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Aggregate information on greenhouse gas emissions by sources and removals by sinks for Parties included in Annex I to the Convention

Note by the secretariat

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I. Mandate

1. The Conference of the Parties (COP), by its decision 13/CP.20, adopted the revised guidelines for the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention (Annex I Parties). As part of the process for the technical review of GHG inventories, the COP requested the secretariat to compile and tabulate aggregate information on greenhouse gas emissions by sources and removals by sinks and trends from the latest available GHG inventory submissions of Annex I Parties and publish this information in a stand-alone document.[1]

2. Pursuant to decision 4/CMP.11, the initial check and the scope of the individual review shall be conducted consistent with the initial assessment and apply the relevant provisions for the review contained in decision 13/CP.20.

3. The COP, by its decision 24/CP.19, adopted the revised "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories" (hereinafter referred to as the UNFCCC reporting guidelines) and a revised set of common reporting format (CRF) tables[2] to be used by Annex I Parties to report quantitative GHG inventory data. Similarly, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by decision 6/CMP.9, adopted the revised CRF tables[3] that Parties shall use for reporting 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, paragraphs 3 and 4, of the Kyoto Protocol in the second commitment period.

II. Comparison of greenhouse gas inventory information

A. Approach

4. This document contains GHG inventory information compiled in tabular format. The tables provide information on emissions by sources and removals by sinks, implied emission factors (IEFs), and activity data (AD) reported by Annex I Parties. In addition, the tables contain information on the methods and emission factors used, activity data from international sources and other information relating to GHG inventory estimates. This information is provided for both the base year/period and for the year 2015.

5. Where it has been submitted by Annex I Parties listed in annex B to the Kyoto Protocol, pages 50–73 of this document also contain inventory information on anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol, reported in accordance with decision 15/CMP.1, in conjunction with decision 3/CMP.11.

6. The information provided in this document is based on information in the CRF tables of the 2017 national GHG inventories submission, received from Parties as at 1 June 2017. It does not cover information contained in inventory submissions from previous years.

7. The inventory data is presented according to the sectors, subsectors and categories specified in the CRF tables.

[1] Decision 13/CP.20, paragraph 8.
[2] The tables, agreed in decision 24/CP.19, can be accessed here: <http://unfccc.int/5333.php>.
[3] The tables, agreed in decision 6/CMP.9, can be accessed here: <http://unfccc.int/7969.php>.

8. As at 1 June 2017, 44 Parties had submitted their CRF tables, including Kazakhstan, which is an Annex I Party for the purposes of the Kyoto Protocol, while remaining a Party not included in Annex I to the Convention for the purposes of the Convention.

9. Four Parties, Denmark, the European Union (EU), France and the United Kingdom of Great Britain and Northern Ireland, provided more than one set of CRF tables in order to address the different geographical areas used for reporting under the Convention and for reporting under the Kyoto Protocol. For the purposes of the this document, the following naming conventions are used to identify inventory submissions under the Convention: Denmark (Convention), covering the Kingdom of Denmark (Denmark mainland, Greenland and Faroe Islands); European Union (Convention), covering its 28 member States; France (Convention) covering metropolitan France, the French Overseas Departments, the French Overseas Collectivities and New Caledonia; and United Kingdom of Great Britain and Northern Ireland (Convention), covering United Kingdom, the Crown Dependencies, Bermuda, Cayman Islands, Falkland Islands and Gibraltar. The following naming conventions are used to identify inventory submissions under the Kyoto Protocol: Denmark (KP), covering Denmark mainland; European Union (KP), covering its 28 member states and Iceland; France (KP), covering metropolitan France and the French Overseas Departments (including Mayotte); and United Kingdom of Great Britain and Northern Ireland (KP), covering United Kingdom, the Crown Dependencies, Cayman Islands, Falkland Islands and Gibraltar.

10. The information presented in this document is based on the streamlining proposal of the secretariat as agreed in the conclusions and recommendations of the 14th meeting of the GHG inventory Lead Reviewers (LRs)[4].

11. The information contained in this report 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 individual review by the expert review team.

B. Explanatory notes to the tables

12. Blank cells in a table indicate that a Party did not report information for a given category, gas, AD or other parameter. Where a Party's value is very small compared with that of other Parties, it has been rounded to zero (0.0 or 0.00). Where a Party reports a zero numerical value, a zero value (0) is shown.

13. In tables where shares or contributions of categories, gases, AD or other parameters to a total are shown (e.g. contribution of specific fuel type to the total emissions of a combustion category), where a Party reports a notation key, zero value (0) or blank in either the numerator or denominator of the calculation, the share or contribution to the total is shown using the symbol "–".

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

15. References to the base year refer to 1990, except for the following Parties with economies in transition which, in accordance with decisions 9/CP.2 and 11/CP.4, use base

[4] See paragraph 26 of the conclusions of the 14th meeting of the inventory lead reviewers; available at <http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/ghg_lrs_14th-_meeting_conclusions.pdf>.

years other than 1990: Bulgaria (1988), Hungary (average 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

16. The column "Share of national total" in the tables indicates the contribution of that category to the Party's national total of GHG emissions in terms of carbon dioxide equivalent, without emissions and removals from LULUCF including indirect CO_2 emissions where reported.

17. Where Parties used notation keys "NO", "NE", "NA", "IE" or "C", these have been reproduced verbatim from the CRF tables provided by Parties. The notation keys, as described in the UNFCCC reporting guidelines, are as follows:

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

18. Where Parties used notation keys "R", "NO", "NR" or "IE", these have been reproduced verbatim from the tables provided by Parties. The notations keys, as described in the tables referred to in decision 6/CMP.9, are as follows:

R	Reported	NR	Not reported
NO	Not occurring	IE	Included elsewhere

19. Tables on energy indicate whether IEFs given in the CRF are based on gross calorific value (GCV) or net calorific value (NCV). Australia, Canada, Japan, New Zealand and United States of America reported energy data on a GCV basis, whilst Denmark reported using a combination of GCV and NCV. Hence, reported IEFs are about 5 per cent lower for liquid, solid and other fuels, 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.

20. The following chemical formulae or abbreviations for GHGs are used in this document:

C	carbon
CH_4	methane
CO_2	carbon dioxide
HFCs	hydrofluorocarbons
N_2O	nitrous oxide
NF_3	nitrogen trifluoride
NMVOC	non-methane volatile organic compound
PFCs	perfluorocarbons
SF_6	sulphur hexafluoride

21. 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 this document:

Methods:		Emission factors:	
D	IPCC default	D	IPCC default
RA	Reference approach	CR	CORINAIR
T1	IPCC tier 1	CS	Country specific

T1a, T1b, T1c	IPCC tier 1a, tier 1b and tier 1c, respectively	PS	Plant specific
		M	Model
T2	IPCC tier 2	OTH	Other
T3	IPCC tier 3		
CR	CORINAIR		
CS	Country specific		
M	Model		
OTH	Other		

22. The following units have been used in this document:

kg	kilogram (10^3 grams)
kt	kilotonne (10^9 grams)
Mg	megagram (10^6 grams) – same as tonne
t	tonne (10^6 grams)
Mt	megatonne (10^{12} grams)
TJ	terajoule (10^{12} joules)
PJ	petajoule (10^{15} joules)
km	kilometre
ha	hectare
kha	thousand hectares
m^3	cubic metre
AB	area burned
AD	activity data
BB	biomass burned
CO	carbon monoxide
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
GCV	gross calorific value
GHG	greenhouse gas
IEA	International Energy Agency
IEF	implied emission factor
LPG	liquefied petroleum gas
LULUCF	land use, land-use change and forestry

N	nitrogen
NCV	net calorific value
NIR	national inventory report
NMVOC	non-methane volatile organic compounds
NO_X	nitrogen oxides
yr	year

C. List of sectoral figures and tables with information submitted under decision 24/CP.19

1. **General**

Figure number	Figure name
Figure G.1	GHG emissions by gas (with LULUCF): base year and 2015
Figure G.2	GHG emissions by gas (without LULUCF): base year and 2015
Figure G.3	GHG emissions by sector (without LULUCF): base year and 2015

Table number	Table name
Table G.1	Submissions used in this report

2. **Energy**

Figure number	Figure name
Figure 1.1	Contribution of subsectors to total GHG emissions in the Energy sector

Table number	Table name
Table 1.1	CO_2 emissions from fuel combustion: reference approach and sectoral approach
Table 1.2	Stationary combustion: liquid fuels – CO_2 (2015)
Table 1.3	Stationary combustion: solid fuels – CO_2 (2015)
Table 1.4	Stationary combustion: gaseous fuels – CO_2 (2015)
Table 1.5	Stationary combustion: other fossil fuels – CO_2 (2015)
Table 1.6	Road transportation – CO_2, N_2O (2015)
Table 1.7	Domestic aviation and navigation – CO_2 (2015)
Table 1.8	Domestic and international aviation – activity data (2015)
Table 1.9	Domestic and international navigation – activity data (2015)
Table 1.10	Fugitive emissions from fuels: coal mining and handling – CH_4 (2015)
Table 1.11a	Fugitive emissions from fuels: oil and natural gas – CH_4, CO_2 (2015)
Table 1.11b	Fugitive emissions from fuels: oil and natural gas – oil – CH_4, CO_2 (2015)
Table 1.11c	Fugitive emissions from fuels: oil and natural gas – natural gas – CH_4, CO_2 (2015)

Table 1.11d	Fugitive emissions from fuels: oil and natural gas – venting and flaring – CH_4, CO_2 (2015)
Table 1.12	CO_2 transport and storage (2015)

3. **Industrial processes and product use**

Figure number	Figure name
Figure 2.1	Contribution of subsectors to total GHG emissions in the Industrial processes and product use sector

Table number	Table name
Table 2.1	Mineral industry – CO_2 (2015)
Table 2.2	Chemical industry – CO_2 and N_2O (2015)
Table 2.3	Metal industry – CO_2 (2015)
Table 2.4	HFCs, PFCs, SF_6 and NF_3 (2015)

4. **Agriculture**

Figure number	Figure name
Figure 3.1	Contribution of subsectors to total GHG emissions in the Agriculture sector

Table number	Table name
Table 3.1	Enteric fermentation – CH_4 (2015)
Table 3.2	Manure management – CH_4 (2015)
Table 3.3	Manure management – N_2O (2015)
Table 3.4	Agricultural soils – N_2O (2015)

5. **Land use, land-use change and forestry**

Table number	Table name
Table 4.1a–b	Methods and emission factors used (2015)
Table 4.2	Forest land – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)
Table 4.3	Cropland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)
Table 4.4	Grassland – AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)
Table 4.5	Land area (2015)

6. **Waste**

Figure number	Figure name
Figure 5.1	Contribution of subsectors to total GHG emissions in the Waste sector

Table number	Table name
Table 5.1a–b	Solid waste disposal on land, biological treatment of solid waste, incineration and open burning of waste and wastewater treatment and discharge (2015)

D. List of tables with information submitted under Article 7, paragraph 1, of the Kyoto Protocol in accordance with decisions 15/CMP.1, in conjunction with 3/CMP.11, and 6/CMP.9

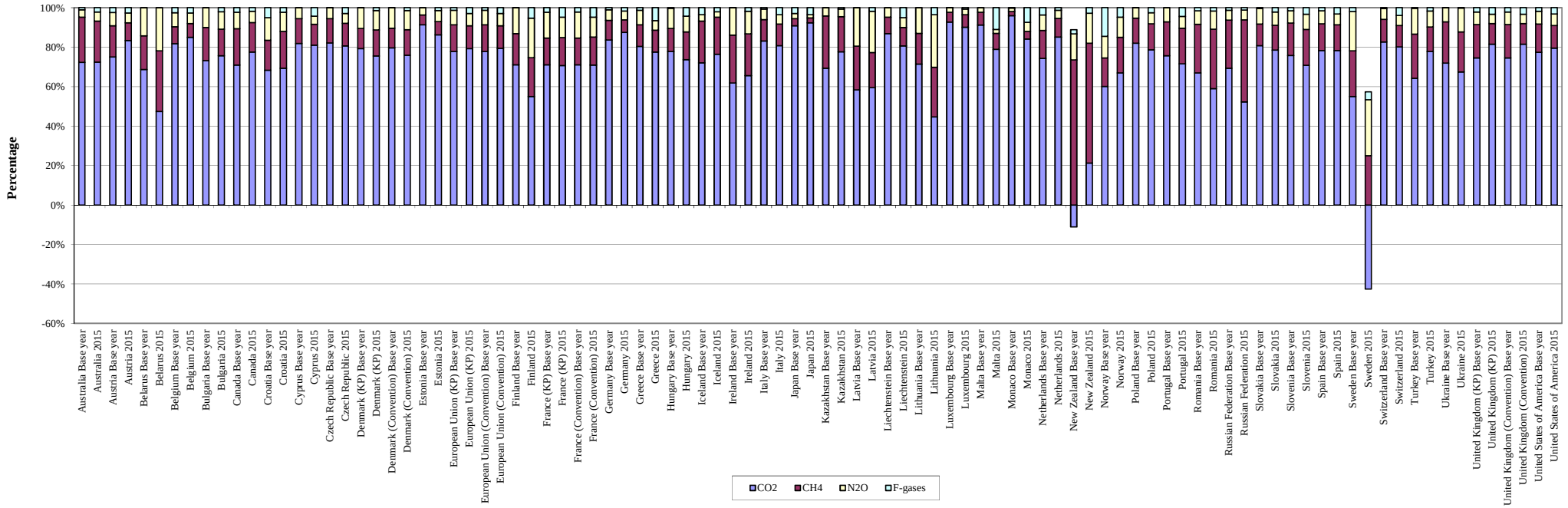
Supplementary information for land use, land-use change and forestry activities under the Kyoto Protocol

Table number	Table name
Table 6.1	Selected values (forest parameters), elected activities under Article 3.4, accounting period, forest management cap
Table 6.2(a)-(d)	Activity coverage in the reporting of information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4
Table 6.3(a)	Afforestation and reforestation - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(b)	Deforestation - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(c)	Forest management - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(d)	Cropland management - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(e)	Cropland management - area and implied carbon stock change factors from the change in carbon stocks for the base year
Table 6.3(f)	Grazing land management - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(g)	Grazing land management - area and implied carbon stock change factors from the change in carbon stocks for the base year
Table 6.3(h)	Revegetation - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(i)	Revegetation - area and implied carbon stock change factors from the change in carbon stocks for the base year
Table 6.3(j)	Wetland drainage and rewetting - area and implied carbon stock change factors from the change in carbon stocks for 2015
Table 6.3(k)	Wetland drainage and rewetting - area and implied carbon stock change factors from the change in carbon stocks for the base year
Table 6.4	Direct and indirect N_2O emissions from N fertilization for 2015
Table 6.5	CH_4 and N_2O emissions from drained and rewetted organic soils for 2015
Table 6.6	N_2O emissions from N mineralization/immobilization due to carbon loss/gain associated with land-use conversions and management change in mineral soils for 2015
Table 6.7(a)	Emissions from biomass burning 2015
Table 6.7(b)	Emissions from biomass burning on cropland management land
Table 6.7(c)	Emissions from biomass burning on grazing land management land

Table 6.7(d)	Emissions from biomass burning on revegetation land
Table 6.7(e)	Emissions from biomass burning on wetland drainage and rewetting land

Figure G.1

GHG emissions by gas[a] (with LULUCF): base year[b] and 2015

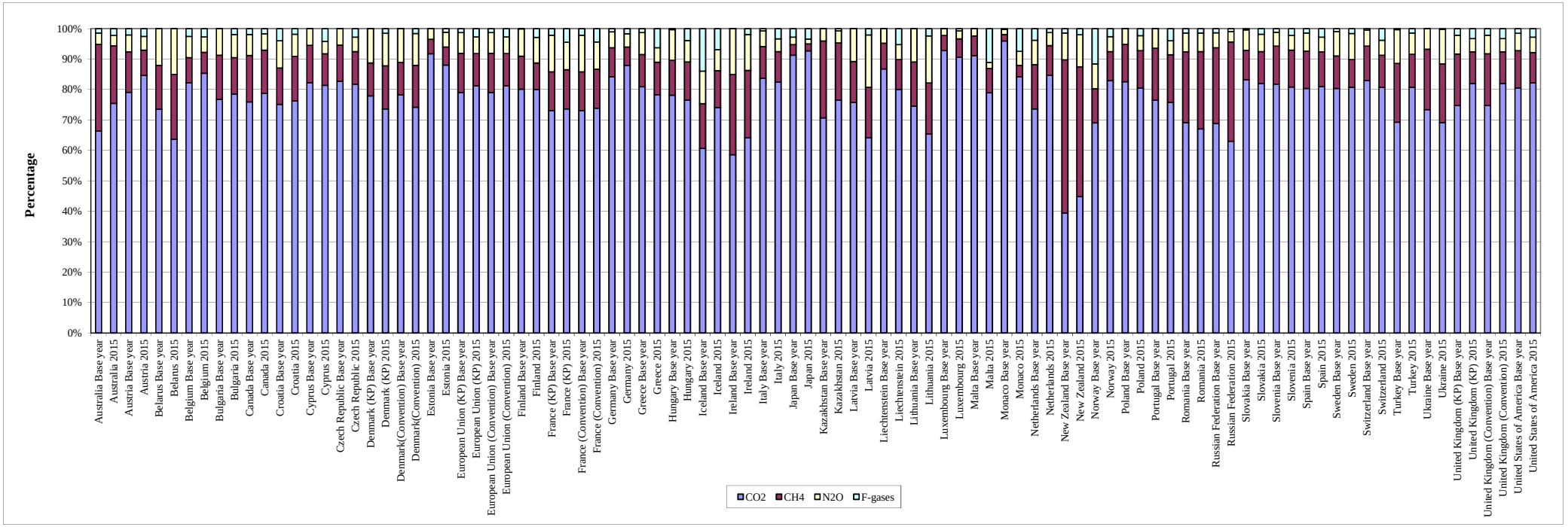


[a] The national totals and emissions by CO_2 in this graph include indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.2

GHG emissions by gas[a] (without LULUCF): base year[b] and 2015

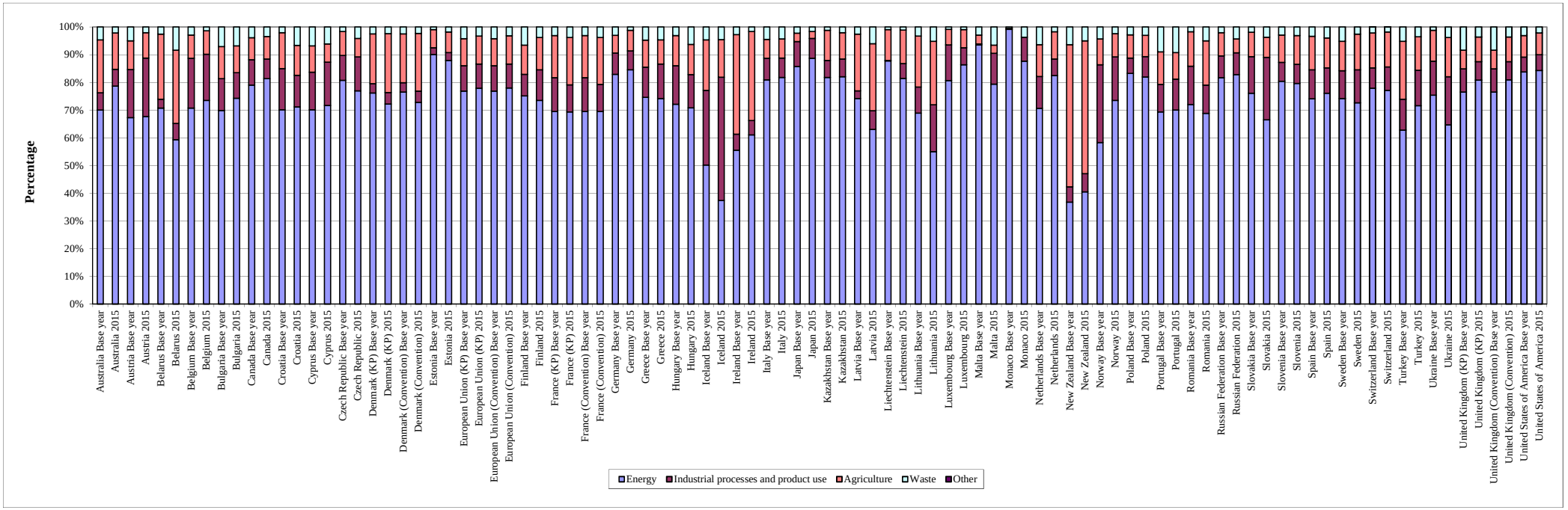


[a] The national totals and emissions by CO_2 in this graph include indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Figure G.3

GHG emissions[a] by sector (without LULUCF): base year[b] and 2015



[a] The national and sectoral totals in this graph include indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table G.1

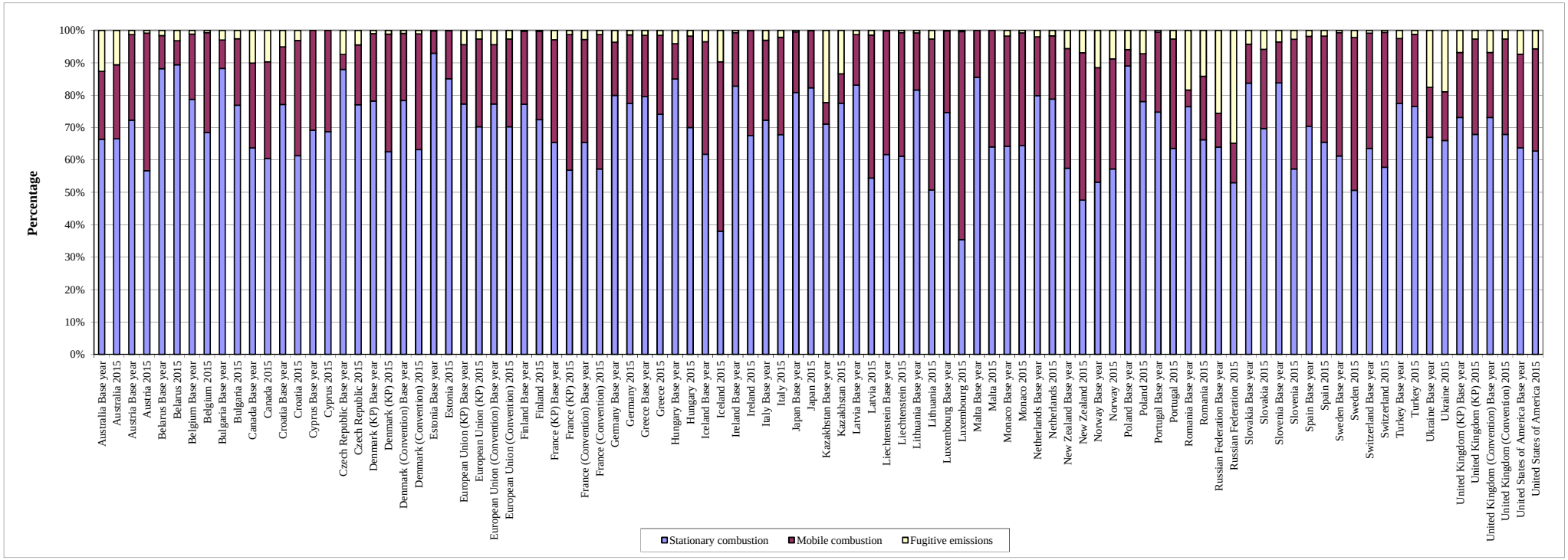
Submissions used in this report

Party	Initial submission date	CRF for years	NIR	CRF submission date and version used in this report	CRF Reporter version (version used in this report)	CRF KP LULUCF [a] submission date and version used in this report	CRF KP LULUCF [a] Reporter version (version used in this report)
Australia	27 May 2017	1990-2015	27 May 2017	27 May 2017 (1)	6.0.2	27 May 2017 (1)	6.0.2
Austria	12 April 2017	1990-2015	12 April 2017	12 April 2017 (1)	6.0.1	12 April 2017 (1)	6.0.1
Belarus	1 June 2017	1990-2015	01 June 2017	1 June 2017 (10)	6.0.2	NA	NA
Belgium	11 April 2017	1990-2015	13 April 2017	11 April 2017 (1)	6.0.1	11 April 2017 (1)	6.0.1
Bulgaria	11 April 2017	1988-2015	12 April 2017	11 April 2017 (10)	6.0.1	11 April 2017 (10)	6.0.1
Canada	13 April 2017	1990-2015	13 April 2017	13 April 2017 (4)	6.0.1	NA	NA
Croatia	12 April 2017	1990-2015	26 May 2017	26 May 2017 (5)	6.0.2	26 May 2017 (5)	6.0.2
Cyprus	8 May 2017	1990-2015	08 May 2017	8 May 2017 (1)	6.0.1	8 May 2017 (1)	6.0.1
Czech Republic	13 April 2017	1990-2015	12 April 2017	5 May 2017 (4)	6.0.1	5 May 2017 (4)	6.0.1
Denmark (KP)	10 April 2017	1990-2015	27 May 2017	7 May 2017 (2)	6.0.1	7 May 2017 (2)	6.0.1
Denmark (Convention)	13 April 2017	1990-2015	27 May 2017	27 May 2017 (2)	6.0.2	NA	NA
Estonia	13 April 2017	1990-2015	12 April 2017	13 April 2017 (3)	6.0.1	13 April 2017 (3)	6.0.1
European Union (KP)	14 April 2017	1990-2015	18 April 2017	31 May 2017 (2)	6.0.2	31 May 2017 (2)	6.0.2
European Union (Convention)	14 April 2017	1990-2015	18 April 2017	31 May 2017 (2)	6.0.2	NA	NA
Finland	11 April 2017	1990-2015	28 April 2017	11 April 2017 (1)	6.0.1	11 April 2017 (1)	6.0.1
France (KP)	13 April 2017	1990-2015	08 April 2017	13 April 2017 (2)	6.0.1	13 April 2017 (2)	6.0.1
France (Convention)	13 April 2017	1990-2015	08 April 2017	13 April 2017 (3)	6.0.1	NA	NA
Germany	11 April 2017	1990-2015	13 April 2017	11 April 2017 (7)	6.0.1	11 April 2017 (7)	6.0.1
Greece	11 April 2017	1990-2015	11 April 2017	11 April 2017 (1)	6.0.1	11 April 2017 (1)	6.0.1
Hungary	15 April 2017	1985-87, 1986-2015	26 May 2017	26 May 2017 (2)	6.0.2	26 May 2017 (2)	6.0.2
Iceland	13 April 2017	1990-2015	05 May 2017	13 April 2017 (5)	6.0.1	13 April 2017 (5)	6.0.1
Ireland	12 April 2017	1990-2015	14 April 2017	12 April 2017 (2)	6.0.1	12 April 2017 (2)	6.0.1
Italy	11 April 2017	1990-2015	12 April 2017	11 April 2017 (4)	6.0.1	11 April 2017 (4)	6.0.1
Japan	13 April 2017	1990-2015	13 April 2017	13 April 2017 (1)	6.0.1	13 April 2017 (1)	6.0.1
Kazakhstan	14 April 2017	1990-2015		14 April 2017 (2)	6.0.1	14 April 2017 (2)	6.0.1
Latvia	13 April 2017	1990-2015	13 April 2017	13 April 2017 (1)	6.0.1	13 April 2017 (1)	6.0.1
Liechtenstein	27 March 2017	1990-2015	13 April 2017	27 March 2017 (6)	6.0.1	27 March 2017 (6)	6.0.1
Lithuania	14 April 2017	1990-2015	14 April 2017	14 April 2017 (4)	6.0.1	14 April 2017 (4)	6.0.1
Luxembourg	6 April 2017	1990-2015	06 April 2017	6 April 2017 (7)	6.0.1	6 April 2017 (7)	6.0.1
Malta	8 May 2017	1990-2015	29 May 2017	8 May 2017 (4)	6.0.1	8 May 2017 (4)	6.0.1
Monaco	20 April 2017	1990-2015		20 April 2017 (2)	6.0.1		
Netherlands	14 April 2017	1990-2015	14 April 2017	14 April 2017 (5)	6.0.1	14 April 2017 (5)	6.0.1
New Zealand	26 May 2017	1990-2015	26 May 2017	26 May 2017 (2)	6.0.2	26 May 2017 (2)	6.0.2
Norway	7 April 2017	1990-2015	07 April 2017	7 April 2017 (7)	6.0.1	7 April 2017 (7)	6.0.1
Poland	13 April 2017	1988-2015	26 May 2017	26 May 2017 (1)	6.0.2	26 May 2017 (1)	6.0.2
Portugal	12 April 2017	1990-2015	26 May 2017	25 May 2017 (2)	6.0.2	25 May 2017 (2)	6.0.2
Romania	14 April 2017	1989-2015	14 April 2017	14 April 2017 (5)	6.0.1	14 April 2017 (5)	6.0.1
Russian Federation	14 April 2017	1990-2015		14 April 2017 (7)	6.0.1	14 April 2017 (7)	6.0.1
Slovakia	11 April 2017	1990-2015	11 April 2017	11 April 2017 (3)	6.0.1	11 April 2017 (3)	6.0.1
Slovenia	12 April 2017	1986-2015	14 April 2017	12 April 2017 (1)	6.0.1	12 April 2017 (1)	6.0.1
Spain	12 April 2017	1990-2015	12 April 2017	12 April 2017 (7)	6.0.1	12 April 2017 (7)	6.0.1
Sweden	12 April 2017	1990-2015	12 April 2017	12 April 2017 (2)	6.0.1	12 April 2017 (2)	6.0.1
Switzerland	13 April 2017	1990-2015	13 April 2017	13 April 2017 (7)	6.0.1	13 April 2017 (7)	6.0.1
Turkey	14 April 2017	1990-2015	15 April 2017	26 May 2017 (2)	6.0.2	NA	NA
Ukraine	24 May 2017	1990-2015	24 May 2017	24 May 2017 (1)	6.0.2	24 May 2017 (1)	6.0.2
United Kingdom of Great Britain and Northern Ireland (KP)	14 April 2017	1990-2015	13 April 2017	14 April 2017 (1)	6.0.1	NA	NA
United Kingdom of Great Britain and Northern Ireland (Convention)	13 April 2017	1990-2015	13 April 2017	13 April 2017 (2)	6.0.1	13 April 2017 (2)	6.0.1
United States of America	14 April 2017	1990-2015	14 April 2017	14 April 2017 (5)	6.0.1	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, forest management, 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.9.

Figure 1.1

Contribution of subsectors to total GHG emissions in the Energy sector[a, b]



[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Indirect CO_2 emissions are excluded from the totals in this graph.

Table 1.1

CO_2 emissions from fuel combustion: reference approach and sectoral approach[a]

	Reference approach	Sectoral approach	Difference
	(kt CO_2)		(%)
Australia Base year	254 499	251 676	1.12
Australia 2015	370 062	370 008	0.01
Austria Base year	52 093	51 197	1.75
Austria 2015	52 902	51 984	1.77
Belarus Base year	-450	94 234	–100.48
Belarus 2015	-14 102	51 078	–127.61
Belgium Base year	87 324	101 164	–13.68
Belgium 2015	81 973	84 425	–2.90
Bulgaria Base year[b]	84 134	77 859	8.06
Bulgaria 2015	45 688	43 822	4.26
Canada Base year	419 155	417 655	0.36
Canada 2015	516 461	515 139	0.26
Croatia Base year[b]	20 188	20 079	0.54
Croatia 2015	15 710	15 598	0.72
Cyprus Base year	4 297	3 896	10.31
Cyprus 2015	5 854	5 962	–1.82
Czech Republic Base year	150 766	144 268	4.50
Czech Republic 2015	93 532	91 858	1.82
Denmark Base year (KP)	51 176	51 336	–0.31
Denmark 2015 (KP)	32 751	33 475	–2.16
Denmark Base year (Convention)	51 806	52 626	–1.56
Denmark 2015 (Convention)	33 280	34 774	–4.30
Estonia Base year	36 108	36 093	0.04
Estonia 2015	16 144	15 589	3.56
European Union (KP) Base year	3 934 700	4 086 387	–3.71
European Union (KP) 2015	3 134 286	3 218 865	–2.63
European Union (Convention) Base year	3 934 700	4 082 177	–3.61
European Union (Convention) 2015	3 134 286	3 214 797	–2.50
Finland Base year	53 048	52 531	0.98
Finland 2015	40 127	39 891	0.59
France Base year (KP)	372 740	360 148	3.50
France 2015 (KP)	311 037	307 245	1.23
France Base year (Convention)	375 349	362 338	3.59
France 2015 (Convention)	317 023	312 741	1.37
Germany Base year	990 816	985 705	0.52
Germany 2015	729 614	741 775	–1.64
Greece Base year	74 770	74 622	0.20
Greece 2015	68 368	69 217	–1.23
Hungary Base year[b]	74 436	74 206	0.31
Hungary 2015	41 021	41 492	–1.13
Iceland Base year	1 851	1 675	10.51
Iceland 2015	1 867	1 483	25.90
Ireland Base year	31 353	30 140	4.02
Ireland 2015	36 271	35 981	0.81
Italy Base year	398 422	400 615	–0.55
Italy 2015	328 602	339 093	–3.09
Japan Base year	1 063 223	1 078 111	–1.38
Japan 2015	1 153 075	1 165 286	–1.05
Kazakhstan Base year	267 911	244 600	9.53
Kazakhstan 2015	214 543	211 445	1.47
Latvia Base year	19 036	18 713	1.72
Latvia 2015	6 481	6 693	–3.17
Liechtenstein Base year	199	199	0.01
Liechtenstein 2015	160	159	0.09
Lithuania Base year	32 460	32 239	0.69
Lithuania 2015	10 430	10 419	0.11
Luxembourg Base year	10 156	10 181	–0.25
Luxembourg 2015	8 718	8 753	–0.40
Malta Base year	1 588	2 165	–26.65
Malta 2015	1 700	1 756	–3.18

Table 1.1

CO_2 emissions from fuel combustion: reference approach and sectoral approach[a]

	Reference approach	Sectoral approach	Difference
	(kt CO_2)		(%)
Monaco Base year	95	95	0.00
Monaco 2015	69	69	0.00
Netherlands Base year	150 984	152 015	–0.68
Netherlands 2015	157 757	155 839	1.23
New Zealand Base year	22 780	22 032	3.39
New Zealand 2015	30 381	29 814	1.90
Norway Base year	24 040	26 189	–8.21
Norway 2015	40 537	35 356	14.65
Poland Base year[b]	481 728	438 754	9.79
Poland 2015	284 484	287 306	–0.98
Portugal Base year	39 640	39 985	–0.86
Portugal 2015	46 560	46 032	1.15
Romania Base year[b]	183 382	175 647	4.40
Romania 2015	67 303	67 156	0.22
Russian Federation Base year	2 363 320	2 265 874	4.30
Russian Federation 2015	1 466 506	1 420 127	3.27
Slovakia Base year	52 451	53 445	–1.86
Slovakia 2015	25 041	25 396	–1.40
Slovenia Base year[b]	15 282	15 410	–0.83
Slovenia 2015	12 749	12 719	0.24
Spain Base year	216 455	206 579	4.78
Spain 2015	237 760	247 122	–3.79
Sweden Base year	53 576	51 524	3.98
Sweden 2015	38 336	37 018	3.56
Switzerland Base year	41 198	40 873	0.79
Switzerland 2015	36 804	36 568	0.65
Turkey Base year	130 178	125 581	3.66
Turkey 2015	325 723	330 125	–1.33
Ukraine Base year	608 895	588 769	3.42
Ukraine 2015	176 600	167 282	5.57
United Kingdom of Great Britain and Northern Ireland (KP) Base year	548 606	559 442	–1.94
United Kingdom of Great Britain and Northern Ireland (KP) 2015	387 697	393 112	–1.38
United Kingdom of Great Britain and Northern Ireland (Convention) Base year	546 979	560 107	–2.34
United Kingdom of Great Britain and Northern Ireland (Convention) 2015	388 360	393 769	–1.37
United States of America Base year	4 791 910	4 865 879	–1.52
United States of America 2015	5 093 130	5 185 964	–1.79

[a] Indirect CO_2 emissions are excluded from the totals in this table.

[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1.2

Stationary combustion: liquid fuels - CO_2 (2015)

	Share of national total[a]	IEF in CRF based on GCV or NCV[b]	Energy industries						Manufacturing industries and construction			Other sectors						Other		
			Methods and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF	Method and EF used[e]		CO_2 IEF				Method and EF used[f]		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 / Fishing	Methods	EF	Stationary
	%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia	7.92	GCV	T2	CS, PS	67	69	60	70	T2	CS	69	T2	CS	68	69	62	70	T1	CS	
Austria	11.51	NCV	T1, T2	CS, D	75	78	75	NO	T1, T2, T3	CS, D	76	D, T1, T2, T3	CS, D	75	75	75	74	T1, T2	CS, D	
Belarus	14.52	NCV	T1	D	77	77	NO	NO	T1	D	74			72	73	70	73			73
Belgium	13.89	NCV	T1, T3	D, PS	69	62	69	NO	CS, T1, T3	D, PS	78	CS, T1, T3	D	74	74	74	74	T1	D	
Bulgaria	4.69	NCV	T1, T2	CS, D	74	93	66	NO	T1, T2	CS, D	82	T1, T2	CS, D	72	71	63	74	T1, T2	CS, D	77
Canada	10.82	GCV	T2	CS	62	75	63	57	T1, T2	CS	69	T1, T2	CS	69	66	69	70	T3	CS	
Croatia	14.53	NCV	T1	D	69	77	68	NO	T1	D	84	T1	D	72	72	70	74	NA	NA	
Cyprus	48.79	NCV	CS	CS	78	78	NO	NO	CS, T1	CS, D	87	T1	D	71	70	70	73	T1	D	74
Czech Republic	2.17	NCV	T1, T2	CS, D	63	77	62	74	T1, T2	CS, D	73	T1, T2	CS, D	73	73	66	74	T1	D	
Denmark (KP)	10.85	NCV	T1, T2, T3	CS, D, PS	60	77	58	74	CR, M, T1, T2, T3	CS, D, PS	81	CR, M, T1, T2, T3	CS, D	74	73	73	74	CR, T2	CS	NO
Denmark (Convention)	12.64	NCV	CS, T1, T2, T3	CS, D, PS	62	76	58	73	CR, M, T1, T2, T3	CS, D, PS	80	CR, M, T1, T2, T3	CS, D	74	73	73	74	CR, T1, T2	CS, D	NO
Estonia	4.41	NCV	T1, T2, T3	CS, D, PS	75	75	NO	NO	T1, T2, T3	CS, D, PS	73	T1, T2	CS, D	72	73	70	73	T2	CS	
European Union (KP)	9.99		NA	NA	69	78	66	72	NA	NA	79	NA	NA	73	73	72	74			71
European Union (Convention)	9.96		NA	NA	69	78	66	72	NA	NA	79	NA	NA	73	73	72	74			71
Finland	16.59	NCV	T3	CS, D, PS	61	78	57	NO	CS, M, T2, T3	CS, D, PS	69	CS, M, T1, T2, T3	CS, D	74	74	74	74	T1	CS	71
France (KP)	12.84		T2, T3	CS, PS	66	76	60	NO	T2, T3	CS, PS	76	T1, T2	CS, D	74	74	73	74	NA	NA	
France (Convention)	13.24		T2, T3	CS, PS	66	76	60	NO	T2, T3	CS, PS	76	T1, T2	CS, D	74	74	73	74	NA	NA	
Germany	9.71	NCV	CS	CS	70	78	69	81	CS, T1	CS, D	98	CS, M, T1, T2, T3	CS, D	74	73	74	74	CS, D, M	CS, D, M	74
Greece	18.37	NCV	T1, T2	D, PS	72	77	68	NO	T1, T2	CS, D, PS	83	T1, T2	CS, D, NO	73	69	73	72	T1	D	
Hungary	5.64	NCV	T1, T2, T3	CS, D, PS	63	76	63	64	T1, T2, T3	CS, D, PS	77	T1, T2, T3	CS, D	71	70	64	73	T1	D	
Iceland	13.81	NCV	T1, T2	D	74	74	NA, NO		T1, T2	CS, D	73	T1, T2	D	74	68	70	74			
Ireland	10.38	NCV	T1, T3	CS, D, PS	76	77	75	NO	T1, T2, T3	CS, D, PS	77	T1, T2	CS, D	72	73	72	73	NA	NA	
Italy	11.47	NCV	T3	CS	71	76	70	NO	T2	CS	81	T2	CS	71	68	70	73	T2	CS	
Japan	18.10	GCV	CS, T2	CS	67	72	63	71	CS, T2	CS	67	T2	CS	67	68	65	70	NA	NA	
Kazakhstan	6.57	NCV	T1, T3	D, PS	73	76	70	73	T1, T3	D, PS	74	T1, T3	D, PS	67	73	66	65	T1, T3	D, PS	72
Latvia	7.22	NCV	T1, T2	CS, D	75	76	NO	75	T1, T2, T3	CS, D, PS	72	T1, T2, T3	CS, D	73	74	70	74	T1	D	
Liechtenstein	23.99	NCV	T2	CS	NA, NO		NA, NO	NO	T1, T2	CS, D	74	T1, T2	CS, D	145	147	147	73	NA	NA	
Lithuania	9.64	NCV	T1, T2, T3	CS, D, PS	69	76	68	73	T1, T2	CS	73	T2, T3	CS	70	72	68	73	T2	CS	
Luxembourg	9.62	NCV	T2	CS	74	74	NO	NO	T1, T2	CS, D, PS	74	T1, T2	CS, D	74	73	74	74	NA	NA	NO
Malta	50.54	NCV	T3	PS	79	79	NO	NO	T1	D	74	T1	D	71	73	64	74	NA	NA	NO
Monaco	15.17	NCV	T1, T2	CS, D	77	77	NO	NO	NA	NA	NO	T1, T2	CS, D	74	IE	74	NO	NA	NA	
Netherlands	9.10	NCV	CS, T2	CS, D	65	59	66	NO	T2	CS, D	68	T1, T2	CS, D	74	74	70	74	T2	CS	
New Zealand	5.16	GCV	T2	CS	63	70	63	70	T2	CS	69	T2	CS	68	68	61	70			
Norway	13.99	NCV	T1, T2, T3	CS, PS	62	53	54	74	T1, T2, T3	CS, PS	64	T1, T2	CS, PS	73	73	72	74	T1, T2	CS, D	71
Poland	3.79	NCV	T1, T2	CS, D	71	77	70	74	T1, T2	CS, D	69	T1, T2	CS, D	72	72	64	74	NA	NA	
Portugal	11.76	NCV	T2	CR, D, PS	60	77	54	NO	T2, T3	CR, D, OTH, PS	75	T1, T2	CR, D	69	69	64	74	NA	NA	
Romania	6.75	NCV	T1, T2	CS, D	66	76	58	69	T1, T2	CS, D	73	T1, T2	CS, D	67	69	65	70	T1, T2	CS, D	70
Russian Federation	6.41	NCV	T1, T2	CS, D	67	74	61	74	T1, T2	CS, D	74	T1, T2	CS, D	67	76	63	74	T1, T2	CS, D	73
Slovakia	4.01	NCV	T2, T3	CS, PS	71	78	71	74	T2	CS	89	T1, T2	CS, D	71	66	63	73	T2	CS, D	66
Slovenia	7.65	NCV	T1, T2	CS, D, PS	74	74	NO	NO	T1, T2, T3	CS, D, PS	77	T1, T2	CS, D	72	72	72	74	T1	D	
Spain	14.97	NCV	T1, T2	CS, D, OTH, PS	67	81	57	74	T1, T2	CS, D, M, OTH, PS	87	T2, T3	CS, D, M, OTH	72	72	70	73	T1, T2, T3	D, M	IE, NO
Sweden	17.00	NCV	T2	CS	55			NO	T1, T2, T3	CS, PS	66	T1, T2	CS	73	72	73	73	T1, T2	CS	
Switzerland	23.53	NCV	CS, T2	CS	61	74	60		CS, T2	CS	73	CS, T2	CS	74	74	74	73	T2	CS	
Turkey	7.24	NCV	T2, T3	CS, D, PS	65	79	58		T1, T2	CS, D	92	T1, T2	CS, D	70	63	65	72			
Ukraine	1.04	NCV	T1, T2, T3	CS, D	70	77	74	65	T1, T2	CS, D	76	T1, T2	CS, D	67	73	66	66	T1	D	
United Kingdom of Great Britain and Northern Ireland (KP)	8.03	NCV	T1, T2	CS, D	70	77	69	72	T1, T2, T3	CS, D	72	T1, T2, T3	CS, D	73	75	72	74	T1	CS	IE, NO
United Kingdom of Great Britain and Northern Ireland (Convention)	8.12	NCV	T1, T2	CS, D	71	77	69	72	T1, T2, T3	CS, D	72	T1, T2, T3	CS, D	73	75	72	74	T1	CS	IE, NO
United States of America	8.64	GCV	T2	CS	81	81	81	81	T2	CS	71	T2	CS, D	66	67	64	71	CS, T2	CS, D	27

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 Other.

