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English only

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).¹ 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.²
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)³ and a revised set of common reporting format (CRF) tables⁴ 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 tables⁵ 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 2014.
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 2016 national GHG inventories submission, received from Parties as at 29 June 2016. It does not cover information contained in inventory submissions from previous years.

¹ The full text of the guidelines is contained in the annex to decision 13/CP.20.

² Decision 13/CP.20, paragraph 8.

³ The full text of the guidelines is contained in annex I to decision 24/CP.19.

⁴ The tables, agreed in decision 24/CP.19, can be accessed here: <<http://unfccc.int/5333.php>>.

⁵ The tables, agreed in decision 6/CMP.9, can be accessed here: <<http://unfccc.int/7969.php>>.

7. The inventory data is presented according to the sectors, subsectors and categories specified in the CRF tables.
8. Further to decision 13/CP.20, decisions 20/CP.21 and 10/CMP.11 noted that the CRF reporter was still not functioning. As such, at the time of the publication of this document, not all Parties had submitted their 2016 GHG inventories. As the submission process is ongoing, the data presented here may, therefore, not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.⁶
9. As at 29 June 2016, 43 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.
10. Three Parties, Denmark, the European Union (EU) and France, 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; and France (Convention) covering metropolitan France, the French Overseas Departments, the French Overseas Collectivities and New Caledonia. 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; and France (KP), covering metropolitan France and the French Overseas Departments (including Mayotte).
11. In order to streamline the aggregate GHG information the 12th meeting of the Lead Reviewers (LRs) recommended deleting tables with limited relevance.⁷ The information in this document is based on the recommendation of the 13th meeting of the LRs⁸ to provisionally implement the streamlining proposal of the secretariat in 2016.
12. 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

13. 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.

⁶ <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/9492.php>.

⁷ See paragraph 15 of the draft conclusions of the 12th meeting of the inventory lead reviewers; available at <http://unfccc.int/files/national_reports/annex_i_ghg_inventories/application/pdf/draftconclusions_mda_ghg_inventory.pdf>.

⁸ See paragraph 17 of the draft conclusions of the 13th meeting of the inventory lead reviewers; available at <http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/draft_conclusions_lrs_13th_v01_4march2016_incl_location_asr.pdf>.

14. 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 “–”.

15. 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.

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

17. 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 CO₂ emissions where reported.

18. 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		

19. 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

20. 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.

21. 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 ₂ O	nitrous oxide
NF ₃	nitrogen trifluoride
NM VOC	non-methane volatile organic compound

PFCs	perfluorocarbons
SF ₆	sulphur hexafluoride

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

Methods:

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

Emission factors:

D	IPCC default
CR	CORINAIR
CS	Country specific
PS	Plant specific
M	Model
OTH	Other

23. 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

<u>Figure number</u>	<u>Figure name</u>
Figure G.1	GHG emissions by gas (with LULUCF): base year and 2014
Figure G.2	GHG emissions by gas (without LULUCF): base year and 2014
Figure G.3	GHG emissions by sector (without LULUCF): base year and 2014
<u>Table number</u>	<u>Table name</u>
Table G.1	Submissions used in this report

2. Energy

<u>Figure number</u>	<u>Figure name</u>
Figure 1.1	Contribution of subsectors to total GHG emissions in the Energy sector
<u>Table number</u>	<u>Table name</u>
Table 1.1	CO ₂ emissions from fuel combustion: reference approach and sectoral approach
Table 1.2	Stationary combustion: liquid fuels – CO ₂ (2014)
Table 1.3	Stationary combustion: solid fuels – CO ₂ (2014)
Table 1.4	Stationary combustion: gaseous fuels – CO ₂ (2014)
Table 1.5	Stationary combustion: other fossil fuels – CO ₂ (2014)

Table 1.6	Road transportation – CO ₂ , N ₂ O (2014)
Table 1.7	Domestic aviation and navigation – CO ₂ (2014)
Table 1.8	Domestic and international aviation – activity data (2014)
Table 1.9	Domestic and international navigation – activity data (2014)
Table 1.10	Fugitive emissions from fuels: coal mining and handling – CH ₄ (2014)
Table 1.11a	Fugitive emissions from fuels: oil and natural gas – CH ₄ , CO ₂ (2014)
Table 1.11b	Fugitive emissions from fuels: oil and natural gas – oil – CH ₄ , CO ₂ (2014)
Table 1.11c	Fugitive emissions from fuels: oil and natural gas – natural gas – CH ₄ , CO ₂ (2014)
Table 1.11d	Fugitive emissions from fuels: oil and natural gas – venting and flaring – CH ₄ , CO ₂ (2014)
Table 1.12	CO ₂ transport and storage (2014)

3. Industrial processes and product use

<u>Figure number</u>	<u>Figure name</u>
Figure 2.1	Contribution of subsectors to total GHG emissions in the Industrial processes and product use sector
<u>Table number</u>	<u>Table name</u>
Table 2.1	Mineral industry – CO ₂ (2014)
Table 2.2	Chemical industry – CO ₂ and N ₂ O (2014)
Table 2.3	Metal industry – CO ₂ (2014)
Table 2.4	HFCs, PFCs, SF ₆ and NF ₃ (2014)

4. Agriculture

<u>Figure number</u>	<u>Figure name</u>
Figure 3.1	Contribution of subsectors to total GHG emissions in the Agriculture sector
<u>Table number</u>	<u>Table name</u>
Table 3.1	Enteric fermentation – CH ₄ (2014)
Table 3.2	Manure management – CH ₄ (2014)
Table 3.3	Manure management – N ₂ O (2014)
Table 3.4	Agricultural soils – N ₂ O (2014)

5. Land use, land-use change and forestry

<u>Table number</u>	<u>Table name</u>
Table 4.1a–b	Methods and emission factors used (2014)
Table 4.2	Forest land – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2014)
Table 4.3	Cropland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2014)

Table 4.4	Grassland – AD, IEFs, carbon stock changes in pools and net CO ₂ emissions/removals (2014)
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Table 4.5	Land area (2014)
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6. Waste

<u>Figure number</u>	<u>Figure name</u>
Figure 5.1	Contribution of subsectors to total GHG emissions in the Waste sector

<u>Table number</u>	<u>Table name</u>
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 (2014)

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

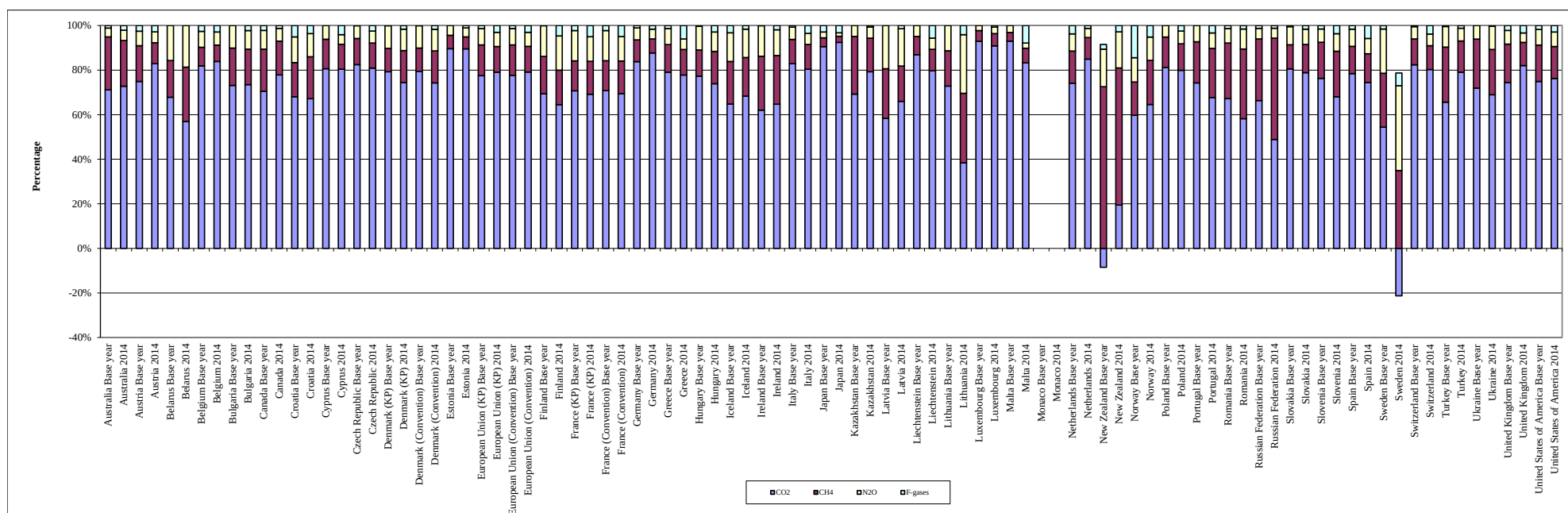
Supplementary information for land use, land-use change and forestry activities under the Kyoto Protocol

<u>Table number</u>	<u>Table name</u>
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 2014
Table 6.3(b)	Deforestation - area and implied carbon stock change factors from the change in carbon stocks for 2014
Table 6.3(c)	Forest management - area and implied carbon stock change factors from the change in carbon stocks for 2014
Table 6.3(d)	Cropland management - area and implied carbon stock change factors from the change in carbon stocks for 2014
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 2014
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 2014
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 2014

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 ₂ O emissions from N fertilization for 2014
Table 6.5	CH ₄ and N ₂ O emissions from drained and rewetted organic soils for 2014
Table 6.6	N ₂ O emissions from N mineralization/immobilization due to carbon loss/gain associated with land-use conversions and management change in mineral soils for 2014
Table 6.7(a)	Emissions from biomass burning 2014
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 2014

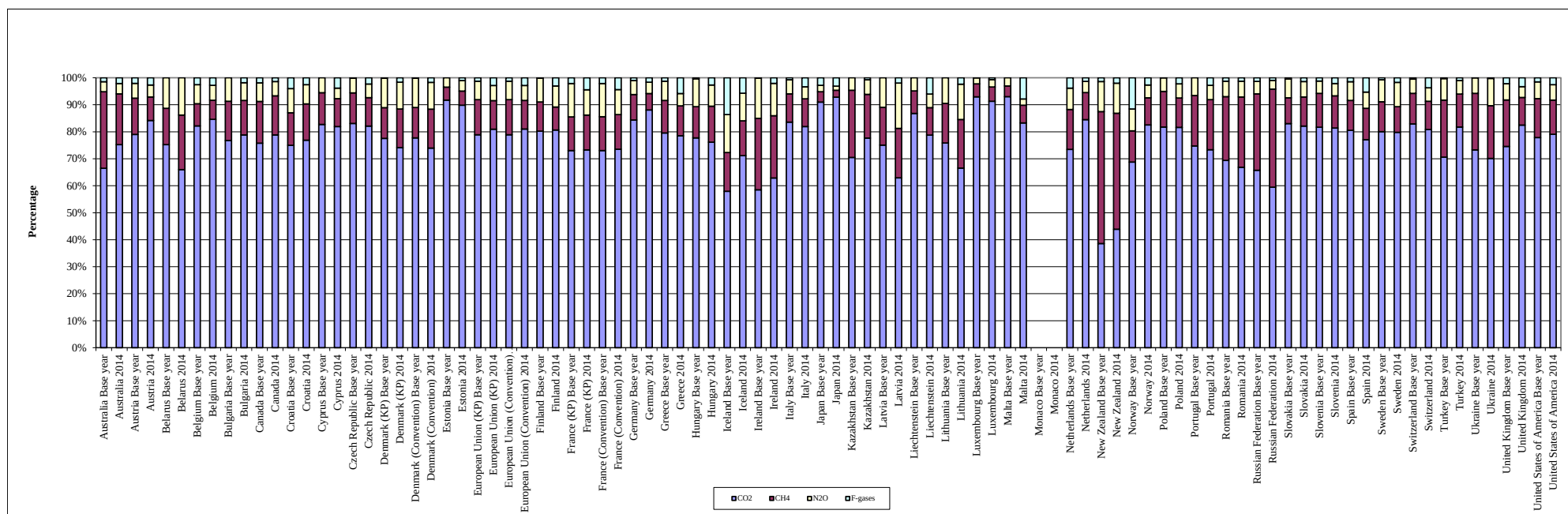


^a The national totals and emissions by CO₂ in this graph include indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 2014

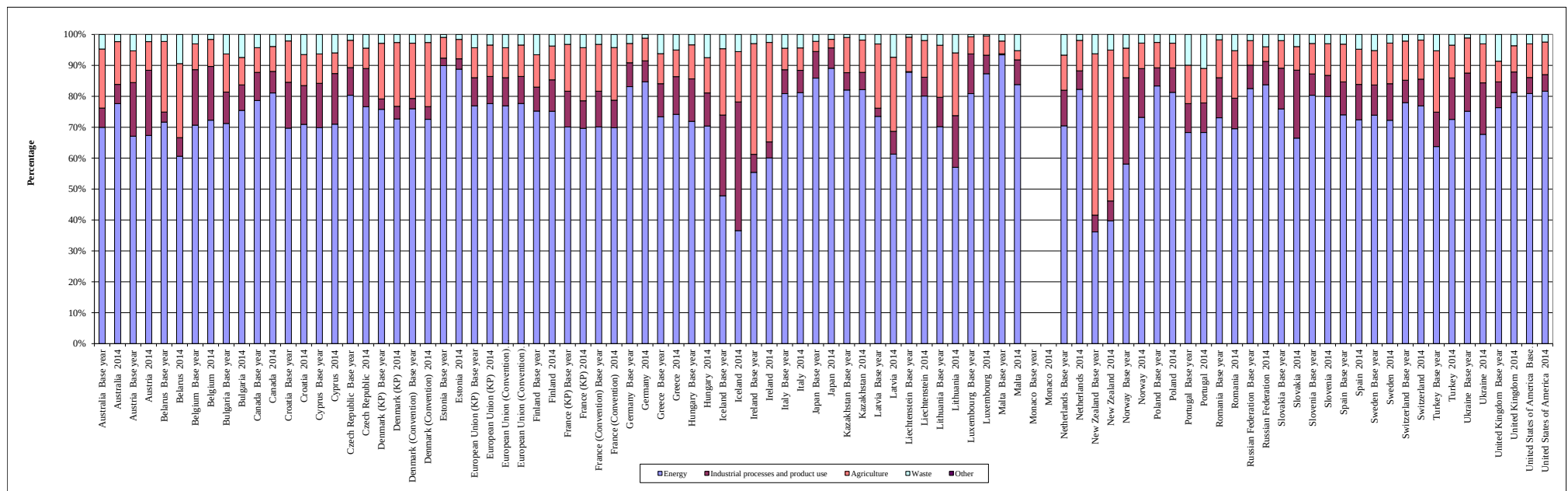


^a The national totals and emissions by CO₂ in this graph include indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 2014



^a The national and sectoral totals in this graph include indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

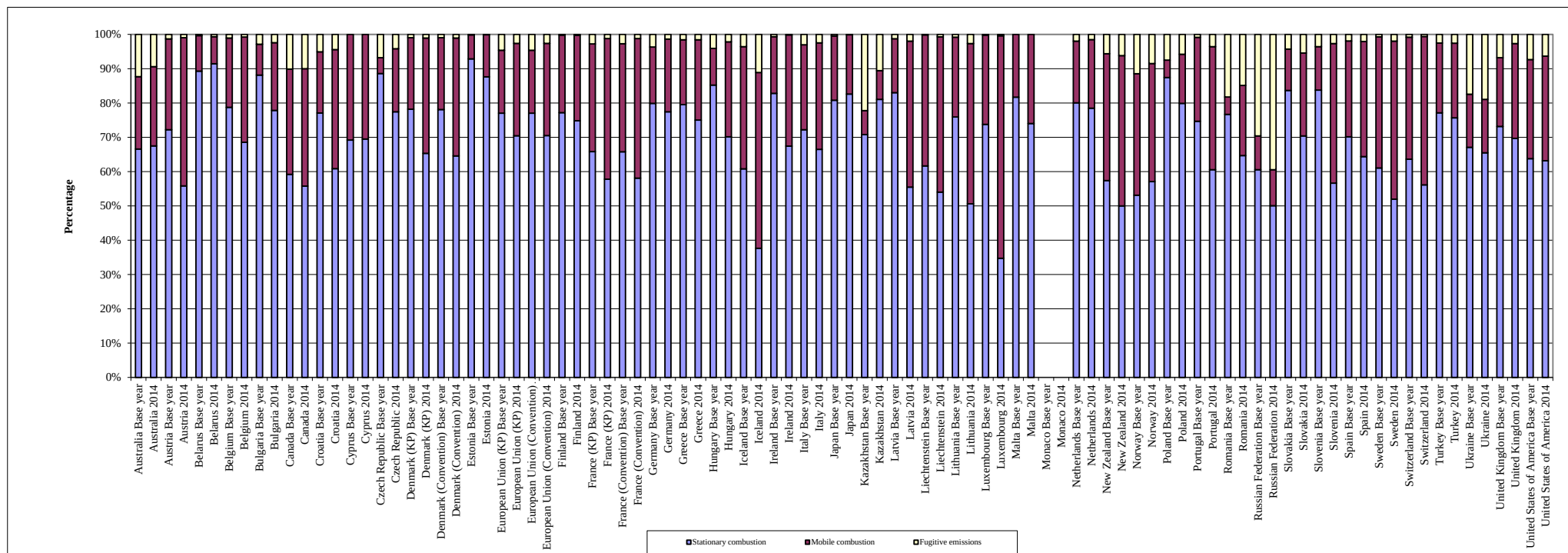
^b In accordance with the UNFCCC reporting guidelines on annual inventories of Annex 1 Parties the year 1990 should be the base year for the estimation and reporting of inventories. However, in accordance with decisions 9/CP.2, 11/CP.4, and 7/CP.12 some Parties with economies in transition use base years 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 2016	1990-2014	27 May 2016	27 May 2016 (1)	5.14	27 May 2016 (1)	5.14
Austria	14 April 2016	1990-2014	14 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Belarus	10 June 2016	1990-2014	10 June 2016	10 June 2016 (9)	5.14	NA	NA
Belgium	15 April 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Bulgaria	15 April 2016	1988-2014	15 April 2016	27 May 2016 (1)	5.14	27 May 2016 (1)	5.14
Canada	14 April 2016	1990-2014	14 April 2016	14 April 2016 (1)	5.12	NA	NA
Croatia	15 April 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Cyprus	13 April 2016	1990-2014	13 April 2016	15 June 2016 (12)	5.14	15 June 2016 (12)	5.14
Czech Republic	15 April 2016	1990-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
Denmark (KP)	15 June 2016	1990-2014	15 June 2016	15 June 2016 (1)	5.14	15 June 2016 (1)	5.14
Denmark (Convention)	15 April 2016	1990-2014	15 April 2016	15 June 2016 (1)	5.14	NA	NA
Estonia	15 April 2016	1990-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
European Union (KP)	27 June 2016	1990-2014	21 June 2016	27 June 2016 (3)	5.14	27 June 2016 (3)	5.14
European Union (Convention)	15 April 2016	1990-2014	15 April 2016	27 June 2016 (2)	5.14	NA	NA
Finland	15 April 2016	1990-2014	15 April 2016	15 April 2016 (7)	5.14	15 April 2016 (7)	5.14
France (KP)	15 April 2016	1990-2014	14 April 2016	15 June 2016 (7)	5.14	15 June 2016 (7)	5.14
France (Convention)	15 April 2016	1990-2014	14 April 2016	15 June 2016 (5)	5.14	NA	NA
Germany	15 April 2016	1990-2014	15 April 2016	15 June 2016 (6)	5.14	15 June 2016 (6)	5.14
Greece	15 April 2016	1990-2014	25 April 2016	23 May 2016 (4)	5.14	23 May 2016 (4)	5.14
Hungary	15 April 2016	1985-1987, 1986-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
Iceland	15 April 2016	1990-2014	15 April 2016	6 May 2016 (2)	5.14	6 May 2016 (2)	5.14
Ireland	15 June 2016	1990-2014	15 June 2016	15 June 2016 (1)	5.14	15 June 2016 (1)	5.14
Italy	15 April 2016	1990-2014	15 April 2016	15 April 2016 (3)	5.14	15 April 2016 (3)	5.14
Japan	14 April 2016	1990-2014	14 April 2016	14 April 2016 (1)	5.12	14 April 2016 (1)	5.12
Kazakhstan	15 April 2016	1990-2014		4 May 2016 (3)	5.14	NA	NA
Latvia	15 April 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Liechtenstein	15 April 2016	1990-2014	27 May 2016	15 April 2016 (5)	5.14	15 April 2016 (5)	5.14
Lithuania	15 April 2016	1990-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
Luxembourg	15 April 2016	1990-2014	15 April 2016	15 June 2016 (4)	5.14	15 June 2016 (4)	5.14
Malta	14 April 2016	1990-2014	19 April 2016	14 April 2016 (7)	5.12		
Monaco							
Netherlands	15 April 2016	1990-2014	14 April 2016	15 June 2016 (5)	5.14	15 June 2016 (5)	5.14
New Zealand	20 May 2016	1990-2014	20 May 2016	20 May 2016 (1)	5.14	20 May 2016 (1)	5.14
Norway	15 April 2016	1990-2014	15 April 2016	15 April 2016 (2)	5.12	15 April 2016 (2)	5.12
Poland	15 April 2016	1988-2014	15 April 2016	23 May 2016 (1)	5.14	23 May 2016 (1)	5.14
Portugal	15 April 2016	1990-2014	15 April 2016	27 May 2016 (2)	5.14	27 May 2016 (2)	5.14
Romania	15 April 2016	1989-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
Russian Federation	15 April 2016	1990-2014		15 April 2016 (2)	5.14	15 April 2016 (2)	5.14
Slovakia	15 April 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Slovenia	15 April 2016	1986-2014	15 April 2016	15 June 2016 (2)	5.14	15 June 2016 (2)	5.14
Spain	15 April 2016	1990-2014	15 April 2016	13 June 2016 (2)	5.14	13 June 2016 (2)	5.14
Sweden	15 april 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
Switzerland	15 April 2016	1990-2014	15 April 2016	15 April 2016 (1)	5.14	15 April 2016 (1)	5.14
Turkey	15 April 2016	1990-2014	15 April 2016	15 April 2016 (3)	5.14	NA	NA
Ukraine	24 May 2016	1990-2014	24 May 2016	24 May 2016 (1)	5.14	24 May 2016 (1)	5.14
United Kingdom of Great Britain and Northern Ireland	15 April 2016	1990-2014	15 April 2016	15 June 2016 (3)	5.14	15 June 2016 (3)	5.14
United States of America	15 April 2016	1990-2014	15 April 2016	15 April 2016 (2)	5.12	NA	NA

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 CO₂ emissions are excluded from the totals in this graph.

Table 1.1**CO₂ 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 2014	360 881	362 266	-0.38
Austria Base year	51 988	51 202	1.54
Austria 2014	51 260	50 102	2.31
Belarus Base year	131 722	94 234	39.78
Belarus 2014	72 309	54 946	31.60
Belgium Base year	91 874	100 982	-9.02
Belgium 2014	76 986	80 569	-4.45
Bulgaria Base year ^b	5 511	78 280	-92.96
Bulgaria 2014	3 437	41 478	-91.71
Canada Base year	414 606	417 649	-0.73
Canada 2014	519 196	518 853	0.07
Croatia Base year ^b	20 188	20 079	0.54
Croatia 2014	15 131	15 032	0.66
Cyprus Base year	4 297	3 896	10.31
Cyprus 2014	5 861	5 883	-0.36
Czech Republic Base year	108 926 561	144 280	75 396.61
Czech Republic 2014	68 955 589	89 383	77 046.47
Denmark (KP) Base year	51 243	51 308	-0.13
Denmark (KP) 2014	35 228	35 786	-1.56
Denmark (Convention) Base year	51 873	52 051	-0.34
Denmark (Convention) 2014	35 753	35 738	0.04
Estonia Base year	37 223	35 647	4.42
Estonia 2014	18 004	18 420	-2.26
European Union (KP) Base year	4 051 109	4 094 617	-1.06
European Union (KP) 2014	3 169 340	3 188 264	-0.59
European Union (Convention) Base year	4 049 235	4 090 514	-1.01
European Union (Convention) 2014	3 167 335	3 184 073	-0.53
Finland Base year	53 068	52 533	1.02
Finland 2014	45 082	43 345	4.01
France (KP) Base year	372 089	364 312	2.13
France (KP) 2014	312 991	310 300	0.87
France (Convention) Base year	348 768 869	366 493	95 063.96
France (Convention) 2014	271 046 979	315 737	85 745.75
Germany Base year	991 048	985 705	0.54
Germany 2014	729 912	742 561	-1.70
Greece Base year	74 738	74 650	0.12
Greece 2014	71 760	73 294	-2.09
Hungary Base year ^b	74 421	73 955	0.63
Hungary 2014	38 472	38 675	-0.53
Iceland Base year	1 731 600	1 634	105 889.14
Iceland 2014	1 482 407	1 436	103 114.07
Ireland Base year	30 763	30 140	2.07
Ireland 2014	34 487	34 426	0.18
Italy Base year	398 421	401 991	-0.89
Italy 2014	321 944	324 015	-0.64
Japan Base year	1 063 223	1 078 082	-1.38
Japan 2014	1 184 026	1 205 408	-1.77
Kazakhstan Base year	267 917	246 140	8.85
Kazakhstan 2014	224 419	228 359	-1.73
Latvia Base year	18 811	18 611	1.08
Latvia 2014	6 276	6 500	-3.44
Liechtenstein Base year	199	199	0.01
Liechtenstein 2014	162	161	0.08
Lithuania Base year	32 182	32 248	-0.21
Lithuania 2014	10 426	10 279	1.43
Luxembourg Base year	10 183	10 322	-1.35
Luxembourg 2014	9 137	9 280	-1.55
Malta Base year	NA, NE, NO	1 855	-100.00
Malta 2014	2 369	2 480	-4.45
Monaco Base year			
Monaco 2014			

Table 1.1**CO₂ emissions from fuel combustion: reference approach and sectoral approach^a**

	Reference approach	Sectoral approach	Difference
	(kt CO ₂)		(%)
Netherlands Base year	162 865	152 125	7.06
Netherlands 2014	158 934	149 190	6.53
New Zealand Base year	22 784	22 036	3.40
New Zealand 2014	30 059	29 853	0.69
Norway Base year	24 251	26 192	-7.41
Norway 2014	37 478	34 916	7.34
Poland Base year ^b	470 800	439 016	7.24
Poland 2014	281 914	284 864	-1.04
Portugal Base year	39 859	39 918	-0.15
Portugal 2014	42 003	41 564	1.06
Romania Base year ^b	182 944	178 531	2.47
Romania 2014	62 298	63 312	-1.60
Russian Federation Base year	2 363 320	2 265 874	4.30
Russian Federation 2014	1 403 968	1 417 173	-0.93
Slovakia Base year	53 458	53 353	0.20
Slovakia 2014	25 352	25 147	0.81
Slovenia Base year ^b	15 246	15 410	-1.06
Slovenia 2014	12 626	12 600	0.20
Spain Base year	205 517	204 792	0.35
Spain 2014	225 039	229 452	-1.92
Sweden Base year	49 414	51 524	-4.09
Sweden 2014	40 350	37 242	8.35
Switzerland Base year	41 122	40 881	0.59
Switzerland 2014	37 188	36 927	0.71
Turkey Base year	147 134 588	124 376	118 197.86
Turkey 2014	260 376 690	325 325	79 935.84
Ukraine Base year	587 673	577 612	1.74
Ukraine 2014	190 701	191 473	-0.40
United Kingdom of Great Britain and Northern Ireland Base year	548 444	560 930	-2.23
United Kingdom of Great Britain and Northern Ireland 2014	402 023	411 872	-2.39
United States of America Base year	4 792 767	4 866 757	-1.52
United States of America 2014	5 197 216	5 331 939	-2.53

^a Indirect CO₂ 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 - CO₂ (2014)

	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)
Australia	8.36	GCV	T2	CS, PS	67	69	61	70	T2	CS	69	T2	CS	68	69	62	70	T1	CS		
Austria	11.33	NCV	NA	NA	74	78	74	NO	NA	NA	76	NA	NA	74	74	75	74				
Belarus	14.93	NCV	T1	D	77	77	NO	NO	T1	D	74	T1	D	72	73	71	73	T1	D	73	
Belgium	14.19	NCV	CS, T1, T3	D, PS	67	62	67	NO	CS, T1, T3	D, PS	75	CS, T1, T3	D	74	74	74	74	T1	D		
Bulgaria	4.76	NCV	T1, T2	CS, D	77	92	67	NO	T1, T2	CS, D	84	T1, T2	CS, D	72	70	64	74	T1, T2	CS, D	77	
Canada	7.18	GCV	T2	CS	60	76	59	57	T2	CS	67	T2	CS	68	65	69	69	T3	CS		
Croatia	14.37	NCV	T1	D	66	77	65	NO	T1	D	83	T1	D	72	72	70	74	NO	NO		
Cyprus	48.33	NCV	CS	CS	78	78	NO		CS, T1	CS, D	89	T1	D	71	69	70	74	T1	D	74	
Czech Republic	2.05	NCV	T1, T2	CS, D	64	77	62	74	T1, T2	CS, D	73	T1, T2	CS, D	74	72	66	74	D, T1	D		
Denmark (KP)	9.89	NCV	T1, T2, T3	CS, D, PS	61	76	58	74	CR, M, T1, T2, T3	CS, D, PS	80	CR, M, T1, T2, T3	CS, D	74	73	69	74	CR, T2	CS		
Denmark (Convention)	11.92	GCV, NCV	CS, T1, T2, T3	CS, D, PS	63	76	58		CR, M, T1, T2, T3	CS, D, PS	79	CR, M, T1, T2, T3	CS, D	74	73	72	74	CR, T1, T2	CS, D		
Estonia	3.45	NCV	T1, T2, T3	CS, D, PS	75	75	NO	NO	T1, T2, T3	CS, D, PS	72	T1, T2	CS, D	73	65	70	73	T2	CS		
European Union (KP)	10.00		NA	NA	69	76	67	72	NA	NA	78	NA	NA	73	73	72	74			73	
European Union (Convention)	9.97		NA	NA	69	76	67	72	NA	NA	78	NA	NA	73	73	72	74			73	
Finland	16.28	NCV	T3	CS, D, PS	64	78	61	NO	CS, M, T3	CS, D, PS	70	CS, M, T1, T3	CS, D	74	74	74	74	T1	CS	72	
France (KP)	13.30		NA	NA	64	76	59	NO	NA	NA	73	NA	NA	74	74	73	74				
France (Convention)	13.74		NA	NA	65	76	59	NO	NA	NA	73	NA	NA	122	74	NO	74				
Germany	9.97	NCV	CS	CS	70	78	69	82	CS	CS, D	98	CS, T1, T2, T3	CS, M	74	73	74	74	CS	CS, M	74	
Greece	16.40	NCV	T1, T2	D, PS	71	76	69	NO	T1, T2	CS, D, PS	84	T1, T2	CS, D, NO	72	69	73	72				
Hungary	5.72	NCV	T1, T2, T3	CS, D, PS	67	77	66	63	T1, T2, T3	CS, D, PS	78	T1, T2	CS, D	72	71	63	74	NA	NA		
Iceland	13.30	NCV	T1, T2	D	75	75	NO		T1	D	75	T1, T2	D	74	68	73	74				
Ireland	10.03	NCV	T1, T3	CS, D, PS	81	79	82	NO	T1, T2, T3	CS, D, PS	76	T1, T2	CS, D	72	73	72	73				
Italy	10.83	NCV	T3	CS	75	76	75	NO	T2	CS	81	T2	CS	71	67	70	73	T2	CS		
Japan	18.58	GCV	CS, T2	CS	68	72	64	71	CS, T2	CS	67	T2	CS	67	68	65	70				
Kazakhstan	5.43	NCV	T1, T3	D, PS	72	77	71	73	T1, T3	D, PS	75	T1, T3	D, PS	67	72	64	64	T1, T3	D, PS	72	
Latvia	7.20	NCV	T1, T2	CS, D	74	74	NO	74	T1, T2, T3	CS, D, PS	72	T1, T2	CS, D	72	73	69	74	T1	D		
Liechtenstein	19.88	NCV	T2	CS	NA, NO		NA, NO	NO	T1, T2	CS, D	74	T1, T2	CS, D	144	147	147	74				
Lithuania	9.03	NCV	T1, T2, T3	CS, D, PS	69	76	69	73	T2	CS	72	T2	CS	68	72	67	72	T2	CS		
Luxembourg	7.63	NCV	T2	CS	74	74	NO	NO	T1, T2	CS, D, PS	72	T1, T2	CS, D	73	73	74	71	NA	NA		
Malta	61.77	NCV	T1, T3	D, PS	77	77	NO	NO	T1	D	75	T1	D	72	75	66	74	NA	NA		
Monaco																					
Netherlands	9.74	NCV	CS, T2	CS, D	68	67	68	74	T2	CS, D	68	T2	CS, D	74	74	70	74	T2	D		
New Zealand	5.17	GCV	T1	CS	63	70	63	70	T1	CS	68	T1	CS	68	68	61	70				
Norway	14.31	NCV	T1, T2, T3	CS, PS	62	52	53	74	T1, T2, T3	CS, PS	63	T1, T2	CS, PS	73	73	72	74	T1, T2	CS, D	71	
Poland	3.64	NCV	T1, T2	CS, D	70	77	69	74	T1, T2	CS, D	68	T1, T2	CS, D	72	72	64	74				
Portugal	12.01	NCV	T2	CR, D, PS	66	76	60	NO	T2, T3	CR, D, OTH, PS	77	T1, T2	CR, D	68	69	64	73				
Romania	6.85	NCV	T1, T2	CS, D	64	69	57	70	T1, T2	CS, D	74	D, T1, T2	CS, D	69	70	63	73	T1, T2	CS, D	74	
Russian Federation	6.08	NCV	T1, T2	CS, D	67	74	62	74	T1, T2	CS, D	74	T1, T2	CS, D	68	77	63	73	T1, T2	CS, D	73	
Slovakia	3.14	NCV	T2, T3	CS, PS	72	78	71	75	T2	CS	89	T1, T2	CS, D	65	66	63	65	T2	CS, D	74	
Slovenia	8.18	NCV	T1, T2	CS, D, PS	75	75	NO	NO	T1, T2, T3	CS, D, PS	80	T1, T2	CS, D	72	72	72	74	T1	D		
Spain	14.28	NCV	T2	CS, OTH, PS	64	77	56	73	T2	CS, D, M, OTH, PS	85	T2, T3	CS, M, OTH	72	72	70	73	NA	NA		
Sweden	18.19	NCV	T2	CS	57	74	54	C, NO	T1, T2, T3	CS, PS	66	M, T1, T2	CS	72	72	73	73	T1	CS		
Switzerland	23.35	NCV	CS, T2	CS	64	74	64		CS, T2	CS	73	CS, T2	CS	74	74	74	73	T2	CS		
Turkey	5.28	NCV	T2, T3	CS, D	64	77	58		T1, T2	CS, D	91	T1, T2	CS, D	68		64	74				
Ukraine	0.88	NCV	T1, T2, T3	CS, D	68	75	73	65	T1, T2	CS, D	78	T1, T2	CS, D	63	65	62	64	T1	D		
United Kingdom of Great Britain and Northern Ireland	7.85	NCV	T1, T2	CS	70	76	69	72	T1, T2, T3	CS, D	72	T1, T2, T3	CS, D	73	77	72	74	T1	CS		
United States of America	7.67	GCV	T2	CS	81	81	81	81	T2	CS	71	T2	CS, D	65	67	65	71	CS, T2	CS	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 CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

