dm	50661463	IE, NO	IE, NO	Biomass burned	kg dm	12617683	IE, NO	IE, NO
Kazakhstan	Area burned	ha	1329	IE, NO	IE, NO	Area burned	ha	5667	IE, NO	IE, NO
Latvia	Biomass burned	kg dm	10690110	0.00	5.51	Biomass burned	kg dm	13232989	0.00	6.77
Liechtenstein	Biomass burned	kg dm	NO	NO	NO	Biomass burned	kg dm	NO	NO	NO
Lithuania	Area burned	ha	134	8.32	1.11	Area burned	ha	22	8.32	0.18
Luxembourg	Biomass burned	kg dm	NO	NO	NO	Biomass burned	kg dm	NO	NO	NO
Malta	Biomass burned	kg dm	NO	NO	NO	Biomass burned	kg dm	NO	NO	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	123233714	IE	IE	Biomass burned			IE	IE
Norway	Area burned	ha	936	IE, NO	IE, NO	Area burned	ha	769	IE, NO	IE, NO
Poland	Area burned	ha	7341	59.94	440.05	Area burned	ha	2127	56.22	119.58
Portugal	Area burned	ha	79672	29.66	2,363.23	Area burned	ha	69814	27.53	1,921.77
Romania	Area burned	ha	44	29.98	1.32	Area burned	ha	206	29.98	6.16
Russian Federation	Area burned	Not specified	NA	IE, NO	IE, NO	Area burned	Not specified	NA	IE, NO	IE, NO
Slovakia	Biomass burned	kg dm	97098	IE, NO	IE, NO	Biomass burned	kg dm	151539	IE, NO	IE, NO
Slovenia	Area burned	ha	IE, NA, NO	IE, NA, NO	IE, NA, NO	Area burned	ha	52	159.57	8.31
Spain		Not specified	NA	NA	3.49		Not specified	NA	NA	52.32680411
Sweden	Area burned	ha	1673	IE	IE	Area burned	ha	725	IE	IE
Switzerland	Area burned	ha	1102	27.28	30.07	Area burned	ha	25	27.28	0.68
Turkey	Area burned	Not specified	NA	IE, NE, NO	IE, NE, NO	Area burned	Not specified	NA	IE, NE, NO	IE, NE, NO
Ukraine	Biomass burned	kg dm	32163	2.64	84.96	Biomass burned	kg dm	138396	1.70	235.46
United Kingdom	Biomass burned	kg dm	25585498	0.00	46.91	Biomass burned	kg dm	48653530	0.00	89.20
United States	Area burned	ha	491977	IE, NE	IE, NE	Area burned	ha	995515	IE, NE	IE, NE

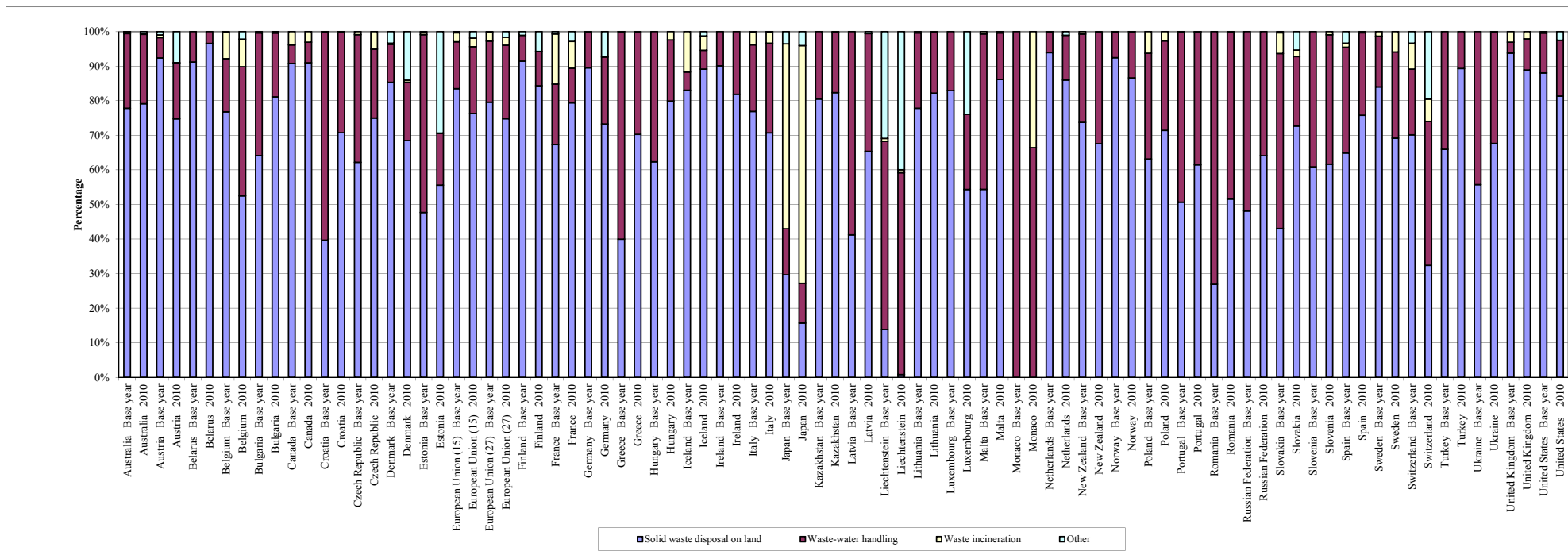
^a In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition use base years other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

Table 5.14
Land Area (2010)

Area (kha)	CRF						Total	FAO ^a	difference	FAO ^a	difference
	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land		Total country area	%	Forest	%
Australia	106,799	26,100	447,971	13,487	1,598	172,939	768,894	768,230	0.00	150,224	-0.29
Austria	4,000	1,437	1,796	146	529	481	8,390	8,244	0.02	3,882	0.03
Belarus	8,010	1,379	3,241	14	NE,NO	NE,NO	12,643	20,282	-0.38	8,591	-0.07
Belgium	715	979	670	52	631	18	3,065	3,028	0.01	677	0.06
Bulgaria	3,847	3,752	1,817	223	832	586	11,057	10,856	0.02	3,872	-0.01
Canada	229,409	47,402	NE,NO	514	2,345	NE,NO	279,669	909,351	-0.69	310,134	-0.26
Croatia	1,695	NE,NO	1,219	2	39	NE,NO	2,955	5,596	-0.47	1,917	-0.12
Czech Republic	2,604	3,256	1,085	163	680	107	7,895	7,725	0.02	2,655	-0.02
Denmark	580	2,794	407	21	460	216,665	220,927	4,243	51.07	542	0.07
Estonia	2,253	1,109	346	499	301	45	4,553	4,239	0.07	2,224	0.01
European Union (15)	126,062	84,991	63,576	18,175	20,259	23,760	336,825	312,611	0.08	120,892	0.04
European Union (27)	161,825	131,925	79,776	22,461	26,771	54,945	477,703	418,174	0.14	156,361	0.03
Finland	21,997	2,448	243	6,442	1,440	1,283	33,854	30,390	0.11	22,157	-0.01
France	23,521	18,560	14,232	1,097	5,468	932	63,809	54,766	0.17	15,906	0.48
Germany	10,934	13,193	6,268	631	3,681	38	34,745	34,861	0.00	11,076	-0.01
Greece	3,389	3,732	5,022	301	534	272	13,249	12,890	0.03	3,873	-0.13
Hungary	2,046	5,234	1,199	264	569	2	9,314	9,053	0.03	2,020	0.01
Iceland	91	169	5,296	717	52	4,003	10,328	10,025	0.03	29	2.15
Ireland	737	400	3,733	1,149	115	987	7,121	6,889	0.03	730	0.01
Italy	10,554	9,213	10,663	57	1,555	887	32,929	29,414	0.12	9,071	0.16
Japan	24,966	3,962	990	1,330	3,759	2,783	37,790	36,450	0.04	24,970	0.00
Kazakhstan	15,740	14,447	187,242	NO	2,210	24,718	244,357	269,970	-0.09	3,315	3.75
Latvia	3,349	1,164	1,260	448	254	4	6,479	6,218	0.04	3,343	0.00
Liechtenstein	6	2	5	0.38	2	1	16	16	0.01	7	-0.10
Lithuania	2,170	2,988	475	379	313	205	6,530	6,268	0.04	2,152	0.01
Luxembourg	94	51	86	1	25	0	258	259	0.00	87	0.09
Malta	1	1	NO	NO	0.18	29,170	29,172	32	910.64	0	1.74
Monaco	NO	NO	NO	NO	0.04	NO	0	NA	NA	NA	NA
Netherlands	397	905	1,385	814	598	39	4,137.98	3,373.00	0.23	365	0.09
New Zealand	10,120	437	14,604	664	207	893	26,924	26,331	0.02	8,277	0.22
Norway	12,251	956	212	3,622	650	14,714	32,406	30,547	0.06	9,989	0.23
Poland	9,305	12,940	3,914	1,368	2,104	361	29,992	30,420	-0.01	9,310	0.00
Portugal	4,128	1,913	1,966	155	313	506	8,980	9,147	-0.02	3,452	0.20
Romania	6,758	9,843	4,818	835	1,117	494	23,865	23,006	0.04	6,537	0.03
Russian Federation	897,335	92,372	122,304	225,053	13,697	361,007	1,711,768	1,637,687	0.05	809,030	0.11
Slovakia	2,011	1,539	876	94	231	153	4,905	4,809	0.02	1,933	0.04
Slovenia	1,244	221	408	13	113	26	2,026	2,014	0.01	1,251	-0.01
Spain	13,677	19,796	4,545	84	1,186	11,335	50,624	49,880	0.01	17,997	-0.24
Sweden	28,434	3,149	474	7,056	1,831	4,399	45,342	41,034	0.10	28,203	0.01
Switzerland	1,197	431	1,413	185	306	609	4,141	4,000	0.04	1,235	-0.03
Turkey	21,537	NA	37	NA,NE	NA,NE	NA	21,575	76,963	-0.72	11,215	0.92
Ukraine	10,601	34,914	7,893	3,403	2,513	1,046	60,370	57,932	0.04	9,679	0.10
United Kingdom	2,908	11,274	12,395	171	1,900	2,279	30,928	24,193	0.28	2,874	0.01
United States	283,713	176,349	182,761	NA	12,753	NA,NE	655,576	914,742	-0.28	303,639	-0.07

^a Source of data for total country area and forest area: FAO secretariat, downloaded on 1 June 2012 from <http://faostat.fao.org/site/377/default.aspx#ancor>. At the time of download, the data were available only until 2009.

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 (2010)

Activity data		Solid waste disposal on land								Waste-water handling												N ₂ O from human sewage		Waste incineration																		
Population (million)		CH ₄						CH ₄ IEF						CH ₄		CH ₄ IEF						N ₂ O IEF		CO ₂ from non-biogenic waste																		
		Methods and EF used ^a		Key category	Share of national total (%)	Emissions per capita (kg)	Managed (t/t)	Unmanaged (t/t)	Methods and EF used ^d	Key category	Share of national total (%)	Emissions per capita (kg)	Domestic / commercial		Industrial		Emissions per capita (kg)	N ₂ O IEF (kg N ₂ O -N/kg sewage N)	Methods and EF used		Key category	Share of national total (%)																				
CRF	World Bank ^e	Methods	EF										Managed	Unmanaged	Methods	EF			Waste-water	Sludge			Waste-water	Sludge	Methods	EF																
IPCC default EF^f																																										
Australia	22	22	T2	D	L, T	2.05	24	0.08	NA	T2, T3	CS, D	T	0.44	5.16	0.05	0.13	0.07	0.03	0.06	0.01	T2	CS	0.01																			
Austria	8	8	T2	CS, D	L, T	1.60	8	0.31	NO	D	CS, D		0.03	0.16	0.00	NA	NA	NA	0.08	0.01	D	CS, D	0.00																			
Belarus	9	9	T1	D	L, T	6.68	30	NO	0.06	NA	NA		-	NE	NE	NE	NE	NE	0.07	0.01	NA	NA	-																			
Belgium	11	11	CS	CS	T	0.45	3	0.08	NO	CR, T1	CR, D		0.10	0.55	NE	NE	NE	NE	0.09	0.01	T1	PS	0.07																			
Bulgaria	8	8	T2, T3	CS, D	L, T	6.18	24	0.01	0.12	D	CS, D	L, T	1.14	4.43	0.15	0.61	0.04	0.12	0.07	0.01	T2	D	0.02																			
Canada	34	34	CS	CS	L, T	2.96	29	0.06	IE	CS, T3	CS, D, PS		0.05	0.48	NA	NA	NE	0.09	0.01	CS, T2	CS, D	0.07																				
Croatia	4	4	T2	CS	L, T	2.65	8	0.03	0.02	T1	D	L	0.73	2.26	0.08	NE	0.00	NE	0.08	0.01	T1	D	0.00																			
Czech Republic	11	11	T2	CS, D	L, T	1.95	12	0.05	NO	CS, T1, T2	CS, D		0.37	2.33	0.09	0.26	0.06	0.06	0.06	0.01	T1	D	0.13																			
Denmark	6	6	CS, T2	CS, D	L, T	1.11	6	0.04	0.02	CS	CS		0.12	0.64	0.23	IE, NE, NO	IE, NA, NE	IE, NE, NO	0.02	NE	T1	CS, D	0.00																			
Estonia	1	1	T2	D	L, T	1.28	9	0.05	NO	T1	D	T	0.03	0.21	0.00	IE	0.00	IE	0.08	0.01	NA	NA	-																			
European Union (15)	400	399	CS, T2	CR, CS, D	L, T	2.17	10	0.07	2.04	CR, CS, D, T1, T2	CR, CS, D		0.29	1.31	NE	NE	NE	NE	0.07	NE	CR, D, T1, T2, T3	CR, CS, D, PS	0.06																			
European Union (27)	503	502	CS, D, M, OTH, T1, T2, T3	CR, CS, D, M	L, T	2.24	10	0.06	0.07	CR, CS, D, T1, T2	CR, CS, D		0.37	1.65	NE	NE	NE	NE	0.07	NE	CR, CS, D, T1, T2, T3	CR, CS, D, PS	0.06																			
Finland	5	5	T2	CS, D	L, T	2.47	16	0.08	NO	D	CS, D		0.16	1.06	0.17	IE	0.00	IE	0.05	0.00	NA	NA	-																			
France	66	65	T2	CS	L, T	2.99	12	0.04	0.38	T1	CS		0.23	0.89	0.10	NA	NA	NA	0.04	0.00	T1, T2	CS, PS	0.27																			
Germany	82	82	T2	CS, D	L, T	0.96	5	0.54	NO	D	CS, D	T	0.01	0.04	0.00	NO	NA	NA	0.09	0.01	NA	NA	-																			
Greece	11	11	T2	CS, D	L, T	2.93	15	0.02	2.83	CS, D	CS, D	L, T	0.90	4.49	0.05	IE	0.25	0.25	0.11	0.01	D	CS, D	0.00																			
Hungary	10	10	T2	D	L, T	4.35	14	0.05	NA, NO	CS, D	CS, D	L	0.68	2.18	0.13	IE	0.02	IE	0.06	0.01	T2	D	0.12																			
Iceland	0	0	T2	CS, D	L, T	4.20	29	0.07	IE	T1	CS, D		0.08	0.53	NE	NE	NO	NE	0.08	0.01	T2	D	0.18																			
Ireland	4	4	T2	CS, D	L, T	1.19	8	0.08	NO	T1	D		0.03	0.17	NO	0.01	NO	0.02	0.10	0.01	NA	NA	-																			
Italy	61	60	T2	CS	L, T	2.57	10	0.05	NO	D	D	L, T	0.55	2.17	0.60	0.60	0.25	IE	0.10	0.01	D	CS	0.05																			
Japan	127	127	T3	CS	T	0.26	1	0.25	NA	CS, D	CS, D		0.10	0.47	NE	IE	NE	IE	0.00	NE	CS	CS	L																			
Kazakhstan	0	16	T2	CS	L, T	1.51	12	0.05	0	D	D		0.15	1.16	0.06	NO	0.03	NO	0.09	0.01	D	D	0.00																			
Latvia	2	2	T2	CS, D	L, T	3.60	9	0.02	0.87	D, T2	D	L, T	1.44	2.69	0.06	0.20	0.23	NA	0.08	0.01	D	D	0.00																			
Liechtenstein	0	0	T2	CS	T	0.01	0	NO	0.01	CS	CS		0.04	0.13	IE	NA	IE	NO	0.08	0.01	T2	CS	0.00																			
Lithuania	3	3	T2	D	L, T	4.59	14	0.03	NO	T1	D		0.60	1.81	0.09	IE	IE	IE	0.08	0.01	T1	D	0.01																			
Luxembourg	1	1	T2	D	L, T	0.29	3	0.06	NO	T1	CS		0.03	0.29	0.16	IE	NO	NO	0.09	IE	NA	NA	-																			
Malta	0	0	M	M	L, T	5.66	20	0.02	NA	D	CS		0.50	1.75	IE	NA	NO	NO	0.09	0.010000281	CS	CS	0.02																			
Monaco	0	9	NA	NA		NA, NO	NO	NO	NA	NA		-	NA, NO	NO	NO	NO	NO	0.08	0.01	NA	NA	-																				
Netherlands	17	17	T2	CS	L, T	2.05	12	0.14	NO	T2	CS		0.09	0.57	0.06	IE	0.00	IE, NE	0.02	NA	NA	-																				
New Zealand	4	4	T2	CS, D	L, T	1.88	15	0.03	IE	D, OTH, T1	CS, OTH		0.65	5.06	0.35	0.15	NE	0.15	0.08	0.01	D	D	0.00																			
Norway	5	5	T2	CS, D	L, T	2.01	11	0.31	IE	T1, T2	CS, D		0.02	0.09	0.01	IE	IE	IE	IE	IE	NA	NA	-																			
Poland	38	38	OTH	D	L, T	1.53	8	0.04	0.04	CS, D	CS, D		0.28	1.38	0.03	0.49	0.03	0.06	0.09	0.01	D	CS	0.06																			
Portugal	11	11	T2	CS, D	L, T	6.48	29	0.04	NO	D	CS, D	L, T	3.21	10.16	0.13	0.47	0.03	IE	0.12	0.01	D	CS, D	0.00																			
Romania	21	21	T2	D	L, T	2.41	7	0.02	0.03	D	CS, L, T		1.70	4.59	0.23	0.162	0.03	IE	0.10	0.01	D	D	0.01																			
Russian Federation	0	142	T1, T2	CS, D	L, T	2.12	16	0.04	0.02	D	CS, D	L, T	0.99	7.34	0.07	0.12	0.06	IE	0.10	0.01	NA	NA	-																			
Slovakia	5	5	T1, T2	CS, D	L, T	3.51	14	0.03	NO	T1	CS	L	0.78	3.15	0.11	IE	0.03	IE	0.05	0.01	T1a	D	0.08																			
Slovenia	2	2	T2	CS, D	L, T	1.82	8	0.04	NO	T1	CS, D	L	0.80	3.65	0.02	0.50	0.01	0.02	0.09	0.01	D	D	0.03																			
Spain	47	46	CS, T2	CR, CS, D	L, T	3.21	12	0.04	0.35	D	CR, CS, D	L	0.66	2.44	0.00	0.11	0.03	0.04	0.09	0.01	CR	CR, CS	0.00																			
Sweden	9	9	T2	CS, D	L, T	1.93	6	0.11	NO	CS, T1	CS, D		0.45	1.52	1.41	NE	0.05	NO	0.01	0.01	T3	PS	0.16																			
Switzerland	8	8	CS, D	CS, D	L, T	0.36	1	NO	NO	CS, D	CS, D		0.08	0.28	0.01	NO	IE	IE	0.09	0.01	CS	CS	0.02																			
Turkey	NA	73	T1	D	L, T	7.96	21	0.07	0.05	T1	D	T	0.51	1.34	0.10	NA	NE	NE	0.08	NA	NA	-																				
Ukraine	46	46	T3	CS, D	L, T	1.94	8	0.03	0.03	T2	CS, D	T	0.65	2.58	0.06	0.13	0.04	0.04	0.07	0.01	NA	NA	-																			
United Kingdom	62	62	OTH, T2	CS	L, T	2.49	11	0.11	NO	CS, OTH	CS, OTH		0.06	0.27	IE	IE	0.09	IE	IE	0.06	0.01	T2	CS	0.05																		
United States	313	309	M	M	L, T	1.59	17	0.05	NA	D	D		0.24	2.52	0.04	NE	0.03	NE	0.05	0.00	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: HNPSTAT - The World Bank Group: World Development Indicators (WDI) database, <http://go.worldbank.org/TW6ZUHUZ0>. Downloaded 11 May 2012.