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] The following Parties reported energy data on a gross calorific value (GCV) basis: Australia, Canada, Japan, New Zealand, United States of America. 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.

[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.1 Energy industries.

[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.2 Manufacturing industries and Construction.

[e] 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.

[f] 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.

Table 1.3

Stationary combustion: solid fuels - CO_2 (2015)

	Share of national total[a]	IEF in CRF based on GCV or NCV[b]	Energy industries						Manufacturing industries and construction			Other sectors						Other		
			Methods and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF	Method and EF used[e]		CO_2 IEF				Method and EF used[f]		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 / Fishing	Methods	EF	Stationary
	%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia	31.11	GCV	T2	CS, PS	91	91	NO	80	T2	CS	82	T2	CS	91	90	95	NO	T1	CS	
Austria	4.58	NCV	T1, T2	CS, D	93	93	NO	IE, NO	T1, T2, T3	CS, D	94	D, T1, T2, T3	CS, D	94	96	94	94	T1, T2	CS, D	
Belarus	2.06	NCV	T1	D	98	98	NO	NO	T1	D	101			98	97	98	97			97
Belgium	7.41	NCV	T1, T3	D, PS	158	169	NO	40	CS, T1, T3	D, PS	97	CS, T1, T3	D	95	NO	95	95	T1	D	
Bulgaria	44.33	NCV	T1, T2	CS, D	103	103	NO	101	T1, T2	CS, D	96	T1, T2	CS, D	95	96	95	96	T1, T2	CS, D	
Canada	9.10	GCV	T2	CS	93	93	NO	77	T1, T2	CS	75	T1, T2	CS	94	95	88	NO	T3	CS	
Croatia	10.25	NCV	T1	D	95	95	NO	NO	T1	D	98	T1	D	100	101	100	NO	NA	NA	
Cyprus	0.17	NCV	CS	CS	NO	NO	NO	NO	CS, T1	CS, D	95	T1	D	NO			NO	T1	D	NO
Czech Republic	44.04	NCV	T1, T2	CS, D	97	98	NO	94	T1, T2	CS, D	91	T1, T2	CS, D	97	99	97	98	T1	D	
Denmark (KP)	14.98	NCV	T1, T2, T3	CS, D, PS	95	95	NO	NO	CR, M, T1, T2, T3	CS, D, PS	97	CR, M, T1, T2, T3	CS, D	95	NO	NO	95	CR, T2	CS	
Denmark (Convention)	14.55	NCV	CS, T1, T2, T3	CS, D, PS	95	95	NO	NO	CR, M, T1, T2, T3	CS, D, PS	97	CR, M, T1, T2, T3	CS, D	95	NO	NO	95	CR, T1, T2	CS, D	
Estonia	62.12	NCV	T1, T2, T3	CS, D, PS	69	102	NO	19	T1, T2, T3	CS, D, PS	98	T1, T2	CS, D	94	NO	94	NO	T2	CS	
European Union (KP)	23.28		NA	NA	101	101	127	94	NA	NA	122	NA	NA	95	95	95	95			100
European Union (Convention)	23.32		NA	NA	101	101	127	94	NA	NA	122	NA	NA	95	95	95	95			100
Finland	14.79	NCV	T3	CS, D, PS	93	93	NO	97	CS, M, T2, T3	CS, D, PS	151	CS, M, T1, T2, T3	CS, D	92	NO	88	92	T1	CS	NO
France (KP)	7.35		T2, T3	CS, PS	118	108	260	186	T2, T3	CS, PS	130	T1, T2	CS, D	95	95	95	NO	NA	NA	
France (Convention)	7.59		T2, T3	CS, PS	118	108	260	186	T2, T3	CS, PS	126	T1, T2	CS, D	95	95	95	NO	NA	NA	
Germany	35.60	NCV	CS	CS	105	104	41	143	CS, T1	CS, D	142	CS, M, T1, T2, T3	CS, D	99	100	99	98	CS, D, M	CS, D, M	99
Greece	30.26	NCV	T1, T2	D, PS	121	121	NO	NO	T1, T2	CS, D, PS	94	T1, T2	CS, D, NO	99	IE, NO	99	99	T1	D	
Hungary	14.57	NCV	T1, T2, T3	CS, D, PS	115	118	NO	52	T1, T2, T3	CS, D, PS	68	T1, T2, T3	CS, D	104	96	104	96	T1	D	
Iceland	0.01	NCV	T1, T2	D	NA, NO	NO	NA, NO		T1, T2	CS, D	74	T1, T2	D	NA, NO	NO	NA, NO	NO			
Ireland	9.37	NCV	T1, T3	CS, D, PS	92	92	NO	NO	T1, T2, T3	CS, D, PS	95	T1, T2	CS, D	96	NO	96	NO	NA	NA	
Italy	11.51	NCV	T3	CS	100	95	NO	177	T2	CS	63	T2	CS	NO	NO	NO	NO	T2	CS	
Japan	34.11	GCV	CS, T2	CS	89	89	90	83	CS, T2	CS	95	T2	CS	106	106	NO	NO	NA	NA	
Kazakhstan	41.78	NCV	T1, T3	D, PS	90	90	87	88	T1, T3	D, PS	86	T1, T3	D, PS	91	91	91	92	T1, T3	D, PS	90
Latvia	1.63	NCV	T1, T2	CS, D	95	95	NO	NO	T1, T2, T3	CS, D, PS	95	T1, T2, T3	CS, D	95	95	95	95	T1	D	
Liechtenstein	–	NCV	T2	CS	NA, NO		NA, NO	NO	T1, T2	CS, D	NA, NO	T1, T2	CS, D	NE, NO		NO	NO	NA	NA	
Lithuania	3.21	NCV	T1, T2, T3	CS, D, PS	95	95	NO	NO	T1, T2	CS	96	T2, T3	CS	95	95	95	95	T2	CS	
Luxembourg	1.61	NCV	T2	CS	NO	NO	NO	NO	T1, T2	CS, D, PS	95	T1, T2	CS, D	98	NO	98	NO	NA	NA	NO
Malta	–	NCV	T3	PS	NO	NO	NO	NO	T1	D	IE, NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Monaco	–	NCV	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	NO	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	
Netherlands	21.21	NCV	CS, T2	CS, D	103	103	NO	93	T2	CS, D	147	T1, T2	CS, D	100	101	99	NO	T2	CS	
New Zealand	4.39	GCV	T2	CS	92	92	NO	NO	T2	CS	92	T2	CS	92	92	93	92			
Norway	1.22	NCV	T1, T2, T3	CS, PS	91	91	NO		T1, T2, T3	CS, PS	117	T1, T2	CS, PS	103	NO	103	NO	T1, T2	CS, D	
Poland	51.44	NCV	T1, T2	CS, D	100	101	95	48	T1, T2	CS, D	105	T1, T2	CS, D	95	95	94	95	NA	NA	
Portugal	17.83	NCV	T2	CR, D, PS	93	93	NO	NO	T2, T3	CR, D, OTH, PS	94	T1, T2	CR, D	NO	NO	NO	NO	NA	NA	
Romania	18.51	NCV	T1, T2	CS, D	91	91	NO	91	T1, T2	CS, D	93	T1, T2	CS, D	91	91	91	NO	T1, T2	CS, D	NO
Russian Federation	11.50	NCV	T1, T2	CS, D	94	95	NA	75	T1, T2	CS, D	55	T1, T2	CS, D	95	95	95	96	T1, T2	CS, D	95
Slovakia	22.56	NCV	T2, T3	CS, PS	116	101	NO	191	T2	CS	116	T1, T2	CS, D	99	98	100	101	T2	CS, D	102
Slovenia	26.77	NCV	T1, T2	CS, D, PS	102	102	NO	NO	T1, T2, T3	CS, D, PS	102	T1, T2	CS, D	96	NO	96	NO	T1	D	
Spain	16.89	NCV	T1, T2	CS, D, OTH, PS	100	100	NO	43	T1, T2	CS, D, M, OTH, PS	134	T2, T3	CS, D, M, OTH	103	103	103	NO	T1, T2, T3	D, M	IE, NO
Sweden	9.01	NCV	T2	CS	158		NO		T1, T2, T3	CS, PS	123	T1, T2	CS	NO	NO	NO	NO	T1, T2	CS	
Switzerland	1.06	NCV	CS, T2	CS	NO	NO	NO	NO	CS, T2	CS	95	CS, T2	CS	93	NO	93	NO	T2	CS	
Turkey	26.42	NCV	T2, T3	CS, D, PS	103	104	NO	73	T1, T2	CS, D	96	T1, T2	CS, D	96	94	99	NO			
Ukraine	23.24	NCV	T1, T2, T3	CS, D	91	93	NA, NO	52	T1, T2	CS, D	91	T1, T2	CS, D	95	93	95	95	T1	D	
United Kingdom of Great Britain and Northern Ireland (KP)	17.01	NCV	T1, T2	CS, D	90	90	NO	85	T1, T2, T3	CS, D	157	T1, T2, T3	CS, D	97	95	97	NO	T1	CS	IE, NO
United Kingdom of Great Britain and Northern Ireland (Convention)	16.98	NCV	T1, T2	CS, D	90	90	NO	85	T1, T2, T3	CS, D	157	T1, T2, T3	CS, D	97	95	97	NO	T1	CS	IE, NO
United States of America	21.80	GCV	T2	CS	91	91	91	91	T2	CS	90	T2	CS, D	89	89	NA, NO	90	CS, T2	CS, D	91

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 Other.

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] The following Parties reported energy data on a gross calorific value (GCV) basis: Australia, Canada, Japan, New Zealand, United States of America. 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.

[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.1 Energy industries.

[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.2 Manufacturing industries and Construction.

[e] 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.

[f] 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.

Table 1.4

Stationary combustion: gaseous fuels - CO_2 (2015)

	Share of national total[a]	IEF in CRF based on GCV or NCV[b]	Energy industries						Manufacturing industries and construction			Other sectors						Other		
			Methods and EF used[c]		CO_2 IEF				Method and EF used[d]		CO_2 IEF	Methods and EF used[e]		CO_2 IEF				Method and EF used[f]		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 / Fishing	Methods	EF	Stationary
	%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia	12.70	GCV	T2	CS, PS	51	50	48	51	T2	CS	51	T2	CS	51	51	51	51	T1	CS	
Austria	18.61	NCV	T1, T2	CS, D	55	55	55	55	T1, T2, T3	CS, D	55	D, T1, T2, T3	CS, D	55	55	55	55	T1, T2	CS, D	
Belarus	35.51	NCV	T1	D	56	56	NO	NO	T1	D	56			56	56	56	56			56
Belgium	25.88	NCV	T1, T3	D, PS	57	57	56	NO	CS, T1, T3	D, PS	56	CS, T1, T3	D	56	56	56	56	T1	D	
Bulgaria	7.09	NCV	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	
Canada	27.69	GCV	T2	CS	51	48	48	52	T1, T2	CS	49	T1, T2	CS	48	48	48	48	T3	CS	
Croatia	16.32	NCV	T1	D	56	56	56	56	T1	D	56	T1	D	56	56	56	56	NA	NA	
Cyprus	–		CS	CS	NO	NO	NO	NO	CS, T1	CS, D	NO	T1	D	NO			NO	T1	D	
Czech Republic	11.28	NCV	T1, T2	CS, D	55	55	55	55	T1, T2	CS, D	55	T1, T2	CS, D	55	55	55	55	T1	D	
Denmark (KP)	14.29	NCV	T1, T2, T3	CS, D, PS	57	57	NO	58	CR, M, T1, T2, T3	CS, D, PS	57	CR, M, T1, T2, T3	CS, D	57	57	57	57	CR, T2	CS	
Denmark (Convention)	13.89	NCV	CS, T1, T2, T3	CS, D, PS	57	57	NO	58	CR, M, T1, T2, T3	CS, D, PS	57	CR, M, T1, T2, T3	CS, D	57	57	57	57	CR, T1, T2	CS, D	
Estonia	4.81	NCV	T1, T2, T3	CS, D, PS	55	55	NO	NO	T1, T2, T3	CS, D, PS	55	T1, T2	CS, D	55	55	55	55	T2	CS	
European Union (KP)	18.51		NA	NA	57	56	56	60	NA	NA	56	NA	NA	56	56	56	56			56
European Union (Convention)	18.54		NA	NA	57	56	56	60	NA	NA	56	NA	NA	56	56	56	56			56
Finland	8.21	NCV	T3	CS, D, PS	55	55	55	NO	CS, M, T2, T3	CS, D, PS	55	CS, M, T1, T2, T3	CS, D	55	55	55	55	T1	CS	55
France (KP)	16.66		T2, T3	CS, PS	56	56	56	NE, NO	T2, T3	CS, PS	56	T1, T2	CS, D	56	56	56	56	NA	NA	
France (Convention)	16.43		T2, T3	CS, PS	56	56	56	NE, NO	T2, T3	CS, PS	56	T1, T2	CS, D	56	56	56	56	NA	NA	
Germany	16.53	NCV	CS	CS	56	56	56	61	CS, T1	CS, D	56	CS, M, T1, T2, T3	CS, D	56	56	56	56	CS, D, M	CS, D, M	56
Greece	5.87	NCV	T1, T2	D, PS	56	56	IE, NO	60	T1, T2	CS, D, PS	56	T1, T2	CS, D, NO	56	56	56	IE, NO	T1	D	
Hungary	27.25	NCV	T1, T2, T3	CS, D, PS	56	56	56	56	T1, T2, T3	CS, D, PS	56	T1, T2, T3	CS, D	56	56	56	56	T1	D	
Iceland	–	NCV	T1, T2	D	NA, NO	NO	NA, NO		T1, T2	CS, D	NA, NO	T1, T2	D	NA, NO	NA, NO	NA, NO	NA, NO			
Ireland	14.46	NCV	T1, T3	CS, D, PS	56	57	11	NO	T1, T2, T3	CS, D, PS	57	T1, T2	CS, D	57	57	57	NO	NA	NA	
Italy	29.82	NCV	T3	CS	57	57	57	57	T2	CS	57	T2	CS	57	57	57	57	T2	CS	
Japan	19.06	GCV	CS, T2	CS	51	51	51	52	CS, T2	CS	52	T2	CS	52	52	53	52	NA	NA	
Kazakhstan	14.61	NCV	T1, T3	D, PS	56	56	56	56	T1, T3	D, PS	56	T1, T3	D, PS	56	56	56	56	T1, T3	D, PS	56
Latvia	22.08	NCV	T1, T2	CS, D	55	55	NO	55	T1, T2, T3	CS, D, PS	55	T1, T2, T3	CS, D	55	55	55	55	T1	D	
Liechtenstein	25.22	NCV	T2	CS	56	56	NA, NO	NO	T1, T2	CS, D	56	T1, T2	CS, D	112	112	112	NO	NA	NA	
Lithuania	12.68	NCV	T1, T2, T3	CS, D, PS	56	56	56	56	T1, T2	CS	56	T2, T3	CS	56	56	56	56	T2	CS	
Luxembourg	17.80	NCV	T2	CS	57	57	NO	NO	T1, T2	CS, D, PS	57	T1, T2	CS, D	57	57	57	57	NA	NA	NO
Malta	0.06	NCV	T3	PS	NO	NO	NO	NO	T1	D	63	T1	D	63	63	NO	63	NA	NA	NO
Monaco	15.18	NCV	T1, T2	CS, D	56	56	NO	NO	NA	NA	NO	T1, T2	CS, D	56	IE	56	NO	NA	NA	
Netherlands	32.15	NCV	CS, T2	CS, D	57	57	57	63	T2	CS, D	57	T1, T2	CS, D	56	56	57	56	T2	CS	
New Zealand	9.43	GCV	T2	CS	54	54	53	54	T2	CS	54	T2	CS	54	54	54	54			
Norway	23.78	NCV	T1, T2, T3	CS, PS	58	56	NO	58	T1, T2, T3	CS, PS	59	T1, T2	CS, PS	56	56	56	56	T1, T2	CS, D	
Poland	6.56	NCV	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56	NA	NA	
Portugal	12.82	NCV	T2	CR, D, PS	56	56	56	NO	T2, T3	CR, D, OTH, PS	56	T1, T2	CR, D	56	56	56	56	NA	NA	
Romania	18.56	NCV	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	NO
Russian Federation	24.62	NCV	T1, T2	CS, D	54	54	54	54	T1, T2	CS, D	54	T1, T2	CS, D	54	54	54	54	T1, T2	CS, D	54
Slovakia	18.31	NCV	T2, T3	CS, PS	56	56	56	56	T2	CS	56	T1, T2	CS, D	56	56	56	56	T2	CS, D	56
Slovenia	9.02	NCV	T1, T2	CS, D, PS	55	55	NO	55	T1, T2, T3	CS, D, PS	55	T1, T2	CS, D	55	55	55	NO	T1	D	
Spain	16.38	NCV	T1, T2	CS, D, OTH, PS	56	56	56	56	T1, T2	CS, D, M, OTH, PS	56	T2, T3	CS, D, M, OTH	56	56	56	56	T1, T2, T3	D, M	IE, NO
Sweden	3.18	NCV	T2	CS	55			NO	T1, T2, T3	CS, PS	57	T1, T2	CS	57	57	57	57	T1, T2	CS	
Switzerland	13.78	NCV	CS, T2	CS	56	56	NO		CS, T2	CS	56	CS, T2	CS	56	56	56	56	T2	CS	
Turkey	19.83	NCV	T2, T3	CS, D, PS	58	59	55		T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56			
Ukraine	17.96	NCV	T1, T2, T3	CS, D	56	56	56	59	T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56	T1	D	
United Kingdom of Great Britain and Northern Ireland (KP)	28.36	NCV	T1, T2	CS, D	57	56	57	61	T1, T2, T3	CS, D	57	T1, T2, T3	CS, D	57	57	57	57	T1	CS	IE, NO
United Kingdom of Great Britain and Northern Ireland (Convention)	28.32	NCV	T1, T2	CS, D	57	56	57	61	T1, T2, T3	CS, D	57	T1, T2, T3	CS, D	57	57	57	57	T1	CS	IE, NO
United States of America	21.76	GCV	T2	CS	50	50	50	50	T2	CS	50	T2	CS, D	50	50	50	50	CS, T2	CS, D	21

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 Other.

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] The following Parties reported energy data on a gross calorific value (GCV) basis: Australia, Canada, Japan, New Zealand, United States of America. 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.

[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.1 Energy industries.

[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.2 Manufacturing industries and Construction.

[e] 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.

[f] 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.

Table 1.5

Stationary combustion: other fossil fuels - CO_2 (2015)

	Share of national total[a]	IEF in CRF based on GCV or NCV[b]	Energy industries						Manufacturing industries and construction			Other sectors						Other		
			Methods and EF used[c]		CO_2 IEF				Methods and EF used[d]		CO_2 IEF	Methods and EF used[e]		CO_2 IEF				Method and EF used[f]		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 / Fishing	Methods	EF	Stationary
	%				(t/TJ)						(t/TJ)			(t/TJ)						(t/TJ)
Australia	–	GCV	T2	CS, PS	NO	NO	NO	NO	T2	CS	NO	T2	CS	NA, NO	NO	NO	NA, NO	T1	CS	
Austria	2.78	NCV	T1, T2	CS, D	58	58	NO	NO	T1, T2, T3	CS, D	66	D, T1, T2, T3	CS, D	69	69	NO	NO	T1, T2	CS, D	
Belarus	–	NCV	T1	D	NO	NO	NO	NO	T1	D	IE, NO									
Belgium	2.31	NCV	T1, T3	D, PS	103	103	NO	NO	CS, T1, T3	D, PS	74	CS, T1, T3	D	66	66	NO	NO	T1	D	
Bulgaria	0.11	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D	85	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D	
Canada	0.04	GCV	T2	CS	NO	NO	NO	NO	T1, T2	CS	78	T1, T2	CS	NO	NO	NO	NO	T3	CS	
Croatia	0.24	NCV	T1	D	NO	NO	NO	NO	T1	D	143	T1	D	NO	NO	NO	NO	NA	NA	
Cyprus	0.05	NCV	CS	CS	NO	NO	NO	NO	CS, T1	CS, D	143	T1	D	NO			NO	T1	D	
Czech Republic	0.47	NCV	T1, T2	CS, D	92	92	NO	NO	T1, T2	CS, D	84	T1, T2	CS, D	NO	NO	NO	NO	T1	D	
Denmark (KP)	3.52	NCV	T1, T2, T3	CS, D, PS	93	93	NO	NO	CR, M, T1, T2, T3	CS, D, PS	85	CR, M, T1, T2, T3	CS, D	NO	NO	NO	NO	CR, T2	CS	
Denmark (Convention)	3.46	NCV	CS, T1, T2, T3	CS, D, PS	93	93	NO	NO	CR, M, T1, T2, T3	CS, D, PS	85	CR, M, T1, T2, T3	CS, D	NO	NO	NO	NO	CR, T1, T2	CS, D	
Estonia	1.44	NCV	T1, T2, T3	CS, D, PS	60	60	NO	NO	T1, T2, T3	CS, D, PS	79	T1, T2	CS, D	NO	NO	NO	NO	T2	CS	
European Union (KP)	1.65		NA	NA	79	80	62	143	NA	NA	65	NA	NA	112	112	IE, NO	IE, NO			IE, NO
European Union (Convention)	1.65		NA	NA	79	80	62	143	NA	NA	65	NA	NA	112	112	IE, NO	IE, NO			IE, NO
Finland	1.44	NCV	T3	CS, D, PS	72	72	NO	NO	CS, M, T2, T3	CS, D, PS	83	CS, M, T1, T2, T3	CS, D	NO	NO	NO	NO	T1	CS	NO
France (KP)	1.76		T2, T3	CS, PS	109	109	47	NO	T2, T3	CS, PS	63	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	
France (Convention)	1.74		T2, T3	CS, PS	109	109	47	NO	T2, T3	CS, PS	63	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	
Germany	2.70	NCV	CS	CS	84	84	NA, NO	NA, NO	CS, T1	CS, D	74	CS, M, T1, T2, T3	CS, D	NA, NO	NA, NO	NA, NO	NA, NO	CS, D, M	CS, D, M	NA, NO
Greece	0.04	NCV	T1, T2	D, PS	NO	NO	NO	NO	T1, T2	CS, D, PS	90	T1, T2	CS, D, NO	IE, NO	IE, NO	IE, NO	IE, NO	T1	D	
Hungary	0.71	NCV	T1, T2, T3	CS, D, PS	89	89	NO	NO	T1, T2, T3	CS, D, PS	76	T1, T2, T3	CS, D	NO	NO	NO	NO	T1	D	
Iceland	–	NCV	T1, T2	D	NA, NO	NO	NA, NO		T1, T2	CS, D	NA, NO	T1, T2	D	NA, NO	NO	NA, NO	NA, NO			
Ireland	0.39	NCV	T1, T3	CS, D, PS	83	83	NO	NO	T1, T2, T3	CS, D, PS	95	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	
Italy	1.20	NCV	T3	CS	90	90	NO	NO	T2	CS	79	T2	CS	115	115	NO	NO	T2	CS	
Japan	1.21	GCV	CS, T2	CS	27	27	47	46	CS, T2	CS	43	T2	CS	NO	NO	NO	NO	NA	NA	
Kazakhstan	0.00	NCV	T1, T3	D, PS	IE, NA	IE, NA	IE, NA	IE, NA	T1, T3	D, PS	IE, NA	T1, T3	D, PS	73	73	NA	IE, NA	T1, T3	D, PS	NA
Latvia	0.96	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2, T3	CS, D, PS	87	T1, T2, T3	CS, D	NO	NO	NO	NO	T1	D	
Liechtenstein	–	NCV	T2	CS	NA, NO		NA, NO	NO	T1, T2	CS, D	NA, NO	T1, T2	CS, D	NO		NO	NO	NA	NA	
Lithuania	0.58	NCV	T1, T2, T3	CS, D, PS	121	121	NO	NO	T1, T2	CS	143	T2, T3	CS	NO	NO	NO	NO	T2	CS	
Luxembourg	1.26	NCV	T2	CS	91	91	NO	NO	T1, T2	CS, D, PS	88	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	NO
Malta	–	NCV	T3	PS	NO	NO	NO	NO	T1	D	IE, NO	T1	D	NO	NO	NO	NO	NA	NA	NO
Monaco	24.30	NCV	T1, T2	CS, D	61	61	NO	NO	NA	NA	NO	T1, T2	CS, D	NO	NO	NO	NO	NA	NA	
Netherlands	1.47	NCV	CS, T2	CS, D	83	83	NO	NO	T2	CS, D	NO	T1, T2	CS, D	NO			NO	T2	CS	
New Zealand	–	GCV	T2	CS	NO	NO	NO	NO	T2	CS	NO	T2	CS	NO	NO	NO	NO			
Norway	2.18	NCV	T1, T2, T3	CS, PS	47	47	NO	79	T1, T2, T3	CS, PS	58	T1, T2	CS, PS	79	79		NO	T1, T2	CS, D	NO
Poland	0.75	NCV	T1, T2	CS, D	115	115	NO	143	T1, T2	CS, D	133	T1, T2	CS, D	130	130	IE, NO	NO	NA	NA	
Portugal	1.03	NCV	T2	CR, D, PS	109	109	NO		T2, T3	CR, D, OTH, PS	48	T1, T2	CR, D	NO	NO	NO	NO	NA	NA	
Romania	0.51	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D	92	T1, T2	CS, D	92	92	NO	NO	T1, T2	CS, D	NO
Russian Federation	1.06	NCV	T1, T2	CS, D	143	143	143	143	T1, T2	CS, D	143	T1, T2	CS, D	143	143	143	143	T1, T2	CS, D	141
Slovakia	0.57	NCV	T2, T3	CS, PS	63	63	NO	NO	T2	CS	89	T1, T2	CS, D	NO	NO	NO	NO	T2	CS, D	NO
Slovenia	0.64	NCV	T1, T2	CS, D, PS	73	73	NO	NO	T1, T2, T3	CS, D, PS	74	T1, T2	CS, D	NO	NO	NO	NO	T1	D	
Spain	0.72	NCV	T1, T2	CS, D, OTH, PS	69	63	140	NO	T1, T2	CS, D, M, OTH, PS	51	T2, T3	CS, D, M, OTH	NO	NO	NO	NO	T1, T2, T3	D, M	NO
Sweden	4.96	NCV	T2	CS	91	91		NO	T1, T2, T3	CS, PS	60	T1, T2	CS	60	60	NO	NO	T1, T2	CS	
Switzerland	5.71	NCV	CS, T2	CS	89	89	NO		CS, T2	CS	70	CS, T2	CS	NO			NO	T2	CS	
Turkey	0.38	NCV	T2, T3	CS, D, PS	143	143	NO		T1, T2	CS, D	141	T1, T2	CS, D	NO	NO		NO			
Ukraine	0.06	NCV	T1, T2, T3	CS, D	73	73	NA, NO	73	T1, T2	CS, D	73	T1, T2	CS, D	73	73	NA, NO	NA, NO	T1	D	
United Kingdom of Great Britain and Northern Ireland (KP)	0.72	NCV	T1, T2	CS, D	37	37	NO	NO	T1, T2, T3	CS, D	44	T1, T2, T3	CS, D	NO	NO	NO	NO	T1	CS	IE, NO
United Kingdom of Great Britain and Northern Ireland (Convention)	0.72	NCV	T1, T2	CS, D	37	37	NO	NO	T1, T2, T3	CS, D	44	T1, T2, T3	CS, D	NO	NO	NO	NO	T1	CS	IE, NO
United States of America	0.17	GCV	T2	CS	7.1	7.1	NA, NO	NA, NO	T2	CS	NA, NO	T2	CS, D	NA, NO	NA, NO	NA, NO	NA, NO	CS, T2	CS, D	44

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 Other.

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] The following Parties reported energy data on a gross calorific value (GCV) basis: Australia, Canada, Japan, New Zealand, United States of America. 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)

[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.1 Energy industries.

[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.2 Manufacturing industries and Construction.

[e] 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.

[f] 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.

Table 1.6

Road transportation - CO_2, N_2O (2015)

	CO_2 emissions						N_2O emissions					
	Share of national total[a]	Methods and EF used		CO_2 IEF			Share of national total[a]	Methods and EF used		N_2O IEF		
		Methods	EF	IEF in CRF based on GCV or NCV[b]	Gasoline	Diesel oil		Methods	EF	IEF in CRF based on GCV or NCV[b]	Gasoline	Diesel oil
	(%)				(t/TJ)		(%)				(kg/TJ)	
IPCC default EF[c]				**NCV**	**69.3 (67.5 to 73.0)**	**74.1 (72.6 to 74.8)**				**NCV**	**8.0 (0.96 to 24)**	**3.9 (1.3 to 12)**
Australia	14.89	T2	CS, D	GCV	67	70	0.21	T1, T3	CS, D	GCV	4.7	1.7
Austria	27.42	T1, T2	CS, D	NCV	76	74	0.24	T3	CS	NCV	0.66	2.6
Belarus	1.26	NA	NA		69	74	0.03	NA	NA		25	3.9
Belgium	21.74	NA	NA	NCV	71	74	0.23	NA	NA	NCV	0.68	2.9
Bulgaria	14.33	T2	CR	NCV	74	75	0.13	T2	CR	NCV	2.5	1.8
Canada	19.58	T1, T3	CS	GCV	66	70	0.34	T1, T3	CS	GCV	3.7	3.9
Croatia	24.11	T1	D	NCV	69	74	0.21	T1, T3	CR, D	NCV	1.8	2.1
Cyprus	21.67	T1	D	NCV	69	74	0.58	T1	D	NCV	8.0	3.9
Czech Republic	13.28	T1	CS, D	NCV	69	74	0.27	T1, T2	CS, D	NCV	4.6	5.2
Denmark (KP)	23.67	CR, M, T2	CS	NCV	73	74	0.26	CR, M, T3	CR	NCV	1.0	3.3
Denmark (Convention)	23.25	CR, M, T1, T2	CS, D	NCV	73	74	0.26	CR, M, T1, T3	CR, D	NCV	1.1	3.3
Estonia	12.16	T1, T2	CS, D	NCV	73	73	0.11	T1, T3	CS, D	NCV	1.5	2.5
European Union (KP)	19.77	NA	NA		72	74	0.20	NA	NA		1.2	2.9
European Union (Convention)	19.78	NA	NA		72	74	0.20	NA	NA		1.2	2.9
Finland	18.60	M, T2	CS	NCV	73	73	0.13	M, T2	D	NCV	0.94	1.8
France (KP)	27.14	T3	M		71	75	0.34	T3	M		1.4	3.2
France (Convention)	26.98	T3	M		71	75	0.34	T3	M		1.4	3.2
Germany	16.96	CS, M, T2, T3	CS, D	NCV	73	74	0.17	CS, M, T2, T3	CS, M	NCV	0.63	3.2
Greece	15.21	T1, T2, T3	CS, D	NCV	73	73	0.11	M, T1	D, M	NCV	1.8	1.6
Hungary	19.31	T1, T2	CS, D	NCV	71	74	0.19	T1, T3	D, M	NCV	1.6	2.6
Iceland	17.83	NA	NA	NCV	69	74	0.62	NA	NA	NCV	16	0.16
Ireland	18.72	T2, T3	CS, M	NCV	70	73	0.17	T3	M	NCV	1.4	2.4
Italy	22.70	T1, T3	CS, D	NCV	73	74	0.20	T3	M	NCV	1.2	2.6
Japan	13.87	T2	CS	GCV	69	69	0.11	T3	CS, D	GCV	1.2	3.1
Kazakhstan	6.03	D, T1	D	NCV	69	74	0.09	D, T1	D	NCV	3.2	3.9
Latvia	25.23	T1, T2	CS, D, OTH	NCV	71	74	0.26	T1, T2	CR, OTH	NCV	1.7	2.7
Liechtenstein	30.75	T2	CS	NCV	74	73	0.20	T2	CS, D	NCV	0.54	2.5
Lithuania	23.89	T1, T2	CS, D	NCV	73	73	0.16	T1, T3	CR, D	NCV	2.4	1.4
Luxembourg	54.87	T2	CS, D	NCV	70	70	0.47	T3	M	NCV	0.46	2.3
Malta	25.66	T3	CR	NCV	70	82	0.22	T3	CR	NCV	2.6	1.8
Monaco	26.36	T1	D	NCV	73	73	1.03	T2	CS	NCV	14	4.1
Netherlands	15.05	T2	CS	NCV	72	74	0.12	T2	CS	NCV	1.0	2.6
New Zealand	16.40	T2	CS	GCV	67	70	0.14	T1, T3	CS, D	GCV	2.4	1.5
Norway	18.90	T2	CS	NCV	71	74	0.14	T2	CS	NCV	0.84	1.9
Poland	11.62	T1, T3	D	NCV	69	73	0.12	T1, T3	D	NCV	1.9	2.6
Portugal	22.29	T2	D	NCV	69	74	0.20	T3	CR	NCV	1.4	2.2
Romania	12.80	T1, T3	D, OTH	NCV	72	76	0.13	T1, T3	D, OTH	NCV	1.9	2.6
Russian Federation	6.74	T1, T2	CS, D	NCV	73	74	0.08	T1, T2, T3	CS, D	NCV	3.8	1.9
Slovakia	15.37	M	D	NCV	70	74	0.14	M	D	NCV	1.9	2.1
Slovenia	31.22	M	M	NCV	69	74	0.31	M	M	NCV	0.80	2.8
Spain	23.26	T1	M	NCV	71	73	0.24	T3	M	NCV	1.2	2.8
Sweden	31.26	T2	CS	NCV	72	72	0.25	M, T1, T2	CS, D	NCV	0.54	2.7
Switzerland	30.92	NA	NA	NCV	74	73	0.22	NA	NA	NCV	0.81	2.7
Turkey	14.29	T1, T2	CS, D	NCV	69	73	0.22	T1	D	NCV	8.0	3.9
Ukraine	6.89	T1, T2	CS, D	NCV	72	74	0.13	T1	D	NCV	5.6	3.9
United Kingdom of Great Britain and Northern Ireland (KP)	21.87	T1, T3	CS, OTH	NCV	70	73	0.20	T3	CR, CS	NCV	0.73	3.0
United Kingdom of Great Britain and Northern Ireland (Convention)	21.85	T1, T3	CS, OTH	NCV	70	73	0.20	T3	CR, CS	NCV	0.73	3.0
United States of America	22.26	T1, T2	CS	GCV	68	70	0.17	M, T1, T2	CS, D, M	GCV	2.3	0.22

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] The following Parties reported energy data on a gross calorific value (GCV) basis: Australia, Canada, Japan, New Zealand, United States of America. 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.

[c] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 3 Mobile Combustion. CO_2 table 3.2.1; N_2O table 3.2.2.

Table 1.7

Domestic aviation and navigation - CO_2 (2015)

	Methods and EF used		Domestic aviation			Domestic navigation		
			Share of national total[a]	CO_2 IEF		Share of national total[a]	CO_2 IEF	
	Methods	EF		Jet kerosene	Aviation gasoline		Residual fuel oil	Gas/diesel oil
			(%)	(t/TJ)		(%)	(t/TJ)	
IPCC default EF[b]				71.5 (69.8 to 74.4)	70 (67.5 to 73.0)		77.4 (75.5 to 78.8)	74.1 (72.6 to 74.8)
Australia	T2	CS	1.61	70	67	0.29	74	70
Austria	T2, T3	CS	0.06	73	76	0.01	NO	74
Belarus			0.01	72		0.69		74
Belgium	T1, T2, T3	CS, D	0.01	72	72	0.35	IE	71
Bulgaria	T1, T2	D	0.07	72	69	0.02	NO	74
Canada	T2, T3	CS	0.99	68	71	0.60	74	70
Croatia	T1	D	0.13	72	70	0.55	NO	74
Cyprus	T1	D	0.01	71	NO	0.02	NO	74
Czech Republic	T1	D	0.01	72	70	0.01	NO	74
Denmark (KP)	CR, M, T2	CS	0.26	72	73	0.77	78	74
Denmark (Convention)	CR, M, T1, T2	CS, D	0.34	72	73	0.88	78	74
Estonia	T2	CS, D	0.01	NO	73	0.22	NO	73
European Union (KP)			0.35	72	70	0.37	78	74
European Union (Convention)			0.35	72	70	0.37	78	74
Finland	M, T1, T2	CS	0.33	73	71	0.75	78	74
France (KP)	T1, T3	CS, M	1.00	72	71	0.28	78	75
France (Convention)	T1, T3	CS, M	1.00	72	71	0.31	78	75
Germany	CS, T1, T2	CS, D, M	0.25	73	70	0.20	81	74
Greece	T1, T2, T3	CS, D	0.41	71	69	1.81	78	77
Hungary	T1	D	0.01	72	70	0.03	NO	74
Iceland	T1	D	0.45	71	69	0.58	76	73
Ireland	T2, T3	CS	0.02	71	70	0.37	NO	73
Italy	T1, T2	CS	0.47	72	70	0.89	77	74
Japan	T2	CS	0.75	68	69	0.81	IE	69
Kazakhstan	T2	D	0.18	73	69	0.10	NO	73
Latvia	T1, T2	CS, D	0.02	73	70	0.09	NO	74
Liechtenstein	T1	CS	0.03	73	NO	–	NO	NO
Lithuania	T2	CS	0.01	72	71	0.07	NO	73
Luxembourg	T1, T2	CS, D	0.01	NO	70	0.01	NO	70
Malta	D, T1	D	0.17	72	70	2.23	77	74
Monaco	T1	D	0.35	72	NO	2.60	NO	74
Netherlands	T1, T2	CS, D	0.02	72	72	0.64	NO	74
New Zealand	T2	CS	1.06	69	66	0.54	73	NO
Norway	T1, T2	CS, D, PS	2.35	73	71	2.69	79	74
Poland	T1	D	0.03	72	70	0.00	NO	74
Portugal	T1, T2, T3	D	0.53	72	70	0.39	77	74
Romania	T1, T2	CS, D, OTH	0.11	72	70	0.11	NO	70
Russian Federation	T1, T1b	D	0.43	72	IE	0.08	77	74
Slovakia	T1, T3	D	0.01	73	71	0.02	NO	74
Slovenia	T1	D	0.01	72	70	–	NO	IE
Spain	T1, T2	D, OTH	0.75	74	70	0.41	77	74
Sweden	T1	CS, D	0.94	72	70	0.67	78	74
Switzerland	T1, T2	CS	0.29	73	IE	0.24	NO	73
Turkey	T1, T2	CS, D	0.88	71	NO	0.24	78	73
Ukraine	T1, T2, T3	CS, D, OTH	0.03	72	70	0.02	77	74
United Kingdom of Great Britain and Northern Ireland (KP)	T2, T3	CS	0.36	72	69	0.47	78	74
United Kingdom of Great Britain and Northern Ireland (Convention)	T2, T3	CS	0.37	72	69	0.47	78	74
United States of America	T1, T2	CS	2.18	68	66	0.43	71	69

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 3 Mobile Combustion. Table 3.6.4 for Jet kerosense, Aviation gasoline; table 3.5.2 for Residual oil Gas/diesel oil.Gas/diesel oil.