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

^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 - CO₂ (2014)

	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
	%																			
Australia	30.68	GCV	T2	CS, PS	90	90	NO	82	T2	CS	83	T2	CS	95	95	95	NO	T1	CS	
Austria	4.66	NCV	NA	NA	93	93	NO	NO	NA	NA	93	NA	NA	94	96	94	94			
Belarus	2.30	NCV	T1	D	98	98	NO	NO	T1	D	102	T1	D	98	98	98	98	T1	D	98
Belgium	7.98	NCV	CS, T1, T3	D, PS	157	171	NO	41	CS, T1, T3	D, PS	96	CS, T1, T3	D	95	NO	95	95	T1	D	
Bulgaria	46.02	NCV	T1, T2	CS, D	103	103	NO	101	T1, T2	CS, D	100	T1, T2	CS, D	96	97	96	96	T1, T2	CS, D	
Canada	8.95	GCV	T2	CS	92	92	NO	85	T2	CS	73	T2	CS	93	92	95	NO	T3	CS	
Croatia	11.24	NCV	T1	D	95	95	NO	NO	T1	D	97	T1	D	99	98	100	NO	NO	NO	
Cyprus	0.11	NCV	CS	CS	NO	NO	NO		CS, T1	CS, D	95	T1	D	NO			NO	T1	D	NO
Czech Republic	44.17	NCV	T1, T2	CS, D	97	97	NO	97	T1, T2	CS, D	86	T1, T2	CS, D	98	100	98	98	D, T1	D	
Denmark (KP)	19.83	NCV	T1, T2, T3	CS, D, PS	94	94	NO	NO	CR, M, T1, T2, T3	CS, D, PS	96	CR, M, T1, T2, T3	CS, D	95	NO	98	95	CR, T2	CS	
Denmark (Convention)	19.81	GCV, NCV	CS, T1, T2, T3	CS, D, PS	94	94	NO		CR, M, T1, T2, T3	CS, D, PS	96	CR, M, T1, T2, T3	CS, D	95	NO	98	95	CR, T1, T2	CS, D	
Estonia	66.50	NCV	T1, T2, T3	CS, D, PS	74	100	NO	11	T1, T2, T3	CS, D, PS	97	T1, T2, T3	CS, D	94	94	94	NO	T2	CS	
European Union (KP)	24.17		NA	NA	101	101	163	97	NA	NA	118	NA	NA	95	95	95	95			99
European Union (Convention)	24.21		NA	NA	101	101	163	97	NA	NA	118	NA	NA	95	95	95	95			99
Finland	17.81	NCV	T3	CS, D, PS	94	93	NO	95	CS, M, T3	CS, D, PS	136	CS, M, T1, T3	CS, D	92	NO	89	93	T1	CS	NO
France (KP)	7.95		NA	NA	120	109	278	187	NA	NA	124	NA	NA	95	95	95	NO			
France (Convention)	8.11		NA	NA	120	109	278	187	NA	NA	121	NA	NA	267	95	NO	NO			
Germany	36.24	NCV	CS	CS	106	105	41	140	CS	CS, D	136	CS, T1, T2, T3	CS, M	99	100	99	98	CS	CS, M	99
Greece	33.74	NCV	T1, T2	D, PS	123	123	NO	NO	T1, T2	CS, D, PS	94	T1, T2	CS, D	99	IE, NO	99	99			
Hungary	15.49	NCV	T1, T2, T3	CS, D, PS	112	114	NO	71	T1, T2, T3	CS, D, PS	68	T1, T2	CS, D	104	96	104	NO	NA	NA	
Iceland	0.01	NCV	T1, T2	D	NO		NO		T1	D	74	T1, T2	D	NO	NO	NO	NO			
Ireland	8.48	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			
Italy	12.49	NCV	T3	CS	101	94	NO	177	T2	CS	68	T2	CS	94	NO	94	NO	T2	CS	
Japan	33.97	GCV	CS, T2	CS	89	89	90	83	CS, T2	CS	95	T2	CS	95	95	NO	NO			
Kazakhstan	46.70	NCV	T1, T3	D, PS	96	96	106	96	T1, T3	D, PS	89	T1, T3	D, PS	96	95	96	95	T1, T3	D, PS	97
Latvia	2.06	NCV	T1, T2	CS, D	95	95	NO	NO	T1, T2, T3	CS, D, PS	95	T1, T2	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	NO		NO	NO			
Lithuania	4.10	NCV	T1, T2, T3	CS, D, PS	95	95	NO	NO	T2	CS	96	T2	CS	95	95	95	95	T2	CS	
Luxembourg	1.73	NCV	T2	CS	NO	NO	NO	NO	T1, T2	CS, D, PS	95	T1, T2	CS, D	97	NO	97	NO	NA	NA	
Malta	-	NCV	T1, T3	D, PS	NO	NO	NO	NO	T1	D	IE, NO	T1	D	NO	NO	NO	NO	NA	NA	
Monaco																				
Netherlands	18.11	NCV	CS, T2	CS, D	106	107	NO	79	T2	CS, D	147	T2	CS, D	101	101	100	NO	T2	D	
New Zealand	4.57	GCV	T1	CS	92	92	NO	NO	T1	CS	92	T1	CS	92	92	92	92			
Norway	1.28	NCV	T1, T2, T3	CS, PS	90	90	NO		T1, T2, T3	CS, PS	115	T1, T2	CS, PS	103	NO	103	NO	T1, T2	CS, D	
Poland	52.68	NCV	T1, T2	CS, D	100	101	97	48	T1, T2	CS, D	104	T1, T2	CS, D	95	95	94	95			
Portugal	15.62	NCV	T2	CR, D, PS	93	93	NO	NO	T2, T3	CR, D, OTH, PS	96	T1, T2	CR, D	NO	NO	NO	NO			
Romania	18.41	NCV	T1, T2	CS, D	88	88	NO	88	T1, T2	CS, D	91	D, T1, T2	CS, D	90	88	90	NO	T1, T2	CS, D	NO
Russian Federation	10.13	NCV	T1, T2	CS, D	94	95	NA	71	T1, T2	CS, D	77	T1, T2	CS, D	95	95	95	95	T1, T2	CS, D	95
Slovakia	23.34	NCV	T2, T3	CS, PS	116	101	NO	195	T2	CS	122	T1, T2	CS, D	98	97	100	97	T2	CS, D	101
Slovenia	26.53	NCV	T1, T2	CS, D, PS	103	103	NO	NO	T1, T2, T3	CS, D, PS	103	T1, T2	CS, D	96	NO	96	NO	T1	D	
Spain	14.68	NCV	T2	CS, OTH, PS	97	98	NO	44	T2	CS, D, M, OTH, PS	135	T2, T3	CS, M, OTH	101	101	101	NO	NA	NA	
Sweden	8.73	NCV	T2	CS	169	191	NO	92	T1, T2, T3	CS, PS	110	M, T1, T2	CS	NO	NO	NO	NO	T1	CS	
Switzerland	1.15	NCV	CS, T2	CS	NO	NO	NO	NO	CS, T2	CS	95	CS, T2	CS	93	NO	93	NO	T2	CS	
Turkey	28.20	NCV	T2, T3	CS, D	105	103	NO	246	T1, T2	CS, D	122	T1, T2	CS, D	93		93	99			
Ukraine	23.11	NCV	T1, T2, T3	CS, D	91	91	NA, NO	93	T1, T2	CS, D	94	T1, T2	CS, D	93	93	93	93	T1	D	
United Kingdom of Great Britain and Northern Ireland	20.92	NCV	T1, T2	CS	90	90	NO	84	T1, T2, T3	CS, D	153	T1, T2, T3	CS, D	97	95	97	NO	T1	CS	
United States of America	23.54	GCV	T2	CS	91	91	91	91	T2	CS	90	T2	CS, D	89	89	NA, NO	90	CS, T2	CS	82

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 CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

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

^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 - CO₂ (2014)

	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
Australia	12.73	GCV	T2	CS, PS	51	51	48	51	T2	CS	51	T2	CS	51	51	51	51	T1	CS	
Austria	17.98	NCV	NA	NA	55	55	55	55	NA	NA	55	NA	NA	55	55	55	55			
Belarus	37.33	NCV	T1	D	56	56	NO	NO	T1	D	56	T1	D	56	56	56	56	T1	D	56
Belgium	24.33	NCV	CS, T1, T3	D, PS	58	58	56	NO	CS, T1, T3	D, PS	56	CS, T1, T3	D	56	56	56	56	T1	D	
Bulgaria	6.95	NCV	T1, T2	CS, D	55	55	55	55	T1, T2	CS, D	55	T1, T2	CS, D	55	55	55	55	T1, T2	CS, D	
Canada	27.05	GCV	T2	CS	51	49	49	52	T2	CS	49	T2	CS	49	49	49	49	T3	CS	
Croatia	15.42	NCV	T1	D	56	56	56	56	T1	D	56	T1	D	56	56	56	56	NO	NO	
Cyprus	–		CS	CS	NO	NO	NO		CS, T1	CS, D	NO	T1	D	NO			NO	T1	D	
Czech Republic	10.90	NCV	T1, T2	CS, D	55	55	55	55	T1, T2	CS, D	55	T1, T2	CS, D	55	55	55	55	D, T1	D	
Denmark (KP)	13.32	NCV	T1, T2, T3	CS, D, PS	57	57	57	57	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)	10.64	GCV, NCV	CS, T1, T2, T3	CS, D, PS	57	57	57		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	4.63	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)	17.79		NA	NA	57	57	56	61	NA	NA	56	NA	NA	56	56	56	56			56
European Union (Convention)	17.82		NA	NA	57	57	56	61	NA	NA	56	NA	NA	56	56	56	56			56
Finland	8.89	NCV	T3	CS, D, PS	55	55	55	NO	CS, M, T3	CS, D, PS	55	CS, M, T1, T3	CS, D	55	55	55	55	T1	CS	55
France (KP)	15.94		NA	NA	56	56	56	NO	NA	NA	57	NA	NA	57	57	57	57			
France (Convention)	15.72		NA	NA	56	56	56	NO	NA	NA	57	NA	NA	206	57	NO	57			
Germany	15.75	NCV	CS	CS	56	56	56	61	CS	CS, D	56	CS, T1, T2, T3	CS, M	56	56	56	56	CS	CS, M	56
Greece	5.05	NCV	T1, T2	D, PS	56	56	IE, NO	57	T1, T2	CS, D, PS	56	T1, T2	CS, D	56	56	56	IE, NO			
Hungary	26.57	NCV	T1, T2, T3	CS, D, PS	56	56	56	56	T1, T2, T3	CS, D, PS	56	T1, T2	CS, D	56	56	56	56	NA	NA	
Iceland	–		T1, T2	D	NO		NO		T1	D	NO	T1, T2	D	NO	NO	NO	NO			
Ireland	14.73	NCV	T1, T3	CS, D, PS	56	57	9	NO	T1, T2, T3	CS, D, PS	57	T1, T2	CS, D	57	57	57	57			
Italy	27.95	NCV	T3	CS	57	57	57	57	T2	CS	57	T2	CS	57	57	57	57	T2	CS	
Japan	19.40	GCV	CS, T2	CS	51	51	51	52	CS, T2	CS	52	T2	CS	52	52	52	52			
Kazakhstan	13.86	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	21.37	NCV	T1, T2	CS, D	54	54	NO	54	T1, T2, T3	CS, D, PS	54	T1, T2	CS, D	54	54	54	54	T1	D	
Liechtenstein	22.88	NCV	T2	CS	56	56	NA, NO	NO	T1, T2	CS, D	56	T1, T2	CS, D	112	112	112	NO			
Lithuania	13.27	NCV	T1, T2, T3	CS, D, PS	55	55	55	55	T2	CS	55	T2	CS	55	55	55	55	T2	CS	
Luxembourg	19.62	NCV	T2	CS	57	57	NO	NO	T1, T2	CS, D, PS	57	T1, T2	CS, D	57	57	57	NO	NA	NA	
Malta	0.03	NCV	T1, T3	D, PS	NO	NO	NO	NO	T1	D	63	T1	D	63	63	63	63	NA	NA	
Monaco																				
Netherlands	34.15	NCV	CS, T2	CS, D	57	56	56	62	T2	CS, D	56	T2	CS, D	56	56	56	56	T2	D	
New Zealand	9.86	GCV	T1	CS	53	53	53	54	T1	CS	54	T1	CS	54	54	54	54			
Norway	23.27	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	6.41	NCV	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	56	T1, T2	CS, D	56	56	56	56			
Portugal	11.29	NCV	T2	CR, D, PS	55	56	54	NO	T2, T3	CR, D, OTH, PS	56	T1, T2	CR, D	56	56	56	56			
Romania	17.98	NCV	T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	56	D, T1, T2	CS, D	56	56	56	56	T1, T2	CS, D	NO
Russian Federation	24.54	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	18.58	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	8.65	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	16.08	NCV	T2	CS, OTH, PS	58	60	55	56	T2	CS, D, M, OTH, PS	56	T2, T3	CS, M, OTH	56	56	56	56	NA	NA	
Sweden	3.24	NCV	T2	CS	59	57	62	C, NO	T1, T2, T3	CS, PS	57	M, T1, T2	CS	57	57	57	57	T1	CS	
Switzerland	12.78	NCV	CS, T2	CS	57	57	NO		CS, T2	CS	57	CS, T2	CS	57	57	57	57	T2	CS	
Turkey	20.38	NCV	T2, T3	CS, D	58	58	55		T1, T2	CS, D	57	T1, T2	CS, D	57		57	57			
Ukraine	19.94	NCV	T1, T2, T3	CS, D	54	55	55	52	T1, T2	CS, D	54	T1, T2	CS, D	55	55	55	55	T1	D	
United Kingdom of Great Britain and Northern Ireland	26.69	NCV	T1, T2	CS	58	56	56	63	T1, T2, T3	CS, D	57	T1, T2, T3	CS, D	57	57	57	57	T1	CS	
United States of America	19.72	GCV	T2	CS	50	50	50	50	T2	CS	50	T2	CS, D	50	50	50	50	CS, T2	CS	22

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 CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

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

^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 - CO₂ (2014)

	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 ^c		CO ₂ IEF				Method and EF used ^d		CO ₂ IEF		
			Methods	EF	Total	Public electricity and heat production	Petroleum refining	Manufacture of solid fuels and other energy industries	Methods	EF	Total	Methods	EF	Total	Commercial / Institutional	Residential	Agriculture / Forestry / Fishing	Methods	EF	Stationary		
	%				(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	2.81	NCV	NA	NA	59	59	NO	NO	NA	NA	65	NA	NA	68	68	NO	NO					
Belarus	–	NCV	T1	D	NO	NO	NO	NO	T1	D	IE, NO	T1	D	NO	NO	NO	NO	T1	D			
Belgium	2.32	NCV	CS, T1, T3	D, PS	99	99	NO	NO	CS, T1, T3	D, PS	76	CS, T1, T3	D	66	66	NO	NO	T1	D			
Bulgaria	0.09	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D	87	T1, T2	CS, D	NO	NO	NO	NO	T1, T2	CS, D			
Canada	0.04	GCV	T2	CS	NA, NO	NA, NO	NO	NO	T2	CS	78	T2	CS	NO	NO	NO	NO	T3	CS			
Croatia	0.27	NCV	T1	D	NO	NO	NO	NO	T1	D	143	T1	D	NO	NO	NO	NO	NO	NO			
Cyprus	0.67	NCV	CS	CS	NO	NO	NO	NO	CS, T1	CS, D	143	T1	D	NO			NO	T1	D			
Czech Republic	0.52	NCV	T1, T2	CS, D	145	145	NO	NO	T1, T2	CS, D	93	T1, T2	CS, D	NO	NO	NO	NO	D, T1	D			
Denmark (KP)	3.03	NCV	T1, T2, T3	CS, D, PS	88	88	NO	NO	CR, M, T1, T2, T3	CS, D, PS	88	CR, M, T1, T2, T3	CS, D	82	82	NO	NO	CR, T2	CS			
Denmark (Convention)	3.07	GCV, NCV	CS, T1, T2, T3	CS, D, PS	88	88	NO	NO	CR, M, T1, T2, T3	CS, D, PS	88	CR, M, T1, T2, T3	CS, D	82	82	NO	NO	CR, T1, T2	CS, D			
Estonia	1.41	NCV	T1, T2, T3	CS, D, PS	56	56	NO	NO	T1, T2, T3	CS, D, PS	80	T1, T2	CS, D	NO	NO	NO	NO	T2	CS			
European Union (KP)	1.49		NA	NA	81	81	100	143	NA	NA	69	NA	NA	112	112	IE, NO	IE, NO					
European Union (Convention)	1.49		NA	NA	82	81	100	143	NA	NA	69	NA	NA	112	112	IE, NO	IE, NO					
Finland	1.20	NCV	T3	CS, D, PS	69	69	NO	NO	CS, M, T3	CS, D, PS	82	CS, M, T1, T3	CS, D	NO	NO	NO	NO	T1	CS	NO		
France (KP)	2.26		NA	NA	108	108	50	NO	NA	NA	52	NA	NA	NO	NO	NO	NO					
France (Convention)	2.23		NA	NA	108	108	50	NO	NA	NA	52	NA	NA	NO	NO	NO	NO					
Germany	2.76	NCV	CS	CS	84	84	NA, NO	NA, NO	CS	CS, D	74	CS, T1, T2, T3	CS, M	NA, NO	NA, NO	NA, NO	NA, NO	CS	CS, M			
Greece	0.03	NCV	T1, T2	D, PS	NO	NO	NO	NO	T1, T2	CS, D, PS	89	T1, T2	CS, D	IE, NO	IE, NO	IE, NO	IE, NO					
Hungary	0.58	NCV	T1, T2, T3	CS, D, PS	105	105	NO	NO	T1, T2, T3	CS, D, PS	67	T1, T2	CS, D	NO	NO	NO	NO	NA	NA			
Iceland	–		T1, T2	D					T1	D	NO	T1, T2	D	NO	NO	NO	NO					
Ireland	0.40	NCV	T1, T3	CS, D, PS	86	86	NO	NO	T1, T2, T3	CS, D, PS	91	T1, T2	CS, D	NO	NO	NO	NO					
Italy	1.22	NCV	T3	CS	93	93	NO	NO	T2	CS	64	T2	CS	114	114	NO	NO	T2	CS			
Japan	1.16	GCV	CS, T2	CS	29	29	47	46	CS, T2	CS	43	T2	CS	NO	NO	NO	NO					
Kazakhstan	0.00	NCV	T1, T3	D, PS	IE, NA	IE, NA	IE, NA	IE, NA	T1, T3	D, PS	73	T1, T3	D, PS	73	73	NA	73	T1, T3	D, PS			
Latvia	0.96	NCV	T1, T2	CS, D	NO	NO	NO	NO	T1, T2, T3	CS, D, PS	86	T1, T2	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					
Lithuania	0.43	NCV	T1, T2, T3	CS, D, PS	109	109	NO	NO	T2	CS	NO	T2	CS	NO	NO	NO	NO	T2	CS			
Luxembourg	1.06	NCV	T2	CS	96	96	NO	NO	T1, T2	CS, D, PS	86	T1, T2	CS, D	NO	NO	NO	NO	NA	NA			
Malta	–	NCV	T1, T3	D, PS	NO	NO	NO	NO	T1	D	IE, NO	T1	D	IE, NO	NO	NO	IE	NA	NA			
Monaco																						
Netherlands	1.51	NCV	CS, T2	CS, D	83	83	NO	NO	T2	CS, D	NO	T2	CS, D	NO	NO	NO	NO	T2	D			
New Zealand	–	GCV	T1	CS	NO	NO	NO	NO	T1	CS	NO	T1	CS	NO	NO	NO	NO					
Norway	2.17	NCV	T1, T2, T3	CS, PS	48	48	NO		T1, T2, T3	CS, PS	59	T1, T2	CS, PS	79	79		NO	T1, T2	CS, D	NO		
Poland	0.75	NCV	T1, T2	CS, D	121	121	NO	143	T1, T2	CS, D	133	T1, T2	CS, D	109	109	IE, NO	NO					
Portugal	1.31	NCV	T2	CR, D, PS	106	106	NO		T2, T3	CR, D, OTH, PS	54	T1, T2	CR, D	NO	NO	NO	NO					
Romania	0.40	NCV	T1, T2	CS, D	84	84	NO	NO	T1, T2	CS, D	84	D, T1, T2	CS, D	87	87	NO	NO	T1, T2	CS, D	NO		
Russian Federation	0.92	NCV	T1, T2	CS, D	143	143	143	143	T1, T2	CS, D	143	T1, T2	CS, D	143	143	NA, NO	143	T1, T2	CS, D	142		
Slovakia	0.85	NCV	T2, T3	CS, PS	76	76	NO	NO	T2	CS	87	T1, T2	CS, D	NO	NO	NO	NO	T2	CS, D	NO		
Slovenia	0.52	NCV	T1, T2	CS, D, PS	73	73	NO	NO	T1, T2, T3	CS, D, PS	54	T1, T2	CS, D	NO	NO	NO	NO	T1	D			
Spain	0.71	NCV	T2	CS, OTH, PS	69	64	101	NO	T2	CS, D, M, OTH, PS	50	T2, T3	CS, M, OTH	NO	NO	NO	NO	NA	NA			
Sweden	4.35	NCV	T2	CS	88	88		NO	T1, T2, T3	CS, PS	64	M, T1, T2	CS	60	60	NO	NO	T1	CS			
Switzerland	5.51	NCV	CS, T2	CS	89	89	NO		CS, T2	CS	69	CS, T2	CS	NO			NO	T2	CS			
Turkey	0.27	NCV	T2, T3	CS, D	143	143	NO		T1, T2	CS, D	139	T1, T2	CS, D	NO			NO					
Ukraine	0.05	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	0.44	NCV	T1, T2	CS	39	39	NO	NO	T1, T2, T3	CS, D	44	T1, T2, T3	CS, D	NO	NO	NO	NO	T1	CS			
United States of America	0.14	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	39		

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 CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

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

^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 - CO₂, N₂O (2014)**

	CO ₂ emissions						N ₂ O emissions					
	Share of national total ^a	Methods and EF used		CO ₂ IEF			Share of national total ^a	Methods and EF used		N ₂ O 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
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	14.77	T2	CS, D	GCV	67	70	0.23	T1, T3	CS, D	GCV	5.1	1.6
Austria	27.90	NA	NA	NCV	76	74	0.24	NA	NA	NCV	0.70	2.6
Belarus	1.46	T1	D	NCV	69	74	0.04	T1	D	NCV	25	3.9
Belgium	21.33	M, T1, T3	OTH	NCV	71	74	0.22	M, T3	CS, OTH	NCV	0.74	2.8
Bulgaria	13.89	T2	CR	NCV	72	75	0.12	T2	CR	NCV	2.6	1.7
Canada	18.42	T1, T2, T3	CS	GCV	66	70	0.32	T1, T3	CS	GCV	3.6	3.9
Croatia	23.33	T1	D	NCV	69	74	0.20	T1, T3	CR, D	NCV	1.9	2.1
Cyprus	20.96	T1	D	NCV	69	74	0.57	T1	D	NCV	8.0	3.9
Czech Republic	12.80	T1	CS, D	NCV	69	74	0.48	T1, T2	CS, D	NCV	19	5.2
Denmark (KP)	21.95	CR, M, T2	CS	NCV	73	74	0.24	CR, M, T3	CR	NCV	1.1	3.2
Denmark (Convention)	22.17	CR, M, T1, T2	CS, D	GCV,NCV	73	74	0.24	CR, M, T1, T3	CR, D	GCV,NCV	1.2	3.2
Estonia	10.17	T1, T2	CS, D	NCV	73	73	0.09	T1, T3	CS, D	NCV	1.5	2.4
European Union (KP)	19.50	NA	NA		72	74	0.20	NA	NA		1.6	2.9
European Union (Convention)	19.51	NA	NA		72	74	0.20	NA	NA		1.6	2.9
Finland	17.34	M	CS	NCV	73	73	0.12	M	D	NCV	1.1	1.7
France (KP)	26.71	NA	NA		71	75	0.32	NA	NA		1.8	3.0
France (Convention)	26.55	NA	NA		71	75	0.32	NA	NA		1.9	3.0
Germany	17.01	CS, M, T2, T3	CS, D	NCV	73	74	0.16	CS, M, T2, T3	CS, M	NCV	0.67	3.1
Greece	14.94	T1, T2, T3	CS, D	NCV	73	73	0.11	M, T1	D, M	NCV	1.8	1.7
Hungary	18.76	T1, T2	CS, D	NCV	73	75	0.18	T1, T3	D, M	NCV	1.8	2.6
Iceland	16.63	NA	NA	NCV	69	74	0.73	NA	NA	NCV	16	3.9
Ireland	18.41	T2, T3	CS, M	NCV	70	73	0.18	T3	M	NCV	1.3	2.7
Italy	23.21	T3	CS	NCV	73	74	0.21	T3	M	NCV	1.2	2.5
Japan	13.68	T2	CS	GCV	69	69	0.11	T3	CS, D	GCV	1.5	2.5
Kazakhstan	5.93	T2	D	NCV	70	48	0.04	T2	D	NCV	0.47	2.1
Latvia	23.42	T1, T2	CS, D, OTH	NCV	71	74	0.24	T1, T2	CR, OTH	NCV	1.8	2.6
Liechtenstein	35.94	T2	CS	NCV	74	74	0.22	T2	CS, D	NCV	0.59	2.5
Lithuania	23.76	T1, T2	CS, D	NCV	73	73	0.18	T1, T3	CR, D	NCV	3.0	1.5
Luxembourg	56.01	T1, T2	CS, D	NCV	71	71	0.46	T3	M	NCV	0.75	2.2
Malta	17.91	T3	CR	NCV	75	74	0.33	T3	CR	NCV	6.1	3.5
Monaco												
Netherlands	15.51	T1, T2	CS	NCV	72	74	0.13	T1, T2	CS, D	NCV	1.1	2.6
New Zealand	15.60	T1	CS	GCV	67	70	0.15	D, T3	CS, D	GCV	2.7	1.6
Norway	19.01	T2	CS	NCV	71	74	0.13	T2	CS	NCV	0.96	1.8
Poland	11.14	T1, T2	CS, D	NCV	70	72	0.14	T1	D	NCV	2.8	3.6
Portugal	23.25	T2	D	NCV	69	73	0.22	T3	CR	NCV	1.6	2.3
Romania	13.52	T1, T3	D, OTH	NCV	71	77	0.15	T1, T3	D, OTH	NCV	2.8	2.6
Russian Federation	5.70	CR, T1, T2	CR, CS, D	NCV	73	74	0.07	CR, T1, T2, T3	CR, CS, D	NCV	3.6	1.9
Slovakia	15.22	M	D	NCV	71	75	0.13	M	D	NCV	1.8	2.0
Slovenia	31.82	M	M	NCV	69	74	0.31	M	M	NCV	0.69	2.7
Spain	22.74	T3	M	NCV	71	73	0.23	T3	M	NCV	1.2	2.7
Sweden	30.24	T1	CS	NCV	72	72	0.25	M	CS, D, M	NCV	0.60	2.6
Switzerland	32.04	NA	NA	NCV	74	73	0.19	NA	NA	NCV	0.59	2.5
Turkey	14.05	T1, T2	CS, D	NCV	69	74	0.22	T1	D	NCV	8.0	3.9
Ukraine	7.35	T1	D	NCV	69	74	0.14	T1	D	NCV	5.6	3.9
United Kingdom of Great Britain and Northern Ireland	20.59	T1, T3	CS, OTH	NCV	70	73	0.18	T3	CR, CS	NCV	0.78	2.9
United States of America	20.90	T1, T2	CS	GCV	68	70	0.18	M, T1, T2	CS, D, M	GCV	2.6	0.22

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

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

^c Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 3 Mobile Combustion. CO₂ table 3.2.1; N₂O table 3.2.2.