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

Table 7.1

Selected values (forest parameters), elected activities under Article 3, paragraph 4, of the Kyoto Protocol, accounting period, forest management cap and geographical coverage ^{1,8}

	Minimum value for 'tree cover' (%) ²	Minimum 'tree height' (m) ²	Minimum area for 'Forest land' (ha) ²	Forest Management ³	Cropland Management ³	Grazing Land Management ³	Revegetation ³	Accounting period ⁴	FM CAP ^{5,6,7} (Mt C/yr)
Australia	20	2	0.20					Annually	0
Austria	30	2	0.05					CP	0.63
Belgium	20	5	0.50					CP	0.03
Bulgaria	10	5	0.10					CP	0.37
Canada	25	5	1.00		X			CP	12.00
Croatia	10	2	0.10	X					0.27
Czech Republic	30	2	0.05	X				CP	0.32
Denmark ⁹	10	5	0.50	X	X	X		Annually	0.05
Estonia	30	2	0.50					CP	0.10
European Union (15)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Finland	10	5	0.50	X				CP	0.16
France (KP)	10	5	0.50	X				Annually	0.88
Germany	10	5	0.10	X				CP	1.24
Greece	25	2	0.30	X				CP	0.09
Hungary	30	5	0.50	X				Annually	0.29
Iceland	10	2	0.50				X	CP	0
Ireland	20	5	0.10					CP	0.05
Italy	10	5	0.50	X				CP	0.18
Japan	30	5	0.30	X			X	CP	13.00
Latvia	20	5	0.10	X				CP	0.34
Liechtenstein	20	3	0.06					Annually	0.01
Lithuania	30	5	0.10	X				CP	0.28
Luxembourg	10	5	0.50					CP	0.01
Monaco	10	5	0.50					Annually	0
Netherlands	20	5	0.50					CP	0.01
New Zealand	30	5	1.00					CP	0.20
Norway	10	5	0.50	X				CP	0.40
Poland	10	2	0.10	X				CP	0.82
Portugal	10	5	1.00	X	X	X		CP	0.22
Romania	10	5	0.25	X			X	CP	1.10
Russian Federation	18	5	1.00	X				Annually	33.00
Slovakia	20	5	0.30					CP	0.50
Slovenia	30	2	0.25	X				CP	0.36
Spain	20	3	1.00	X	X			CP	0.67
Sweden	10	5	0.50	X				CP	0.58
Switzerland	20	3	0.06	X				Annually	0.50
Ukraine	30	5	0.10	X				CP	1.11
United Kingdom (UK)	20	2	0.10	X				CP	0.37

¹ As either reported by a Party in its initial report under the Kyoto Protocol, and subsequently reviewed under Article 8 of the Kyoto Protocol and recorded in the compilation and accounting database, or included in a decision of the COP/MOP. These parameters are fixed for the first commitment period under the Kyoto Protocol. The Forest management CAP is from the appendix to the annex to decision 16/CMP.1.

² As reported by Party in accordance with paragraph 8(b) of the annex to decision 13/CMP.1 using the definitions and ranges outlined in paragraph 1(a) of the annex to decision 16/CMP.1.

³ Accounting for activities under Article 3, paragraph 4, of the Kyoto Protocol is optional, and is marked with an 'X' in the appropriate column.

⁴ Parties specified in their initial reports whether it intends to account for activities under Article 3, paragraph 3 and 4, of the Kyoto Protocol 'annually' or over the commitment period (CP), in accordance with paragraph 8(d) of the annex to decision 13/CMP.1.

⁵ In accordance with paragraph 11 of the annex to decision 16/CMP.1, for the first commitment period only, additions and subtractions from the assigned amount of a Party resulting from forest management under Article 3, paragraph 4, after the application of paragraph 10 of the annex to decision 16/CMP.1 and resulting from forest management projects under Article 6, shall not exceed this value times 5.

⁶ In accordance with paragraph 10 of the annex to decision 16/CMP.1, for the first commitment period, a Party that incurs a net source of emissions under Article 3, paragraph 3, activities may account for emissions/removals under Forest Management under Article 3, paragraph 4, up to a level equal to the net source of emissions under Article 3, paragraph 3, but no greater than 9.0 megatonnes of carbon times 5, if the total emissions/removals in the managed forest since 1990 is equal to, or larger than, the net source of emissions incurred under Article 3, paragraph 3.

⁷ The value in the appendix to the annex to decision 16/CMP.1 for Italy was revised by decision 8/CMP.2.

⁸ Parties for which territories included in the report may differ from corresponding territory covered under the Convention.

⁹ Includes Greenland but excludes Faroe Islands.

Table 7.2(a)

Activity coverage in the reporting of information relating to activities under Article 3.3 for 2010¹

	Afforestation and reforestation										Deforestation									
	Change in carbon pool reported					Greenhouse gas sources reported					Change in carbon pool reported					Greenhouse gas sources reported				
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Fertilization ²	Liming	Biomass burning ³			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Disturbance associated with LU conversion to CL	Liming	Biomass burning ³		
						N ₂ O	CO ₂	CO ₂	CH ₄	N ₂ O						N ₂ O	CO ₂	CO ₂	CH ₄	N ₂ O
Australia	R	R	R	R	R	IE	R	IE	R	R	R	R	R	R	R	R	NO	IE	IE, R	IE, R
Austria	R	R	R	NO	R	NO	NO	NO	NO	NO	R	R	R	IE	R	R	NO	NO	NO	NO
Belgium	R	R	R	NO	R	NO	NO	NO	NO	NO	R	R	R	R	R	NE	NO	NO	NO	NO
Bulgaria	R	IE	R	NR	R	NO	NO	NO	NO	NO	R	IE	R	R	R	NO	NO	NO	NO	NO
Canada	R	R	R	R	IE, R	IE	NO	NO	NO	NO	R	R	R	R	NO, R	R	IE	R	R	R
Croatia	R	IE	IE	NO	R	NO	NO	IE	IE	IE	R	IE	IE	IE	R	NE	NO	NO	NO	NO
Czech Republic	R	R	IE	R	R	NO	NO	NO	NO	NO	R	R	IE	R	R	R	NO	NO	NO	NO
Denmark ⁴	R	R	R	R	R	IE, NO	IE	NO	IE, NO	IE, NO	NO, R	NO, R	NO, R	NO, R	NO, R	NO, R	IE	NO	IE, NO	IE, NO
Estonia	R	R	NE	NO	R	NO	R	R	R	R	R	R	R	R	R	NO	NO	NO	NO	NO
European Union (15)	R	IE, R	IE, NR, R	IE, NO, NR, R	NR, R	IE, NO, R	NO	IE, NO, R	NE, NO, R	IE, NO, R	R	IE, R	IE, NR, R	IE, NR, R	NR, R	NO	NE, NO, R	NE, NO, R	NE, NO, R	NE, NO, R
Finland	R	R	IE	NO	R	NO	NO	NO, R	NO, R	NO, R	R	R	IE	R	R	R	R	IE, NO	IE, NO	IE, NO
France (KP)	R	R	R	R	R	NO	NO	R	R	R	R	R	R	R	R	R	R	R	R	R
Germany	R	R	R	NO	R	NO	R	R	R	R	R	R	R	R	R	R	NO	NO	NO	NO
Greece	R	R	NR	NR	NR	NO	NO	NO	NO	NO	R	R	NR	NR	NR	NO	NO	NO	NO	NO
Hungary	R	R	NR	NR	NR	IE	NO	IE	R	R	R	R	R	R	R	NO	IE	R	R	
Iceland	R	IE	R	IE	R	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ireland	R	R	R	R	R	IE	NO	R	R	R	R	R	R	R	R	NO	R	NO	NO	NO
Italy	R	R	R	R	R	NO	NO	IE	R	R	R	R	R	R	R	NO	NO	NO	NO	NO
Japan	R	R	R	R	R	IE	NO	IE	R	R	R	R	R	R	R	R	R	NO	NO	NO
Latvia	R	R	R	R	R	NO	NO	NO	NO	NO	R	R	R	R	R	NO	NO	NO	NO	NO
Liechtenstein	R	IE	NR	NR	R	NO	NO	NO	NO	NO	R	IE	R	R	R	NO	NO	NO	NO	NO
Lithuania	R	R	R	R	R	NO	NO	R	R	R	R	R	R	R	R	NO	NO	NA	NA	NA
Luxembourg	R	IE	IE	NO	R	NO	NO	NO	NO	NO	R	IE	IE	R	R	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	R	R	NR	NR	R	NO	NO	NE	NE	NE	R	R	R	R	R	R	R	NE	NE	NE
New Zealand	R	R	R	R	R	IE	IE	R	R	R	R	R	R	R	R	R	R	IE	NE	NE
Norway	R	R	IE	IE	R	IE	IE	IE	IE	IE	R	R	IE	IE	R	NA	IE	NA	NA	NA
Poland	R	R	IE	R	R	NO	NO	R	R	R	R	R	IE	R	R	NA	NO	NO	NO	NO
Portugal	R	R	R	IE	R	IE	NO	R	R	R	R	R	R	IE	R	R	NO	R	R	R
Romania	R	R	R	NR	R	NO	NO	NO	NO	NO	R	R	R	R	R	NO	NO	NO	NO	NO
Russian Federation	R	R	R	R	R	NA	NA	IE	R	R	R	R	R	R	R	NO	NA	NO	NO	NO
Slovakia	R	R	IE	NO	R	NO	NO	NO	NO	NO	R	R	IE	R	R	NO	NO	NO	NO	NO
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	NO	NO	NO	NO	NO
Spain	R	IE	NR	NR	R	NO	NO	NO, R	NO, R	NO, R	R	IE	R	R	R	NO	NO	NO	NO	NO
Sweden	R	R	R	R	R	NO	NO	NO	NO	NO	R	R	R	R	R	R	NO	NO	NO	NO
Switzerland	R	IE	NR	NR	R	NO	NO	NO	NO	NO	R	IE	R	R	R	R	NO	NO	NO	NO
Ukraine	R	R	R	R	R	NO	NO	R	R	R	R	IE	R	R	R	NO	NO	NO	NO	NO
United Kingdom	R	IE	R	IE	R	NO	IE	IE	IE	IE	R	IE	IE	IE	R	NO	NO	R	R	R

¹ As reported in Table NIR 1. "Summary Table - activity coverage and other information relating to activities under Article 3, paragraph 3, and elected activities under Article 3, paragraph 4, of the Kyoto Protocol".
² N₂O emissions from fertilization for cropland management, grazing land management and revegetation should be reported in the Agriculture sector. If a Party is unable to separate fertilizer applied to forest land from Agriculture, it may report N₂O emissions from fertilization in the agriculture sector.
³ If CO₂ emissions from biomass burning are not already included under changes in carbon stock, they should be reported under biomass burning; this also includes the carbon component of CH₄.
⁴ Includes Greenland but excludes Faroe Islands.

Table 7.2(b)

Activity coverage in the reporting of information relating to elected activities under Article 3.4 for 2010 ¹

	Forest management											Cropland management										
	Change in carbon pool reported					Greenhouse gas sources reported						Change in carbon pool reported					Greenhouse gas sources reported					
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Fertilization ²	Drainage of soil under FM	Liming	Biomass burning ³			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Disturbance associated with LU conversion to CL	Liming	Biomass burning ³			
						N ₂ O	N ₂ O	CO ₂	CO ₂	CH ₄	N ₂ O						N ₂ O	CO ₂	CO ₂	CH ₄	N ₂ O	
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	R	IE	NO	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	R	R	IE	R	NR	NO	NO	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark ⁴	R	R	R	R	R	IE, NO	NO, R	IE	NO	NO, R	NO, R	R	IE	NO	NO, R	NO, R	NO, R	R	NO	NO	NO	NO
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	NA, R	IE, NA, R	IE, NA, NR, R	IE, NA, NR, R	NA, NR, R	IE, NA, NO, R	IE, NA, NO, R	NO	IE, NA, NO, R	IE, NA, NO, R	NA, NE, NO, R	NA, R	IE, NA, R	NA, NO, NR	IE, NA, NO, NR	NA, R	NA, NO	NA, NE, NO	IE, NA, NE, NO, R	IE, NA, NE, NO, R	IE, NA, NE, NO, R	IE, NA, NE, NO, R
Finland	R	R	IE	IE	R	R	NE	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	R	R	R	R	R	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	R	R	R	R	NR, R	NO	R	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	R	R	NR	NR	NR	NO	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	R	R	NR	NR	NR	IE	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	R	R	R	R	NR	NO	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	R	R	R	R	R	IE	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	R	R	R	R	R	NO	R	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	R	R	R	R	R	NO	R	NO	R	R	R	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	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	R	R	R	R	R	R	R	R	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	R	R	IE	R	R	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	R	R	R	IE	R	IE	NO	NO	R	R	R	R	R	R	R	IE	R	R	R	R	R	R
Romania	R	R	NR	NR	NR	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation	R	R	R	R	R	NA	R	NA	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	R	R	NR	R	NR	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	R	IE	NR	NR	NR	NO	NO	NO	IE, NE	NE, R	NE, R	R	IE	NR	NR	R	NO	NO	NO, R	NO, R	NO, R	NO, R
Sweden	R	R	R	R	R	R	NE	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	R	IE	NR	R	NR	NO	NE	NO	IE, R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	R	R	R	R	NO	NO	R	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	R	IE	R	IE	R	NO	NE	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

¹ As reported in Table NIR 1. "Summary Table - activity coverage and other information relating to activities under Article 3, paragraph 3, and elected activities under Article 3, paragraph 4, of the Kyoto Protocol".