Table 1.8

Domestic and international aviation - activity data (2015)

	Domestic aviation						International aviation						Total jet kerosene and aviation gasoline		
	Jet kerosene			Aviation gasoline			Jet kerosene			Aviation gasoline					
	CRF	IEA[a,b,d]	Difference	CRF	IEA[a,c,d]	Difference	CRF	IEA[a,b,d]	Difference	CRF	IEA[a,c,d]	Difference	CRF	IEA[a,b,c,d]	Difference
	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)
Australia	121 457	124 511	2.51	2 303	2 141	-7.06	169 840	162 870	-4.10	NO	0	–	293 600	289 522	-1.39
Austria	571	1 204	110.99	111	132	19.42	29 251	29 068	-0.62	NO	0	–	29 932	30 404	1.58
Belarus	99	903	812.50		0	–	5 722	4 773	-16.59	NO	0	–	5 821	5 676	-2.49
Belgium	84	0	–	41	88	115.21	58 394	60 802	4.12	1.5	0	–	58 520	60 890	4.05
Bulgaria	516	516	0.00	44	44	0.01	7 396	7 396	0.00	NO	0	–	7 956	7 956	0.00
Canada	102 021	200 343	96.38	2 023	1 613	-20.27	166 667	36 171	-78.30	60	0	–	270 771	238 127	-12.06
Croatia	418	430	2.96	13	0	–	4 880	4 773	-2.18	4.5	0	–	5 315	5 203	-2.11
Cyprus	13	0	–	NO	0	–	10 515	10 019	-4.72	NO	0	–	10 528	10 019	-4.83
Czech Republic	14	1 462	10 035.07	131	132	0.49	12 413	12 255	-1.27	NO	0	–	12 558	13 849	10.28
Denmark (KP)	1 729		–	43		–	36 464		–	6.9		–	38 242		–
Denmark (Convention)	2 297	1 204	-47.57	48	44	-9.00	36 469	36 550	0.22	6.9	0	–	38 821	37 798	-2.63
Estonia	NO	0	–	17	0	-100.0	1 022	1 032	0.99	NO	0	–	1 039	1 032	-0.67
European Union (KP)	207 738		–	3 194		–	1 954 050		–	62		–	2 165 044		–
European Union (Convention)	203 636	228 416	12.17	3 104	2 684	-13.52	1 945 260	1 902 707	-2.19	70	484	592.81	2 152 070	2 134 291	-0.83
Finland	2 513	2 494	-0.75	29	44	54.40	26 818	26 617	-0.75	NO	0	–	29 360	29 155	-0.70
France (KP)	62 717		–	853		–	241 768		–	NO		–	305 338		–
France (Convention)	63 608	32 680	-48.62	853	836	-2.04	245 529	248 626	1.26	NO	0	–	309 991	282 142	-8.98
Germany	29 702	30 143	1.49	553	572	3.44	331 949	336 948	1.51	NO	0	–	362 204	367 663	1.51
Greece	5 369	6 966	29.75	90	44	-50.89	40 167	34 486	-14.14	NO	0	–	45 626	41 496	-9.05
Hungary	22	0	–	38	0	–	7 595	7 525	-0.92	1.9	0	–	7 657	7 525	-1.73
Iceland	264	258	-2.32	22	44	97.86	9 426	9 202	-2.38	0.40	0	–	9 713	9 504	-2.15
Ireland	115	258	125.14	31	0	–	35 326	34 228	-3.11	NO	0	–	35 472	34 486	-2.78
Italy	28 595	29 111	1.81	109	88	-18.93	135 293	132 569	-2.01	NO	0	–	163 996	161 768	-1.36
Japan	145 332	139 908	-3.73	57	45	-21.21	280 892	270 382	-3.74	NO	0	–	426 281	410 335	-3.74
Kazakhstan	7 193	645	-91.03	290	176	-39.34	12 489	13 158	5.36	NA	0	–	19 972	13 979	-30.01
Latvia	18	0	–	6.0	0	–	4 494	4 472	-0.49	NO	0	–	4 518	4 472	-1.02
Liechtenstein	0.81		–	NO		–	16		–	NO		–	17		–
Lithuania	3.0	0	–	19	0	–	3 416	3 397	-0.56	NO	0	–	3 438	3 397	-1.19
Luxembourg	NO	0	–	8.6	0	–	19 161	19 135	-0.14	0.96	0	–	19 171	19 135	-0.19
Malta	53	86	62.86	0.19	0	–	4 892	4 816	-1.56	1.4	0	–	4 947	4 902	-0.91
Monaco	3.9		–	NO		–	42		–	NO		–	46		–
Netherlands	381	387	1.56	46	44	-5.03	159 023	158 369	-0.41	NO	0	–	159 451	158 800	-0.41
New Zealand	11 930	11 436	-4.13	483	446	-7.58	40 357	35 200	-12.78	NO	0	–	52 769	47 082	-10.78
Norway	17 177	17 157	-0.12	134	132	-1.57	20 824	20 769	-0.27	NO	0	–	38 135	38 058	-0.20
Poland	1 568	602	-61.61	176	176	0.01	26 210	27 176	3.69	NO	0	–	27 954	27 954	0.00
Portugal	5 102	5 203	1.99	17	44	157.67	43 898	43 817	-0.18	38	0	–	49 055	49 064	0.02
Romania	1 719	1 505	-12.44	44	44	0.10	9 625	8 428	-12.44	NO	0	–	11 388	9 977	-12.39
Russian Federation	159 146	212 162	33.31	IE	352	–	128 785	212 119	64.71	NO	0	–	287 931	424 633	47.48
Slovakia	48	0	–	2.1	0	–	1 983	1 806	-8.91	2.2	0	–	2 035	1 806	-11.26
Slovenia	8.3	0	–	20	44	124.59	1 037	1 075	3.65	NO	0	–	1 065	1 119	5.07
Spain	33 723	74 476	120.84	160	176	9.96	200 527	161 594	-19.42	NO	0	–	234 410	236 246	0.78
Sweden	6 971	5 461	-21.66	64	88	38.38	30 271	30 960	2.27	NO	0	–	37 306	36 509	-2.14
Switzerland	1 887	2 408	27.61	IE	132	–	67 333	67 940	0.90	IE	0	–	69 220	70 480	1.82
Turkey	58 824	51 041	-13.23	NO	0	–	155 037	149 167	-3.79	NO	0	–	213 861	200 208	-6.38
Ukraine	1 045	0	–	107	0	–	11 979	0	–	NO	0	–	13 132	0	–
United Kingdom of Great Britain and Northern Ireland (KP)	24 842		–	507		–	460 835		–	3.9		–		0	–
United Kingdom of Great Britain and Northern Ireland (Convention)	25 504	34 228	34.21	507	44	-91.32	460 835	454 768	-1.32	3.9	484	12 214.71	486 849	489 524	0.55
United States of America	2 091 145	2 197 531	5.09	22 272	20 787	-6.67	1 076 552	987 266	-8.29	NA	0	–	3 189 968	3 205 584	0.49

[a] Data provided by IEA on 15 June 2017. Data of OECD countries correspond to the preliminary 2017 edition of the IEA World Energy Balances, while non-OECD countries' data are still provisional.

[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] Geographical coverage of IEA data:

IEA data for Denmark do not include Faroe Islands and Greenland.

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.

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

IEA data for the Netherlands are only for the European part.

Table 1.9

Domestic and international navigation - activity data (2015)

	Domestic Navigation						International Navigation						Total					
	Residual fuel oil			Gas / diesel oil			Residual fuel oil			Gas / diesel oil			Residual fuel oil			Gas / diesel oil		
	CRF	IEA[a,b]	Difference	CRF	IEA[a,b]	Difference	CRF	IEA[a,b]	Difference	CRF	IEA[a,b]	Difference	CRF	IEA[a,b]	Difference	CRF	IEA[a,b]	Difference
	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)	(TJ)		(%)
Australia	2 208	2 173	-1.60	8 180	9 628	17.69	20 736	28 329	36.62	2 500	3 365	34.62	22 944	30 502	32.94	10 680	12 993	21.65
Austria	NO	0	–	54	43	-21.07	NO	0	–	711	724	1.86	NO	0	–	765	767	0.24
Belarus		0	–	8 303	43	-99.49	NO	0	–	NO	0	–	0	0	–	8 303	43	-99.49
Belgium	IE	0	–	5 707	7 753	35.85	173 501	179 400	3.40	62 466	64 326	2.98	173 501	179 400	3.40	68 173	72 079	5.73
Bulgaria	NO	0	–	137	0	–	840	840	0.00	2 774	2 812	1.34	840	840	0.00	2 911	2 812	-3.43
Canada	28 216	25 447	-9.81	28 763	27 520	-4.32	6 345	5 708	-10.04	1 685	1 619	-3.94	34 561	31 155	-9.85	30 449	29 138	-4.30
Croatia	NO	0	–	1 760	1 747	-0.74	8.0	0	–	64	0	–	8.0	0	–	1 824	1 747	-4.23
Cyprus	NO	0	–	21	0	–	6 828	6 760	-0.99	3 225	3 195	-0.93	6 828	6 760	-0.99	3 246	3 195	-1.57
Czech Republic	NO	0	–	172	128	-25.61	NO	0	–	NO	0	–	NO	0	–	172	128	-25.61
Denmark (KP)	2 132		–	2 748		–	12 079		–	18 410		–	14 211		–	21 158		–
Denmark (Convention)	2 545	40	-98.43	3 082	5 581	81.05	12 231	13 400	9.56	18 872	18 531	-1.80	14 776	13 440	-9.04	21 954	24 112	9.83
Estonia	NO	0	–	543	511	-5.85	8 230	8 200	-0.36	3 892	3 919	0.70	8 230	8 200	-0.36	4 435	4 430	-0.10
European Union (KP)	57 450		–	133 561		–	1 287 299		–	457 576		–	1 344 749		–	591 137		–
European Union (Convention)	57 360	39 240	-31.59	133 222	135 766	1.91	1 283 545	1 298 600	1.17	455 007	457 907	0.64	1 340 905	1 337 840	-0.23	588 229	593 673	0.93
Finland	449	440	-1.99	3 488	3 664	5.04	10 276	10 400	1.21	1 556	1 874	20.43	10 725	10 840	1.07	5 044	5 538	9.79
France (KP)	855		–	4 975		–	63 872		–	8 773		–	64 727		–	13 748		–
France (Convention)	2 009	1 960	-2.43	5 834	5 112	-12.38	65 026	61 920	-4.78	9 045	5 069	-43.95	67 034	63 880	-4.71	14 879	10 181	-31.57
Germany	6 255	0	–	17 460	13 291	-23.88	49 892	56 840	13.93	38 996	43 282	10.99	56 148	56 840	1.23	56 456	56 573	0.21
Greece	13 294	13 040	-1.91	9 005	9 329	3.60	61 527	61 240	-0.47	12 542	12 993	3.60	74 821	74 280	-0.72	21 547	22 322	3.60
Hungary	NO	0	–	258	256	-0.93	NE	0	–	NE	0	–	NE, NO	0	–	258	256	-0.93
Iceland	18	0	–	339	341	0.40	1 550	520	-66.45	2 569	1 448	-43.62	1 568	520	-66.83	2 908	1 789	-38.48
Ireland	NO	0	–	2 994	2 939	-1.81	570	400	-29.82	6 112	6 134	0.36	570	400	-29.82	9 106	9 074	-0.35
Italy	22 166	16 360	-26.19	24 652	22 663	-8.07	64 579	68 280	5.73	7 710	9 670	25.43	86 745	84 640	-2.43	32 362	32 333	-0.09
Japan	IE	93 209	–	5 966	41 194	590.46	IE	171 337	–	1 020	6 603	547.30	IE	264 546	–	6 986	47 797	584.16
Kazakhstan	NO	0	–	3 941	383	-90.27	NA	0	–	NA	4 047	–	NA, NO	0	–	3 941	4 430	12.41
Latvia	NO	0	–	129	128	-0.94	5 440	5 360	-1.47	5 226	5 240	0.26	5 440	5 360	-1.47	5 355	5 368	0.23
Liechtenstein	NO		–	NO		–	NO		–	NO		–	NO		–	NO		–
Lithuania	NO	0	–	187	213	13.89	1 458	1 480	1.51	1 738	1 704	-1.96	1 458	1 480	1.51	1 925	1 917	-0.42
Luxembourg	NO	0	–	13	0	–	NO	0	–	1.6	0	–	NO	0	–	14	0	–
Malta	153	80	-47.81	496	511	3.10	54 810	53 200	-2.94	11 538	11 033	-4.37	54 964	53 280	-3.06	12 033	11 545	-4.06
Monaco	NO		–	25		–	NO		–	296		–	NO		–	322		–
Netherlands	NO	0	–	15 796	15 847	0.32	424 083	428 600	1.07	83 100	83 539	0.53	424 083	428 600	1.07	98 896	99 386	0.49
New Zealand	5 860	2 854	-51.29	NO	2 897	–	12 408	11 630	-6.27	1 628	2 428	49.15	18 268	14 484	-20.72	1 628	5 325	227.08
Norway	16	0	–	16 314	23 984	47.01	1 645	4 120	150.49	9 110	3 834	-57.92	1 661	4 120	148.03	25 425	27 818	9.41
Poland	NO	0	–	155	85	-44.90	1 880	1 880	0.00	5 934	5 879	-0.93	1 880	1 880	0.00	6 089	5 964	-2.05
Portugal	2 486	2 040	-17.93	1 000	1 960	95.98	21 646	22 120	2.19	5 741	4 643	-19.12	24 132	24 160	0.12	6 741	6 603	-2.04
Romania	NO	0	–	1 834	1 832	-0.10	NO	0	–	1 902	1 874	-1.45	NO	0	–	3 736	3 706	-0.79
Russian Federation	6 822	3 800	-44.30	19 943	19 979	0.18	533 052	200 800	-62.33	41 009	452 838	1 004.25	539 873	204 600	-62.10	60 952	472 817	675.72
Slovakia	NO	0	–	84	0	–	NO	0	–	295	0	–	NO	0	–	379	0	–
Slovenia	NO	0	–	IE	0	–	2 668	2 600	-2.53	NO	0	–	2 668	2 600	-2.53	IE, NO	0	–
Spain	4 460	4 440	-0.45	13 781	14 101	2.32	240 638	239 560	-0.45	71 712	70 716	-1.39	245 098	244 000	-0.45	85 493	84 817	-0.79
Sweden	920	840	-8.73	2 691	1 917	-28.75	45 990	42 760	-7.02	33 653	32 972	-2.02	46 911	43 600	-7.06	36 344	34 889	-4.00
Switzerland	NO	0	–	1 034	298	-71.15	NO	0	–	335	256	-23.72	NO	0	–	1 369	554	-59.54
Turkey	1 460	7 320	401.36	13 909	4 260	-69.37	30 542	30 240	-0.99	4 816	4771	-0.93	32 002	37 560	17.37	18 725	9 031	-51.77
Ukraine	251	520	107.07	762	1 491	95.63	268	0	–	729	0	–	520	520	0.10	1 491	1 491	-0.01
United Kingdom of Great Britain and Northern Ireland (KP)	4 228		–	23 083		–	34 934		–	66 937		–	39 162		–	90 020		–
United Kingdom of Great Britain and Northern Ireland (Convention)	4 262	0	–	23 083	26 156	13.31	34 934	33 360	-4.51	66 937	67 777	1.25	39 196	33 360	-14.89	90 020	93 933	4.35
United States of America	59 664	44 662	-25.14	345 395	145 138	-57.98	429 249	252 054	-41.28	119 749	289 723	141.94	488 913	296 716	-39.31	465 144	434 861	-6.51

[a] Data provided by IEA on 15 June 2017. Data of OECD countries correspond to the preliminary 2017 edition of the IEA World Energy Balances, while non-OECD countries' data are still provisional.

[b] Geographical coverage of IEA data:

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

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.

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

IEA data for the Netherlands are only for the European part.

Table 1.10

Fugitive emissions from fuels: coal mining and handling - CH_4 (2015)

	Share of national total[a]	Methods and EF used		Activity data					CH_4 IEF			
				CRF			IEA[b]		Underground mines		Surface mines	
		Methods	EF	Underground mines	Surface mines	Total	Total	Difference	Mining activities	Post-mining activities	Mining activities	Post-mining activities
	(%)			(Mt)				(%)	(kg/t)			
IPCC default EF[c]									12.06 (6.70-16.75)	1.68 (0.60-2.68)	0.8 (0.20-1.34)	0.07 (0-0.13)
Australia	4.75	T2, T3	CS, PS	131	508	640	512	-19.90	5.5	0.35	0.46	IE, NA
Austria	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Belarus	–						0	–				
Belgium	0.01	D	D		NO	NO	0	–			NO	NO
Bulgaria	1.59	OTH, T1	D, OTH	0.45	35	36	36	0.00	12	1.7	0.80	0.067
Canada	0.16	CS	CS	0.62	78	78	62	-21.09	2.0	IE, NO	0.54	IE, NO
Croatia	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Cyprus	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Czech Republic	2.80	T1, T2	CS, D	8.3	38	46	46	0.00	8.8	1.7	1.3	0.067
Denmark (KP)	–	NA	NA	NO	NO	NO		–	NO	NO	NO	NO
Denmark (Convention)	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Estonia	–	NA	NA		NO	NO	0	–			NO	NO
European Union (KP)	0.66			90	406	496		–	8.3	1.5	0.48	0.027
European Union (Convention)	0.66			90	406	496	500	0.80	8.3	1.5	0.48	0.027
Finland	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
France (KP)	0.00	T2, T3	CS, PS	NO	NO	NO		–	NO	NO	NO	NO
France (Convention)	0.00	T2, T3	CS, PS	NO	NO	NO	0	–	NO	NO	NO	NO
Germany	0.34	T2, T3	CS	6.2	178	184	185	0.23	19	0.58	0.011	IE, NA
Greece	1.05	T1	D	NO	46	46	46	0.00	NO	NO	0.87	IE, NO
Hungary	0.09	CS, T1, T2	CS, D	0.022	9.2	9.3	9.3	0.00	4.2	0.40	NO	NO
Iceland	–	NA	NA	NO		NO	0	–	NO	NO		
Ireland	0.03	T1	D	NO	NO	NO	0	–	NO	NO	NO	NO
Italy	0.01	T1	D	0.081	NO	0.081	0.081	0.00	12	1.7	NO	NO
Japan	0.04	T1, T2, T3	CS, D	0.47	0.79	1.3	0	–	3.4	1.7	0.80	0.067
Kazakhstan	7.82	T1, T2, T3	CR, CS	11	92	103	107	4.60	26	0.67	7.2	NO
Latvia	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Liechtenstein	–	NA	NA	NO	NO	NO		–	NO	NO	NO	NO
Lithuania	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Luxembourg	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Malta	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Monaco	–	NA	NA	NO	NO	NO		–	NO	NO	NO	NO
Netherlands	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
New Zealand	0.24	T1, T2, T3	CS, D, OTH	0.23	3.2	3.4	3.4	-0.02	15	1.6	0.80	0.067
Norway	0.16	T2	CS	0.12	1.2	1.3	1.1	-16.75	7.2	IE, NO	0.54	IE, NO
Poland	4.35	T1	D	65	63	128	135	5.54	7.6	1.7	0.80	0.067
Portugal	0.01	NO	NO	NO	NO	NO	0	–	NO	NO	NO	NO
Romania	0.86	T1	D	0.13	25	26	25	-0.46	12	1.7	0.80	0.067
Russian Federation	2.31	T1, T2	CS, D	104	270	373	352	-5.78	13	2.0	3.7	0.13
Slovakia	0.77	T2	CS	1.9	NO	1.9	1.9	-0.02	5.8	0.60	NO	NO
Slovenia	1.30	T2, T3	CS, D, PS	3.2	NO	3.2	3.2	0.00	2.0	0.67	NO	NO
Spain	0.05	CS, NE, T2	CS	2.3	2.8	5.1	3.1	-39.48	1.7	0.52	0.046	0.014
Sweden	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Switzerland	–	NA	NA	NO	NO	NO	0	–	NO	NO	NO	NO
Turkey	0.26	T1	D	3.4	55	58	58	0.00	12	1.7	0.001	0.000
Ukraine	4.38	T1, T2, T3	CS, D, M	52	C	C	30	–	11	1.2	C	C
United Kingdom of Great Britain and Northern Ireland (KP)	0.27	T2, T3	CS	2.8	7.3	10		–	14	1.2	0.34	IE, NO
United Kingdom of Great Britain and Northern Ireland (Convention)	0.27	T2, T3	CS	2.8	7.3	10	8.6	-14.46	14	1.2	0.34	IE, NO
United States of America	1.02	T2, T3	CS	278	534	812	812	0.00	8.7	0.83	0.65	0.14

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Data provided by IEA on 15 June 2017. Data of OECD countries correspond to the preliminary 2017 edition of the IEA World Energy Balances, while non-OECD countries' data are still provisional.

[c] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 4 Fugitive Emissions, pages 4.12 to 4.19. (Tier 1).

Table 1.11a

Fugitive emissions from fuels: oil and natural gas - CH_4, CO_2 (2015)

	CH_4			CO_2		
	Share of national total[a]	Methods and EF used		Share of national total[a]	Methods and EF used	
	(%)	Methods	EF	(%)	Methods	EF
Australia	1.64	T1, T2	CS, D, PS	1.58	T1, T2, T3	CS, D, PS
Austria	0.33	T1, T2	CS, D	0.27	T1, T2	CS, D
Belarus	1.62	CS	D	0.00	NA	NA
Belgium	0.46	CS, D, T1	CS, D	0.08	T1, T2	D, PS
Bulgaria	0.32	T1	D	0.01	T1	D
Canada	5.96	CS	CS	1.75	CS	CS
Croatia	0.86	T1	D	1.39	CS, T1	CS, D
Cyprus	–	NA	NA	–	NA	NA
Czech Republic	0.48	T1, T2	CS, D	0.00	T1, T2	CS, D
Denmark (KP)	0.21	T2, T3	CR, CS, D, PS	0.51	T2, T3	CS, D, PS
Denmark (Convention)	0.20	T2, T3	CR, CS, D, PS	0.50	T2, T3	CS, D, PS
Estonia	0.09	T1	D	0.00	T1	D
European Union (KP)	0.76	NA	NA	0.47		
European Union (Convention)	0.76	NA	NA	0.47	NA	NA
Finland	0.07	CS, T1, T2	CS, D, PS	0.19	CS	CS
France (KP)	0.26	T1, T2, T3	CS, D, OTH, PS	0.65	T1, T2, T3	CS, D, PS
France (Convention)	0.26	T1, T2, T3	CS, D, OTH, PS	0.64	T1, T2, T3	CS, D, PS
Germany	0.56	T2, T3	CS	0.20	CS, T2, T3	CS
Greece	0.10	T1	D	0.00	T1	D
Hungary	0.85	T1	CS	0.22	T1	CS
Iceland	0.01	NA	NA	–	NA	NA
Ireland	0.04	CS, T1, T2	CS, D	0.00	CS, T2, T3	CS, PS
Italy	1.13	T1, T2	CS, D	0.51	T1, T2	CS, D
Japan	0.02	CS, T1	CS, D	0.02	CS, T1	CS, D
Kazakhstan	2.48	CS, D, T1	CS, D	0.67	CS, T1	CS, D
Latvia	0.91	T3	CS	0.00	T3	CS
Liechtenstein	0.58	T3	CS	–	NA	NA
Lithuania	1.46	T1, T2	CS, D	0.02	T1, T2	CS, D
Luxembourg	0.34	T1	D	0.00	T1	D
Malta	–	NA	NA	–	NA	NA
Monaco	0.70	T3	CS	0.00	T3	CS
Netherlands	0.33	T1, T1b, T2, T3	CS, D, PS	0.67	T1, T2, T3	CS, D, PS
New Zealand	0.56	T1, T3	CS, D	0.95	T1, T2, T3	CS, D, PS
Norway	1.52	T2	CS	4.75	T2	CS, PS
Poland	0.63	T1, T2	CS, D	0.02	T1, T2	CS, D
Portugal	0.13	CR, OTH	CR, OTH	1.65	D	D
Romania	7.24	T1	D	0.80	T1, T2	CS, D
Russian Federation	23.85	T1b, T2	CS, D	2.69	T1b	D
Slovakia	3.05	T1	CS	0.00	T1	CS
Slovenia	0.21	T1	D	0.00	T1	D
Spain	0.21	CS, D, T1, T2	CS, D	1.10	CS, T1, T2	CS, D, PS
Sweden	0.12	CS, T1, T2, T3	CS, D, PS	1.47	CS, T2, T3	CS, PS
Switzerland	0.40	CS, D	CS, D	0.06	CS, D	CS, D
Turkey	0.58	T1	D	0.03	T1	D
Ukraine	7.15	T1, T2	CS, D	0.66	T1, T2	CS, D
United Kingdom of Great Britain and Northern Ireland (KP)	1.00	T2, T3	CS, PS	0.82	T2, T3	CS, PS
United Kingdom of Great Britain and Northern Ireland (Convention)	1.00	T2, T3	CS, PS	0.81	T2, T3	CS, PS
United States of America	3.07	CS	CS	0.70	CS	CS

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

Table 1.11b

Fugitive emissions from fuels: oil and natural gas - oil - CH_4, CO_2 (2015)

	Oil																	
	Exploration				Production				Transport				Refining (R) / Storage (S)			
	CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data	
	kg/unit		Unit	Description	kg/unit		Unit	Description	kg/unit		Unit	Description	kg/unit		Unit	Description
IPCC default EF[b]			10^3 m^3	total oil production					(5.4)(PL) (25)(TT)							
Australia	NO	NO	t	Quantity of Oil Flared	5 452	NA, NO	PJ	Crude Oil and ORF Produced	312	NA, NO	PJ	Crude oil transport domestic	686	84 321	PJ	Crude Oil refined and stored
Austria	IE	IE, NO	Mt	Mt crude oil	IE	IE, NO	Mt	Mt crude oil	5.4	0.49	Mt	1000 m3 crude oil	31 663	NA, NO	Mt	Mt crude oil Input
Belarus				number of wells drilled	29 891	5 566		PJ of oil produced	111	10		PJ oil loaded in tankers	1 400			PJ oil refined
Belgium	NO	NO			NO	NO			150	14	PJ		56	NA, NO	PJ	
Bulgaria	194	9 102	103m3	Indigenous production	2 200	280	103m3	Indigenous production	25	2.3	103m3	Indigenous production	22	NO	103m3	Refinery intake
Canada	IE	IE, NO	NA	NA	1 865	1 338	10^3 m^3	Total Crude Oil Production	0.081	0.12	10^3 m^3	Total crude oil production	30	7.1	TJ	Refinery energy consumption
Croatia	194	9 102	1000 m3	total oil production	2 546	41 225	1000 m3	total oil production	5.4	0.49	1000 m3	total oil transported by pipelines	22	NA, NO	1000 m3	oil refined
Cyprus	NO	NO	NO		NO	NO	NO		NE	NE, NO	NE		NO	NO	NO	Crude Oil refined (10^3 m3)
Czech Republic	NO	NO	PJ	(e.g. number of wells drilled)	4 746	7 576	PJ	(e.g. PJ of oil produced)	146	13	PJ	(e.g. PJ oil loaded in tankers)	585	NE, NO	PJ	(e.g. PJ oil refined)
Denmark (KP)	0.011	2 449	m3	(e.g. numbers of wells drilled	0.071	0.001	Mg	Oil produced	IE	IE, NO	Mg	Oil produced	0.084	NA	Mg	Oil refined
Denmark (Convention)	0.011	2 449	dnm:m3 grl:NO fro:NO		0.071	0.001	dnm:Mg grl:NO fro:NO		IE, NO	IE, NO	dnm:Mg grl:NO fro:NO		0.084	NA, NO	dnm:Mg grl:NO fro:NO	
Estonia	NO	NO	NA	Exploration	NO	NO	NA	Production	NO	NO	NA	Transport	NO	NO	NA	Refining/Storage
European Union (KP)																
European Union (Convention)																
Finland	NO	NO	NO		NO	NO	NO		NO	NO	NO		25	NO	kt	kt oil refined
France (KP)	NE	NE	PJ	NO	54 578	7 201	PJ	Oil produced	63	5.7	PJ	Oil loaded	24	1 024 495	PJ	Oil refined
France (Convention)	NE	NE	PJ	NO	54 578	7 201	PJ	Oil produced	63	5.7	PJ	Oil loaded	24	1 024 495	PJ	Oil refined
Germany	64	0.48	number	number of wells drilled	0.20	0.10	t	oil produced	0.007	NA, NO	t	oil transported	0.086	3.4	t	oil refined
Greece	NE	NE, NO			0.69	0.050	kt		27	NE, NO	kt		26	IE, NO	kt	
Hungary	IE	IE, NO	NA		1 808	130	1000 m3	conventional oil production (thousand m3)	10	52	1000 m3	Oil transported by pipeline (thousand m3)	22	NA, NO	1000 m3	Oil refined (thousand m3)
Iceland	NO	NO			NO	NO			NO	NO			NO	NO		
Ireland	NO	NO	PJ		NO	NO	PJ		NO	NO	PJ		110	NO	PJ	
Italy	NO	NO	NA	Wells drilled	1 872	321	Gg	Oil produced	6.2	0.56	Gg	Oil transported	9.7	20 921	Gg	Oil refined
Japan	IE	IE, NO			1 172 138	84 655	10^6 m^3	Oil produced	74 766	5 169	10^6 m^3	Oil & condensate produced	2 628	NE, NO	10^6 m^3	Oil refined
Kazakhstan	NO	NO	NA		106	0.028	NA		30	4.9	NA		3.5	NA	NA	
Latvia	NO	NO	kt	Exploration	NO	NO	kt	Production	NO	NO	kt	Transport	NO	NO	kt	Refining/Storage
Liechtenstein	NO	NO	no	number of wells drilled	NO	NO	no	oil produced	NO	NO	no	oil loaded in tankers	NO	NO	no	oil refined
Lithuania	194	9 100	thous.m3	Wells drilled, number	1.5	0.11	thous.m3	Oil produced, thous.m3	5.4	0.49	thous.m3	Oil transported, thous.m3	2.6	NO	thous.m3	Oil refining, PJ
Luxembourg	NO	NO	NA	number of wells drilled	NO	NO	NA	oil produced	NO	NO	NA	oil loaded in tankers	NO	NO	NA	oil refined
Malta	NO	NO	NO	number of wells drilled	NO	NO	NO	oil produced	NO	NO	NO	oil loaded in tankers	NO	NO	NO	oil refined
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	IE	IE, NO	PJ		IE	IE, NO	PJ		5.8	0.53	Mg		92	520 011	PJ	
New Zealand	0.000	0.028	number of wells drilled		0.001	0.000	m3		0.030	0.003	m3		0.022	NA, NO	m3	
Norway	IE	IE, NO	Number of wells	Exploration wells	IE	IE, NO	10^3 m^3	Oil produced	1 342	31 116	PJ	Oil loaded in tankers	8 237	1 654 152	PJ	Oil refined
Poland	NA	NA	NA	NA	83 135	6 004	PJ	Production	6.3	0.57	Gg	oil ltransported by pipeline	1 126	NA	PJ	oil refined
Portugal	NO	NO	NO		NO	NO	NO		NO	NO	Mt		27 893	20 106 422	Mt	
Romania	48 294	2 281 822	PJ	oil produced	556 148	70 653	PJ	oil produced	149	14	PJ	oil refined	880	IE, NO	PJ	oil refined
Russian Federation	1 702	80 418	10^3 m3	Oil produced	19 600	2 489	10^3 m3	Oil and Condensate produced	5.4	0.49	10^2 m3	Oil transpoted by pipeline	22	NE, NO	10^3 m3	Oil refined
Slovakia	NO	NO	NO		3 600	260	kt	Production	5.4	0.49	kt	Transfer	41	NO	kt	Refining/Storage
Slovenia	NO	NO	1000 m3	NA	NO	NO	1000 m3	Conventional oil produced	NA	430	1000 m3	Consumption of LPG	NO	NA, NO	1000 m3	Oil refined
Spain	NA	NA, NO	Tg	Crude oil produced	705	56	Tg	Crude oil produced	503	46	Tg	Transport of crude oil	1 834	50 947 798	Tg	Oil refined
Sweden			TJ	Amount of feedstock for hydrogen production	NO	NO	NA				PJ	Amount of transported crude oil			Mt	Amount of consumed crude oil
Switzerland	NO	NO			NO	NO			152 439	NA, NO	PJ		1 041 667	NA, NO	PJ	Crude oil used
Turkey	NO	NO	NO		3 600	260	10^3 m^3	oil production	4.4	83	10^3 m^3	oil transported by pipeline	4.1	NA, NO	10^3 m^3	(petroleum refining)
Ukraine	747	80 400	10^3 m^3	Oil Produced	30 001	2 150	10^3 m^3	oil produced	5.4	0.49	10^3 m^3	Crude oil transported by pipeline	880	NA, NE	PJ	Oil refined
United Kingdom of Great Britain and Northern Ireland (KP)	25	3 200	t	Exploration drilling: fuel use	2 974	52 490	PJ	Oil produced	0.011	NO	t	Oil loading	2.2	NO	PJ	Refinery throughput
United Kingdom of Great Britain and Northern Ireland (Convention)	25	3 200	t	Exploration drilling: fuel use	2 974	52 490	PJ	Oil produced	0.011	NO	t	Oil loading	2.2	NO	PJ	Refinery throughput
United States of America	IE	IE, NA	10^6 Bbl(oil US)	Annual Domestic Production	453 503	186 050	10^6 Bbl(oil US)	Annual Domestic Production	1 415	NA, NE	10^6 Bbl(oil US)	Refinery Feed	IE	IE	10^6 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 default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 4 Fugitive Emissions. Table 4.2.4. Tier 1 Emission Factors in developed coutries. Values converted from Gg to kg.

Table 1.11c

Fugitive emissions from fuels: oil and natural gas - natural gas - CH_4, CO_2 (2015)

	Natural Gas																			
	Production				Processing				Transmission and Storage				Distribution				Other			
	CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data	
	kg/unit		Unit	Description	kg/unit		Unit	Description	kg/unit		Unit	Description	kg/unit		Unit	Description	kg/unit		Unit	Description
IPCC default EF[b]	(380 to 2300)	(140 to 820)	10^6 m^3	Gas produced	(150 to 1030)	(12 to 320)	10^6 m^3	Gas produced	(66-480)(T) (25)(S)	(0.88)(T) (0.11)(S)	10^6 m^3	marketable gas	1 100	51	10^6 m^3	utility sales				
Australia	45 056	7 076	PJ	Natural gas produced	0.48	0.081	t	NA	850	20	km	Length of Pipeline	232 551	13 232	PJ	Utility sales	IE	NO,IE	NA	IE
Austria	4 059	121 784	Mm3	Mm3 natural gas	NA	61 750	Mm3	Mm3 natural gas	538	25	km	km pipeline length	51	2.3	km	km distribution network length	NO	NO	Mm3	Mm3 natural gas stored
Belarus	126 818	4 154		PJ gas produced					38 483	1 181		PJ gas consumed	83 379	NE	NE	PJ gas consumed				PJ gas consumed
Belgium	NO	NO			NO	NO			11 516	NO,NA	PJ		25 503	820	PJ		NO	NO		
Bulgaria	1 340	48	106m3	Indigenous production	590	166	106m3	Indigenous production	273	0.18	106m3	Transmission and storage	1 100	51	106m3	Inland consumption	NO	NO	NO	
Canada	489	13	Gl	Gross new production of Natural Gas	57	40	Gl	Gross new production of Natural Gas	554	465	km	Transmission - Cubic Metre KM	142	7.3	km	Distribution - Cubic Metre KM	1 345	261	number	Number of Spills + Total Wells
Croatia	1 341	109 279	1000000 m3	gas produced	592	43 166	1000000 m3	gas produced	480	4.1	1000000 m3	marketable gas	1 100	51	1000000 m3	utility sales	NO	NO	NO	
Cyprus	NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO	
Czech Republic	38 649	15	PJ	(e.g. PJ gas produced)	NA	NO,NA	PJ		5 116	20	PJ	(e.g. PJ gas consumed)	139 667	556	PJ	(e.g. PJ gas consumed)	IE	NO,IE	PJ	(e.g. PJ gas consumed)
Denmark (KP)	380	14	10^6 m3	Gas produced	NA	NA	10^6 m3	Gas produced	6.5	0.22	10^6 m3	Gas transmission	67	1.7	10^6 m3	Gas distributed	NO	NO	m3	Incl. In transmission
Denmark (Convention)	380	14	dnm:10^6 m3 grl:NO fro:NO		NA,NO	NO,NA	dnm:10^6 m3 grl:NO fro:NO		6.5	0.22	dnm:10^6 m3 grl:NO fro:NO		67	1.7	dnm:10^6 m3 grl:NO fro:NO		NO	NO	dnm:m3 grl:NO fro:NO	
Estonia	NO	NO	NA	Production	NO	NO	NA	Processing	2 218	30	PJ	Amount of the transmission of Natural Gas	36 960	1 714	PJ	Amount of natural gas distributed	NO	NO	NA	Other
European Union (KP)																				
European Union (Convention)																				
Finland	NO	NO	NO		NA	NO	NA		3 960	NE,NO	PJ	PJ gas consumed	102 720	NE,NO	PJ	PJ gas distributed	NO	NO	NO	
France (KP)	IE	NO,IE	PJ	NO	304	5 361 447	PJ	Gas processed	16 356	201	PJ	Gas consumed	13 921	171	PJ	Gas consumed	NO	NO	PJ	NO
France (Convention)	IE	NO,IE	PJ	NO	304	5 361 447	PJ	Gas processed	16 356	201	PJ	Gas consumed	13 921	171	PJ	Gas consumed	NO	NO	PJ	NO
Germany	0.12	0.11	1000 m³	gas produced	0.044	134	1000 m³	gas produced	2 138	8.8	km	length of transmission pipelines	176	1.2	km	length of distribution pipelines	22	0.17	TJ	gas consumed
Greece	1 930	214	mil_m3		IE	NO,IE	mil_m3		298	0.99	mil m3		1 100	51	mil m3		IE	NO,IE		
Hungary	1 340	48	million m3	Gas production (million m3)	919	248	million m3	Sweet gas plants-raw gas feed (million m3)	298	0.99	million m3	Marketable gas (million m3)	1 100	51	million m3	Utility sales (million m3)	NO	NO	NO	
Iceland	NO	NO			NO	NO			NO	NO			NO	NO			NO	NO		
Ireland	75 795	NO	PJ		IE	NO	PJ		IE	NO	PJ		7 549	181	PJ		NO	NO	PJ	
Italy	906	82	Mm3	Gas produced	406	320	Mm3	Gas produced	461	10	Mm3	Gas transported	4 380	91	Mm3	Gas distributed	NO	NO	NA	other
Japan	2 185	77	10^6 m^3	Gas produced	755	235	10^6 m^3	Gas produced	237	NO,NA	10^6 m^3	Gas sold	10	NO,NA	10^6 m^3	Town gas sold	IE	NO,NA		
Kazakhstan	3	16	NA		NA	NA	NA		553	0.005	NA		18 000	0.037	NA		37 109	NA	NA	
Latvia	NO	NO	m3	Production	NO	NO	m3	Processing	0.68	0.002	m3	Transmission and storage	0.68	0.002	m3	Distribution	0.68	0.002	m3	Other
Liechtenstein		NO	no	gas produced	NO	NO	no	gas produced	165	NO	km	gas consumed	46	NO	TJ	gas consumed	NO	NO	TJ	gas produced
Lithuania	NO	NO	NO		NO	NO	NO		954 481	676	thous.t	Natural gas leakages	954 481	676	thous.t	Natural gas leakages	IE	NA,NO	thous.t	Natural gas leakages
Luxembourg	NO	NO	NA	gas produced	NO	NO	NA	NO	13	0.024	TJ	gas consumed	30	1.4	TJ	gas consumed	NO	NO	NA	NO
Malta	NO	NO	NO	gas produced	NO	NO	NO	NO	NO	NO	NO	gas consumed	NO	NO	NO	gas consumed	NO	NO	NO	
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.74	0.013	m	CH4	NO	NO	NO	NO
Netherlands	IE	NO,IE	PJ		IE	NO,IE	PJ		2 379	28	PJ		45 854	1 411	10^3 km		NO	NO,NE	PJ	
New Zealand	987	36	Mm3		NE	NE,NO	NA		443 202	52 929	TJ		14 001	2 127	TJ		NA	NA	NA	
Norway	IE	12 195	10^6 m^3	Gas produced	IE	NO,IE	PJ		IE	NO,IE	PJ	Gas export	44 507	NO,IE	PJ	Gas consumption	NE	NE	PJ	
Poland	66 880	2 384	PJ	Production	29 951	34 805	PJ		13 958	26	PJ	gas consumed	31 986	1 483	PJ	gas consumed	727	3.2	PJ	NA
Portugal	NO	NO	NO		NO	NO	NO		16	0.086	toe NG Transmitted		1 290	9.1	toe NG Distributed		NO	NO	NO	
Romania	12 190	97	106m3	gas produced	250	20	106m3	gas produced and processed	633	1.4	106m3	gas produced	1 800	96	106m3	gas supplied	139 500	NO	PJ	gas consumed
Russian Federation	1 340	48	10^6 m3	Natural Gas produced	755	235	10^6 m3	Natural Gas produced	6 028	0.99	10^6 m3	Marketable gas	1 100	51	10^6 m3	Gas consumed	NE	NO,NE	NA	
Slovakia	2 300	82	mil m3	Production/Processing	1 030	320	mil m3		480	0.88	mil m3	Transfer	1 100	51	mil m3	Distribution	25	0.11	mil m3	Storage
Slovenia	1.3	0.048	1000 m3	Gas production	NO	NO	1000 m3	NA	0.38	0.001	1000 m3	Marketable gas	1.1	0.051	1000 m3	Utility sale	NO	NO	1000 m3	NA
Spain	2 096	75	Mm3	Mm3 gas produced	150	12	Mm3	Mm3 gas produced	1 519	39	PJ	PJ gas (NCV)	23 529	606	PJ	PJ of gaseous fuels (natural gas, LPG, gas work gas or propanized air) distributed by networks	NO	NO	NO	NO
Sweden	NO	NO	NA		NO	NO	NA				km	Length of gas transmission network			NA		NO	NO	NA	
Switzerland	NO	NO	PJ	gas produced	NO	NO			18 082 000	NA,NO	PJ	See documentation box	18 082 000	NA,NO	PJ		NO	NA,NO	PJ	
Turkey	2 300	82	10^6 m^3	Natural gas production	1 030	320	10^6 m^3	Natural gas production	439	0.81	10^6 m^3	Natural gas transmission by pipeline	1 100	51	10^6 m^3	Natural gas distribution	NO	NO	NO	
Ukraine	12 190	97	10^6 m^3	Natural Gas Produced	790	250	10^6 m^3	Natural Gas Processed	385 915	5 043	Mt	gas transmitted	9 328 675	121 915	10^9 m^3	The volume of natural gas distribution	212 870	874	PJ	Residential and Non-residential Gas Consumed
United Kingdom of Great Britain and Northern Ireland (KP)	IE	NO,IE	PJ	Gas produced	1 618	165 430	PJ	Gas produced	4.7	0.19	GWh	Natural gas supply	304	13	GWh	Natural gas supply	NO	NO	NA	
United Kingdom of Great Britain and Northern Ireland (Convention)	IE	NO,IE	PJ	Gas produced	1 618	165 430	PJ	Gas produced	4.7	0.19	GWh	Natural gas supply	304	13	GWh	Natural gas supply	NO	NO	NA	
United States of America	157 567 183	686 808 858	10^9 ft^3	Annual Production	IE	IE	NA	Annual Production	49 415 980	1 417 056	10^9 ft^3	Consumption	IE	IE	10^9 ft^3	Consumption	NA	NA	NA	Other

[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 default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 4 Fugitive Emissions. Table 4.2.4. Tier 1 Emission Factors in developed coutries. Values converted from Gg to kg.