Table 1.7**Domestic aviation and navigation - CO₂ (2014)**

	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
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	1.65	70	67	0.30	74	70
Austria	NA	NA	0.07	73	76	0.01	NO	74
Belarus	T1	D	0.01	72	NO	0.67	NO	74
Belgium	T1, T3	CS, D	0.02	72	70	0.36	IE	71
Bulgaria	T1, T2	D	0.05	72	69	0.02	NO	74
Canada	T2, T3	CS	0.97	68	71	0.62	74	70
Croatia	T1	D	0.13	72	70	0.60	NO	74
Cyprus	T1	D	0.01	71	NO	0.02	NO	74
Czech Republic	T1	D	0.01	71	70	0.01	NO	74
Denmark (KP)	CR, M, T2	CS	0.27	72	73	0.71	78	74
Denmark (Convention)	CR, M, T1, T2	CS, D	0.35	72	72	0.89	78	74
Estonia	T2	CS, D	0.01	NO	73	0.15	NO	73
European Union (KP)			0.36	72	70	0.36	78	74
European Union			0.35	72	70	0.36	78	74
Finland	CS, M, OTH, T3	CS	0.33	73	71	0.70	78	74
France (KP)			0.98	72	71	0.27	78	75
France (Convention)			0.98	72	71	0.31	78	75
Germany	CS, T1, T3	CS, D, M	0.25	73	70	0.21	81	74
Greece	T1, T2	CS, D	0.54	70	69	1.44	78	77
Hungary	T1	D	0.00	71	70	0.03	NO	74
Iceland	T1	D	0.87	71	69	0.44	77	73
Ireland	T2, T3	CS	0.02	71	70	0.38	NO	73
Italy	T1, T2	CS	0.46	72	70	0.98	77	74
Japan	T2	CS	0.75	68	69	0.81	IE	69
Kazakhstan	T2	CS, D	0.17	73	69	0.03	NO	73
Latvia	T1, T2	CS, D	0.03	73	70	0.11	NO	74
Liechtenstein	T1	CS	0.03	73	NO	–	NO	NO
Lithuania	T2	CS	0.01	72	72	0.08	NO	73
Luxembourg	T1, T2	CS, D	0.00	NO	69	0.01	NO	74
Malta	D, T1	D	0.14	72	70	3.30	77	74
Monaco								
Netherlands	T2	CS, D	0.02	72	72	0.54	NO	74
New Zealand	T1	CS	1.04	68	66	0.39	73	NO
Norway	T1, T2	CS, D, PS	2.36	73	71	2.76	79	74
Poland	T1	D	0.04	72	70	0.00	77	74
Portugal	T1, T2, T3	D	0.52	71	69	0.26	77	73
Romania	T1, T2	CS, D, OTH	0.07	72	70	0.11	NO	74
Russian Federation	T1, T1b	D	0.39	72	NO	0.08	77	74
Slovakia	T1, T3	D	0.01	73	71	0.01	NO	76
Slovenia	T1	D	0.01	NO	70	–	NO	IE
Spain	T1, T2	CS, D, M	0.80	73	73	0.30	77	73
Sweden	T1	CS	0.95	71	70	0.74	78	74
Switzerland	NA	NA	0.29	73	IE	0.23	NO	73
Turkey	T2	CS, D	0.87	71	NO	0.29	78	74
Ukraine	T1, T3	D, OTH	0.03	72	70	0.02	77	74
United Kingdom of Great Britain and Northern Ireland	T2, T3	CS	0.36	72	69	0.43	78	74
United States of America	T1, T2	CS	1.90	68	66	0.34	71	68

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 kerosene, Aviation gasoline; Table 3.5.2 for Residual oil Gas/diesel oil.

Table 1.8**Domestic and international aviation - activity data (2014)**

	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	121 331	124 378	2.51	2 452	2 275	-7.25	170 880	163 894	-4.09	NO	0	-	294 663	290 546	-1.40
Austria	582	1 204	106.74	99	88	-11.16	27 177	26 961	-0.80	NO	0	-	27 859	28 253	1.42
Belarus	99	946	855.95	NO	0	-	5 722	4 730	-17.34	NO	0	-	5 821	5 676	-2.49
Belgium	341	0	-	42	88	110.54	56 678	55 685	-1.75	0.23	0	-	57 062	55 773	-2.26
Bulgaria	344	344	-0.00	44	44	0.01	7 095	7 095	-0.00	NO	0	-	7 483	7 483	-0.00
Canada	103 699	206 677	99.30	1 775	1 254	-29.34	168 915	30 729	-81.81	53	0	-	274 442	238 660	-13.04
Croatia	382	387	1.19	45	44	-1.32	5 073	4 945	-2.52	4.5	0	-	5 504	5 376	-2.33
Cyprus	8.4	0	-	NO	0	-	10 859	9 933	-8.53	NO	0	-	10 867	9 933	-8.60
Czech Republic	12	688	5412.96	88	88	0.49	12 241	12 169	-0.59	NO	0	-	12 341	12 945	4.89
Denmark (KP)	1 862		-	39		-	37 221		-	3.0		-	39 125		-
Denmark (Convention)	2 431	1 333	-45.16	45	44	-2.56	37 233	37 324	0.24	3.0	0	-	39 712	38 701	-2.55
Estonia	NO	0	-	17	0	-	1 700	1 720	1.17	NO	0	-	1 717	1 720	0.17
European Union (KP)	211 278		-	3 353		-	1 897 735		-	55		-	2 112 421		-
European Union (Convention)	206 819	217 967	5.39	3 224	3 432	6.46	1 889 769	1 839 970	-2.64	69	0	-	2 099 881	2 061 369	-1.83
Finland	2 600	2 580	-0.77	33	44	34.16	26 240	26 058	-0.69	NO	0	-	28 873	28 682	-0.66
France (KP)	62 268		-	857		-	228 187		-	NO		-	291 311		-
France (Convention)	63 184	32 680	-48.28	857	792	-7.57	231 628	235 769	1.79	NO	0	-	295 669	269 241	-8.94
Germany	29 702	30 100	1.34	472	528	11.86	332 168	336 518	1.31	NO	0	-	362 342	367 146	1.33
Greece	7 733	7 439	-3.80	90	88	-1.78	40 203	32 551	-19.03	NO	0	-	48 026	40 078	-16.55
Hungary	16	0	-	0.066	0	-	7 148	7 353	2.87	2.2	0	-	7 166	7 353	2.62
Iceland	542	516	-4.88	22	44	98.66	7 826	7 611	-2.75	0.089	0	-	8 391	8 171	-2.62
Ireland	100	258	158.49	32	88	175.51	31 219	30 272	-3.03	NO	0	-	31 350	30 618	-2.34
Italy	26 774	26 961	0.70	90	88	-2.14	131 354	128 785	-1.96	NO	0	-	158 218	155 834	-1.51
Japan	149 190	143 335	-3.92	58	45	-23.46	279 106	268 157	-3.92	NO	0	-	428 354	411 536	-3.93
Kazakhstan	7 193	3 698	-48.59	290	176	-39.34	12 788	9 718	-24.01	NA	0	-	20 271	13 592	-32.95
Latvia	43	43	-0.00	4.0	0	-	4 580	4 558	-0.48	NO	0	-	4 627	4 601	-0.56
Liechtenstein	0.85		-	NO		-	16		-	NO		-	17		-
Lithuania	8.0	0	-	19	0	-	3 241	3 225	-0.49	NO	0	-	3 268	3 225	-1.32
Luxembourg	NO	0	-	7.2	0	-	16 997	16 942	-0.33	0.80	0	-	17 005	16 942	-0.37
Malta	56	43	-23.17	1.5	0	-	4 642	4 644	0.04	NO	0	-	4 700	4 687	-0.27
Monaco															
Netherlands	510	387	-24.13	61	44	-28.16	151 422	149 683	-1.15	NO	0	-	151 993	150 114	-1.24
New Zealand	11 944	10 903	-8.72	440	446	1.30	37 657	35 200	-6.53	NO	0	-	50 041	46 548	-6.98
Norway	17 100	17 071	-0.17	72	88	22.15	21 162	21 113	-0.23	NO	0	-	38 334	38 272	-0.16
Poland	1 695	903	-46.71	220	220	0.01	23 684	24 467	3.31	NO	0	-	25 598	25 590	-0.03
Portugal	4 752	5 375	13.10	18	44	142.96	41 944	41 323	-1.48	41	0	-	46 755	46 742	-0.03
Romania	972	860	-11.56	44	44	0.10	12 681	7 654	-39.64	NO	0	-	13 697	8 558	-37.52
Russian Federation	152 183	237 102	55.80	NO	440	-	151 255	237 059	56.73	NO	0	-	303 438	474 601	56.41
Slovakia	56	0	-	1.8	0	-	1 661	1 462	-11.97	1.9	0	-	1 720	1 462	-15.00
Slovenia	NO	0	-	21	44	110.34	1 017	1 075	5.75	NO	0	-	1 038	1 119	7.85
Spain	36 304	68 886	89.75	130	132	1.48	187 780	152 908	-18.57	NO	0	-	224 215	221 926	-1.02
Sweden	7 137	3 741	-47.58	75	88	16.94	31 691	30 229	-4.61	NO	0	-	38 903	34 058	-12.45
Switzerland	1 921	2 279	18.65	IE	176	-	65 006	65 790	1.21	IE	0	-	66 927	68 245	1.97
Turkey	57 243	41 624	-27.29	NO	0	-	138 775	109 220	-21.30	NO	0	-	196 018	150 844	-23.05
Ukraine	1 283	0	-	23	0	-	13 269	0	-	NO	0	-	14 575	0	-
United Kingdom of Great Britain and Northern Ireland	25 423	33 755	32.77	798	792	-0.80	455 066	448 662	-1.41	5.9	0	-	481 293	483 209	0.40
United States of America	1 949 937	2 396 938	22.92	22 846	21 549	-5.68	1 039 303	634 569	-38.94	NA	0	-	3 012 086	3 053 055	1.36

^a Data provided by IEA on 27 May 2016. Data of OECD countries correspond to the preliminary 2016 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 (2014)

	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	4 335	2 002	-53.82	6 435	8 051	25.11	27 659	28 712	3.81	1 834	1 448	-21.02	31 994	30 715	-4.00	8 269	9 500	14.88
Austria	NO	0	-	59	43	-27.47	NO	0	-	860	852	-0.91	NO	0	-	919	895	-2.61
Belarus	NO	0	-	8 303	85	-98.97	NO	0	-	NO	0	-	NO	0	-	8 303	85	-98.97
Belgium	IE	0	-	5 826	6 859	17.73	204 319	199 720	-2.25	25 704	25 560	-0.56	204 319	199 720	-2.25	31 530	32 419	2.82
Bulgaria	NO	0	-	116	0	-	1 040	1 040	0.00	2 355	2 386	1.31	1 040	1 040	0.00	2 471	2 386	-3.44
Canada	34 638	31 235	-9.82	28 426	27 179	-4.39	15 453	13 949	-9.73	1 459	1 406	-3.66	50 091	45 185	-9.79	29 885	28 585	-4.35
Croatia	NO	0	-	1 841	1 832	-0.49	NO	0	-	NO	0	-	NO	0	-	1 841	1 832	-0.49
Cyprus	NO	0	-	20	0	-	6 181	6 120	-0.99	3 440	3 408	-0.93	6 181	6 120	-0.99	3 460	3 408	-1.49
Czech Republic	NO	0	-	129	128	-0.92	NO	0	-	NO	0	-	NO	0	-	129	128	-0.92
Denmark (KP)	2 132		-	2 690		-	16 714		-	12 643		-	18 846		-	15 333		-
Denmark (Convention)	2 814	520	-81.52	3 148	5 112	62.39	17 016	17 960	5.55	13 547	12 737	-5.97	19 830	18 480	-6.81	16 695	17 849	6.92
Estonia	NO	0	-	434	383	-11.65	11 279	11 240	-0.35	2 116	2 130	0.66	11 279	11 240	-0.35	2 550	2 513	-1.43
European Union (KP)	56 350		-	124 778		-	1 446 607		-	293 901		-	1 502 957		-	418 680		-
European Union (Convention)	56 238	40 720	-27.59	124 594	124 307	-0.23	1 444 319	1 444 200	-0.01	292 319	292 662	0.12	1 500 557	1 484 920	-1.04	416 913	416 969	0.01
Finland	1 118	1 120	0.19	2 718	2 854	5.01	2 311	2 600	12.50	1 082	1 406	29.97	3 429	3 720	8.49	3 800	4 260	12.12
France (KP)	857		-	4 466		-	72 987		-	7 510		-	73 844		-	11 976		-
France (Convention)	1 897	2 440	28.59	5 828	5 197	-10.83	74 027	71 400	-3.55	8 218	3 578	-56.45	75 924	73 840	-2.75	14 046	8 776	-37.52
Germany	6 174	0	-	18 416	12 482	-32.22	69 100	74 640	8.02	13 589	20 874	53.61	75 273	74 640	-0.84	32 006	33 356	4.22
Greece	11 006	10 800	-1.87	7 731	7 966	3.05	66 501	66 120	-0.57	10 856	11 246	3.60	77 507	76 920	-0.76	18 586	19 213	3.37
Hungary	NO	0	-	252	256	1.43	NE	0	-	NE	0	-	NE, NO	0	-	252	256	1.43
Iceland	86	80	-7.33	184	170	-7.56	1 472	320	-78.26	1 582	639	-59.61	1 558	400	-74.33	1 766	809	-54.18
Ireland	NO	600	-	3 035	43	-98.60	843	800	-5.09	4 770	4 558	-4.44	843	1 400	66.09	7 805	4 601	-41.05
Italy	23 568	14 240	-39.58	26 174	26 327	0.58	52 073	73 800	41.72	5 068	4 856	-4.17	75 641	88 040	16.39	31 242	31 183	-0.19
Japan	IE	97 213	-	5 403	41 492	667.94	IE	143 605	-	1 323	3 877	192.94	IE	240 818	-	6 726	45 369	574.49
Kazakhstan	NO	0	-	1 309	213	-83.73		0	-		0	-		0	-	1 309	213	-83.73
Latvia	NO	0	-	170	170	0.24	6 780	6 680	-1.47	2 932	2 939	0.25	6 780	6 680	-1.47	3 102	3 110	0.25
Liechtenstein	NO		-	NO		-	NO		-	NO		-	NO		-	NO		-
Lithuania	NO	0	-	199	213	7.03	130	120	-7.70	347	341	-1.79	130	120	-7.70	546	554	1.43
Luxembourg	NO	0	-	15	0	-	NO	0	-	1.6	0	-	NO	0	-	16	0	-
Malta	358	40	-88.84	949	383	-59.59	42 987	42 840	-0.34	8 641	7 881	-8.80	43 346	42 880	-1.07	9 590	8 264	-13.82
Monaco																		
Netherlands	NO	0	-	12 617	12 823	1.63	482 831	471 080	-2.43	57 314	57 169	-0.25	482 831	471 080	-2.43	69 931	69 992	0.09
New Zealand	4 338	2 343	-45.99	NO	2 513	-	10 601	9 841	-7.18	2 098	2 215	5.58	14 939	12 184	-18.45	2 098	4 729	125.38
Norway	1 251	0	-	15 239	23 047	51.24	5 975	3 120	-47.78	9 067	2 897	-68.05	7 226	3 120	-56.82	24 306	25 943	6.74
Poland	19	0	-	141	128	-9.65	2 920	2 920	-0.00	3 248	3 195	-1.63	2 939	2 920	-0.66	3 389	3 323	-1.97
Portugal	1 582	2 120	33.99	636	1 406	120.88	23 394	22 840	-2.37	3 309	2 471	-25.34	24 976	24 960	-0.06	3 946	3 877	-1.75
Romania	NO	0	-	1 578	1 576	-0.10	NO	0	-	3 369	3 365	-0.10	NO	0	-	4 947	4 942	-0.10
Russian Federation	8 978	8 960	-0.20	19 208	19 255	0.24	594 072	258 760	-56.44	66 931	365 721	446.41	603 050	267 720	-55.61	86 139	384 976	346.92
Slovakia	NO	0	-	59	0	-	NO	0	-	192	0	-	NO	0	-	251	0	-
Slovenia	NO	0	-	IE	0	-	2 383	2 320	-2.64	NO	0	-	2 383	2 320	-2.64	IE, NO	0	-
Spain	3 496	3 480	-0.45	10 109	10 096	-0.12	270 894	269 680	-0.45	54 605	53 846	-1.39	274 389	273 160	-0.45	64 714	63 943	-1.19
Sweden	2 024	1 880	-7.12	2 069	1 321	-36.16	62 229	57 920	-6.92	13 709	13 334	-2.73	64 253	59 800	-6.93	15 777	14 654	-7.12
Switzerland	NO	0	-	1 032	298	-71.11	NO	0	-	309	213	-31.10	NO	0	-	1 341	511	-61.89
Turkey	1 228	9 880	704.26	16 854	10 352	-38.58	37 572	37 200	-0.99	4 386	4 345	-0.93	38 800	47 080	21.34	21 240	14 697	-30.81
Ukraine	131	360	174.93	630	1 448	130.07	203	0	-	856	0	-	334	360	7.68	1 486	1 448	-2.52
United Kingdom of Great Britain and Northern Ireland	3 928	3 480	-11.41	22 099	26 710	20.87	47 238	42 360	-10.33	54 725	54 528	-0.36	51 166	45 840	-10.41	76 824	81 238	5.75
United States of America	81 619	20 502	-74.88	260 446	143 775	-44.80	389 502	423 346	8.69	86 564	181 178	109.30	471 121	443 848	-5.79	347 010	324 953	-6.36

^a Data provided by IEA on 27 May 2016. Data of OECD countries correspond to the preliminary 2016 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 - CH₄ (2014)**

	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	4.43	T2, T3	CS, PS	120	505	625	489	-21.84	5.3	0.36	0.46	IE, NA
Austria	-	NA	NA	NO	NO	NO	0.001	-	NO	NO	NO	NO
Belarus	-	NA	NA	NO	NO	NO	1.4	-	NO	NO	NO	NO
Belgium	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Bulgaria	1.46	T1	D	0.47	31	31	31	0	12	1.7	0.80	0.067
Canada	0.18	CS	CS	1.1	90	91	69	-23.97	2.0	IE, NA	0.54	IE, NA
Croatia	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Cyprus	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Czech Republic	2.49	T1, T2	CS, D	8.7	38	47	47	0	8.8	1.6	0.77	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	NO	21	-	NO	NO	NO	NO
European Union (KP)	0.53			95	405	500		-	6.0	1.5	0.43	0.026
European Union (Convention)	0.53			95	405	500	539	7.82	6.0	1.5	0.43	0.026
Finland	-	NA	NA	NO	NO	NO	6.7	-	NO	NO	NO	NO
France (KP)	0.00	NA	NA	NO	NO	NO		-	NO	NO	NO	NO
France (Convention)	0.00	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Germany	0.30	T2, T3	CS	7.6	178	186	187	0.38	13	0.58	0.011	IE, NA
Greece	1.09	T1	D	NO	51	51	51	0	NO	NO	0.87	IE, NO
Hungary	0.11	CS, T1, T2	CS, D	0.60	9.0	9.6	9.6	0	0.62	0.062	NO	NO
Iceland	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Ireland	0.03	T1	D	NO	NO	NO	4.6	-	NO	NO	NO	NO
Italy	0.01	T1	D	0.086	NO	0.086	0.086	0	10	0.90	NO	NO
Japan	0.04	T1, T2, T3	CS, D	0.54	0.78	1.3	0	-	2.8	1.7	0.80	0.067
Kazakhstan	8.55	T1, T2, T3	CR, CS	11	103	114	114	0.00	26	0.65	7.6	NO
Latvia	-	NA	NA	NO	NO	NO	0.005	-	NO	NO	NO	NO
Liechtenstein	-	NA	NA	NO	NO	NO		-	NO	NO	NO	NO
Lithuania	-	NA	NA	NO	NO	NO	0.1	-	NO	NO	NO	NO
Luxembourg	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Malta	-	NA	NA	NA	NA	NA	0	-	NO	NO	NO	NO
Monaco	-							-				
Netherlands	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
New Zealand	0.24	T1	D	0.23	3.7	4.0	4.0	0.02	15	1.6	1.0	0.067
Norway	0.20	T2	CS	0.12	2.4	2.5	1.7	-32.91	7.2	IE, NO	0.54	IE, NO
Poland	3.11	T1	D	66	64	130	136	4.96	4.6	1.7	0.80	0.067
Portugal	0.01	T1	D	NO	NO	NO	0	-	NO	NO	NO	NO
Romania	0.54	T1	D	0.30	23	24	24	0.01	12	1.7	0.80	0.067
Russian Federation	2.14	T1, T2	CS, D	105	254	359	334	-6.91	12	2.0	3.7	0.13
Slovakia	0.94	T2	CS	2.2	NO	2.2	2.2	0.01	6.4	0.60	NO	NO
Slovenia	1.30	T2, T3	CS, D, PS	3.1	NO	3.1	3.1	-0.01	2.0	0.67	NO	NO
Spain	0.07	CS, NE, T2	CS	2.3	2.8	5.1	3.9	-22.98	2.6	0.79	0.079	0.024
Sweden	-	NA	NA	NO	NO	NO	0.45	-	NO	NO	NO	NO
Switzerland	-	NA	NA	NO	NO	NO	0	-	NO	NO	NO	NO
Turkey	1.25	T1	D	17	48	65	65	0	12	1.7	0.001	0.000
Ukraine	5.20	T1, T2, T3	CS, D, M	68	C	C	46	-	11	1.2	0.80	0.067
United Kingdom of Great Britain and Northern Ireland	0.31	T2, T3	CS	3.7	8.0	12	12	-0.01	14	1.2	0.34	IE, NO
United States of America	1.05	T2, T3	CS	322	584	906	906	-0.00	8.2	0.84	0.66	0.14

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

^b Data provided by IEA on 27 May 2016. Data of OECD countries correspond to the preliminary 2016 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 - CH₄, CO₂ (2014)**

	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	1.05	T1, T2	CS, D, PS	1.42	T1, T2, T3	CS, D, PS
Austria	0.35	NA	NA	0.29	NA	NA
Belarus	0.12	CS, D, T1	CS, D	0.00	D, T1	CS, D
Belgium	0.46	CS, D, T1	CS, D	0.09	T1, T3	D, PS
Bulgaria	0.35	T1	D	0.02	T1	D
Canada	6.03	CS	CS	1.76	CS	CS
Croatia	0.84	T1	D	2.29	CS, T1	CS, D
Cyprus	–	NA	NA	–	NA	NA
Czech Republic	0.50	T1, T2	CS, D	0.01	T1, T2	CS, D
Denmark (KP)	0.21	T2, T3	CR, CS, D, PS	0.49	T2, T3	CS, D, PS
Denmark (Convention)	0.21	T2, T3	CR, CS, D, PS	0.49	T2, T3	CS, D, PS
Estonia	0.08	T1	D	0.00	T1	D
European Union (KP)	0.82			0.49		
European Union (Convention)	0.82	NA	NA	0.49	NA	NA
Finland	0.06	CS, T1, T2	CS, D, PS	0.14	CS	CS
France (KP)	0.20	NA	NA	0.66	NA	NA
France (Convention)	0.19	NA	NA	0.65	NA	NA
Germany	0.56	T2, T3	CS	0.21	CS, T2	CS
Greece	0.09	T1	D	0.00	T1	D
Hungary	1.06	T1	CS	0.23	T1	CS
Iceland	0.01	NA	NA	0.00	NA	NA
Ireland	0.05	T1, T2	CS, D	–	NA	NA
Italy	1.40	T1, T2	CS, D	0.51	T1, T2	CS, D
Japan	0.02	CS, T1	CS, D	0.02	CS, T1	CS, D
Kazakhstan	0.08	CS, D, T1	CS, D	0.00	T1	CS, D
Latvia	1.19	T2	CS	0.00	T2	CS
Liechtenstein	0.59	T3	CS	–	NA	NA
Lithuania	1.50	T1, T2	CS, D	0.02	T1, T2	CS, D
Luxembourg	0.36	T1	D	0.00	T1	D
Malta	–	NA	NA	–	NA	NA
Monaco						
Netherlands	0.37	T1, T1b, T2, T3	CS, D, PS	0.54	CS, T1, T2, T3	CS, D, PS
New Zealand	0.50	CS, D, T1, T3	CS, D	0.73	CS, D, OTH, T1, T3	CS, D, PS
Norway	1.67	T2	CS	4.34	T2	CS, PS
Poland	0.63	T1, T2	CS, D	0.08	T1, T2	CS, D
Portugal	0.31	CR, OTH	CR, OTH	2.05	D	D
Romania	7.75	T1	D	0.90	T1, T2	CS, D
Russian Federation	28.23	T1b, T2	CS, D	2.65	T1b	D
Slovakia	2.60	T1, T2	CS	0.00	T1	CS
Slovenia	0.20	T1	D	0.00	T1	D
Spain	0.22	CR, CS, T1	CR, CS, D	1.20	CS, T1, T2	CS, D, PS
Sweden	0.12	CS, T1, T2	CS, D, PS	1.30	T2, T3	CS, PS
Switzerland	0.40	CS, D	CS, D	0.07	CS, D	CS, D
Turkey	0.58	T1	D	0.03	T1	D
Ukraine	7.49	T1, T2	CS, D	0.06	T1, T2	CS, D
United Kingdom of Great Britain and Northern Ireland	1.02	T2, T3	CS, PS	0.74	T2, T3	CS, PS
United States of America	3.47	M	M	0.65	M	M

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

Table 1.11b

Fugitive emissions from fuels: oil and natural gas - oil - CH₄, CO₂ (2014)

	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		Quantity of Oil Flared	2 673	NA, NO	PJ	Crude Oil and ORF Produced	555	NA, NO	PJ	Crude oil transport domestic	567	79 684	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	NO	NO	NE	number of wells drilled	29 891	5 566	NE	PJ of oil produced	111	10	NE	PJ oil loaded in tankers	1 400	NA	NE	PJ oil refined
Belgium	NO	NO	PJ		NO	NO	PJ		150	14	PJ		52	NA, NO	PJ	
Bulgaria	194	9 102	103m3		2 200	280	103m3		25	2.3	103m3		22	NO	103m3	
Canada	IE	IE, NA	NA	NA	1 852	1 363	10 ³ m ³	Total Crude Oil Production	0.078	0.12	10 ³ m ³	Total crude oil production	30	7.1	TJ	Refinery energy consumption oil refined
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	
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)	NO	NO	m3	(e.g. numbers of wells drilled)	0.087	0.001	Mg	Oil produced	IE	IE, NO	Mg	Oil produced	0.090	NA	Mg	Oil refined
Denmark (Convention)	NO	NO	dnm:m3 gr:NO fro:WasNull		0.087	0.001	dnm:Mg gr:NO fro:WasNull		IE, NO	IE, NO	dnm:Mg gr:NO fro:WasNull		0.090	NA, NO	dnm:Mg gr:NO fro:WasNull	
Estonia	NO	NO	NA	Exploration	NO	NO	NA	Production	NO	NO	NA	Transport	NO	NO	NA	Refining/Storage
European Union (KP)	NE	NE			NE	NE			NE	NE			NE	NE		
European Union (Convention)	NE	NE			NE	NE			NE	NE			NE	NE		
Finland	NO	NO	NO		NO	NO	NO		NO	NO	NO		25	NO	kt	kt oil refined
France (KP)	NO	NO	PJ	NO	54 578	7 201	PJ	Oil produced	61	5.6	PJ	Oil loaded	5.9	1 092 985	PJ	Oil refined
France (Convention)	NO	NO	PJ	NO	54 578	7 201	PJ	Oil produced	61	5.6	PJ	Oil loaded	5.9	1 092 985	PJ	Oil refined
Germany	64	0.48	number	number of wells drilled	0.20	0.12	t	oil produced	0.006	NA, NO	t	oil transported	0.089	3.2	t	oil refined
Greece	NO	NO			0.69	0.050	kt		27	NA, NO	kt		26	IE, NO	kt	
Hungary	IE	IE, NO	NA		1 808	130	1000 m3	conventional oil production (thousand m3)	10	46	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	8.7	22 158	Gg	Oil refined
Japan	IE	IE, NO	106 m3	Activity data	1 314 983	94 971	106 m3	Oil produced	74 494	5 153	106 m3	Oil & condensate produced	2 628	NE, NO	106m3	Oil refined
Kazakhstan	NO	NO	na		2 720	28	na		5.5	4.8	NA		0.1	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	270	5 700	Number	Wells drilled, number	1.5	0.11	thous.m3	Oil produced, thous.m3	5.4	0.49	thous.m3	Oil transported, thous.m3	745	NO	PJ	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																
Netherlands	IE	IE, NO	PJ		IE	IE, NO	PJ				Mg		79	396 986	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	PJ		IE	IE, NO	10 ³ m ³	Oil produced	1 589	26 863	PJ	Oil loaded in tankers	8 335	1 469 690	PJ	Oil refined
Poland	NA	NA	NA	NA	61 800	6 315 000	PJ	Production	6.3	0.57		oil transported by pipeline	1 126	NA	PJ	oil refined
Portugal	NO	NO	NO		NO	NO	NO		52 486	NO	Mt	Petroleum Products Transported	18 826	21 113 000	Mt	Petroleum Products Stored
Romania	48 309	2 282 527		oil produced	445 120	56 551		oil produced	149	13		oil refined	880	IE, NO		oil refined
Russian Federation	1 702	80 417	10 ³ m3	Oil produced	19 600	2 490	10 ³ m3	Oil and Condensate produced	5.4	0.49	10 ³ m3	Oil transported 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		NO	NO	1000 m3	Conventional oil produced	NA	430	1000 m3	Consumption of LPG	NO	NA, NO	1000 m3	Oil refined
Spain	NO	NO	number		1 706 000	317 998	Tg	Crude oil produced	27 000	NA, NO	Tg	Transport of crude oil	382	50 735 162	Tg	Oil refined
Sweden	1.00	199 213	TJ	Amount of feedstock for hydrogen production	NO	NO	NA		745	NE, NO	PJ	Amount of transported crude oil	20 881	13 392 332	Mt	Amount of consumed crude oil
Switzerland	NO	NO			NO	NO			152	NA, NO	PJ		1 042	NA, NO	PJ	Crude oil used
Turkey	NO	NO	NO		3 600	260	10 ³ m ³	oil production	3.6	140	10 ³ m ³	oil transported by pipeline	4.1	NA, NO	10 ³ m ³	(petroleum refining)
Ukraine	950	2 109	Number	number of wells drilled and operated	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	25	3 200	t	Exploration drilling: fuel use	4 257	35 389	PJ	Oil produced	0.012	NO	t	Oil loading	2.3	NO	PJ	Refinery throughput
United States of America	IE	NA	NA		847 468	201 451	10 ⁶ Bbl(oil US)		1 397	NA	10 ⁶ Bbl(oil US)		4 060	505 938	10 ⁶ Bbl(oil US)	

^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 countries. Values converted from Gg to kg.