² N₂O emissions from fertilization for cropland management, grazing land management and revegetation should be reported in the Agriculture sector. If a Party is unable to separate fertilizer applied to forest land from Agriculture, it may report emissions from fertilization in the Agriculture sector.

³ If CO₂ emissions from biomass burning are not already included under changes in carbon stock, they should be reported under biomass burning; this also includes the carbon component of CH₄.

⁴ Includes Greenland but excludes Faroe Islands.

Table 7.2(c)

Activity coverage in the reporting of information relating to elected activities under Article 3.4 for 2010 ¹

	Grazing land management										Revegetation									
	Change in carbon pool reported					Greenhouse gas sources reported					Change in carbon pool reported					Greenhouse gas sources reported				
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Liming	Biomass burning ²				Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil	Liming	Biomass burning ²			
						CO ₂	CO ₂	CH ₄	N ₂ O							CO ₂	CO ₂	CH ₄	N ₂ O	
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Austria	NA	NA	NA	NA	NA	NA	NA	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	NA	
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Denmark ³	R	IE	NO	NO	NO, R	IE	NO	NO, R	NO, R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
European Union (15)	NA, R	IE, NA, R	NA, NO, R	IE, NA, NO, R	NA, R	IE, NA, NE	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Germany	NA	NA	NA	NA	NA	NA	NA	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	NA	
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	R	IE	IE	NO	R	NO	NO	NO	NO	NO	
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	R	R	R	IE	R	R	NO	NO	NO	NO	
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lithuania	NA	NA	NA	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	NA	
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Portugal	R	R	R	IE	R	IE	NR	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	R	R	R	R	R	NO	NO	NO	NO	NO	
Russian Federation	NA	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	NA	NA	NA	NA	NA	NA	NA	
Slovenia	NA	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	NA	
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Switzerland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
United Kingdom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

¹ As reported in Table NIR 1. "Summary Table - activity coverage and other information relating to activities under Article 3, paragraph 3, and elected activities under Article 3, paragraph 4, of the Kyoto Protocol".

² If CO₂ emissions from biomass burning are not already included under changes in carbon stock, they should be reported under biomass burning; this also includes the carbon component of CH₄.

³ Includes Greenland but excludes Faroe Islands.

Table 7.3(a)

Afforestation and reforestation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	
Australia	1,142	NO	5.63	-15.92	-10.29	1.39	-4.05	-2.66	1.03	3.11	0.20	NO	31.58	5,533.8	-2,355.1	3,178.7	1,369.2	-599.5	769.8	493.4	521.5	-256.4	NO	-17,258.9
Austria	234	NO	1.00	IE,NO	1.00	0.18	IE,NO	0.18	1.19	NO	0.68	NO	-11.22	234.6	IE,NO	234.6	42.0	IE,NO	42.0	278.3	NO	159.9	NO	-2,620.9
Belgium	21	NO	1.92	NO	1.92	0.38	NO	0.38	NO	NO	1.38	NO	-13.52	40.5	NO	40.5	8.1	NO	8.1	NO	NO	29.0	NO	-284.2
Bulgaria	227	NO	2.31	-0.40	1.92	NO,IE	NO,IE	NO,IE	0.26	NO,NE	-0.51	NO	-6.13	526.3	-90.0	436.3	NO,IE	NO,IE	NO,IE	59.3	NO,NE	-115.6	NO	-1,393.3
Canada	98	IE,NA	2.28	-0.59	1.70	1.04	-0.66	0.39	0.26	0.23	-0.19	IE,NA	-8.73	223.9	-57.4	166.5	102.3	-64.5	37.8	25.8	22.1	-18.7	IE,NA	-856.1
Croatia	20	NO,NA,NE	2.21	-0.36	1.85	NE,IE,NA	NO,NA,NE	NE,NO,IE,NA	NE,IE,NA	NE,IE,NA	0.13	NO,NA,NE	-7.25	43.1	-6.9	36.1	NE,IE,NA	NO,NA,NE	IE,NO,IE,NA	NE,IE,NA	NE,IE,NA	2.5	NO,NA,NE	-141.4
Czech Republic	43	NO	1.59	NO	1.59	0.32	NO	0.32	IE,NO	NO	0.15	NO	-7.54	67.8	NO	67.8	13.6	NO	13.6	IE,NO	NO	6.5	NO	-322.3
Denmark ¹	47	2	1.21	-1.02	0.19	0.19	-0.13	0.05	-0.18	-0.20	0.15	-0.34	0.01	56.9	-47.7	9.1	8.8	-6.3	2.5	-8.4	-9.4	6.7	-0.6	0.4
Estonia	23	3	2.91	NA,NO	2.91	1.30	NA,NO	1.30	NA,NE	NA,NO	NA,NO	-0.16	-15.33	66.9	NA,NO	66.9	29.8	NA,NO	29.8	NA,NE	NA,NO	NA,NO	-0.5	-352.4
European Union (15)	6,000	318	7.59	-14.49	-6.90	1.61	-7.37	-5.76	2.24	0.77	0.84	-1.37	33.24	11,450.4	-4,263.6	7,186.7	2,099.5	-605.0	1,494.5	1,291.7	94.6	1,290.7	-254.2	-40,714.5
Finland	167	66	0.33	IE,NA	0.33	0.11	IE,NA	0.11	IE,NA	NA,NO	-0.47	-1.92	2.18	55.5	IE,NA	55.5	18.3	IE,NA	18.3	IE,NA	NA,NO	-47.0	-125.8	363.0
France (KP)	1,217	NO	1.02	-0.16	0.85	0.40	NO	0.40	0.27	0.04	0.20	NO	-6.48	1,235.4	-200.0	1,035.3	484.6	NO	484.6	331.5	52.7	246.0	NO	-7,884.0
Germany	377	22	3.11	-0.02	3.08	1.04	-0.01	1.04	0.46	NO	-0.26	-0.68	-15.77	1,170.6	-8.4	1,162.2	393.1	-2.8	390.3	174.7	NO	-90.9	-15.0	-5,944.6
Greece	33	NO	2.01	NO,NA	2.01	0.87	NO,NA	0.87	NA	NA	NA,NO	-10.55	-10.55	66.8	NO,NA	66.8	28.8	NO,NA	28.8	NA	NA	NA	NA	-350.6
Hungary	168	NO	2.81	-0.06	2.74	0.70	IE	0.70	NE	NE	NE	NO	-12.64	282.3	-9.2	273.1	70.6	IE	70.6	NE	NE	NE	NO	-1,260.0
Iceland	30	3	0.85	NA,NO	0.85	0.21	NA,NO	0.21	0.14	NA,NE	0.39	-0.16	-5.67	25.7	NA,NO	25.7	6.4	NA,NO	6.4	4.3	NA,NE	10.9	-0.4	-171.9
Ireland	280	161	12.21	-17.44	-5.23	2.55	-1.89	0.67	5.26	1.61	NO,NA	-1.08	-6.66	1,118.6	-834.1	284.4	222.5	-26.8	195.7	382.5	40.5	NO,NA	-81.3	-3,013.7
Italy	1,637	NA,NO	2.08	-1.28	0.80	0.42	-0.25	0.17	0.00	0.01	0.14	NA,NO	-4.11	3,408.9	-2,095.5	1,313.4	685.7	-412.6	273.1	3.2	9.4	233.6	NA,NO	-6,719.6
Japan	29	IE,NA	2.35	-0.02	2.33	0.61	0.00	0.61	0.28	0.70	0.12	IE,NA	-14.82	67.6	-0.6	67.0	17.5	0.0	17.5	8.1	20.2	3.5	IE,NA	-426.1
Latvia	219	219	0.49	NA,NO	0.49	0.16	NA,NO	0.16	NA,NE	NA,NE	NA,NO	-0.02	-2.31	107.3	NA,NO	107.3	34.3	NA,NO	34.3	NA,NE	NA,NE	NA,NO	-3.6	-506.2
Liechtenstein	1	NE,NO,IE	1.27	NO	1.27	IE,NO	IE,NO	IE,NO	NO	NO	0.17	NO	-5.31	0.8	NO	0.8	IE,NO	IE,NO	IE,NO	NO	NO	0.1	NO	-3.3
Lithuania	26	NA	1.73	NA	1.73	0.35	NA	0.35	NA	NA	NA	NA	-7.60	44.7	NA	44.7	8.9	NA	8.9	NA	NA	NA	NA	-196.6
Luxembourg	9	NO	2.17	-0.15	2.01	IE,NO	IE,NO	IE,NO	IE,NO	NO	0.85	NO	-10.48	19.4	-1.4	18.0	IE,NO	IE,NO	IE,NO	IE,NO	NO	7.6	NO	-93.8
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	47	3	2.18	-0.05	2.13	0.92	-0.14	0.78	NA,NE	NA,NE	0.18	-6.46	-9.51	103.3	-2.4	100.9	43.6	-6.7	36.9	NA,NE	NA,NE	7.7	-22.5	-450.9
New Zealand	594	1	13.42	-73.79	-60.37	3.05	-16.02	-12.97	-5.13	21.09	-4.28	-2.72	226.08	4,655.1	-70.9	4,584.1	931.3	-28.7	902.6	36.4	112.5	-354.3	-0.8	-19,362.1
Norway	379	17	0.39	NO	0.39	0.28	NO	0.28	IE	IE	-0.08	IE,NE	-2.18	73.4	NO	73.4	23.5	NO	23.5	IE	IE	-30.1	IE,NE	-244.7
Poland	637	18	1.92	NO	1.92	0.54	NO	0.54	IE,NO	0.02	1.88	NO	-15.79	1,220.3	NO	1,220.3	341.7	NO	341.7	IE,NO	14.2	1,165.2	NO	-10,051.8
Portugal	320	NO	4.69	-12.91	-8.22	1.08	-12.85	-11.77	0.16	IE	2.76	NO	62.58	550.6	-170.1	380.4	115.8	-149.9	-34.1	31.9	IE	547.7	NO	-3,395.2
Romania	27	NO	1.49	NO	1.49	0.37	NO	0.37	0.26	NO	1.67	NO	-13.87	40.2	NO	40.2	10.0	NO	10.0	6.9	NO	44.9	NO	-373.9
Russian Federation	560	NA,NO	1.89	-0.63	1.27	0.51	-0.17	0.34	0.08	0.33	0.50	NA,NO	-9.24	1,061.4	-350.3	711.1	286.6	-94.6	192.0	46.0	182.5	280.6	NA,NO	-5,178.2
Slovakia	33	NA,NO	1.24	NA,NO	1.24	0.29	NA,NO	0.29	0.41	NA,NO	2.29	NA,NO	-15.52	40.9	NA,NO	40.9	9.4	NA,NO	9.4	13.7	NA,NO	75.6	NA,NO	-512.0
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NA,NO	NA,NO	NO	NO	NA,NO	NO	NO	NO	NO	NO	NA,NO	NA,NO	NO	NO	NO	NA,NO
Spain	1,078	NA,NO	1.51	IE,NA	1.51	IE,NA	IE,NA	IE,NA	NA,NE	NA,NE	0.15	NA,NO	-6.07	1,623.2	IE,NA	1,623.2	IE,NA	IE,NA	IE,NA	NA,NE	NA,NE	161.8	NA,NO	-6,544.9
Sweden	237	37	0.61	IE,NO	0.61	0.20	IE,NO	0.20	0.30	0.01	-0.13	-0.57	-3.36	144.0	IE,NO	144.0	48.3	IE,NO	48.3	71.2	1.5	-26.9	-21.0	-796.0
Switzerland	2	0	10.90	-3.23	7.68	IE	IE	IE	0.94	0.31	0.17	-1.36	-33.32	6.5	-0.9	5.6	IE	IE	IE	0.3	0.1	0.3	0.0	-23.1
Ukraine	242	NO	0.83	-0.01	0.82	0.18	IE,NO	0.18	0.24	0.09	0.11	NO	-5.31	84.1	-0.5	83.7	18.6	IE,NO	18.6	23.9	9.2	4.5	NO	-512.5
United Kingdom	297	27	5.47	-3.05	2.42	IE,NO	IE,NO	IE,NO	0.09	IE,NO	0.21	0.45	-10.04	1,622.2	-904.0	718.2	IE,NO	IE,NO	IE,NO	26.8	IE,NO	55.6	12.0	-2,979.5

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(b)