Table 1.11d

Fugitive emissions from fuels: oil and natural gas - venting and flaring - CH_4, CO_2 (2015)

	Venting and flaring																			
	Oil								Gas								Combined							
	Venting				Flaring				Venting			Flaring					Venting				Flaring			
	CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data			CH_4 IEF[a]	CO_2 IEF[a]	Activity data		CH_4 IEF[a]	CO_2 IEF[a]	Activity data	
	kg/unit		unit	Description	kg/unit		unit	Description	kg/unit	unit	Description	kg/unit		unit	Description		kg/unit		unit	Description	kg/unit		unit	Description
IPCC default EF[b]																								
Australia	IE	IE, NO			35 000	2 900 000			17 477			4 762	2 700 000				NO	NO			NO	NO		
Austria	NO	NO	NA		NO	NO	NA		NO	NA		NO	NO	NA			NO	NO	NA		NO	NO	NA	
Belarus				PJ oil produced				PJ gas consumption			PJ gas produced				PJ gas consumption				Venting	0.006	0.91		Flaring
Belgium	NO	NO			NO	NO			88	PJ		NO	NO				NO	NO			IE	NA		
Bulgaria	8 700	1 800	103m3	Indigenous production	21	34 000	103m3	Indigenous production	182	106m3	Indigenous production	2.8	4 200	106m3	Indigenous production		NO	NO	NO		NO	NO	NO	
Canada	3 984	21 879	10^3 m^3	Total crude oil production	6 162	1 872 897	Gl	Flared Gas	1 581	Gl	Gross new production of Natural Gas	2 820	467 275	Gl	Flared Gas		60	1.4	number	Number of wells drilled	200	33 735	number	Number of wells drilled
Croatia	25	2.3			IE	IE, NO			IE			IE	IE, NO				NO	NO			NO	NO		
Cyprus	NE	NE, NO			NE	NE, NO			NO			NO	NO				NO	NO			NO	NO		
Czech Republic	235 390	48 701	PJ	(e.g. PJ oil produced)	568	919 913	PJ	(e.g. PJ gas consumption)	NO	PJ	(e.g. PJ gas produced)	NO	NO	PJ	(e.g. PJ gas consumption)		NO	NO	PJ		NO	NO	PJ	
Denmark (KP)	NO	NO	GJ	(e.g. PJ oil produced)	0.018	51	GJ	Refinery gas consumption	16	GJ	Venting in gas terminals	0.039	57	GJ	Gas consumption		NO	NO	GJ		0.26	63	GJ	
Denmark (Convention)	NO	NO			0.018	51			16			0.039	57				NO	NO			0.26	63		
Estonia	NO	NO	NA	Oil	NO	NO	NA	Oil	NO	NA	Gas	NO	NO	NA	Gas		NO	NO	NA	Combined	NO	NO	NA	Combined
European Union (KP)																								
European Union (Convention																								
Finland	NO	NO	NO		0.52	55 654	TJ	used fuels, TJ	NO	NO		NO	NO	NO			NO	NO	NO		NO	NO	NO	
France (KP)	19 942	2 631	PJ	Oil produced	0.013	64	PJ	Gas Flared	IE	Gg	Gas produced	6 220	2 190 432	Gg	Consumption		NO	NO	PJ	Oil and Gas produced	NO	NO	PJ	Consumption
France (Convention)	19 942	2 631	PJ	Oil produced	0.013	64	PJ	Gas Flared	IE	Gg	Gas produced	6 220	2 190 432	Gg	Consumption		NO	NO	PJ	Oil and Gas produced	NO	NO	PJ	Consumption
Germany	IE	IE, NO			1.2	3 897	kt	oil refined	IE			IE	1.8	m3	gas flared		IE	IE, NO	m3		IE	IE, NO		
Greece	844	111	kt		29	48 045	kt		182	mil m3		2.8	4 200	mil_m3			NO	NO			NO	NO		
Hungary	720	95	1000 m3	Conventional oil production (thousand m3)	436	76 920	1000 m3	Conventional oil production (thousand m3)	1 442	million m3	Sour gas plants-raw gas feed (million m3)	2.7	4 064	million m3	Gas production (million m3)		IE	IE, NO	NO		IE	IE, NO	NA	
Iceland	NO	NO			NO	NO			NO			NO	NO				NO	NO			NO	NO		
Ireland	NO	NO	PJ		NO	NO	PJ		IE	PJ		NO	55 893 136	PJ	Natural gas flaring		NO	NO	PJ		NO	NO	PJ	
Italy	179	2 061	Gg	Oil produced	276	38 926	Gg	Oil produced	NA	Mm3	Gas produced	36	4 200	Mm3	Gas produced		NO	NO	NA	Combined	NO	NO	NA	Combined
Japan	720 000	95 000	10^6 m^3	Oil produced	25 000	41 000 000	10^6 m^3	Oil produced	IE	10^6 m^3	Gas produced in relevant facilities	2.0	3 000	10^6 m^3	Gas produced		IE	IE, NO			270	5 700	wells	Number of wells tested
Kazakhstan	NA	NA	NA		NA	NA	NA		NA	NA		NA	NA	NA			NA	NA	NA		NA	NA	NA	
Latvia	NO	NO	kt	Oil	NO	NO	kt	Oil	0.68	m3	Gas	NO	NO	kt	Gas		NO	NO	kt	Combined	NO	NO	kt	Combined
Liechtenstein	NO	NO	no	oil produced	NO	NO	no	gas consumed	NO	no	gas produced	NO	NO	no	gas consumed		NO	NO	no	gas produced	NO	NO	no	Gas/Oil Produced
Lithuania	720	95	thous.m3	Oil produced, thous.m3	25	41 000	thous.m3	Oil produced, thous.m3	NO	NO		NO	NO	NO			NO	NO	NO		NO	NO	NO	
Luxembourg	NO	NO	NA	oil produced	NO	NO	NA	gas consumed	NO	NA	gas produced	NO	NO	NA	gas consumed		NO	NO	NA	combined oil and gas production	NO	NO	NA	combined oil and gas consumption
Malta	NO	NO	NO	oil produced	NO	NO	NO	gas consumed	NO	NO	gas produced	NO	NO	NO	gas consumed		NO	NO	NO	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	NO	NO	NO
Netherlands	IE	IE, NO	10^6 m^3		IE	IE, NO	10^6 m^3		IE	PJ		IE	IE, NO	PJ			IE	IE	PJ		IE	IE	PJ	
New Zealand	IE	IE			IE	IE			NA			IE	IE				14 125	NA, NO			370	53 824		
Norway	IE	IE, NO	PJ		9 456	75 650 118	PJ	Oil flared	IE	PJ		84 541	78 515 201	PJ	Gas flared		2 346	9 255	PJ	Oil and gas produced	IE	IE, NO	PJ	
Poland	933	174	Gg	oil produced	47 619	29	Gg	oil produced	IE	NA	NA	1 200	13 466	10^6m3	gas production		NO	NA, NO	NA	NA	NO	NA, NO	NA	NA
Portugal	NO	NO	NO		1 399	2 188 680	kt		NO	NO		NO	NO	NO			NO	NO	NO		NO	NO	NO	
Romania	293 680	61 006	PJ	oil produced	709	1 149 183	PJ	gas consumed	392	106m3	gas produced	0.88	1 400	106m3	gas consumed		NA	NA, NO		gas and oil produced	NA	NA, NO		gas and oil combined
Russian Federation	10 351	2 150	10^3 m3	Oil and Condensate produced	12 000	2 000 000	10^6 m3	Associated gas flaring	IE	10^6 m3	Marketable Gas	2.0	3 000	10^6 m3	Natural Gas production		NE	NE, NO	NA		NE	NE, NO	NA	
Slovakia	720	95	kt	Venting oil	25	41 000	kt	Flaring oil	320	mil m3	Venting gas	2.0	3 000	mil m3	Flaring gas		NO	NO	NA		NO	NO	NA	
Slovenia	NA	NA, NO	1000 m3	Conventional oil produced	NO	NO	1000 m3	Conventional oil produced	0.25	1000 m3	Marketable gas	0.001	1.2	1000 m3	Gas production		NO	NO	1000 m3	NA	NO	NO	1000 m3	NA
Spain	815 402	107 589	Tg	Tg gas venting	851	3 289 814	Tg	Tg gas consumption	467 093 673	PJ	gas produced	1 247	226 398	Mm3	Mm3 gas consumption		NO	NO	NO	NO	NO	NO	NO	NO
Sweden	IE	IE, NO	NA				TJ	Amount of gas flared		NA				NA			IE	IE, NO	NA		NA	NA, NO	NA	
Switzerland	NO	NO			NA	NA		(please specify)	NO			NO	NO				NO	NO			NO	NO		
Turkey	720	95	10^3 m^3	(Oil production	219	50 102	10^3 m^3	Oil production	42 120	10^6 m^3	Natural gas production	2.0	3 000	10^6 m^3	Natural gas production		NO	NO	NO		NO	NO	NO	
Ukraine	855	113			30	48 500			IE			2.3	3 550				IE	IE, NA			IE	IE, NA		
United Kingdom of Great Britain and Northern Ireland (KP)	NA	NA	NA		10	2 604	t	Amount of gas flared	NA	NA		6.6	2 015	t	Amount of gas flared		IE	IE, NO	NA		IE	IE, NO	NA	
United Kingdom of Great Britain and Northern Ireland (Convention)	NA	NA	NA		10	2 604	t	Amount of gas flared	NA	NA		6.6	2 015	t	Amount of gas flared		IE	IE, NO	NA		IE	IE, NO	NA	
United States of America	IE	IE, NA	NA	Production	IE	IE, NA	NA	Production	IE	NA	Production	IE	IE, NA	NA	Production		IE	IE, NA	NA	Production	IE	IE, NA	10^9 ft^3	Gas Flared

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

[b] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 4 Fugitive Emissions. Table 4.2.4. Tier 1 Emission Factors in developed coutries. Values converted from Gg to kg.

Table 1.12

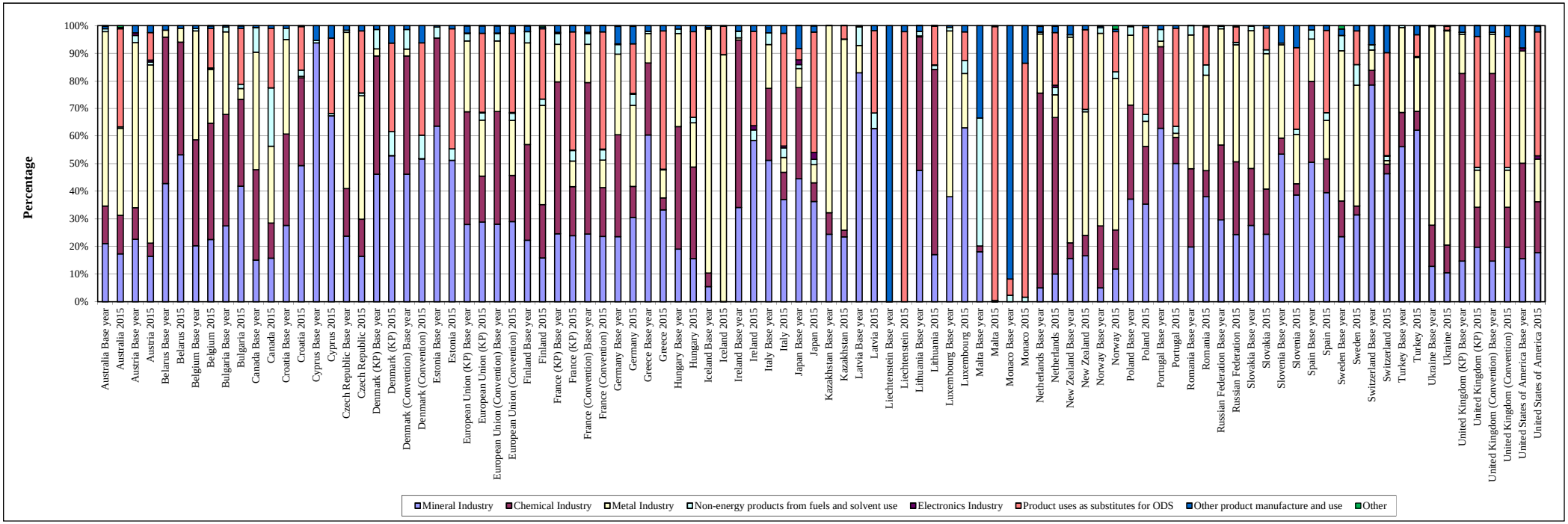
CO_2 transport and storage (2015)

	Transport of CO_2		Injection and storage		Other	
	CO_2 IEF	Activity data	CO_2 IEF	Activity data	CO_2 IEF	Activity data
	kg/kt	(kt)	kg/kt	(kt)	kg/kt	(kt)
IPCC default EF[a]	(0.00014 to 0.014 Gg/year/km)	10^3 m^3	n.a.	10^3 m^3	n.a.	10^3 m^3
Australia	NO	NO	NO	NO	NO	NO
Austria	NO	NO	NO	NO	NO	NO
Belarus	NO	NO	NO	NO	NO	NO
Belgium	NO	NO	NO	NO	NO	NO
Bulgaria	NO	NO	NO	NO	NO	NO
Canada	41	2 434	IE, NE	2 434	NA	NA
Croatia	NO	NO	NO	NO	NO	NO
Cyprus	NO	NO	NO	NO		
Czech Republic	NO	NO	NO	NO	NO	NO
Denmark (KP)	NO	NO	NO	NO	NO	NO
Denmark (Convention)	NO	NO	NO	NO	NO	NO
Estonia	NO	NO	NO	NO	NO	NO
European Union (KP)	NO	NO	IE, NO	NE, NO	NO	NO
European Union (Convention)	NO	NO	IE, NO	NE, NO	NO	NO
Finland	NA	NA	NA	NA	NO	NO
France (KP)	NO	NO	IE	NE	NO	NO
France (Convention)	NO	NO	IE	NE	NO	NO
Germany	NO	NO	NO	NO	NO	NO
Greece	NO	NO	NO	NO	NO	NO
Hungary	NO	NO	NO	NO	NO	NO
Iceland	NO	NO				
Ireland	NO	NO	NO	NO	NO	NO
Italy	NO	NO	NO	NO	NO	NO
Japan	NO	NO	NE, NO	NO	NO	NO
Kazakhstan			NA	NA		
Latvia	NO	NO	NO	NO	NO	NO
Liechtenstein	NO	NO	NO	NO		
Lithuania	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO		
Monaco	NO	NO	NO	NO	NO	NO
Netherlands	NO	NO	NO	NO	NO	NO
New Zealand	NO	NO	NO	NO		
Norway	NO	679	2 000	20 982		
Poland	NO	NO	NO	NO	NO	NO
Portugal	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	NO		
Russian Federation	NO	NO	NO	NO	NO	NO
Slovakia	NO	NO	NO	NO	NO	NO
Slovenia	NO	NO	NO	NO	NO	NO
Spain	NO	NO	NO	NO	NO	NO
Sweden	NO	NO	NO	NO		
Switzerland	NO	NO	NO	NO	NO	NO
Turkey	NA, NO	NA, NO	NE, NO	NE, NO	NO	NO
Ukraine	NO	NO	NO	NO	NO	NO
United Kingdom of Great Britain and Northern Ireland (KP)	NO	NO	NO	NO	NO	NO
United Kingdom of Great Britain and Northern Ireland (Convention)	NO	NO	NO	NO	NO	NO
United States of America	IE, NA	IE	IE, NA	IE	IE, NA	IE

[a] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 5 Carbon Dioxide Transport, Injection and Geological Storage. Table 5.2. Tier 1 Emission Factors for pipeline transport of CO_2 from a CO_2 capture site to the final storage site.

Figure 2.1

Contribution of subsectors to total GHG emissions in the Industrial Processes and Product Use sector[a, b]



[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Indirect CO_2 emissions are excluded from the totals in this graph.

Table 2.1

Mineral industry - CO_2 (2015)

	Methods and EF used		Cement production				Lime production		Glass production	
			Share of national total[a]	Activity data		CO_2 IEF	Share of national total[a]	CO_2 IEF	Share of national total[a]	CO_2 IEF
	Methods	EF		Description[b]	Value					
			(%)		(kt)	(t/t)	(%)	(t/t)	(%)	(t/t)
IPCC default EF[c]								0.59-0.86		0.2
Australia	T2	CS	0.58	Clinker Production	5 632	0.55	0.22	0.75	–	IE, NO
Austria	T1, T3	D, PS	2.16	Cement clinker	3 257	0.52	0.73	0.75	0.05	0.080
Belarus	T1, T2	D	2.52	Used clincer production data	4 343	0.52	0.53	0.75	0.06	0.15
Belgium	T1, T3	CS, PS	2.00	Clinker Production	4 396	0.53	1.42	0.80	0.16	0.10
Bulgaria	T1, T2	CS, D, PS	1.80		2 074	0.53	0.33	0.78	0.13	0.15
Canada	T1, T2	CS, D	0.87	clinker production	11 514	0.54	0.19	0.76	0.01	0.42
Croatia	T2, T3	CS, D	4.98	clinker production	2 159	0.54	0.31	0.55	0.13	0.13
Cyprus	CS, T1	CS, D	10.40	Clinker production	1 641	0.53	0.03	0.75	–	NO
Czech Republic	T1, T3	D, PS	1.21	clinker production	2 919	0.53	0.48	0.77	0.10	0.10
Denmark (KP)	CS, T2, T3	CS, D, PS	1.93	Production of Clinker	1 715	0.54	0.10	0.79	0.02	0.047
Denmark (Convention)	CS, T1, T2, T3	CS, D, PS	1.87	Production of Clinker	1 715	0.54	0.10	0.79	0.02	0.047
Estonia	T1, T2, T3	D, PS	1.14	Clinker production	356	0.58	0.21	0.71	0.06	0.11
European Union (KP)			1.72		139 247	0.53	0.45	0.71	0.10	0.12
European Union (Convention)			1.73		139 247	0.53	0.45	0.71	0.10	0.12
Finland	T1, T2, T3	CS, D, PS	0.83	Produced clinker	934	0.49	0.64	0.78	0.00	0.40
France (KP)	T1, T2, T3	CS, D, PS	1.45	Clinker consumption	12 513	0.53	0.49	0.67	0.11	0.19
France (Convention)	T1, T2, T3	CS, D, PS	1.42	Clinker consumption	12 513	0.53	0.49	0.67	0.11	0.19
Germany	T1, T2	CS, D	1.37	produced clinker	23 355	0.53	0.55	0.75	0.10	0.12
Greece	CS, T1	CS, D, PS	3.62	clinker production	6 554	0.53	0.17	0.75	0.02	0.15
Hungary	CS, T3	CS, D	1.11	Clinker production (kt)	1 331	0.51	0.25	0.73	0.09	0.11
Iceland	T3	PS	–	clinker production	NO	NO	–	NO	–	NO
Ireland	T3	PS	2.76	clinker production	3 021	0.55	0.30	0.75	–	NO
Italy	T2	CS, PS	1.89	Clinker production	15 527	0.53	0.36	0.71	0.12	0.10
Japan	CS, T2	CS	1.96	Production of clinker	50 307	0.52	0.41	0.43	0.01	0.96
Kazakhstan	T1, T2	D	1.13		6 470	0.53	0.21	0.74	–	NO
Latvia	D, T1, T2	D, OTH, PS	4.12	(produced clinker)	918	0.51	0.01	0.83	0.00	C
Liechtenstein	NA	NA	–	Production	NO	NO	–	NO	–	NO
Lithuania	CS, T1, T2	CS, D, PS	2.58	Clinker production	963	0.54	0.19	0.77	0.03	0.13
Luxembourg	CS, T2	CS, PS	3.21	clinker production	678	0.49	–	NO	0.63	0.15
Malta	T1	D	–	(not occuring)	NO	NO	–	NO	–	NO
Monaco	NA	NA	–		NO	NO	–	NO	–	NO
Netherlands	CS, T1	CS, D, PS	0.13		517	0.48	–	IE, NO	0.05	0.068
New Zealand	CS, T1	CS, D	0.77	Clinker produced	C	C	0.24	0.78	–	NA
Norway	T1, T3	CS, D, PS	1.25	Production quantity	1 284	0.52	0.41	0.77	0.01	0.46
Poland	T1, T2	CS, D	1.64	Clinker production	11 278	0.56	0.39	0.73	0.11	0.16
Portugal	T1, T3	OTH	4.24		5 626	0.52	0.51	0.69	0.24	0.098
Romania	CS, OTH, T2, T3	CS, D, PS	2.87	clinker production	6 203	0.54	0.71	0.79	0.05	0.15
Russian Federation	T1, T2	CS, D	0.87	Clinker production	43 873	0.53	0.34	0.77	0.06	0.15
Slovakia	T2, T3	PS	3.17	Cement clinker	2 506	0.52	1.57	0.78	0.03	0.42
Slovenia	T2, T3	CS, D	2.18	Clinker produced	713	0.51	0.36	0.75	0.06	0.13
Spain	D, T1, T2, T3	CS, D, PS	2.75	Clinker production	17 650	0.52	0.41	0.71	0.14	0.10
Sweden	T3	CS, D, PS	2.84	Amount of produced clinker	2 826	0.54	0.78	0.78	0.03	NE
Switzerland	CS, T2, T3	CS, D, PS	3.56	clinker production	3 195	0.54	0.09	C	0.02	0.052
Turkey	T1, T2	CS, D	6.87	Clinker Production	61 971	0.53	0.55	0.70	0.10	0.16
Ukraine	T1, T2, T3	CS, D	1.01	clinker production	6 063	0.54	0.70	0.77	0.07	0.18
United Kingdom of Great Britain and Northern Ireland (KP)	T3	CS	0.88	Clinker production	7 617	0.59	0.24	0.45	0.07	0.16
United Kingdom of Great Britain and Northern Ireland (Convention)	T3	CS	0.88	Clinker production	7 617	0.59	0.24	0.45	0.07	0.16
United States of America	CS, T2, T3	D	0.61	Clinker Production	76 700	0.52	0.20	0.75	0.02	0.42

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Den mark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[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: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3 Chapter 2 Mineral Industry Emissions. Lime production table 2.4; glass production section 2.4.1.2.

Table 2.2

Chemical industry - CO_2 and N_2O (2015)

	CO_2					N_2O						
	Methods and EF used		Ammonia production			Methods and EF used		Nitric acid production			Adipic acid production	
	Methods	EF	Share of national total[a]	Activity data (production)	CO_2 IEF	Methods	EF	Share of national total[a]	Activity data (production)	N_2O IEF	Share of national total[a]	N_2O IEF
			(%)	(kt)	(t/t)			(%)	(kt)	(t/t)	(%)	(t/t)
IPCC default EF[b]					1.666 to 3.273					0.002 to 0.009		0.3
Australia	T1b, T2	CS, D	–	C	IE	T3	CS	–	C	IE, NO	–	NO
Austria	T1, T3	D, PS	0.64	520	0.97	T3	PS	0.06	562	0.000	–	NO
Belarus	T1, T2	CS, D	1.56	1 104	1.3	T1	D	0.00	0.11	0.005	–	NO
Belgium	T3	D, PS	1.03	1 047	1.2	T3	PS	0.32	2 040	0.001	–	NO
Bulgaria	T2	CS, PS	1.76	C	C	T3	PS	0.20	C		–	NO
Canada	T2	CS, OTH	0.39	4 431	1.3	T1, T2, T3	CS, D, PS	0.15	854	0.004	–	NO
Croatia	T1, T3	D, PS	2.29	455	2.0	T1, T2	D, PS	1.32	345	0.003	–	NO
Cyprus	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Czech Republic	T1, T3	CS, D, PS	0.58	227	3.3	CS, T1	CS, PS	0.22	563	0.002	–	NO
Denmark (KP)	T2	PS	–	NO	NO	NA	NA	–	NO	NO	–	NO
Denmark (Convention)	T2	PS	–	NO	NO	NA	NA	–	NO	NO	–	NO
Estonia	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
European Union (KP)	NA	NA	0.56	40 189	0.68	NA	NA	0.10	19 297	0.001	0.01	0.004
European Union (Convention)	NA	NA	0.56	40 189	0.68	NA	NA	0.10	19 297	0.001	0.01	0.004
Finland	CS, T2, T3	CS, PS	–	NO	NO	T3	PS	0.47	621	0.001	–	NO
France (KP)	T1, T2, T3	CS, D, PS	0.25	1 069	1.1	T2, T3	CS, D, PS	0.11	2 039	0.001	0.01	C
France (Convention)	T1, T2, T3	CS, D, PS	0.25	1 069	1.1	T2, T3	CS, D, PS	0.11	2 039	0.001	0.01	C
Germany	T1, T2, T3	CS, D, PS	0.46	2 742	1.9	T3	PS	0.06	2 522	0.001	0.03	C
Greece	T1, T1a	CS	0.25	145	1.7	CS	CS	0.02	199	0.000	–	NO
Hungary	CS, T3	CS, D	1.57	18 320	0.056	CS	PS	0.08	670	0.000	–	NO
Iceland	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Ireland	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Italy	T2	CR, PS	0.11	396	1.9	T2	D, PS	0.01	390	0.000	0.03	0.004
Japan	CS, T1, T2, T3	CS, D	0.15	917	2.1	CS, T1, T2, T3	CS, PS	0.03	388	0.004	0.01	C
Kazakhstan	T1	D	0.13	180	2.1	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	T3	CS	10.05	1 064	2.1	T3	PS	1.28	1 195	0.001	–	NO
Luxembourg	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Malta	T1	D	–	NO	NO	NA	NA	–	NO	NO	–	NO
Monaco	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Netherlands	CS, T1, T3	CS, D	2.01	C	C	T2	PS	0.19	C	C	–	NO
New Zealand	T1, T2	CS, D	0.03	137	1.4	NA	NA	–	NO	NO	–	NO
Norway	T2	CS, D, PS	0.85	465	1.4	CS, T2, T3	PS	0.47	1 730	0.000	–	NO
Poland	T1, T2	CS, D	1.00	2 720	1.7	T1	CS	0.13	2 396	0.001	–	NO
Portugal	NO	NO	–	C	NO	D	PS	0.06	C	C	–	NO
Romania	D, T1, T2	D, PS	0.60	338	2.1	T2, T3	D, PS	0.29	735	0.002	–	NO
Russian Federation	T1, T3	CS, D	1.04	15 152	2.1	T1	D	0.19	8 299	0.002	–	NO
Slovakia	T2, T3	CS, PS	1.55	477	1.9	T3	D, PS	0.34	634	0.001	–	NO
Slovenia	T2	D	–	NO	NO	NA	NA	–	NO	NO	–	NO
Spain	D, T1, T3	D, PS	0.10	488	1.3	T1, T3	D, PS	0.05	700	0.001	–	NO
Sweden	D	PS	–	NO	NO	T2, T3	PS	0.07	239	0.001	–	NO
Switzerland	T2	D, PS	–	C	C	T2	PS	0.01	C	C	–	NO
Turkey	T1, T2	CS, D	0.31	C	C	T1	D	0.30	C	C	–	NO
Ukraine	T1, T3	CS, D	1.15	2 641	2.0	T2, T3	CS, D	0.48	1 157	0.005	–	NO
United Kingdom of Great Britain and Northern Ireland (KP)	CS, T1, T3	CS, D	0.31	1 022	1.6	T1, T3	CS, D	0.01	1 127	0.000	–	NO
United Kingdom of Great Britain and Northern Ireland (Convention)	CS, T1, T3	CS, D	0.31	1 022	1.6	T1, T3	CS, D	0.01	1 127	0.000	–	NO
United States of America	CS, T1	CS, D, OTH	0.16	11 505	0.94	CS	CS	0.18	7 212	0.005	0.06	C

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3 Chapter 3 Chemical Industry Emissions. Ammonia table 3.1; nitric acid table 3.3; adipic acid table 3.4.

Table 2.3

Metal industry - CO_2 (2015)

	Methods and EF used		Iron and steel[a]					Aluminium production		
				Steel		Pig iron				
	Methods	EF	Share of national total[b]	Activity Data (production)	CO_2 IEF	Activity Data (production)	CO_2 IEF	Share of national total[b]	Activity Data (production)	CO_2 IEF
			(%)	(kt)	t/t	(kt)	t/t	(%)	(kt)	t/t
IPCC default EF[c]					1.46 (BOF) 0.08 (EAF) 1.72 (OHF)		1.35			1.6 (Prebake) 1.7 (Soderberg)
Australia	T1b, T2	CS	1.25	4 776	NA, NO	NO	NO	0.50	1 649 060	0.002
Austria	T1, T3	CS, D, PS	13.62	7 020	1.5	5 795	IE, NO	0.01	C	
Belarus	D, T1	D	0.23	IE	IE, NA	NO	NA, NO	–	NO	NO
Belgium	CS, T3	PS	3.16	7 336	0.50	4 247	IE, NA	–	NO	NO
Bulgaria	T1, T2	CS, D, PS	0.06	564	0.066	NO	NO	–	C	NA
Canada	T1, T2, T3	CS, D, OTH	1.11	12 594	0.065	6 055	1.1	0.70	2 881	1.8
Croatia	T2	CS	0.06	149	0.092	NO	NO	–	NO	NO
Cyprus	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Czech Republic	CS, T1, T2	D, PS	5.37	5 256	IE, NA	4 047	IE, NA	–	NO	NO
Denmark (KP)	T1	D	–	NO	NO	NO	NO	–	NO	NO
Denmark (Convention)	NA, T1	D, NA	–	NO	NO	NO	NO	–	NO	NO
Estonia	NA	NA	–	NO	NO	NO	NO	–	NO	NO
European Union (KP)	NA	NA	1.51	NE	NE	NE	NE	0.11	NE	NE
European Union (Convention)	NA	NA	1.51	NE	NE	NE	NE	0.08	NE	NE
Finland	CS, T2, T3	CS	3.89	3 939	0.55	NO	IE, NO	–	NO	NO
France (KP)	T1, T2, T3	CS, D, PS	0.51	15 086	0.076	9 688	0.11	0.14	419	1.6
France (Convention)	T1, T2, T3	CS, D, PS	0.50	15 086	0.076	9 688	0.11	0.14	419	1.6
Germany	T1, T2, T3	CS, D	1.86	42 676	0.39	28 393	IE, NO	0.08	541	1.4
Greece	CS, T1	CS, D, PS	0.06	910	0.067	NO	NO	0.30	180	1.6
Hungary	T3	PS	1.91	1 675	0.12	1 247	1.6	–	NO	NO
Iceland	T1, T3	D, PS	0.01	4.3	0.080	NO	NO	28.63	860	1.5
Ireland	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Italy	T2	CR, CS, PS	0.31	22 018	0.040	5 051	0.089	–	NO	NO
Japan	T2	OTH	0.45	32	3.7	13 105	0.44	–	NA	IE, NA
Kazakhstan	T1, T2	CS, D	2.77	3 551	0.14	3 234	1.8	0.14	222	1.9
Latvia	T2	D, PS	0.01	12	0.083	NO	NO	–	NO	NO
Liechtenstein	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Lithuania	T2	D	0.01	NO	NO	NO	NO	–	NO	NO
Luxembourg	CS, T2	CS	1.20	2 126	0.058	NO	NO	–	NO	NO
Malta	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Monaco	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Netherlands	T1a, T2	CS, D	0.46	7 071	0.002	NA	IE, NO	0.02	28	1.4
New Zealand	T1, T2, T3	CS, D	2.21	C	C	NA	NA, NO	0.67	333	1.6
Norway	T2, T3	CS, PS	0.05	580	0.049	NO	NO	3.44	1 217	1.5
Poland	T1, T2, T3	CS, D	0.53	IE	IE	5 621	0.12	–	NO	NA, NO
Portugal	T2	PS	0.14	2 016	0.047	NO	NO	–	NO	NO
Romania	D, T3	CS, D, PS	3.23	3 481	1.1	1 983	IE, NO	0.29	206	1.6
Russian Federation	T1, T2, T3	CS, D, PS	2.85	69 422	0.11	52 411	1.2	0.22	C	
Slovakia	T1, T2, T3	D, PS	9.76	4 311	0.93	34	IE, NO	0.67	171	1.6
Slovenia	T1, T2	CS, D, PS	0.32	632	0.084	NO	NA, NO	0.70	84	1.4
Spain	T1, T2, T3	CS, D, PS	0.84	14 978	0.047	C		0.18	C	
Sweden	D, T2, T3	PS	–	1 701	0.10	2 867	0.59	0.34	119	1.5
Switzerland	CS, T3	CS, PS	0.02	1 296	0.009	NO	NO	–	NO	NO
Turkey	T1, T2, T3	CS	2.41	31 697	0.30	4 022	IE, NO	0.02	C	C
Ukraine	T1, T3	CS, D	12.67	22 998	0.12	21 863	1.6	–	NO	NO
United Kingdom of Great Britain and Northern Ireland (KP)	T1, T2	CS	0.85	10 819	0.020	8 774	0.21	0.01	48	1.5
United Kingdom of Great Britain and Northern Ireland (Convention)	T1, T2	CS	0.85	10 819	0.020	8 774	0.21	0.01	48	1.5
United States of America	T1, T2	CS, D, OTH	0.74	49 451	0.16	25 436	0.33	0.04	1 587	1.7

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] In addition to data reported here, CO_2 emission estimates from direct reduced iron (2.C.1.c) were reported by European Union (KP), European Union (Convention), Netherlands, Russian Federation and United States of America; CO_2 emission estimates from sinter (2.C.1.d) were reported by Belgium, European Union (KP), European Union (Convention), Hungary, Kazakhstan, Poland, Spain, Turkey, United Kingdom (KP), United Kingdom (Convention) and United States of America; CO_2 emission estimates from pellet (2.C.1.e) were reported by Kazakhstan, Russian Federation, Turkey and United States of America.

[c] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3 Chapter 4 Metal Industry Emissions. Iron and steel table 4.1; Aluminium table 4.10.

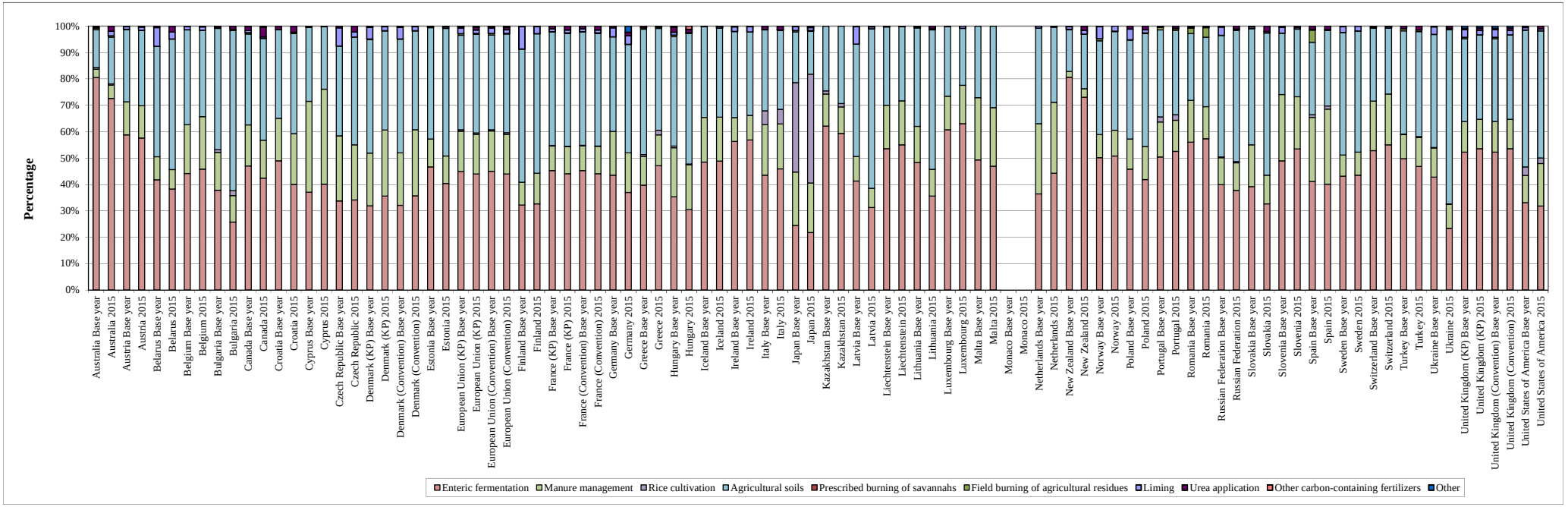
Table 2.4

HFCs, PFCs, SF_6 and NF_3 (2015)

	Metal industry						Electronic industry						Product uses as substitutes for ODS				Other product manufacture and use			
	HFCs		PFCs		SF_6		PFCs		SF_6		NF_3		HFCs		PFCs		HFCs		PFCs	
	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF	Methods	EF
IPCC default EF																				
Australia	NA	NA	T1c	CS	NA	NA	NA	NA	NA	NA	NA	NA	M	CS, D	NA	NA	NA	NA	NA	NA
Austria			NA	NA	T2	D							NA	NA	NA	NA	NA	NA	NA	NA
Belarus	NA	NA	NA	NA	NO	NA	NA	NA	NE	NE	NE	NE	NA	NA	NA	NA	NE	NE	NE	NE
Belgium	NA	NA	NA	NA	NA	NA							NA	NA	NA	NA			NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO, T2	D, NO	NO, T2	D, NO	NO	NO	NO	NO
Canada	NA	NA	T1, T2, T3	CS, D, OTH	T3	D	T2	D	T2	D	T2	CS, D	T2	CS, D	T2	D	NA	NA	T2	D
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1a, T2	D	T1a	D	NA	NA	NA	NA
Cyprus							NA	NA	NA	NA	NA	NA	NA	NA						
Czech Republic	NA	NA	NA	NA	NA	NA	T2	D	T2	D	T2	D	D, T1, T2	CS, D	D, T2	CS, D				
Denmark (KP)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T2	D	T2	D				
Denmark (Convention)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1, T2	D	T2	D				
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	NA	NA
European Union (KP)							NA	NA	NA	NA					NA	NA			NA	NA
European Union (Convention)							NA	NA	NA	NA					NA	NA			NA	NA
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T2	D	T2	NA	NA	NA	NA	NA
France (KP)	NA	NA	T2, T3	CS, PS	NA	NA	T2	CS	T2	CS	T2	CS	T1, T2, T3	CS, D, PS			T2	OTH	T2	CS, D
France (Convention)	NA	NA	T2, T3	CS, PS	NA	NA	T2	CS	T2	CS	T2	CS	T1, T2, T3	CS, D, PS			T2	OTH	T2	CS, D
Germany	D	D	T3	CS	CS, D	CS, D	T3	PS	T3	PS	T3	PS	CS, T2	CS, D	T2	CS, D	CS	CS	CS	CS
Greece	NA	NA	T3	PS	NA	NA	NA	NA	NA	NA	NA	NA	CS, IE, T2	D, IE	IE, T2	D, IE	NA	NA	NA	NA
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	CS, T1, T2	CS, D	T2	D	NA	NA	NO	NO
Iceland	NA	NA	T2	D	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
Italy	T2	PS	NA	NA	NA	NA	T2	CS	T2	CS	T2	CS	T2	CS, D			NA	NA	NA	NA
Japan	CS	CS	NA	NA	CS	CS	T2	CS	T2	CS	T2	CS	NA	NA					NA	NA
Kazakhstan	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	T1a, T2	CS, D, OTH	NA	NA	NA	NA	NA	NA
Liechtenstein	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	T3	PS	T2	PS	T1a, T1b, T2	CS, D, PS	NA	NA	NA	NA	NA	NA
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1, T2	CS, M, PS			T3	PS	NA	NA
Malta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1	D	NA	NA				
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	CS, T2	D, OTH	NO	NE	NA	NA	NA	NA
Netherlands	NA	NA	T2	CS	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	NA	NA
New Zealand			T2	D	NA	NA							T1a, T2	CS, D	T2	CS	NA	NA	T1	D
Norway					NA	NA	NA	NA	T2	CS	NA	NA	T2	D	T1, T2	CS, D	NA	NA	NA	NA
Poland	NA	NA	NA	NA	T1	D	NA	NA	NO	NO	NO	NO	T1a, T1b, T2	D	T2	D	NA	NA	NA	NA
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	IE, NO	IE, NO	IE, NO	IE, NO	NO	NO	NO	NO
Romania	NA	NA	T2	D, PS	NA	NA	NA	NA	NA	NA	NA	NA	T2	D	NA	NA	NA	NA	NA	NA
Russian Federation			T2	D, PS			OTH	OTH	NA	NA	NA	NA	T1, T2, T3	CS, D	T1	D	NA	NA	NA	NA
Slovakia	NA	NA	T2	PS	NA	NA	NA	NA	NA	NA	NA	NA	T1a, T2	CS, D	NA	NA	NA	NA	NA	NA
Slovenia	NA	NA	T3	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NO	NO	NA	NA	NA	NA
Spain	NA	NA	T2	D	NA	NA	NA	NA	NA	NA	NA	NA	T1a, T2	CS, D	T1a, T2	CS, D	NA	NA	NA	NA
Sweden	NA	NA			T2	D	NA	NA	NA	NA			T1a	CS, D, PS		CS			NA	NA
Switzerland	NA	NA	T3	CS	NA	NA	T2	D	T2	D	T2	D	T1, T2	CS, D	T1, T2	CS, D	T2	D	T2	CS, D
Turkey	NA	NA	NA	NA			NA	NA					NA	NA	NA	NA				
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1a, T2	D	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	T2	PS	T2	PS	T2	PS	NA	NA	NA	NA	T2	D	CS, T1a, T2, T3	CS, OTH	NA	NA	NA	NA	T2, T3	CS, D
United Kingdom of Great Britain and Northern Ireland (Convention)	T2	PS	T2	PS	T2	PS	NA	NA	NA	NA	T2	D	CS, T1a, T2, T3	CS, OTH	NA	NA	NA	NA	T2, T3	CS, D
United States of America	M, T3	CS, M	T2	CS	M, T3	CS, M	M, T2	CS, M	M, T2	CS, M	M, T2	CS, M	M, T2	CS, M	M, T2	CS, M	NA	NA	NA	NA

Figure 3.1

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



[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Indirect CO_2 emissions are excluded from the totals in this graph.

Table 3.1

Enteric fermentation - CH_4 (2015)

	Share of national total[a]	Methods and EF used		Cattle								Sheep				Swine			
				Activity data (population size)			Option A		Option B			Option C	Activity data (population size)			CH_4 IEF	Activity data (population size)			CH_4 IEF
							Dairy cattle	Non-dairy cattle	Mature dairy cattle	Other mature cattle	Growing cattle	Other								
		Methods	EF	CRF	FAO[b]	Difference	CH_4 IEF						CRF	FAO[b]	Difference		CRF	FAO[b]	Difference	
	(%)			(thousands of head)		(%)	(kg/head/yr)						(thousands of head)		(%)	(kg/head/yr)	(thousands of head)		(%)	(kg/head/yr)
IPCC default EF[c,d]							46-128	27-60								5-8				1.0-1.5
Australia	9.53	CS, T1, T2	CS, D	27 443	29 103	6.05						56	70 910	72 612	2.40	6.8	2 272	2 308	1.58	1.6
Austria	5.24	T1, T2	CS, D	1 958	1 958	0.03	130	60					354	357	1.05	8.0	2 845	2 896	1.77	1.5
Belarus	10.13	T1, T2	CS, D	4 384	4 322	-1.40	128	56					215	73	-66.27	10	3 080	2 925	-5.03	1.5
Belgium	3.90	NA	NA	2 554	2 477	-3.02	143	51					118	112	-5.47	8.0	6 662	6 350	-4.68	1.5
Bulgaria	2.49	T1, T2	CS, D	552	576	4.37			107	77	55		1 334	1 370	2.70	7.2	577	586	1.70	1.5
Canada	3.46	T1, T2	CS, D	12 465	12 220	-1.97	156	70					959	875	-8.79	8.0	13 243	13 055	-1.42	1.5
Croatia	4.36	T1, T2	CS, D	478	441	-7.66			110	61	48		608	605	-0.47	7.9	588	1 156	96.53	1.5
Cyprus	2.66	T1, T2	CS, D	59	61	3.42	115	57					297	322	8.60	8.0	358	342	-4.47	1.5
Czech Republic	2.26	T1, T2	CS, D	1 407	1 374	-2.39	143	55					232	225	-2.72	8.0	1 560	1 617	3.68	1.5
Denmark (KP)	7.59	T1, T2	CS, D, OTH	1 552		–	154	42					210		–	6.7	12 538		–	1.1
Denmark (Convention)	7.43	T1, T2	CS, D, OTH	1 554	1 566	0.80	154	42					307	245	-19.96	7.4	12 538	12 332	-1.64	1.1
Estonia	3.00	D, T1, T2	CS, D, OTH	256	261	2.03			145	60	39		88	82	-7.20	8.0	305	359	17.80	1.0
European Union (KP)	4.46			89 676		–	129	51					98 929		–	8.3	144 120		–	1.2
European Union (Convention)	4.46			89 597	88 919	-0.76	129	51					98 191	97 696	-0.50	8.3	144 078	149 199	3.55	1.2
Finland	3.81	CS, OTH, T1, T2	CS, D, OTH	915	914	-0.04	151	54					155	138	-11.19	8.4	1 239	1 245	0.47	1.0
France (KP)	7.56	T2, T3	CS	19 406		–	123	51					7 066		–	13	13 213		–	0.69
France (Convention)	7.48	T2, T3	CS	19 495	19 338	-0.81	123	51					7 068	7 258	2.68	13	13 300	13 657	2.68	0.69
Germany	2.75	CS, T1, T2, T3	CS, D	12 635	12 742	0.84	136	43					1 867	1 601	-14.26	6.4	22 979	28 339	23.33	1.1
Greece	4.09	T1, T2	CS, D	677	659	-2.59	118	62					8 473	9 072	7.07	9.5	746	1 046	40.23	1.5
Hungary	3.33	T1, T2	CS, D	815	782	-4.03	133	56					1 194	1 214	1.68	8.0	3 127	3 004	-3.93	1.5
Iceland	6.63	NA	NA	79	74	-5.49			95	49	19		738	487	-34.07	8.4	43	29	-32.77	1.5
Ireland	18.26	CS, T1, T2	CS, D	6 926	6 926	0.00	113	46					4 870	5 097	4.66	5.6	1 506	1 555	3.29	1.3
Italy	3.18	T1, T2	CS, D	5 781	5 756	-0.44	140	47					7 149	7 166	0.24	7.4	8 683	8 676	-0.08	1.5
Japan	0.55	CS, T1	CS, D	3 824	3 962	3.60	102	57					17	13	-23.73	8.0	9 313	9 537	2.41	1.4
Kazakhstan	5.68	T1, T2	CS, D	6 862	5 851	-14.73	102	51					18 073	15 198	-15.91	6.7	1 110	922	-16.88	1.0
Latvia	7.58	T1, T2	CS, D, OTH	419	407	-3.01			132	79	30		102	85	-17.11	8.0	334	368	9.96	1.5
Liechtenstein	6.65	T2	CS	6.0	6.2	3.00			135	87	41		3.9	3.6	-7.99	8.5	1.7	1.7	-2.00	1.1
Lithuania	8.15	T1, T2	CS, D, OTH	741	713	-3.73	125	56					154	100	-35.49	10	701	755	7.65	1.2
Luxembourg	4.18	T1, T2	CS, D	201	199	-1.12						84	9.5	8.7	-7.74	9.8	95	87	-8.65	1.5
Malta	1.39	T1, T2	CS, D	15	15	-0.91						67	10	11	2.95	9.9	44	47	8.78	1.5
Monaco	–	NA	NA	NO	0	–	NO	NO					NO	0	–	NO	NO	0	–	NO
Netherlands	4.36	T1, T2, T3	CS, D	4 134	4 169	0.85			129	79	36		946	1 076	13.72	8.0	12 603	12 238	-2.90	1.5
New Zealand	35.05	T1, T2	CS, D	10 033	10 368	3.34	84	59					29 121	29 803	2.34	12	268	287	6.96	1.1
Norway	4.29	T1, T2	CS, D	802	840	4.69			146	110	56		1 423	2 287	60.78	12	830	842	1.51	1.5
Poland	3.22	T1, T2	CS, D	5 961	5 920	-0.68						79	228	223	-2.09	8.0	11 640	11 724	0.72	1.5
Portugal	5.05	T1, T2	CS, D	1 538	1 549	0.69	132	64					2 050	2 032	-0.89	9.1	2 132	2 126	-0.28	1.2
Romania	9.18	T2	CS	2 074	2 022	-2.49	115	64					9 810	9 136	-6.87	18	4 927	5 180	5.14	1.5
Russian Federation	1.88	CS, T1, T2	CS, D	19 680	19 564	-0.59	116	64					24 204	22 247	-8.09	8.0	20 054	19 081	-4.85	1.3
Slovakia	2.39	T1, T2	CS, D	458	468	2.24	117	57					382	400	4.76	9.4	633	637	0.64	1.5
Slovenia	5.54	T1, T2	CS, D	484	461	-4.88						74	81	109	34.86	8.0	271	288	6.25	1.5
Spain	4.30	CS, T1, T2	CS, D	6 208	6 079	-2.09	135	52					16 474	15 432	-6.33	7.6	27 678	26 568	-4.01	0.84
Sweden	5.60	CS, T1	CS, D	1 476	1 493	1.19	140	49					595	589	-1.01	8.0	1 356	1 377	1.57	1.5
Switzerland	6.95	T2	CS	1 554	1 563	0.55			137	107	39		347	403	16.06	8.7	1 496	1 498	0.17	1.1
Turkey	5.66	T1, T2	CS, D	13 994	14 223	1.64	81	48					31 508	31 140	-1.17	5.1	1.6	2.7	61.69	1.0
Ukraine	3.32	T1, T2, T3	CS	3 997	4 398	10.02			122	84	62		969	859	-11.35	8.4	7 457	7 764	4.12	1.5
United Kingdom of Great Britain and Northern Ireland (KP)	4.76	T1, T2	CS, D	9 919		–	130	65					33 337		–	5.1	4 739		–	1.5
United Kingdom of Great Britain and Northern Ireland (Convention)	4.75	T1, T2	CS, D	9 919	9 844	-0.75	130	65					33 337	34 443	3.32	5.1	4 739	4 817	1.64	1.5
United States of America	2.53	M, T1, T2	CS, D, M	95 023	88 526	-6.84						68	5 280	5 245	-0.66	8.0	68 191	67 776	-0.61	1.5

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of international statistics: FAOSTAT data, downloaded on 31 May 2017 from http://faostat3.fao.org/home/E. At the time of download data for 2015 was not available, therefore, data for 2014 is shown in this table.