Table 1.11c

Fugitive emissions from fuels: oil and natural gas - natural gas - CH₄, CO₂ (2014)

	Natural Gas															
	Production				Processing				Transmission and Storage				Distribution			
	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	(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	1 368	IE, NO	PJ	Natural gas produced	IE	IE, NO	NA	NA	414	20	km	Length of Pipeline	144 831	8 234	PJ	Utility sales
Austria	4 023	113 873	Mm3	Mm3 natural gas	NA	63 352	Mm3	Mm3 natural gas	539	25	km	km pipeline length	51	2.3	km	km distribution network length
Belarus	126 818	4 154	NE	PJ gas produced	IE	IE, NO	NE		38 483	1 181	NE	PJ gas consumed	IE	IE, NA	NE	PJ gas consumed
Belgium	NO	NO	PJ		NO	NO	PJ		11 371	NA, NO	PJ		28 210	907	PJ	
Bulgaria	1 340	48	106m3		590	166	106m3		273	0.16	106m3		1 100	51	106m3	
Canada	488	13	GI	Gross new production of Natural Gas	57	39	GI	Gross new production of Natural Gas	8.9	0.12	10 ⁹ m ³ /3 km	Transmission - Cubic Metre	6.3	0.40	10 ⁹ m ³ /3 km	Distribution - Cubic Metre
Croatia	1 341	228 542	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
Cyprus	NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO	
Czech Republic	38 649	15	PJ	(e.g. PJ gas produced)	NA	NA, NO	PJ		4 769	19	PJ	(e.g. PJ gas consumed)	141 339	563	PJ	(e.g. PJ gas consumed)
Denmark (KP)	380	14	10 ⁶ m3	Gas produced	NA	NA	10 ⁶ m3	Gas produced	29	0.87	10 ⁶ m3	Gas transmission	66	1.9	10 ⁶ m3	Gas distributed
Denmark (Convention)	380	14	dnm:10 ⁶ m3 gr1:NO		NA, NO	NA, NO	dnm:10 ⁶ m3 gr1:NO		29	0.87	dnm:10 ⁶ m3 gr1:NO		66	1.9	dnm:10 ⁶ m3 gr1: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
European Union (KP)	NE	NE			NE	NE			NE	NE			NE	NE		
European Union (Convention)	NE	NE			NE	NE			NE	NE			NE	NE		
Finland	NO	NO	NO		NA	NA	NA		1 508	NE, NO	PJ	PJ gas consumed	100 221	NE, NO	PJ	PJ gas distributed
France (KP)	IE	IE, NO	PJ	NO	304	5 361 447	PJ	Gas processed	9 418	116	PJ	Gas consumed	14 891	183	PJ	Gas consumed
France (Convention)	IE	IE, NO	PJ	NO	304	5 361 447	PJ	Gas processed	9 418	116	PJ	Gas consumed	14 891	183	PJ	Gas consumed
Germany	0.17	0.11	1000 m ³	gas produced	0.11	138	1000 m ³	gas produced	2 146	NE, NO	km	length of transmission pipelines	175	NE, NO	km	length of distribution pipelines
Greece	1 930	214	mil m3		IE	IE, NO	mil m3		298	0.99	mil m3		1 100	51	mil m3	
Hungary	1 340	48	million m3	Gas production (million m3)	954	251	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)
Iceland	NO	NO					NO		NO	NO			NO	NO		
Ireland	70 643	NO	PJ		IE	NO	PJ		IE	NO	PJ		NO	NO	PJ	
Italy	906	82	Mm3	Gas produced	406	320	Mm3	Gas produced	508	11	Mm3	Gas transported	5 528	123	Mm3	Gas distributed
Japan	2 188	77	106m3	Gas produced	755	235	106m3	Gas produced	193	NA, NO	106m3	Gas sold	9.5	NA, NO	106m3	Town gas sold
Kazakhstan	2.9	0.095	NA		NA	NA	NA		0.88	0.005	NA		1.8	0.002	NA	
Latvia	NO	NO	m3	Production	NO	NO	m3	Processing	0.68	0.002	m3	Transmission and storage	0.68	0.002	m3	Distribution
Liechtenstein	NO	NO	no	gas produced	NO	NO	NO	gas produced	165	NO	km	gas consumed	51	NO	TJ	gas consumed
Lithuania	NO	NO	NO		NO	NO	NO		970 900	800	thous.t	Natural gas leakages	970 900	800	thous.t	Natural gas leakages
Luxembourg	NO	NO	NA	gas produced	NO	NO	NA		13	0.024	TJ	gas consumed	30	1.4	TJ	gas consumed
Malta	NO	NO	NO	gas produced	NO	NO	NO		NO	NO	NO	gas consumed	NO	NO	NO	gas consumed
Monaco																
Netherlands			PJ		IE	IE, NO	PJ				PJ				10 ³ km	
New Zealand	954	34	Mm3		NO	NA	NA		447 303	52 947	TJ		14 025	2 195	TJ	
Norway	IE	IE, NO	10 ⁶ m ³	Gas produced	IE	IE, NO	PJ		NO	NO	PJ		NE	NO	PJ	
Poland	66 880	2 384	PJ	Production	29 951	33 472	PJ		13 958	26	PJ	gas consumed	31 986	1 483	PJ	gas consumed
Portugal	NO	NO	NO		NO	NO	NO		1 704	4 682	ton NG Imported		NO	NO	ton NG Distributed	
Romania	12 190	97		gas produced	IE	IE, NO		gas produced and processed	633	1.4		gas produced	1 800	96		gas supplied
Russian Federation	12 190	97	10 ⁶ m3	Natural Gas produced	790	250	10 ⁶ m3	Natural Gas produced	6 045	1.6	10 ⁶ m3	Marketable gas	1 800	95	10 ⁶ m3	Gas consumed
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
Slovenia	1.3	0.048	1000 m3	Gas production	NO	NO	1000 m3		0.38	0.001	1000 m3	Marketable gas	1.1	0.051	1000 m3	Utility sale
Spain	70 658	2 440	PJ	PJ gas produced (NCV)	IE	IE, NO	PJ		1 335	41	PJ	PJ gas (NCV)	23 703	728	PJ	PJ gas consumed (NCV)
Sweden	NO	NO	NA		NO	NO	NA		6.8	0.15	km	Length of gas transmission network	NA	NA	NA	
Switzerland	NO	NO	PJ	gas produced	NO	NO			17 888 000	NA, NO	PJ	See documentation box	17 888 000	NA, NO	PJ	
Turkey	2 300	82	10 ⁶ m ³	Natural gas production	1 030	320	10 ⁶ m ³	Natural gas production	462	0.85	10 ⁶ m ³	Natural gas transmission by pipeline	1 100	51	10 ⁶ m ³	Natural gas distribution
Ukraine	12 190	97	10 ⁶ m ³	Natural Gas Produced	790	250	10 ⁶ m ³	Natural Gas Processed	1 031 457	7 056	Mt	gas transmitted	NA	NA	10 ³ km	Length of natural gas distribution network
United Kingdom of Great Britain and Northern Ireland	IE	IE, NO	PJ	Gas produced	2 190	221 187	PJ	Gas produced	11	0.46	GWh	Natural gas supply	327	13	GWh	Natural gas supply
United States of America	171 628	956 894	10 ⁹ ft ³ /d		IE	IE, NA	NA		48 030	1 449	10 ⁹ ft ³ /d		16 634	524	10 ⁹ ft ³ /d	

^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 countries. Values converted from Gg to kg.

Table 1.11d

Fugitive emissions from fuels: oil and natural gas - venting and flaring - CH₄, CO₂ (2014)

	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	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	kg/unit		unit	Description
IPCC default EF ^b																								
Australia	IE	IE, NO	NA	NA	33 333	2 800 000	kt	Quantity of Gas Flared	13 753	PJ	Natural gas, crude oil and ORF produced	4 565	2 588 410	kt	Natural gas, crude oil and ORF produced	NO	NO	NA	NA	NO	NO	NA	NA	NA
Austria	NO	NO	NA	NA	NO	NO	NA	NA	NO	NA	NA	NO	NO	NA	NA	NO	NO	NA	NA	NO	NO	NA	NA	NA
Belarus	NA	NA, NO	NA	PJ oil produced	NA	NA, NO	NA	PJ gas consumption	NA	NA	PJ gas produced	NA	NA, NO	NA	PJ gas consumption	NA	NA, NO	NA	Venting	0.003	0.51	na	na	Flaring
Belgium	NO	NO	PJ		NO	NO	PJ		13	PJ		NO	NO	PJ		NO	NO	PJ		IE	NA	PJ		
Bulgaria	8 700	1 800	103m3		21	34 000	103m3		182	106m3		2.8	4 200	106m3		NO	NO	NO		NO	NO	NO	NO	NO
Canada	4 408	22 929	10 ⁻³ m ³	Total crude oil production	5 961	1 736 472	GJ	Flared Gas	1 557	GJ	Gross new production of Natural Gas	2 659	438 469	GJ	Flared Gas	50	1.1	number	Number of wells drilled	131	21 953	number	number	Number of wells drilled
Croatia	25	2.3	1000 m3		IE	IE, NO	1000 m3		IE	1000000 m3		IE	IE, NO	1000000 m3		NO	NO	NO		NO	NO	NO	NO	NO
Cyprus	NE	NE, NO			NE	NE, NO			NO	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	53	GJ	Refinery gas consumption	15	GJ	Venting in gas terminals	0.10	57	GJ	Gas consumption	NO	NO	GJ		0.23	59	GJ		
Denmark (Convention)	NO	NO	dm:GJ grt:NO fro:WasNull		0.018	53	dm:GJ grt:NO fro:WasNull		15	dm:GJ grt:NO fro:WasNull		0.10	57	dm:GJ grt:NO fro:WasNull		NO	NO	dm:GJ grt:NO fro:WasNull		0.23	59	dm:GJ grt:NO fro:WasNull		
Estonia	NO	NO	NA	Oil	NO	NO	NA	Oil	NO	NA	Gas	NO	NO	NA	Gas	NO	NO	NA	Combined	NO	NO	NA	NA	Combined
European Union (KP)	NE	NE			NE	NE			NE	NE		NE	NE			NE	NE			NE	NE			
European Union (Convention)	NE	NE			NE	NE			NE	NE		NE	NE			NE	NE			NE	NE			
Finland	NO	NO	NO		0.73	52 985	TJ	used fuels, TJ	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO	NO	NO
France (KP)	19 942	2 631	PJ	Oil produced	25	146 007	PJ	Consumption	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	25	146 007	PJ	Consumption	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			1.1	3 795	kt	oil refined	IE			IE	1.8	m ³	gas flared	IE	IE, NO			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)	331	67 509	1000 m3	Conventional oil production (thousand m3)	1 662	million m3	Sour gas plants-raw gas feed (million m3)	2.7	4 051	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	NO			
Ireland	NO	NO	PJ		NO	NO	PJ		IE	PJ		NO	NO	PJ	Natural gas flaring	NO	NO	PJ		NO	NO	PJ		
Italy	180	2 061	Gg	Oil produced	343	48 072	Gg	Oil produced	NA	Mm3	Gas produced	2 036	4 200	Mm3	Gas produced	NO	NO	NA	Combined	NO	NO	NO	NO	Combined
Japan	720 000	95 000	106 m3	Oil produced	25 000	41 000 000	106 m3	Oil produced	IE	106m3	Gas produced in relevant facilities	2.0	3 000	106m3	Gas produced	IE	IE, NO		Activity data	271	5 700	wells	Number of wells tested	
Kazakhstan	NA	NA	NA		NA	NA, NO	NA		NA	NA		NA	NA	NA		NO	NO			NA	NA	na	na	
Latvia	NO	NO	m	Oil	NO	NO	kt	Oil	0.68	m3	Gas	NO	NO	kt	Gas	NO	NO	kt	Combined	NO	NO	kt	kt	Combined
Liechtenstein	NO	NO	m	oil produced	NO	NO	m	gas consumed	NO	m	gas produced	NO	NO	m	gas consumed	NO	NO	m	gas produced	NO	NO	m	m	Combined Gas/Oil Produced
Lithuania	720	95	thous.m3	Oil produced, thous.m3	25	41 000	thous.m3	Oil produced, thous.m3	IE	thous.t		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	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	NO
Monaco																								
Netherlands			10 ⁻⁶ m ³				10 ⁻⁶ m ³			PJ				PJ		IE	IE	PJ		IE	IE	PJ		
New Zealand	IE	IE	NA		IE	IE	NA		IE	NA		IE	IE	NA		15 861	NA, NO	TJ		424	52 315	TJ		
Norway	IE	IE, NO	PJ		9 456	75 650 118	PJ	Oil flared	IE	PJ		82 896	72 790 383	PJ	Gas flared	2 880	16 899	PJ	Oil and gas produced	IE	IE, NO	PJ		
Poland	825	164	Gg	oil produced	47 619	29	Gg	oil produced	IE	NA	NA	1 200	12 951	10 ⁻⁶ m3	gas production	NO	NA, NO	NA	NA	NO	NA, NO	NA	NA	NA
Portugal	NO	NO	NO		1 399	2 543 462	kt fuel flared	Flared Amount	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO	NO	NO
Romania	293 769	61 028		oil produced	710	1 149 538		gas consumed	392		gas produced	11	1 800		gas consumed	NA	NA, NO		gas and oil produced	NA	NA, NO	NA	NA	gas and oil combined
Russian Federation	10 350	2 150	10 ⁻³ m3	Oil and Condensate produced	12 000	2 000 036	10 ⁻⁶ m3	Associated gas flaring	IE	10 ⁻⁶ m3	Marketable Gas	2.3	3 550	10 ⁻⁶ m3	Natural Gas production	NE	NE, NO	NA		NE	NE, NO	NA		NA
Slovakia	720	95	kt	Venting oil	25	41 000	kt	Flaring oil	2 851	mil m3	Venting gas	2.0	3 000	mil m3	Flaring gas	NO	NO	NA		NO	NO	NA	NA	NA
Slovenia	NA	NA, NO	1000 m3	Conventional oil produced	NA	NA, NO	1000 m3	Conventional oil produced	0.25	1000 m3	Marketable gas	0.001	1.2	1000 m3	Gas production	NO	NO	1000 m3		NO	NO	1000 m3		
Spain	NO	NO		(e.g. PJ oil produced)	500	3 394 127	Tg	(e.g. PJ gas consumption)	16 933 208	PJ	gas produced	5 538	81 597 982	PJ	(e.g. PJ gas consumption)	NO	NO			NO	NO	NO	PJ	
Sweden	IE	IE, NO	NA		1.00	54 310	TJ	Amount of gas flared	NE	NA		1.0	56 950	NA		IE	IE, NO	NA		NA	NA, NO	NA	NA	NA
Switzerland	NO	NO			NA	NA		(please specify)	NO	NO		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	32 071	10 ⁻⁶ m ³	Natural gas production	2.0	3 000	10 ⁻⁶ m ³	Natural gas production	NO	NO	NO		NO	NO	NO	NO	NO
Ukraine	855	113	10 ⁻³ m ³	oil produced	30	48 500	10 ⁻³ m ³	oil produced	IE	NA	gas transmission	2.3	3 550	10 ⁻⁶ m ³	Natural Gas Produced	IE	IE, NA	NA		IE	IE, NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	NA	NA	NA		10	2 547		Amount of gas flared	NA	NA		8.2	2 143	t	Amount of gas flared	IE	IE, NO	NA		IE	IE, NO	NA	NA	NA
United States of America	IE	IE, NA	NA		IE	IE, NA	NA		IE	NA		IE	IE, NA	NA		IE	IE, NA	NA		IE	54 706 667	10 ⁹ ft ⁴		

^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 countries. Values converted from Gg to kg.

Table 1.12

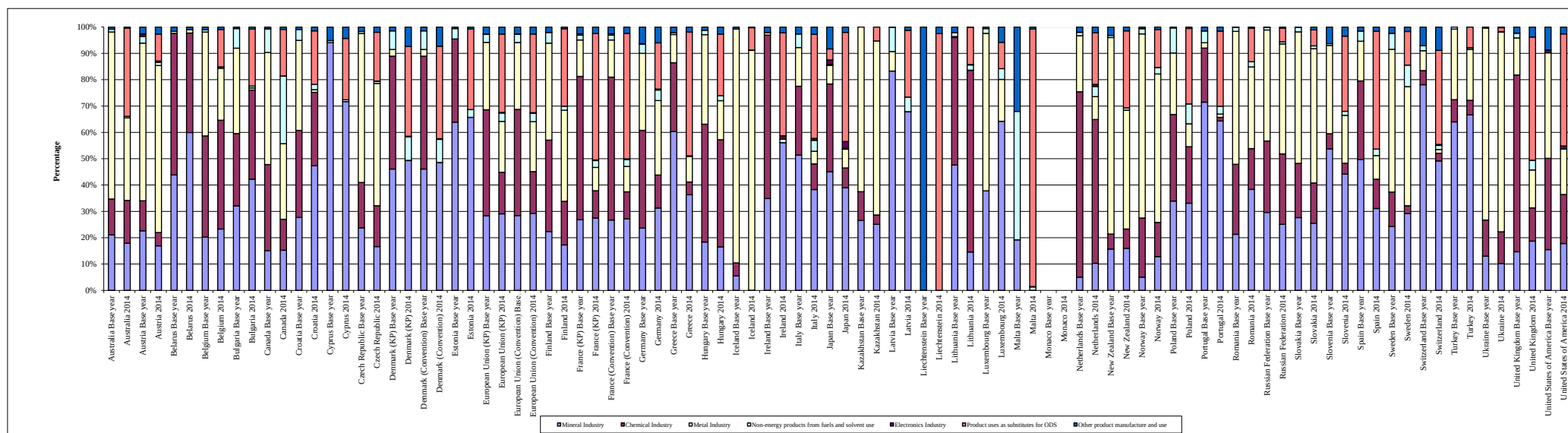
CO₂ transport and storage (2014)

	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	46	2 175	NO	NO	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	NE, NO	NE, NO	NO	NO
European Union (Convention)	NO	NO	NE, NO	NE, NO	NO	NO
Finland	NO	NO	NO	NO	NO	NO
France (KP)	NO	NO	NO	NO	NO	NO
France (Convention)	NO	NO	NO	NO	NO	NO
Germany	NO	NO	NE, NO	NE, NO		
Greece	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		
Kazakhstan						
Latvia	NO	NO	NO	NO	NO	NO
Liechtenstein	NO	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NO	NO	NO
Luxembourg	NO	NO	NO	NO	NO	NO
Malta	NO	NO	NO	NO		
Monaco						
Netherlands	NO	NO	NO	NO	NO	NO
New Zealand	NO	NO	NO	NO		
Norway	NO	NO	IE	2 490		
Poland	NO	NO	NO	NO	NO	NO
Portugal	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	NO		
Russian Federation	NA, 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		
Turkey	NA, NO	NA, NO	NE, NO	NE, NO	NO	NO
Ukraine	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	NO	NO	NO	NO		
United States of America	NA, NE	NE	NE	NE		

^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 CO₂ from a CO₂ 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 CO₂ emissions are excluded from the totals in this graph.

Table 2.1**Mineral industry - CO₂ (2014)**

	Methods and EF used		Cement production				Lime production		Glass production	
	Methods	EF	Share of national total ^a (%)	Activity data		CO ₂ IEF (t/t)	Share of national total ^a (%)	CO ₂ IEF (t/t)	Share of national total ^a (%)	CO ₂ IEF (t/t)
				Description ^b	Value (kt)					
IPCC default EF ^c								0.59-0.86		0.2
Australia	T2	CS	0.60	Clinker Production	5 739	0.55	0.23	0.77	–	IE, NO
Austria	NA	NA	2.15	Cement clinker	3 143	0.52	0.77	0.75	0.05	0.07
Belarus	T1, T2	D	2.89	Used clinker production data	5 100	0.52	0.62	0.74	0.08	0.17
Belgium	T3	CS, PS	2.32	Clinker Production	4 831	0.55	1.44	0.78	0.14	0.10
Bulgaria	T1, T2	CS, D, PS	1.60		1 717	0.53	0.36	0.78	0.12	0.14
Canada	T1, T2	CS, D	0.80	clinker production	10 930	0.55	0.19	0.76	0.01	0.42
Croatia	T2, T3	CS, D	5.35	clinker production	2 278	0.54	0.31	0.58	0.13	0.11
Cyprus	CS, T1	CS, D	11.60	Clinker production	1 823	0.53	0.03	0.75	–	NO
Czech Republic	T1, T3	D, PS	1.18	clinker production	2 792	0.53	0.50	0.77	0.09	0.10
Denmark (KP)	CS, T2, T3	CS, D, PS	1.73	Production of Clinker	1 644	0.54	0.11	0.79	0.02	0.04
Denmark (Convention)	CS, T1, T2, T3	CS, D, PS	1.73	Production of Clinker	1 644	0.54	0.11	0.79	0.02	0.04
Estonia	T1, T2, T3	D, PS	2.00	Clinker production	720	0.59	0.16	0.70	0.04	0.12
European Union (KP)			1.74		140 126	0.53	0.46	0.71	0.09	0.14
European Union (Convention)			1.75		140 126	0.53	0.46	0.71	0.09	0.14
Finland	T1, T2, T3	CS	0.80	Produced clinker	941	0.50	0.65	0.79	0.00	0.40
France (KP)	NA	NA	1.52	Clinker production	13 146	0.53	0.47	0.66	0.11	0.19
France (Convention)	NA	NA	1.50	Clinker production	13 146	0.53	0.46	0.66	0.11	0.19
Germany	T1, T2	CS, D	1.41	produced clinker	23 871	0.53	0.55	0.75	0.10	0.12
Greece	CS, T1	CS, D, PS	3.77	clinker production	7 234	0.53	0.29	0.87	0.02	0.15
Hungary	CS, T3	CS, D	0.99	Clinker production (kt)	1 095	0.52	0.25	0.74	0.10	0.13
Iceland	NA	NA	–	clinker production	NO	NO	–	NO		
Ireland	T3	PS	2.51	clinker production	2 682	0.54	0.32	0.73	–	NO
Italy	T2	CS, PS	1.99	Clinker production	15 833	0.53	0.44	0.72	0.13	0.12
Japan	CS, T2	CS	1.95	Production of clinker	51 573	0.51	0.43	0.43	0.01	0.47
Kazakhstan	CR, T1, T2	CR, D, PS	1.02		6 083	0.52	0.22	0.74	–	NO
Latvia	T1, T2, T3	D, OTH, PS	4.89	(produced clinker)	1 093	0.51	0.00	0.55	0.01	0.06
Liechtenstein	NA	NA	–	Production	NO	NO	–	NO	–	NO
Lithuania	CS, T1, T2	CS, D, PS	2.09	Clinker production	754	0.53	0.22	0.77	0.04	0.14
Luxembourg	CS, T2	CS, PS	3.28	clinker production	731	0.48	–	NO	0.57	0.14
Malta	T1	D	–	(not occurring)	NO	NO	–	NO	–	NO
Monaco										
Netherlands	CS, T1	CS, D, PS	0.15		559	0.51	–	IE, NO	0.05	0.07
New Zealand	CS, T1	CS, D	0.76	Clinker production	C	C	0.19	0.77	–	IE, NO
Norway	T1, T3	CS, D, PS	1.37	Production quantity	1 375	0.53	0.42	0.75	0.01	0.46
Poland	T1, T2	CS, D	1.70	Clinker production	11 866	0.54	0.36	0.73	0.07	0.10
Portugal	T1, T3	OTH	4.80	Clinker Production	5 968	0.52	0.54	0.66	0.24	0.09
Romania	CS, OTH, T2	CS, D, PS	2.68	clinker production	5 467	0.54	0.87	0.77	0.05	0.15
Russian Federation	T1, T2	CS, D	0.94	Clinker production	50 164	0.53	0.33	0.77	0.03	0.10
Slovakia	T2, T3	PS	3.12	Cement clinker	2 415	0.52	1.64	0.78	0.03	0.42
Slovenia	T2, T3	CS, D	2.52	Clinker produced	807	0.52	0.34	0.74	0.05	0.13
Spain	D, T1, T2	CS, D, PS	2.70	Clinker production	16 917	0.53	0.42	0.73	0.14	107
Sweden	CS, D	CS, D	2.57	Amount of produced clinker	2 602	0.54	0.76	0.75	0.03	NE
Switzerland	CS, T2, T3	CS, D, PS	3.81	clinker production	3 502	0.53	0.11	C	0.01	0.05
Turkey	T1, T2	CS, D	7.29	Clinker Production	63 642	0.54	1.06	0.75	0.13	0.15
Ukraine	T1, T2, T3	CS, D	0.93	clinker production	6 065	0.54	0.67	0.77	0.07	0.18
United Kingdom of Great Britain and Northern Ireland	T3	CS	0.80	Clinker production	7 197	0.59	0.24	0.45	0.07	0.20
United States of America	CS, T2, T3	D	0.55	Clinker Production	74 946	0.52	0.20	0.75	0.02	0.42

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 - CO₂ and N₂O (2014)

	CO ₂					N ₂ O						
	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 ₂ O IEF	Share of national total ^a	N ₂ O 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	NO	NA	0.69	537	0.98	NA	NA	0.06	552	0.000	–	NO
Belarus	T1, T2	CS, D	1.47	1 064	1.3	T1	D	0.00	0.000	5.3	–	NA, NO
Belgium	T3	D, PS	0.92	922	1.1	T3	PS	0.42	2 031	0.001	–	NO
Bulgaria	T2	CS, PS	1.53	C	C	T3	PS	0.22	C	C	–	NO
Canada	T2	CS, OTH	0.34	4 069	1.3	T1, T2, T3	CS, D, PS	0.14	874	0.004	–	NO
Croatia	T1, T3	D, PS	2.33	458	2.0	T1, T2	D, PS	1.16	307	0.003	–	NO
Cyprus	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Czech Republic	T1, T3	CS, D, PS	0.55	211	3.3	CS, T1	CS, PS	0.20	550	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	0.60	33 569	0.82	NA	NA	0.11	1 156 727	0.000	0.01	0.017
European Union (Convention)	NA	NA	0.60	33 569	0.82	NA	NA	0.11	1 156 727	0.000	0.01	0.017
Finland	CS, T2, T3	CS, PS	–	NO	NO	T3	PS	0.35	632	0.001	–	NO
France (KP)	NA	NA	0.26	929	1.3	NA	NA	0.12	1 974	0.001	0.03	C
France (Convention)	NA	NA	0.25	929	1.3	NA	NA	0.12	1 974	0.001	0.03	C
Germany	CS, T1, T2, T3	CS, D, PS	0.53	2 899	2.0	T2, T3	PS	0.06	2 601	0.001	0.02	C
Greece	T1, T1a	CS	0.24	145	1.7	CS	CS	0.03	182	0.000	–	NO
Hungary	CS, T3	CS, D	1.96	20 636	0.056	CS	PS	0.11	740	0.000	–	NO
Iceland	NA	NA	–	–	–	NA	NA	–	NO	NO	–	–
Ireland	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Italy	D, T2	CR, PS	0.17	606	1.2	T2	D, PS	0.01	443	0.000	0.01	0.002
Japan	CS, T1, T2, T3	CS, D	0.14	932	2.0	CS, T1, T2, T3	CS, PS	0.03	437	0.004	0.01	C
Kazakhstan	T1	CR	0.18	169	3.3	NA	NA	–	NO	NO	–	NO
Latvia	NO	NO	–	NO	NO	NO	NO	–	NO	NO	–	NO
Liechtenstein	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Lithuania	T3	CS	9.80	991	2.1	T3	PS	1.73	1 141	0.001	–	NO
Luxembourg	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Malta	NA	NA	–	NO	NO	NA	NA	–	NO	NO	–	NO
Monaco												
Netherlands	CS, T1, T1b	CS, D	1.91	C	C	T2	PS	0.19	C	C	–	NO
New Zealand	T1, T2	CS, D	0.02	156	1.4	NA	NA	–	NO	NO	–	NO
Norway	T2	CS, D, PS	0.52	333	1.4	CS, T2, T3	PS	0.51	1 670	0.001	–	NO
Poland	T1, T2	CR, CS, D	1.20	2 635	1.7	T1, T2	CS	0.13	2 366	0.001	–	NO
Portugal	D, T2	PS	–	C	NO	D	PS	0.08	C	C	–	NO
Romania	D, T1, T2	D, PS	1.10	729	1.7	T2, T3	D, PS	0.37	1 001	0.001	–	NO
Russian Federation	T1, T3	CS, D	0.95	14 600	2.1	T1	D	0.16	7 628	0.002	–	NO
Slovakia	T2, T3	CS, PS	1.30	346	1.9	T3	D, PS	0.36	580	0.001	–	NO
Slovenia	T2	D	–	NO	NO	NA	NA	–	NO	NO	–	NO
Spain	D, T1, T3	D, PS	0.20	540	1.2	T1, T3	D, PS	0.05	662	0.001	–	NO
Sweden	CS, D	PS	–	NO	NO	CS	PS	0.10	262	0.001	–	NO
Switzerland	T2	PS	–	C	IE, NA	T3	PS	0.01	C	C	–	NO
Turkey	D, T1, T2	CS, D	0.16	C	C	T1	D	0.39	C	C	–	NO
Ukraine	T1, T3	CS, D	1.27	2 984	2.0	T2, T3	CS, D	0.60	1 569	0.005	–	NE, NO
United Kingdom of Great Britain and Northern Ireland	CS, T1, T3	CS, D	–	–	–	T1, T3	CS, D	–	–	–	–	–
United States of America	CS, D, T1, T2	CS, D, OTH	0.13	10 515	0.90	T2, T3	CS	0.16	7 656	0.005	0.08	C

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 - CO₂ (2014)

	Methods and EF used		Iron and steel ^a				Aluminium production			
			Share of national total ^b	Steel		Pig iron				
	Methods	EF		Activity Data (production)	CO ₂ IEF	Activity Data (production)	CO ₂ IEF	Share of national total ^b	Activity Data (production)	CO ₂ IEF
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	1.17	4 446	NA, NO	NO	NO	0.57	1 778	1.7
Austria	NA	NA	13.30	7 185	1.4	6 015	IE, NO	0.01	C	C
Belarus	D, T1	D	0.01	IE	IE, NA	NO	NA, NO	–	NO	NO
Belgium	CS, T3	PS	3.33	7 420	0.50	4 388	IE, NA	–	NO	NO
Bulgaria	T1, T2	CS, D	0.07	634	0.063	NO	NO	–	C	NO
Canada	T1, T2, T3	CS, D, OTH	1.15	12 951	0.066	6 728	1.1	0.64	2 860 878	0.002
Croatia	T2	CS	0.12	175	0.16	NO	NO	–	NO	NO
Cyprus	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Czech Republic	CS, T1, T2	D, PS	5.16	5 404	IE, NA	4 170	IE, NA	–	NO	NO
Denmark (KP)	T1	D	–	NO	NO	NO	NO	–	NO	NO
Denmark (Convention)	T1	D	–	NO	NO	NO	NO	–	NO	NO
Estonia	NA	NA	–	NO	NO	NO	NO	–	NO	NO
European Union (KP)			1.46	157 484	0.27	79 134	0.098	0.10	2 532	1.7
European Union (Convention)			1.46	157 484	0.27	79 134	0.098	0.07	1 693	1.9
Finland	CS, T2, T3	CS	3.44	3 808	0.53	NO	IE, NO	–	NO	NO
France (KP)	NA	NA	0.52	16 368	0.075	10 441	0.11	0.13	384	1.6
France (Convention)	NA	NA	0.51	16 368	0.075	10 441	0.11	0.13	384	1.6
Germany	T1, T2, T3	CS, D	1.77	42 943	0.37	27 945	IE, NO	0.08	531	1.4
Greece	CS, T1	CS, D, PS	0.07	1 022	0.069	NO	NO	0.27	173	1.6
Hungary	T3	PS	1.58	1 152	0.12	801	1.7	–	NO	NO
Iceland	T2, T3	D, PS	–	NO	NA, NO	NO	NA, NO	27.83	839	1.5
Ireland	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Italy	T1, T2	CR, CS, D, PS	0.33	23 715	0.035	6 371	0.086	–	NO	NO
Japan	T2	OTH	0.45	NE	NE	13 488	0.44	–	NA	IE, NE
Kazakhstan	CR, CS, D, T1, T2	CR, CS, D	2.25	3 538	0.15	3 185	1.6	0.12	210	1.8
Latvia	T2	D, PS	0.00	0.093	0.11	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	0.95	2 193	0.047	NO	NO	–	NO	NO
Malta	NA	NA	–	NO	NO	NO	NO	–	NO	NO
Monaco										
Netherlands	T1a, T2	CS, D	0.51	7 013	0.004	NA	IE, NO	0.00	2.2	1.4
New Zealand	T1, T2, T3	CS, D	2.14	C	C	NA	NA	0.66	327	1.6
Norway	T2, T3	CS, PS	0.05	586	0.046	NO	NO	3.32	1 173	1.5
Poland	T1, T2, T3	CS, D	0.55	IE	IE	4 637	0.16	–	NO	NA, NO
Portugal	T2	D, PS	0.10	2 053	0.030	NO	NO	–	NO	NO
Romania	D, T3	CS, D, PS	2.77	3 275	0.93	1 631	IE, NO	0.29	195	1.6
Russian Federation	T1, T2, T3	CS, D, PS	2.70	70 547	0.10	51 460	1.3	0.21	C	C
Slovakia	T1, T2, T3	D, PS	9.96	4 439	0.91	24	IE, NO	0.65	168	1.6
Slovenia	T1, T2	CS, D, PS	0.32	649	0.081	NO	NA, NO	0.72	84	1.4
Spain	D, T1, T2, T3	CS, D, PS	0.58	14 341	0.047	C	C	0.18	C	C
Sweden	CS, D, T2	PS	4.06	1 665	0.10	3 006	0.59	0.32	114	1.5
Switzerland	CS, T3	CS, PS	0.02	1 315	0.008	NO	NO	–	NO	NO
Turkey	T1, T2, T3	CS, D	2.53	34 236	0.29	4 066	IE, NO	0.01	C	C
Ukraine	T1, T3	CS, D	11.75	27 144	0.11	24 801	1.4	–	NO	NO
United Kingdom of Great Britain and Northern Ireland	T1, T2	CS	0.91	12 032	0.013	9 705	0.19	0.01	42	1.5
United States of America	T1, T2	CS, D, OTH	0.79	55 174	0.14	29 375	0.52	0.04	1 710	1.7

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

^b In addition to data reported here, CO₂ emission estimates from direct reduced iron (2.C.1.c) were reported by European Union (KP), European Union (Convention), Netherlands, Russian Federation, Sweden and United States of America; CO₂ 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 and United States of America; CO₂ emission estimates from pellet (2.C.1.e) were reported by European Union (KP), European Union (Convention), Kazakhstan, Russian Federation and Sweden.