Afforestation and reforestation (units of land not harvested since the beginning of the commitment period) - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)	
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		
Australia	994	NO	5.56	IE, NO	5.56	1.38	IE, NO	1.38	0.40	0.07	-0.34	NO	-25.93	5,523.8	IE, NO	5,523.8	1,366.8	IE, NO	1,366.8	400.4	72.0	-335.7	NO	-25,766.7	
Austria	234	NO	1.00	IE	1.00	0.18	IE	0.18	1.19	NO	0.68	NO	-11.22	234.6	IE	234.6	42.0	IE	42.0	278.3	NO	159.9	NO	-2,620.9	
Belgium	21	NO	1.92	NO	1.92	0.38	NO	0.38	NO	NO	1.38	NO	-13.52	40.5	NO	40.5	8.1	NO	8.1	NO	NO	29.0	NO	-284.2	
Bulgaria	227	NO	2.31	-0.40	1.92	IE, NO	IE, NO	IE, NO	0.26	NE, NO	-0.51	NO	-6.13	526.3	-90.0	436.3	IE, NO	IE, NO	IE, NO	59.3	NE, NO	-115.6	NO	-1,393.3	
Canada	98	IE	2.28	-0.59	1.70	1.04	-0.66	0.39	0.26	0.23	-0.19	IE	-8.73	223.9	-57.4	166.5	102.3	-64.5	37.8	25.8	22.1	-18.7	IE	-856.1	
Croatia	20	NE, NO	2.21	-0.36	1.85	IE, NE	NE, NO	IE, NE, NO	IE, NE	IE, NE	0.13	NE, NO	-7.25	43.1	-6.9	36.1	IE, NE	NE, NO	IE, NE, NO	IE, NE	IE, NE	2.5	NE, NO	-141.4	
Czech Republic	43	NO	1.59	NO	1.59	0.32	NO	0.32	IE	NO	0.15	NO	-7.54	67.8	NO	67.8	13.6	NO	13.6	IE	NO	6.5	NO	-322.3	
Denmark ¹	47	2	1.21	-1.02	0.19	0.19	-0.13	0.05	-0.18	-0.20	0.15	-0.34	0.01	56.9	-47.7	9.1	8.8	-6.3	2.5	-8.4	-9.4	6.7	-0.6	0.4	
Estonia	23	3	2.91	NO	2.91	1.30	NO	1.30	NE	NO	NO	-0.16	-15.33	66.9	NO	66.9	29.8	NO	29.8	NE	NO	NO	-0.5	-352.4	
European Union (15)	5,980	314	1.90	-0.67	1.23	0.35	-0.08	0.27	0.21	0.01	0.23	-0.80	-6.94	11,341.3	-3,998.8	7,342.5	2,075.3	-465.2	1,610.1	1,252.8	80.1	1,280.8	-252.3	-41,484.4	
Finland	167	66	0.33	IE	0.33	0.11	IE	0.11	IE	NO	-0.47	-1.92	2.18	55.5	IE	55.5	18.3	IE	18.3	IE	NO	-47.0	-125.8	363.0	
France (KP)	1,217	NO	1.02	-0.16	0.85	0.40	NO	0.40	0.27	0.04	0.20	NO	-6.48	1,235.4	-200.0	1,035.3	484.6	NO	484.6	331.5	52.7	246.0	NO	-7,884.0	
Germany	377	22	3.11	-0.02	3.08	1.04	-0.01	1.04	0.46	NO	-0.26	-0.68	-15.77	1,170.6	-8.4	1,162.2	393.1	-2.8	390.3	174.7	NO	-90.9	-15.0	-5,944.6	
Greece	33	NO	2.01	NA, NO	2.01	0.87	NA, NO	0.87	—	—	—	NO	-10.55	66.8	NA, NO	66.8	28.8	NA, NO	28.8	—	—	—	—	—	-350.6
Hungary	151	NO	1.75	-0.06	1.69	0.44	IE	0.44	NE	NE	NE	NO	-7.79	263.8	-9.2	254.6	65.9	IE	65.9	NE	NE	NO	-47.0	-1,175.4	
Iceland	30	3	0.85	NO	0.85	0.21	NO	0.21	0.14	NE	0.39	-0.16	-5.67	25.7	NO	25.7	6.4	NO	6.4	4.3	NE	10.9	-0.4	-171.9	
Ireland	270	158	3.85	-2.56	1.29	0.76	-0.03	0.73	1.27	0.10	NA, NO	-0.50	-11.33	1,038.3	-691.3	347.0	205.3	-9.0	196.3	344.2	26.0	NA, NO	-79.4	-3,058.5	
Italy	1,637	NO	2.08	-1.28	0.80	0.42	-0.25	0.17	0.00	0.01	0.14	NO	-4.11	3,408.9	-2,095.5	1,313.4	685.7	-412.6	273.1	3.2	9.4	233.6	NO	-6,719.6	
Japan	29	IE	2.35	-0.02	2.33	0.61	0.00	0.61	0.28	0.70	0.12	IE	-14.82	67.6	-0.6	67.0	17.5	0.0	17.5	8.1	20.2	3.5	IE	-426.1	
Latvia	219	219	0.49	NO	0.49	0.16	NO	0.16	NE	NE	NO	-0.02	-2.31	107.3	NO	107.3	34.3	NO	34.3	NE	NE	NO	-3.6	-506.2	
Liechtenstein	1	IE, NE, NO	1.27	NO	1.27	IE	IE	IE	IE	NO	0.17	NO	-5.31	0.8	NO	0.8	IE	IE	IE	NO	NO	0.1	NO	-3.3	
Lithuania	26	NA	1.73	NA	1.73	0.35	NA	0.35	NA	NA	NA	NA	-7.60	44.7	NA	44.7	8.9	NA	8.9	NA	NA	NA	NA	-196.6	
Luxembourg	9	NO	2.17	-0.15	2.01	IE	IE	IE	IE	IE	NO	0.85	NO	-10.48	19.4	-1.4	18.0	IE	IE	IE	IE	NO	7.6	NO	-93.8
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	47	3	2.18	-0.05	2.13	0.92	-0.14	0.78	NE	NE	0.18	-6.46	-9.51	103.3	-2.4	100.9	43.6	-6.7	36.9	NE	NE	7.7	-22.5	-450.9	
New Zealand	593	1	7.84	-0.04	7.80	1.57	-0.03	1.54	0.07	0.17	-0.59	-0.68	-32.90	4,651.7	-26.7	4,625.0	930.4	-19.1	911.3	39.5	100.0	-352.1	-0.8	-19,517.5	
Norway	377	17	0.19	NO	0.19	0.06	NO	0.06	IE	IE	-0.08	NE	-0.64	72.9	NO	72.9	23.0	NO	23.0	IE	IE	-30.1	NE	-241.2	
Poland	637	18	1.92	NO	1.92	0.54	NO	0.54	IE	0.02	1.88	NO	-15.79	1,220.3	NO	1,220.3	341.7	NO	341.7	IE	14.2	1,165.2	NO	-10,051.8	
Portugal	311	NO	1.68	-0.15	1.52	0.35	-0.09	0.26	0.10	IE	1.73	NO	-13.25	521.8	-48.2	473.6	108.8	-27.9	80.9	31.3	IE	537.9	NO	-4,120.3	
Romania	27	NO	1.49	NO	1.49	0.37	NO	0.37	0.26	NO	1.67	NO	-13.87	40.2	NO	40.2	10.0	NO	10.0	NO	10.0	44.9	NO	-373.9	
Russian Federation	560	NO	1.89	-0.63	1.27	0.51	-0.17	0.34	0.08	0.33	0.50	NO	-9.24	1,061.4	-350.3	711.1	286.6	-94.6	192.0	46.0	182.5	280.6	NO	-5,178.2	
Slovakia	33	NO	1.24	NO	1.24	0.29	NO	0.29	0.41	NO	2.29	NO	-15.52	40.9	NO	40.9	9.4	NO	9.4	13.7	NO	75.6	NO	-512.0	
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NA, NO	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NA, NO	NA, NO
Spain	1,078	NO	1.51	IE	1.51	IE	IE	IE	IE	NE	0.15	NO	-6.07	1,623.2	IE	1,623.2	IE	IE	IE	NE	NE	161.8	NO	-6,544.9	
Sweden	237	37	0.61	IE	0.61	0.20	IE	0.20	0.30	0.01	-0.13	-0.57	-3.36	144.0	IE	144.0	48.3	IE	48.3	71.2	1.5	-26.9	-21.0	-796.0	
Switzerland	2	0	2.16	NO	2.16	IE	IE	IE	IE	NO	0.17	-0.68	-8.51	4.1	NO	4.1	IE	IE	IE	NO	NO	0.3	0.0	-16.4	
Ukraine	150	NO	0.13	NO	0.13	0.03	NO	0.03	0.04	0.01	-0.11	NO	-0.39	19.7	NO	19.7	4.2	NO	4.2	5.4	2.2	-15.8	NO	-57.8	
United Kingdom	297	27	5.47	-3.05	2.42	IE	IE	IE	0.09	IE	0.21	0.45	-10.04	1,622.2	-904.0	718.2	IE	IE	IE	26.8	IE	55.6	12.0	-2,979.5	

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(c)

Afforestation and reforestation (units of land harvested since the beginning of the commitment period) - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)											Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil				
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	Increase		Decrease	Net change	Increase	Decrease			Net change	Mineral	Organic		
Australia	148	NO	0.07	-15.92	-15.85	0.02	-4.05	-4.04	0.63	3.04	0.54	NO	57.51	10.0	-2,355.1	-2,345.1	2.5	-599.5	-597.0	93.0	449.6	79.2	NO	8,507.8	
Austria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Belgium	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	
Czech Republic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Denmark ¹	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE,NA	IE,NA	IE,NA	IE	IE	IE	IE	IE	IE	IE	IE,NA	IE,NA	NA,IE	
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
European Union (15)	19	3	5.69	-13.82	-8.13	1.26	-7.29	-6.03	2.03	0.76	0.62	-0.57	40.18	109.1	-264.8	-155.8	24.2	-139.8	-115.6	38.9	14.5	9.8	-1.8	769.9	
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Greece	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hungary	17	NO	1.06	IE	1.06	0.26	IE	0.26	NE	NE	NE	NO	-4.85	18.5	IE	18.5	4.6	IE	4.6	NE	NE	NE	NO	-84.7	
Iceland	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ireland	10	3	8.36	-14.88	-6.52	1.79	-1.85	-0.06	3.99	1.51	NA,NO	-0.57	4.67	80.3	-142.9	-62.6	17.2	-17.8	-0.6	38.3	14.5	NA,NO	-1.8	44.8	
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Luxembourg	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
New Zealand	1	0	5.58	-73.74	-68.16	1.48	-15.98	-14.51	-5.20	20.92	-3.69	-2.04	258.99	3.3	-44.2	-40.9	0.9	-9.6	-8.7	-3.1	12.6	-2.2	0.0	155.4	
Norway	2	NO	0.20	NO	0.20	0.22	NO	0.22	IE	IE	IE	IE	-1.54	0.4	NO	0.4	0.5	NO	0.5	IE	IE	IE	IE	-3.5	
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Portugal	10	NO	3.01	-12.76	-9.75	0.73	-12.76	-12.03	0.06	IE	1.03	NO	75.83	28.8	-122.0	-93.2	7.0	-122.0	-115.0	0.6	IE	9.8	NO	725.1	
Romania	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Russian Federation	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sweden	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Switzerland	0	0	8.75	-3.23	5.52	IE	IE	IE	0.94	0.31	NO	-0.68	-24.80	2.4	-0.9	1.5	IE	IE	IE	0.3	0.1	NO	0.0	-6.7	
Ukraine	92	NO	0.70	-0.01	0.69	0.16	IE	0.16	0.20	0.08	0.22	NO	-4.93	64.5	-0.5	64.0	14.3	IE	14.3	18.4	7.0	20.3	NO	-454.7	
United Kingdom	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(d)

Deforestation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)											Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)											Net CO ₂ emissions/ removals (Gg CO ₂)
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil					
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	Increase		Decrease	Net change	Increase	Decrease			Net change	Mineral	Organic			
Australia	6,403	NO	0.00	-0.57	-0.57	0.00	-0.25	-0.25	-0.14	-0.32	-0.55	NO	6.68	8.4	-3,656.4	-3,648.1	7.9	-1,622.6	-1,614.7	-882.9	-2,024.7	-3,502.4	—	42,800.3		
Austria	120	NO	IE	-0.72	-0.72	IE	-0.19	-0.19	-1.23	IE	-0.94	NO	11.32	IE	-87.1	-87.1	IE	-23.0	-23.0	-148.5	IE	-112.8	NO	1,362.0		
Belgium	20	NO	NO	-3.99	-3.99	NO	-0.80	-0.80	-0.31	-0.08	-1.61	NO	24.85	NO	-78.2	-78.2	NO	-15.6	-15.6	-6.0	-1.5	-31.6	NO	487.8		
Bulgaria	7	NO	0.02	-5.48	-5.46	IE	IE	IE	-0.27	-0.27	-2.55	NO	31.37	0.1	-35.9	-35.8	IE	IE	IE	-1.8	-1.8	-16.7	NO	205.5		
Canada	1,046	NO	NO	-1.90	-1.90	NO	-0.45	-0.45	0.09	-0.26	-0.54	NO	11.22	NO	-1,983.0	-1,983.0	NO	-470.2	-470.2	93.7	-270.5	-569.4	NO	11,731.1		
Croatia	0	NE, NO	0.19	-40.24	-40.04	NE, NO	NE, NO	NE, NO	IE, NE	IE, NE	-93.75	NE, NO	490.56	0.1	-18.3	-18.2	NE, NO	NE, NO	NE, NO	IE, NE	IE, NE	-42.6	NE, NO	222.9		
Czech Republic	14	NO	NO	-3.22	-3.22	NO	-0.64	-0.64	IE, NA	-0.07	NO	14.70	NO	-45.2	-45.2	NO	-9.0	-9.0	IE, NA	IE, NA	-1.1	-0.9	NO	206.4		
Denmark ¹	7	0	0.07	-0.95	-0.88	IE, NA	-0.19	-0.19	-0.20	-0.02	-0.20	-2.53	5.79	0.5	-6.6	-6.1	IE, NA	-1.3	-1.3	-1.4	-0.1	-1.3	-0.7	40.1		
Estonia	21	5	IE	-2.87	-2.87	IE	-0.84	-0.84	-0.06	-0.10	-0.08	-0.11	14.52	IE	-59.3	-59.3	IE	-17.4	-17.4	-1.2	-2.1	-1.2	-0.5	299.7		
European Union (15)	1,910	110	0.04	-1.57	-1.53	0.02	-0.36	-0.35	-0.35	-0.05	-0.79	-3.28	11.78	71.0	-2,997.5	-2,926.6	29.4	-692.4	-663.1	-669.3	-95.4	-1,423.3	-360.6	22,506.9		
Finland	324	61	0.05	-1.73	-1.68	IE, NE, NO	-0.50	-0.50	IE, NE, NO	-0.04	-0.09	-3.99	11.13	17.1	-561.1	-544.0	IE, NE, NO	-162.1	-162.1	IE, NE, NO	-12.1	-22.7	-242.4	3,605.4		
France (KP)	791	NO	NO	-2.07	-2.07	NO	-0.46	-0.46	-0.19	-0.08	-0.98	NO	13.87	NO	-1,636.8	-1,636.8	NO	-360.8	-360.8	-152.3	-66.9	-773.5	NO	10,964.4		
Germany	197	11	0.10	-0.13	-0.03	0.03	-0.05	-0.01	-0.10	-0.02	0.27	-4.64	0.60	19.1	-24.8	-5.7	6.4	-9.1	-2.8	-19.3	-3.6	50.3	-51.3	118.5		
Greece	4	NO	NO	-0.10	-0.10	NO	-0.04	-0.04	NE, NO	NE, NO	NE, NO	NO	0.53	NO	-0.4	-0.4	NO	-0.2	-0.2	NE, NO	NE, NO	NE, NO	NO	2.1		
Hungary	9	NO	IE	-0.67	-0.67	IE	-0.17	-0.17	-0.07	-0.07	-0.36	NO	4.90	IE	-6.1	-6.1	IE	-1.5	-1.5	-0.7	-0.6	-3.2	NO	44.5		
Iceland	0	NO	NA	-4.90	-4.90	NA	-1.22	-1.22	NA	NA	NA	NA	22.45	NA	-0.1	-0.1	NA	0.0	0.0	NA	NA	NA	NA	0.3		
Ireland	8	2	NA, NO	-0.42	-0.42	NA, NO	-0.12	-0.12	-0.05	-0.01	NA, NO	-0.13	2.33	NA, NO	-3.5	-3.5	NA, NO	-1.0	-1.0	-0.4	-0.1	NA, NO	-0.3	19.2		
Italy	14	NO	NO	-2.30	-2.30	NO	-0.49	-0.49	-0.17	-0.34	-4.10	NO	27.12	NO	-33.2	-33.2	NO	-7.1	-7.1	-2.5	-4.9	-59.2	NO	391.8		
Japan	323	IE	0.00	-2.25	-2.25	0.00	-0.58	-0.58	-0.29	-0.73	-0.22	IE	14.93	0.1	-725.9	-725.8	0.4	-186.2	-185.8	-94.8	-235.6	-72.0	IE	4,818.3		
Latvia	36	1	NO	-0.96	-0.96	NO	-0.31	-0.31	-0.67	-0.19	2.39	1.00	-0.80	NO	-35.1	-35.1	NO	-11.2	-11.2	-24.3	-6.9	84.3	1.1	-29.2		
Liechtenstein	0	IE, NE	NO	NO	NO	IE, NE	IE, NE	IE, NE	NO	NO	-1.88	IE, NE	6.90	NO	NO	NO	IE, NE	IE, NE	IE, NE	NO	NO	0.0	IE, NE	0.1		
Lithuania	1	0	NA	-4.32	-4.32	NA	-0.99	-0.99	-0.96	-0.14	-2.76	-3.48	34.03	NA	-4.5	-4.5	NA	-1.0	-1.0	-1.0	-0.1	-2.4	-0.6	35.2		
Luxembourg	8	NO	0.30	-4.83	-4.53	IE	IE	IE	IE	-0.06	-0.41	NO	18.34	2.3	-37.0	-34.7	IE	IE	IE	IE	-0.5	-3.1	NO	140.6		
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Netherlands	45	2	0.28	-2.85	-2.57	0.17	-0.64	-0.47	-1.29	-0.06	-0.19	-5.75	17.85	12.8	-129.5	-116.7	7.9	-29.1	-21.3	-58.9	-2.6	-8.1	-13.9	812.1		
New Zealand	107	1	0.04	-2.60	-2.56	0.06	-0.56	-0.49	-0.25	-0.23	0.91	-2.40	9.67	4.3	-278.0	-273.7	6.8	-59.5	-52.8	-27.2	-24.4	97.3	-1.2	1,033.6		
Norway	113	NO	0.11	-1.81	-1.70	NO	-0.45	-0.45	IE	IE	-0.69	IE	10.42	12.8	-205.2	-192.4	NO	-50.9	-50.9	IE	IE	-78.6	IE	1,180.2		
Poland	12	NA	NA	-2.61	-2.61	NA	-0.52	-0.52	IE	-0.08	-2.21	NA	19.88	NA	-30.1	-30.1	NA	-6.0	-6.0	IE	-0.9	-25.4	NA	228.7		
Portugal	131	NO	0.15	-0.91	-0.77	0.12	-0.22	-0.11	-0.09	IE	-1.56	NO	9.24	19.2	-119.5	-100.3	15.1	-29.2	-14.0	-11.6	IE	-203.3	NO	1,207.0		
Romania	55	NO	NO	-0.11	-0.11	NO	-0.03	-0.03	-0.01	0.00	-2.22	NO	8.70	NO	-5.8	-5.8	NO	-1.4	-1.4	-0.8	-0.1	-121.8	NO	476.2		
Russian Federation	36	NO	NO	-36.99	-36.99	NO	-9.68	-9.68	-8.39	-9.28	-97.72	NO	594.23	NO	-1,319.7	-1,319.7	NO	-345.3	-345.3	-299.4	-331.2	-3,486.1	NO	21,199.6		
Slovakia	8	NO	NO	-4.86	-4.86	NO	-1.13	-1.13	-0.02	-0.20	-0.13	NO	23.26	NO	-37.8	-37.8	NO	-8.8	-8.8	-0.1	-1.6	-1.0	NO	180.6		
Slovenia	6	NO	IE	-13.05	-13.05	IE	-0.85	-0.85	-0.67	-0.57	-0.93	NO	58.97	IE	-79.0	-79.0	IE	-5.2	-5.2	-4.1	-3.5	-5.6	NO	356.9		
Spain	1	NO	IE	-29.92	-29.92	IE	IE	IE	-4.25	-4.98	-15.40	NO	200.00	IE	-16.2	-16.2	IE	IE	IE	IE	-2.3	-2.7	-8.3	NO	108.1	
Sweden	213	33	IE	-0.76	-0.76	IE	-0.25	-0.25	-1.25	0.00	-1.21	-1.57	12.96	IE	-162.4	-162.4	IE	-54.0	-54.0	-266.2	-0.3	-218.0	-52.1	2,760.6		
Switzerland	7	0	NO	-5.63	-5.63	IE	IE	IE	-1.13	-0.32	-1.78	-5.73	32.55	NO	-41.3	-41.3	IE	IE	IE	IE	-8.3	-2.3	-13.0	-0.2	238.5	
Ukraine	49	NO	NO	0.00	0.00	NO	IE	IE, NO	0.00	0.00	0.00	NO	0.00	NO	0.0	0.0	NO	IE	IE, NO	0.0	0.0	0.0	NO	0.1		
United Kingdom	28	IE	IE	-3.65	-3.65	IE	IE	IE	IE	IE	IE	-1.14	IE	17.57	IE	-101.4	-101.4	IE	IE	IE	IE	IE	IE	IE	487.5	