[c] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Chapter 10: Emissions from Livestock and Manure Management. Dairy and Other cattle table 10.11; Sheep and Swine table 10.10.

[d] For dairy and other cattle, 2006 IPCC default emission factors (in kg CH_4/head/year) are provided by regions as shown below (see footnote c for source reference).

	Western Europe	Eastern Europe	Oceania	Latin America	Asia	Africa and Middle East	Indian Subcontinent
Dairy cattle	117	99	90	72	68	46	58
Other cattle	57	58	60	56	47	31	27

Table 3.2

Manure management - CH_4 (2015)

	Share of national total[a]	Methods and EF used		Cattle						Sheep	Swine
				Option A		Option B			Option C		
				Dairy cattle	Non-dairy cattle	Mature dairy cattle	Other mature cattle	Growing cattle	Other		
	(%)	Methods	EF	CH_4 IEF (kg/head/yr)							
IPCC default EF[b]				1-112	0 to 26					0.10 to 0.37	0 to 45
Australia	0.48	CS, T2, T3	CS, D						1.7	0.002	23
Austria	0.56	T1, T2	CS, D	12	5.0					0.19	1.2
Belarus	0.94	T1, T2	CS, D	5.1	2.4					0.61	5.6
Belgium	1.07			29	2.9					0.19	4.5
Bulgaria	0.19	T1, T2	CS, D			2.9	2.0	1.4		0.21	4.6
Canada	0.52	T1, T2	CS, D	36	3.4					0.29	5.1
Croatia	1.47	T2	CS			34	9.9	9.9		0.14	7.4
Cyprus	1.63	T1, T2	D	10	4.4					0.28	14
Czech Republic	0.60	T1, T2	CS, D	22	9.0					0.19	6.0
Denmark (KP)	3.84	CS, T2	CS, D	24	13					0.20	3.6
Denmark (Convention)	3.73	CS, T2	CS, D	24	13					0.20	3.6
Estonia	0.43	D, T1, T2	CS, D			13	1.9	3.3		0.19	4.2
European Union (KP)	1.04			19	6.0					0.34	5.8
European Union (Convention)	1.04			19	6.0					0.34	5.8
Finland	0.84	T2	CS	27	5.9					0.25	3.4
France (KP)	1.36	T2	CS	23	4.9					0.29	5.7
France (Convention)	1.36	T2	CS	23	5.0					0.29	5.8
Germany	0.69	T2	CS, D	21	6.9					0.21	4.1
Greece	0.69	T1, T2	CS, D	13	3.6					1.0	16
Hungary	1.09	T1, T2	CS, D	31	8.8					0.30	3.8
Iceland	1.15	NA	NA			29	11	4.0		0.62	5.9
Ireland	2.15	T1, T2	CS, D	10	4.4					0.39	5.0
Italy	0.69	T1, T2	CS, D	13	6.7					0.21	6.2
Japan	0.18	CS, T1	CS, D	60	2.2					0.28	0.52
Kazakhstan	0.22	T1, T2	CS, D	4.6	0.96					0.10	4.0
Latvia	0.89	T1, T2	CS, D			15	1.9	1.1		0.19	2.6
Liechtenstein	1.34	T2	D			27	15	6.9		1.3	4.6
Lithuania	1.33	T1, T2	CS, D	9.7	5.9					0.40	4.5
Luxembourg	0.63	T1, T2	CS, D						10	0.21	5.2
Malta	0.18	T1, T2	CS, D						6.1	0.28	0.47
Monaco	–	NA	NA	NO	NO					NO	NO
Netherlands	2.30	T1, T2	CS, D			42	9.1	8.7		0.19	6.7
New Zealand	1.44	T1, T2	CS, D	5.8	0.79					0.12	5.9
Norway	0.49	T1, T2	CS, D			22	7.7	4.3		0.19	2.2
Poland	0.42	T1, T2	CS, D						6.1	0.19	2.0
Portugal	0.86	T1, T2	CS, D	8.5	2.2					0.38	7.4
Romania	1.38	T1, T2	CS, D	6.3	2.5					0.56	9.3
Russian Federation	0.16	CS, T1, T2	CS, D	5.1	3.2					0.19	3.6
Slovakia	0.38	T1, T2	CS, D	6.8	1.8					0.28	6.7
Slovenia	1.48	T1, T2	CS, D						17	0.24	4.1
Spain	2.52	CS, T1, T2	CS, D	30	7.1					0.24	9.5
Sweden	0.48	T1, T2	CS, D	9.0	3.6					0.19	1.2
Switzerland	1.68	T2	CS, D			28	18	7.1		1.3	4.3
Turkey	0.67	T1	D	19	1.0					0.12	4.0
Ukraine	0.66	T2	CS			4.4	2.7	1.7		0.23	3.1
United Kingdom of Great Britain and Northern Ireland (KP)	0.69	T1, T2	CS, D	17	8.9					0.20	5.2
United Kingdom of Great Britain and Northern Ireland (Convention)	0.69	T1, T2	CS, D	17	8.9					0.20	5.2
United States of America	1.01	M, T1, T2	CS, D, M						16	0.55	14

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Chapter 10 Emissions from Livestock and Manure Management. Dairy, Other cattle and Swine table 10.14; Sheep table 10.15. Default emission factors are provided according to climate regions (cool, temperate, warm), as shown below.

Default IPCC emission factors according to climate regions[b]

	Dairy cattle			Other cattle			Swine		
	cool	temperate	warm	cool	temperate	warm	cool	temperate	warm
North America	48-58	63-98	105-112	1	2	2	10-23	13-39	22-45
Western Europe	21-29	34-75	83-92	6-8	10-21	24-26	6-12	9-27	19-33
Eastern Europe	11-15	20-37	42-46	6-8	9-19	21-23	3-5	4-12	10-17
Oceania	23-26	27-30	31	1	2	2	11-22	13-24	13-24
Latin America	1	1	2	1	1	1	1	1	2
Africa	1	1	1	0	1	1	0-1	1	1-2
Middle East	2	2	2-3	1	1	1	1-2	2-5	5-6
Asia	9-12	13-26	28-31	1	1	1	2	3-6	6-7
Indian Subcontinent	5	5	5-6	2	2	2	2-3	3-5	6

	Sheep		
	cool	temperate	warm
Developed countries	0.19	0.28	0.37
Developing countries	0.10	0.15	0.20

Table 3.3

Manure management - N_2O (2015)

	N excretion rates						Share of national total[a]	Methods and EF used		N_2O IEF				
	Option A		Option B			Option C								
	Dairy cattle	Non-dairy cattle	Mature dairy cattle	Other mature cattle	Growing cattle	Other				Dairy cattle	Non-dairy cattle	Sheep	Swine	Other livestock
	(kg N / head / year)						(%)	Methods	EF	(kg N_2O/head/yr)				
IPCC default EF[b]	0.35 to 0.70	0.31 to 0.79												
Australia						46	0.19	CS, T2, T3	D			NA	0.079	0.004
Austria	102	46					0.56	T2	CS	0.70	0.36	0.051	0.045	0.003
Belarus	77	36					1.01	T1, T2	D	0.35	0.21	0.44	0.087	0.007
Belgium	357	163					0.63			0.77	0.57	0.017	0.037	0.001
Bulgaria			100	67	40		0.78	T1	D			0.038	0.016	0.017
Canada	102	47					0.66	T1	D	1.3	0.70	0.046	0.029	0.017
Croatia			89	50	50		0.62	T2	CS, D			0.011	0.018	0.005
Cyprus	96	42					0.76	T1	D	0.72	0.32	0.097	0.044	0.016
Czech Republic	133	67					0.79	T1, T2	CS, D	3.0	0.87	0.036	0.21	0.009
Denmark (KP)	143	43					1.51	T2	D	1.0	0.37	0.029	0.066	0.010
Denmark (Convention)	248	91					1.48	T2	CS, D	1.0	0.37	0.046	0.066	0.010
Estonia			120	47	32		0.34	T1, T2	CS, D			0.085	0.015	0.007
European Union (KP)	116	53					0.48			0.54	0.23	0.015	0.051	0.004
European Union (Convention)	116	53					0.48			0.54	0.23	0.014	0.051	0.004
Finland	133	52					0.52	T2	D	0.79	0.41	0.077	0.032	0.008
France (KP)	114	59					0.41	T2	CS, D	0.15	0.088	0.034	0.005	0.001
France (Convention)	114	59					0.40	T2	CS, D	0.15	0.088	0.034	0.005	0.001
Germany	120	42					0.43	T2	CS, D	0.78	0.40	0.076	0.080	0.004
Greece	114	55					0.32	D	D	0.82	0.28	0.012	0.11	0.003
Hungary	109	51					0.76	T1, T2	CS, D	1.1	0.47	0.077	0.063	0.004
Iceland			95	42	15		1.11	NA	NA			0.15	NO	0.030
Ireland	101	50					0.84	T2	CS, D	0.12	0.13	0.008	0.026	0.003
Italy	116	51					0.49	T2	CS, D	0.61	0.28	0.013	0.071	0.006
Japan	85	51					0.30	CS, T1	CS, D	1.8	1.2	IE	0.42	0.004
Kazakhstan	61	39					0.73	T1	CS, D	0.67	0.43	0.043	0.63	0.028
Latvia			109	62	20		0.85	T1, T2	D			0.092	0.059	0.008
Liechtenstein			115	80	36		0.68	NA	NA			0.083	0.005	0.011
Lithuania	108	41					1.00	T1, T2	D	0.51	0.25	0.042	0.014	0.005
Luxembourg						59	0.34	T2	D			0.025	0.055	0.016
Malta						68	0.48	T1, T2	CS, D			0.25	0.036	0.004
Monaco	NO	NO					–	NA	NA	NO	NO	NO	NO	NO
Netherlands			130	77	40		0.35	CS	CS			IE	IE	
New Zealand	122	76					0.11	T1	CS	NO	NO	NO	0.15	0.001
Norway			129	65	44		0.33	T1, T2	CS, D			0.045	0.057	0.004
Poland						54	0.54	T2	CS, D			0.044	0.081	0.001
Portugal	118	50					0.28	T2	CS, D	0.53	0.040	0.012	0.003	0.005
Romania	54	38					0.57	T2	D	0.21	0.12	0.014	0.045	0.002
Russian Federation	100	63					0.36	T1	CS, D	0.63	0.37	0.082	0.16	0.007
Slovakia	105	45					0.41	T2	CS	0.73	0.25	0.093	0.090	0.002
Slovenia						58	0.58	T1, T2	CS, D			0.18	0.17	0.016
Spain	115	42					0.53	CS, T2	D	0.34	0.14	0.012	0.039	0.001
Sweden	131	42					0.64	T2	CS, D	0.79	0.27	0.027	0.075	0.008
Switzerland			115	80	34		0.75	CS	CS, D			0.10	0.004	0.005
Turkey	80	37					0.66	T1	D	0.32	0.53	NA	0.083	0.003
Ukraine			134	98	79		0.64	T2	CS			0.007	0.095	0.003
United Kingdom of Great Britain and Northern Ireland (KP)	128	53					0.29			0.52	0.26	0.004	0.077	0.001
United Kingdom of Great Britain and Northern Ireland (Convention)	128	53					0.29	T2	D	0.52	0.26	0.004	0.077	0.001
United States of America						49	0.27	M, T1, T2	CS, D, M			0.20	0.097	0.003

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of default N excretion rates: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Chapter 10 Emissions from Livestock and Manure Management, table 10.19, page 10.59. Default values are provided by regions as shown below. The unit of the IPCC defaults is kg N (1000 kg animal mass)$^{-1}$ day^{-1}.

IPCC defaults:

	North America	Western Europe	Eastern Europe	Oceania	Latin America	Africa	Middle East	Asia
Dairy cattle	0.44	0.48	0.35	0.44	0.48	0.6	0.7	0.47
Non-dairy cattle	0.31	0.33	0.35	0.5	0.36	0.63	0.79	0.34
Sheep	0.42	0.85	0.9	1.13	1.17	1.17	1.17	1.17
Swine	0.5	0.68	0.74	0.73	1.64	1.64	1.64	0.5
Poultry	0.83	0.83	0.82	0.82	0.82	0.82	0.82	0.82

Table 3.4

Agriculture soils - N_2O (2015)

	Methods and EF used		Direct N_2O emissions from managed soils								Indirect N_2O emissions from managed soils				
			Share of national total[a]	Inorganic N fertilizers		Organic N fertilizers	Urine and dung deposited by grazing animals	Crop residue	Loss/gain of soil organic matter	Cultivation of organic soils	Share of national total[a]	Atmospheric deposition		Nitrogen leaching and run-off	
				Activity data	N_2O IEF							Activity data	N_2O IEF	Activity data	N_2O IEF
	Methods	EF		Use of synthetic fertilizers		N_2O IEF									
			(%)	(kg N / year)	(kg N_2O-N / kg N)						(%)	(kg N / year)	(kg N_2O-N / kg N)	(kg N / year)	(kg N_2O-N / kg N)
IPCC default EF					0.01 (0.003-0.03)[b]					8 (2-24)[c], 16 (5-48)[d]			0.01 (0.002-0.05)[e]		0.0075 (0.0005-0.025)[e]
Australia	CS, T1, T2	CS, D	1.83	1 346 608 005	0.004	0.009	0.004	0.010	0.002	8.0	0.49	483 725 811	0.003	561 995 900	0.008
Austria	T1	D	2.17	120 933 620	0.010	0.010	0.016	0.010	0.010	8.2	0.43	32 794 071	0.010	52 914 457	0.008
Belarus	T1	D	11.45	443 000 000	0.010	0.010	0.020	0.010	0.006	8.0	1.64	85 028 706	0.010	304 054 106	0.008
Belgium	NA	NA	2.19	143 591 566	0.010	0.010	0.020	0.010	0.010	8.0	0.60	40 307 962	0.010	148 151 145	0.008
Bulgaria	T1	D	4.64	322 974 000	0.010	0.010	0.012	0.010	0.010	NO	1.22	24 546 770	0.010	180 925 193	0.008
Canada	T1, T2	CS, D	2.59	2 593 000 000	0.009	0.012	0.002	0.009	0.014	8.0	0.55	255 061 264	0.010	793 682 672	0.008
Croatia	T1	D	3.13	87 735 897	0.010	0.010	0.012	0.010	0.010	8.0	1.00	15 697 036	0.010	46 091 417	0.008
Cyprus	T1	D	1.14	7 533 000	0.010	0.010	NO	0.010	NO	NO	0.43	3 141 396	0.010	6 154 753	0.008
Czech Republic	T1, T2	CS, D	2.01	270 023 000	0.010	0.010	0.018	0.010	0.010	NO	0.69	59 556 478	0.010	173 607 934	0.008
Denmark (KP)	CS, D, T1, T2	D	6.86	203 483 000	0.010	0.010	0.018	0.010	0.010	9.1	1.13	32 474 577	0.010	165 331 000	0.005
Denmark (Convention)	CS, D, T1, T2	CS, D	6.68	203 631 325	0.010	0.010	0.018	0.010	0.010	9.0	1.10	32 524 154	0.010	165 380 140	0.005
Estonia	CS, D, T1, T2	D	2.88	35 806 000	0.010	0.010	0.019	0.010	NO	8.0	0.70	7 702 156	0.010	25 877 102	0.008
European Union (KP)	NA	NA	3.09	11 260 839 106	0.010	0.010	0.015	0.010	0.010	6.8	0.70	1 907 456 353	0.010	6 055 283 040	0.007
European Union (Convention)	NA	NA	3.09	11 249 209 476	0.010	0.010	0.015	0.010	0.010	6.9	1.10	1 903 152 898	0.010	6 047 079 077	0.007
Finland	T1, T2	CS, D	5.47	143 478 875	0.010	0.010	0.017	0.010	NA	9.7	0.70	9 937 308	0.010	97 383 353	0.008
France (KP)	T1, T2	CS, D	5.98	2 223 051 309	0.010	0.010	0.019	0.010	IE	8.0	1.37	224 748 834	0.011	1 450 022 097	0.008
France (Convention)	T1, T2	CS, D	5.91	2 227 448 112	0.010	0.010	0.019	0.010	IE	8.0	1.35	224 748 834	0.011	1 450 022 097	0.008
Germany	T1, T2	CS, D	2.39	1 822 791 000	0.010	0.010	0.019	0.010	NA	4.9	0.67	412 188 199	0.010	1 160 198 222	0.007
Greece	T1	D	2.47	185 122 667	0.010	0.010	0.011	0.010	NO	8.0	0.88	70 185 143	0.010	146 637 474	0.008
Hungary	T1	D	5.04	358 421 000	0.010	0.010	0.015	0.010	0.010	NO	0.36	27 743 110	0.010	25 980 679	0.008
Iceland	T1b, T2	CS, D	3.50	11 629 630	0.010	0.010	0.011	0.010	NE	0.96	1.08	4 303 455	0.010	8 203 963	0.008
Ireland	T1	CS, D	9.35	330 959 000	0.010	0.010	0.019	0.010	0.010	4.3	0.81	42 348 317	0.010	81 294 023	0.008
Italy	CS, T1	CS, D	1.58	517 854 000	0.010	0.010	0.011	0.010	NO	8.0	0.49	136 266 745	0.010	426 007 088	0.008
Japan	CS, T2	CS, D	0.27	394 443 424	0.007	0.006	0.008	0.010	0.004	1.4	0.14	129 266 828	0.010	353 909 331	0.008
Kazakhstan	T1, T2	CS, D	2.51	91 530 000	0.009	0.011	0.014	0.010	0.010	NO	0.28	111 654 338	0.010	901 612 118	0.001
Latvia	T1	D	13.08	75 800 000	0.010	0.010	0.019	0.010	NO	12	1.57	12 610 093	0.010	33 736 388	0.008
Liechtenstein	T1b	D	2.44	191 288	0.010	0.010	0.018	0.010	NO	8.0	0.95	103 845	0.026	175 991	0.008
Lithuania	T1	D	10.13	166 611 111	0.010	0.010	0.019	0.010	0.010	8.0	1.97	22 231 632	0.010	83 050 089	0.008
Luxembourg	T1	CS, D	1.04	12 714 469	0.010	0.010	0.010	0.010	2.0	NO	0.38	3 284 928	0.010	6 837 457	0.007
Malta	T1	D	0.68	657 479	0.010	0.010	NO	0.010	0.010	NO	0.23	380 646	0.010	968 271	0.008
Monaco	NA	NA	–	NO	NO	NO	NO	NO	NO	NO	–	NO	NO	NO	NO
Netherlands	T1, T1b, T2	CS, D	2.49	269570039	0.013	0.009	0.033	0.011	NO	4.4	0.31	50137431	0.011	99911737	0.008
New Zealand	T1, T2	CS, D	8.24	428 682 000	0.006	0.004	0.008	0.010	0.010	8.0	1.64	180 724 873	0.010	132 216 818	0.008
Norway	T1	CS, D	2.70	104 154 948	0.010	0.010	0.016	0.010	IE	13	0.45	17 024 264	0.010	46 648 676	0.007
Poland	T1	CS, D	2.65	1 003 600 000	0.010	0.010	0.019	0.010	NO	8.0	0.64	169 714 745	0.010	481 644 699	0.008
Portugal	T1, T2	CS, D	2.45	121 027 943	0.010	0.010	0.018	0.010	0	NO	0.61	21 449 768	0.011	87 754 866	0.008
Romania	T1	D	3.21	321 300 000	0.010	0.010	0.015	0.010	NO	8.0	1.00	79 811 730	0.010	225 149 806	0.008
Russian Federation	CS, T1, T2	CS, D	2.11	1 263 420 000	0.014	0.010	0.018	0.010	0.010	8.0	0.37	510 450 980	0.010	2 083 419 378	0.008
Slovakia	T1, T2	CS, D	3.02	114 773 000	0.010	0.010	0.016	0.010	NO	NO	0.92	22 265 067	0.010	78 306 391	0.008
Slovenia	T1	D	1.99	28 319 000	0.010	0.010	0.017	0.010	10	8.0	0.66	8 971 099	0.010	65 804	2.2
Spain	CS, T1a, T1b	D	2.68	1 068 103 000	0.010	0.010	0.014	0.010	NA	NO	0.39	234 285 619	0.010	61 300 133	0.008
Sweden	CS, T1, T2	CS, D	5.34	190 200 000	0.010	0.010	0.017	0.010	NO	13	0.56	23 659 656	0.010	53 746 497	0.008
Switzerland	CS, T1	CS, D	2.22	43 935 533	0.010	0.010	0.019	0.010	0.010	8.0	0.93	26 375 144	0.026	34 573 339	0.007
Turkey	T1	D	3.67	1 486 568 300	0.010	0.010	0.014	0.010	NO	8.0	1.15	394 770 890	0.010	1 025 294 913	0.008
Ukraine	CS, T2	CS	7.53	1 015 921 680	0.010	0.010	0.020	0.010	0.010	8.0	1.86	260 076 801	0.010	1 359 430 172	0.008
United Kingdom of Great Britain and Northern Ireland (KP)	CS, T1, T1a, T2	CS, D	2.28	1 102 775 501	0.009	0.005	0.004	0.010	0.010	8.0	0.56	114 712 381	0.010	648 031 002	0.008
United Kingdom of Great Britain and Northern Ireland (Convention)	CS, T1, T1a, T2	CS, D	2.28	1 102 775 501	0.009	0.005	0.004	0.010	0.010	8.0	0.56	114 712 381	0.010	648 031 002	0.008
United States of America	D, T3	D, M	3.24	12 229 974 939	0.010	0.009	0.007	0.006	0.007	9.9	0.58	2 358 035 612	0.015	6 158 938 176	0.007

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, table 11.1, page 11.11. IEFs for N-fixing crops and crop residues are shown in the unit kg N_2O-N/kg N. The unit of the IPCC default emission factor is also kg N_2O-N/kg N.

[c] For cultivation of histosols (drained/managed organic soils), the two default values refer to temperate. The values in parenthesis indicate the range as presented in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, table 11.1, page 11.11.

[d] For cultivation of histosols (drained/managed organic soils), the two default values refer to temperate tropical. The values in parenthesis indicate the range as presented in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, table 11.1, page 11.11.

[e] Source of default emission factor: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, table 11.3, page 11.24.

Table 4.1a

Methods and emission factors used (2015)

	Forest Land						Cropland						Grassland					
	CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		CH_4		N_2O	
	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF
Australia	CS, T2, T3	CS, M	CS	CS	CS, T2	CS	T1, T3	D, M	CS	CS	CS, T2	CS	T1, T2, T3	CS, D, M	CS	CS	CS, T2	CS
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belarus	T1, T2	CS, D	T1	CS, D	T1	CS, 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	T1	D	T1, T2	CS, D	NA	NA	NA	NA
Canada	T3	CS	T2	CS	T2	CS	T1, T2, T3	CS, D	T2	CS	T2	CS	NA	NA	T1	D	T1	D
Croatia	T1, T2	CS, D	T1	D	T1	D	T1	CS, D	T1	D	T1	CS, D	T1	CS, D	T1	D	T1	D
Cyprus	T1, T2	OTH	T1	OTH	T1	OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	T2	CS, D	T2	CS, D	T2	CS, D	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T1, T2	CS, D	NA	NA	NA	NA
Denmark (KP)	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	T1	D	NA	NA	T1	D	T1	D
Denmark (Convention)	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	T1	D	NA	NA	T1	D	T1	D
Estonia	T1, T2	D, OTH	T2	D	T2	D	T1, T2	D	NA	NA	T1	D	T1, T2	D, OTH	T2	D	T2	D
European Union (KP)	NA	NA	NA	NA	NA	NA	NA	NA										
European Union (Convention)	NA	NA	NA	NA	NA	NA	NA	NA										
Finland	T2, T3	CS, D	T2	CS, D	T1, T2	CS, D	T2, T3	CS, D	NA	NA	T1	D	T2, T3	CS, D	T2	D	T1, T2	D
France (KP)	T1, T2	CS, D	T1, T2	CR, D	T1, T2	CR, D	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1, T2	D	T1, T2	D
France (Convention)	T1, T2	CS, D	T1, T2	CR, D	T1, T2	CR, D	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1, T2	D	T1, T2	D
Germany	CS, T2	CS	T2	CS, D	T2	CS, D	T2	CS	T2	CS	T2	CS, D	T2	CS	T2	CS	T2	CS, D
Greece	OTH, T1, T2	CS, D, OTH	T1	D	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1	CS, D	T1	D	T1	D
Hungary	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	T1	D	T1	D
Iceland	T1, T2, T3	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1	D	NA	NA	T1, T2, T3	CS, D	T1, T2	CS, D	T2	CS, D
Ireland	CS, T1, T2, T3	CS	D, T1	CS, D	D, T1	CS, D	CS, D	D	D, T1	D	D, T1	D	D, T1, T3	CS, D	D, T1	D	D, T1	D
Italy	T1, T2, T3	CS, D	T2	CS, D	T2	CS, D	T1, T2	CS, D	T1	D	T1	D	T1, T2, T3	CS, D	T1	CS	T1	CS
Japan	T1, T2, T3	CS, D	T1	D	T1, T2	CS, D	T1, T2, T3	CS, D	T1	CS, D	CS, T1	CS, D	T1, T2, T3	CS, D	T1	D	CS	CS
Kazakhstan	T2	CS	T2	D	T2	D	T2	CS	NA	NA	NA	NA	T2	CS	T1	D	T1	D
Latvia	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	D, T1	D	D	D
Liechtenstein	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	T2	CS	T2	CS	NA	NA	T2	CS
Lithuania	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2	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	T1	D
Malta	OTH, T1	D, OTH	NA	NA	NA	NA	T1	D, OTH	NA	NA	NA	NA	T1	D, OTH	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	T1, T2	CS, D	T1	CS, D	T1	CS, D	CS, T1	CS, D	NA	NA	D, T1	CS	CS, T1, T2	CS, D	CS	D	CS, D, T1	CS, D
New Zealand	T1, T2, T3	CS, D	T1, T2	CS, D	T1, T2	CS, D	T1, T2, T3	CS, D	NA	NA	T1, T2	CS, D	T1, T2, T3	CS, D	T1, T2	CS, D	T1, T2	CS, D
Norway	T1, T2, T3	CS, D	T1	D	T1	D	T1, T2, T3	CS, D	T1	D	T1	D	T1, T2, T3	CS, D	T1	D	T1	D
Poland	T2, T3	CS, D	D, T2	CS, D	D, T2	CS, D	T1, T2	D	NA	NA	T1	D	D, T1, T2	CS, D	D, T1	CS, D	D, T1	CS, D
Portugal	CS, T2	CS, D	D	D	D	D	NA	NA	D	D	D	D	NA	NA	D	D	D	D
Romania	T1, T2, T3	CS, D	T1	D	T1	D	T1	D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D
Russian Federation	CS, T2	CS, D	T1, T2	CS, D	T1, T2	CS, D	CS, T1	CS, D	T1	D	NA	NA	CS, T1, T3	CS	T1	D	T1	D
Slovakia	T1, T2	CS, D	T2	CS, D	T2	CS, D	T1, T2	CS, D	NA	NA	T2	CS, D	T1, T2	CS, D	NA	NA	T2	CS, D
Slovenia	CS, D, T1, T2, T3	CS, D	D, T1	D	D, T1	D	D, T1, T2, T3	CS, D	NA	NA	NA	NA	D, T1, T2, T3	CS, D	NA	NA	D, T1	D
Spain	CS, T1, T2	CS, D	CS	D	CS, T1	D	T1, T2	CS, D	NA	NA	T1	D	CS, T1, T2	CS, D	CS	D	CS, T1	D
Sweden	NA	NA	T1	D	T1	D	NA	NA	T1	D	T1	D	NA	NA	T1	CS, D	T1	D
Switzerland	T2, T3	CS	T1	CS	T1	D	T2	CS	NA	NA	T1	D	T2	CS	T1	D	T1	D
Turkey	T2	CS	T2	D	T2	D	T1, T2	D	NA	NA	T1	D	D, T1, T2	CS, D	NA	NA	NA	NA
Ukraine	CS, T1, T2	CS, D	CS, T1	D	CS, T1	D	CS, T1, T3	CS, D	CS, T1	D	CS, T1	D	CS, T1, T3	CS, D	T1	D	T1	D
United Kingdom of Great Britain and Northern Ireland (KP)	CS, T3	CS	NA	NA	D, T1	CS, D	CS, D, T1, T3	CS, D	D	CS	D	CS, D	CS, D, T1, T3	CS, D	D	CS	D	CS, D
United Kingdom of Great Britain and Northern Ireland (Convention)	CS, T3	CS	NA	NA	D, T1	CS, D	CS, D, T1, T3	CS, D	D	CS	D	CS, D	CS, D, T1, T3	CS, D	D	CS	D	CS, D
United States of America	T2, T3	CS, D	T2	D	T1, T2	D	T2, T3	CS, M	NA	NA	NA	NA	T2, T3	CS, M	T1	D	T1	D

Table 4.1b

Methods and emission factors used (2015)

	Wetlands						Settlements						Other Land						Harvested Wood Products	
	CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2		CH_4		N_2O		CO_2	
	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF
Australia	T2, T3	CS, M	NA	NA	NA	NA	T2, T3	CS, M	CS	CS	CS, T2	CS	NA	NA	NA	NA	NA	NA	T2, T3	D, M
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Belarus	T2	CS	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	T1	D	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T1	D
Canada	T2, T3	CS	T2	CS	T2	D	T2, T3	CS	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA	T3	CS
Croatia	T1	CS, D	NA	NA	T1	D	T1, T2	CS, D			T1	D	NA	NA	NA	NA	NA	NA	T2	D
Cyprus	NA	NA	NA	NA	NA	NA							NA	NA					NA	NA
Czech Republic	T1, T2	CS, D	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	T1, T2	D
Denmark (KP)	NA	NA	T1	D	T1	D	NA	NA			T1	D	NA	NA						
Denmark (Convention)	NA	NA	T1	D	T1	D	NA	NA			T1	D	NA	NA					NA	NA
Estonia	T2	CS, D, OTH	T2	CS	T2	CS	T2	OTH	NA	NA	NA	NA	T2	OTH	NA	NA	NA	NA	T2, T3	CS, D
European Union (KP)	NA	NA			NA	NA					NA	NA			NA	NA				
European Union (Convention)	NA	NA	NA	NA	NA	NA					NA	NA			NA	NA				
Finland	T1, T2, T3	CS, D	T1, T2	CS, D	T2	CS	T2, T3	CS	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	D
France (KP)	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	NA	NA	NA	NA	T3	CS
France (Convention)	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	T1, T2	D	T1, T2	D	T1, T2	CS, D	NA	NA	NA	NA	T3	CS
Germany	T2	CS	T2	CS	T2	CS, D	T2	CS	T2	CS	T2	CS, D	NA	NA	NA	NA	NA	NA	CS, T2	D
Greece	T1	D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	T2	D
Hungary	T1, T2	CS, D	NA	NA	T1	D	T1, T2, T3	CS, D	NA	NA	T1	D	T2	CS, D	NA	NA	T1	D	T2	D
Iceland	RA, T1, T2	CS, D	RA, T1, T2	CS, D	T2	CS, D	T1, T2, T3	CS			NA	NA	NA	NA	T2	CS, D	T2	CS, D	NA	NA
Ireland	D, T1, T2, T3	CS, D	D, T2	CS, D	D, T1, T2	CS, D	D, T1, T3	CS, D, OTH			T1, T2	D	T1, T3	CS			T1	D	T2, T3	D
Italy	NA	NA	NA	NA	NA	NA	T1	D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	CS
Japan	T2	CS, D	NA	NA	NA	NA	T2	CS, D			NA	NA	T2	CS, D			T1	CS, D	T2, T3	CS, D
Kazakhstan	NA	NA	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	T1, T2	CS, D	T1	D	T1	D	T1, T2	CS, D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	CS
Liechtenstein	T2	CS	NA	NA	T2	CS	NA	NA			T2	CS	T2	CS			T2	CS	T2	NA
Lithuania	T1	D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1, T2	D	T1, T2	CS, D	NA	NA	T1, T2	D	T1, T2	D
Luxembourg	T1	CS, D	NA	NA	T1	D	T1	CS, D	NA	NA	T1	D	T1	CS	NA	NA	T1	D	NA	NA
Malta	NA	NA	NA	NA	NA	NA	T1	D, OTH	NA	NA	NA	NA	T1	OTH	NA	NA	NA	NA	NA	NA
Monaco	NA	NA	NA	NA	NA	NA	T1, T2	D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	T1, T2	CS, D	NA	NA	D, T1	CS	T1	CS, D			T1	CS	T1	CS, D			T1	CS	T1	D
New Zealand	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T1, T2	CS, D	NA	NA	T1, T2	CS, D	T2	CS, D
Norway	T1, T2, T3	CS, D	T1	D	T1	D	T1, T2, T3	CS, D	NA	NA	T1, T2	D	T1, T2, T3	CS, D	NA	NA	T1	D	T2	D
Poland	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	T2	D	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							D	D
Romania	NO, T1	D, NO	NO	NO	NO, T2	D, NO	T1	D			T1	D	T1	D			T1	D	T2	CS
Russian Federation	T1	D	T1	D	T1	D	CS, T1, T2	CS	NA	NA	T1	D	T1	CS	NA	NA	T1	D	T1	D
Slovakia	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	T2	CS, D	T1, T2	CS, D	NA	NA	T2	CS, D	T2	CS, D
Slovenia	D, T1, T2	CS, D	NA	NA	NA	NA	D, T2	CS, D	NA	NA	D, T1	D	D, T2	CS, D	NA	NA	D, T1	D	D, T1	D
Spain	T1, T2	CS, D	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	T2	D
Sweden	NA	NA	T1	D	T1	D					T1	D	NA	NA				NA	NA	NA
Switzerland	NA	NA	NA	NA	T1	D	NA	NA			NA	NA	T2	CS			T1	D	T2	D
Turkey	NA	NA	NA	NA	NA	NA	CS	D			NA	NA	NA	NA					T2	D
Ukraine	CS, T1	D	CS, T1	D	T1	D	CS, T1	CS, D	NA	NA	T1	D	CS, T1	CS, D	NA	NA	T1	D	T1	D
United Kingdom of Great Britain and Northern Ireland (KP)	D	D	NA	NA	D	CS	CS, D, T1, T3	CS, D	D	CS	D	CS, D	NA	NA	NA	NA	NA	NA	CS, T3	CS
United Kingdom of Great Britain and Northern Ireland (Convention)	D	D	NA	NA	D	CS	CS, D, T1, T3	CS, D	D	CS	D	CS, D	NA	NA	NA	NA	NA	NA	CS, T3	CS
United States of America	T1, T2	CS, D	T1	D	T1	D	T2, T3	CS	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T3	CS

Table 4.2

Forest land - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)[a,b]

	Forest land remaining forest land							Land converted to forest land						
	IEF (t C/ha)													
	CSC[c] in living biomass/area[d]			Net CSC[c] in dead wood/area	Net CSC[c] in litter/area	Net CSC[c] in soils/area[e,f]		CSC[c] in living biomass/area[d]			Net CSC[c] in dead wood/area	Net CSC[c] in litter/area	Net CSC[c] in soils/area[e,f]	
	Gains	Losses	Net Change			Mineral soils	Organic soils	Gains	Losses	Net Change			Mineral soils	Organic soils
IPCC default EF														
Australia	0.065	–0.012	0.053	0.006	–0.002	0.001	IE, NA	0.43	IE, NO	0.43	0.33	0.15	0.056	89
Austria	2.4	-2.1	0.31	0.059	IE, NE	-0.18	NO	1.7	-0.52	1.2	0.016	1.2	0.70	NO
Belarus	1.5	-0.89	0.62	0.046	0.072	0.37	NE	NE	NE	NE	NE	NE	NE	NE
Belgium	1.1	-0.16	0.94			0.53	NO	2.5	–0.001	2.5	0.090	0.36	1.39	NO
Bulgaria	0.40	IE, NO	0.40	0.026	0.040	–0.057	NO	2.2	-0.35	1.8	NO	0.27	-1.2	NO
Canada	2.9	-2.7	0.22	0.079	-0.13	0.036	IE	3.9	-1.5	2.4	0.27	0.33	-0.18	IE, NO
Croatia	1.7	-1.1	0.64	NO	NO	NO	NO	1.2	-0.65	0.52	NO	IE, NO	0.74	NO
Cyprus	0.33	–0.036	0.29	NO	NO	NO	NO	NE	NE	NE	NE	NE	NE	NO
Czech Republic	3.0	-2.3	0.67	NO	NO	NO	NO	1.9	NO	1.9	0.007	0.54	0.12	NO
Denmark (KP)	1.2	NO	1.2	–0.017	-0.97	NA	-1.3	0.14	-0.85	-0.71	–0.026	-0.92	0.10	-1.3
Denmark (Convention)	1.2	NO	1.2	–0.017	-0.97	NA, NO	-1.3	0.14	-0.85	-0.71	–0.026	-0.92	0.10	-1.3
Estonia	0.20	IE	0.20	0.013	NO	0.14	-0.19	0.31	-0.003	0.31	0.006	0.30	–0.40	-0.32
European Union (KP)	1.3	-0.70	0.59	0.012	–0.013	0.096	-0.40	1.9	-0.43	1.4	0.023	0.21	0.19	-0.77
European Union (Convention)	1.3	-0.70	0.59	0.012	–0.013	0.096	-0.40	1.9	-0.43	1.4	0.023	0.21	0.19	-0.77
Finland	1.7	-1.4	0.37	IE	IE	0.21	-0.27	1.5	–0.042	1.5	NA	IE,NA	0.07	-1.8
France (KP)	1.7	-1.1	0.61	–0.030	NE	NE	NO	1.4	-0.16	1.2	0.044	0.24	0.15	NE, NO
France (Convention)	1.7	-1.1	0.61	–0.030	NE	NE	NO	1.4	-0.16	1.2	0.044	0.24	0.15	NE, NO
Germany	1.0	IE	1.0	–0.052	–0.013	0.41	-2.2	3.6	-0.36	3.3	0.034	0.47	–0.36	-2.2
Greece	0.17	IE, NO	0.17	NA, NO	NA, NO	NA, NO	NA, NO	0.81	-0.46	0.35	NE, NO	NE, NO	NE, NO	NO
Hungary	0.57	IE, NO	0.57	NO	NO	NO	-2.6	2.0	–0.007	2.0	IE, NE, NO	1.4	0.35	NO
Iceland	0.097	IE	0.097	IE, NE	NE	NE	-0.37	1.2	–0.020	1.2	NA, NE, NO	0.14	0.40	-0.37
Ireland	5.4	-5.8	-0.36	IE	0.74	NO	-0.46	4.9	-2.2	2.7	NO,IE	0.93	NE, NO	-0.73
Italy	2.5	-1.3	1.1	0.008	0.014	NA, NO	NO	2.6	-1.4	1.2	0.008	0.014	0.18	NO
Japan	0.68	–0.006	0.67	–0.023	0.003	0.025	NO	3.0	–0.002	3.0	0.65	0.28	0.15	NO
Kazakhstan	0.24	NO	0.24	IE	NE	NE	NO	IE, NO	NO	IE, NO	IE, NO	NE, NO	NE, NO	NO
Latvia	3.1	-2.7	0.44	0.20	NA	NA	-2.6	0.53	IE, NE, NO	0.53	0.10	0.10	NA, NE, NO	-0.79
Liechtenstein	2.5	-2.4	0.098	0.014	IE	NO	NO	1.2	NO	1.2	NO	NO	NO	NO
Lithuania	1.0	IE	1.0	0.037	NO	NO	IE	1.5	IE	1.5	NO	1.1	NE	IE
Luxembourg	3.1	-2.0	1.1	NO	NO	NO	NO	3.1	–0.069	3.1	0.28	0.96	1.7	NO
Malta	NE, NO	0	0	0	0	0	NO	NO	NO	NO	NO	NO	NO	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	2.1	-0.97	1.1	0.24	NO	NO	NO	3.6	-0.31	3.3	NO	NO	–0.025	-0.22
New Zealand	1.2	-0.79	0.42	–0.025	–0.004	0.000	-0.12	8.3	-4.7	3.5	1.0	-0.21	-0.33	-0.68
Norway	0.91	-0.39	0.52	0.025	0.12	0.003	-0.27	0.64	–0.004	0.63	0.018	1.7	-0.35	-0.93
Poland	0.78	IE	0.78	NO	NO	0.11	-0.56	1.0	NO	1.0	NO	NO	0.11	-0.68
Portugal	2.0	-1.4	0.60	IE	–0.002	0.003	NO	2.3	-0.63	1.7	IE	0.084	0.38	NO
Romania	1.6	-0.73	0.90	NO	NO	NO	-0.68	1.1	IE	1.1	0.084	NO	1.8	NO
Russian Federation	0.31	–0.089	0.22	0.017	0.006	0.024	-0.71	0.011	–0.004	0.008	0.001	0.000	0.002	NA, NO
Slovakia	2.5	-1.9	0.63	NO	NO	NO	NO	1.6	NO	1.6	NO	0.42	1.2	NO
Slovenia	1.2	IE	1.2	–0.001	NO	NO	NO	1.1	NA, NO	1.1	NA, NO	NA, NO	1.7	NA, NO
Spain	0.51	IE	0.51	NE	NE	NE	NO	2.4	IE, NO	2.4	0.054	0.10	0.63	NO
Sweden	0.34	IE	0.34	0.071	–0.076	0.20	-0.36	0.63	IE	0.63	0.016	0.32	–0.08	-0.58
Switzerland	3.0	-2.4	0.53	0.037	–0.015	0.001	-2.6	1.4	-0.86	0.57	0.21	1.3	0.62	-2.6
Turkey	0.89	-0.42	0.47	NE	NE	NE	NE	0.45	–0.093	0.36	NE, NO	0.30	2.4	NE, NO
Ukraine	1.7	-0.29	1.4	0.28	0.020	NA	-0.68	0.56	–0.003	0.55	0.051	0.12	0.58	NO
United Kingdom of Great Britain and Northern Ireland (KP)	2.3	-1.2	1.1	IE	0.043	0.34	0.64	0.86	–0.007	0.85	IE, NO	0.018	-1.2	-1.9
United Kingdom of Great Britain and Northern Ireland (Convention)	2.3	-1.2	1.1	IE	0.043	0.34	0.64	0.86	–0.007	0.85	IE, NO	0.018	-1.2	-1.9
United States of America	0.38	IE	0.38	0.044	0.015	0.14	–0.004	9.8	IE	9.8	4.9	8.3	0.05	NE

[a] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (–).