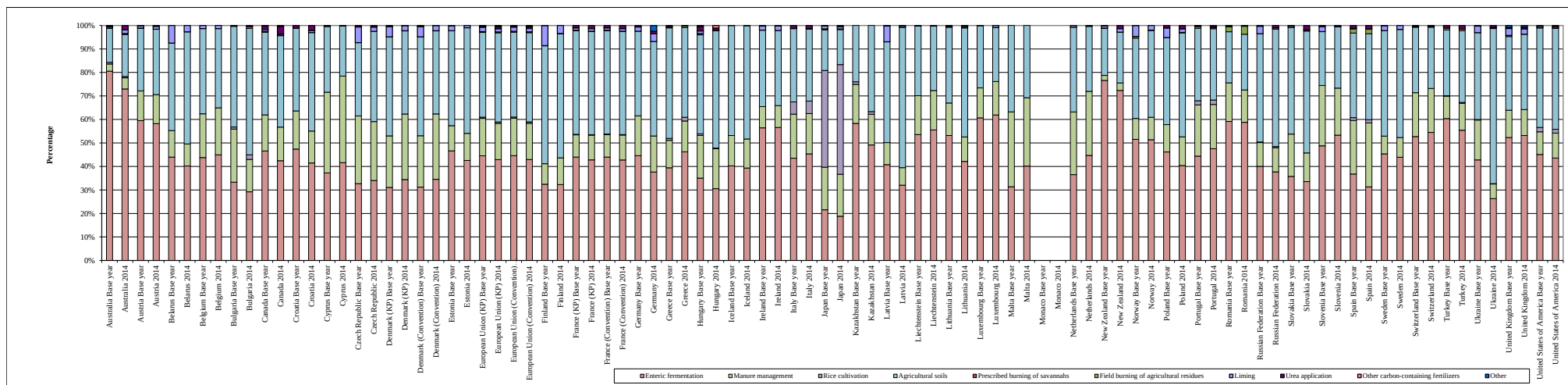
^c Source of default emission factors: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3 Chapter 4 Metal Industry Emissions. Iron and steel table 4.1; Aluminium table 4.10.

Table 2.4

HFCs, PFCs, SF₆ and NF₃ (2014)

	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									NA	NA	NA	NA	NA	NA	NA	NA
Belarus																				
Belgium	NA	NA	NA	NA	NA	NA	T2, T3	D, PS	T2, T3	D, PS	T2, T3	D, PS	T2	CS, D, PS	T2	CS, D, PS	NA	NA	NA	NA
Bulgaria							NO	NO	NO	NO	NO	NO	T2	D	T2	D	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						
Czech Republic	NA	NA	NA	NA	NA	NA	T2	D	T2	D	T2	D	D, T1	CS, D	D, T1	CS, D				
Denmark (KP)			NA	NA	NA	NA	T2	D	NA	NA	NA	NA	T2	D	T2	D				
Denmark (Convention)	NA	NA	NA	NA	NA	NA	T2	D	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)																				
European Union (Convention)																				
Finland					NA	NA	NA	NA	T2	D	NA	NA	T2	D	T2	NA	NA	NA	NA	NA
France (KP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
France (Convention)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Germany	D	D	T3	CS	CS, D	D	T3	PS	T3	PS	D, T3	CS, PS	CS, T2	CS, D	T2	CS, D	CS	CS	NA	NA
Greece	NA	NA	T3	PS	NA	NA	NA	NA	NA	NA	NA	NA	CS, T2	D	T2	D	NA	NA	NA	NA
Hungary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	CS, T1, T2	CS, D	CS, T2	CS, D	NA	NA	NO	NO
Iceland			T2	D	NA	D														
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						
Japan	CS	CS	T2	CS	CS	CS	T2	CS	T2	CS	T2	CS	CS	CS, OTH	CS	CS			CS	CS
Kazakhstan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latvia	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	T1a, T2	CS, D, OTH	NO	NO	NA	NA	NA	NA
Liechtenstein													CS	CS	CS	CS				
Lithuania			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, T3	CS, M, PS			T3	PS	NA	NA
Malta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	CS, T1, T2	CS, D	NA	NA			CS	CS
Monaco																				
Netherlands	NA	NA	T2	CS	NA	NA	T2	CS	NA	NA	NA	NA	T2	CS	NA	NA	NA	NA	NA	NA
New Zealand			T2		NA	NA							T1a, T2	CS, D	NA	NA			T1	D
Norway					NA	NA	NA	NA	T2	CS	NA	NA	T1, T2	CS, D	T1, T2	CS, D	NA	NA	NA	NA
Poland	NA	NA	NA	NA	T1	D	NO	NO	NO	NO	NO	NO	T1a, T1b, T2	D	IE, T2	D, IE	NA	NA	NA	NA
Portugal	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	IE, NO	IE, NO	IE, NO	IE, NO	NO	NO	NO	NO
Romania	NA	NA	NA	NA	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					NA	NA	NA	NA
Slovakia			T3	PS									NA	NA	T1a, T2	CS, D	NA	NA		
Slovenia	NA	NA	T3	CS, D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1, T2	CS, D	NO	NO	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	NA	NA	D	D	NA	NA	NA	NA			CS, T2	CS, D, PS	CS	CS, D	NA	NA	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																
Ukraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T1a, T2	D	NE	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	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}



* In accordance with the UNFCCC reporting guidelines on annual inventories of Annex I Parties this 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 CO₂ emissions are excluded from the totals in this graph.

Table 3.1
Enteric fermentation - CH₄ (2014)

IPCC default EF ^{c,d}	Share of national total ^a	Methods and EF used		Activity data (population size)		Cattle						Sheep				Swine								
						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	CRF	FAO ^b										Difference	CRF	FAO ^b	Difference	CRF	FAO ^b
		(%)	Methods	EF	CRF	FAO ^b	Difference	CH ₄ IEF						CRF	FAO ^b	Difference	CRF	FAO ^b	Difference	(kg/head/yr)	(thousands of head)	(%)	(kg/head/yr)	
				(thousands of head)	(%)							(thousands of head)	(%)	(kg/head/yr)										
						46-128	27-60							5-8									1.0-1.5	
Australia	10.11	CS, T1, T2	CS, D	29 103	29 103	0.00					55	72 612	72 612	-0.00	6.8	2 308	2 308	-0.01					1.6	
Austria	5.40			1 961	1 958	-0.15	130	60				349	357	2.39	8.0	2 868	2 896	0.96					1.5	
Belarus	9.64	T1, T2	CS, D	4 343	4 364	0.50	126	56				213	73	-66.02	11	3 109	2 924	-5.93					1.5	
Belgium	3.92	T1, T2	CS, D	2 516	2 477	-1.53	140	50				111	112	0.93	8.0	6 516	6 350	-2.55					1.5	
Bulgaria	2.60	T1, T2	CS, D	564	576	2.02			110	62	41	1 352	1 370	1.27	7.1	570	586	2.92					1.5	
Canada	3.36	T1, T2	CS, D	12 755	12 220	-4.19	155	69				986	875	-11.27	8.0	13 120	13 055	-0.50					1.5	
Croatia	4.17	T1, T2	CS, D	443	441	-0.47			105	59	48	605	605	0.02	7.9	551	1 156	109.94					1.4	
Cyprus	2.78	T1, T2	CS, D	60	61	2.25	115	57				322	322	0	8.0	342	342	-0.00					1.5	
Czech Republic	2.24	T1, T2	CS, D	1 374	1 374	0	141	55				225	225	0	8.0	1 617	1 617	0					1.5	
Denmark (KP)	7.11	T1, T2	CS, D, OTH	1 615		-	155	38				220		-	6.7	12 332		-					1.1	
Denmark (Convention)	7.15	T1, T2	CS, D, OTH	1 617	1 566	-3.12	155	38				318	245	-22.70	7.4	12 332	12 332	0					1.1	
Estonia	2.66	D, T1, T2	CS, D, OTH	265	261	-1.25			143	60	39	86	82	-4.59	8.0	358	359	0.22					1.0	
European Union (KP)	4.36			76 580		-	160	57				98 725		-	8.1	142 925		-					1.2	
European Union (Convention)	4.36			76 580	89 443	16.80	160	57				97 966	97 757	-0.21	8.1	142 889	149 036	4.30					1.2	
Finland	3.53	CS, OTH, T1, T2	CS, D, OTH	914	914	0	149	53				138	138	0	8.4	1 245	1 245	0					1.0	
France (KP)	7.35			19 267		-	122	51				7 209		-	9.5	13 323		-					0.79	
France (Convention)	7.28			19 357	19 248	-0.56	122	51				7 212	7 208	-0.05	9.5	13 410	13 323	-0.65					0.79	
Germany	2.76	T1, T2, T3	CS, D	12 742	12 742	-0.00	136	43				1 892	1 601	-15.41	6.2	23 667	28 339	19.74					1.1	
Greece	3.98	T1, T2	CS, D	694	659	-5.04	119	60				8 802	9 072	3.07	9.5	864	1 046	21.06					1.5	
Hungary	3.49	T1, T2	CS, D	791	782	-1.10	131	55				1 237	1 214	-1.84	8.0	3 067	3 004	-2.06					1.5	
Iceland	6.40	NA	NA	74	74	-0.00			94	48	19	759	487	-35.94	8.3	36	29	-21.02					1.5	
Ireland	18.22	CS, T1, T2	CS, D	6 800	6 926	1.85	111	47				5 032	5 097	1.29	5.5	1 530	1 555	1.64					1.3	
Italy	3.29	T1, T2	CS, D	5 756	6 125	6.42	139	47				7 166	7 166	0	8.0	8 676	8 676	0.00					1.5	
Japan	0.53	CS, T1	CS, D	3 860	3 962	2.65	99	55				17	13	-22.68	8.0	9 536	9 537	0.01					1.4	
Kazakhstan	5.12	T1, T2	CS, D	6 714	5 851	-12.85	94	51				17 897	15 198	-15.08	6.6	1 106	922	-16.60					1.0	
Latvia	7.67	T1, T2	CS, D, OTH	422	407	-3.70			136	78	29	93	85	-8.32	8.0	349	368	5.18					1.5	
Liechtenstein	6.60	D, T2	CS, D	6.2	6.2	0			135	87	41	3.6	3.6	0	8.5	1.7	1.7	0					1.1	
Lithuania	8.56	T1, T2	CS, D, OTH	737	714	-3.14	125	56				124	100	-19.62	12	714	755	5.66					1.0	
Luxembourg	3.86	T1, T2	CS, D	199	199	0						8.7	8.7	0	9.8	87	87	0					1.5	
Malta	1.20	T1, T2	CS, D	15	15	0	122	31				11	11	0	14	47	47	0					1.5	
Monaco																								
Netherlands	4.40	T1, T2, T3	CS, D	4 068	4 169	2.47			127	79	36	959	1 076	12.25	8.0	12 238	12 238	-0.00					1.5	
New Zealand	35.32	T1, T2	CS, D	10 368	10 368	0	82	58				29 803	29 803	0	12	287	287	0					1.1	
Norway	4.23	T1, T2	CS, D	760	839	10.45			146	110	54	1 535	2 284	48.82	14	574	831	44.67					1.5	
Poland	3.24	T2, T3	CS, D	5 920	5 920	0						201	223	10.68	8.0	11 724	11 724	0					1.5	
Portugal	5.31	T1, T2	CS, D	1 502	1 549	3.11	135	63				2 067	2 032	-1.67	9.5	2 056	2 126	3.40					1.2	
Romania	9.02	T2	CS	1 998	2 022	1.23	97	64				9 518	9 136	-4.02	18	5 042	5 180	2.74					1.5	
Russian Federation	1.78	CS, T1, T2	CS, D	20 156	19 564	-2.94	115	61				24 033	22 247	-7.43	8.0	19 857	19 081	-3.91					1.3	
Slovakia	2.57	T1, T2	CS, D	466	468	0.49	110	55				391	400	2.24	9.4	642	637	-0.73					1.5	
Slovenia	5.46	T1, T2	CS, D	468	461	-1.64						74	83	109	30.42	8.0	281	288	2.50					1.5
Spain	3.56	CS, T1, T2	CS, D	6 044	6 079	0.58	103	41				15 432	15 432	-0.00	7.8	25 990	26 568	2.22					0.89	
Sweden	5.77	CS, T1	CS, D	1 493	1 493	0	134	55				589	589	0	8.0	1 377	1 377	0					1.5	
Switzerland	6.91	T2	CS	1 563	1 563	0			137	107	39	403	403	0	8.5	1 498	1 498	0					1.1	
Turkey	5.87	T1	D	14 223	14 123	-0.70	84	47				31 140	31 115	-0.08	5.1	2.7	2.7	0					1.0	
Ukraine	3.31	T1, T2, T3	CS	4 295	4 534	5.56			123	83	67	1 030	1 067	3.52	8.7	7 752	7 922	2.19					1.5	
United Kingdom of Great Britain and Northern Ireland	4.52	T1, T2	CS, D	9 837	9 837	-0.00	131	65				33 743	33 743	-0.00	5.0	4 815	4 815	-0.01					1.5	
United States of America	4.59	M, T1, T2	CS, D, M	94 021	88 526	-5.84						135	5 245	5 245	0	8.0	64 230	67 726	5.44					1.5

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, Latvia, Netherlands, Portugal and Switzerland.

^b Source of international statistics: FAOSTAT data, downloaded on 30 May 2016 from <http://faostat3.fao.org/home/E>.

^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 CH₄/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 - CH₄ (2014)

	Share of national total ^a	Methods and EF used		Cattle					Sheep	Swine
				Option A		Option B		Option C		
		Methods	EF	Dairy cattle	Non-dairy cattle	Mature dairy cattle	Other mature cattle	Growing cattle	Other	
	(%)			CH ₄ IEF (kg/head/yr)						
IPCC default EF ^b				1-112	0 to 26				0.10 to 0.37	0 to 45
Australia	0.49	CS, T2, T3	CS, D						1.5	0.002
Austria	0.57			12	5.0					0.19
Belarus	0.86	T1, T2	CS, D	5.1	2.4					0.67
Belgium	1.10	T1, T2	CS, D	28	3.5					0.19
Bulgaria	0.46	T1, T2	CS, D			3.2	1.3	0.84		0.21
Canada	0.50	T1, T2	CS, D	35	3.3					0.29
Croatia	0.77	T2	CS			17	8.1	8.1		0.12
Cyprus	1.59	T1, T2	D	10	4.4					0.26
Czech Republic	0.61	T1, T2	CS, D	22	9.1					0.19
Denmark (KP)	4.30	CS, T2	CS, D	30	13					1.8
Denmark (Convention)	4.30	CS, T2	CS, D	30	13					1.3
Estonia	0.40	D, T1, T2	CS, D			13	1.9	3.3		0.19
European Union (KP)	1.05			26	6.4					0.34
European Union (Convention)	1.05			26	6.4					0.33
Finland	0.77	T2	CS	27	5.8					0.25
France (KP)	1.31			23	5.1					0.21
France (Convention)	1.31			23	5.2					0.21
Germany	0.69	T2	CS, D	21	6.9					0.21
Greece	0.81	T1, T2	CS, D	13	3.5					1.0
Hungary	1.14	T1, T2	CS, D	31	8.8					0.30
Iceland	1.09	NA	NA			28	11	4.2		0.63
Ireland	2.14	T1, T2	CS, D	10	4.4					0.39
Italy	0.73	T1, T2	CS, D	13	6.8					0.21
Japan	0.17	CS, T1	CS, D	59	2.2					0.28
Kazakhstan	0.21	T1, T2	CS, D	4.8	0.84					0.10
Latvia	0.88	T1, T2	CS, D			15	1.9	1.1		0.19
Liechtenstein	1.33	T2	D			27	15	6.9		1.3
Lithuania	1.23	T1, T2	CS, D	9.6	5.9					0.45
Luxembourg	0.57	T1, T2	CS, D						9.9	0.21
Malta	0.43	T1, T2	D	21	1E					0.28
Monaco										
Netherlands	2.33	T2	CS, D			42	9.1	8.6		0.19
New Zealand	1.43	T1, T2	CS, D	5.6	0.78					0.12
Norway	0.58	T1, T2	CS, D			30	10	5.5		0.19
Poland	0.42	T1, T2	CS, D						6.1	0.19
Portugal	1.80	T1, T2	CS, D	11	2.1					0.40
Romania	1.44	T2	CS	4.3	2.5					0.56
Russian Federation	0.15	CS, T1, T2	CS, D	5.1	3.0					0.19
Slovakia	0.47	T1, T2	CS, D	13	2.1					0.29
Slovenia	1.46	T1, T2	CS, D						17	0.34
Spain	2.38	CS, T1, T2	CS, D	73	2.6					0.23
Sweden	0.48	T1, T2	CS, D	8.8	3.7					0.19
Switzerland	1.61	T2	CS, D			27	17	6.7		1.3
Turkey	0.68	T1	D	19	1					0.12
Ukraine	0.43	T2	CS			8.1	7.5	3.5		0.24
United Kingdom of Great Britain and Northern Ireland	0.66	T1, T2	CS, D	18	8.8					0.20
United States of America	0.87	M, T1, T2	CS, D, M						15	0.54

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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						
Developed countries	0.10	0.15	0.20						

Table 3.3

Manure management - N₂O (2014)

	N excretion rates						Share of national total ^a	Methods and EF used		N ₂ O IEF				
	Option A		Option B			Option C				Dairy cattle	Non-dairy cattle	Sheep	Swine	Other livestock
	Dairy cattle	Non-dairy cattle	Mature dairy cattle	Other mature cattle	Growing cattle	Other								
	(kg N / head / year)							(%)	Methods	EF				
IPCC default EF ^b	0.35 to 0.70	0.31 to 0.79												
Australia						45	0.17	CS, T2, T3	D			NA	0.079	0.004
Austria	101	46					0.57			0.70	0.36	0.051	0.045	0.003
Belarus	7 709	3 679 414					1.39	T1, T2	CS, D	0.61	0.51	0.47	0.077	0.008
Belgium	118	54					0.64	T2	D	0.76	0.57	0.017	0.037	0.001
Bulgaria			100	67	40		0.77	T1	D			0.038	0.029	0.017
Canada	102	45					0.63	T1	D	1.3	0.67	0.046	0.029	0.017
Croatia			89	50	50		0.60	T2	CS, D			0.011	0.016	0.005
Cyprus	96	42					0.87	T1	D	0.72	0.32	0.097	0.063	0.016
Czech Republic	150	74					1.04	T1, T2	CS, D	3.3	0.95	0.035	0.37	0.009
Denmark (KP)	143	42					1.46	T2	D	1.0	0.35	0.029	0.071	0.009
Denmark (Convention)	248	90					1.46	T2	CS, D	1.0	0.35	0.033	0.071	0.009
Estonia			118	48	38		0.32	T1, T2	CS, D			0.085	0.018	0.007
European Union (KP)	105	51					0.52			0.72	0.25	0.016	0.053	
European Union (Convention)	105	51					0.52			0.72	0.25	0.015	0.053	
Finland	131	51					0.48	T2	D	0.78	0.41	0.077	0.031	0.008
France (KP)	113	59					0.51			0.15	0.087	0.034	0.004	0.001
France (Convention)	113	59					0.50			0.15	0.088	0.034	0.004	0.001
Germany	119	42					0.43	T2	CS, D	0.78	0.40	0.076	0.080	0.004
Greece	99	52					0.32	D	D	0.71	0.26	0.012	0.11	0.003
Hungary	106	51					0.80	T1, T2	CS, D	1.1	0.47	0.077	0.063	0.004
Iceland			95	42	15		0.92	NA	NA			0.14	0.014	0.034
Ireland	101	51					0.85	T2	CS, D	0.12	0.13	0.008	0.026	0.003
Italy	116	51					0.51	T2	CS, D	0.65	0.29	0.013	0.075	0.006
Japan	84	51					0.33	CS, T1	CS, D	1.8	1.2	IE	0.42	0.006
Kazakhstan	70	50					1.15	T1	D	1.5	0.47	0.13	0.63	0.036
Latvia			114	62	20		0.92	T1, T2	D			0.081	0.054	0.008
Liechtenstein			115	80	36		0.67					0.091	0.005	0.011
Lithuania	108	37					0.88	T1, T2	D	0.51	0.22	0.045	0.013	0.002
Luxembourg						59	0.32	T2	D			0.025	0.056	0.015
Malta	70	89					0.43	T1, T2	D	1.4	0.80	0.23	0.033	0.004
Monaco														
Netherlands							0.35	CS	CS			IE	IE	
New Zealand	119	75					0.11	T1	CS	NO	NO	NO	0.15	0.001
Norway			128	65	42		0.20	T1, T2	CS, D			0.033	0.037	0.002
Poland						55	0.55	T1, T2	CS, D			0.044	0.081	0.001
Portugal	119	50					0.30	T2	CS, D	0.53	0.041	0.012	0.003	0.005
Romania	54	38					0.67	T2	D	0.21	0.12	0.014	0.045	0.006
Russian Federation	99	60					0.33	T1	CS, D	0.63	0.36	0.080	0.17	0.007
Slovakia	104	39					0.46	T2	CS	0.69	0.28	0.21	0.090	0.004
Slovenia						58	0.59	T1, T2	CS, D			0.23	0.17	0.017
Spain	111	42					0.71	NA	NA	0.90	0.065	0.007	0.035	0.014
Sweden	128	42					0.62	T2	CS	0.77	0.26	0.025	0.074	0.008
Switzerland			115	80	33		0.76	CS	D			0.089	0.004	0.005
Turkey	71	40					0.54	T1	D	0.076	0.57	NO	0.070	0.003
Ukraine			75	68	30		0.35	T2	CS			0.019	0.094	0.002
United Kingdom of Great Britain and Northern Ireland	128	54					0.28	T2	D	0.52	0.26	0.003	0.078	0.001
United States of America						62	0.25	M, T1, T2, T3	CS, D, M			0.20	0.096	0.77

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 - N₂O (2014)

Methods and EF used			Direct N ₂ O emissions from managed soils								Indirect N ₂ O 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 ₂ O IEF							Activity data	N ₂ O IEF	Activity data	N ₂ O IEF
				Use of synthetic fertilizers											
Methods	EF	(%)	(kg N / year)	(kg N ₂ O-N / kg N)					(%)	(kg N / year)	(kg N ₂ O-N / kg N)	(kg N / year)	(kg N ₂ O-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	1.93	1 407 441 099	0.004	0.009	0.005	0.010	2.0	8.0	0.53	502 298 046	0.003	611 898 477	0.008
Austria	NA	NA	2.16	111 810 000	0.010	0.010	0.016	0.010	0.010	NO	0.43	30 307 139	0.010	52 387 323	0.008
Belarus	T1, T1a, T1b	D	11.43	456 100 000	0.010	0.010	0.020	0.010	NA	8.0	–	IE	IE	IE	IE
Belgium	T1	D	2.31	144 785 342	0.010	0.010	0.020	0.010	0.010	8.0	0.64	40 303 415	0.010	362 985 171	0.003
Bulgaria	T1	D	3.79	174 002 000	0.010	0.010	0.012	0.010	NE	NO	1.00	19 077 122	0.010	136 974 553	0.008
Canada	T1, T2	CS, D	2.48	2 473 000 000	0.009	0.012	0.002	0.009	0.014	8.0	0.60	373 412 457	0.010	772 161 532	0.008
Croatia	T1	D	3.18	80 707 112	0.010	0.010	0.012	0.010	0.010	8.0	1.03	16 015 768	0.010	45 743 734	0.008
Cyprus	T1	D	1.30	6 693 000	0.010	0.010	NO	0.010	NE	NO	0.13	669 300	0.010	2 157 482	0.008
Czech Republic	T1, T2	CS, D	1.90	240 935 400	0.010	0.010	0.018	0.010	NO	NO	0.62	64 705 074	0.010	137 213 511	0.008
Denmark (KP)	CS, D, T1, T2	D	6.31	186 799 000	0.010	0.010	0.018	0.010	0.010	11	1.00	32 322 993	0.010	165 268 000	0.005
Denmark (Convention)	CS, D, T1, T2	CS, D	6.32	186 970 580	0.010	0.010	0.018	0.010	0.010	11	1.00	32 373 241	0.010	165 324 441	0.005
Estonia	CS, D, T1, T2	D	2.26	35 806 000	0.010	0.010	0.019	0.010	NO	8.0	0.55	7 938 763	0.010	22 649 879	0.008
European Union (KP)	NA	NA	3.12	10 888 303 647	0.010	0.010	0.015	0.010	0.008	7.0	0.73	2 079 932 369	0.010	6 373 615 548	0.007
European Union (Convention)	NA	NA	3.12	10 875 352 647	0.010	0.010	0.015	0.010	0.008	7.1	0.73	2 074 931 983	0.010	6 363 956 469	0.007
Finland	T1, T2	CS, D	5.13	147 373 000	0.010	0.010	0.017	0.010	NO	9.7	0.66	9 467 675	0.010	98 552 227	0.008
France (KP)	NA	NA	6.02	2 189 758 942	0.010	0.010	0.019	0.010	NO	8.0	1.54	399 146 367	0.010	1 472 303 207	0.008
France (Convention)	NA	NA	5.95	2 195 838 375	0.010	0.010	0.019	0.010	NO	8.0	1.52	400 254 518	0.010	1 476 390 766	0.008
Germany	T1, T2	CS, D	2.38	1 675 289 000	0.010	0.010	0.019	0.010	NO	5.1	0.57	391 017 197	0.010	932 493 176	0.007
Greece	T1	D	2.43	180 931 000	0.010	0.010	0.011	0.010	NO	8.0	0.86	72 194 888	0.010	152 782 663	0.008
Hungary	T1	D	5.26	326 752 530	0.010	0.010	0.014	0.010	0.010	NO	0.45	36 129 082	0.010	24 362 277	0.008
Iceland	T1b, T2	CS, D	4.88	12 951 000	0.012	0.012	0.020	0.013	NE	0.96	2.97	5 000 386	0.010	9 659 079	0.025
Ireland	T1	CS, D	9.47	331 782 000	0.010	0.010	0.019	0.010	0.010	4.3	0.81	40 992 664	0.010	80 145 460	0.008
Italy	CS, T1	CS, D	1.67	505 126 000	0.010	0.010	0.011	0.010	NO	8.0	0.56	138 141 953	0.010	480 017 952	0.007
Japan	CS, T2	CS, D	0.28	409 725 234	0.007	0.006	0.008	0.010	0.004	1.4	0.14	138 196 515	0.010	370 830 122	0.008
Kazakhstan	T1, T2	CR, CS, D	3.48	80 600 000	0.010	0.011	0.014	0.010	0.010	NO	0.34	105 436 758	0.010	1 656 240 000	0.001
Latvia	T1	D	12.57	72 900 000	0.010	0.010	0.019	0.010	NO	12	1.72	12 077 570	0.010	39 715 502	0.008
Liechtenstein	T1b	D	2.34	168 552	0.010	0.010	0.019	0.010	NO	8.0	0.93	104 604	0.026	173 003	0.007
Lithuania	T1	D	7.27	154 000 000	0.010	0.010	0.019	0.010	0.010	0.008	2.15	25 248 665	0.010	83 623 410	0.008
Luxembourg	T1	D	1.05	13 944 450	0.010	0.010	0.010	0.010	NO	NO	0.39	3 429 609	0.010	7 239 309	0.007
Malta	T1	D	0.67	635 630	0.010	0.010	NO	0.010	NO	NO	0.25	600 450	0.010	4 276 418	0.002
Monaco															
Netherlands	T1, T1b, T2	CS, D	2.42	213 231 045	0.013	0.009	0.033	0.012	NO	7.5	0.30	47 240 435	0.011	91 189 101	0.008
New Zealand	T1, T2	CS, D	8.76	376 890 000	0.005	0.010	0.008	0.010	0.010	8.0	1.75	196 159 522	0.010	143 241 348	0.008
Norway	T1	CS, D	2.62	102 126 000	0.010	0.010	0.015	0.010	IE	13	0.42	13 836 781	0.010	45 138 715	0.007
Poland	T1	CS, D	2.85	1 098 455 000	0.010	0.010	0.019	0.010	0.010	8.0	0.69	172 176 616	0.010	517 903 655	0.008
Portugal	T1, T2	CS, D	2.69	129 566 172	0.010	0.010	0.018	0.010		NO	0.70	24 685 511	0.011	91 056 909	0.008
Romania	T1	D	3.31	272 700 000	0.010	0.010	0.015	0.010	NO	8.0	0.32	74 874 239	0.010	NO	NO
Russian Federation	CS, T1, T2	CS, D	2.01	1 194 487 400	0.014	0.010	0.018	0.010	0.010	8.0	0.35	495 967 772	0.010	2 114 304 709	0.008
Slovakia	T1, T2	CS, D	3.04	119 036 050	0.010	0.010	0.014	0.010	NO	NO	0.94	22 621 049	0.010	78 214 070	0.008
Slovenia	T1	D	2.00	28 612 000	0.010	0.010	0.017	0.010	NO	8.0	0.67	8 940 767	0.010	19 605 773	0.008
Spain	CS, T1a, T1b	D	3.17	1 101 895 000	0.010	0.010	0.020	0.010	NA	NO	0.99	252 370 790	0.010	586 987 732	0.008
Sweden	CS, T1, T2	CS, D	5.51	181 090 000	0.010	0.010	0.017	0.010	0.010	13	0.54	21 619 264	0.010	54 262 708	0.008
Switzerland	CS, T1b	D	2.28	49 504 320	0.010	0.010	0.019	0.010	0.010	8.0	1.03	27 876 023	0.026	44 035 294	0.007
Turkey	T1	D	2.47	1 486 568 332	0.010	0.010	0.014	0.010	0.010	NE	0.76	212 236 163	0.010	726 294 056	0.008
Ukraine	CS, T2	CS	6.68	1 052 799 000	0.010	0.010	0.019	0.010	0.010	8.0	1.63	213 369 246	0.010	1 355 441 254	0.008
United Kingdom of Great Britain and Northern Ireland	CS, T1, T1a, T2	CS, D	2.21	1 150 736 973	0.009	0.005	0.004	0.010	0.006	8.0	0.51	111 252 870	0.010	624 532 174	0.008
United States of America	D, T3	D, M	3.71	11 459 419 388	0.011	0.012	0.005	0.007	0.009	9.0	0.81	3 749 670 960	0.011	13 861 563 628	0.006

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 N₂O-N/kg N. The unit of the IPCC default emission factor is also kg N₂O-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 (2014)

	Forest Land						Cropland						Grassland					
	CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O	
	Method	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	CS, T3	CS, M	CS	CS	CS, T2	CS	T3	CS, M	CS	CS	CS, T2	CS
Austria	NO	NA	NO		NO	NA	NA	NA	NO		NO		NA	NA			NA	NA
Belarus	T1, T2	CS, D	T1	D	T1	D	T1	D									NA	NA
Belgium	CS, T1, T2	CS	NA	NA	T1	D	CS, T1, T2	CS	NA	NA	T1	D	CS, T1, T2	CS	NA	NA	T1	D
Bulgaria	T1, T3	CS, D	T1	D	T1	D	T1, T3	CS, D					T1, T3	CS			NA	NA
Canada	T3	CS	T2	CS	T2	CS	T2, T3	CS	T2	CS	T2	CS	NA	NA	NA	NA	NA	NA
Croatia	T2	CS, D	T1	D	T1	D	T1	CS, D	NA	NA	T1	CS, D	T1	CS, D	T1	D	T1	D
Cyprus					NA	NA	T1						T1				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)	T1, T2, T3	CS, D	NA	NA	T1	D	NA	NA	NA	NA	T1	D	T1, T2	CS, D	T1	D	T1	D
Denmark (Convention)	T1, T2, T3	CS, D	NA	NA	T1	D	NA	NA	NA	NA	T1	D	T1, T2	CS, D	T1	D	T1	D
Estonia	T1, T2, T3	D, OTH	T2	NA	T2	NA	T1, T2	D	NA	NA	T1	D	T1, T2, T3	D, OTH	T2	D	T2	D
European Union (KP)					NA	NA												
European Union (Convention)					NA	NA												
Finland	T2, T3	CS, D	T2	CS, D	T2	CS, D	T2, T3	CS, D	T2	D	T2	CS, D	T2, T3	CS, D	T2	D	T2	CS, D
France (KP)					NA	NA											NA	NA
France (Convention)					NA	NA											NA	NA
Germany	CS, T2	CS	T2	CS, D	CS, T2	CS, D	T2	CS	T2	CS	T2	CS	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, T2	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	D	T1, T2	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, T1	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	CS, D			CS	CS	T1, T2	CS, D				
Kazakhstan	T1, T2	CS, D	T1	D	T1	D	T2	CS			T2	CS, D	T1, T2	CS, D	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	T2	CS			T2	CS	T2	CS			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, T2	CS, D	T1, T2	CS, D
Luxembourg	T1, T2	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	T1	D	T1	CS, D	NA	NA	NA	NA
Malta	D	D	D	D	D	D	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE, NO	NE, NO
Monaco																		
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	NA	NA	T1	D	T1, T2, T3	CS, D	NA	NA	NA	NA
Poland	D, T2	CS, D	D, T2	CS, D	D, T2	CS, D	T1, T2	D	NO	NO	T1	D	D, T1, T2	CS, D	D, T1	CS, D	D, T1	CS, D
Portugal	CS, T2	CS, D	D	D	D	D		D	D	D	D	D			D	D	D	D
Romania	T1, T2, T3	CS, D	T1	D	T1	D	T1	D	T1	D	T1	D	T1, T2	CS, D	T1	D	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	T2	CS, D	T2	D	T2	D	T2	CS	NA	NA	T2	CS	T2	CS	NA	NA	T2	D
Slovenia	CS, D, T1, T2, T3	CS, D	D, T1	D	D, T1	D	D, T1, T2	CS, D	NA	NA	D, T1	D	D, T1, T2, T3	CS, D			NA	NA
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	T2, T3	CS	T1	D	T1	CS, D	T2, T3	CS	T1	CS	T1	CS	T2, T3	CS	T1	CS, D	T1	D
Switzerland	T2	CS	T1	D	T1	D	T2	CS	NA	NA	T1	D	T2	CS	T1	D	T1	D
Turkey	T2	CS, D	T2	D	T2	D	T1, T2	D			NA	NA	D, T1, T2	CS, D			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	CS, D, T3	CS	D	CS	D, T1	CS	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	NA	NA	NA	NA	T2, T3	CS	NA	NA	NA	NA