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(e)

Forest management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)											Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)									Net CO ₂ emissions/ removals (Gg CO ₂)		
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil					
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	Increase		Decrease	Net change	Increase	Decrease			Net change	Mineral	Organic			
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA		
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Croatia	1,895	NE	2.33	-1.07	1.26	IE	IE	IE	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	-4.62	4,420.4	-2,032.8	2,387.7	IE	IE	IE	NE, NO	NE, NO	NE, NO	NE, NO	-8,754.8	
Czech Republic	2,561	19	2.55	-1.96	0.59	0.51	-0.39	0.12	NE, NO	NO	NE, NO	—	—	-2.59	6,524.4	-5,015.6	1,508.8	1,304.9	-1,003.1	301.8	NE, NO	NO	NE, NO	—	-6,638.8	
Denmark ¹	533	27	1.95	IE, NA	1.95	0.40	IE, NA	0.40	0.52	0.06	NA, NR	-0.34	-10.67	1,039.5	IE, NA	1,039.5	213.7	IE, NA	213.7	275.1	32.5	NA, NR	-9.1	—	-5,689.3	
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
European Union (15)	109,284	10,776	0.98	-0.58	0.40	0.22	-0.13	0.09	0.00	0.03	0.06	-0.40	-1.97	107,035.1	-63,862.4	43,172.6	24,168.5	-13,915.1	10,253.4	315.9	3,555.7	5,608.8	-4,311.2	—	-214,849.5	
Finland	21,798	5,888	1.25	-0.91	0.34	0.34	-0.27	0.07	IE	IE	0.09	-0.29	-1.46	27,231.3	-19,758.8	7,472.6	7,347.4	-5,884.5	1,463.0	IE	IE	1,467.3	-1,712.7	—	-31,863.9	
France (KP)	21,567	NO	1.43	-0.97	0.46	0.41	-0.23	0.18	0.00	-0.06	0.00	NO	-2.12	30,802.4	-20,970.2	9,832.2	8,797.0	-4,877.2	3,919.8	0.0	-1,308.8	0.0	NO	—	-45,625.4	
Germany	10,557	222	0.33	IE	0.33	0.10	IE	0.10	NO	0.09	NO	-0.68	-1.85	3,484.6	IE	3,484.6	1,005.4	IE	1,005.4	NO	989.7	NO	-151.2	—	-19,537.5	
Greece	1,206	NO	0.42	-0.11	0.31	0.14	-0.03	0.11	NA, NE	NA, NE	NA, NE	NA, NO	-1.54	502.4	-130.2	372.2	167.7	-33.9	133.8	NA, NE	NA, NE	NA, NE	NA, NO	—	-1,855.5	
Hungary	1,656	NO	0.21	IE	0.21	0.07	IE	0.07	NE	NE	NE	NO	-1.03	348.6	IE	348.6	116.2	IE	116.2	NE	NE	NE	NO	—	-1,704.0	
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	7,448	NO	2.24	-1.33	0.90	0.44	-0.31	0.13	0.03	0.26	NE	NO	-4.87	16,650.3	-9,935.4	6,714.9	3,271.5	-2,280.8	990.8	224.9	1,954.5	NE	NO	—	-36,245.4	
Japan	15,111	IE	0.77	-0.01	0.75	0.19	0.00	0.19	0.01	-0.02	0.03	IE	-3.52	11,615.7	-217.0	11,398.7	2,933.6	-56.6	2,877.0	97.1	-286.6	437.3	IE	—	-53,253.3	
Latvia	3,130	428	2.57	-1.35	1.23	0.82	-0.43	0.39	NE	NE	NO	-0.68	-5.59	8,055.4	-4,218.7	3,836.7	2,577.7	-1,350.0	1,227.7	NE	NE	NO	-290.9	—	-17,503.0	
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	2,140	340	1.15	NA	1.15	0.27	NA	0.27	0.13	0.05	NA	-0.34	-5.65	2,467.7	NA	2,467.7	576.9	NA	576.9	268.4	101.0	NA	-116.4	—	-12,091.4	
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	11,734	593	0.75	-0.25	0.50	0.20	-0.07	0.13	0.03	0.08	0.12	-0.07	-3.11	8,830.8	-2,971.3	5,859.5	2,296.1	-771.8	1,524.3	296.4	949.1	1,373.4	-39.2	—	-36,532.7	
Poland	8,668	229	1.92	-1.36	0.56	0.52	-0.28	0.23	IE	0.02	0.53	NO	-4.88	16,673.8	-11,785.8	4,888.0	4,467.0	-2,469.4	1,997.6	IE	193.4	4,464.0	NO	—	-42,311.4	
Portugal	3,897	NO	1.74	-1.05	0.69	0.36	-0.22	0.14	0.00	IE	-0.08	NO	-2.75	6,793.6	-4,106.2	2,687.4	1,389.9	-838.7	551.1	-4.3	IE	-309.5	NO	—	-10,724.0	
Romania	6,312	95	1.53	-0.79	0.73	0.28	-0.05	0.23	NO	NO	NO	NO	-3.52	9,629.5	-5,013.3	4,616.2	1,742.1	-302.1	1,440.0	NO	NO	NO	NO	—	-22,206.0	
Russian Federation	614,132	1,950	0.28	-0.11	0.17	0.08	-0.03	0.04	0.00	0.03	0.01	-0.16	-0.92	173,529.0	-70,560.4	102,968.6	48,330.0	-21,338.5	26,991.4	2,939.3	16,512.2	5,670.9	-312.0	—	-567,491.3	
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	1,185	NO	1.84	IE	1.84	0.43	IE	0.43	NA	0.11	NA	NO	-8.71	2,175.5	IE	2,175.5	511.3	IE	511.3	NA	127.0	NA	NO	—	-10,317.5	
Spain	12,600	NO	0.41	IE	0.41	IE	IE	IE	NE	NE	NE	NO	-1.49	5,111.3	IE	5,111.3	IE	IE	IE	NE	NE	NE	NO	—	-18,741.3	
Sweden	28,310	4,405	0.21	IE	0.21	0.07	IE	0.07	-0.03	0.07	0.16	-0.58	-1.31	5,836.1	IE	5,836.1	1,975.9	IE	1,975.9	-853.7	1,887.8	3,818.5	-2,573.5	—	-37,000.8	
Switzerland	1,197	4	2.83	-2.66	0.17	IE	IE	IE	NO	0.03	NO	-0.68	-0.71	3,382.1	-3,179.8	202.3	IE	IE	IE	NO	32.4	NO	-2.4	—	-851.4	
Ukraine	9,223	192	1.76	-0.56	1.20	0.26	IE	0.26	NO	0.03	0.16	NO	0.68	-6.08	16,233.1	-5,193.9	11,039.4	2,440.3	IE	2,440.3	232.4	1,452.6	NO	130.8	—	-56,083.8
United Kingdom	1,369	235	7.00	-6.55	0.45	IE	IE	IE	0.49	IE	0.56	0.58	-5.53	9,583.6	-8,961.7	621.9	IE	IE	IE	673.9	IE	632.5	135.2	—	-7,566.5	

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(f)

Cropland management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)											Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)					
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil									
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	Increase		Decrease	Net change	Increase	Decrease			Net change	Mineral	Organic							
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	46.910	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.09	-5.00	-0.28	22.9	-22.1	0.8	7.4	-8.0	-0.6	-37.3	-395.1	4,158.0	-80.8	-13,364.9						
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark ¹	2,856	43	0.06	-0.07	-0.01	IE	IE	IE	NA	NA	-0.12	-11.04	1.09	172.2	-209.9	-37.7	IE	IE	IE	NA	NA	-331.6	-476.0	3,099.3						
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	25,990	43	0.04	-0.04	-0.01	0.00	0.00	0.00	0.00	NA, NE, NO	0.03	-11.04	-0.02	936.1	-1,098.6	-162.5	7.6	-5.7	1.9	-0.3	NA, NE, NO	794.3	-476.0	-577.4						
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	2,648	NO	0.01	-0.01	0.01	0.00	0.00	0.00	0.00	NO	0.03	NO	-0.14	37.1	-15.6	21.4	7.6	-5.7	1.9	-0.3	NO	80.8	NO	-380.9						
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	20,486	NO	0.04	-0.04	-0.01	IE	IE	IE	NE	NE	0.05	NO	-0.16	726.9	-873.1	-146.2	IE	IE	IE	NE	NE	1,045.0	NO	-3,295.8						
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(g)

Cropland management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)	
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		
Australia																									
Austria																									
Belgium																									
Bulgaria																									
Canada	48,758	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	0.01	-5.00	0.07	10.4	-19.7	-9.3	3.7	-7.9	-4.2	-26.3	-1,367.3	528.5	-80.8	3,517.5
Croatia																									
Czech Republic																									
Denmark ¹	2,921	58	0.04	-0.06	-0.02	IE	IE	IE	NA	NA	-0.14	-11.35	1.38	113.3	-164.8	-51.5	IE	IE	IE	NA	NA	-387.0	-659.9	4,027.5	
Estonia																									
European Union (15)	27,740	58	0.03	-0.02	0.00	0.00	0.00	0.00	0.00		-0.01	-11.35	0.12	711.1	-588.5	122.6	4.8	-11.4	-6.6	-0.7		-352.9	-659.9	3,290.8	
Finland																									
France (KP)																									
Germany																									
Greece																									
Hungary																									
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland																									
Italy																									
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia																									
Liechtenstein																									
Lithuania																									
Luxembourg																									
Monaco																									
Netherlands																									
New Zealand																									
Norway																									
Poland																									
Portugal	3,611	NO	0.01	-0.01	0.00	0.00	0.00	0.00	0.00	NE	0.01	NO	-0.01	29.9	-37.2	-7.3	4.8	-11.4	-6.6	-0.7	NE	21.4	NO	-25.1	
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation																									
Slovakia																									
Slovenia																									
Spain	21,208	NO	0.03	-0.02	0.01	IE	IE	IE	NE	NE	0.00	NO	-0.03	567.9	-386.6	181.3	IE	IE	IE	NE	NE	12.8	NO	-711.6	
Sweden																									
Switzerland																									
Ukraine																									
United Kingdom																									

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(h)

Grazing land management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)											Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)								Net CO ₂ emissions/ removals (Gg CO ₂)						
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil		Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil								
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic	Increase		Decrease	Net change	Increase	Decrease			Net change	Mineral		Organic					
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark	406	39	0.03	-0.04	-0.02	IE	IE	IE	NA	NA	0.00	-1.01	0.43	11.1	-17.3	-6.2	IE	IE	IE	NA	NA	-1.4	-39.6					172.9	
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	1,445	31	0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	NA, NO	0.18	-1.25	-0.50	11.8	-21.6	-9.8	0.7	-1.7	-0.9	-0.1	NA, NO	248.6	-39.2					-728.0	
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	1,281	NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO	0.20	NO	-0.70	0.7	-4.4	-3.7	0.7	-1.7	-0.9	-0.1	NO	249.9	NO					-899.3	
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(i)

Grazing land management - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)			
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil					
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic				
Australia																											
Austria																											
Belgium																											
Bulgaria																											
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia																											
Czech Republic																											
Denmark ¹	361	47	0.03	-0.05	-0.02	IE	IE	IE	NA	NA	0.00	-1.06	0.57	11.3	-17.2	-5.9	IE	IE	IE	NA	NA	-0.1	-50.0			205.2	
Estonia																											
European Union (15)	705	40	0.02	-0.18	-0.17	IE, NA, NE	-0.03	-0.03	0.00		0.18	-1.25	0.35	11.1	-127.4	-116.3	IE, NA, NE	-23.3	-23.3	0.0		122.4	-49.8			246.1	
Finland																											
France (KP)																											
Germany																											
Greece																											
Hungary																											
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland																											
Italy																											
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia																											
Liechtenstein																											
Lithuania																											
Luxembourg																											
Monaco																											
Netherlands																											
New Zealand																											
Norway																											
Poland																											
Portugal	585	NO	NE	-0.19	-0.19	NE	-0.04	-0.04	0.00	NE	0.21	NO	0.07	NE	-110.3	-110.3	NE	-23.3	-23.3	0.0	NE	122.4	NO			41.0	
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation																											
Slovakia																											
Slovenia																											
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden																											
Switzerland																											
Ukraine																											
United Kingdom																											

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(j)

Revegetation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for 2010

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)			
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil					
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic				
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark ¹	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	249	NO	0.06	IE	0.06	IE	IE	IE	IE	NO	0.51	NA	-2.08	14.1	IE	14.1	IE	IE	IE	IE	IE	NO	126.6	NA		-516.0	
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	77	NO	2.49	0.00	2.48	0.65	0.00	0.65	0.04	IE, NO	0.81	NO	-14.59	192.5	-0.3	192.2	50.0	-0.1	50.0	3.3	IE, NO	62.8	NO			-1,130.2	
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania	14	NO	1.41	NO	1.41	0.35	NO	0.35	0.44	NO	3.20	NO	-19.77	19.1	NO	19.1	4.8	NO	4.8	5.9	NO	43.4	NO			-268.3	
Russian Federation	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

¹ Includes Greenland but excludes Faroe Islands.

Table 7.3(k)

Revegetation - area, implied carbon stock change factors and emissions and removals from the change in carbon stocks for the base year

	Area (kha)		Implied carbon stock change factor (Mg C/ha)										Implied emission/ removal factor per area (Mg CO ₂ /ha)	Change in carbon stock (Gg C)										Net CO ₂ emissions/ removals (Gg CO ₂)		
	Total	Organic Soil	Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil			Above-ground biomass			Below-ground biomass			Litter	Deadwood	Soil				
			Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic		Increase	Decrease	Net change	Increase	Decrease	Net change			Mineral	Organic			
Australia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Austria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bulgaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Denmark ¹	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
European Union (15)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Finland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
France (KP)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Germany	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Iceland	167	NO	0.06	IE	0.06	IE	IE	IE	IE	IE	NO	0.51	NA	-2.08	9.5	IE	9.5	IE	IE	IE	IE	IE	NO	85.7	NA	-349.1
Ireland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	6	NO	2.21	-0.01	2.20	0.58	0.00	0.57	0.04	IE, NO	0.80	NO	-13.27	13.0	-0.1	12.9	3.4	0.0	3.4	0.3	IE, NO	4.7	NO	—	NO	-77.8
Latvia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Liechtenstein	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lithuania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Monaco	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Zealand	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Norway	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania	88	NO	1.47	NO	1.47	0.37	NO	0.37	0.27	NO	1.85	NO	-14.49	129.1	NO	129.1	32.3	NO	32.3	23.6	NO	162.8	NO	—	NO	-1,275.0
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

¹ Includes Greenland but excludes Faroe Islands.