[b] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may use notation keys only in the stock change columns.

[c] CSC = carbon stock change.

[d] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[e] When Parties cannot estimate carbon stock changes for organic and mineral soil separately, these should be reported under mineral soils.

[f] Parties who wish to do so may report annual on-site CO$_2$-C emissions/removals and off-site CO$_2$-C emissions from drained and rewetted organic soils here.

Table 4.3

Cropland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)[a,b]

	Cropland remaining cropland						Land converted to cropland					
	IEF (t C/ha)											
	CSC[c] in living biomass/area[d,e]			Net CSC[c] in DOM[f]/area[g]	Net CSC[c] in soils/area[h,i]		CSC[c] in living biomass/area[d,e]			Net CSC[c] in DOM[f]/area[g]	Net CSC[c] in soils/area[h,i]	
	Gains	Losses	Net Change		Mineral soils	Organic soils	Gains	Losses	Net Change		Mineral soils	Organic soils
IPCC default EF												
Australia	0.001	IE	0.001	NA	0.037	IE	IE, NA, NO	-0.23	-0.23	–0.024	-0.22	-5.0
Austria	0.12	-0.15	–0.031	NO	0.075	NO	0.96	-0.85	0.12	–0.034	-0.98	NO
Belarus	0.041	–0.050	–0.009	NE	NE	-1.0	NE	NE	NE	NE	NE	NE
Belgium	0.004	NO	0.004	NO	–0.038	-10	NO	-0.26	-0.26	–0.020	-1.3	NO
Bulgaria	0.10	-0.15	–0.050	NE	–0.001	NO	0.29	-0.34	–0.048	NE, NO	–0.087	NO
Canada	0.001	–0.001	0.000	–0.010	0.094	-5.0	NE, NO	-0.88	-0.88	-1.5	1.1	C, IE, NE, NO
Croatia	0.17	-0.16	0.003	NO	0.002	-10	0.76	-0.35	0.41	NO	-0.76	NO
Cyprus	NE	NE	NE	NE	NE	NO	NE	NE	NE	NE	NE	NO
Czech Republic	0.000	NO	0.000	NO	0.007	NO	0.003	-0.14	-0.14	–0.004	-0.33	NO
Denmark (KP)	0.14	-0.18	–0.040	NO	0.047	-6.6	1.4	-1.1	0.25	-0.13	–0.004	IE, NO
Denmark (Convention)	0.14	-0.18	–0.040	NO	0.047	-6.6	1.4	-1.1	0.25	-0.13	–0.004	–0.081
Estonia	IE	–0.000	–0.000	NO	0.093	-5.0	IE, NO	–0.001	–0.001	–0.000	-1.4	-5.0
European Union (KP)	0.036	–0.029	0.008	–0.000	0.021	-4.9	0.13	-0.27	-0.14	–0.016	-0.85	-6.4
European Union (Convention)	0.036	–0.029	0.008	–0.000	0.021	-4.8	0.13	-0.27	-0.14	–0.016	-0.85	-6.4
Finland	0.000	–0.000	0.000	IE	0.019	-6.6	0.13	-1.0	-0.88	–0.004	-0.73	-6.8
France (KP)	0.089	–0.090	–0.002	NE	0.069	NO	0.021	-0.26	-0.24	–0.017	-1.1	NE, NO
France (Convention)	0.089	–0.090	–0.002	NE	0.069	NO	0.021	-0.26	-0.24	–0.017	-1.1	NE, NO
Germany	0.003	–0.001	0.001	NA	NA	-8.1	0.31	-0.36	–0.051	–0.009	-0.79	-8.1
Greece	0.020	–0.024	–0.003	NO	NO	-10	NO	NO	NO	NO	–0.066	NO
Hungary	0.008	–0.009	–0.001	NO	0.032	NO	0.14	-0.16	–0.017	–0.056	-0.81	NO
Iceland	NO	NO	NO	NO	NE	-7.9	0.11	-0.77	-0.67	IE, NA	0.10	-7.9
Ireland	0.055	–0.032	0.023	NO	–0.002	NO	NO	NO	NO	NO	NO	NO
Italy	0.000	–0.038	–0.038	NO	NO	-10	NO	NO	NO	NO	NO	NO
Japan	IE	–0.011	–0.011	NA	-0.14	-2.4	IE, NA	-0.83	-0.83	-0.37	IE	IE
Kazakhstan	NO	–0.009	–0.009	NE	-0.60	NO	NO	NO	NO	NO	NO	NO
Latvia	0.002	–0.000	0.001	0.000	NA	-7.9	NA, NO	-2.1	-2.1	-0.78	-1.1	-7.9
Liechtenstein	NO	NO	NO	NO	NO	-9.5	0.13	-0.24	-0.10	–0.006	-0.27	-9.5
Lithuania	0.007	–0.002	0.005	NO	0.011	IE	NO	-0.12	-0.12	NO	-1.2	IE, NO
Luxembourg	0.015	–0.024	–0.009	NO	0.001	NO	0.27	-0.39	-0.12	–0.019	-1.2	NO
Malta	0.21	NO	0.21	NE	0.025	NO	0.004	NO	0.004	NE, NO	-0.37	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	NO	-4.0	0.51	-0.72	-0.21	–0.033	-0.80	-4.1
New Zealand	0.013	–0.009	0.004	0	–0.001	-9.9	0.40	-0.15	0.25	–0.013	-0.53	-10.0
Norway	0.005	NO	0.005	NO	0.024	-7.9	0.017	-0.79	-0.77	-1.9	1.0	-7.9
Poland	0.035	IE	0.035	NO	–0.002	-1.0	NO	NO	NO	NO	–0.050	NO
Portugal	0.031	–0.014	0.018	NO	0.008	NO	0.14	-0.36	-0.21	–0.029	-0.71	NO
Romania	0.033	IE	0.033	–0.002	0.075	-2.5	0.22	-0.30	–0.081	–0.026	–0.076	NO
Russian Federation	0.014	–0.003	0.011	NO	-0.17	-5.9	NO	NO	NO	NO	NO	NO
Slovakia	0.17	–0.017	0.15	NO	0.016	NO	NO	-0.11	-0.11	–0.004	-0.67	NO
Slovenia	0.36	–0.046	0.32	NA, NO	–0.000	-10	0.82	-0.64	0.18	–0.043	-0.41	NO
Spain	0.021	IE	0.021	NE	0.026	NO	0.063	–0.020	0.043	–0.002	-0.69	NO
Sweden	0.016	IE	0.016	0.001	0.38	-6.2	0.091	-0.71	-0.62	–0.084	-0.25	-6.2
Switzerland	NO	-0.50	-0.50	NO	NO	-9.5	0.022	-0.10	–0.080	–0.001	-0.32	-9.0
Turkey	0.001	–0.000	0.000	0.000	0.004	-9.5	0.31	-1.3	-0.96	0.16	–0.030	NE, NO
Ukraine	0.044	–0.051	–0.007	NA	-0.31	-10	NA, NO	-2.4	-2.4	–0.000	-0.18	NO
United Kingdom of Great Britain and Northern Ireland (KP)	0.007	0	0.007	NO	-0.33	-5.0	IE, NO	–0.030	–0.030	0	-1.3	-5.0
United Kingdom of Great Britain and Northern Ireland (Convention)	0.007	0	0.007	NO	-0.33	-5.0	IE, NO	–0.030	–0.030	0	-1.3	-5.0
United States of America	NE	NE	NE	NE	0.08	-13	NE	–0.057	–0.057	–0.014	-0.32	-13

[a] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (–).

[b] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may use notation keys only in the stock change columns.

[c] CSC = carbon stock change.

[d] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[e] For category cropland remaining cropland this column only includes changes in perennial woody biomass.

[f] DOM = dead organic matter.

[g] No reporting on DOM pools is required for category cropland remaining cropland.

[h] When Parties cannot estimate carbon stock changes for organic and mineral soil separately, these should be reported under mineral soils.

[i] Parties who wish to do so may report annual on-site CO_2-C emissions/removals and off-site CO_2-C emissions from drained and rewetted organic soils here.

Table 4.4

Grassland - AD, IEFs, carbon stock changes in pools and net CO_2 emissions/removals (2015)[a,b]

	Grassland remaining grassland						Land converted to grassland					
	IEF (t C/ha)											
	CSC[c] in living biomass/area[d]			Net CSC[c] in DOM[e]/area[f]	Net CSC[c] in soils/area[g,h]		CSC[c] in living biomass/area[d]			Net CSC[c] in DOM[e]/area[f]	Net CSC[c] in soils/area[g,h]	
	Gains	Losses	Net Change		Mineral soils	Organic soils	Gains	Losses	Net Change		Mineral soils	Organic soils
IPCC default EF												
Australia	0.021	–0.018	0.003	0.001	–0.001	IE	IE, NA, NO	-0.20	-0.20	–0.016	-0.25	-5.0
Austria	NO	NO	NO	NO	0.002	-6.4	0.70	-1.6	-0.86	-0.42	0.89	NO
Belarus	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Belgium	NO	NO	NO	NO	0.20	-2.5	NO	-1.2	-1.2	–0.086	1.4	NO
Bulgaria	NE	NE	NE	NE	NE	NO	0.45	-0.49	–0.038	NE, NO	1.1	NO
Canada	NA, NO	NA, NO	NA, NO	NA, NO	NE, NO	NE, NO	NO	NO	NO	NO	NO	NO
Croatia	NO	NO	NO	NO	NO	-2.5	0.47	-1.2	-0.71	NO	1.1	NO
Cyprus	NE	NE	NE	NE	NE	NO	NE	NE	NE	NE	NE	NO
Czech Republic	NO	NO	NO	NO	0.090	NO	0.050	–0.050	0.001	–0.001	0.47	NO
Denmark (KP)	4.5	-6.2	-1.7	NO	NO	-6.8	0.62	-0.97	-0.35	–0.087	0.001	-8.7
Denmark (Convention)	0.93	-1.3	-0.36	NO	NO	-5.4	0.62	-0.97	-0.35	–0.087	0.001	-8.7
Estonia	0.000	IE	0.000	NO	NO	–0.341	0.12	-0.41	-0.29	-0.10	0.85	-5.0
European Union (KP)	0.066	–0.052	0.014	0.002	0.020	-3.2	0.11	-0.24	-0.13	–0.025	0.73	-2.8
European Union (Convention)	0.072	–0.056	0.015	0.002	0.021	-4.6	0.11	-0.25	-0.14	–0.025	0.74	-2.4
Finland	0.37	NE	0.37	NE	NA	-3.5	0.13	-0.35	-0.22	NA	0.049	-3.5
France (KP)	0.13	-0.11	0.016	NE	–0.003	NO	0.095	-0.17	–0.076	–0.016	0.97	NE, NO
France (Convention)	0.13	-0.11	0.016	NE	–0.003	NO	0.095	-0.17	–0.076	–0.016	0.97	NE, NO
Germany	0.041	–0.009	0.032	NO	–0.002	-6.2	0.44	-0.44	–0.002	–0.071	0.82	-6.4
Greece	NO	–0.000	–0.000	NO	NO	NO	NO	–0.047	–0.047	NO	0.71	NO
Hungary	NO	NO	NO	NO	0.001	NO	0.15	-0.40	-0.25	–0.041	0.85	NO
Iceland	0.000	IE, NO	0.000	0.000	0.000	-5.7	0.085	IE, NA, NO	0.085	0.001	0.48	-5.7
Ireland	NO	NO	NO	NO	0.013	-3.9	0.079	–0.085	–0.007	–0.096	NO	-5.0
Italy	0.43	-0.36	0.067	0.004	NA, NO	-2.5	NO	–0.045	–0.045	NO	1.0	NO
Japan	NA	NA	NA	NA	0.081	-0.14	0.22	-1.0	-0.82	-0.47	IE, NO	IE, NO
Kazakhstan	0.001	NO	0.001	IE	0.012	NO	0.15	IE, NO	0.15	NO	0.36	NO
Latvia	0.029	–0.007	0.022	0.002	NA	-6.1	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.98	-2.4
Liechtenstein	0.066	–0.061	0.005	NO	0.008	-8.3	0.39	-1.2	-0.85	-0.34	0.20	-12
Lithuania	NO	NO	NO	NO	NO	IE	0.002	NO	0.002	NO	1.2	IE, NO
Luxembourg	NO	NO	NO	NO	NO	NO	0.40	-0.52	-0.12	–0.044	1.4	NO
Malta	0.000	NO	0.000	NE, NO	0.007	NO	NO	NO	NO	NE, NO	0.27	NO
Monaco	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Netherlands	NE	NE	NE	NE	0.000	-4.6	0.60	-0.78	-0.17	-0.15	0.68	-4.2
New Zealand	0.006	–0.004	0.002	0.000	–0.000	-2.2	0.15	-4.7	-4.5	-0.40	0.54	-2.1
Norway	0.17	-0.12	0.050	NO	–0.040	-3.6	0.28	-1.3	-1.0	-3.1	2.0	-3.6
Poland	NO	NO	NO	NO	–0.012	-0.25	0.36	IE, NO	0.36	IE, NO	0.84	NO
Portugal	NO	NO	NO	NO	0.22	NO	0.048	-0.22	-0.17	–0.012	-0.44	NO
Romania	0.095	NE, NO	0.095	NO	NO	0.25	0.003	-0.38	-0.38	–0.008	0.13	NO
Russian Federation	NA	NA	NA	NA	0.029	-5.8	0.19	NA, NO	0.19	0.16	0.43	-5.8
Slovakia	NO	NO	NO	NO	NO	NO	0.010	–0.009	0.001	–0.001	0.70	NO
Slovenia	NA	NA	NA	NA	NA	NA	0.11	-0.85	-0.74	-0.12	0.31	NA, NO
Spain	NE	NE	NE	NE	NE	NO	IE, NO	-0.92	-0.92	–0.083	0.30	NO
Sweden	0.091	IE	0.091	0.27	-0.17	-1.8	0.13	–0.079	0.050	-0.24	0.075	-4.3
Switzerland	0.016	–0.009	0.007	NO	0.011	-9.1	0.13	-0.93	-0.80	-0.34	0.49	-9.0
Turkey	NE	NE	NE	NE	NE	-0.94	0.10	-0.40	-0.30	-0.28	-2.4	NE, NO
Ukraine	NA	NA	NA	NA	0.008	-2.5	NA	NA	NA	NA	0.69	NO
United Kingdom of Great Britain and Northern Ireland (KP)	0.002	–0.003	–0.001	NO	0.12	IE, NO	0.032	–0.056	–0.023	–0.009	0.63	-0.25
United Kingdom of Great Britain and Northern Ireland (Convention)	0.002	–0.003	–0.001	NO	0.12	IE, NO	0.032	–0.056	–0.023	–0.009	0.63	-0.25
United States of America	NE	NE	NE	NE	0.032	-3.1	NE	-0.33	-0.33	-0.14	0.20	-3.1

[a] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (–).

[b] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may use notation keys only in the stock change columns.

[c] CSC = carbon stock change.

[d] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[e] DOM = dead organic matter.

[f] No reporting on DOM pools is required for category grassland remaining grassland.

[g] When Parties cannot estimate carbon stock changes for organic and mineral soil separately, these should be reported under mineral soils.

[h] Parties who wish to do so may report annual on-site CO_2-C emissions/removals and off-site CO_2-C emissions from drained and rewetted organic soils here.

Table 4.5

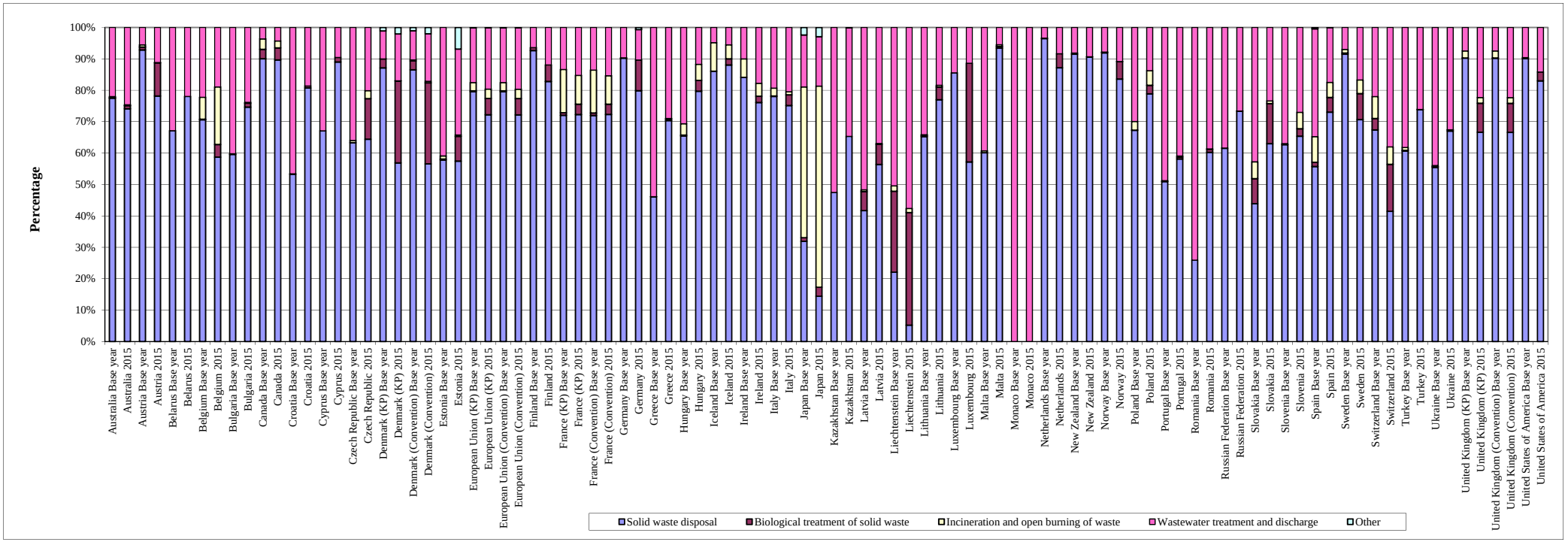
Land Area (2015)

Area (kha)	CRF						Total	FAO[a]	difference	FAO[a]	difference
	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land		Total country area	%	Forest	%
Australia	132 230	36 229	519 391	19 331	1 124	60 694	769 000	768 230	-0.10	124 443	-5.89
Austria	4 030	1 416	1 463	151	555	773	8 387	8 252	-1.61	3 867	-4.03
Belarus	9 402	6 182	3 495	117	1 035	882	21 114	20 291	-3.90	8 614	-8.39
Belgium	713	1 061	598	59	695	NO	3 126	3 028	-3.13	683	-4.25
Bulgaria	3 886	4 107	1 754	231	516	605	11 100	10 856	-2.20	3 806	-2.07
Canada	225 863	45 167	6 608	542	931	NE, NO	279 111	909 351	225.80	347 116	53.68
Croatia	2 370	1 597	1 188	74	261	166	5 656	5 596	-1.06	1 922	-18.92
Cyprus	159	441	234	NE, NO		NE, NO	835	924	10.68	173	8.71
Czech Republic	2 668	3 211	1 001	165	736	105	7 887	7 721	-2.10	2 665	-0.13
Denmark (KP)	638	2 813	188	120	520	26	4 306		–		–
Denmark (Convention)	638	2 813	430	121	526	216 386	220 914	45 411	-79.44	607	-4.75
Estonia	2 421	1 038	290	22	322	43	4 135	4 239	2.51	2 232	-7.78
European Union (KP)	166 515	127 118	94 755	24 302	29 480	16 650	458 821		–		–
European Union (Convention)	166 371	126 982	88 112	23 676	29 440	12 678	447 259	423 821	-5.24	160 712	-3.40
Finland	21 889	2 485	243	6 447	1 469	1 310	33 843	30 389	-10.21	22 218	1.50
France (KP)	23 757	17 864	14 465	1 161	5 656	958	63 860		–		–
France (Convention)	23 757	17 864	14 465	1 161	5 656	958	63 860	63 942	0.13	25 386	6.86
Germany	11 161	13 491	6 486	730	3 892	20	35 780	34 890	-2.49	11 417	2.29
Greece	3 460	3 312	5 317	301	535	272	13 198	12 890	-2.34	4 024	16.29
Hungary	2 061	5 171	1 223	263	583	2.4	9 303	9 053	-2.69	2 064	0.17
Iceland	139	125	5 379	626	28	3 973	10 269	10 025	-2.38	48	-65.58
Ireland	760	673	4 313	1 162	124	79	7 112	6 889	-3.13	748	-1.57
Italy	9 305	8 849	8 472	519	2 334	655	30 134	29 414	-2.39	9 243	-0.67
Japan	24 906	4 312	956	1 338	3 825	2 459	37 797	36 456	-3.55	24 960	0.21
Kazakhstan	12 716	25 086	197 917	8 847	2 184	25 739	272 489	269 970	-0.92	3 309	-73.98
Latvia	3 298	1 716	738	445	254	5.4	6 457	6 218	-3.71	3 356	1.74
Liechtenstein	6.2	1.7	5.0	0.38	1.8	1.00	16	16	-0.78	6.9	10.80
Lithuania	2 206	2 139	1 478	341	354	12	6 530	6 265	-4.06	2 178	-1.27
Luxembourg	96	62	74	1.2	26	0.055	259	259	0.15	87	-9.83
Malta	0.072	3.7	11	0.025	9.2	0.55	25	32	30.20	0.35	386.11
Monaco	NO	NO	NO	NO	0.20	NO	0.20		–		–
Netherlands	399	959	1 311	828	618	37	4 151	3 369	-18.85	375	-5.82
New Zealand	9 905	477	14 741	682	225	895	26 925	26 331	-2.21	10 152	2.49
Norway	12 133	937	234	3 767	693	14 614	32 378	36 525	12.81	12 110	-0.19
Poland	9 395	14 023	4 173	1 370	2 209	98	31 268	30 619	-2.08	9 414	0.20
Portugal	4 365	2 390	658	196	496	1 136	9 239	9 161	-0.85	3 193	-26.84
Romania	7 001	8 689	4 983	1 089	1 677	399	23 839	23 008	-3.49	6 792	-2.99
Russian Federation	896 733	91 776	128 199	225 455	11 030	358 617	1 711 810	1 637 687	-4.33	814 972	-9.12
Slovakia	2 020	1 531	859	94	236	164	4 904	4 809	-1.94	1 940	-3.98
Slovenia	1 206	257	399	15	118	32	2 027	2 014	-0.65	1 248	3.44
Spain	15 355	20 053	12 272	419	1 389	1 163	50 651	50 021	-1.24	18 384	19.72
Sweden	28 286	2 829	496	7 305	1 879	4 321	45 116	40 731	-9.72	28 073	-0.75
Switzerland	1 253	393	1 384	188	325	587	4 129	3 952	-4.30	1 250	-0.18
Turkey	22 343	28 082	14 853	NE, NO	867	10 960	77 105	76 963	-0.18	11 613	-48.03
Ukraine	10 633	34 886	7 841	3 409	2 553	1 034	60 355	57 929	-4.02	9 635	-9.38
United Kingdom of Great Britain and Northern Ireland (KP)	3 469	4 810	14 690	171	1 989	295	25 425		–		–
United Kingdom of Great Britain and Northern Ireland (Convention)	3 469	4 810	14 690	171	1 989	295	25 425	25 497	0.29	3 144	-9.36
United States of America	273 003	162 548	244 669	22 529	18 082	NA, NE	720 831	914 742	26.90	309 820	13.49

[a] Source of international statistics: FAOSTAT data, downloaded on 31 May 2017 from http://faostat3.fao.org/home/E. At the time of download data for 2015 was not available, therefore, data for 2014 is shown in this table.

Figure 5.1

Contribution of subsectors to total GHG emissions in the Waste sector[a, b]



[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, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years other than 1990: Bulgaria (1988), Croatia (1990), Hungary (average of 1985 to 1987), Poland (1988), Romania (1989) and Slovenia (1986).

[b] Indirect CO_2 emissions are excluded from the totals in this graph.

Table 5.1a

Solid waste disposal on land, biological treatment of solid waste, incineration and open burning of waste and wastewater treatment and discharge (2015)

	Solid waste disposal							Biological treatment of solid waste										
	CH_4							CH_4						N_2O				
	Methods and EF used		Share of national total[a]	Emissions per capita[b]	CH_4 IEF			Methods and EF used		Share of national total[a]	Emissions per capita[b]	IEF		Methods and EF used		Share of national total[a]	Emissions per capita[b]	IEF	
	Methods	EF			Managed	Unmanaged	Uncategorized	Methods	EF			Composting	Anaerobic digestion	Methods	EF			Composting	Anaerobic digestion
			(%)	(kg CO_2 eq.)	(t/t)	(t/t)	(t/t)			(%)	(kg CO_2 eq.)	g/kg	g/kg			(%)	(kg CO_2 eq.)	g/kg	g/kg
IPCC default EF																			
Australia	T2, T3	D	1.58	354	0.018	NO	NO	T1	CS	0.02	4.4	0.75	NO	T1	CS	0.00	0.46	0.007	NO
Austria	T2	CS, D	1.64	150	0.40	NO	NO	T1, T2	CS, D	0.10	9.4	1.8	107	T2	CS	0.12	11	0.25	NA, NO
Belarus	T1	CS, D	6.54	617	NO	0.055	NE	NA	NA	–	–	NO	NO	NA	NA	–	–	NO	NO
Belgium	T2	D	0.80	0.14	0.036	NO	NO	T1	CS	0.02	0.004	0.75	NO	T1	CS	0.03	0.006	0.096	NO
Bulgaria	T2	CS, D	5.10	438	0.024	0.24	NO	T1	D	0.05	4.3	4.0	NO	T1	D	0.04	3.1	0.24	NO
Canada	CS	CS	3.07	618	0.047	0.34	NO	T1	D	0.08	15	4.0	NA, NE	T1	D	0.05	11	0.24	NA, NE
Croatia	T2	CS	5.33	298	0.040	0.030	NO	T1	D	0.03	1.5	4.0	IE	T1	D	0.02	1.0	0.24	NA
Cyprus	T2	D	5.44	540	0.018	0.059	NO	T1	D	0.05	5.2	4.0	NO	T1	D	0.04	3.7	0.24	NO
Czech Republic	T1	CS, D	2.65	321	0.054	NO	NO	CS, D, T1	CS, D	0.50	60	4.0	IE, NE	T1	D	0.03	4.2	0.24	IE, NO
Denmark (KP)	CS, T2	CS, D	1.36	116	0.024	NO	NO	CS, T1	CS, OTH	0.39	33	3.8	NO	CS, T1	CS, OTH	0.23	20	0.31	NO
Denmark (Convention)	CS, T2	CS, D	1.32	115	0.024	0.025	NE, NO	CS, T1	CS, OTH	0.38	33	3.8	NO	CS, T1	CS, OTH	0.23	20	0.31	NE, NO
Estonia	T2	D	1.04	143	0.28	NO	NO	T1	D	0.08	11	4.0	NE, NO	T1	D	0.06	8.2	0.24	NE, NO
European Union (KP)			2.34	1.4	0.044	0.23	NO			0.10	0.059	2.8	NE			0.07	0.040	0.23	NE
European Union (Convention)			2.33	1.4	0.044	0.23	NO			0.10	0.059	2.8	NE			0.07	0.040	0.23	NE
Finland	T2	CS, D	3.18	322	0.023	NO	NO	T1	D	0.12	13	6.0	1.0	T1	D	0.08	8.0	0.36	NA
France (KP)	T2	CS, D	2.75	0.19	0.037	NO	NO	T2	CS	0.05	0.004	0.78	2.8	T2	CS	0.07	0.005	0.13	NA
France (Convention)	T2	CS, D	2.75	0.19	0.037	NO	NO	T2	CS	0.05	0.004	0.78	2.8	T2	CS	0.07	0.005	0.13	NA
Germany	T2	CS	0.99	109	0.43	NO	NO	T2	CS	0.09	9.5	1.4	51	T2	CS	0.04	4.0	0.074	0.067
Greece	T2	CS, D	3.30	273	0.021	0.38	NO	D	D	0.01	1.1	4.0	NO	D	D	0.01	0.77	0.24	NO
Hungary	T2	D	5.01	310	0.040	IE, NO	NO	CS, T1	D	0.16	10	10	NE, NO	T1	D	0.06	3.5	0.60	NE, NO
Iceland	T2	CS, D	4.02	554	0.043	0.033	NA	T2	CS, D	0.05	6.5	4.0	NA	T1	D	0.04	5.8	0.30	NA
Ireland	T2	CS, D	1.24	160	0.071	IE	NO	T1	D	0.02	2.4	4.0	NO	T1	D	0.01	1.7	0.24	NO
Italy	T2	CS	3.26	232	0.058	NO	NO	D	CS, D	0.03	2.0	1.6	2.0	D	D	0.12	8.6	0.60	NA, NO
Japan	T3	CS	0.23	24	0.31	NO	0.074	D, T1	D	0.03	2.8	10	NE, NO	D, T1	D	0.02	2.0	0.60	NO
Kazakhstan	M	D, M	1.33	226	0.023	0.028	0.034	NA	NA	–	–	NO	NO	NA	NA	–	–	NO	NO
Latvia	T2	CS, D	3.42	195	0.021	NO	NO	D	D	0.23	13	4.0	NO	D	D	0.16	9.3	0.24	NO
Liechtenstein	T2	CS	0.06	3.2	NO	NO	NO	CS	CS	0.35	19	5.3	NO	CS	CS	0.06	3.1	0.074	NO
Lithuania	T2	D	3.99	276	0.043	0.13	NO	T1	D	0.14	9.6	10	NE, NO	T1	D	0.07	5.1	0.60	NO
Luxembourg	T1	D	0.52	82	0.14	NO	NO	T1	D	0.20	32	5.1	IE, NE	T1	D	0.08	13	0.31	NA
Malta	M, T2	M, PS	6.13	318	0.021	NA	NO	T1	D	0.04	1.9	NO	0.81	NA	NA	–	–	NO	NA, NO
Monaco	NA	NA	–	–	NO	NO	NO	NA	NA	–	–	NO	NO	NA	NA	–	–	NO	NO
Netherlands	T2	CS	1.51	174	0.053	NO	NO	T2	CS	0.04	4.4	0.81	1.1	T2	CS	0.04	4.6	0.081	0.046
New Zealand	T2	CS, D	4.52	780	0.016	0.015	NO	NA	NA	–	–	NE, NO	NO	NA	NA	–	–	NE	NO
Norway	T2	D	2.01	209	7.6	NO	NO	T1	D	0.07	7.5	4.0	0.80	T1	D	0.06	6.4	0.30	NO
Poland	T2	CS, D	2.36	237	0.043	NO	NO	T1	D	0.05	4.8	4.0	NA, NO	T1	D	0.03	3.4	0.24	NA, NO
Portugal	T2	CS, D	5.38	359	0.042	NO	NA, NO	T1	D	0.03	2.2	4.0	0.80	T1	D	0.02	1.3	0.24	NO
Romania	T2	CS, D	3.02	178	0.014	0.091	NA	T1	D	0.03	1.7	4.0	NO	T1	D	0.02	1.2	0.24	NO
Russian Federation	T2	CS, D	3.18	588	0.053	0.025	NO	T1	D	0.00	0.31	7.8	NO	T1	D	0.00	0.23	0.49	NO
Slovakia	T2	CS, D	2.33	177	0.013	0.077	NO	T1	D	0.28	21	4.0	NO	T1	D	0.20	15	0.24	NO
Slovenia	T2	CS, D	2.02	165	0.061	NO	NO	T1	D	0.04	3.5	4.0	NO	T1	D	0.03	2.5	0.24	NO
Spain	T2	CS, D	2.93	212	0.030	NO	NO	T1	D	0.11	8.3	4.0	57	T1	D	0.07	5.4	0.24	NE, NO
Sweden	T2	CS, D	1.85	101	0.065	NO	NO	NO, T1, T2	CS, D, NO	0.16	8.8	11	111	NO, T1	D, NO	0.06	3.0	0.69	NA
Switzerland	CS, D	CS, D	0.73	42	NO	NO	NO	CS	CS	0.23	13	5.0	0.21	CS	CS	0.03	2.0	0.070	NO
Turkey	T2	CS, D	2.62	159	0.007	0.043	NO	T1	D	0.00	0.12	4.0	NO	T1	D	0.00	0.085	0.24	NO
Ukraine	T3	CS, D	2.52	190	0.027	0.029	NA	T1	D	0.01	0.48	4.0	NA	T1	D	0.01	0.43	0.30	NA
United Kingdom of Great Britain and Northern Ireland (KP)	T2	CS	2.43	189	0.057	NO	NO	T1	D	0.21	16	10	2.0	T1	D	0.13	10	0.60	NO
United Kingdom of Great Britain and Northern Ireland (Convention)	T2	CS	2.43	189	0.057	NO	NO	T1	D	0.21	16	10	2.0	T1	D	0.13	10	0.60	NO
United States of America	M	M	1.76	356	0.015	NA	NA	D	D	0.03	6.5	4.0	IE	D	D	0.03	5.8	0.30	IE, NA

[a] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[b] Calculated using population data from CRF Table 5.D. World Bank population data was used for Netherlands as it was not presented in CRF Table 5.D.

Table 5.1b

Solid waste disposal on land, biological treatment of solid waste, incineration and open burning of waste and wastewater treatment and discharge (2015)

	Activity data		Incineration and open burning of waste						Wastewater treatment and discharge									
			CO_2						CH_4						N_2O			
	Population (million)		Methods and EF used		Share of national total[b]	Emissions per capita[c]	IEF		Methods and EF used		Share of national total[b]	Emissions per capita[c]	CH_4 IEF		Methods and EF used		Share of national total[b]	Emissions per capita[c]	N_2O IEF	
	CRF	World Bank[a]	Methods	EF			Waste incineration	Open burning of waste	Methods	EF			Domestic	Industrial	Methods	EF			Domestic	Industrial
					(%)	(kg CO_2 eq.)	kg/t	kg/t			(%)	(kg CO_2 eq.)	kg/kg	kg/kg			(%)	(kg CO_2 eq.)	kg N_2O-N/kg N	kg N_2O-N/kg N
IPCC default EF[d]																			0.005	
Australia	24	24	T2	CS	0.01	1.3	1 419	NO	T2, T3	CS, D	0.43	97	0.073	0.076	CS	D	0.09	20	0.008	IE
Austria	8.6	8.6	T2	CS	0.00	0.24	2 052	NO	T2	CS, D	0.03	2.7	0.16	IE, NA, NO	CS	CS, D	0.20	19	0.032	IE
Belarus	9.5	9.5	NA	NA	–	–	NO	NO	T1	D	1.59	150	NE	0.099	T1	D	0.26	24	0.010	NE
Belgium	6 445	11	T1, T3	PS	0.25	0.045	14 004	NO	CR, T1	CR, D	0.17	0.031	NE	NA	D	D	0.08	0.015	NE	NA
Bulgaria	7.2	7.2	T1	D	0.02	1.4	1 561	NO	T2	D	1.39	120	0.16	0.041	T1	D	0.23	20	0.005	NA
Canada	36	36	T1, T2	CS, D	0.06	12	392	NE, NO	CS, T3	CS, D, PS	0.05	11	NA	NA	D	D	0.09	19	0.010	NE
Croatia	4.2	4.2	T1	D	0.00	0.010	880	NO	T1, T2	D	0.88	49	0.090	0.003	T1	D	0.35	20	0.005	NA
Cyprus	0.85	1.17	NA	NA	–	–	NO	NO	T1	D	0.39	39	0.011	0.080	OTH, T1	D, OTH	0.19	19	0.005	NE
Czech Republic	11	11	T1	D	0.10	13	1 642	NO	CS, T1	CS, D	0.67	82	0.16	0.015	T1	CS, D	0.15	19	0.005	NE
Denmark (KP)	5.7	5.7	NA	NA	–	–	NO	NO	CS	CS	0.23	19	0.064	IE, NO	CS	CS	0.13	11	0.036	IE
Denmark (Convention)	5.7	5.8	T1	CS	0.01	0.55	295	154	CS, NA	CS, NA	0.22	19	0.064	IE, NA, NE, NO	CS, T1	CS, D	0.13	12	0.031	IE, NE
Estonia	1.3	1.3	T1, T2	D	0.01	0.76	1 710	344	T1	D	0.33	45	0.069	0.20	T1	D	0.17	23	0.005	NO
European Union (KP)	73 400	519			0.07	0.043	NE	NE			0.46	0.27	0.11	0.026			0.17	0.10	0.005	0.029
European Union (Convention)	73 400	519			0.07	0.043	NE	NE			0.46	0.27	0.11	0.026			0.17	0.099	0.005	0.029
Finland	5.5	5.5	NA	NA	–	–	IE, NO	NE, NO	CS, T2, T3	CS, D	0.31	32	0.045	0.001	CS, T1	D	0.15	15	0.005	0.005
France (KP)	66 538	67	T1, T2	CS, D	0.33	0.022	2 820	97	T1	D	0.48	0.033	0.091	0.62	T1	D	0.10	0.007	0.002	NA
France (Convention)	67 108	67	T1, T2	CS, D	0.33	0.022	2 820	97	T1	D	0.48	0.033	0.091	0.62	T1	D	0.10	0.007	0.002	NA
Germany	82	82	NA	NA	–	–	NO	NO	CS, D	CS, D	0.07	7.6	0.19	0.001	CS, D	CS, D	0.05	5.5	0.006	IE
Greece	12	11	D	CS, D	0.01	0.78	303	NO	D	D	1.02	84	0.023	0.20	D	CS	0.34	28	0.005	IE
Hungary	9.9	9.8	T2	D	0.32	20	2 115	NO	T1	D	0.61	38	0.11	0.013	CS	D	0.13	7.8	0.006	NE
Iceland	0.33	0.33	T2	D	0.19	26	401	IE, NO	T1	CS, D	0.12	17	0.024	IE, NO	T1	D	0.13	18	0.005	IE
Ireland	4.6	4.6	T1	D	0.07	8.6	2 933	505	T1, T2	CS, D	0.09	12	0.052	IE, NO	T1	D	0.20	26	0.005	IE
Italy	61	61	D	CS	0.03	1.8	825	NO	T1	D	0.58	41	0.15	0.25	T1	CR, D	0.31	22	0.005	1.0
Japan	128	127	CS	CS	0.92	95	539	NO	CS, D	CS, D	0.13	13	NA	NA	CS, D	CS, D	0.12	13	NA	0.003
Kazakhstan	18	18	NA	NA	–	–	NA, NO	NO	D	D	0.59	101	0.12	0.075	D	D	0.11	19	0.005	NO
Latvia	2.0	2.0	D	D	0.00	0.090	880	NO	D	CS	2.07	118	0.091	0.065	D	D	0.17	9.6	0.002	0.005
Liechtenstein	0.038	0.038	CS	CS	0.01	0.58	NO	255	CS	CS	0.34	18	NA	IE, NO	D	D	0.32	17	NA	IE, NO
Lithuania	2.9	2.9	T1, T2	D	0.03	2.0	1 002	NO	T1	D	0.73	51	0.062	IE, NA	T1	D	0.22	15	0.005	NA
Luxembourg	0.65	0.57	NA	NA	–	–	IE, NO	NO	T1	CS	0.03	5.4	1.0	NO	T1	D, PS	0.07	11	0.003	0.013
Malta	0.43	0.43	T1	D	0.03	1.6	120	NO	D	CS	0.11	5.6	0.011	IE, NO	D	D	0.25	13	0.002	IE
Monaco	38	0.038	NA	NA	–	–	IE, NO	NO	T1	CS	2.95	0.063	0.057	NO	T1	D	0.73	0.016	NE	NO
Netherlands		17	NA	NA	–	–	IE, NO	NO	T1, T2	CS, D	0.11	12	0.51	0.002	T1, T2	D	0.04	4.2	NA	NE
New Zealand	4.6	4.6	T1	D	0.00	0.26	226	NO	T1, T2	CS	0.30	52	0.036	0.017	CS, T1	CS, D	0.16	28	0.005	0.018
Norway	5.2	5.2	D	OTH	–	–	IE, NO	NE, NO	T1	CS, D	0.12	12	NE	NE	CS, T1	CS, D	0.14	15	0.008	NE
Poland	38	38	T1, T2	CS, D	0.13	13	819	NA	T1	CS, D	0.21	22	0.072	0.032	T1	D	0.20	20	0.005	NA
Portugal	10	10	T1, T2	CS, D	0.03	2.2	913	NO	T2	CS, D	3.42	228	0.16	0.025	T2	CS, D	0.37	25	0.005	IE
Romania	20	20	D	D	0.01	0.30	254	NO	D	D	1.50	88	0.14	0.015	D	D	0.44	26	0.005	NE
Russian Federation	143	144	NA	NA	–	–	IE	NO	T1, T2, T3	CS, D	1.05	193	0.38	0.078	T2	CS, D	0.11	20	0.003	NE
Slovakia	5.4	5.4	T2	CS, D	0.02	1.3	29	NO	CS, T2	D	0.74	57	0.27	0.025	CS, T2	CS, D	0.12	9.1	0.005	0.004
Slovenia	2.1	2.1	T1	D	0.16	13	2 400	NO	T1	CS, D	0.55	44	0.099	0.013	T1	D	0.29	24	0.005	NA
Spain	46	46	NA	NA	–	–	IE	NO	T1, T2	D	0.41	30	0.055	0.010	D	D	0.29	21	0.005	IE
Sweden	9.9	9.8	NE	NE	0.10	5.7	180	NE	NO, T2	CS, NO	0.05	2.8	0.21	1.5	NO, T1	CS, D, NO	0.38	21	0.020	0.005
Switzerland	8.3	8.3	CS	CS	0.02	1.2	68	NO	CS, D	CS, D	0.37	21	0.22	IE	CS	CS	0.30	17	0.005	IE
Turkey	78	79	T2	CS, D	0.00	0.006	IE, NO	127	T2	CS	0.50	30	0.075	0.013	T1	D	0.43	26	0.005	IE
Ukraine	43	45	T1, T2	CS, D	0.00	0.24	210	NA, NE	T2	CS, D	0.91	68	0.10	0.047	CS, T1	CS, D	0.32	24	0.006	0.005
United Kingdom of Great Britain and Northern Ireland (KP)	65	65	T1, T2	CS, D	0.06	4.3	590	261	CS, T1	CS, D	0.67	52	0.020	0.18	T1	D	0.14	11	0.004	NE
United Kingdom of Great Britain and Northern Ireland (Convention)	65	65	T1, T2	CS, D	0.06	4.3	590	261	CS, T1	CS, D	0.68	53	0.020	0.18	T1	D	0.14	11	0.004	NE
United States of America	325	321	NA	NA	–	–	IE, NA	NA	D	CS, D	0.22	45	0.11	0.028	D	CS, D	0.08	15	0.006	NE

[a] Source of population data: World Bank http://databank.worldbank.org/data/home.aspx, downloaded 25 May 2017.