Table 4.1b

Methods and emission factors used (2014)

	Wetlands						Settlements						Other Land						Harvested Wood Products	
	CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂		CH ₄		N ₂ O		CO ₂	
	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF	Method	EF
Australia	IE, NE	IE, NE	IE, NE	IE, NE	IE, NE	IE, NE	IE, NE	IE, NE	NE	NE	IE, NE	IE, NE	NA	NA	NA	NA	NA	NA	T2, T3	D, M
Austria					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
Belgium	CS, T1	CS	NA	NA	T1	D	CS, T1	CS	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	D
Bulgaria	NA	NA			NA	NA	T1	NA			NA	NA	T2	CS			NA	NA	T1, T2	D
Canada	T2, T3	CS	NA	NA	NA	NA	T2, T3	CS			NA	NA	NA	NA					T3	CS
Croatia	T1	D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	D
Cyprus					NA	NA					NA	NA					NA	NA	T1	NA
Czech Republic	T1, T2	CS, D	NA	NA	NA	NA	T2	CS	NA	NA	D	D	T2	CS	NA	NA	NA	NA	T1, T2	D
Denmark (KP)	T1, T2	D	T1	D	T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	NA	NA		
Denmark (Convention)	T1, T2	D	T1	D	T1	D	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	T2	CS, D	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								
European Union (Convention)					NA	NA					NA	NA								
Finland	T1, T2, T3	CS, D	T1, T2	CS, D	T1, T2, T3	CS, D	T2, T3	CS, D	T2	D	T1, T2	D	T2	D	T2	D	T2	D	T2	D
France (KP)					NA	NA			NA	NA	NA	NA			NA	NA	NA	NA	NA	NA
France (Convention)					NA	NA			NA	NA	NA	NA			NA	NA	NA	NA	NA	NA
Germany	T2	CS	T2	CS	T2	CS	T2	CS	NA	NA	T2	CS	NA	NA	NA	NA	NA	NA	CS, T2	D
Greece	T1	D	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA	T1, T2	CS, D	NA	NA	NA	NA	T2	D
Hungary	T1, T2	CS, D	NA	NA	T1	D	T1, T2	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	NA	NA
Ireland	D, T1, T3	CS, D	D, T1	D	D, T1	D	D, T1, T3	CS, D, OTH			T1	D	T1, T3	CS			T1	D	T2	D
Italy	T1	D	NA	NA	NA	NA	T1	D, OTH	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	CS
Japan					NA	NA	T2	CS, D			NA	NA	T2	CS, D					T2, T3	CS, D
Kazakhstan					NA	NA	T1	D			NA	NA					NA	NA	T2	CS
Latvia	T1, T2	CS, D	T1	D	T1	D	T2	CS	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	CS
Liechtenstein	T2	CS			T2	CS	T2	CS			T2	CS					NA	NA	T2	CS
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	D
Luxembourg	T1	CS, D	NA	NA	NA	NA	T1	CS, D	NA	NA	NA	NA	T1	CS	NA	NA	NA	NA	NA	NA
Malta	NO	NO	NO	NO	NO	NO	NA	NA			NA	NA	NA	NA					NO	NO
Monaco																				
Netherlands	T1, T2	CS, D			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	NA	NA	NA	NA	T1, T2, T3	CS, D			T1	D	T1, T2, T3	CS, D					T2	D
Poland	NO	NO	NO	NO	NO	NO	T1, T2	CS, D	NA	NA	NA	NA	NO	NA	NO	NA	NO	NA	NA	NA
Portugal					NA	NA			NA	NA	NA	NA							D	D
Romania	T1	D	T1	D	T1, T2	D	T1	D	NA	NA	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	T2	CS	NA	NA	T2	D	T2	CS	NA	NA	T2	D	T2	D
Slovenia	D, T1, T2	CS, D			NA	NA	D, T2	CS, D			NA	NA	D, T2	CS, D	NA	NA	NA	NA	D, T1	D
Spain	T1, T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1, T2	CS, D	NA	NA	T1	D	T1	D
Sweden	T1	CS	T1	CS	T1	CS	T2, T3	CS, D	NA	NA	T1	CS, D	NA	NA	NA	NA	NA	NA	T3	CS
Switzerland	NA	NA	NA	NA	T1	D	NA	NA	NA	NA	NA	NA	T2	CS	NA	NA	T1	D	T2	D
Turkey	NA	NA			NA	NA	CS	D			NA	NA	NA	NA			NA	NA	D	D
Ukraine	CS, T1	CS, D	CS, T1	D	CS, T1	D	CS, T1	CS, D	NA	NA	T1	D	CS, T1	CS, D	NA	NA	T1	D	T2	D
United Kingdom of Great Britain and Northern Ireland	D	D	NA	NA	D	CS	CS, D, T3	CS, D		D	CS, D	D	D	D	NA	NA	NA	NA	CS, T3	CS
United States of America	T1	D	NA	NA	NA	NA	T2, T3	NA			NA	NA	T2, T3	NA					T3	CS

Table 4.2

Forest land - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2014)^{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	0.072	IE	0.072	-0.008	0.001	0.002	IE	0.64	IE, NO	0.64	0.13	0.12	-0.27	NO
Austria	2.4	-2.1	0.31	0.059	IE, NE	-0.18	NO	1.7	-0.52	1.2	0.016	1.2	0.73	NO
Belarus	1.5	-0.98	0.56	NE	NE	NE	NE	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	1.1	-0.16	0.94	-0.012	0.004	0.53	NO	2.6	0	2.6	NO	NO	1.6	NO
Bulgaria	0.72	IE, NO	0.72	NO	NO	NO	NO	2.2	-0.35	1.9	NO	0.27	-1.2	NO
Canada	3.5	-3.3	0.19	0.20	-0.13	0.032	IE	3.7	-1.4	2.3	0.2	-0.13	0.032	IE, NO
Croatia	1.7	-1.00	0.75	NO	0.75	NO	NO	1.3	-0.76	0.49	NO	IE, NO	0.73	NO
Cyprus	1.2	-0.011	1.2	NO	NO	NO	NO							
Czech Republic	3.0	-2.2	0.79	NO	NO	NO	NO	1.9	NO	1.9	0.007	0.56	0.13	NO
Denmark (KP)	1.6	IE	1.6	0.13	0.40	NA	-1.30	NO	-1.3	-1.3	-0.001	0.022	0.11	-1.3
Denmark (Convention)	1.6	IE, NO	1.6	0.13	0.40	NA, NO	-1.30	NO	-1.3	-1.3	-0.001	0.022	0.11	-1.3
Estonia	IE	-0.018	-0.018	-0.013	NO	0.16	-0.17	3.8	IE	3.8	0.011	0.30	-0.38	-0.30
European Union (KP)	1.3	-0.68	0.62	0.016	-0.007	0.080	-0.42	1.8	-0.48	1.3	0.038	0.20	0.32	-0.63
European Union (Convention)	1.3	-0.69	0.62	0.016	-0.007	0.080	-0.42	1.8	-0.48	1.3	0.038	0.20	0.32	-0.64
Finland	1.6	-1.3	0.34	IE	IE	0.16	-0.30	1.5	-0.015	1.5	NA	IE, NA	0.063	-1.9
France (KP)	1.8	-1.0	0.80	-0.033	NO	NO	NO	1.4	-0.17	1.3	0.045	0.25	0.24	-2.0
France (Convention)	1.8	-1.0	0.80	-0.033	NO	NO	NO	1.4	-0.17	1.3	0.045	0.25	0.24	-2.0
Germany	1.0	IE	1.0	-0.052	-0.013	0.41	-2.2	3.6	-0.36	3.3	0.034	0.47	-0.37	-2.2
Greece	0.17	IE, NO	0.17	NA, NO	NA, NO	NA, NO	NA, NO	0.90	-0.48	0.41	NE, NO	NE, NO	NE, NO	NO
Hungary	0.47	IE, NO	0.47	NO	NO	NO	-2.6	1.9	-0.040	1.9	IE, NE, NO	IE, NE, NO	0.34	NO
Iceland	0.10	IE	0.10	IE, NE	NE	NE	-0.37	1.1	-0.028	1.1	IE, NA, NO	0.14	0.40	-0.37
Ireland	5.5	-5.7	-0.27	IE	0.57	NO	-0.47	4.9	-2.5	2.4	IE, NO	1.05	NO	-0.73
Italy	2.4	-1.5	0.93	0.008	0.014	NA, NO	NO	2.6	-1.6	1.00	0.008	0.014	0.20	NO
Japan	0.70	IE, NA	0.70	-0.023	0.004	0.026	NO	2.9	-0.003	2.9	-0.022	0.004	0.026	NO
Kazakhstan	0.024	NO	0.024	IE	NE	NE	NO	NO	NO	NO	NO	NO	NO	NO
Latvia	2.7	-2.7	0.047	0.33	NO	NO	-2.6	0.46	IE, NE, NO	0.46	0.11	0.097	NE, NO	-0.89
Liechtenstein	2.5	-2.5	-0.038	0.016	IE	NO	NO	1.2	NO	1.2	NO	NO	NO	NO
Lithuania	1.1	IE	1.1	0.079	NO	NO	IE	1.6	IE	1.6	NO	1.20	NO	IE
Luxembourg	3.1	-1.9	1.3	NO	NO	NO	NO	3.1	-0.061	3.1	0.28	0.96	1.7	NO
Malta	0.78	0	0.78	0	0	0	NO	NO	NO	NO	0	0	0	NO
Monaco														
Netherlands	2.7	-0.79	1.9	0.016	NO	NO	NO	1.8	-0.31	1.5	NO	NO	-0.014	-0.22
New Zealand	1.2	-0.84	0.33	0.008	-0.002	0.000	-0.11	8.2	-3.8	4.4	0.78	-0.22	-0.36	-0.68
Norway	0.93	-0.36	0.57	0.023	0.11	0.003	-0.27	0.58	-0.090	0.49	0.023	0.12	0.0002	-0.27
Poland	0.90	IE	0.90	NO	NO	0.11	-0.68	1.0	NO	1.0	NO	NO	0.11	-0.68
Portugal	2.0	-1.3	0.69	IE	-0.002	0.004	NO	2.3	-0.40	1.9	IE	-0.011	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	0.30	-0.09	0.21	0.021	0.006	0.027	-0.71	0.011	-0.004	0.008	0.001	0.000	0.002	NA, NO
Slovakia	2.5	-1.9	0.59	NO	NO	NO	NO	1.6	NO	1.6	NO	0.42	1.2	NO
Slovenia	1.5	IE	1.5	-0.001	NO	NO	NO	0.99	NA, NO	0.99	NA, NO	NA, NO	1.7	NA, NO
Spain	0.51	IE	0.51	NE	NE	NE	NO	1.1	IE, NO	1.1	0.16	0.10	0.65	NO
Sweden	0.37	IE	0.37	0.085	-0.075	0.14	-0.38	0.74	IE	0.74	0.025	0.33	-0.075	-0.37
Switzerland	2.9	-2.4	0.53	0.003	-0.146	0.001	-2.6	1.4	-0.82	0.55	0.19	1.3	0.58	-2.5
Turkey	0.87	-0.39	0.48	NE	NE	NE	NE	0.45	-0.093	0.36	NE	0.31	2.4	NE
Ukraine	1.7	-0.33	1.4	0.29	0.020	NO	-0.68	0.56	-0.008	0.55	0.053	0.12	0.004	NO
United Kingdom of Great Britain and Northern Ireland	2.6	-1.3	1.2	IE	0.23	0.23	0.77	0.93	-0.019	0.91	IE, NO	0.034	1.1	2.6
United States of America	0.39	IE	0.39	0.054	0.033	0.15	IE	NA	NA	NA	NA	NA	0.10	NO

^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 CO₂-C emissions/removals and off-site CO₂-C emissions from drained and rewetted organic soils here.

Table 4.3

Cropland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2014)^{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	IE	0.000	0.000	NA	0.011	IE	IE, NE, NO	-0.28	-0.28	-0.21	-0.19	IE, NE, NO
Austria	0.12	-0.14	-0.023	NO	0.11	NO	0.31	-0.28	0.027	-0.039	-0.98	NO
Belarus	2.1	-0.59	1.5	NE, NO	NE	NE	NE, NO	NE, NO	NE, NO	NE, NO	NE	NE
Belgium	NO	0.000	0.000	NO	0.29	-10.0	NO	-0.11	-0.11	-0.011	-1.3	NO
Bulgaria	0.11	-0.15	-0.036	NO	-0.001	NO	0.24	-0.26	-0.027	NO	-0.17	NO
Canada	0.001	-0.001	0.000	-0.009	0.073	-5.0	NE, NO	-0.89	-0.89	-1.48	1.07	C, IE, NE, NO
Croatia	0.18	-0.16	0.017	NO	0.000	-10.0	0.63	-0.13	0.50	NO	-0.90	NO
Cyprus	NE	NE	NE	NE	NE	NO	NE	NE	NE	NE	NE	NO
Czech Republic	NO	0.000	0.000	NO	0.007	NO	0.005	-0.16	-0.16	-0.004	-0.33	NO
Denmark (KP)	0.084	-0.12	-0.038	NO	-0.14	-9.3	1.1	-0.80	0.34	NA, NO	0.020	NO, IE
Denmark (Convention)	0.084	-0.12	-0.038	NO	-0.14	-9.3	1.1	-0.80	0.34	NA, NO	0.020	-5.0
Estonia	IE	-0.001	-0.001	NO	0.097	-5.0	IE, NO	-0.13	-0.13	-0.008	-1.4	-5.0
European Union (KP)	0.033	-0.031	0.002	0.000	0.001	-5.0	0.11	-0.23	-0.12	-0.014	-0.88	-6.8
European Union (Convention)	0.033	-0.031	0.002	0.000	0.001	-4.8	0.11	-0.23	-0.12	-0.014	-0.88	-6.8
Finland	0.000	0.000	0.000	NE	0.006	-6.5	0.20	-1.6	-1.4	-0.008	-0.77	-6.8
France (KP)	0.096	-0.096	0	NO	NO	NO	NO	-0.16	-0.16	-0.018	-1.2	-3.5
France (Convention)	0.096	-0.096	0	NO	NO	NO	NO	-0.16	-0.16	-0.018	-1.2	-3.5
Germany	NO	NO	NO	NO	NO	-8.1	0.34	-0.36	-0.019	-0.009	-0.79	-8.1
Greece	0.056	-0.012	0.044	NO	NO	-10.0	NO	-0.60	-0.60	NO	-0.72	NO
Hungary	0.008	-0.009	-0.001	NO	0.036	NO	0.13	-0.13	0.006	-0.019	-0.81	NO
Iceland	NO	NO	NO	NO	NE	-7.9	0.11	-0.77	-0.67	IE, NA	0.10	-7.9
Ireland	0.036	-0.033	0.003	NO	-0.002	NO	NO	NO	NO	NO	NO	NO
Italy	0.000	-0.069	-0.069	NO	NO	-10.0	NO	NO	NO	NO	-1.1	NO
Japan	IE	-0.009	-0.009	NA	-0.17	-2.4	IE, NA	-1.1	-1.1	-0.49	IE	IE
Kazakhstan	0.044	NO	0.044	NE	-0.37	NO	NO	NO	NO	NO	NO	NO
Latvia	0.002	-0.001	0.001	0.000	NO	-7.9	NO	-0.35	-0.35	-0.14	-1.1	-7.9
Liechtenstein	NO	NO	NO	NO	NO	-9.5	0.18	-0.25	-0.079	NO	-0.27	-11.4
Lithuania	0.005	-0.002	0.003	NO	0.011	-5.0	NO	-0.12	-0.12	NO	-1.2	-5.0
Luxembourg	0.014	-0.023	-0.009	NO	0.001	NO	0.10	-0.19	-0.088	-0.025	-1.1	NO
Malta	0.22	NE	0.22	0	0	NO	IE, NO	IE, NO	IE, NO	IE, NO	IE, NO	NO
Monaco												
Netherlands	NE	NE	NE	NE	NO	-4.0	0.54	-0.76	-0.22	-0.034	-0.79	-4.1
New Zealand	0.013	-0.009	0.004	0	-0.001	-9.9	0.40	-0.25	0.15	-0.016	-0.56	-10.0
Norway	0.005	-0.002	0.003	NO	0.000	-7.9	0.018	-0.94	-0.92	-1.9	1.0	-7.9
Poland	0.034	IE	0.034	NO	-0.002	-1.0	NO	NO	NO	NO	-0.054	NO
Portugal	0.031	-0.014	0.018	NO	0.007	NO	0.14	-0.33	-0.19	-0.061	-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	0.014	NO	-0.20	-5.9	NO	NO	NO	NO	NO	NO
Slovakia	0.17	-0.016	0.15	NO	0.008	NO	NO	-0.059	-0.059	-0.020	-0.69	NO
Slovenia	0.38	-0.25	0.14	NA, NO	-0.001	-10.0	0.014	-0.77	-0.76	-0.045	-0.37	NO
Spain	IE	-0.011	-0.011	NE	0.025	NO	0.029	-0.019	0.010	-0.003	-0.71	NO
Sweden	0.025	IE	0.025	0.000	-0.087	-6.2	0.095	-0.57	-0.47	-0.077	-0.30	-6.2
Switzerland	0.025	NO	0.025	NO	NO	-9.5	0.028	-0.11	-0.083	-0.002	-0.25	-8.8
Turkey	0.073	-0.39	-0.32	0	1.2	-9.5	0.27	-1.4	-1.09	0.20	-0.13	NE, NO
Ukraine	0.044	NO	0.044	NO	-0.34	-10.0	NO	NO	NO	NO	-0.13	NO
United Kingdom of Great Britain and Northern Ireland	0.003	0.000	0.003	NO	-0.32	-5.0	IE, NO	-0.029	-0.029	0.000	-1.3	-5.0
United States of America	NE	NE	NE	NE	16	-0.050	NA	-0.27	-0.27	NE	-0.15	-8.9

^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 CO₂-C emissions/removals and off-site CO₂-C emissions from drained and rewetted organic soils here.

Table 4.4

Grassland - AD, IEFs, carbon stock changes in pools and net CO₂ emissions/removals (2014)^{a, b}

	Grassland remaining grassland						Land converted to grassland					
	IEF (Mg 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	Increase	Decrease	Net Change		Mineral soils	Organic soils
IPCC default EF												
Australia	0.003	-0.002	0.001	IE	0.003	IE	IE, NE, NO	-0.18	-0.18	-0.15	-0.23	IE, NE, NO
Austria	NO	NO	NO	NO	0.002	-0.25	0.29	-1.00	-0.70	-0.40	0.89	NO
Belarus	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
Belgium	NO	NO	NO	NO	0.095	-2.5	NO	-0.034	-0.034	0.001	1.3	NO
Bulgaria	NO	NO	NO	NO	NO	NO	1.3	-1.3	0.092	NO	1.2	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	0.55	-1.4	-0.84	NO	1.1	NO
Cyprus				NE		NO	NE	NE	NE	NE	NE	NO
Czech Republic	NO	NO	NO	NO	0.090	NO	0.045	-0.045	0.000	-0.001	0.47	NO
Denmark (KP)	NO	-0.37	-0.37	NO	NO	-8.4	0.55	-0.91	-0.36	-0.038	-0.022	-8.4
Denmark (Convention)	0.000	-0.19	-0.19	NO	NO	-6.3	0.55	-0.91	-0.36	-0.038	-0.022	-8.4
Estonia	0.080	IE	0.080	0.006	NO	-0.78	0.18	-0.49	-0.31	-0.11	0.86	-5.1
European Union (KP)	0.066	-0.053	0.013	0.001	0.020	-3.2	0.11	-0.25	-0.14	-0.026	0.76	-3.4
European Union (Convention)	0.071	-0.057	0.014	0.002	0.021	-4.7	0.11	-0.26	-0.14	-0.027	0.77	-3.1
Finland	0.39	NE	0.39	NE	NA	-3.5	0.13	-0.24	-0.11	NA, NE, NO	0.078	-3.5
France (KP)	0.16	-0.16	0	NO	NO	NO	NO	-0.12	-0.12	-0.016	1.1	-2.4
France (Convention)	0.16	-0.16	0	NO	NO	NO	NO	-0.12	-0.12	-0.016	1.1	-2.4
Germany	0.041	-0.009	0.032	NO	-0.001	-6.2	0.43	-0.45	-0.021	-0.069	0.82	-6.4
Greece	NO	0.000	0.000	NO	NO	NO	NO	-0.15	-0.15	NO	0.71	NO
Hungary	NO	NO	NO	NO	0.000	NO	0.15	-0.26	-0.11	-0.011	0.85	NO
Iceland	0.000	IE, NO	0.000	0.000	0.000	-5.7	0.086	IE, NA, NO	0.086	0.001	0.48	-5.7
Ireland	NO	NO	NO	NO	0.012	-3.9	0.31	-0.13	0.18	-0.009	NO	-5.1
Italy	0.43	-0.35	0.075	0.004	NA, NO	-2.5	NO	-0.044	-0.044	NO	1.1	NO
Japan	NA	NA	NA	NA	0.036	-0.14	0.23	-0.30	-0.072	-0.13	IE, NO	IE, NO
Kazakhstan	NO	-0.003	-0.003	IE	0.012	NO	NO	NO	NO	NO	NO	NO
Latvia	0.028	-0.008	0.020	0.004	NO	-6.1	NE, NO	NE, NO	NE, NO	NE, NO	1.1	-4.1
Liechtenstein	0.076	-0.065	0.011	NO	0.008	-8.9	0.42	-1.4	-1.0	-0.41	0.11	-9.4
Lithuania	NO	NO	NO	NO	NO	-0.25	0.002	NO	0.002	NO	1.4	-0.25
Luxembourg	NO	NO	NO	NO	NO	NO	0.048	-0.30	-0.25	-0.057	1.4	NO
Malta	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Monaco												
Netherlands	NE	NE	NE	NE	0.000	-4.6	0.63	-0.79	-0.16	-0.16	0.68	-4.2
New Zealand	0.003	-0.003	0.001	0.000	0.000	-2.2	0.25	-7.4	-7.1	-0.66	0.53	-2.1
Norway	0.12	-0.070	0.047	NO	-0.041	-6.1	0.39	-0.87	-0.48	-3.1	2.0	-6.1
Poland	NO	NO	NO	NO	-0.015	-0.25	0.23	IE, NO	0.23	IE, NO	0.95	NO
Portugal	NO	NO	NO	NO	0.20	NO	0.047	-0.19	-0.14	-0.046	-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	0.21	NA, NO	0.21	0.17	0.40	-7.8
Slovakia	NO	NO	NO	NO	NO	NO	0.002	-0.064	-0.062	-0.009	0.71	NO
Slovenia	NA	NA	NA	NA	NA	NA	0.21	-0.93	-0.73	-0.12	0.34	NA, NO
Spain	NE	NE	NE	NE	NE	NO	IE, NO	-0.84	-0.84	-0.13	0.34	NO
Sweden	0.072	IE	0.072	0.25	0.14	-1.6	0.13	-0.67	-0.54	-0.24	0.079	-3.0
Switzerland	0.015	-0.008	0.006	NO	0.010	-9.1	0.14	-0.94	-0.81	-0.35	0.53	-9.0
Turkey	NE	NE	NE	NE	NE	-0.93	0.67	-0.45	0.21	-0.25	-1.2	NE
Ukraine	NO	NO	NO	NO	0.008	-2.5	NO	NO	NO	NO	NO	NO
United Kingdom of Great Britain and Northern Ireland	0.002	-0.002	0.000	NO	0.11	IE, NO	0.033	-0.041	-0.008	-0.006	0.64	-0.25
United States of America	NE	NE	NE	NE	0.001	-3.1	NA	-0.72	-0.72	NE	0.15	-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 CO₂-C emissions/removals and off-site CO₂-C emissions from drained and rewetted organic soils here.

Table 4.5

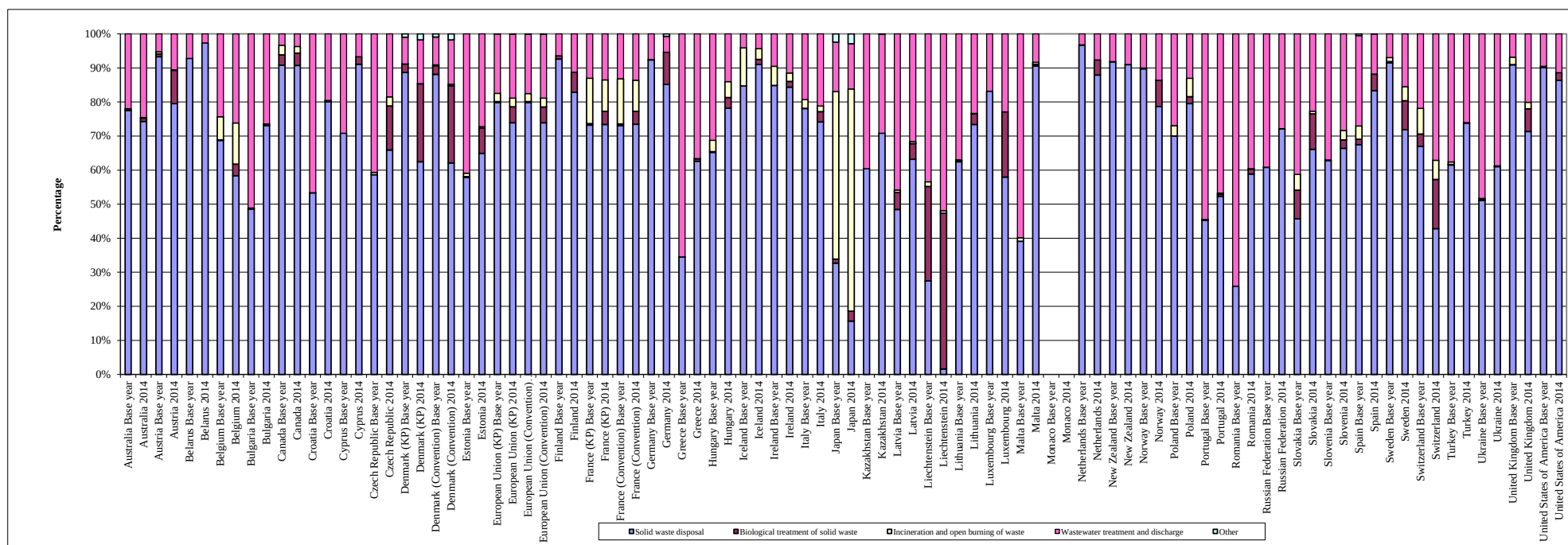
Land Area (2014)

Area (kha)	CRF						Total	FAO ^a	Difference	FAO ^a	Difference
	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land		Total country area	%	Forest	%
Australia	106 790	37 303	543 389	1.0	1.0	1.0	687 485	774 122	12.60	124 135	16.24
Austria	4 024	1 421	1 463	150	550	778	8 387	8 388	0.01	3 865	-3.94
Belarus	8 168	1 474	2 844	11	NE	NE, NO	12 496	20 760	66.13	8 594	5.21
Belgium	724	978	640	53	662	NO	3 058	3 053	-0.16	683	-5.79
Bulgaria	3 874	4 053	2 036	231	863	806	11 863	11 100	-6.43	3 789	-2.20
Canada	231 742	50 263	7 138	522	936	NE, NO	290 600	998 467	243.59	347 162	49.81
Croatia	2 361	1 598	1 189	75	315	177	5 715	5 659	-0.97	1 921	-18.63
Cyprus	155	442	235	NE, NO	NE, NO	NE, NO	831	925	11.26	173	11.50
Czech Republic	2 666	3 218	997	165	735	105	7 887	7 887	0.00	2 663	-0.13
Denmark (KP)	615	2 598	427	120	519	26	4 306				
Denmark (Convention)	615	2 598	669	121	525	216 386	220 914	4 309	-98.05	602	-2.12
Estonia	2 310	1 024	322	506	311	50	4 523	4 523	0.01	2 233	-3.33
European Union (KP)	165 637	126 974	96 079	24 642	29 664	16 898	459 896				
European Union (Convention)	165 496	126 837	89 438	24 023	29 624	12 916	448 334	438 349	-2.23	160 343	-3.11
Finland	21 894	2 489	241	6 448	1 460	1 311	33 843	33 842	-0.00	22 218	1.48
France (KP)	23 746	17 818	14 568	1 158	5 617	953	63 860				
France (Convention)	23 746	17 818	14 568	1 158	5 617	953	63 860	54 909	-14.02	16 763	-29.41
Germany	11 155	13 491	6 534	729	3 851	20	35 780	35 717	-0.18	11 415	2.33
Greece	3 456	3 467	5 166	301	535	272	13 198	13 196	-0.02	3 994	15.55
Hungary	2 061	5 175	1 221	263	581	2.5	9 303	9 303	-0.00	2 060	-0.08
Iceland	137	126	5 377	619	28	3 982	10 269	10 300	0.30	47	-65.89
Ireland	755	673	4 319	1 140	119	106	7 112	7 028	-1.18	743	-1.58
Italy	9 324	8 880	8 413	519	2 343	655	30 134	30 134	0.00	9 189	-1.44
Japan	25 114	4 307	948	1 338	3 807	2 284	37 797	37 796	-0.00	24 961	-0.61
Kazakhstan	125 480	35 854	187 210	NO	206	24 649	373 399	272 490	-27.02	3 309	-97.36
Latvia	3 299	1 716	737	446	254	5.4	6 457	6 449	-0.13	3 355	1.69
Liechtenstein	6.2	1.7	5.0	0.37	1.8	1.0	16	16	-0.44	6.9	11.96
Lithuania	2 197	2 155	1 471	342	352	11	6 528	6 530	0.04	2 176	-0.96
Luxembourg	96	62	74	1.2	26	0.055	259	259	0.15	87	-9.81
Malta	0.63	1.4	10	0.025	9.0	0.39	22	32	48.63	0.35	-44.36
Monaco											
Netherlands	398	954	1 323	825	614	37	4 151	4 150	-0.03	375	-5.86
New Zealand	9 916	477	14 729	685	225	894	26 925	26 771	-0.57	10 152	2.38
Norway	12 119	931	229	3 778	696	14 626	32 378	38 518	18.96	12 108	-0.09
Poland	9 383	14 011	4 153	1 366	2 250	105	31 268	31 268	0.00	9 393	0.11
Portugal	4 364	2 389	663	195	491	1 138	9 239	9 222	-0.19	3 205	-26.56
Romania	7 001	8 689	4 983	1 089	1 677	399	23 839	23 839	-0.00	6 723	-3.98
Russian Federation	898 425	91 529	128 813	225 238	10 117	358 871	1 712 995	1 709 825	-0.19	815 013	-9.28
Slovakia	2 017	1 532	865	94	234	161	4 904	4 904	0.00	1 940	-3.84
Slovenia	1 206	259	398	15	117	32	2 027	2 027	-0.01	1 248	3.42
Spain	15 359	20 070	12 276	419	1 364	1 164	50 651	50 594	-0.11	18 350	19.47
Sweden	28 400	2 856	489	7 197	1 865	4 309	45 116	44 742	-0.83	28 073	-1.15
Switzerland	1 252	398	1 383	188	322	587	4 129	4 129	-0.01	1 246	-0.44
Turkey	22 064	769	449	NE, NO	35	NE, NO	23 317	78 356	236.05	11 510	-47.83
Ukraine	10 631	34 883	7 848	3 403	2 550	1 034	60 349	60 355	0.01	9 613	-9.57
United Kingdom of Great Britain and Northern Ireland	2 669	4 798	15 519	174	1 974	291	25 425	24 361	-4.18	3 110	16.54
United States of America	272 690	163 686	268 839	5.3	10 699	NA	715 918	983 151	37.33	309 545	13.52