Table 7.4**Direct N₂O emissions from N fertilization¹ for 2010**

	A/R: units of land not harvested since beginning of CP			A/R: units of land harvested since beginning of CP			Forest management ²		
	Total fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O	Total fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O	Total fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O
	Gg N/yr	kg N ₂ O-N/kg N	Gg	Gg N/yr	kg N ₂ O-N/kg N	Gg	Gg N/yr	kg N ₂ O-N/kg N	Gg
Australia	IE	IE	IE	IE	IE	IE	NA	NA	NA
Austria	NO	NO	NO	NO	NO	NO	NA	NA	NA
Belgium	NO	NO	NO	NO	NO	NO	NA	NA	NA
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	IE	IE	IE	NA	NA	NA	NA	NA	NA
Croatia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	NO	NO	NO	NO	NO	NO	NO	NO
Denmark ³	IE	IE	IE	IE	IE	IE	IE	IE	IE
Estonia	NO	NO	NO	NO	NO	NO	NA	NA	NA
European Union (15)	0.35	0.01	0.00	IE, NA, NO	IE, NA, NO	IE, NA, NO	15.72	0.01	0.29
Finland	NO	NO	NO	NA	NA	NA	3.72	0.01	0.07
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	NO	NO	NO	NO	NO	NO	NO	NO	NO
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	IE	IE	IE	IE	IE	IE	IE	IE	IE
Iceland	0.02	0.01	0.00	NO	NA	NA	NA	NA	NA
Ireland	IE	IE	IE	IE	IE	IE	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	IE	IE	IE	NA	NA	NA	IE	IE	IE
Latvia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Liechtenstein	NO	NO	NO	NO	NO	NO	NA	NA	NA
Lithuania	NO	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	NO	NO	NO	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NO	NO	NO	NO	NO	NO	NA	NA	NA
New Zealand	IE	IE	IE	IE	IE	IE	NA	NA	NA
Norway	IE	IE	IE	IE	IE	IE	0.27	0.00	0.00
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	IE	IE	IE	IE	IE	IE	IE	IE	IE
Romania	IE	IE	IE	IE	IE	IE	IE	IE	IE
Russian Federation	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	NO	NO	NO	NO	NO	NO	12.00	0.01	0.21
Switzerland	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	0.35	0.01	0.00	NO	NO	NO	NO	NO	NO

¹ N₂O emissions from fertilization for Cropland Management, Grazing Land Management and Revegetation should be reported in the agriculture sector.

² If Forest Management is elected by the Party

³ Includes Greenland but excludes Faroe Islands

Table 7.5**N₂O emissions from drainage of soils^{1,2} for 2010**

	Organic soil			Mineral soil			Total		
	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O
	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	NO	NO	NO	NO	NO	NO	NO	NO
Denmark ³	13.32	0.60	0.01	278.48	0.06	0.03	291.81	0.08	0.04
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	235.75	0.60	0.22	278.48	0.06	0.03	514.23	0.31	0.25
Finland	NE	NE	NE	NE	NE	NE	NE	NE	NE
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	222.42	0.60	0.21	NE	NO	NO	222.42	0.60	0.21
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NO	NO	NO	NO	NO	NO	NO	NO	NO
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NO	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	427.79	0.60	0.40	603.84	0.06	0.06	1,031.63	0.28	0.46
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	171.12	0.28	0.07	NO	NO	NO	171.12	0.28	0.07
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	245.42	0.10	0.04	NO	NO	NO	245.42	0.10	0.04
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	NO	NO	NO	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	NO	NO	NO	NO	NO	NO
Russian Federation	1,950.20	0.22	0.68	NO	NO	NO	1,950.20	0.22	0.68
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	NE	NE	NE	NE	NE	NE	NE	NE	NE
Ukraine	192.30	0.10	0.03	NO	NO	NO	192.30	0.10	0.03
United Kingdom	NE	NE	NE	NE	NE	NE	NE	NE	NE

¹ N₂O emissions from drainage of soils include those from Forest Management. NO emissions from drained cropland and grassland soils are covered in the agriculture sector under cultivation of histosols. Fertilization for Cropland Management, Grazing Land Management and Revegetation should be reported in the agriculture sector.

² If Forest Management is elected by the Party

³ Includes Greenland but excludes Faroe Islands

Table 7.6(a)**N₂O emissions from disturbance associated with land-use conversion to cropland (deforestation ¹) for 2010**

	Deforestation								
	Organic Soil ²			Mineral Soil			Total		
	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O
	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg
Australia	NO	NO	NO	6,403.29	0.12	1.22	6,403.29	0.12	1.22
Austria	NO	NO	NO	8.67	0.00	0.00	8.67	0.00	0.00
Belgium	NE	NE	NE	1.99	2.18	0.01	1.99	2.18	0.01
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NO	NO	NO	450.05	0.06	0.04	450.05	0.06	0.04
Croatia	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NO	NO	NO	2.67	0.33	0.00	2.67	0.33	0.00
Denmark ³	0.28	0.15	0.00	6.65	0.19	0.00	6.92	0.18	0.00
Estonia	NO	NO	NO	NO	NO	NO	NO	NO	NO
European Union (15)	28.69	0.01	0.00	821.95	0.28	0.36	850.65	0.27	0.36
Finland	25.82	IE	IE	55.06	0.01	0.00	80.88	0.01	0.00
France (KP)	NO	NO	NO	644.63	0.19	0.20	644.63	0.19	0.20
Germany	2.52	IE	IE	47.99	0.08	0.01	50.52	0.07	0.01
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NO	NO	NO	1.48	0.34	0.00	1.48	0.34	0.00
Iceland	NO	NA	NA	NO	NA	NA	NO	NA	NA
Ireland	NO	NO	NO	NO	NO	NO	NO	NO	NO
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	IE	IE, NA	IE, NA	23.99	0.25	0.01	23.99	0.25	0.01
Latvia	1.15	12.12	0.02	20.38	38.48	1.23	21.53	37.07	1.25
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	0.94	0.75	0.00	0.94	0.75	0.00
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	0.07	2.37	0.00	1.63	0.59	0.00	1.71	0.67	0.00
New Zealand	NO	NO	NO	0.27	NO	NO	0.27	NO	NO
Norway	NO	NO	NO	NO	NO	NO	NO	NO	NO
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	NO	NO	NO	49.69	1.56	0.12	49.69	1.56	0.12
Romania	NO	NO	NO	NO	NO	NO	NO	NO	NO
Russian Federation	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NO	NO	NO	0.13	40.36	0.01	0.13	40.36	0.01
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	IE	IE	IE	4.29	2.50	0.02	4.29	2.50	0.02
Switzerland	0.00	NO	NO	0.01	0.99	0.00	0.01	0.82	0.00
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NO	NO	NO	0.41	5.04	0.00	0.41	5.04	0.00

¹ N₂O emissions associated with deforestation followed by the establishment of cropland should be reported under deforestation even if cropland management is not elected under Article 3.4² N₂O emissions from cropland are included in the agriculture sector.³ Includes Greenland but excludes Faroe Islands

Table 7.6(b)N₂O emissions from disturbance associated with land-use conversion to cropland (cropland management ^{1,2}) for 2010

	Cropland management								
	Organic soil ³			Mineral soil			Total		
	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O
	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NO	NO	NO	3.39	0.23	0.00	3.39	0.23	0.00
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark ⁴	0.49	NA	NA	9.30	IE	IE	9.78	IE, NA	IE, NA
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	0.49	NA, NO	NA, NO	201.33	0.13	0.04	201.82	0.13	0.04
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	NO	NO	NO	192.03	0.14	0.04	192.03	0.14	0.04
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NA	NA	NA	NA	NA	NA	NA	NA	NA

¹ This includes N₂O emissions in land subject to cropland management from disturbance of soils due to the conversion to cropland of lands other than forest lands.² If Cropland Management is elected by the Party³ N₂O emissions from cropland are included in the agriculture sector⁴ Includes Greenland but excludes Faroe Islands.

Table 7.6(c)**N₂O emissions from disturbance associated with land-use conversion to cropland (cropland management ^{1,2}) for the base year**

	Cropland management								
	Organic soil ³			Mineral soil			Total		
	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O	Area of drained soils	IEF	N ₂ O
	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg	kha	kg N ₂ O-N/ha	Gg
Australia	—	—	—	—	—	—	—	—	—
Austria	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—	—	—
Bulgaria	—	—	—	—	—	—	—	—	—
Canada	NO	NO	NO	1,269.82	0.02	0.04	1,269.82	0.02	0.04
Croatia	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—
Denmark ⁴	0.02	NA	NA	0.44	IE	IE	0.47	IE, NA	IE, NA
Estonia	—	—	—	—	—	—	—	—	—
European Union (15)	0.02	NA, NO	NA, NO	99.27	0.30	0.05	99.30	0.30	0.05
Finland	—	—	—	—	—	—	—	—	—
France (KP)	—	—	—	—	—	—	—	—	—
Germany	—	—	—	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	—	—
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	—	—	—	—	—	—	—	—	—
Italy	—	—	—	—	—	—	—	—	—
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	—	—	—	—	—	—	—	—	—
Liechtenstein	—	—	—	—	—	—	—	—	—
Lithuania	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—
Monaco	—	—	—	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—	—	—	—
New Zealand	—	—	—	—	—	—	—	—	—
Norway	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—
Portugal	NO	NO	NO	98.83	0.30	0.05	98.83	0.30	0.05
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation	—	—	—	—	—	—	—	—	—
Slovakia	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—
Ukraine	—	—	—	—	—	—	—	—	—
United Kingdom	—	—	—	—	—	—	—	—	—

¹ This includes N₂O emissions in land subject to Cropland Management from disturbance of soils due to the conversion to cropland of lands other than Forest Lands.² If Cropland Management is elected by the Party³ N₂O emissions from cropland are included in the agriculture sector⁴ Includes Greenland but excludes Faroe Islands.

Table 7.6(d)

N₂O emissions from disturbance associated with land-use conversion to cropland (deforestation: units of land otherwise subject to elected activities under Article 3.4) ^{1,2} for 2010

	Deforestation: units of land otherwise subject to elected activities under Article 3.4 (information item)				
	Organic soil ³	Mineral soil	Total		
	Area of drained soils	Area of drained soils	Area of drained soils	IEF	N ₂ O
	kha	kha	kha	kg N ₂ O-N/ha	Gg
Australia	NA	NA	NA		
Austria	NO	NO	NO		
Belgium	NA	NA	NA		
Bulgaria	NO	NO	NO		
Canada	IE	IE	IE		
Croatia	NA	NA	NA		
Czech Republic	NA	NA	NA		
Denmark ⁴	0.0	0.9	0.9		
Estonia	NA	NA	NA		
European Union (15)	0.0	53.4	53.5		
Finland	NA	NA	NA		
France (KP)	NE	NE	NE		
Germany	NA	NA	NA		
Greece	NA	NA	NA		
Hungary	NO	NO	NO		
Iceland	NA	NA	NA		
Ireland	NA	NA	NA		
Italy	NA	NA	NA		
Japan	NA	NA	NA		
Latvia	NA	NA	NA		
Liechtenstein	NO	NO	NO		
Lithuania	NO	NO	NO		
Luxembourg	NA	NA	NA		
Monaco	NA	NA	NA		
Netherlands	NA	NA	NA		
New Zealand	NA	NA	NA		
Norway	NA	NA	NA		
Poland	NA	NA	NA		
Portugal	NO	52.5	52.5		
Romania	NA	NA	NA		
Russian Federation	NA	NA	NA		
Slovakia	NA	NA	NA		
Slovenia	NA	0.1	0.1		
Spain	NO	NO	NO		
Sweden	NO	NO	NO		
Switzerland	NO	NO	NO		
Ukraine	NA	NA	NA		
United Kingdom	NO	NO	NO		

¹ N₂O emissions associated with deforestation followed by the establishment of cropland should be reported under deforestation even if cropland management is not elected under Article 3.4

² Units of land subject to deforestation under Article 3.3 otherwise subject to elected activities under Article 3.4 are implicitly included under A.2. They are reported in table 3 for transparency purposes and to fulfil the requirement of paragraph 6(b) (ii) of the annex to decision 15/CMP.1

³ N₂O emissions from cropland are included in the agriculture sector

⁴ Includes Greenland but excludes Faroe Islands.

Table 7.7(a)

Carbon emissions from lime application¹ on Article 3.3 activities for 2010

	Afforestation and reforestation			R (units of land not harvested since the beginning of 2000)			+R (units of land harvested since the beginning of 2000)			Deforestation			Total Article 3.3		
	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon
	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg
Australia	372.08	0.11	0.04	372.08	0.11	0.04	NO	NO	NO	NO	NO	NO	372.08	0.11	0.04
Austria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Belgium	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NA,NO	NA,NO	NA,NO	NO	NO	NO	NA	NA	NA	IE	IE	IE	IE,NA,NO	IE,NA,NO	IE,NA,NO
Croatia	NO	NO	NO	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	NO	NO	NO
Denmark ²	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Estonia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
European Union (15)	NA,NO,IE	NA,NO,IE	NA,NO,IE	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	70,890.40	0.12	8.81	70,890.40	0.12	8.81
Finland	NA,NO	NA,NO	NA,NO	NO	NO	NO	NA	NA	NA	56,392.00	0.13	7.05	56,392.00	0.13	7.05
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	12,511.52	0.12	1.50	12,511.52	0.12	1.50
Germany	IE,NO	IE,NO	IE,NO	IE	IE	IE	NO	NO	NO	NO	NO	NO	IE,NO	IE,NO	IE,NO
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NO	NO	NO	NO	NO	NO	NO	NO	NO	670.14	0.12	0.08	670.14	0.12	0.08
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NA,NO	NA,NO	NA,NO	NO	NO	NO	NA	NA	NA	1,029.47	0.44	0.45	1,029.47	0.44	0.45
Latvia	NO	NO	NO	NO	NO	NO	NO	NO	NO	88.67	0.12	0.01	88.67	0.12	0.01
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	1,316.66	0.13	0.17	1,316.66	0.13	0.17
New Zealand	NO	NO	NO	NO	NO	NO	NO	NO	NO	10,115.71	0.44	4.45	10,115.71	0.44	4.45
Norway	NO	NO	NO	NO	NO	NO	NO	NO	NO	IE, NO	IE, NO	IE, NO	NO,IE	NO,IE	NO,IE
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA,NO	NA,NO	NA,NO
Portugal	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Russian Federation	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	NA	NA	NA
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sweden	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Switzerland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NO	NO	NO	NO	NO	NO	NO	NO	NO	87.13	0.12	0.01	87.13	0.12	0.01

¹ Total for limestone and dolomite.

² Includes Greenland but excludes Faroe Islands.

Table 7.7(b)

Carbon emissions from lime application on Article 3.3 activities for the base year

	Afforestation and reforestation			R (units of land not harvested since the beginning of			+R (units of land harvested since the beginning of C			Deforestation			Total Article 3.3		
	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon
	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg
Australia															
Austria															
Belgium															
Bulgaria															
Canada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia															
Czech Republic															
Denmark ²	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Estonia															
European Union (15)	NA,NO,IE	NA,NO,IE	NA,NO,IE	IE, NA	IE, NA	IE, NA	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA	IE, NA	IE, NA	NA,NO,IE	NA,NO,IE	NA,NO,IE
Finland															
France (KP)															
Germany															
Greece															
Hungary															
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland															
Italy															
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia															
Liechtenstein															
Lithuania															
Luxembourg															
Monaco															
Netherlands															
New Zealand															
Norway															
Poland															
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Russian Federation															
Slovakia															
Slovenia															
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sweden															
Switzerland															
Ukraine															
United Kingdom															

¹ Total for limestone and dolomite.

² Includes Greenland but excludes Faroe Islands.

Table 7.7(c)

Carbon emissions from lime application¹ on Article 3.4 activities for 2010

	Forest management ²			Cropland management ²			Grazing land management ²			Revegetation ²			Total Article 3.4 ²		
	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon
	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	NA	NA	NA	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
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Canada	NA	NA	NA	626,205.00	0.13	78.48	NA	NA	NA	NA	NA	NA	626,205.00	0.13	78.48
Croatia	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Czech Republic	5,122.00	0.12	0.61	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,122.00	0.12	0.61
Denmark ³	IE	IE	IE	421,340.78	0.12	50.53	9.25	0.13	0.00	NA	NA	NA	421,350.03	0.25	50.53
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (15)	132,554.21	0.12	15.90	449,281.25	0.12	53.93	IE, NA	IE, NA	IE, NA	NA	NA	NA	581,835.45	0.24	69.83
Finland	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
France (KP)	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Germany	132,554.21	0.12	15.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	132,554.21	0.12	15.90
Greece	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Hungary	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	NO	NO	NO	NA	NA	NA	NA	NA	NA	83.55	0.08	0.01	83.55	0.08	0.01
Latvia	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Liechtenstein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Portugal	NO	NO	NO	27,940.47	0.12	3.41	IE	IE	IE	NA	NA	NA	27,940.47	0.12	3.41
Romania	NO	NO	NO	NA	NA	NA	NA	NA	NA	NO	NO	NO	NA,NO	NA,NO	NA,NO
Russian Federation	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	NA	NA	NA
Slovenia	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Spain	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Sweden	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Switzerland	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO

¹ Total for limestone and dolomite.