[b] The national total includes indirect CO_2 emissions from the atmospheric oxidation of CH_4, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, Japan, Latvia, Netherlands, Portugal and Switzerland.

[c] Calculated using population data from CRF Table 5.D. World Bank population data was used for Netherlands as it was not presented in CRF Table 5.D.

[d] Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 5 Chapter 6 Wastewater Treatment and Discharge, page 6.28.

Table 6.1

Selected values (forest parameters), elected activities under Article 3.4, accounting period, forest management cap[a]

	Minimum value for 'tree crown cover' (%)[b]	Minimum 'tree height' (m)[b]	Minimum area for 'Forest land' (ha)[b]	Cropland Management[c]	Grazing Land Management[c]	Revegetation[c]	Wetland drainage and rewetting[c]	Harvest Wood Products[c]	Accounting period[d]	FM CAP[e] (Mt CO_2 eq.)	Forest Management Reference Level (FMRL)[f] (Mt CO_2 eq./yr)
Australia	20	2	0.2	X	X	X		X	Annually/CP	117.21	0.36
Austria	30	2	0.05					X	CP	22.08	-0.69
Belgium	20	5	0.5					X	CP	41.39	
Bulgaria	10	5	0.1					X	CP	31.95	-8.15
Croatia	10	2	0.1					X	CP	8.74	-5.38
Cyprus	10	5	0.3	X	X			X	CP	1.56	
Czech Republic	30	2	0.05					X	CP		
Denmark (KP)	10	5	0.5	X	X			X	Annually		0.33
Estonia	30	2	0.5					X	CP	45.95	
European Union (KP)											-290.71
Finland	10	5	0.5					X	CP	19.98	-34.05
France (KP)								X	CP	153.47	-45.62
Germany	10	5	0.1	X	X			X	CP	351.01	
Greece	25	2	0.3					X	CP		-1.74
Hungary	30	5	0.5					X	Annually	30.68	-1.04
Iceland						X		X	CP	1.02	
Ireland	20	5	0.1	X	X			X	CP		-0.61
Italy	10	5	0.5	X	X			X	CP	146.14	
Japan	30	5	0.3	X	X	X		X			1.13
Kazakhstan	10	5	0.05					X			
Latvia	20	5	0.1					X	CP	7.39	-4.60
Liechtenstein	20	3	0.06					X	CP		0.00
Lithuania	30	5	0.1					X	CP	13.50	-5.47
Luxembourg	10	5	0.05					X	CP	36.60	-0.24
Malta	30	5	1					X	CP		0.00
Monaco									CP		
Netherlands	20	5	0.5					X	CP	62.50	
New Zealand	30	5	1					X	CP	18.43	-6.10
Norway	10	5	0.5	X	X			X	CP	14.54	
Poland	10	2	0.1					X	CP	162.41	
Portugal	10	5	1	X	X			X	CP	16.95	-3.53
Romania	10	5	0.25			X		X	CP	85.38	-19.11
Russian Federation	18	5	1					X			6.62
Slovakia	20	5	0.3					X	CP	20.80	
Slovenia	30	2	0.25					X	CP	5.69	
Spain	20	3	1	X				X	CP		
Sweden	10	5	0.5					X	CP	20.18	-34.07
Switzerland	20	3	0.06					X	CP	15.04	-1.68
Ukraine	30	5	0.1					X	CP	262.63	-62.14
United Kingdom of Great Britain and Northern Ireland (KP)	20	2	0.1	X	X		X	X	CP		-15.83

[a] As either reported by a Party in its report to facilitate the calculation of the assigned amount for the second commitment period under the Kyoto Protocol, submitted in accordance with decisions 2/CMP.8, annex I, and 6/CMP.9, or subsequently reviewed under Article 8 of the Kyoto Protocol and recorded in the initial review report and the compilation and accounting database.

[b] As reported by Party in accordance with paragraph 8(b) of the annex to decision 13/CMP.1 or paragraph 1(f) of Annex I to decision 2/CMP.8 and paragraph 21 of the annex to decision 2/CMP.7.

[c] An "X" indicates if any activity under Article 3.4 was elected for reporting, in accordance with paragraph 8 of the annex to decision 2/CMP.7 and paragraph 1(g) of Annex I to decision 2/CMP.8.

[d] Parties specified in their report to facilitate the calculation of the assigned amount for the second commitment period under the Kyoto Protocol whether they intend to account for activities under Article 3, paragraph 3 and 4, of the Kyoto Protocol 'annually' or over the second commitment period, in accordance to paragraph 1(h) of Annex I to decision 2/CMP.8.

[e] In accordance with paragraph 13 of the annex to decision 2/CMP.7, for the second commitment period, additions to the assigned amount of a Party resulting from forest management under Article 3, paragraph 4, and from forest management project activities undertaken under Article 6, shall not exceed 3.5 per cent of the base year greenhouse gas emissions excluding land use, land-use change and forestry pursuant to Article 3, paragraphs 7 and 8, or any amendments thereto, times eight. The FM CAP was calculated on the basis of the base year or period emissions reported in the annual greenhouse gas inventory report due by 15 April 2015, as included in the information communicated as part of the report to facilitate the calculation of a Party's assigned amount for the second commitment period, and takes into account any corrections or adjustments made during the review process of that report under Article 8 of the Kyoto Protocol.

[f] The forest management reference level as inscribed in the appendix to the annex to decision 2/CMP.7, and any technical corrections applied for the submission used for the calculation of the initial assigned amount as reported by Party in the 2017 inventory submission.

Table 6.2(a)

Activity coverage in the reporting of information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4[a]

	Afforestation and reforestation															Deforestation														
	Change in carbon pool reported[b]							Greenhouse gas sources reported[c]								Change in carbon pool reported[b]							Greenhouse gas sources reported[c]							
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		HWP[e]	Fertilization[f]	Drained, rewetted and other soils[g]		Nitrogen mineralization in mineral soils[i]	Indirect N_2O emissions from managed soil[f]	Biomass burning[j]			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		HWP[e]	Fertilization[f]	Drained, rewetted and other soils[g]		Nitrogen mineralization in mineral soils[i]	Indirect N_2O emissions from managed soil[f]	Biomass burning[j]		
					Mineral	Organic[d]														Mineral	Organic[d]										
								N_2O	CH_4[h]	N_2O	N_2O	N_2O	CO_2[k]	CH_4	N_2O								N_2O	CH_4[h]	N_2O	N_2O	N_2O	CO_2[k]	CH_4	N_2O
Australia	R	R	R	R	R	IE	R	IE	NO	NO	R	IE	R	R	R	R	R	R	R	R	IE	NR	IE	NO	NO	R	IE	R	R	R
Austria	R	R	R	R	R	NO	R	NO	NO	NO	R	NO	NO	NO	NO	R	R	R	R	R	NO	IO	NO	NO	NO	R	NO	NO	NO	NO
Belgium	R	R	R	R	R	NO	R	NO	NO	NO	R	NO	NO	NO	NO	R	R	R	R	R	NO	R	IE	NO	NO	R	NO	NO	NO	NO
Bulgaria	R	IE	R	NO	R	NO	R	NO	NO	NO	NO	NO	R	R	R	R	IE	R	R	R	NO	R	NO	NO	NO	NO	NO	NO	NO	NO
Croatia	R	R	IE	NO	R	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	IE	IE	R	NO	R	NO	NO	NO	R	NO	NO	NO	NO
Cyprus	NR	NR	NR	NR	NR	NO	NR	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR	NR	NR	NR	NO	NR	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	R	R	R	R	R	R	R	NO	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	R	R	NO	NO	NO	R	NO	NO	NO	NO
Denmark (KP)	R	R	R	R	R	R	R	IE	R	R	NO	R	NO	NO	NO	R	R	R	R	R	R	R	IE	R	R	R	IE	NO	NO	NO
Estonia	R	R	R	R	R	R	R	NO	NE	NE	NO	NO	IE	R	R	R	R	R	R	R	R	R	NO	NE	NE	NO	NO	NO	NO	NO
European Union (KP)	NO, NR, R	NO, NR, R	IE, NO, NR, R	IE, NO, NR, R	NO, NR, R	NO, NR, R	IE, NO, NR, R	IE, NO, R	NO, R	NO, R	NO, R	IE, NO, R	IE, NO, R	IE, NO, R	IE, NO, R	NO, NR, R	IE, NO, NR, R	IE, NO, NR, R	IE, NO, NR, R	NO, NR, R	IE, NO, NR, R	NO, NR, R	IE, NO	NO, R	NO, R	IE, NO, R	IE, NO, R	IE, NO, R	IE, NO, R
Finland	R	R	IE	IE	R	R	R	R	R	R	R	R	R	R	R	R	R	IE	IE, R	R	R	IO, NO	IE	R	R	R	IE	R	R	R
France (KP)	R	R	R	R	R	IE	NO	NO	NO	NO	R	NE	R	R	R	R	R	R	R	R	IE	IO	NO	NO	NO	R	NE	R	R	R
Germany	R	R	R	R	R	R	IE	NO	NO, R	NO, R	R	R	IE, NO	IE, NO	IE, NO	R	R	R	R	R	R	NO	NO	NO, R	NO, R	R	R	NO	NO	NO
Greece	R	R	NR	NR	NR	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	R	R	R	NO	NO	NO	NO	NO	R	NO	NO	NO	NO
Hungary	R	R	NR	NR	NR	NO	IE	IE	NO	NO	NO	NO	IE	R	R	R	R	R	R	R	NO	IO	IE	NO	NO	R	R	IE	R	R
Iceland																														
Ireland	R	R	R	R	NO	R	R	IE	R	R	NO	IE	R	R	R	R	R	R	R	R	R	IO	IE	R	R	R	IE	NO	NO	NO
Italy	R	R	R	R	R	NO	R	NO	NO	NO	R	R	R	R	R	R	R	R	R	R	NO	R	NO	NO	NO	NO	NO	NO	NO	NO
Japan	R	R	R	R	R	NO	NO	IE	NO	NO	NO	IE	IE	R	R	R	R	R	R	R	NO	IO	IE	NO	NO	R	IE	NO	NO	NO
Kazakhstan	R	IE	NR	IE	R	NO	NR	NO	NO	NO	NO	NO	IE	IE	IE	IE	IE	NR	IE	NR	NO	NR	NO	NO	NO	NO	NO	IE	IE	IE
Latvia	R	R	R	R	NO	R	NO	NO	R	R	NO	NO	NO	NO	NO	R	R	R	R	R	R	R	IE	R	R	IE	IE	NO	NO	NO
Liechtenstein	R	R	NR	NR	R	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	NO	IO	NO	NO	NO	R	NO	NO	NO	NO
Lithuania	R	R	R	NO	R	R	IE	NO	R	R	NO	NO	R	R	R	R	R	R	R	R	R	IO	NO	NO	NO	R	NO	NO	NO	NO
Luxembourg	R	R	R	R	R	NO	IO	NO	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	NO	IO	NO	NO	NO	R	NO	NO	NO	NO
Malta	NR	NR	NR	NR	NR	NO	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																														
Netherlands	R	R	R	R	R	R	IE	NO	NE	NE	R	NO	R	R	R	R	R	R	R	R	R	IO	IE	NE	NE	R	IE	R	R	R
New Zealand	R	R	R	R	R	R	R	IE	NE	NE	R	IE	IE	R	R	R	R	R	R	R	R	R	IE	NE	NE	R	IE	IE	R	R
Norway	R	R	R	R	R	R	R	R	NE, R	NE, R	R	R	IE, NO	NO, R	NO, R	R	R	R	R	R	R	R	IE	NE, R	IE, NE	R	R	NO	NO	NO
Poland	R	R	R	R	R	R	NO	NO	NO	NO	NO	NO	R	R	R	R	R	R	R	R	R	R	NO	NO	NO	NO	NO	NO	NO	NO
Portugal	R	R	R	IE	R	NO	R	IE	NO	NO	R	IE	R	R	R	R	R	R	IE	R	NO	R	IE	NO	NO	R	IE	R	R	R
Romania	R	R	R	NO	R	NR	R	IE	NO	NO	R	R	R	R	R	R	R	R	NO	R	NR	R	IE	NO	NO	R	R	R	R	R
Russian Federation	R	R	R	R	R	NO	R	NO	NO	NO	NO	NO	IE	R	R	R	R	R	R	R	NO	IE	NO	NO	NO	NO	NO	NO	NO	NO
Slovakia	R	R	R	NO, NR	R	NO, NR	NR	NO	NO	NO	NO	NO	R	R	R	R	R	R	R	R	NO, NR	NR	NO	NO	NO	NO	NO	NO	NO	NO
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	R	R	R	R	R	NO	IO	NO	NO	NO	R	NO	NO	NO	NO
Spain	R	IE	NR, R	NR, R	NR, R	NO	NR	NO	NO	NO	NE, R	IE, NE	IE, NO, R	NO, R	NO, R	NR, R	IE, NR	NR, R	NR, R	NR, R	NO	NR	NO	NO	NO	NE, R	IE, NE	NE, NO, R	IE, NE, NO, R	IE, NE, NO, R
Sweden	R	R	R	R	R	R	R	NO	R	R	R	R	NO	NO	NO	R	R	R	R	R	R	IO	NO	R	R	R	R	NO	NO	NO
Switzerland	R	R	NR	NR	R	R	NO	NO	NO	R	R	NO	IE	IE	IE	R	R	R	R	R	R	IO	NO	NO	NO	R	NO	NO	NO	NO
Ukraine	R	R	R	R	R	NO	IE	NO	NO	NO	R	NE	R	R	R	R	R	R	R	R	NO	IO	NO	NO	NO	R	NE	NO	NO	NO
United Kingdom of Great Britain and Northern Ireland (KP)	R	IE	R	IE	R	R	R	R	NE	R	R	R	R	R	R	R	IE	R	IE	R	IE	IO	NO	NO	NO	R	R	R	R	R

[a] As reported in Table NIR 1. "Summary Table - Activity coverage and other information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4.

[b] Indicate R (reported), NR (not reported), IE (included elsewhere) or NO (not occurring), for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4, or instantaneous oxidation (IO) for carbon stock changes in harvest wood products (HWP). With the exception of HWP, if changes in a carbon pool are not reported, verifiable information in the national inventory report (NIR) must be provided that demonstrates that these unaccounted pools were not a net source of anthropogenic greenhouse gas emissions. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[c] Indicate R (reported), NE (not estimated), IE (included elsewhere) or NO (not occurring) for greenhouse gas sources reported, for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[d] Includes CO_2 emissions/removals from organic soils, including CO_2 emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO_2 emissions/removals from drainage and rewetting from organic soils and off-site CO_2 emissions via water-borne carbon losses from organic soils should be reported here for wetland drainage and rewetting. These emissions could be reported for other activities as appropriate.

[e] HWP from lands reported under deforestation, which originated from the deforestation event at the time of the land-use change shall be accounted for on the basis of instantaneous oxidation (IO).

[f] N_2O emissions from fertilization of each activity (afforestation/reforestation, deforestation, forest management, revegetation and wetland drainage and rewetting) should be reported here when these emissions are not reported under the agriculture sector.

[g] CH_4 and N_2O emissions from drained and rewetted organic soils should be reported here, as appropriate, when emissions are not reported under the agriculture sector. For wetland drainage and rewetting only emissions from organic soils are included.

[h] CH_4 emissions from drained soils and drainage ditches should be reported here, as appropriate.

[i] N_2O emissions from nitrogen mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils under the appropriate activity (afforestation/reforestation, deforestation, forest management, cropland management, grazing land management and revegetation) should be reported here when these emissions are not reported under the agriculture sector.

[j] Emissions from burning of organic soils should also be included here, as appropriate.

[k] If CO_2 emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO_2 emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).

Table 6.2(b)

Activity coverage in the reporting of information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4[a]

	Forest management															Cropland management										
	Change in carbon pool reported[b]							Greenhouse gas sources reported[c]								Change in carbon pool reported[b]						Greenhouse gas sources reported[c]				
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		HWP[e]	Fertilization[f]	Drained, rewetted and other soils[g]		Nitrogen mineralization in mineral soils[i]	Indirect N_2O emissions from managed soil[f]	Biomass burning[j]			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		Drained, rewetted and other soils[g]	Nitrogen mineralization in mineral soils[i]	Biomass burning[j]		
					Mineral	Organic[d]														Mineral	Organic[d]						
								N_2O	CH_4[h]	N_2O	N_2O	N_2O	CO_2[k]	CH_4	N_2O							CH_4[h]	N_2O	CO_2[k]	CH_4	N_2O
Australia	R	R	R	R	R	IE	R	IE	NA	NA	R	IE	R	R	R	R	R	R	R	R	IE	NA	R	R	R	R
Austria	R	R	IE	R	R	NO	R	NO	NO	NO	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium	R	R	NO	NO	R	NO	R	NO	NO	NO	R	NO	NO	NO	NO	R		NO	NO	R	R	NO	R	NO	NO	NO
Bulgaria	R	IE	R	R	R	NO	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	R	R	NO	NO	NO	NO	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	NR	NR	NR	NR	NO	NO	NR	NE	NE	NE	NE	NE	R	R	R	NR	NR	NR	NR	NR	NO	NE	NE	NE	NE	NE
Czech Republic	R	R	IE	R	R	R	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	R	R	R	R	R	R	R	IE	R	R	NO	IE	NO	NO	NO	R	IE	NO	NO	R	R	R	IE	NO	NO	NO
Estonia	R	R	R	R	R	R	R	NO	NA	NA	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	NR, R	IE, NR, R	IE, NO, NR, R	IE, NO, NR, R	NO, NR, R	NO, NR, R	NR, R	IE, NO, R	NO, R	NO, R	NO, R	IE, NO, R	IE, NO, R	NO, R	NO, R	NR, R	IE, NR, R	IE, NO, NR, R	IE, NO, NR, R	NR, R	NO, R	NO, R	IE, NO, R	NO, R	IE, NO, R	IE, NO, R
Finland	R	R	IE	IE	R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	R	R	R	R	R	IE	R	NO	NO	NO	R	NE	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	R	R	R	R	R	R	R	NO	NO, R	NO, R	R	R	IE, NO	NO, R	NO, R	R	R	IE	IE, NO	R	R	NO, R	R	NO	NO	NO
Greece	R	R	NR	NR	NR	NO	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	R	R	NR	NR	NR	R	R	IE	NO	NO	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland																										
Ireland	R	R	R	R	NA	R	R	IE	R	R	NO	IE	R	R	R	R	IE	NO	NO	R	NO	NO	IE	NO	R	R
Italy	R	R	R	R	NR	NR	R	NO	NO	NO	NO	NO	R	R	R	R	R	NO	NO	R	R	NO	NO	R	R	R
Japan	R	R	R	R	R	NO	R	R	NO	NO	R	R	IE	R	R	R	R	NR	NR	R	R	R	R	IE	R	R
Kazakhstan	R	IE	IE	IE	NR	NO	NR	NO	NO	NO	NO	NO	IE	R	R	R	IE	IE	NO	R	NO	NO	IE	IE	IE	IE
Latvia	R	R	R	R	NO	R	R	NO	R	R	R	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	R	R	NR	NR	NR	NO	R	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithuania	R	R	R	R	NO	R	R	NO	R	R	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	R	R	R	R	R	NO	IO	NO	NO	NO	NO	NO	NO	NO	NO	NR	NR	NR	NR	NR	NO	NO	NA	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	IE	IE	NR	NR	IE	NO	NO	IE	NO	NO	NO
Monaco																										
Netherlands	R	R	R	R	R	R	R	NO	NE	NE	R	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	R	R	R	R	R	R	R	NO	NE	NE	R	IE	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Norway	R	R	R	R	R	R	R	R	NE, R	NE, R	R	R	IE	NE, R	NE, R	NO, R	NO, R	NO	NO	R	R	NE, R	R	NO	NO	NO
Poland	R	R	R	R	R	R	R	NO	R	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	R	R	R	IE	R	NO	R	IE	NO	NO	R	IE	R	R	R	R	R	R	NO	R	NO	NO	R	R	R	R
Romania	R	R	R	NO	R	NR	R	IE	NO	NO	R	R	R	R	R	R	R	NR	NR	R	NO	NO	R	R	R	R
Russian Federation	R	R	R	R	R	R	R	NO	R	R	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	R	R	NO, NR	NO, NR	NO, NR	NO, NR	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	R	R	NR	R	NR	NO	R	NO	NO	NO	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	NR, R	IE, NR	NR, R	NR, R	NR, R	NO	R	NO	NO	NO	NE, R	IE, NE	IE, NE, R	NO, R	NO, R	NR, R	IE, NR	NR, R	NR, R	R	NO	NO	NE, R	NE, NO	IE, NE, NO	IE, NE, NO
Sweden	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	R	R	R	R	R	R	R	NO	NO	R	NO	NA	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	R	R	R	R	R	R	R	NO	NO	R	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	R	IE	R	IE	R	R	R	NO	NE	R	NO	NO	R	R	R	R	IE	NR	NR	R	R	NE	R	NE	R	R

[a] As reported in Table NIR 1. "Summary Table - Activity coverage and other information relating to activities under Article 3, paragraph 3, forest management under Article 3.4.

[b] Indicate R (reported), NR (not reported), IE (included elsewhere) or NO (not occurring), for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4, or instantaneous oxidation (IO) for carbon stock changes in harvest wood products (HWP). With the exception of HWP, if changes in a carbon pool are not reported , verifiable information in the national inventory report (NIR) must be provided that demonstrates that these unaccounted pools were not a net source of anthropogenic greenhouse gas emissions. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[c] Indicate R (reported), NE (not estimated), IE (included elsewhere) or NO (not occurring) for greenhouse gas sources reported, for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[d] Includes CO_2 emissions/removals from organic soils, including CO_2 emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO_2 emissions/removals from drainage and rewetting from organic soils and off-site CO_2 emissions via water-borne carbon losses from organic soils should be reported here for wetland drainage and rewetting. These emissions could be reported for other activities as appropriate.

[e] HWP from lands reported under deforestation, which originated from the deforestation event at the time of the land-use change shall be accounted for on the basis of instantaneous oxidation (IO).

[f] N_2O emissions from fertilization of each activity (afforestation/reforestation, deforestation, forest management, revegetation and wetland drainage and rewetting) should be reported here when these emissions are not reported under the agriculture sector.

[g] CH_4 and N_2O emissions from drained and rewetted organic soils should be reported here, as appropriate, when emissions are not reported under the agriculture sector. For wetland drainage and rewetting only emissions from organic soils are included.

[h] CH_4 emissions from drained soils and drainage ditches should be reported here, as appropriate.

[i] N_2O emissions from nitrogen mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils under the appropriate activity (afforestation/reforestation, deforestation, forest management, cropland management, grazing land management and revegetation) should be reported here when these emissions are not reported under the agriculture sector.

[j] Emissions from burning of organic soils should also be included here, as appropriate.

[k] If CO_2 emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO_2 emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).

Table 6.2(c)

Activity coverage in the reporting of information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4[a]

	Grazing land management											Revegetation												
	Change in carbon pool reported[b]						Greenhouse gas sources reported[c]					Change in carbon pool reported[b]						Greenhouse gas sources reported[c]						
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		Drained, rewetted and other soils[e]	Nitrogen mineralization in mineral soils[g]	Biomass burning[h]			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		Fertilization[j]	Drained, rewetted and other soils[e]		Nitrogen mineralization in mineral soils[g]	Indirect N_2O emissions from managed soil[j]	Biomass burning[h]		
					Mineral	Organic[d]										Mineral	Organic[d]								
							CH_4[f]	N_2O	CO_2[i]	CH_4	N_2O							N_2O	CH_4[f]	N_2O	N_2O	N_2O	CO_2[i]	CH_4	N_2O
Australia	R	R	R	R	R	IE	NA	R	R	R	R	R	IE	NA	NA	NA	NA	IE	NA	NA	NA	IE	IE	IE	IE
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
Belgium	NO	NO	NO	NO	R	R	NO	R	NO	NO	NO	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
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
Cyprus	NR	NR	NR	NR	NR	NO	NE	NE	NE	NE	NE	NR	NR	NR	NR	NR	NO	NE	NE	NE	NE	NE	NE	NE	NE
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
Denmark (KP)	R	IE	NO	NO	R	R	R	IE	IE	R	R	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
European Union (KP)	NO, NR, R	IE, NO, NR, R	IE, NO, NR, R	IE, NO, NR, R	NR, R	NO, R	NO, R	IE, NO, R	IE, NO, R	NO, R	NO, R	NR, R	IE, NR, R	IE, NR, R	NO, NR, R	NR, R	NO	NO, R	NO	NO	NO, R	NO, R	NO, R	NO, R	NO, R
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
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
Germany	R	R	IE	IE, NO	R	R	NO, R	NO	NO	NO	NO	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
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
Iceland												R	IE	IE	NO	R	NO	R	NO	NO	NO	NO	NE	R	R
Ireland	R	IE	NO	NO	R	R	R	IE	NO	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy	NO	NO	NO	NO	R	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	R	R	NR	NR	R	R	R	R	NO	NO	NO	R	R	R	IE	R	NO	IE	NO	NO	NA	NO	NO	NO	NO
Kazakhstan	NR	NR	NR	NO	NR	NO	NO	NO	IE	IE	IE	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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
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
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
Luxembourg	NR	NR	NR	NR	NR	NO	NO	NA	NO	NO	NO	NR	NR	NR	NR	NR	NO	NO	NO	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO														
Monaco																									
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
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
Norway	NO, R	NO, R	NO	NO	R	R	NE, R	R	IE, NO	NE, NO	NE, NO	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
Portugal	R	R	R	NO	R	NO	NO	R	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania	R	R	NR	NR	R	NO	NO	R	R	R	R	R	R	R	R	R	NO	R	NO	NO	R	R	R	R	R
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
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
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
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
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
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
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
United Kingdom of Great Britain and Northern Ireland (KP)	R	IE	NR	NR	R	R	NE	R	NE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[a] As reported in Table NIR 1. "Summary Table - Activity coverage and other information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4.

[b] Indicate R (reported), NR (not reported), IE (included elsewhere) or NO (not occurring), for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4, or instantaneous oxidation (IO) for carbon stock changes in harvest wood products (HWP). With the exception of HWP, if changes in a carbon pool are not reported, verifiable information in the national inventory report (NIR) must be provided that demonstrates that these unaccounted pools were not a net source of anthropogenic greenhouse gas emissions. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[c] Indicate R (reported), NE (not estimated), IE (included elsewhere) or NO (not occurring) for greenhouse gas sources reported, for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[d] Includes CO_2 emissions/removals from organic soils, including CO_2 emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO_2 emissions/removals from drainage and rewetting from organic soils and off-site CO_2 emissions via water-borne carbon losses from organic soils should be reported here for wetland drainage and rewetting. These emissions could be reported for other activities as appropriate.

[e] CH_4 and N_2O emissions from drained and rewetted organic soils should be reported here, as appropriate, when emissions are not reported under the agriculture sector. For wetland drainage and rewetting only emissions from organic soils are included.

[f] CH_4 emissions from drained soils and drainage ditches should be reported here, as appropriate.

[g] N_2O emissions from nitrogen mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils under the appropriate activity (afforestation/reforestation, deforestation, forest management, cropland management, grazing land management and revegetation) should be reported here when these emissions are not reported under the agriculture sector.

[h] Emissions from burning of organic soils should also be included here, as appropriate.

[i] If CO_2 emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO_2 emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).

[j] N_2O emissions from fertilization of afforestation/reforestation, deforestation, forest management, revegetation and wetland drainage and rewetting should be reported here when these emissions are not reported under the agriculture sector.

Table 6.2(d)

Activity coverage in the reporting of information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4[a]

	Wetland drainage and rewetting												
	Change in carbon pool reported[b]						Greenhouse gas sources reported[c]						
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		Fertilization[e]	Drained, rewetted and other soils[f]		Indirect N_2O emissions from managed soil[e]	Biomass burning[i]		
					Mineral	Organic[d]							
							N_2O	CH_4[h]	N_2O	N_2O	CO_2[j]	CH_4	N_2O
Australia	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
Belgium	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		
Bulgaria	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
Cyprus	NR	NR	NR	NR		NO	NE	NE	NE	NE	NE	NE	NE
Czech Republic	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	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
European Union (KP)	NR, R	NR, R	NR, R	NR, R		NO, NR, R	NO	NO	NO	NO	NO	NO	NO
Finland	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
Germany	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Greece	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Hungary	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Iceland													
Ireland	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
Japan	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan	NR	NR	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO
Latvia	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
Lithuania	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NR	NR	NR	NR		NO	NO	NO	NO	NO	NO	NO	NO
Malta													
Monaco													
Netherlands	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
Norway	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
Poland	NA	NA	NA	NA		NA	NA		NA	NA	NA	NA	NA
Portugal	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
Russian Federation	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
Slovenia	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
Sweden	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
Ukraine	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	NR	NR	NR	NR		NR	NE	NE	NE	NE	NE	NE	NE

[a] As reported in Table NIR 1. "Summary Table - Activity coverage and other information relating to activities under Article 3, paragraph 3, forest management under Article 3.4, and elected activities under Article 3.4.

[b] Indicate R (reported), NR (not reported), IE (included elsewhere) or NO (not occurring), for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4, or instantaneous oxidation (IO) for carbon stock changes in harvest wood products (HWP). With the exception of HWP, if changes in a carbon pool are not reported , verifiable information in the national inventory report (NIR) must be provided that demonstrates that these unaccounted pools were not a net source of anthropogenic greenhouse gas emissions. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[c] Indicate R (reported), NE (not estimated), IE (included elsewhere) or NO (not occurring) for greenhouse gas sources reported, for each relevant activity under Article 3.3, forest management or any elected activity under Article 3.4. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the NIR.

[d] Includes CO_2 emissions/removals from organic soils, including CO_2 emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO_2 emissions/removals from drainage and rewetting from organic soils and off-site CO_2 emissions via water-borne carbon losses from organic soils should be reported here for wetland drainage and rewetting. These emissions could be reported for other activities as appropriate.

[e] N_2O emissions from fertilization of each activity (afforestation/reforestation, deforestation, forest management, revegetation and wetland drainage and rewetting) should be reported here when these emissions are not reported under the agriculture sector.

[f] CH_4 and N_2O emissions from drained and rewetted organic soils should be reported here, as appropriate, when emissions are not reported under the agriculture sector. For wetland drainage and rewetting only emissions from organic soils are included.

[g] CH_4 emissions from drained soils and drainage ditches should be reported here, as appropriate.

[h] N_2O emissions from nitrogen mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils under the appropriate activity (afforestation/reforestation, deforestation, forest management, cropland management, grazing land management and revegetation) should be reported here when these emissions are not reported under the agriculture sector.

[i] Emissions from burning of organic soils should also be included here, as appropriate.

[j] If CO_2 emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO_2 emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).

Table 6.3(a)

Afforestation and reforestation - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)										Area subject to natural disturbances		
	Total	Mineral Soils	Organic Soil[b]	CSC in above-ground biomass[c, d]			CSC in below-ground biomass[c, d]			Net CSC in litter[c]	Net CSC in dead wood[c]	Net CSC in soil[c]		Total	Mineral Soils	Organic Soil[b]
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[e, f]	(kha)		
Australia	3 559	3 558	1.0	0.30	IE, NA	0.30	0.12	IE, NA	0.12	0.15	0.34	0.061	89	NA	NA	NA
Austria	218	218	NA, NO	1.4	-0.46	0.97	0.36	–0.098	0.26	0.85	0.016	0.49	NA, NO	NA	NA	NA
Belgium	39	39		1.5	–0.001	1.5	0.29	–0.001	0.29			1.1				
Bulgaria	263	263	NO	2.5	-0.29	2.2	IE, NO	IE, NO	IE, NO	0.23	NE, NO	-0.98	NO	NO	NO	NO
Croatia	59	59	NA, NO	0.83	-0.36	0.47	0.37	-0.27	0.095	IE, NA	NA, NO	0.73	NA,NO	NA	NA	NA
Cyprus	NE, NO	NE	NO	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO	NE, NO	NE	NO
Czech Republic	58	58	NO	1.8	NO	1.8	0.36	NO	0.36	0.49	0.007	0.11	NO	NO	NO	NO
Denmark (KP)	103	93	10	1.5	-0.16	1.4	0.31	IE	0.31	0.023	0.003	0.081	-1.3			
Estonia	59	47	13	0.84	IE, NO	0.84	0.33	IE, NO	0.33	0.30	0.023	-0.72	-0.52	NO	NO	NO
European Union (KP)	9 231	8 827	404	1.8	-0.45	1.3	0.33	–0.087	0.24	0.15	0.024	0.054	-1.2	NA, NE, NO	NA, NE, NO	NA, NO
Finland	173	106	67	1.1	-0.48	0.63	0.38	-0.17	0.20	IE, NA	IE, NA	0.12	-1.4	NA	NA	NA
France (KP)	1 479	1 479	IE, NO	1.3	-0.21	1.1	0.46	IE, NO	0.46	0.16	0.029	0.11	IE, NO	NO	NO	NO
Germany	534	489	46	3.0	-0.16	2.9	0.61	–0.085	0.53	0.47	0.034	-0.24	-2.2	NA	NA	NA
Greece	34	34	NO	1.9	-1.1	0.84	0.37	-0.22	0.15	NA, NE	NA, NE	NA, NE	NA	NO	NO	NO
Hungary	173	173	NA, NO	1.5	–0.006	1.5	0.39	–0.000	0.39	NA, NE	NA, NE	NA, NE	NA, NO	NA	NA	NA
Iceland	46	42	3.1	0.85	IE, NO	0.85	0.21	IE, NO	0.21	0.14	NO	0.40	-0.49	NO	NO	NO
Ireland	311	140	171	4.0	-2.1	1.9	0.93	-0.13	0.80	0.71	0.22	NA, NO	-0.73	NA	NA	NA
Italy	1 845	1 845	NO	2.1	-1.2	0.97	0.43	-0.24	0.19	0.014	0.009	0.13	NA, NO	NO	NO	NO
Japan	95	95	NA, NO	2.3	–0.000	2.3	0.60	–0.001	0.60	0.23	0.85	0.080	NA, NO	NA	NA	NA
Kazakhstan	167	167	NO	0.56	NE, NO	0.56	IE, NO	NO	IE, NO	NE, NO	IE, NO	NE	NO	NE, NO	NE	NO
Latvia	41	40	0.80	0.47	-0.13	0.33	0.12	–0.033	0.083	0.081	0.082	NA, NO	-2.6	NA	NA	NA
Liechtenstein	0.034	0.034	NO	1.4	NO	1.4	0.45	NO	0.45	NO	NO	0.31	NO	NO	NO	NO
Lithuania	45	38	7.0	1.3	IE, NA	1.3	0.30	IE, NA	0.30	1.1	NA, NO	-0.60	-2.2	NA	NA	NA
Luxembourg	8.8	8.8	NO	3.2	–0.036	3.2	0.64	IE, NO	0.64	0.50	0.15	0.88	NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco																
Netherlands	68	59	8.3	3.1	–0.069	3.0	0.56	-0.20	0.36	NO	0.12	–0.013	-0.18	NO	NO	NO
New Zealand	648	646	1.8	7.1	-1.2	5.9	1.5	-0.26	1.2	-0.19	–0.003	-0.36	-0.68			
Norway	58	51	6.8	0.78	–0.016	0.77	0.24	–0.005	0.23	2.5	0.022	-0.62	-0.93	NA	NA	NA
Poland	735	716	18	0.80	NO	0.80	0.21	NO	0.21	NO	NO	0.059	-0.68	NO	NO	NO
Portugal	610	610	NO	2.1	-1.0	1.1	0.40	-0.31	0.094	0.054	IE, NO	0.24	NO	NO	NO	NO
Romania	31	31	IE, NO	1.9	IE, NO	1.9	IE, NO	IE, NO	IE, NO	0.051	IE, NO	1.1	IE, NO	NO	NO	NO
Russian Federation	581	581	NO	1.8	-0.61	1.2	0.46	-0.15	0.31	0.036	0.27	0.50	NO	NO	NO	NO
Slovakia	43	43	NA, NO	1.1	NA, NO	1.1	0.24	NA, NO	0.24	0.42	NA, NO	1.2	NA, NO	NA	NA	NA
Slovenia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	1 246	1 246	NA, NO	1.9	IE, NA	1.9	IE, NA	IE, NA	IE, NA	0.074	0.040	0.47	NA, NO	NA	NA	NA
Sweden	353	325	28	0.86	IE, NO	0.86	0.28	IE, NO	0.28	0.26	0.016	-0.15	-2.2	NO	NO	NO
Switzerland	2.6	2.6	0.011	2.1	-1.2	0.92	0.71	-0.32	0.40	–0.006	0.023	0.44	-2.6			
Ukraine	308	308	NA, NO	0.49	–0.003	0.48	0.11	IE, NA, NO	0.11	0.20	0.081	0.097	NA, NO	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	655	624	31	1.5	–0.028	1.5	IE, NA	IE, NA	IE, NA	0.034	IE, NA	-0.89	-1.3	NA	NA	NA

[a] As both afforestation and reforestation under Article 3.3 are subject to the same provisions specified in the annex to decision 2/CMP.7, they can be reported together.

[b] A Party should report on-site CO_2 emissions from drained organic soils here. A Party may also choose to include emissions and removals from rewetted and other organic soils, including off-site CO_2 emissions, here. A Party should provide detailed information on methodologies, emissions and removals from these subdivisions in the NIR.

[c] Carbon stock changes (CSC). The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[d] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key included elsewhere (IE) should be filled in, in the other column.

[e] The value reported here is an emission and not a carbon stock change.

[f] CO_2 emissions from dissolved organic carbon from drained and CO_2 emissions/removals from rewetted organic soils may also be included here.

Table 6.3(b)

Deforestation - area and implied carbon stock change factors from the change in carbon stocks for 2015

	Area subject to the activity			Implied carbon stock change factor (t C/ha)										Area subject to natural disturbance		
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[a, b]			CSC in below-ground biomass[a, b]			Net CSC in litter[a]	Net CSC in dead wood[a]	Net CSC in soil[a]		Total	Mineral Soils	Organic Soil
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[c, d]	(kha)		
Australia	11 967	11 964	3.1	IE, NO	-0.26	-0.26	IE, NO	-0.10	-0.10	–0.003	–0.036	-0.29	-4.8	NO	NO	NO
Austria	74	74	NA, NO	0.21	-0.88	-0.67	0.052	-0.22	-0.17	-0.53	0.000	-0.49	NA, NO	NA	NA	NA
Belgium	34	34			-7.0	-7.0		-1.4	-1.4	-0.21	–0.054	-1.9				
Bulgaria	4.5	4.5	NO	0.94	-7.0	-6.0	IE, NO	IE, NO	IE, NO	-0.71	-0.35	-2.6	NO	NO	NO	NO
Croatia	4.7	4.7	NA, NO	0.73	-1.4	-0.69	NA, NO	-0.36	-0.36	IE, NA	IE, NA	-2.7	NA, NO	NA	NA	NA
Cyprus	NE, NO	NE	NO	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO	NE, NO	NE	NO
Czech Republic	17	17	NO	NA, NO	-2.0	-2.0	NA, NO	-0.41	-0.41	-0.28	–0.056	–0.032	NA, NO	NO	NO	NO
Denmark (KP)	10	9.5	0.49	0.89	-3.9	-3.0	0.43	-0.78	-0.35	-2.8	-0.27	–0.058	-4.5	NO	NO	NO
Estonia	20	16	3.5	IE, NA	-0.52	-0.52	IE, NA	-0.12	-0.12	-1.1	–0.025	-0.69	-1.6	NA	NA	NA
European Union (KP)	3 944	3 786	157	0.045	-1.4	-1.3	0.019	-0.22	-0.20	-0.27	–0.042	-0.71	-4.3	NA, NE, NO	NA, NE, NO	NA, NO
Finland	391	305	87	0.026	-0.56	-0.53	0.010	-0.17	-0.16	IE, NA	–0.010	-0.39	-5.1	NA	NA	NA
France (KP)	1 624	1 624	IE, NO	NO	-1.0	-1.0	NO	-0.27	-0.27	-0.11	–0.037	-0.43	IE	NO	NO	NO
Germany	286	266	21	0.28	-1.3	-0.99	0.11	-0.22	-0.12	-0.51	–0.054	0.13	-5.9	NA	NA	NA
Greece	5.2	5.2	NO	NA, NO	–0.086	–0.086	NA, NO	–0.028	–0.028	–0.023	–0.003	-2.0	NA, NO	NO	NO	NO
Hungary	13	13	NO	IE, NO	-2.0	-2.0	IE, NO	-0.50	-0.50	-0.96	-0.30	-0.84	NO	NO	NO	NO
Iceland	0.052	0.052	NO	NO	-0.34	-0.34	NO	–0.084	–0.084	-0.13	IE, NO	-0.61	NO	NO	NO	NO
Ireland	17	10	7.1	0.007	-0.90	-0.89	0.031	-0.23	-0.20	-0.22	-0.13	-0.37	-1.1	NA	NA	NA
Italy	51	51	NO	NA, NO	-3.3	-3.3	NA, NO	-0.70	-0.70	-0.21	-0.11	-5.9	NA, NO	NO	NO	NO
Japan	294	293	0.49	0.001	-0.83	-0.83	0.005	-0.21	-0.21	-0.15	-0.37	-0.10	NA, NO	NA	NA	NA
Kazakhstan	NE, NO	NE	NO	NE, NO	NE	NE, NO	NE, NO	NE	NE, NO	NE, NO	NE, NO	NE	NO	NE, NO	NE	NO
Latvia	59	46	13	NO	-3.8	-3.8	NO	-0.96	-0.96	-0.94	-0.88	-0.58	-4.4	NO	NO	NO
Liechtenstein	0.19	0.19	NO	0.39	-3.6	-3.2	0.13	-1.2	-1.1	-0.78	-0.41	-1.1	NO	NO	NO	NO
Lithuania	2.0	1.7	0.32	IE, NO	-1.2	-1.2	IE, NO	-0.28	-0.28	-0.47	–0.063	-1.4	-1.4	NO	NO	NO
Luxembourg	5.8	5.8	NO	0.072	-0.71	-0.64	IE, NA, NO	-0.15	-0.15	-0.13	–0.038	-0.91	NA, NO	NO	NO	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco																
Netherlands	73	66	7.1	0.37	-3.8	-3.5	0.25	-0.75	-0.50	-1.6	-0.10	–0.005	-2.6	NO	NO	NO
New Zealand	188	188	0.88	0.064	-4.3	-4.2	0.10	-0.94	-0.84	-0.21	-0.23	0.53	-2.3	NA	NA	NA
Norway	152	142	10	0.040	-0.99	-0.95	0.012	-0.28	-0.26	-2.8	-0.23	0.19	-7.9			
Poland	18	18	NO	NO	-2.2	-2.2	NO	-0.45	-0.45	–0.001	–0.058	-1.8	NO	NO	NO	NO
Portugal	361	361	NO	0.075	-0.36	-0.29	0.040	–0.078	–0.038	–0.050	IE	-1.1	NO	NO	NO	NO
Romania	365	365	NA, NO	NA, NO	-3.9	-3.9	IE, NA	IE, NA	IE, NA	-0.33	IE, NA	-1.6	NA, NO	NA	NA	NA
Russian Federation	605	605	IE, NO	NO	-0.94	-0.94	NO	–0.246	-0.25	-0.18	-0.24	-0.45	NO	NO	NO	NO
Slovakia	8.5	8.5	NA, NO	NA, NO	-1.4	-1.4	NA, NO	-0.44	-0.44	-0.13	–0.077	–0.027	NA, NO	NA	NA	NA
Slovenia	27	27	NO	NA, NO	-2.8	-2.8	NA, NO	-0.27	-0.27	-0.30	-0.14	-1.5	NA	NO	NO	NO
Spain	114	114	NA, NO	IE, NA	-0.90	-0.90	IE, NA	IE, NA	IE, NA	–0.059	–0.030	-0.31	NA, NO	NA	NA	NA
Sweden	297	277	19	IE, NO	-0.22	-0.22	IE, NO	–0.070	–0.070	-0.84	–0.000	-0.72	-1.6	NO	NO	NO
Switzerland	8.6	8.6	0.032	0.000	-2.3	-2.3	0.000	-0.70	-0.70	-0.77	-0.18	-0.79	-5.0			
Ukraine	50	50	NA, NO	NA	–0.035	–0.035	NA	–0.005	–0.005	–0.000	–0.000	–0.005	NA, NO	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	61	61	IE, NA, NO	0.001	-2.2	-2.2	IE, NA, NO	IE, NA, NO	IE, NA, NO	-0.40	IE, NA, NO	-1.7	IE, NA, NO	NA	NA	NA

[a] Carbon stock change (CSC). The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[b] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[c] The value reported here is an emission and not a carbon stock change.