^a Source of international statistics: FAOSTAT data, downloaded on 30 May 2016 from <http://faostat3.fao.org/home/E>. At the time of download data for 2014 was not available, therefore, data for 2013 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 CO₂ 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 (2014)

	Solid waste disposal										Biological treatment of solid waste									
	CH ₄						CH ₄						N ₂ O							
	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	1.71	380	0.019	NO	NO	T1	CS	0.02	4.4	0.75	NO	T1	CS	0.00	0.46	0.007	NO	
Austria	NA	NA	1.84	164	0.33	NO	NO			0.10	9.2	1.8	43	NA	NA	0.12	11	0.25	NA, NO	
Belarus	T1	CS, D	9.17	889	NO	0.060	NE	NA	NA	–	–	NO	NO	NA	NA	–	–	NO	NO	
Belgium	T2	D	0.93	95	0.040	NO	NO	T1	CS	0.02	2.2	0.75	NO	T1	CS	0.03	3.4	0.096	NO	
Bulgaria	T2	CS, D	5.42	431	0.020	0.11	NO	T1	D	0.01	0.81	4.0	NO	T1	D	0.01	0.58	0.24	NO	
Canada	CS	CS	3.46	728	0.054	IE	0.37	T1	D	0.07	15	4.0	NA, NE	T1	D	0.07	14	0.30	NA, NE	
Croatia	T2	CS	5.19	281	0.042	0.028	NO	T1	D	0.02	0.88	4.0	0.80	T1	D	0.01	0.48	0.24	IE, NA	
Cyprus	NA	NA	5.43	538	IE, NO	IE	0.046	T1	D	0.08	7.7	4.0	NO	T1	D	0.06	5.5	0.24	NO	
Czech Republic	T1	CS, D	2.65	316	0.052	NO	NO	CS, D, T1	CS, D	0.49	59	4.0	IE, NE	T1	D	0.03	3.5	0.24	IE, NO	
Denmark (KP)	CS, T2	CS, D	1.61	147	0.013	NO	NO	CS, T1	CS, OTH	0.35	32	3.8	NO	CS, T1	CS, OTH	0.24	22	0.32	NA, NO	
Denmark (Convention)	CS, T2	CS, D	1.62	146	0.013	0.024	NO	CS, T1	CS, OTH	0.35	32	3.8	NO	CS, T1	CS, OTH	0.24	22	0.32	NA, NO	
Estonia	T2	D	1.04	166	0.30	NO	NO	T1	D	0.07	11	4.0	IE, NO	T1	D	0.05	7.9	0.24	IE	
European Union (KP)			2.52	1.6	0.044	0.24	0.16			0.09	0.057	2.4	76			0.07	0.044	0.23	0.041	
European Union (Convention)			2.51	1.6	0.044	0.24	0.16			0.09	0.057	2.4	76			0.07	0.044	0.23	0.041	
Finland	T2	CS, D	3.09	364 718	0.021	NO	NO	T1	D	0.13	14 951	5.6	1.2	T1	D	0.09	10 973	0.38	NA, NE	
France (KP)	NA	NA	3.12	0.22	0.040	NO	NO			0.06	0.004	1.1	2.8	NA	NA	0.11	0.007	0.22	NA	
France (Convention)	NA	NA	3.11	0.22	0.041	NO	NO			0.06	0.004	1.1	2.8	NA	NA	0.11	0.007	0.22	NO	
Germany	T2	CS	1.02	113	0.44	NO	NO	T2	CS	0.08	8.8	1.4	3.5	T2	CS	0.03	3.8	0.074	0.067	
Greece	T2	CS, D	3.14	278	0.022	0.38	NO	D	D	0.02	1.7	4.0	NO	D	D	0.02	1.6	0.30	NO	
Hungary	T2	D	5.85	339	0.050	IE, NO	NO	CS, T1	D	0.17	10	10	NE, NO	T1	D	0.06	3.4	0.60	NE, NO	
Iceland	T2	CS, D	5.05	706	0.056	0.045	NA	T2	CS, D	0.04	6.1	4.0	NO	T1	D	0.04	5.5	0.30	NO	
Ireland	T2	CS, D	2.16	273	0.11	NO	NO	T1	D	0.02	2.9	4.0	NO	T1	D	0.02	2.6	0.30	NO	
Italy	T2	CS	3.22	222	0.050	NO	NO	CS, D	CS, D	0.02	1.0	0.029	2.0	D	D	0.12	7.9	0.20	NA, NO	
Japan	T3	CS	0.24	26	0.23	NO	0.74	D, T1	D	0.03	2.8	10	NO	D, T1	D	0.02	2.0	0.60	NO	
Kazakhstan	NA	M	1.29	236	0.031	NO	0.036	NA	NA	–	–	–	NO	NA	NA	–	–	–	NO	
Latvia	T2	CS, D	4.65	264	0.024	NO	NO	D	D	0.20	11	4.0	NO	D	D	0.14	8.0	0.24	NO	
Liechtenstein	T2	CS	0.03	1.7	NO	NO	NO	CS	CS	0.75	41	17	NO	CS	CS	0.13	6.9	0.24	NO	
Lithuania	T2	D	4.36	285	0.056	0.15	NO	T1	D	0.11	7.0	4.0	NE, NO	T1	D	0.08	5.0	0.24	NO	
Luxembourg	T2	D	0.27	46	0.035	NO	NO	T1	D	0.05	8.8	4.0	NE, NO	T1	D	0.04	6.3	0.24	NE, NO	
Malta	M, T2	M, PS	4.74	329	0.022	NA	NO	T1	D	0.03	2.0	NO	0.80	NA	NA	–	–	NO	NA, NO	
Monaco																				
Netherlands	T2	CS	1.68	187	IE	NA, NO	NO	NA	NA	0.04	4.5	NO	NA	NA	NA	0.04	4.9	NO	NA	
New Zealand	T2	CS, D	4.58	816	0.017	0.015	NO	NA	NA	–	–	NE, NO	NO	NA	NA	–	–	NE	NO	
Norway	T2	D	2.20	229	11	NO	NO	T1	D	0.12	12	4.0	1.0	T1	D	0.10	10	0.30	NO	
Poland	T2	CS, D	2.25	222	0.033	NO	NO	T1	D	0.03	3.4	4.0	NA, NO	T1	D	0.02	2.4	0.24	NA, NO	
Portugal	T2	CS, D	5.74	357	0.039	NO	NA, NO	T1	D	0.04	2.5	4.0	1.0	T1	D	0.02	1.5	0.30	NO	
Romania	T2	CS, D	3.09	170	0.012	0.13	NA	T1	D	0.04	2.2	4.0	NO	T1	D	0.04	1.9	0.30	NO	
Russian Federation	T2	CS, D	2.88	561	0.051	0.024	NO	T1	D	0.00	0.33	8.0	NO	T1	D	0.00	0.29	0.60	NO	
Slovakia	T2	CS, D	2.58	193	0.021	0.14	NO	T1	D	0.21	16	4.0	NO	T1	D	0.19	14	0.30	NO	
Slovenia	T2	CS, D	1.98	159	0.063	NO	NO	T1	D	0.04	3.4	4.0	NO	T1	D	0.03	2.4	0.24	NO	
Spain	T2	CS, D, OTH	3.97	281	0.039	NO	NO	T1	D	0.13	9.0	4.0	6.3	T1	D	0.10	7.3	0.30	0.000	
Sweden	T2	CS, D	2.01	112	0.062	NO	NO	T1, T2	CS, D	0.15	8.6	11	114	T1	D	0.08	4.6	0.86	NA, NO	
Switzerland	CS, D	CS, D	0.75	45	NO	NO	NO	CS	CS	0.22	13	5.0	0.22	CS	CS	0.03	2.0	0.07	NO	
Turkey	T2	CS, D	2.54	155	0.027	IE, NO	NO	T1	D	0.00	0.12	4.0	NO	T1	D	0.00	0.11	0.30	NO	
Ukraine	T3	CS, D	1.86	146	0.019	0.024	NA	T1	D	0.00	0.15	4.0	NA	T1	D	0.00	0.13	0.30	NA	
United Kingdom of Great Britain and Northern Ireland	T2	CS	2.59	211	0.040	NO	NO	T2	D	0.14	12	10	3.3	T2	D	0.10	8.0	0.60	0.12	
United States of America	M	M	2.10	458	0.014	NA	NA	D	D	0.03	6.4	4.0	NE	D	D	0.03	5.7	0.30	NE	

^a The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 (2014)

	Activity data		Incineration and open burning of waste						Wastewater treatment and discharge												
			CO ₂				CH ₄		N ₂ O												
	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 ₂ O IEF				
	Population (million)				Waste incineration	Open burning of waste					Domestic	Industrial					Domestic	Industrial			
	CRF	World Bank ^d	Methods	EF	(%)	(kg CO ₂ eq.)	kg/t	kg/t	Methods	EF	(%)	(kg CO ₂ eq.)	kg/kg	kg/kg		(%)	(kg CO ₂ eq.)	kg N ₂ O-N/kg N	kg N ₂ O-N/kg N		
IPCC default EF ^e																					
Australia	23	23	T2	CS	0.01	1.3	1 440	NO	T2, T3	CS, D	0.48	107	0.073	0.071		CS	D	0.08	19	0.013	
Austria	8.5	8.5	NA	NA	0.00	0.24	2 030	NO	NA	NA	0.03	3.0	0.16	IE, NA, NO	NA	NA	0.21	19	0.030	IE	
Belarus	9.5	9.5	NA	NA	-	-	NO	NO	NA	NA	-	-	NE	NE		T1	D	0.25	24	0.010	NE
Belgium	11	11	T1, T3	PS	0.19	20	6 214	NO	CR, T1	CR, D	0.18	19	NE	NA	D	D	0.24	24	NE	NA	
Bulgaria	7.2	7.2	T1	D	0.02	1.6	1 570	NO	T2	D	1.71	136	0.15	0.054	T1	D	0.25	20	0.005	NA	
Canada	36	36	T1, T2	CS, D	0.06	12	377	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	0.011	882	NO	NO	T1, T2	D	0.91	49	0.36	0.090	T1	D	0.36	20	0.005	NA	
Cyprus	0.85	1.2	NA	NA	-	-	NO	NO	T1	D	0.21	20	0.032	0.008	OTH, T1	D, OTH	0.19	19	0.005	NE	
Czech Republic	11	11	T1	D	0.10	13	1 642	NO	T1, T2	CS, D	0.58	69	0.18	NE	T1	CS, D	0.16	19	0.005	NE	
Denmark (KP)	5.6		NA	NA	-	-	NO	NO	CS	CS	0.21	19	0.071	NO, IE	CS	CS	0.12	11	0.037	IE	
Denmark (Convention)	5.7	5.6	T1	CS	0.01	0.55	293	154	CS	CS	0.21	19	0.071	IE, NA, NO	CS, T1	CS, D	0.13	11	0.031	IE	
Estonia	1.3	1.3	T1, T2	D	0.00	0.75	1 932	344	T1	D	0.29	47	0.069	0.20	T1	D	0.14	23	0.005	NO	
European Union (KP)	66 621				0.08	0.053	606	40			0.47	0.30	0.10	0.058			0.17	0.11	0.005	0.012	
European Union (Convention)	66 621	508			0.08	0.052	607	30			0.47	0.30	0.10	0.058			0.17	0.11	0.005	0.012	
Finland	0.005	5.5	NA	NA	-	-	IE, NO	NE, NO	CS, T2	CS, D	0.29	34 479	0.046	0.001	CS, T1	D	0.13	15 162	0.005	0.005	
France (KP)	66 200		NA	NA	0.38	0.026	785	100			0.47	0.033	0.083	0.49			0.10	0.007	0.002	NA	
France (Convention)	66 767	66	NA	NA	0.37	0.026	785	100			0.46	0.033	0.084	0.49			0.10	0.007	0.002	NO	
Germany	81		NA	NA	-	-	NA, NO	NO	CS, D	CS, D	0.01	0.78	0.17	0.001	CS, D	CS, D	0.05	5.4	0.006	IE	
Greece	11	11	D	CS, D	0.00	0.27	140	NO	D	D	1.52	134	0.092	0.25	D	CS	0.32	28	0.005	IE	
Hungary	9.9	9.9	T2	D	0.35	20	2 043	NO	T1, T2	D	0.66	38	0.099	0.013	D	D	0.39	23	0.005	NE	
Iceland	0.33	0.33	T2	D	0.16	22	292	NO	T1	CS, D	0.09	13	0.024	IE, NO	T1	D	0.15	21	0.005	IE	
Ireland	4.6	4.6	T1	D	0.06	7.8	2 933	505	NA	NA	0.09	11	0.013	IE, NO	NA	NA	0.20	26	0.005	IE	
Italy	61	61	D	CS	0.05	3.8	983	NO	T1	D	0.60	41	0.15	0.25	T1	CR, D	0.32	22	0.005	1.0	
Japan	128	127	CS	CS	0.91	96	586	NO	CS	CS	0.12	13	NA	NA	CS	CS	0.08	8.8	NA	0.003	
Kazakhstan	17	17	NA	NA	-	-	NO	D	D	D	0.38	69	0.48	NA, NO	D	D	0.15	28	0.64	NE	
Latvia	2.0	2.0	D	D	0.00	0.28	1 141	NO	D	CS	2.18	124	0.100	0.065	D	D	0.15	8.3	0.002	0.000	
Liechtenstein	0.037	0.037	CS	CS	0.01	0.59	NO	255	CS	CS	0.47	26	NA	IE, NO	D	D	0.53	29	NA	IE, NO	
Lithuania	2.9	2.9	T1	D	0.01	0.67	1 008	NO	T1	D	1.15	75	0.093	IE, NA	T1	D	0.24	15	0.005	NA	
Luxembourg	0.63	0.56	NA	NA	-	-	IE, NO	NA	T1	CS	0.04	6.1	1.0	NO	T1, T3	D, PS	0.07	12	0.004	0.003	
Malta	0.43		T1	D	0.03	1.8	129	NO	D	CS	0.04	3.1	0.005	IE, NO	D	D	0.39	27	0.005	IE	
Monaco		0.038																			
Netherlands		17	NA	NA	-	-	IE, NA	NO	T2	CS	0.11	12	0.052	0.002	T1	D	0.04	4.2	0.008	NE	
New Zealand	4.6	4.5	D	D	0.00	0.41	4.4	NO	T1	CS	0.30	53	0.036	0.016	CS, T1	CS, D	0.16	28	0.005	0.017	
Norway	5.1	5.1	D	OTH	-	-	IE, NO	NE, NO	T1	CS, D	0.12	12	NE	NE	CS, T1	CS, D	0.26	27	0.014	NE	
Poland	38	38	T1, T2	CS, D	0.14	14	845	NA	T1	CS, D	0.18	17	0.064	0.031	T1	NA	0.19	19	0.005	NA	
Portugal	10	10	T1, T2	CS, D	0.04	2.5	1 068	NO	T2	CS, D	4.50	280	0.16	0.035	T2	CS, D	0.62	39	0.005	NE	
Romania	20	20	D	D	0.01	0.44	291	NO	D	D	1.60	88	0.14	0.016	D	D	0.47	26	0.005	NE	
Russian Federation	144	144	NA	NA	-	-	IE	NO	T1, T2	CS, D	1.00	195	0.41	0.078	T2	CS, D	0.11	21	0.003	NE	
Slovakia	5.4	5.4	T2	CS, D	0.02	1.1	25	NO	CS, T2	D	0.76	57	0.27	0.025	CS, T2	CS, D	0.12	9.1	0.005	0.007	
Slovenia	2.1	2.1	T1, T2	D	0.08	6.7	1 610	NO	T1	CS, D	0.55	44	0.10	0.013	T1	D	0.29	24	0.005	NA	
Spain	46	46	NA	NA	-	-	IE, NO	NO	T1, T2	CS, D	0.27	19	0.045	0.11	D	D	0.29	21	0.005	NE	
Sweden	9.7	9.7	NE	NE	0.11	5.9	229	NE	T2	CS	0.05	2.8	0.21	1.6	T1	CS, D	0.38	21	0.020	0.005	
Switzerland	8.2	8.2	CS	CS	0.02	1.2	70	NO	CS, D	CS, D	0.36	21	0.22	IE	CS	CS	0.30	18	0.005	IE	
Turkey	77	76	T2	CS, D	0.00	0.001	IE, NO	21	T2	CS	0.50	31	0.076	0.013	T1	D	0.40	24	0.005	IE	
Ukraine	45	45	T1, T2	CS, D	0.00	0.32	191	NA	T2	CS, D	0.87	69	0.10	0.048	CS, T1	CS, D	0.31	24	0.006	0.005	
United Kingdom of Great Britain and Northern Ireland	65	65	T1, T2	CS, D	0.06	4.7	602	261	CS, T1	CS, D	0.65	53	0.020	0.18	T1	D	0.08	6.4	0.003	NE	
United States of America	323	319	NA	NA	-	-	IE, NA	NA	D	CS, D	0.21	46	0.11	0.028	D	CS, D	0.07	15	0.005	NA	

^a Source of population data: World Bank <http://databank.worldbank.org/data/home.aspx>, downloaded 10 May 2016.^b The national total includes indirect CO₂ emissions from the atmospheric oxidation of CH₄, CO and NMVOCs for the following Parties: Canada, Czech Republic, Denmark (KP), Denmark (Convention), European Union (KP), European Union (Convention), Finland, France (KP), France (Convention), Ireland, 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 6.1Selected 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	-0.99
Austria	30	2	0.05					X	CP	22.08	-0.69
Belarus											
Belgium	20	5	0.5					X	CP	20.45	-2.50
Bulgaria	10	5	0.1					X	CP	34.06	-8.15
Croatia	10	2	0.1					X	CP		-5.38
Cyprus	10	5	0.3					X	CP	1.557	-0.16
Czech Republic	30	2	0.05					X	CP		-4.69
Denmark (KP)	10	5	0.5	X	X			X	Annually		0.33
Estonia	30	2	0.5					X	CP	11.19	-2.74
European Union (KP)											
Finland	10	5	0.5					X	CP	19.98	-31.44
France (KP)	10	5	0.5					X	CP	153.47	-45.62
Germany	10	5	0.1	X	X			X	CP	349.96	-22.42
Greece	25	2	0.3					X	CP		-1.66
Hungary	30	5	0.5					X	Annually	30.68	-1.04
Iceland	10	2	0.5			X		X			
Ireland	20	5	0.1	X	X			X	CP		-0.14
Italy	10	5	0.5	X	X			X	CP	146.14	-22.17
Japan	30	5	0.3	X	X	X		X			
Kazakhstan											
Latvia	20	5	0.1					X	CP	7.35	-6.38
Liechtenstein	20	3	0.06					X	CP	0.06	0.00
Lithuania	30	5	0.1					X	CP	13.19	-5.34
Luxembourg	10	5	0.5								
Malta											
Monaco	10	5	0.5								
Netherlands	20	5	0.5					X	CP		-1.43
New Zealand	30	5	1					X			
Norway	10	5	0.5	X	X			X	CP	14.54	-13.01
Poland	10	2	0.1					X	CP	162.36	-27.13
Portugal	10	5	1	X	X			X	CP	16.95	-3.39
Romania	10	5	0.25			X		X	CP		-15.79
Russian Federation	18	5	1					X			
Slovakia	20	5	0.3					X	CP		-1.08
Slovenia	30	2	0.25					X	CP	5.69	-3.17
Spain	20	3	1	X				X	CP		-23.10
Sweden	10	5	0.5					X	CP	20.15	-34.07
Switzerland	20	3	0.06					X	CP	15.04	-1.68
Ukraine	30	5	0.1					X	CP		-62.14
United Kingdom of Great Britain and Northern Ireland	20	2	0.1	X	X		X	X	CP		-13.93

^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 and subsequently reviewed under Article 8 of the Kyoto Protocol and recorded in the compilation and accounting database, or included in a decision of the COP/MOP. These parameters are fixed for the second commitment period under the Kyoto Protocol.

^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.

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 ^d							Change in carbon pool reported ^b							Greenhouse gas sources reported ^d																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		HWP ^e	Fertilization ^f	Drained, rewetted and other soils ^g		Nitrogen mineralization in mineral soils ^h	Indirect N ₂ O emissions from managed soil ⁱ	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 ^h	Indirect N ₂ O emissions from managed soil ⁱ	Biomass burning ^j																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
					Mineral	Organic ^d			N ₂ O	CH ₄ ^h			N ₂ O	N ₂ O	CO ₂ ^h					CH ₄	N ₂ O			Mineral	Organic ^d			N ₂ O	CH ₄ ^h	N ₂ O	N ₂ O	CO ₂ ^h	CH ₄	N ₂ O																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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^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 CO₂ emissions/removals from organic soils, including CO₂ emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO₂ emissions/removals from drainage and rewetting from organic soils and off-site CO₂ 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 N₂O 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 CH₄ and N₂O 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 CH₄ emissions from drained soils and drainage ditches should be reported here, as appropriate.ⁱ N₂O 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 CO₂ emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO₂ 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 ^f	Fertilization ^f	Drained, rewetted and other soils ^g	Nitrogen mineralization in mineral soils ^h	Indirect N ₂ O emissions from managed soil ⁱ	Biomass burning ^j			Above-ground biomass	Below-ground biomass	Litter	Deadwood	Soil		Drained, rewetted and other soils ^g	Nitrogen mineralization in mineral soils ^h	Biomass burning ^j					
					Mineral	Organic ^d													Mineral	Organic ^d								
								N ₂ O	CH ₄ ^k	N ₂ O	N ₂ O	N ₂ O	CO ₂ ^k	CH ₄	N ₂ O						CH ₄ ^k	N ₂ O	CO ₂ ^k	CH ₄	N ₂ O			
Australia	R	R		R	R		IE	R	IE	NA	NA	R	IE	R	R	R	R	R	R	R	IE	NA	R	R	R	R	R	
Austria																												
Belarus																												
Belgium	R	R		R	R		NO	R	NO	NO	NO	R	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bulgaria	R	IE		NO	NO	NO	NO	R	NO	NO	NO	NO	NO	IE	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Croatia	R	IE		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	IE	R	R	R	IE	NO	NO	R	R	IE	NO	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)																												
Finland	R	R		IE	IE	R	R	R	IE, R	NO, R	NO, R	NO	NO	R	R	R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France (KP)																												
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	IE	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	R	R		R	NE	R	R	NE	NO	R	R	NE	NE	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
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																												
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	NO	NO	NO	NO	NO	NO	NO	
Malta																												
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	NE, R	NE, R	NO, R	NO, R	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	R	R	NO	R	IE	NO	NO	R	IE	R	R	R	R	R	NO	NO	R	R	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	NR	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Switzerland	R	R		R	R	R	R	R	NO	NA	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	R	IE		R	IE	R	R	R	NO	NE	R	R	NO	R	R	R	R	IE	NE	NE	R	NO	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 CO₂ emissions/removals from organic soils, including CO₂ emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO₂ emissions/removals from drainage and rewetting from organic soils and off-site CO₂ 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 N₂O 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 CH₄ and N₂O 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 CH₄ emissions from drained soils and drainage ditches should be reported here, as appropriate.

ⁱ N₂O 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 CO₂ emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO₂ 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 ⁱ	Drained, rewetted and other soils ^e	Nitrogen mineralization in mineral soils ^g	Indirect N ₂ O emissions from managed soil ^j	Biomass burning ^h			
					Mineral	Organic ^d										Mineral	Organic ^d								
							CH ₄ ^f	N ₂ O	CO ₂ ⁱ	CH ₄	N ₂ O							N ₂ O	CH ₄ ^f	N ₂ O	N ₂ O	N ₂ O	CO ₂ ⁱ	CH ₄	N ₂ O
Australia	R	R		R		R	IE	NA	R	R	R														
Austria																									
Belarus																									
Belgium	NA	NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	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	NO	NE	NE	NE	NE	NR	NR	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	R	IE		NO		NO	R	R	IE	IE	R	R	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
European Union (KP)																									
Finland	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)																									
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
Greece	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
Iceland	NA	NA		NA		NA	NA	NA	NA	NA	NA	NA	R	IE	IE	NO	R	NO	R	NO	NO	NO	NO	NE	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
Italy	NO	NO		NO		NO	R	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	R	R		NR		NR	R	R	R	NO	NO	NO	R	R	R	IE	R	NO	IE	NO	NO	NA	NO	NO	NO
Kazakhstan																									
Latvia	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
Lithuania	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	NO	NO	NO	NR	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	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
Norway	R	R		NO, R		NO, R	R	R	NE, R	R	IE, NO	NE, NO	NE, NO	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	R	R		R		NO	R	NO	NO	R	R	R	R	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	NO	R	NO	NO	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
Slovakia	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
Spain	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
Switzerland	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
United Kingdom of Great Britain and Northern Ireland	R	IE		NE		NE	R	NO	NE	R	NE	R	R	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 CO₂ emissions/removals from organic soils, including CO₂ emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO₂ emissions/removals from drainage and rewetting from organic soils and off-site CO₂ 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 CH₄ and N₂O 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 CH₄ emissions from drained soils and drainage ditches should be reported here, as appropriate.^g N₂O 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^h Emissions from burning of organic soils should also be included here, as appropriate.ⁱ If CO₂ emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO₂ emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).^j N₂O 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 ₂ O emissions from managed soil ^g	Biomass burning ^j		
					Mineral	Organic ^d							
							N ₂ O	CH ₄ ^h	N ₂ O	N ₂ O	CO ₂ ⁱ	CH ₄	N ₂ O
Australia													
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
Croatia	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
Cyprus	NR	NR	NR	NR	NR		NO	NE	NE	NE	NE	NE	NE
Czech Republic	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)													
Finland	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
France (KP)													
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	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
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													
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	NR		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	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	NR	NR	NR	NR	NR		NR	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), 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 CO₂ emissions/removals from organic soils, including CO₂ emissions from dissolved organic carbon associated with drainage and rewetting. On-site CO₂ emissions/removals from drainage and rewetting from organic soils and off-site CO₂ 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 N₂O 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 CH₄ and N₂O 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 CH₄ emissions from drained soils and drainage ditches should be reported here, as appropriate.

^h N₂O 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 CO₂ emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning. Parties that include CO₂ 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 2014^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 ^e	Net CSC in dead wood ^e	Net CSC in soil ^e		Total	Mineral Soils	Organic Soil ^b
	(kha)			Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic ^{e, f}	(kha)		
Australia	3 190	3 190	IE, NA	0.47	IE, NA	0.47	0.17	IE, NA	0.17	0.12	0.14	-0.27	NA, NO	NA	NA	NA
Austria	211	211	NO	1.4	-0.45	0.96	0.36	-0.097	0.26	0.89	0.016	0.53	NO			
Belarus																
Belgium	38	38	NA, NO	1.8	NA, NO	1.8	0.35	NA, NO	0.35	NA, NO	NA, NO	1.4	NA, NO	NA	NA	NA
Bulgaria	251	251	NO	2.5	-0.30	2.2	IE, NO	IE, NO	IE, NO	0.23	NO	-1.0	NO	NO	NO	NO
Croatia	52	52	NA, NO	1.3	-0.75	0.53	NA, IE	NA, IE	NA, IE	NA, IE	NA, NO	0.72	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	55	55	NO	1.7	NO	1.7	0.35	NO	0.35	0.50	0.007	0.12	NO	NO	NO	NO
Denmark (KP)	87	77	9.4	0.29	-0.035	0.26	0.046	IE	0.046	0.15	0.001	0.089	-1.3			
Estonia	34	26	8.1	1.4	IE, NO	1.4	0.57	IE, NO	0.57	0.30	-0.003	-0.55	-0.48	NO	NO	NO
European Union (KP)																
Finland	170	104	66	1.1	-0.008	1.1	0.38	-0.003	0.38	IE	IE	0.092	-1.5			
France (KP)	1 433	1 433	IE, NO	1.3	-0.21	1.1	0.47	IE, NO	0.47	0.17	0.032	0.18	IE, NO	NO	NO	NO
Germany	520	476	44	3.0	-0.17	2.9	0.61	-0.089	0.52	0.47	0.034	-0.27	-2.2	NA	NA	NA
Greece	33	33	NO	2.0	-1.1	0.93	0.38	-0.21	0.17	NA, NE	NA, NE	NA, NE	NA	NO	NO	NO
Hungary	173	173	NA, NO	1.4	-0.033	1.3	0.34	-0.002	0.34	NA, NE	NA, NE	NA, NE	NA, NO	NA	NA	NA
Iceland	43	40	3.1	0.70	IE, NO	0.70	0.18	IE, NO	0.18	0.16	NO	0.40	-0.49	NO	NO	NO
Ireland	305	137	168	4.0	-2.3	1.7	0.90	-0.19	0.71	0.78	0.27	NA, NO	-0.73	NA	NA	NA
Italy	1 860	1 860	NO	2.1	-1.3	0.82	0.44	-0.27	0.16	0.015	0.009	0.15	NA, NO	NO	NO	NO
Japan	35	35	NA, NO	2.3	0.000	2.3	0.60	-0.001	0.60	0.24	0.83	0.080	NA, NO	NA	NA	NA
Kazakhstan																
Latvia	41	40	0.80	0.47	-0.16	0.31	0.11	-0.036	0.071	0.081	0.097	NA, NO	2.6	NA	NA	NA
Liechtenstein	0.036	0.036	NO	1.3	NO	1.3	0.42	NO	0.42	NO	NO	0.38	NO	NO	NO	NO
Lithuania	41	35	6.5	1.2	IE, NA	1.2	0.28	IE, NA	0.28	1.1	NA, NO	-0.63	-2.2	NA	NA	NA
Luxembourg	8.8	8.8	NO	3.1	-0.037	3.1	0.62	IE, NO	0.62	0.58	0.17	1.0	NO	NO	NO	NO
Malta																
Monaco																
Netherlands	NO	NO	NO	NO	NO	NO	NO	NO	NO			NO	NO	NO	NO	NO
New Zealand	646	644	1.8	7.1	-0.19	6.9	1.5	-0.053	1.4	-0.195	-0.311	-0.41	-0.68			
Norway	57	51	6.1	0.64	-0.089	0.55	0.20	-0.027	0.17	2.2	0.022	-0.53	-0.93			
Poland	721	703	18	0.82		0.82	0.22	NO	0.22	NO	NO	0.062	-0.68			
Portugal	604	604	NO	2.1	-0.36	1.7	0.41	-0.17	0.24	-0.008	IE	0.26	NO	NO	NO	NO
Romania	32	32	IE, NO	1.8	IE, NO	1.8	IE, NO	IE, NO	IE, NO	0.050	IE, NO	1.1	IE, NO	NO	NO	NO
Russian Federation	578	578	NO	1.9	-0.62	1.3	0.46	-0.15	0.31	0.041	0.29	0.50	NO	NO	NO	NO
Slovakia	39	39	NA, NO	1.1	NA, NO	1.1	0.25	NA, NO	0.25	0.41	NA, NO	1.3	NA, NO	NA	NA	NA
Slovenia	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO
Spain	NA	1 235	NA, NO	NA	IE, NA	NA	IE, NA	IE, NA	IE, NA	NA	NA	0.54	NA, NO	NA	NA	NA
Sweden	336	309	27	0.89	IE, NO	0.89	0.30	IE, NO	0.30	0.30	0.025	-0.15	-2.5	NO	NO	NO
Switzerland	2.5	2.5	0.012	2.1	-1.1	0.97	0.69	-0.29	0.40	-0.078	-0.001	0.44	-2.6			
Ukraine	302	302	NA, NO	0.50	-0.007	0.49	0.11	IE, NA, NO	0.11	0.17	0.066	0.061	NA, NO	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	351	324	27	1.5	-0.10	1.4	IE, NA	IE, NA	IE, NA	0.093	IE, NA	1.00	2.3	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 CO₂ 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 CO₂ 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 CO₂ emissions from dissolved organic carbon from drained and CO₂ 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 2014**