² If elected by the Party

³ Includes Greenland but excludes Faroe Islands.

Table 7.7(d)

Carbon emissions from lime application¹ on Article 3.4 activities for the base year

	Forest management ²			Cropland management ²			Grazing land management ²			Revegetation ²			Total Article 3.4 ²		
	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon	Total lime applied	C emission per unit of lime	Carbon
	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg	Mg/yr	Mg C/Mg	Gg
Australia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Austria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bulgaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada	NA	NA	NA	442,755.00	0.13	55.53	NA	NA	NA	NA	NA	NA	442,755.00	0.13	55.53
Croatia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Denmark ³	IE	IE	IE	1,416,684.16	0.12	169.89	18.50	0.13	0.00	NA	NA	NA	1,416,702.66	0.25	169.89
Estonia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
European Union (15)	IE, NA	IE, NA	IE, NA	1,444,867.88	0.12	173.32	IE, NA	IE, NA	IE, NA	NA	NA	NA	1,444,867.88	0.12	173.32
Finland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
France (KP)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Germany	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Iceland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.29	0.08	0.00	6.29	0.08	0.00
Latvia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Liechtenstein	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lithuania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Monaco	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Zealand	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Norway	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	NA	NA	NA	28,183.72	0.12	3.44	IE	IE	IE	NA	NA	NA	28,183.72	0.12	3.44
Romania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NA,NO	NA,NO	NA,NO
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spain	NA	NA	NA	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO	NA,NO
Sweden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

¹ Total for limestone and dolomite.

² If elected by the Party

³ Includes Greenland but excludes Faroe Islands.

Table 7.8(a)**Emissions from biomass burning on afforestation and reforestation land for 2010**

	Activity data ¹			Implied Emission Factor ¹			Emissions ¹		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ²	ha or kg dm		Mg/activity data unit			Gg		
Australia	bb	kg dm	170,457,898.34	NO,IE	0.00	0.00	NO,IE	0.61	0.01
Austria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Belgium	ab	ha	NO	NO	NO	NO	NO	NO	NO
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Croatia	ab	ha	NO,IE	NO,IE	NE,NO,IE	NE,NO,IE	NO,IE	NE,NO,IE	NE,NO,IE
Czech Republic	bb, ab	kg dm, ha	NO	NO	NO	NO	NO	NO	NO
Denmark³							NO	NO	NO,NA
Estonia	ab	ha	77.30	64.07	0.36	0.00	4.95	0.03	0.00
European Union (15)	ab	ha	57,474,148.87	0.00	0.00	0.00	236.65	1.60	0.01
Finland	ab	ha	5.00	NA	NA	NO,IE,NA	0.01	0.00	NO,IE,NA
France (KP)							NA	NA	NA
Germany	ab	ha	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE
Greece							NA	NA	NA
Hungary	bb	kg dm	2,378,314.64	NO,IE	0.00	0.00	NO,IE	0.02	0.00
Iceland							NA	NA	NA
Ireland	bb	kg dm	17,870,907.60	0.00	0.00	0.00	26.21	0.11	0.00
Italy	ab	ha	5,807.04	NO,IE	0.11	0.00	NO,IE,NA	0.62	0.00
Japan	bb	kg dm	15,339.27	NO,IE	0.00	0.00	NO,IE,NA	0.00	0.00
Latvia							NO	NO	NO
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	2.17	8.32	0.13	0.00	0.02	0.00	0.00
Luxembourg	ab	ha	NO	NO	NO	NO	NO	NO	NO
Monaco							NA	NA	NA
Netherlands	bb	kg dm	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE
New Zealand	bb	kg dm	51,074,409.58	IE	0.00	0.00	IE	0.22	0.00
Norway							NO,IE	NO,IE	NO,IE
Poland	ab	ha	156.22	56.22	0.22	0.00	8.78	0.03	0.00
Portugal	ab	ha	4,842.19	28.47	0.11	0.00	137.85	0.56	0.01
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation	ab	ha	NA,IE	NA,IE	NA,IE	NA,IE	NA,IE	2.25	0.12
Slovakia							NA	NA	NA
Slovenia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Spain	bb	kg dm	28,541,893.15				52.33	0.23	0.00
Sweden							NO	NO	NO
Switzerland							NO	NO	NO
Ukraine	bb	kg dm	3,722.36	1.70	0.01	0.00	6.33	0.03	0.00
United Kingdom	bb	kg dm	11,050,698.89	NO	NO	NO	20.26	0.09	0.00

¹ Total for controlled burning and wildfires.² Area burned (AA) and biomass burned (BB)³ Includes Greenland but excludes Faroe Islands

Table 7.8(b)**Emissions from biomass burning on afforestation and reforestation (A.1.1: units of land not harvested) land for 2010**

	Activity data ¹			Implied Emission Factor ¹			Emissions ¹		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ²	ha or kg dm		Mg/activity data unit			Gg		
Australia	bb	kg dm	571,417.34	NO,IE	0.00	0.00	IE, NO	0.00	0.00
Austria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Belgium	ab	ha	NO	NO	NO	NO	NO	NO	NO
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NO	NO	NO	NO	NO	NO	NO
Croatia	ab	ha	NO,IE	NO,IE	NE,NO,IE	NE,NO,IE	IE, NO	IE, NE, NO	IE, NE, NO
Czech Republic	bb	kg dm	NO	NO	NO	NO	NO	NO	NO
Denmark³							NO	NO	NA, NO
Estonia	ab	ha	77.30	64.07	0.36	0.00	4.95	0.03	0.00
European Union (15)	ab	ha	57,474,148.87	0.00	0.00	0.00	236.65	1.60	0.01
Finland	ab	ha	5.00			NO,IE	0.01	0.00	IE, NO
France (KP)							NA	NA	NA
Germany	ab	ha	NO,IE	NO,IE	NO,IE	NO,IE	IE, NO	IE, NO	IE, NO
Greece							NA	NA	NA
Hungary	bb	kg dm	472,600.00	NO	0.00	0.00	NO	0.00	0.00
Iceland							NA	NA	NA
Ireland	bb	kg dm	17,870,907.60	0.00	0.00	0.00	26.21	0.11	0.00
Italy	ab	ha	5,807.04	NO,IE	0.11	0.00	IE, NO	0.62	0.00
Japan	bb	kg dm	15,339.27	NO,IE	0.00	0.00	IE, NO	0.00	0.00
Latvia							NO	NO	NO
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	2.17	8.32	0.13	0.00	0.02	0.00	0.00
Luxembourg	ab	ha	NO	NO	NO	NO	NO	NO	NO
Monaco							NA	NA	NA
Netherlands	bb	kg dm	NO,NE	NO,NE	NO,NE	NO,NE	NE, NO	NE, NO	NE, NO
New Zealand	bb	kg dm	51,074,409.58	IE	0.00	0.00	IE	0.22	0.00
Norway							IE, NO	IE, NO	IE, NO
Poland	ab	ha	156.22	56.22	0.22	0.00	8.78	0.03	0.00
Portugal	ab	ha	4,842.19	28.47	0.11	0.00	137.85	0.56	0.01
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation	ab	ha	NA,IE	NA,IE	NA,IE	NA,IE	IE, NA	2.25	0.12
Slovakia							NA	NA	NA
Slovenia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Spain	bb	kg dm	28,541,893.15				52.33	0.23	0.00
Sweden							NO	NO	NO
Switzerland							NO	NO	NO
Ukraine							NA	NA	NA
United Kingdom	bb	kg dm	11,050,698.89				20.26	0.09	0.00

¹ Total for controlled burning and wildfires.² Area burned (AA) and biomass burned (BB)³ Includes Greenland but excludes Faroe Islands

Table 7.8(c)**Emissions from biomass burning on afforestation and reforestation (A.1.2: units of land harvested) land for 2010**

	Activity data ¹			Implied Emission Factor ¹			Emissions ¹		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ²	ha or kg dm		Mg/activity data unit			Gg		
Australia	bb	kg dm	169,886,481.00	NO,IE	0.00	0.00	IE, NO	0.61	0.01
Austria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Belgium	ab	ha	NO	NO	NO	NO	NO	NO	NO
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Czech Republic	ab	ha	NO	NO	NO	NO	NO	NO	NO
Denmark ³							NO	NO	NO
Estonia	ab	ha	NO	NO	NO	NO	NO	NO	NO
European Union (15)	ab	ha	NO	NA,NE,NO,IE	NA,NE,NO,IE	NA,NE,NO,IE	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO
Finland	ab	ha	NA	NA	NA	NA	NA	NA	NA
France (KP)							NA	NA	NA
Germany							NO	NO	NO
Greece							NA	NA	NA
Hungary	bb	kg dm	1,905,714.64	NO,IE	0.00	0.00	IE, NO	0.01	0.00
Iceland							NA	NA	NA
Ireland	bb	kg dm	NO,IE	IE	IE	IE	IE	IE	IE
Italy							NA	NA	NA
Japan							NA	NA	NA
Latvia							NO	NO	NO
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Luxembourg	ab	ha	NO	NO	NO	NO	NO	NO	NO
Monaco							NA	NA	NA
Netherlands	bb	kg dm	NO,NE	NO,NE	NO,NE	NO,NE	NE, NO	NE, NO	NE, NO
New Zealand	bb	kg dm	IE	IE	IE	IE	IE	IE	IE
Norway							IE, NO	IE, NO	IE, NO
Poland	ab	ha	NO,IE	NO,IE	NO,IE	NO,IE	IE, NO	IE, NO	IE, NO
Portugal	ab	ha	NO	NO	NO	NO	NO	NO	NO
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation							NA	NA	NA
Slovakia							NA	NA	NA
Slovenia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Spain							NO	NO	NO
Sweden							NO	NO	NO
Switzerland							NO	NO	NO
Ukraine	bb	kg dm	3,722.36	1.70	0.01	0.00	6.33	0.03	0.00
United Kingdom	bb	kg dm	NO	NO	NO	NO	NO	NO	NO

¹ Total for controlled burning and wildfires.² Area burned (AA) and biomass burned (BB)³ Includes Greenland but excludes Faroe Islands

Table 7.8(d)**Emissions from biomass burning on deforestation land for 2010**

	Activity data ¹			Implied Emission Factor ¹			Emissions ¹		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ²	ha or kg dm		Mg/activity data unit			Gg		
Australia	bb	kg dm	13,487,081,767.91	NO,IE	0.00	0.00	IE, NO	48.55	0.90
Austria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Belgium	ab	ha	NO	NO	NO	NO	NO	NO	NO
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	20,742.85	131.22	0.53	0.02	2,721.80	11.06	0.42
Croatia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Czech Republic	ab	ha	NO	NO	NO	NO	NO	NO	NO
Denmark³							NO	NO	NO
Estonia	ab	ha	NO	NO	NO	NO	NO	NO	NO
European Union (15)							222.97	8.04	0.16
Finland	ab	ha	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	IE, NE, NO	IE, NE, NO	IE, NE, NO
France (KP)							IE, NO	6.39	0.04
Germany							NO	NO	NO
Greece							NA	NA	NA
Hungary	bb	kg dm	511,044.44	NO,IE	0.00	0.00	IE, NO	0.00	0.00
Iceland							NA	NA	NA
Ireland	bb	kg dm	NO	NO,IE	NO,IE	NO,IE	IE, NO	IE, NO	IE, NO
Italy							NA	NA	NA
Japan	bb	kg dm	NO	NO	NO	NO	NO	NO	NO
Latvia							NO	NO	NO
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Luxembourg	ab	ha	NO	NO	NO	NO	NO	NO	NO
Monaco							NA	NA	NA
Netherlands	bb	kg dm	NO,NE	NO,NE	NO,NE	NO,NE	NE, NO	NE, NO	NE, NO
New Zealand	bb	kg dm	NE	IE	NE	NE	IE	NE	NE
Norway							IE, NO	IE, NO	IE, NO
Poland	ab	ha	NO	NO	NO	NO	NO	NO	NO
Portugal	ab	ha	6,429.21	NO	0.11	0.02	NO	0.68	0.11
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation							NA	NA	NA
Slovakia							NA	NA	NA
Slovenia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Spain							NO	NO	NO
Sweden							NO	NO	NO
Switzerland	ab	ha	NO	NO	NO	NO	NO	NO	NO
Ukraine							NA	NA	NA
United Kingdom	bb	kg dm	135,134,240.66	0.00	0.00	0.00	222.97	0.97	0.01

¹ Total for controlled burning and wildfires.² Area burned (AA) and biomass burned (BB)³ Includes Greenland but excludes Faroe Islands

Table 7.8(e)**Emissions from biomass burning on Total Article 3.3 land for 2010**

	Activity data ¹			Implied Emission Factor ¹			Emissions ¹		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ²	ha or kg dm		Mg/activity data unit			Gg		
Australia	bb	kg dm	13,657,539,666.25	NO,IE	0.00	0.00	NO,IE	49.17	0.91
Austria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Belgium	ab	ha	NO	NO	NO	NO	NO	NO	NO
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	20,742.85	131.22	0.53	0.02	2,721.80	11.06	0.42
Croatia	ab	ha	NO,IE	NO,IE	NE,NO,IE	NE,NO,IE	NO,IE	NE,NO,IE	NE,NO,IE
Czech Republic	bb, ab	kg dm, ha	NO	NO	NO	NO	NO	NO	NO
Denmark³							NO	NO	NO,NA
Estonia	ab	ha	77.30	64.07	0.36	0.00	4.95	0.03	0.00
European Union (15)	ab	ha	57,474,148.87	0.00	0.00	0.00	459.62	9.64	0.17
Finland	ab	ha	5.00	NE,NO,IE,NA	NE,NO,IE,NA	NE,NO,IE,NA	0.01	0.00	NE,NO,IE,NA
France (KP)							NO,IE,NA	6.39	0.04
Germany	ab	ha	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE	NO,IE
Greece							NA	NA	NA
Hungary	bb	kg dm	2,889,359.08	NO,IE	0.00	0.00	NO,IE	0.02	0.00
Iceland							NA	NA	NA
Ireland	bb	kg dm	17,870,907.60	0.00	0.00	0.00	26.21	0.11	0.00
Italy	ab	ha	5,807.04	NO,IE	0.11	0.00	NO,IE,NA	0.62	0.00
Japan	bb	kg dm	15,339.27	NO,IE	0.00	0.00	NO,IE,NA	0.00	0.00
Latvia							NO	NO	NO
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	2.17	8.32	0.13	0.00	0.02	0.00	0.00
Luxembourg	ab	ha	NO	NO	NO	NO	NO	NO	NO
Monaco							NA	NA	NA
Netherlands	bb	kg dm	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE
New Zealand	bb	kg dm	51,074,409.58	IE	0.00	0.00	IE	0.22	0.00
Norway							NO,IE	NO,IE	NO,IE
Poland	ab	ha	156.22	56.22	0.22	0.00	8.78	0.03	0.00
Portugal	ab	ha	11,271.40	28.47	0.22	0.02	137.85	1.23	0.12
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation	ab	ha	NA,IE	NA,IE	NA,IE	NA,IE	NA,IE	2.25	0.12
Slovakia							NA	NA	NA
Slovenia	ab	ha	NO	NO	NO	NO	NO	NO	NO
Spain	bb	kg dm	28,541,893.15				52.33	0.23	0.00
Sweden							NO	NO	NO
Switzerland	ab	ha	NO	NO	NO	NO	NO	NO	NO
Ukraine	bb	kg dm	3,722.36	1.70	0.01	0.00	6.33	0.03	0.00
United Kingdom	bb	kg dm	146,184,939.55	0.00	0.00	0.00	243.23	1.06	0.01

¹ Total for controlled burning and wildfires.² Area burned (AA) and biomass burned (BB)³ Includes Greenland but excludes Faroe Islands