[d] CO_2 emissions from dissolved organic carbon from drained and CO_2 emissions/removals from rewetted organic soils may also be included here.

Table 6.3(c)

Forest management - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)										Area subject to newly established forest(CEF-ne)			Area subject to harvested and converted forest plantations (CEF-hc)			Area subject to natural disturbances		
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]		Total	Mineral Soils	Organic Soil	Total	Mineral Soils	Organic Soil	Total	Mineral Soils	Organic Soil
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d, e]	(kha)			(kha)			(kha)		
Australia	10 979	10 979	IE, NA	0.49	IE, NA	0.49	0.12	IE, NA	0.12	–0.065	-0.20	0.010	IE, NA	NA	NA	NA	NA	NA	NA	IE, NA	IE	NA
Austria	3 811	3 811	NA, NO	1.9	-1.7	0.26	0.45	-0.42	0.031	IE, NA, NE, NO	0.059	-0.18	NA, NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Belgium	676	676		1.1	-0.16	0.95						0.53										
Bulgaria	3 623	3 623	NO	0.40	IE, NO	0.40	IE, NO	IE, NO	IE, NO	0.040	0.026	–0.057	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Croatia	2 311	2 311	NA, NO	1.4	-0.85	0.54	0.33	-0.20	0.13	NA, NO	NA, NO	NA, NO	NA, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	NE, NO	NE	NO	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO	NE, NO	NE	NO	NE, NO	NE	NO	NE, NO	NE	NO
Czech Republic	2 610	2 592	19	2.4	-1.9	0.50	0.49	-0.39	0.10	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Denmark (KP)	535	509	26	0.73	–0.009	0.72	0.11	–0.002	0.11	-1.2	–0.022	NA, NO	-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	2 361	501	1 861	0.20	IE, NA	0.20	IE, NA	IE, NA	IE, NA	NE, NA	0.013	0.51	-0.053	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	154 479	141 183	13 296	1.1	-0.58	0.49	0.22	-0.13	0.097	–0.014	0.009	0.11	-0.39	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO
Finland	21 685	15 795	5 890	1.4	-1.1	0.32	0.38	-0.31	0.062	IE, NA	IE, NA	0.21	-0.27	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	21 518	21 518	IE	1.3	-0.92	0.43	0.38	-0.22	0.17	0.001	–0.031	0.010	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Germany	10 627	10 527	100	0.90	IE, NA	0.90	0.13	IE, NA	0.13	–0.013	–0.052	0.41	-2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	1 234	1 234	NA, NO	0.45	–0.094	0.35	0.15	–0.030	0.12	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Hungary	1 767	1 761	6.5	0.44	IE, NA	0.44	0.15	IE, NA	0.15	NA, NE	NA, NE	NA, NE	-2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	94	93	0.49	0.19	–0.011	0.18	0.047	IE, NE	0.047	0.006	IE, NO	0.014	-0.49	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ireland	449	181	268	4.3	-5.2	-0.85	1.1	-0.61	0.49	0.60	0.14	NA, NO	-0.46	NO	NO	NO	NO	NO	NO	NA	NA	NA
Italy	7 460	7 460	NA, NO	2.1	-1.1	1.00	0.43	-0.23	0.20	0.003	0.002	NA, NE, NO	NA, NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Japan	15 652	15 610	43	0.85	-0.17	0.67	0.22	–0.045	0.17	0.003	–0.038	0.024	NA, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan	IE, NE, NO	IE, NE	NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	NE, NO	IE, NE, NO	NE, NO	NO	IE, NO	IE	NO	NE, NO	NE	NO	NE, NO	NE	NO
Latvia	3 063	2 585	478	2.5	-2.1	0.39	0.62	-0.52	0.098	NA, NO	0.058	NA, NO	-2.6	NO	NO	NO	NO	NO	NO	NA	NA	NA
Liechtenstein	6.2	6.2	NO	1.7	-1.7	0.015	0.56	-0.56	0.005	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	2 161	1 822	339	0.85	IE, NA, NO	0.85	0.20	IE, NA, NO	0.20	0.043	0.025	NA, NO	-1.5	IE	IE	IE	NO	NO	NO	NA	NA	NA
Luxembourg	87	87	NO	2.5	-1.7	0.78	0.54	-0.37	0.18	0.000	0.000	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Malta	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	NE	NE	NO	NO	NO	NE	NE	NE
Monaco																						
Netherlands	324	308	16	1.9	-1.0	0.87	0.16	NO	0.16	NO	0.22	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
New Zealand	9 257	9 240	17	1.0	-0.86	0.14	0.22	-0.18	0.039	–0.006	0.057	0.000	-0.12							NA	NA	NA
Norway	12 077	11 357	720	0.73	-0.31	0.41	0.18	–0.080	0.10	0.12	0.024	0.003	-0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	8 661	8 421	240	0.62	IE, NA, NO	0.62	0.16	IE, NA, NO	0.16	NA, NO	NA, NO	0.11	-0.57	NO	NO	NO	NO	NO	NO	NA	NA	NA
Portugal	3 755	3 755	NO	1.6	-1.2	0.45	0.32	-0.16	0.17	–0.002	IE, NO	–0.005	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Romania	7 064	6 969	95	1.7	-0.69	0.98	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.004	NA, NO	0.085	-0.68	NA	NA	NA	NA	NA	NA	NO	NO	NO
Russian Federation	638 687	636 737	1 950	0.28	–0.072	0.21	0.077	–0.037	0.040	0.004	0.024	0.008	-0.71	IE	IE	IE	NO	NO	NO	NA	NA	NA
Slovakia	1 978	1 978	NA, NO	2.1	-1.6	0.51	0.42	-0.31	0.11	NA, NO	NA, NO	NA, NO	NA, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	1 083	1 082	0.76	0.95	IE, NA	0.95	0.22	IE, NA	0.22	NA, NO	–0.001	NA, NO	NA, NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	14 435	14 435	NA, NO	0.47	IE, NA, NO	0.47	IE, NA, NO	IE, NA, NO	IE, NA, NO	–0.002	–0.001	–0.002	NA, NO	NO	NO	NO	NO	NO	NO	NA	NA	NA
Sweden	28 295	24 540	3 755	0.25	IE, NO	0.25	0.084	IE, NO	0.084	–0.074	0.069	0.20	-0.33	NO	NO	NO	NO	NO	NO	NO	NO	NO
Switzerland	1 251	1 247	4.0	2.3	-1.8	0.42	0.65	-0.54	0.10	–0.016	0.037	0.001	-2.6									
Ukraine	9 354	9 161	193	1.7	-0.31	1.4	0.25	IE, NA	0.25	0.022	0.32	NA	-0.68	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	2 811	2 610	201	2.3	-1.3	0.96	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.041	IE, NA, NO	0.38	0.72	NA	NA	NA	NA	NA	NA	NO	NO	NO

[a] For forest management, information reported here refers to anthropogenic carbon stock change for the inventory year for all geographical locations that encompass land subject to forest management under Article 3.4. Newly established forest will reach at least the equivalent carbon stock that was contained in the harvested forest plantation at the time of harvest, and, if not, a debit would be generated under Article 3.4. Reporting is required by Parties which apply the provision to exclude emissions from natural disturbances in accordance with paragraphs 33 and 34 in the annex to decision 2/CMP.7.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

[e] CO_2 emissions from dissolved organic carbon from drained and CO_2 emissions/removals from rewetted organic soils may also be included here.

Table 6.3(d)

Cropland management - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	34 914	34 901	13	0.002	IE, NA	0.002	0.001	IE, NA	0.001	0.000	0.000	0.032	-5.0
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria	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
Cyprus													
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	2 838	2 721	117	0.16	-0.16	0.006	0.038	–0.069	–0.031	NO	NO	0.043	-6.3
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	54 134	53 489	645	0.023	–0.021	0.002	0.004	–0.007	–0.003	–0.000	IE, NA, NE, NO	–0.064	-6.2
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Germany	14 646	14 236	410	0.019	–0.015	0.004	0.006	–0.011	–0.005	IE, NA	IE, NA, NO	–0.054	-7.4
Greece	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
Iceland													
Ireland	673	673	NO	0.053	–0.055	–0.002	IE	IE	IE	NO	NO	–0.002	NO
Italy	8 939	8 914	25	0.000	–0.038	–0.038	IE, NO	IE, NO	IE, NO	NE	NE	NE	10
Japan	3 904	3 729	175	0.000	–0.008	–0.008	IE	–0.005	–0.005	NA	NA	-0.15	-2.4
Kazakhstan	IE, NO	IE	NO	IE	IE	IE	IE	IE	IE	NE	IE	IE	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania	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
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	939	878	61	0.004	–0.003	0.001	0.002	–0.001	0.000	NO	NO	0.021	-7.9
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	2 339	2 339	NO	0.032	–0.018	0.014	0.010	–0.013	–0.003	–0.001	IE	–0.041	NO
Romania	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
Slovakia	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
Spain	20 165	20 165	NO	0.017	IE	0.017	IE	IE	IE	–0.000	NO	0.012	NO
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	4 534	4 441	93	0.007	–0.008	–0.001	IE, NE	IE, NE	IE, NE	NE, NO	NE, NO	-0.66	-5.0

[a] For those Parties where Cropland management has been elected, this table contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to cropland management under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(e)

Cropland management - area and implied carbon stock change factors from the change in carbon stocks for the base year[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	34 898	34 885	13	0.001	IE, NA	0.001	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA, NO	-5.0
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria													
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus													
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	2 881	2 732	149	0.035	–0.029	0.007	0.008	–0.006	0.002	NO	NO	–0.057	-7.2
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	57 577	56 994	583	0.013	–0.012	0.001	0.002	–0.003	–0.001	–0.000	IE, NA, NE, NO	–0.094	-6.4
Finland													
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	14 092	13 777	315	0.014	–0.018	–0.004	0.006	–0.011	–0.006	IE, NA	IE, NA, NO	–0.053	-7.7
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary													
Iceland													
Ireland	698	698	NO	0.051	–0.056	–0.005	IE	IE	IE	NO	NO	–0.005	NO
Italy	10 704	10 680	25	0.003	–0.021	–0.018	IE, NO	IE, NO	IE, NO	NE	NE	NE	10
Japan	4 597	4 406	190	0.000	–0.010	–0.010	0.000	–0.007	–0.007	NA	NA	-0.51	-2.4
Kazakhstan	IE, NO	IE	NO	IE	IE	IE	IE	IE	IE	NE	IE	IE	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania													
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	939	880	59	0.006	–0.004	0.001	0.002	–0.002	0.000	NO	NO	0.002	-7.9
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	2 974	2 974	NO	0.016	–0.004	0.012	0.003	–0.002	0.002	–0.005	IE	-0.29	NO
Romania													
Russian Federation	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
Slovenia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	20 999	20 999	NO	0.016	IE	0.016	IE	IE	IE	–0.000	NO	–0.002	NO
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine													
United Kingdom of Great Britain and Northern Ireland (KP)	5 228	5 135	93	0.001	–0.014	–0.013	IE, NE	IE, NE	IE, NE	NE, NO	NE, NO	-0.70	-5.0

[a] For those Parties where Cropland management has been elected, contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to cropland management under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(f)

Grazing land management - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	533 875	533 826	49	0.020	–0.017	0.003	0.000	IE, NA	0.000	0.000	0.001	–0.003	-5.0
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria	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
Cyprus	NE, NO	NE	NO	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	205	175	30	0.46	–0.921	–0.461	1.3	-1.5	-0.24	NO	NO	–0.016	-6.7
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	27 092	24 351	2 741	0.011	–0.015	–0.004	0.013	–0.014	–0.001	0.000	IE, NA, NE, NO	0.11	-3.0
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Germany	6 314	5 321	993	0.014	–0.022	–0.008	0.011	–0.007	0.004	IE, NA	IE, NA, NO	0.085	-6.4
Greece	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
Iceland													
Ireland	4 278	3 898	380	0.000	–0.000	–0.000	IE, NO	NO	IE, NO	NO	NO	0.012	-4.0
Italy	426	426	NO	NO	NO	NO	NO	NO	NO	NE	NE	0.45	NO
Japan	607	567	40	0.001	IE, NO	0.001	0.004	IE, NO	0.004	NA	NA	0.13	-0.19
Kazakhstan	IE, NO	IE	NO	IE	IE	IE	IE	IE	IE	IE	NO	IE	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania	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
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	216	212	3.6	0.12	–0.083	0.034	0.045	–0.032	0.013	NO	NO	–0.066	-3.6
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	596	596	NO	0.023	–0.037	–0.015	0.020	–0.030	–0.011	0.000	IE	0.066	NO
Romania													
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	15 273	13 935	1 338	0.007	–0.003	0.004	IE, NE	IE, NE	IE, NE	NE, NO	NE, NO	0.13	–0.036

[a] If grazing land management has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to grazing land management under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(g)

Grazing land management - area and implied carbon stock change factors from the change in carbon stocks for the base year[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	537 429	537 381	49	0.014	–0.012	0.002	IE, NA	IE, NA	IE, NA	IE, NA	–0.000	IE, NA, NO	-5.0
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria													
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	NE, NO	NE	NO	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	253	219	34	0.011	–0.058	–0.047	0.029	–0.067	–0.039	NO	NO	–0.001	-6.8
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	26 782	23 969	2 814	0.019	–0.015	0.004	0.006	–0.005	0.001	–0.000	IE, NA, NE, NO	0.090	-3.4
Finland													
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	6 936	5 841	1 095	0.023	–0.038	–0.015	0.019	–0.014	0.005	IE, NA	IE, NA, NO	0.11	-6.8
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary													
Iceland													
Ireland	4 206	3 860	345	0.000	–0.000	–0.000	IE, NO	IE, NO	IE, NO	NO	NO	–0.001	-5.3
Italy	3.0	3.0	NO	NO	NO	NO	NO	NO	NO	NE	NE	0.47	NO
Japan	647	607	40	0.005	IE	0.005	0.018	IE	0.018	NA	NA	-0.39	-0.19
Kazakhstan	IE, NO	IE	NO	IE	IE	IE	IE	IE	IE	IE	NO	IE	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania													
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	231	228	3.6	0.12	–0.086	0.036	0.047	–0.033	0.014	NO	NO	0.032	-3.6
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	529	529	NO	0.025	–0.063	–0.039	0.044	–0.033	0.011	–0.009	IE	-0.65	NO
Romania													
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine													
United Kingdom of Great Britain and Northern Ireland (KP)	14 856	13 516	1 339	0.023	–0.006	0.017	IE, NE	IE, NE	IE, NE	NE, NO	NE, NO	0.14	–0.036

[a] If grazing land management has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to grazing land management under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(h)

Revegetation - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	20 073	20 073	IE	0.027	–0.025	0.002	IE	IE	IE	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria	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
Cyprus	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	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
European Union (KP)	378	378	NA, NE, NO	0.85	IE, NA, NE, NO	0.85	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	0.004	NA, NE, NO	0.44	NA, NE, NO
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Germany	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
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	274	274	NO	0.057	IE	0.057	IE	IE	IE	IE	NO	0.51	NA
Ireland	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
Japan	86	83	2.0	2.5	–0.008	2.4	0.64	–0.002	0.64	0.043	IE	0.92	NO
Kazakhstan	10 672	10 672	NO	0.15	NO	0.15	IE	IE	IE	NO	NO	0.36	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania	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
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	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
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania	104	104	NO	3.0	IE	3.0	IE	IE	IE	0.013	NO	0.24	NO
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[a] For those Parties where revegetation has been elected, contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to Revegetation under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(i)

Revegetation - area and implied carbon stock change factors from the change in carbon stocks for the base year[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	20 074	20 074	IE	0.016	–0.017	–0.001	IE	IE	IE	NA	NA	NA	NA
Austria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium													
Bulgaria													
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Czech Republic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	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
European Union (KP)	259	259	NA, NO	1.1	IE, NA, NO	1.1	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.026	NA, NO	1.1	NA, NO
Finland													
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	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
Hungary													
Iceland	167	167	NO	0.057	IE, NA	0.057	IE, NA	IE, NA	IE, NA	IE, NA	NA, NO	0.51	NA
Ireland	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
Japan	5.9	5.7	0.14	2.2	–0.023	2.2	0.58	–0.006	0.57	0.043	IE	0.88	NO
Kazakhstan	10 672	10 672	NO	0.000	NO	0.000	IE	IE	IE	NO	NO	–0.074	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania													
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	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
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania													
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine													
United Kingdom of Great Britain and Northern Ireland (KP)													

[a] For those Parties where revegetation has been elected, contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to Revegetation under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(j)

Wetland drainage and rewetting - area and implied carbon stock change factors from the change in carbon stocks for 2015[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	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
Belgium													
Bulgaria	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
Cyprus	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
Denmark (KP)	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
European Union (KP)	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE, NO	NA, NE
Finland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NO	NE
Germany	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
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland													
Ireland	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
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania	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
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	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
Portugal	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
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

[a] For those Parties where revegetation has been elected, contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to Revegetation under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.3(k)

Wetland drainage and rewetting - area and implied carbon stock change factors from the change in carbon stocks for the base year[a]

	Area subject to the activity			Implied carbon stock change factor (t C/ha)									
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass[b, c]			CSC in below-ground biomass[b, c]			Net CSC in litter[b]	Net CSC in dead wood[b]	Net CSC in soil[b]	
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic[d]
Australia	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
Belgium													
Bulgaria													
Croatia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	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
Denmark (KP)	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
European Union (KP)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Finland													
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	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
Hungary													
Iceland	NA												
Ireland	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
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein													
Lithuania													
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta													
Monaco													
Netherlands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand													
Norway	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
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Romania													
Russian Federation	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
Slovenia	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
Sweden	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland													
Ukraine													
United Kingdom of Great Britain and Northern Ireland (KP)													

[a] For those Parties where revegetation has been elected, contains information on anthropogenic carbon stock change for the inventory year for all geographic locations that encompass land subject to Revegetation under Article 3.4.

[b] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[c] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses" column. The notation key IE should be filled in, in the other column.

[d] The value reported here is an emission or removal and not a carbon stock change.

Table 6.4

Direct and indirect N_2O emissions from N fertilization for 2015[a, b]

	Afforestation and Reforestation	Deforestation[c]	Forest management	Revegetation	Wetland drainage and rewetting[d]
	N_2O-N per unit of fertilizer	N_2O-N per unit of fertilizer	N_2O-N per unit of fertilizer	N_2O-N per unit of fertilizer	N_2O-N per unit of fertilizer
	kg N_2O-N/kg N	kg N_2O-N/kg N	kg N_2O-N/kg N	kg N_2O-N/kg N	kg N_2O-N/kg N
Australia	IE	IE	IE	IE	NA
Austria	NO	NO	NO	NA	NA
Belgium					
Bulgaria	NO	NO	NO		NA
Croatia	NO	NO	NO	NA	NA
Cyprus	NE	NE	NE	NO	NE
Czech Republic	NO	NO	NO	NA	NA
Denmark (KP)	IE	NO	IE	NA	NA
Estonia	NO	NO	NO	NA	NA
European Union (KP)	0.013	NO, NE, IE, NA	0.000	0.010	NO, NE, IE, NA
Finland	NA	IE	0.010	NA	NA
France (KP)	NO	NO	NE	NE	NE
Germany	NO	NO	NO	NA	NA
Greece	NA	NA	NA	NA	NA
Hungary	IE	IE	IE	NA	NA
Iceland	0.012			0.010	
Ireland	IE	IE	IE	NA	NA
Italy	NO	NO	NO	NA	NA
Japan	IE	IE	0.97	IE	NA
Kazakhstan	NO	NO	NO	NO	NO
Latvia	NO	IE	NO	NA	NO
Liechtenstein	NO	NO			
Lithuania	NO	NO	NO	NA	NA
Luxembourg	NO	NO	NO	NA	NA
Malta	NO	NO	NO		
Monaco					
Netherlands	NO	IE	NO	NA	NA
New Zealand	IE	IE	IE		
Norway	0.000	IE	0.000	NA	NA
Poland	NO	NO	NO	NA	NA
Portugal	IE	IE	IE	NA	NA
Romania	IE	IE	IE	IE	IE
Russian Federation	NO	NO	NO	NA	NA
Slovakia	NO	NO	NO	NA	NA
Slovenia	NO	NA	NA	NA	NA
Spain	NO	NO	NO	NA	NA
Sweden	NO	IE	0.000	NA	NA
Switzerland	NO	NA	NO	NA	NA
Ukraine	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	0.013	NO	NO	NA	NE

[a] N_2O emissions from fertilization for cropland management, grazing land management and revegetation as well as from fertilization of areas categorized as cropland or grassland underdeforestation should be reported in the agriculture sector. If a Party is not able to separate fertilizer applied to forest land from agriculture, it may report all N_2O emissions from fertilization in the agriculture sector. In this case, reporting of N_2O emissions from fertilization should not be included under afforestation/reforestation, deforestation or forest management, revegetation or wetland drainage and rewetting, as appropriate, to avoid double counting.

[b] Direct and indirect N_2O emissions from fertilization are estimated following section 11.2 of the 2006 IPCC Guidelines based on the amount of fertilizer applied to land under forest management. The indirect N_2O emissions from afforestation and reforestation and land under forest management are estimated as part of the total indirect emissions in the agriculture sector based on the total amount of fertilizer used in the country. Parties should show that double counting of N_2O emissions from fertilization with agriculture sector estimates has been avoided.

[c] Only for areas that have been subsequently reforested.

[d] Only N_2O emissions which have not been reported under agriculture should be included here.

Table 6.5

CH_4 and N_2O emissions from drained and rewetted organic soils for 2015[a, b, c]

	Afforestation and Reforestation			Deforestation			Forest Management			Cropland Management			Grazing Land Management			Revegetation			Wetland drainage and rewetting		
	Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor		Area of organic soils	Implied Emission Factor	
		N_2O-N	CH_4		N_2O-N	CH_4		N_2O-N	CH_4		N_2O-N	CH_4		N_2O-N	CH_4		N_2O-N	CH_4		N_2O-N	CH_4
	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha	kha	kg N_2O-N/ha	kg CH_4/ha
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Austria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Belgium																					
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Croatia	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Cyprus	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO,NE		NO,NE	NO	NO	NO	NO	NO	NO
Czech Republic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	10	1.4	4.0	0.49	8.4	28	26	1.4	43	121		1.8	32		17	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 (KP)	373	1.0	4.8	94	2.8	17	6 492	1.0	8.2	531		19	1 397		26	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE
Finland	63	0.79	3.3	35	1.5	20	4 293	0.54	7.8	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
France (KP)	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NO,NE	NE		NE	NE		NE	NE	NE	NE	NE	NE	NE
Germany	46	1.4	4.6	21	1.6	18	100	1.4	4.6	410		24	993		20	NA	NA	NA	NA	NA	NA
Greece	NO	NA	NA	NO	NA	NA	NO	NA	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Hungary	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Iceland	3.1	3.2	7.4	NO			0.49	3.2	7.4							NO	NA	NA			
Ireland	155	1.2	6.3	7.1	2.0	33	242	0.74	7.3	NO		NO	372		43	NA	NA	NA	NA	NA	NA
Italy	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO	NA	NA	NA	NA	NA	NA
Japan	NO	NO	NO	NO	NO	NO	NO	NO	NO	24		58	40		2.2	NO	NO	NO	NA	NA	NA
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO	NO	NO	NO	NO,NE	NO,NE	NO,NE
Latvia	0.80	2.8	64	13	12	17	490	2.7	12	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO															
Lithuania	3.5	1.8	8.0	NO	NO	NO	171	1.8	7.9	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Luxembourg	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO												
Monaco																					
Netherlands	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
New Zealand	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE		NE	NE		NE	NE	NE	NE	NE	NE	NE
Norway	6.8	3.2	7.3	10	NE,IE	58	241	2.6	8.4	61		58	3.6		30	NA	NA	NA	NA	NA	NA
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Portugal	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO	NA	NA	NA	NA	NA	NA
Romania	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO	NO	NO	NO	NA	NA	NA
Russian Federation	NO	NO	NO	NO	NO	NO	1 950	1.7	9.8	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Slovakia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Slovenia	NO	NA	NA	NO	NA	NA	NO	NA	NA	NA		NA	NO,NA		NA	NA	NA	NA	NA	NA	NA
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NA		NA	NA	NA	NA	NA	NA	NA
Sweden	28	1.3	9.1	18	NO,IE	2.8	997	2.1	9.1	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Switzerland	0.011	2.8	NO	NO	NO	NO	4.0	2.8	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Ukraine	NO	NO	NO	NA	NA	NA	193	0.60	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	62	0.20	NO,NE	NO	NO	NO	171	0.21	NO,NE	NE		NE	NE		NE	NA	NA	NA	NE	NE	NE

[a] Methodologies for CH_4 and N_2O emissions from drained and rewetted soils are given in the "Wetlands Supplement" for all land-use categories.

[b] N_2O emissions from drained cropland and grazing land soils are covered in the agriculture sector under cultivation of histosols.

[c] For activities other than wetland drainage and rewetting, a Party may choose to include CH_4 emissions from drained, rewetted and other organic soils. A Party should provide detailed information on methodologies, emissions and removals from these subdivisions in the NIR, ensuring consistency in reporting among categories.

Table 6.6

N_2O emissions from N mineralization/immobilization due to carbon loss/gain associated with land-use conversions and management change in mineral soils for 2015[a]

	Afforestation and Reforestation			Deforestation[c]			Forest Management			Cropland Management			Grazing land Management			Revegetation		
	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]	Land area[b]	Carbon Stock Change	IEF N_2O-N[d]
	kha	kt C	kg N_2O-N/ha	kha	kt C	kg N_2O-N/ha	kha	kt C	kg N_2O-N/ha	kha	kt C	kg N_2O-N/ha	kha	kt C	kg N_2O-N/ha	kha	kt C	kg N_2O-N/ha
Australia	3 558	216	0.026	11 964	-3 416	0.035	10 979	107	0.006	898	-134	0.017	533 875	-18 639	0.007	NA	NA	NA
Austria	115	-61	0.50	32	-59	1.1	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Belgium	14	0.000	0.003	17	0.000	3.5												
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	58	43	NO	4.6	-13	2.3	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyprus	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Czech Republic	NO	NO	NO	3.0	-0.97	0.22	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	NO	NO	NO	2.6	-0.67	4.5	509	NO	NO	2 721	-2.4	0.002	175	-2.8	0.013	NA	NA	NA
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)	3 108	-802	0.26	1 497	-402	1.4	47 158	9 122	0.002	6 120	-3 493	0.47	5 851	-603	0.14	NA, NE, NO	NA, NE, NO	NA, NE, NO
Finland	106	2.7	0.017	305	118	0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)				110	NA	0.80	NO		NO	NE		NE	NE		NE	NE	NE	NE
Germany	489	-120	0.39	266	35	0.055	10 527	4 316	NO	934	-762	0.79	5 321	454	NO	NA	NA	NA
Greece	NO	NA	NA	5.2	-11	1.4	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	173	NE	NO	13	IE	0.56	1 767	NE	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NE	NE	NE	NE			NE									NA	NA	NA
Ireland	140	NO	NO	3.6	-3.8	71	181	NO	NO	IE	IE	IE	IE	IE	IE	NA	NA	NA
Italy	NO	NO	NO	3.7	305	55	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA
Japan	NA	NA	NA	6.2	-30	5.2	15 652	-189	0.013	35	NA	0.32	566	NA	0.009	NA	NA	NA
Kazakhstan	NO	NO	NO	NO	NO	NO	NO	NO	NO	IE	IE	IE	NO	NO	NO	NO	NO	NO
Latvia	NO	NO	NO	46	-27	0.48	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	0.19		0.72												
Lithuania	38	-22	0.34	1.7	-2.4	1.1	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NO	NO	NO	5.8	-5.3	0.93	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO									
Monaco																		
Netherlands	59	-0.78	0.20	66	-0.30	0.20	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
New Zealand	646	234	0.24	188	3.6	0.013	9 214	2.5	0.000									
Norway	25	-45	1.2	95	-54	0.38	11 357	34	NO	22	-2.8	0.087	211	-15	0.047	NA	NA	NA
Poland	722	NE	NE	0.74	IE	1.8	8 661	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	19	-40	1.4	105	-404	2.6	19	-38	1.4	101	-281	1.9	57	-145	1.7	NA	NA	NA
Romania	6.1	0.12	1.0	83	13	8.4	NO	NO	NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Russian Federation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	NO	NA	NA	2.7	-3.1	0.94	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	3.3	-2.5	0.52	82	-38	0.32	249	-33	0.091	457	-316	0.47	NA	NA	NA	NA	NA	NA
Sweden	325	-48	0.098	277	-200	0.72	24 540	4 877	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	1.3	0.14	0.073	0.000	0.000	0.000	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	308	30	0.026	50	-0.24	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)	841	-553	0.56	60	-105	1.4	707	IE, NO	0.080	1 907	-2132	0.91	299	-909	2.5	NA	NA	NA

[a] N_2O emissions from nitrogen mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils under afforestation/reforestation, deforestation, forest management, cropland management, grazing land management and revegetation should be reported here when these emissions/removals are not reported under the agriculture sector.

[b] Land areas should include lands converted and/or lands where a management change has taken place and resulted in carbon loss. Gains could be reported, under tier 3 approaches, if sufficient scientific justification is provided.

[c] N_2O 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.

[d] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

Table 6.7(a)

Emissions from biomass burning 2015[a]

	Afforestation/reforestation				Deforestation				Total article 3.3				Forest management			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor			Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O
		(t/activity data unit)				(t/activity data unit)				(t/activity data unit)				(t/activity data unit)		
Australia		12	0.029	0.001		IE	0.099	0.002		1.8	0.083	0.002		0.97	0.12	0.002
Austria		NO	NO	NO		NO	NO	NO		NO	NO	NO		IE, NO	NA	NA
Belgium																
Bulgaria		0.002	0.000	0.000		NO	NO	NO		0.002	0.000	0.000		0.002	0.000	0.000
Croatia						NO	NO	NO								
Cyprus		NE	NE	NE		NE	NE	NE		NE	NE	NE				
Czech Republic		NO	NO	NO		NO	NO	NO		NO	NO	NO		0.002	0.000	0.000
Denmark (KP)		NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO
Estonia		IE, NA	0.31	0.003		NO	NO	NO		IE, NA, NO	0.31	0.003		IE, NO	0.003	0.000
European Union (KP)																
Finland		NA	NA	NA		NA	NA	NA		NA	NA	NA		4.8	0.052	0.000
France (KP)																
Germany		IE, NO	IE, NO	IE, NO		NO	NO	NO		IE, NO	IE, NO	IE, NO		IE, NO	0.22	0.012
Greece		19	0.24	0.002		NA	NA	NA		19	0.240	0.002		19	0.24	0.002
Hungary		IE	0.000	0.000		IE	0.000	0.000		IE	0.000	0.000		IE	0.000	0.000
Iceland														NA	NA	NA
Ireland		152	0.66	0.004		NO	NO	NO		152	0.66	0.004		261	1.1	0.007
Italy		IE, NO	0.49	0.016		NO	NO	NO		IE, NO	0.49	0.016		IE, NO	3.5	0.016
Japan		IE, NO	0.000	0.000		NO	NO	NO		IE, NO	0.000	0.000		IE, NO	0.000	0.000
Kazakhstan		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO		IE, NO	0.059	0.003
Latvia		NO	NO	NO		NO	NO	NO		NO	NO	NO				
Liechtenstein		NO	NO	NO		NO	NO	NO		NO	NO	NO				
Lithuania		10	0.022	0.001		NO	NO	NO		10	0.022	0.001		25	0.11	0.006
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																
Netherlands		96	0.29	0.016		7.3	0.010	0.001		53	0.15	0.009		96	0.29	0.016
New Zealand		IE	0.000	0.000		IE	0.000	0.000		IE	0.000	0.000		IE	0.000	0.000
Norway		IE, NO	0.034	0.000		NO	NO	NO		IE, NO	0.034	0.000		IE	0.034	0.000
Poland		IE, NO	0.020	0.000		NO	NO	NO		IE, NO	0.020	0.000		IE, NO	0.34	0.004
Portugal		32	0.12	0.002		NO	0.067	0.001		13	0.089	0.001		32	0.12	0.002
Romania		48	0.21	0.006		NO	NO	NO		48	0.21	0.006		48	0.21	0.006
Russian Federation		IE, NO	0.000	0.000		NO	NO	NO		IE, NO	0.000	0.000		35	0.075	0.009
Slovakia		IE, NO	0.093	0.005		NO	NO	NO		IE, NO	0.093	0.005		IE	0.000	0.000
Slovenia		NO	NO	NO		NA	NA	NA		NA, NO	NA, NO	NA, NO		68	0.20	0.011
Spain		19	0.076	0.004		12	0.023	0.002		18	0.070	0.004		1.7	0.073	0.004
Sweden		NO	NO	NO		NO	NO	NO		NO	NO	NO		IE	0.052	0.000
Switzerland		NO	NO	NO						NO	NO	NO				
Ukraine		0.002	0.000	0.000		NA, NO	NA, NO	NA, NO		0.002	0.000	0.000		0.002	0.000	0.000
United Kingdom of Great Britain and Northern Ireland (KP)		NE, NO	NE, NO	NE, NO		0.002	0.000	0.000		0.002	0.000	0.000		NE, NO	NE, NO	NE, NO

[a] Total for controlled burning and wildfires.

[b] For each activity, activity data could area burned or fuel burned. Units will be ha for area burned, and kg dm for fuel burned. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[c] Area burned (ab) and biomass burned (bb).

Table 6.7(b)

Emissions from biomass burning on cropland management land[a]

	Base year				2015			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O
		(t/activity data unit)				(t/activity data unit)		
Australia		IE	IE	IE		IE	0.019	0.000
Austria		NA	NA	NA		NA	NA	NA
Belgium								
Bulgaria						NA	NA	NA
Croatia		NA	NA	NA		NA	NA	NA
Cyprus		NE	NE	NE		NE	NE	NE
Czech Republic		NA	NA	NA		NA	NA	NA
Denmark (KP)		NO	NO	NO		NO	NO	NO
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NO	NO	NO		NO	NO	NO
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland								
Ireland		NO	0.010	0.000		NO	0.011	0.000
Italy		4.3	0.024	0.001		4.7	0.026	0.001
Japan		IE, NO	0.000	0.000		IE, NO	0.000	0.000
Kazakhstan		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein								
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands		NA	NA	NA		NA	NA	NA
New Zealand						NA	NA	NA
Norway		NO	NO	NO		NO	NO	NO
Poland		NA	NA	NA		NA	NA	NA
Portugal		NO	0.034	0.000		NO	0.026	0.000
Romania		NA	NA	NA		NA	NA	NA
Russian Federation		NA	NA	NA		NA	NA	NA
Slovakia		NA	NA	NA		NA	NA	NA
Slovenia		NA	NA	NA		NA	NA	NA
Spain		NE	IE, NE	IE, NE		NE	IE, NE	IE, NE
Sweden		NA	NA	NA		NA	NA	NA
Switzerland								
Ukraine						NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)		NE, NO	0.011	0.000		NE, NO	0.011	0.000

[a] Total for controlled burning and wildfires.

[b] For each activity, activity data should be selected between area burned or fuel burned. Units will be ha for area burned, and kg dm for fuel burned. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[c] Area burned (ab) and biomass burned (bb).

Table 6.7(c)

Emissions from biomass burning on grazing land management land[a]

	Base year				2015			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O
		(t/activity data unit)				(t/activity data unit)		
Australia		IE	0.006	0.000		IE	0.006	0.000
Austria		NA	NA	NA		NA	NA	NA
Belgium								
Bulgaria						NA	NA	NA
Croatia		NA	NA	NA		NA	NA	NA
Cyprus		NE	NE	NE		NE	NE	NE
Czech Republic		NA	NA	NA		NA	NA	NA
Denmark (KP)		IE	1.7	0.15		IE	1.7	0.15
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NO	NO	NO		NO	NO	NO
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland								
Ireland		40	0.99	0.000		40	0.99	0.000
Italy		NO	NO	NO		NO	NO	NO
Japan		NO	NO	NO		NO	NO	NO
Kazakhstan		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein								
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands		NA	NA	NA		NA	NA	NA
New Zealand						NA	NA	NA
Norway		IE, NO	NE, NO	NE, NO		IE, NO	NE, NO	NE, NO
Poland		NA	NA	NA		NA	NA	NA
Portugal		NO	0.006	0.000		NO	0.011	0.000
Romania		NA	NA	NA		NA	NA	NA
Russian Federation		NA	NA	NA		NA	NA	NA
Slovakia		NA	NA	NA		NA	NA	NA
Slovenia		NA	NA	NA		NA	NA	NA
Spain		NA	NA	NA		NA	NA	NA
Sweden		NA	NA	NA		NA	NA	NA
Switzerland								
Ukraine						NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)		NE, NO	0.026	0.002		NE, NO	0.026	0.002

[a] Total for controlled burning and wildfires. Greenhouse gas emissions from prescribed savanna burning are reported in the agriculture sector.

[b] For each activity, activity data should be selected between area burned or fuel burned. Units will be ha for area burned, and kg dm for fuel burned. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[c] Area burned (ab) and biomass burned (bb).

Table 6.7(d)

Emissions from biomass burning on revegetation land[a]

	Base year				2015			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O
		(t/activity data unit)				(t/activity data unit)		
Australia		IE	IE	IE		IE	IE	IE
Austria		NA	NA	NA		NA	NA	NA
Belgium								
Bulgaria		NA	NA	NA		NA	NA	NA
Croatia		NA	NA	NA		NA	NA	NA
Cyprus		NO	NO	NO		NO	NO	NO
Czech Republic		NA	NA	NA		NA	NA	NA
Denmark (KP)		NA	NA	NA		NA	NA	NA
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NO	NO	NO		NO	NO	NO
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland		NE	NE	NE		NA, NO	NA, NO	NA, NO
Ireland		NA	NA	NA		NA	NA	NA
Italy		NA	NA	NA		NA	NA	NA
Japan		NO	NO	NO		NO	NO	NO
Kazakhstan		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein								
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands		NA	NA	NA		NA	NA	NA
New Zealand								
Norway		NA	NA	NA		NA	NA	NA
Poland		NA	NA	NA		NA	NA	NA
Portugal		NA	NA	NA		NA	NA	NA
Romania		NO	NO	NO		NO	NO	NO
Russian Federation		NA	NA	NA		NA	NA	NA
Slovakia		NA	NA	NA		NA	NA	NA
Slovenia		NA	NA	NA		NA	NA	NA
Spain		NA	NA	NA		NA	NA	NA
Sweden		NA	NA	NA		NA	NA	NA
Switzerland								
Ukraine						NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)						NA	NA	NA

[a] Total for controlled burning and wildfires.

[b] For each activity, activity data should be selected between area burned or fuel burned. Units will be ha for area burned, and kg dm for fuel burned. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[c] Area burned (ab) and biomass burned (bb).

Table 6.7(e)

Emissions from biomass burning on wetland drainage and rewetting land[a]

	Base year				2015			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O	Description of unit area[b]: ab or bb[c]	CO_2	CH_4	N_2O
		(t/activity data unit)				(t/activity data unit)		
Australia		NA	NA	NA		NA	NA	NA
Austria		NA	NA	NA		NA	NA	NA
Belgium								
Bulgaria		NA	NA	NA		NA	NA	NA
Croatia		NA	NA	NA		NA	NA	NA
Cyprus		NA, NO	NA, NO	NA, NO		NA, NO	NA, NO	NA, NO
Czech Republic		NA	NA	NA		NA	NA	NA
Denmark (KP)		NA	NA	NA		NA	NA	NA
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NO	NO	NO		NO	NO	NO
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland								
Ireland		NA	NA	NA		NA	NA	NA
Italy		NA	NA	NA		NA	NA	NA
Japan		NA	NA	NA		NA	NA	NA
Kazakhstan		IE, NO	IE, NO	IE, NO		IE, NO	IE, NO	IE, NO
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein								
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands		NA	NA	NA		NA	NA	NA
New Zealand								
Norway		NA	NA	NA		NA	NA	NA
Poland		NA	NA	NA		NA	NA	NA
Portugal		NA	NA	NA		NA	NA	NA
Romania		NO	NO	NO		NO	NO	NO
Russian Federation		NA	NA	NA		NA	NA	NA
Slovakia		NA	NA	NA		NA	NA	NA
Slovenia		NA	NA	NA		NA	NA	NA
Spain		NA	NA	NA		NA	NA	NA
Sweden		NA	NA	NA		NA	NA	NA
Switzerland								
Ukraine						NA	NA	NA
United Kingdom of Great Britain and Northern Ireland (KP)						NE	NE	NE

[a] Total for controlled burning and wildfires.

[b] For each activity, activity data should be selected between area burned or fuel burned. Units will be ha for area burned, and kg dm for fuel burned. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[c] Area burned (ab) and biomass burned (bb).