	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	8 603	8 603	IE, NO	IE, NO	-0.32	-0.32	IE, NO	-0.138	-0.14	-0.077	-0.22	-0.28	IE, NO	NO	NO	NO
Austria	72	72	NO	0.21	-0.90	-0.69	0.052	-0.222	-0.17	-0.54	0.0004	-0.57	NO			
Belarus																
Belgium	27	27	NA, NO	NA, NO	-1.1	-1.1	NA, NO	-0.22	-0.22	0.010	-0.11	-1.6	NA, NO	NA	NA	NA
Bulgaria	4.4	4.4	NO	0.034	-1.9	-1.8	IE, NO	IE, NO	IE, NO	-0.19	-0.094	-3.3	NO	NO	NO	NO
Croatia	4.4	4.4	NA, NO	0.68	-0.27	0.42	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	-2.9	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	-2.7	-2.7	NA, NO	-0.54	-0.54	-0.37	-0.075	-0.041	NA, NO	NO	NO	NO
Denmark (KP)	3.4	3.2	0.16	0.55	-6.2	-5.7	IE, NO	-1.2	-1.2	-1.9	-0.17	0.099	-6.0	NO	NO	NO
Estonia	21	16	4.3	IE, NA	-1.7	-1.7	IE, NA	-0.40	-0.40	-1.0	-0.064	-0.69	-0.80	NA	NA	NA
European Union (KP)																
Finland	384	297	87	0.047	-1.0	-0.96	0.017	-0.30	-0.29	IE	-0.013	-0.36	-5.0			
France (KP)	1 081	1 081	IE	NO	-1.5	-1.5	NO	-0.35	-0.35	-0.17	-0.055	-0.63	IE	NO	NO	NO
Germany	279	259	20	0.29	-1.3	-1.0	0.11	-0.23	-0.12	-0.52	-0.056	0.15	-4.9	NA	NA	NA
Greece	5.2	5.2	NO	NA, NO	-0.082	-0.08	NA, NO	-0.031	-0.031	-0.032	-0.004	-2.2	NA, NO	NO	NO	NO
Hungary	11	11	NO	IE, NO	-1.6	-1.6	IE, NO	-0.41	-0.41	-0.47	-0.14	-0.83	NO	NO	NO	NO
Iceland	0.049	0.049	NO	NO	IE, NO	IE, NO	NO	IE, NO	IE, NO	NO	IE, NO	-0.61	NO	NO	NO	NO
Ireland	17	10	6.8	0.003	-0.64	-0.64	0.014	-0.14	-0.12	-0.080	-0.027	-0.37	-1.1	NA	NA	NA
Italy	48	48	NO	NA, NO	-3.6	-3.6	NA, NO	-0.76	-0.76	-0.23	-0.11	-6.4	NA, NO	NO	NO	NO
Japan	359	358	0.60	0.001	-0.80	-0.79	0.004	-0.21	-0.20	-0.15	-0.36	-0.11	NA, NO	NA	NA	NA
Kazakhstan																
Latvia	51	37	14	NO	-2.9	-2.9	NO	-0.65	-0.65	-0.70	-0.73	-0.75	-5.9	NO	NO	NO
Liechtenstein	0.17	0.17	NO	0.42	-3.7	-3.3	0.14	-1.2	-1.1	-0.82	-0.43	-1.2	NO	NO	NO	NO
Lithuania	2.0	1.7	0.31	IE, NO	-12.9	-12.9	IE, NO	-3.0	-3.0	-5.0	-0.67	-15	-15	NO	NO	NO
Luxembourg	5.8	5.8	NO	0.073	-0.72	-0.65	IE, NA	-0.16	-0.16	-0.13	-0.038	-1.0	NO, NA	NO	NO	NO
Malta																
Monaco																
Netherlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
New Zealand	182	182	0.77	0.090	-6.9	-6.8	0.19	-1.5	-1.3	-0.39	-0.36	0.54	-2.3	NA	NA	NA
Norway	146	135	10	0.054	-1.1	-1.0	0.017	-0.30	-0.29	-2.4	-0.20	0.19	-7.9			
Poland	17	17	NO	NO	-1.9	-1.9	NO	-0.38	-0.38	-0.001	-0.007	-1.8	NO			
Portugal	355	355	NO	0.078	-0.37	-0.29	0.042	-0.079	-0.037	-0.025	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	NO	NA	NA
Russian Federation	15	15	IE, NO	NO	-48	-48	NO	-13	-13	-9.2	-13	-21	NO	NO	NO	NO
Slovakia	8.4	8.4	NA, NO	NA, NO	-1.5	-1.5	NA, NO	-0.33	-0.33	-0.15	-0.087	-0.025	NA, NO	NA	NA	NA
Slovenia	26	26	NO	NO	-3.1	-3.1	NO	-0.28	-0.28	-0.34	-0.15	-1.6	NA	1.7	1.7	NO
Spain	NA	111	NA, NO	IE, NA, NO	NA	NA	NA, NO, IE	NA, NO, IE	NA, NO, IE	NA	NA	-0.34	NA, NO	NA	NA	NA
Sweden	284	272	12	IE, NO	-0.77	-0.77	IE, NO	-0.26	-0.26	-1.1	0.001	-0.80	-1.3	NO	NO	NO
Switzerland	6.2	6.1	0.025	0.000	-2.9	-2.9	0.000	-0.90	-0.90	-1.0	-0.23	-0.99	-6.1			
Ukraine	50	50	NA, NO	NA, NO	-0.027	-0.027	NA, NO	-0.009	-0.009	0.000	0.000	-0.009	NA, NO	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	54	54	IE, NA, NO	0.001	-1.59	-1.6	IE, NA, NO	IE, NA, NO	IE, NA, NO	-0.25	IE, NA, NO	-1.6	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 CO₂ emissions from dissolved organic carbon from drained and CO₂ 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 2014^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-he)			Area subject to natural disturbances		
	Total	Mineral Soils	Organic Soil	CSC in above-ground biomass ^{b,c}			CSC in above-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	10 976	10 976	IE, NA	0.54	IE, NA	0.54	0.13	IE, NA	0.13	-0.10	-0.24	0.018	IE, NA	NA	NA	NA	NA	NA	NA	IE	IE	NA
Austria	3 813	3 813	NA, NO	1.9	-1.7	0.26	0.45	-0.42	0.032	NA, NE, NO	0.057	-0.18	NA, NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Belarus																						
Belgium	687	687	NA, NO	0.92	-0.13	0.79	0.057	-0.026	0.031	0.004	-0.012	0.53	NA	NA	NA	NA	NA	NA	NA			
Bulgaria	3 619	3 619	NO	0.55	IE, NO	0.55	IE, NO	IE, NO	IE, NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Croatia	2 310	2 310	NA, NO	1.7	-1.0	0.74	IE, NA	IE, NA	IE, NA	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	2 611	2 592	19	2.4	-1.8	0.60	0.49	-0.37	0.12	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Denmark (KP)	528	502	26	1.2	IE, NA	1.2	0.26	IE, NA	0.26	0.39	0.13	NA, NO	-1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estonia	2 276	465	1 811	IE, NA	-0.017	-0.017	IE, NA	IE, NA	IE, NA	NE, NA	-0.012	0.61	-0.044	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)																						
Finland	21 692	15 801	5 891	1.3	-1.0	0.28	0.35	-0.30	0.053	IE, NA, NO	IE, NA, NO	0.16	-0.30	NA	NA	NA	NA	NA	NA	NO	NO	NO
France (KP)	21 553	21 553	IE	1.4	-0.85	0.59	0.41	-0.21	0.21	0.001	-0.034	-0.003	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
Germany	10 635	10 534	101	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	1 768	1 761	6.5	0.38	IE, NA	0.38	0.13	IE, NA	0.13	NE, NA	NE, NA	NE, NA	-2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	94	93	0.49	0.19	-0.014	0.18	0.047	IE, NE	0.047	0.006	IE, NO	0.015	-0.37	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ireland	449	181	268	4.3	-5.1	-0.78	1.1	-0.61	0.51	0.47	0.093	NA, NO	-0.47	NO	NO	NO	NO	NO	NO	NA	NA	NA
Italy	7 464	7 464	NA, NO	2.3	-1.4	0.89	0.47	-0.29	0.18	0.002	0.001	NA, NE, NO	NA, NO	NA	NA	NA	NA	NA	NA	NO	NO	NO
Japan	16 088	16 042	46	0.70	-0.024	0.68	0.18	-0.006	0.17	0.004	-0.036	0.024	NA, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan																						
Latvia	3 258	2 772	486	2.1	-2.1	0.036	0.48	-0.47	0.008	NA, NO	0.31	NA, NO	-2.6	NO	NO	NO	NO	NO	NO	NA	NA	NA
Liechtenstein	6.1	6.1	NO	1.7	-1.9	-0.17	0.56	-0.62	-0.057	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	2 156	1 818	339	0.92	IE, NA, NO	0.92	0.22	IE, NA, NO	0.22	0.043	0.078	NA, NO	-1.5	IE	IE	IE	NO	NO	NO	NA	NA	NA
Luxembourg	87	87	NO	2.5	-1.6	0.92	0.54	-0.34	0.20	NO	0	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Malta																						
Monaco																						
Netherlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO			
New Zealand	9 270	9 252	18	0.99	-0.92	0.065	0.22	-0.19	0.022	-0.005	0.097	0.000	-0.11	NO	NO	NO	NO	NO	NO	NA	NA	NA
Norway	12 063	11 345	718	0.74	-0.29	0.45	0.19	-0.074	0.11	0.11	0.023	0.003	-0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA
Poland	8 661	8 424	238	0.71	IE, NA, NO	0.71	0.19	IE, NA, NO	0.19	NA, NO	NA, NO	0.11	-0.68	NO	NO	NO	NO	NO	NO	NA	NA	NA
Portugal	3 760	3 760	NO	1.6	-1.2	0.44	0.33	-0.15	0.18	-0.003	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	618 008	616 058	1 950	0.28	-0.073	0.21	0.078	-0.038	0.040	0.004	0.023	0.007	-0.71	IE	IE	IE	NO	NO	NO	NA	NA	NA
Slovakia	1 985	1 985	NA, NO	2.1	-1.6	0.48	0.42	-0.32	0.099	NA, NO	NA, NO	NA, NO	NA, NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Slovenia	1 067	1 066	0.72	1.3	IE, NA	1.3	0.29	IE, NA	0.29	NA, NO	-0.001	NA, NO	NA, NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Spain	NA, NO	14 439	NA, NO	NA, NO	IE, NA, NO	NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	NA, NO	NA, NO	-0.002	NA, NO	NO	NO	NO	NO	NO	NO	NA	NA	NA
Sweden	28 393	24 626	3 768	0.27	IE, NO	0.27	0.092	IE, NO	0.092	-0.071	0.083	0.14	-0.38	NO	NO	NO	NO	NO	NO	NO	NO	NO
Switzerland	1 251	1 247	3.7	2.2	-1.8	0.42	0.63	-0.53	0.10	-0.14	0.004	0.001	-2.7									
Ukraine	9 354	9 161	193	1.7	-0.36	1.3	0.25	IE, NA	0.25	0.022	0.32	NA, NO	-0.68	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	2 321	2 096	225	2.5	-1.4	1.2	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.24	IE, NA, NO	0.20	0.68	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

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

^e CO₂ emissions from dissolved organic carbon from drained and CO₂ 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 2014^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	42 286	42 286	IE	0.001	0.000	0.001	0.001	IE	0.001	-0.001	0.000	0.006	IE, NO
Austria	NO												
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)	2 564	2 474	90	0.11	-0.10	0.003	0.023	-0.048	-0.025	NO	NO	-0.14	-7.3
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)													
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	14 616	14 209	408	0.019	-0.015	0.005	0.006	-0.011	-0.005	IE, NO	IE, NO	-0.053	-7.5
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	NA												
Ireland	675	675	NO	0.036	-0.033	0.003	IE	IE	IE	NO	NO	-0.002	NO
Italy	8 863	8 863	NO	0.000	-0.069	-0.069	IE, NO	IE, NO	IE, NO	NA	NO	NO	NO
Japan	3 904	3 729	175	0.000	-0.006	-0.006	0.000	-0.004	-0.004	NA	NA	-0.19	-2.4
Kazakhstan													
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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													
New Zealand													
Norway	937	877	60	0.000	-0.003	-0.003	0.000	-0.001	-0.001	NO	NO	-0.001	-8.1
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	2 337	2 337		0.032	-0.018	0.013	0.010	-0.010	-0.001	-0.003	IE	-0.041	
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	20 164	20 164	NO	IE	-0.014	-0.014	IE	IE	IE	0.000	0	0.010	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	5 178	5 085	93	0.003	-0.007	-0.004	NE,IE	NE,IE	NE,IE	NE	NE	-0.39	NE,NO

^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	42 286	42 286	IE	0.000	IE	0.000	IE	IE	IE	IE, NA	IE, NA	IE, NA	IE, NO
Austria	NO												
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)	2 753	2 632	121	0.036	-0.037	-0.001	0.007	-0.009	-0.002	NO	NO	-0.15	-9.3
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)													
Finland													
France (KP)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Germany	14 092	13 777	315	0.013	-0.018	-0.005	0.005	-0.011	-0.006	IE, NO	IE, NO	-0.053	-7.7
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary													
Iceland	NA												
Ireland	698	698	NO	0.034	-0.035	-0.001	IE	IE	IE	NO	NO	0.003	NO
Italy	10 704	10 704	NO	0.003	-0.021	-0.018	IE, NO	IE, NO	IE, NO	NA	NO	NO	NO
Japan	4 597	4 406	190	0.000	-0.010	-0.010	0.0001	-0.007	-0.007	NA	NA	-0.506	-2.4
Kazakhstan													
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													
New Zealand													
Norway	938	880	58	0.000	-0.003	-0.002	0.000	-0.001	-0.001	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		0.016	-0.004	0.012	0.003	-0.002	0.002	-0.029	IE	-0.29	
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	20 999	20 999	NO	0.016	IE	0.016	IE	IE	IE	-0.000	0	-0.002	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	5 427	5 334	93	0.001	-0.013	-0.013	NE,IE	NE,IE	NE,IE	NE	NE	-0.004	NE,NO

^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 2014^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	561 469	561 469	IE	0.004	-0.002	0.002	0.000	IE	0.000	-0.000	-0.000	0.001	IE
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)	348	327	21	0.08	-0.39	-0.32	0.21	-0.28	-0.065	NO	NO	-0.01	-8.4
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)													
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	6 350	5 353	997	0.014	-0.023	-0.009	0.011	-0.008	0.003	IE, NO	IE, NO	0.087	-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	NA												
Ireland	4 296	3 917	378	0.001	0.000	0.000	IE, NO	NO	IE, NO	NO	NO	0.009	-4.1
Italy	404	404	NO	NO	NO	NO	NO	NO	NO	NO	NO	0.46	NO
Japan	608	568	40	0.001	IE, NO	0.001	0.004	IE, NO	0.004	NA	NA	0.055	-0.19
Kazakhstan													
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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													
New Zealand													
Norway	214	210	4.4	0.086	-0.028	0.058	0.033	-0.011	0.022	NO	NO	-0.067	-5.9
Poland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	597	597	NO	0.021	-0.037	-0.017	0.018	-0.023	-0.004	-0.006	IE	0.039	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	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	14 236	14 111	124	0.007	-0.002	0.005	IE, NE	IE, NE	IE, NE	NE	NE	0.051	NE

^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	564 613	564 613	IE	0.002	-0.002	0.000	IE	IE	IE	IE	IE	IE, NA	IE
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)	411	388	23	0.011	-0.055	-0.043	0.030	-0.046	-0.016	NO	NO	0.00	-8.4
Estonia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
European Union (KP)													
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	-0.039	-0.015	0.019	-0.014	0.005	IE, NO	IE, NO	0.11	-6.8
Greece	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary													
Iceland	NA												
Ireland	3 865	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	NO	NO	0.31	NO
Japan	647	607	40	0.005	IE	0.005	0.020	IE	0.020	NA	NA	-0.39	-0.19
Kazakhstan													
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													
New Zealand													
Norway	230	225	4.5	NO	NO	NO	NO	NO	NO	NO	NO	0.032	-6.1
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	-0.064	IE	-0.65	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	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	14 371	14 246	124	0.005	-0.006	-0.001	NE,IE	NE,IE	NE,IE	NE	NE	0.000	NE

^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 2014^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	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)													
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	256838 598 666 677	256838 598 666 677	NO	0.000	IE	0.000	IE	IE	IE	IE	NO	0.000	NA
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Italy													
Japan	83	81	2.0	2.5	-0.008	2.5	0.64	-0.002	0.64	0.043	IE	0.92	NO
Kazakhstan													
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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													
New Zealand													
Norway		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	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	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)													
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													
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													
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													
New Zealand													
Norway		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	92	92	NO	3.0	IE	3.0	IE	IE	IE	0.073	NO	2.1	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	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(j)**Wetland drainage and rewetting - area and implied carbon stock change factors from the change in carbon stocks for 2014^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													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)													
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	NA												
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA
Italy													
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan													
Latvia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
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													
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
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	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	
				Gains	Losses	Net change	Gains	Losses	Net change			Mineral	Organic ^d
	(kha)												
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria													
Belarus													
Belgium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)													
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													
Japan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kazakhstan													
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													
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
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
United Kingdom of Great Britain and Northern Ireland	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 6.4**Direct and indirect N₂O emissions from N fertilization for 2014^{a, b}**

	Afforestation and Reforestation	Deforestation ^c	Forest management	Revegetation	Wetland drainage and rewetting ^d
	N ₂ O-N per unit of fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O-N per unit of fertilizer	N ₂ O-N per unit of fertilizer
	kg N ₂ O-N/kg N	kg N ₂ O-N/kg N	kg N ₂ O-N/kg N	kg N ₂ O-N/kg N	kg N ₂ O-N/kg N
Australia	IE	IE	IE	NE	NA
Austria					
Belarus					
Belgium	NO	IE	NO	NA	NA
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)					
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	0.011				
Ireland	IE	IE	IE	NA	NA
Italy	NO	NO	NO		
Japan	IE	IE	0.97	IE	NA
Kazakhstan					
Latvia	NO	IE	NO	NA	NO
Liechtenstein	NO	NO	NO	NO	NO
Lithuania	NO	NO	NO	NA	NA
Luxembourg	NO	NO	NO	NA	NA
Malta					
Monaco					
Netherlands	NO	IE	NO		
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	NA	NA	NA	NA	NA
Spain	NO	NO	NO	NA	NA
Sweden	NO	NO	0.000	NA	NA
Switzerland	NO	NA	NO	NA	NA
Ukraine	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	0.006	NO	NO	NA	NE

^a N₂O emissions from fertilization for cropland management, grazing land management and revegetation as well as from fertilization of areas categorized as cropland or grassland under deforestation 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 N₂O emissions from fertilization in the agriculture sector. In this case, reporting of N₂O 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 N₂O 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 N₂O 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 N₂O emissions from fertilization with agriculture sector estimates has been avoided.

^c Only for areas that have been subsequently reforested.

^d Only N₂O emissions which have not been reported under agriculture should be included here.

Table 6.5

CH₄ and N₂O emissions from drained and rewetted organic soils for 2014^{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 ₂ O-N	CH ₄		N ₂ O-N	CH ₄		N ₂ O-N	CH ₄		N ₂ O-N	CH ₄		N ₂ O-N	CH ₄		N ₂ O-N	CH ₄		N ₂ O-N	CH ₄
	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha	kha	kg N ₂ O-N/ha	kg CH ₄ /ha
Australia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA		NA	NE	NE	NE	NA	NA	NA
Austria																					
Belarus																					
Belgium	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
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	NE, NO		NE, NO	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)	9.4	1.4	4.0	0.16	14	12	19	1.9	58	90		41	24		41	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)																					
Finland	64	0.79	3.3	35	1.5	19	4 293	0.54	7.8	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
France (KP)	NE, 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
Germany	44	1.4	4.6	20	1.6	18	101	1.4	4.6	408		24	997		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	4.7	5.0	NO			0.49	3.2	7.4	NA			NA						NA		
Ireland	151	1.2	6.3	6.8	2.0	35	243	0.74	7.3	NO		NO	369		42	NA	NA	NA	NA	NA	NA
Italy	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO						
Japan	NO	NO	NO	NO	NO	NO	NO	NO	NO	24		58	40		2.2	NO	NO	NO	NA	NA	NA
Kazakhstan																					
Latvia	0.80	2.8	64	14	4.9	104	498	2.7	13	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO		NO	NO	NO	NO	NO	NO	NO
Lithuania	3.2	1.8	8.0	NO	NO	NO	170	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																					
Monaco																					
Netherlands	NE	NE	NE	NE	NE	NE	NE	NE	NE												
New Zealand	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE		NE	NE		NE	NE	NE	NE	NE	NE	NE
Norway	6.1	3.2	7.4	10	IE, NE	58	241	2.6	8.4	60		58	3.1		73	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	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	27	2.2	8.9	9.3	0.55	2.5	1 091	2.1	9.1						NA	NA	NA	NA	NA	NA	NA
Switzerland	NO	NO	NO	NO	NO	NO	3.9	2.8	NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
Ukraine	NO	NO	NO	NA	NA	NA	193	0.60	NA, NO	NA		NA	NA		NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	51	0.20	NE, NO	NO	NO	NO	202	0.20	NE, NO	NE		NE	NE		NE	NA	NA	NA	NE	NE	NE

^a Methodologies for CH₄ and N₂O emissions from drained and rewetted soils are given in the "Wetlands Supplement" for all land-use categories.^b N₂O 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 CH₄ 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

N₂O emissions from N mineralization/immobilization due to carbon loss/gain associated with land-use conversions and management change in mineral soils for 2014^a

	Afforestation and Reforestation			Deforestation ^c			Forest Management			Cropland Management			Grazing land Management			Revegetation		
	Land area ^b	Carbon Stock Change	IEF	Land area ^b	Carbon Stock Change	IEF	Land area ^b	Carbon Stock Change	IEF	Land area ^b	Carbon Stock Change	IEF	Land area ^b	Carbon Stock Change	IEF	Land area ^b	Carbon Stock Change	IEF
			N ₂ O-N ^d			N ₂ O-N ^d			N ₂ O-N ^d			N ₂ O-N ^d			N ₂ O-N ^d			N ₂ O-N ^d
	kha	kt C	kg N ₂ O-N/ha	kha	kt C	kg N ₂ O-N/ha	kha	kt C	kg N ₂ O-N/ha	kha	kt C	kg N ₂ O-N/ha	kha	kt C	kg N ₂ O-N/ha	kha	kt C	kg N ₂ O-N/ha
Australia	3 190	-863	0.031	8 603	-2 443	0.032	10 976	194	0.006	7 264	-155	0.002	561 469	-8 745	0.003	NE	NE	NE
Austria				4.4	-2.9	0.44												
Belarus																		
Belgium	17	18	0.004	27	-54	1.7	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulgaria	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	51	37	NO	4.4	-13	2.4	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	2.9	-1.0	0.24	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denmark (KP)	NO	NO	NO	3.0	-0.31	0.063	502	NO	NO	2 474	-2.8	0.002	327	-3.9	0.01	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)																		
Finland	104	11	0.028	224	107	0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France (KP)				111	NA	1.5	NO		NO	NE		NE	NE		NE	NE	NE	NE
Germany	476	-129	0.40	259	40	0.049	10 534	4 319	NO	933	-758	0.79	5 353	468	NO	NA	NA	NA
Greece	NO	NA	NA	0.015	-0.009	0.39	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	173	NE	NO	1.9	IE	0.69	1 768	NE	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iceland	NE	NE	NE	NE			NE			NA			NA					
Ireland	137	NO	NO	3.4	-3.7	72	181	NO	NO	IE	IE	IE	IE	IE	IE	NA	NA	NA
Italy	NO	NO	NO	3.7	305	55	NO	NO	NO	NO	18	NO	NO	NO	NO			
Japan	NA	NA	NA	7.3	-38	5.7	16 042	-194	0.013	35	NA	0.63	567	NA	0.019	NA	NA	NA
Kazakhstan																		
Latvia	NO	NO	NO	37	-28	0.62	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liechtenstein	NO	NO	NO	0.17		0.78	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lithuania	35	-22	0.42	1.7	-25	9.9	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg	NO	NO	NO	0.93	-0.92	0.83	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malta																		
Monaco																		
Netherlands	64	-0.20	0.18	69	-0.24	0.18	327	NO	NO									
New Zealand	644	270	0.28	182	2.8	0.010	9 219	2.5	0									
Norway	27		0.95	94		0.31	11 345	31	NO	22		0.074	209		0.048	NA	NA	NA
Poland	721	NE	NE	0.78	IE	2.5	8 661	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portugal	19	-39	1.4	113	-419	2.5	20	-41	1.4	98	-273	1.9	55	-140	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	2.6	-3.0	0.94	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	3.3	-2.6	0.63	84	-40	0.39	249	-33	0.11	482	-347	0.59	NA	NA	NA	NA	NA	NA
Sweden	309	-46	0.10	272	-217	0.80	24 626	3 415	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Switzerland	1.3	0.15	0.078	6.1	6.6	0.72	NO	NO	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ukraine	327	18	0.006	50	-0.45	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
United Kingdom of Great Britain and Northern Ireland	103	IE	0.081	54	IE, NO	0.68	491	IE, NO	0.081	6 890	IE, NE	0.20	287	IE, NE	2.1	NA	NA	NA

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

^d In the calculation of the implied emission factor, N₂O emissions are converted to N₂O-N by multiplying by 28/44.

Table 6.7(a)**Emissions from biomass burning 2014^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 ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O
		(t/activity data unit)				(t/activity data unit)				(t/activity data unit)				(t/activity data unit)		
Australia		2.1	0.011	0.000		IE, NO	0.016	0.000		0.12	0.016	0.000		0.95	0.14	0.002
Austria														IE	0.093	0.005
Belarus																
Belgium		NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO
Bulgaria		0.002	0.000	0.000		NO	NO	NO		0.002	0.000	0.000		0.002	0.000	0.000
Croatia		NA	NA	NA		NO	NO	NO		NA, NO	NA, NO	NA, NO		IE, NO	NA	NA
Cyprus		NE	NE	NE		NE	NE	NE		NE	NE	NE		IE, NO	IE, NO	IE, NO
Czech Republic		NO	NO	NO		NO	NO	NO		NO	NO	NO		0.002	0.000	0.000
Denmark (KP)		IE, NO	IE, NO	IE, NO		NO	NO	NO		IE, NO	IE, NO	IE, NO		IE, NO	174	9.6
Estonia		IE, NA	0.061	0.001		NO	NO	NO		IE, NA, NO	0.061	0.001		IE, NO	0.029	0.000
European Union (KP)																
Finland		NA	NA	NA		NA	NA	NA		NA	NA	NA		7.3	0.045	0.000
France (KP)		NA	NA	NA		IE, NO	NA	NA		IE, NA, NO	NA	NA		NA	NA	NA
Germany		IE, NO	IE, NO	IE, NO		NO	NO	NO		IE, NO	IE, NO	IE, NO		IE, NO	0.22	0.012
Greece		6.9	0.088	0.001		NA	NA	NA		6.9	0.088	0.001		19	0.24	0.002
Hungary		IE	0.000	0.000		IE, NO	0.000	0.000		IE, NO	0.000	0.000		IE	0.000	0.000
Iceland														NA	NA	NA
Ireland		NA	NA	NA		NO	NO	NO		NA, NO	NA, NO	NA, NO		261	1.1	0.007
Italy		IE, NO	0.73	0.023		NO	NO	NO		IE, NO	0.73	0.023		IE, NO	0.73	0.023
Japan		IE, NO	0.000	0.000		NO	NO	NO		IE, NO	0.000	0.000		IE, NO	0.000	0.000
Kazakhstan																
Latvia		NO	NO	NO		NO	NO	NO		NO	NO	NO		NA	NA	NA
Liechtenstein		NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO
Lithuania		11	0.049	0.003		NO	NO	NO		11.1	0.049	0.003		35	2.4	0.013
Luxembourg		NO	NO	NO		NO	NO	NO		NO	NO	NO		NO	NO	NO
Malta																
Monaco																
Netherlands		95	0.29	0.016		7.3	0.010	0.001		54	0.15	0.009		95	0.29	0.016
New Zealand		IE	0.000	0.000		IE	0.001	0.000		IE	0.000	0.000		IE	1.4	0.010
Norway		IE, NO	0.043	0.000		NO	NO	NO		IE, NO	0.043	0.000		IE	0.043	0.000
Poland		16	0.18	0.003		NO	NO	NO		16	0.18	0.003		18	0.56	0.004
Portugal		27	0.10	0.001		NO	0.11	0.053		8.6	0.10	0.036		25.45	0.09	0.001
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		28	0.14	0.008
Slovakia		IE, NO	NA	NA		NO	NO	NO		IE, NO	NA, NO	NA, NO		IE	NA	NA
Slovenia		NA	NA	NA		NA	NA	NA		NA	NA	NA		69	0.77	0.008
Spain		4.48	0.016	0.001		13	0.023	0.002		5.4	0.017	0.001		1.9	0.020	0.001
Sweden		NO	NO	NO		NO	NO	NO		NO	NO	NO		IE	0.077	0.001
Switzerland		NO	NO	NO						NO	NO	NO		IE, NO	0.50	0.028
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		0.001	0.000	0.000		0.002	0.000	0.000		0.002	0.000	0.000		0.001	0.000	0.000

^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				2014			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O
		(t/activity data unit)				(t/activity data unit)		
Australia		IE	IE	IE		IE	0.017	0.000
Austria								
Belarus								
Belgium		NA	NA	NA		NA	NA	NA
Bulgaria		NA	NA	NA		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	0.011	0.000		NO	0.011	0.000
Italy		4.3	0.024	0.001		4.9	0.027	0.001
Japan		IE, NO	0.000	0.000		IE, NO	0.000	0.000
Kazakhstan								
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein						NO	NO	NO
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands								
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	0.056	0.005
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		IE, NE	IE, NE	IE, NE		IE, NE	IE, NE	IE, NE
Sweden		NA	NA	NA		NA	NA	NA
Switzerland								
Ukraine		NA	NA	NA		NA	NA	NA
United Kingdom of Great Britain and Northern Ireland		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				2014			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O
		(t/activity data unit)				(t/activity data unit)		
Australia		0.004	0.007	0.000		-0.028	0.005	0.000
Austria								
Belarus								
Belgium		NA	NA	NA		NA	NA	NA
Bulgaria		NA	NA	NA		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	1.9	0.17
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								
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein						NO	NO	NO
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands								
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	0.014	0.004
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		NA	NA	NA
United Kingdom of Great Britain and Northern Ireland		NE, NO	0.024	0.002		NE, NO	0.023	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				2014			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O
		(t/activity data unit)				(t/activity data unit)		
Australia		NE	NE	NE		NE	NE	NE
Austria								
Belarus								
Belgium		NA	NA	NA		NA	NA	NA
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)								
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NA	NA	NA		NA	NA	NA
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland		NE	NE	NE				
Ireland		NA	NA	NA		NA	NA	NA
Italy								
Japan		NO	NO	NO		NO	NO	NO
Kazakhstan								
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein						NO	NO	NO
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands								
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		NA	NA	NA
United Kingdom of Great Britain and Northern Ireland						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				2014			
	Activity data	Implied Emission Factor			Activity data	Implied Emission Factor		
	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O	Description of unit area ^b : ab or bb ^c	CO ₂	CH ₄	N ₂ O
		(t/activity data unit)				(t/activity data unit)		
Australia		NA	NA	NA		NA	NA	NA
Austria								
Belarus								
Belgium		NA	NA	NA		NA	NA	NA
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)								
Estonia		NA	NA	NA		NA	NA	NA
European Union (KP)								
Finland						NA	NA	NA
France (KP)		NO	NO	NO		NE	NE	NE
Germany		NA	NA	NA		NA	NA	NA
Greece		NA	NA	NA		NA	NA	NA
Hungary						NA	NA	NA
Iceland								
Ireland		NA	NA	NA		NA	NA	NA
Italy								
Japan		NA	NA	NA		NA	NA	NA
Kazakhstan								
Latvia		NA	NA	NA		NA	NA	NA
Liechtenstein						NO	NO	NO
Lithuania						NA	NA	NA
Luxembourg		NA	NA	NA		NA	NA	NA
Malta								
Monaco								
Netherlands								
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		NA	NA	NA
United Kingdom of Great Britain and Northern Ireland						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).