Table 7.8(f)**Emissions from biomass burning on forest management¹ land for 2010**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							NA	NA	NA
Austria	ab	ha	NA	NA	NA	NA	NA	NA	NA
Belgium							NA	NA	NA
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia	ab	ha	446.00	30.31	2.95	0.68	13.52	1.32	0.30
Czech Republic	bb	kg dm	763,125,345.22	0.00	0.00	0.00	1,399.06	6.11	0.04
Denmark⁴							NO	NA, NO	NA, NO
Estonia							NA	NA	NA
European Union (15)							2,173.01	42.97	0.36
Finland	ab	ha	689.00	7.31	0.05	0.00	5.04	0.03	0.00
France (KP)							307.41	30.86	0.23
Germany	ab	ha	522.00	NO,IE	0.29	0.00	IE, NO	0.15	0.00
Greece	ab	ha	396.63	NO,IE	0.08	0.00	IE, NO	0.03	0.00
Hungary	bb	kg dm	150,704,793.77	IE	0.00	0.00	IE	1.05	0.01
Iceland							NA	NA	NA
Ireland							NA	NA	NA
Italy	ab	ha	13,549.76	NO,IE	0.11	0.00	IE, NO	1.44	0.00
Japan	bb	kg dm	8,063,157.78	IE	0.00	0.00	IE	0.07	0.00
Latvia							6.77	1.92	0.01
Liechtenstein							NA	NA	NA
Lithuania	ab	ha	19.33	8.32	0.13	0.00	0.16	0.00	0.00
Luxembourg							NA	NA	NA
Monaco							NA	NA	NA
Netherlands							NA	NA	NA
New Zealand							NA	NA	NA
Norway	ab	ha	768.70	NO,IE	0.09	0.00	IE, NO	0.07	0.00
Poland	ab	ha	1,970.78	56.22	0.22	0.00	110.80	0.43	0.01
Portugal	ab	ha	64,993.81	27.46	0.11	0.00	1,784.52	7.46	0.10
Romania	ab	ha	205.50	29.99	0.00		6.16	0.00	0.00
Russian Federation	ab	ha	3,247.09	NO,IE	152.32	8.43	IE, NO	494.60	27.36
Slovakia							NA	NA	NA
Slovenia	ab	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
Spain	bb	kg dm	333,658,383.14	NE,IE	0.00	0.00	IE, NE	2.67	0.02
Sweden	ab	ha	725.00	9.80	0.04	0.00	7.10	0.03	0.00
Switzerland	ab	ha	25.00	27.28	0.35	0.02	0.68	0.01	0.00
Ukraine	bb	kg dm	134,673.24	1.70	0.01	0.00	229.12	1.08	0.02
United Kingdom	bb	kg dm	37,602,831.36	0.00	0.00	0.00	68.94	0.30	0.00

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands

Table 7.8(g)**Emissions from biomass burning on cropland management¹ land for 2010**

	Activity data ²			Implied Emission Factor ³			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							NA	NA	NA
Austria	ab	ha	NA	NA	NA	NA	NA	NA	NA
Belgium							NA	NA	NA
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NO,IE	NO,NA	NO,IE	NO,IE	NA, NO	IE, NO	IE, NO
Croatia							NA	NA	NA
Czech Republic							NA	NA	NA
Denmark ⁴							NO	NO	NO
Estonia							NA	NA	NA
European Union (15)							NA, NO	19.30	0.25
Finland	ab	ha	NA	NA	NA	NA	NA	NA	NA
France (KP)							NA	NA	NA
Germany							NA	NA	NA
Greece							NA	NA	NA
Hungary							NA	NA	NA
Iceland							NA	NA	NA
Ireland							NA	NA	NA
Italy							NA	NA	NA
Japan							NA	NA	NA
Latvia							NA	NA	NA
Liechtenstein							NA	NA	NA
Lithuania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Luxembourg							NA	NA	NA
Monaco							NA	NA	NA
Netherlands							NA	NA	NA
New Zealand							NA	NA	NA
Norway							NA	NA	NA
Poland							NA	NA	NA
Portugal	ab	ha	6,421.81	NO	0.06	0.00	NO	0.39	0.02
Romania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Russian Federation							NA	NA	NA
Slovakia							NA	NA	NA
Slovenia							NA	NA	NA
Spain	bb	kg dm	5,542,431,909.96	NO,NA			NA, NO	18.91	0.23
Sweden							NA	NA	NA
Switzerland							NA	NA	NA
Ukraine							NA	NA	NA
United Kingdom							NA	NA	NA

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands.

Table 7.8(h)

Emissions from biomass burning on cropland management¹ land for the base year

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							—	—	—
Austria	ab	ha					—	—	—
Belgium							—	—	—
Bulgaria	ab	ha					—	—	—
Canada	ab	ha	NO,IE	NO,NA	NO,IE	NO,IE	NA, NO	IE, NO	IE, NO
Croatia							—	—	—
Czech Republic							—	—	—
Denmark ⁴							NO	NO	NO
Estonia							—	—	—
European Union (15)							NA, NE, NO	20.05	0.41
Finland	ab	ha					—	—	—
France (KP)							—	—	—
Germany							—	—	—
Greece							—	—	—
Hungary							—	—	—
Iceland							NA	NA	NA
Ireland							—	—	—
Italy							—	—	—
Japan							NA	NA	NA
Latvia							—	—	—
Liechtenstein							—	—	—
Lithuania	ab	ha					—	—	—
Luxembourg							—	—	—
Monaco							—	—	—
Netherlands							—	—	—
New Zealand							—	—	—
Norway							—	—	—
Poland							—	—	—
Portugal	ab	ha	9,067.72	NO,NE	0.04	0.00	NE, NO	0.40	0.01
Romania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Russian Federation							—	—	—
Slovakia							—	—	—
Slovenia							—	—	—
Spain	bb	kg dm	6,168,833,679.84	NO,NA			NA, NO	19.65	0.40
Sweden							—	—	—
Switzerland							—	—	—
Ukraine							—	—	—
United Kingdom							—	—	—

¹ If elected by the Party

² Total for controlled burning and wildfires.

³ Area burned (AA) and biomass burned (BB)

⁴ Includes Greenland but excludes Faroe Islands.

Table 7.8(i)**Emissions from biomass burning on grazing land management¹ land for 2010**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							NA	NA	NA
Austria	ab	ha	NA	NA	NA	NA	NA	NA	NA
Belgium							NA	NA	NA
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia							NA	NA	NA
Czech Republic							NA	NA	NA
Denmark ⁴	ab	ha	0.36	NO	1.67	0.15	NO	0.00	0.00
Estonia							NA	NA	NA
European Union (15)							NA, NO	0.09	0.01
Finland	ab	ha	NA	NA	NA	NA	NA	NA	NA
France (KP)							NA	NA	NA
Germany							NA	NA	NA
Greece							NA	NA	NA
Hungary							NA	NA	NA
Iceland							NA	NA	NA
Ireland							NA	NA	NA
Italy							NA	NA	NA
Japan							NA	NA	NA
Latvia							NA	NA	NA
Liechtenstein							NA	NA	NA
Lithuania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Luxembourg							NA	NA	NA
Monaco							NA	NA	NA
Netherlands							NA	NA	NA
New Zealand							NA	NA	NA
Norway							NA	NA	NA
Poland							NA	NA	NA
Portugal	ab	ha	3,266.26	NO	0.03	0.00	NO	0.09	0.01
Romania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Russian Federation							NA	NA	NA
Slovakia							NA	NA	NA
Slovenia							NA	NA	NA
Spain							NA	NA	NA
Sweden							NA	NA	NA
Switzerland							NA	NA	NA
Ukraine							NA	NA	NA
United Kingdom							NA	NA	NA

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands

Table 7.8(j)**Emissions from biomass burning on grazing land management¹ land for the base year**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							—	—	—
Austria	ab	ha					—	—	—
Belgium							—	—	—
Bulgaria	ab	ha					—	—	—
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia							—	—	—
Czech Republic							—	—	—
Denmark ⁴	ab	ha	0.05	NO	1.67	0.15	NO	0.00	0.00
Estonia							—	—	—
European Union (15)							NA, NE, NO	0.02	0.00
Finland	ab	ha					—	—	—
France (KP)							—	—	—
Germany							—	—	—
Greece							—	—	—
Hungary							—	—	—
Iceland							NA	NA	NA
Ireland							—	—	—
Italy							—	—	—
Japan							NA	NA	NA
Latvia							—	—	—
Liechtenstein							—	—	—
Lithuania	ab	ha					—	—	—
Luxembourg							—	—	—
Monaco							—	—	—
Netherlands							—	—	—
New Zealand							—	—	—
Norway							—	—	—
Poland							—	—	—
Portugal	ab	ha	1,389.84	NO,NE	0.02	0.00	NE, NO	0.02	0.00
Romania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Russian Federation							—	—	—
Slovakia							—	—	—
Slovenia							—	—	—
Spain							NA	NA	NA
Sweden							—	—	—
Switzerland							—	—	—
Ukraine							—	—	—
United Kingdom							—	—	—

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands.

Table 7.8(k)**Emissions from biomass burning on revegetation¹ land for 2010**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							NA	NA	NA
Austria	ab	ha	NA	NA	NA	NA	NA	NA	NA
Belgium							NA	NA	NA
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia							NA	NA	NA
Czech Republic							NA	NA	NA
Denmark⁴							NA	NA	NA
Estonia							NA	NA	NA
European Union (15)							NA	NA	NA
Finland	ab	ha	NA	NA	NA	NA	NA	NA	NA
France (KP)							NA	NA	NA
Germany							NA	NA	NA
Greece							NA	NA	NA
Hungary							NA	NA	NA
Iceland							NA	NA	NA
Ireland							NA	NA	NA
Italy							NA	NA	NA
Japan	bb	kg dm	NO	NO	NO	NO	NO	NO	NO
Latvia							NA	NA	NA
Liechtenstein							NO	NO	NO
Lithuania	ab	ha	NA	NA	NA	NA	NA	NA	NA
Luxembourg							NA	NA	NA
Monaco							NA	NA	NA
Netherlands							NA	NA	NA
New Zealand							NA	NA	NA
Norway							NA	NA	NA
Poland							NA	NA	NA
Portugal							NA	NA	NA
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation							NA	NA	NA
Slovakia							NA	NA	NA
Slovenia							NA	NA	NA
Spain							NA	NA	NA
Sweden							NA	NA	NA
Switzerland							NA	NA	NA
Ukraine							NA	NA	NA
United Kingdom							NA	NA	NA

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands

Table 7.8(I)

Emissions from biomass burning on revegetation¹ land for the base year

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							—	—	—
Austria	ab	ha					—	—	—
Belgium							—	—	—
Bulgaria	ab	ha					—	—	—
Canada	ab	ha	NA	NA	NA	NA	NA	NA	NA
Croatia							—	—	—
Czech Republic							—	—	—
Denmark ⁴							NA	NA	NA
Estonia							—	—	—
European Union (15)							NA	NA	NA
Finland	ab	ha					—	—	—
France (KP)							—	—	—
Germany							—	—	—
Greece							—	—	—
Hungary							—	—	—
Iceland							NA	NA	NA
Ireland							—	—	—
Italy							—	—	—
Japan	bb	kg dm	NO	NO	NO	NO	NO	NO	NO
Latvia							—	—	—
Liechtenstein							—	—	—
Lithuania	ab	ha					—	—	—
Luxembourg							—	—	—
Monaco							—	—	—
Netherlands							—	—	—
New Zealand							—	—	—
Norway							—	—	—
Poland							—	—	—
Portugal							NA	NA	NA
Romania	ab	ha	NO	NO	NO	NO	NO	NO	NO
Russian Federation							—	—	—
Slovakia							—	—	—
Slovenia							—	—	—
Spain							NA	NA	NA
Sweden							—	—	—
Switzerland							—	—	—
Ukraine							—	—	—
United Kingdom							—	—	—

¹ If elected by the Party

² Total for controlled burning and wildfires.

³ Area burned (AA) and biomass burned (BB)

⁴ Includes Greenland but excludes Faroe Islands.

Table 7.8(m)**Emissions from biomass burning on Total Article 3.4¹ land for 2010**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia							NA	NA	NA
Austria	ab	ha	NA	NA	NA	NA	NA	NA	NA
Belgium							NA	NA	NA
Bulgaria	ab	ha	NO	NO	NO	NO	NO	NO	NO
Canada	ab	ha	NO,IE,NA	NO,NA	NO,IE,NA	NO,IE,NA	NO,NA	NO,IE,NA	NO,IE,NA
Croatia	ab	ha	446.00	30.31	2.95	0.68	13.52	1.32	0.30
Czech Republic	bb	kg dm	763,125,345.22	0.00	0.00	0.00	1,399.06	6.11	0.04
Denmark⁴	ab	ha	0.36	NO	1.67	0.15	NA,NO	0.00	0.00
Estonia							NA	NA	NA
European Union (15)							2,173.01	62.36	0.61
Finland	ab	ha	689.00	7.31	0.05	0.00	5.04	0.03	0.00
France (KP)							307.41	30.86	0.23
Germany	ab	ha	522.00	NO,IE	0.29	0.00	NO,IE,NA	0.15	0.00
Greece	ab	ha	396.63	NO,IE	0.08	0.00	NO,IE,NA	0.03	0.00
Hungary	bb	kg dm	150,704,793.77	IE	0.00	0.00	IE,NA	1.05	0.01
Iceland							NA	NA	NA
Ireland							NA	NA	NA
Italy	ab	ha	13,549.76	NO,IE	0.11	0.00	NO,IE,NA	1.44	0.00
Japan	bb	kg dm	8,063,157.78	NO,IE	0.00	0.00	IE,NA,NO	0.07	0.00
Latvia							6.77	1.92	0.01
Liechtenstein							NA,NO	NA,NO	NA,NO
Lithuania	ab	ha	19.33	8.32	0.13	0.00	0.16	0.00	0.00
Luxembourg							NA	NA	NA
Monaco							NA	NA	NA
Netherlands							NA	NA	NA
New Zealand							NA	NA	NA
Norway	ab	ha	768.70	NO,IE	0.09	0.00	NO,IE,NA	0.07	0.00
Poland	ab	ha	1,970.78	56.22	0.22	0.00	110.80	0.43	0.01
Portugal	ab	ha	74,681.88	27.46	0.20	0.01	1,784.52	7.93	0.13
Romania	ab	ha	205.50	29.99	0.00	NA,NO	6.16	0.00	0.00
Russian Federation	ab	ha	3,247.09	NO,IE	152.32	8.43	NO,IE,NA	494.60	27.36
Slovakia							NA	NA	NA
Slovenia	ab	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
Spain	bb	kg dm	5,876,090,293.10	NO,IE,NO,NA	0.00	0.00	NE,NO,IE,NA	21.58	0.25
Sweden	ab	ha	725.00	9.80	0.04	0.00	7.10	0.03	0.00
Switzerland	ab	ha	25.00	27.28	0.35	0.02	0.68	0.01	0.00
Ukraine	bb	kg dm	134,673.24	1.70	0.01	0.00	229.12	1.08	0.02
United Kingdom	bb	kg dm	37,602,831.36	0.00	0.00	0.00	68.94	0.30	0.00

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands

Table 7.8(n)**Emissions from biomass burning on Total Article 3.4¹ land for the base year**

	Activity data ²			Implied Emission Factor ²			Emissions ²		
	Description	Unit	Value	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
	AB or BB ³	ha or kg dm		Mg/activity data unit			Gg		
Australia									
Austria	ab	ha							
Belgium									
Bulgaria	ab	ha							
Canada	ab	ha	NO,IE,NA	NO,NA	NO,IE,NA	NO,IE,NA	NO,NA	NO,IE,NA	NO,IE,NA
Croatia									
Czech Republic									
Denmark ⁴	ab	ha	0.05	NO	1.67	0.15	NA,NO	0.03	0.00
Estonia									
European Union (15)							2,354.65	29.39	0.54
Finland	ab	ha							
France (KP)									
Germany									
Greece									
Hungary									
Iceland							NA	NA	NA
Ireland									
Italy									
Japan	bb	kg dm	NO	NO	NO	NO	NA,NO	NA,NO	NA,NO
Latvia									
Liechtenstein									
Lithuania	ab	ha							
Luxembourg									
Monaco									
Netherlands									
New Zealand									
Norway									
Poland									
Portugal	ab	ha	10,457.56	NO,NE	0.06	0.00	2,354.65	9.71	0.13
Romania	ab	ha	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Russian Federation									
Slovakia									
Slovenia									
Spain	bb	kg dm	6,168,833,679.84	NO,NA			NO,NA	19.65	0.40
Sweden									
Switzerland									
Ukraine									
United Kingdom									

¹ If elected by the Party² Total for controlled burning and wildfires.³ Area burned (AA) and biomass burned (BB)⁴ Includes Greenland but excludes Faroe Islands.