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## Subsidiary Body for Implementation

Forty-seventh session

Bonn, 6–15 November 2017

Item 3(c) of the provisional agenda

**Reporting from and review of Parties included in Annex I to the Convention**

**Report on national greenhouse gas inventory data from Parties included in Annex I to the Convention for the period 1990–2015**

## National greenhouse gas inventory data for the period 1990–2015

### Report by the secretariat

#### *Summary*

All 43 Parties included in Annex I to the Convention (Annex I Parties) submitted their greenhouse gas (GHG) inventory common reporting format (CRF) tables and national inventory reports in 2017. By the deadline of 15 April 2017, CRF tables from 36 Parties and national inventory reports from 35 Parties had been received. Over the period 1990–2015, total aggregate GHG emissions without emissions and removals from land use, land-use change and forestry (LULUCF) for all Annex I Parties decreased by 12.9 per cent, while total GHG emissions and removals with LULUCF decreased by 17.9 per cent. For Annex I Parties with economies in transition, GHG emissions without and with LULUCF decreased by 38.3 per cent and 48.5 per cent, respectively. For Annex I Parties that do not have economies in transition, GHG emissions without and with LULUCF decreased by 0.7 per cent and 2.1 per cent, respectively. The information in this document is based on information in the national GHG inventory submissions of Annex I Parties received as at 6 September 2017. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was still ongoing; therefore, the data included in this document may not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.



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## **I. Introduction**

### **A. Mandate**

1. The Conference of the Parties (COP), by decision 24/CP.19, requested Parties included in Annex I to the Convention (Annex I Parties) to submit national inventory data on greenhouse gas (GHG) emissions by sources and removals by sinks by 15 April of each year. By decision 13/CP.20, paragraphs 8 and 10, the COP requested the secretariat to compile and summarize information on GHG inventory data submitted by Annex I Parties, inter alia, for consideration by the COP and the subsidiary bodies.

### **B. Scope of the note**

2. This document shows the status of reporting of GHG inventories by Annex I Parties in 2017 (chapter II) and provides a summary of the latest available data on GHG emissions and removals for the period 1990–2015 (chapter III). Data are provided for carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), as well as for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>), unspecified mix of HFCs and PFCs (MIX) and nitrogen trifluoride (NF<sub>3</sub>) taken together, and, where Parties have elected to report them, indirect CO<sub>2</sub> emissions from the atmospheric oxidation of CH<sub>4</sub>, carbon monoxide and non-methane volatile organic compounds. Data are provided on total<sup>1</sup> aggregate<sup>2</sup> GHG emissions, both without and with net GHG emissions and removals from land use, land-use change and forestry (LULUCF).

3. The information provided in this document is based on information in the national GHG inventories received from all 43 Annex I Parties (see table 1) as at 6 September 2017.

4. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was still ongoing; therefore, the data presented here may not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.<sup>3</sup>

### **C. Possible action by the Subsidiary Body for Implementation**

5. The Subsidiary Body for Implementation may wish to take note of the information contained in this document and to seek further guidance from the COP, as appropriate.

## **II. Status of reporting**

### **A. Timeliness and completeness of submissions**

6. According to the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories” (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines),<sup>4</sup> Annex I Parties are required to submit annually a national inventory report (NIR) and common reporting format (CRF) tables containing data from the

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<sup>1</sup> The term “total” implies that emissions from the sectors of the common reporting format are summed; the inclusion of emissions from land use, land-use change and forestry in the sum is indicated separately; unless stated otherwise, totals do not include indirect CO<sub>2</sub> emissions.

<sup>2</sup> The term “aggregate” implies that GHG emissions and removals are calculated as a weighted sum of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> using the global warming potential values agreed under the Convention.

<sup>3</sup> <http://unfccc.int/10116.php>.

<sup>4</sup> Decision 24/CP.19, annex I.

base year up to two years prior to the year of submission. In 2017, all 43 Annex I Parties provided GHG data for all years from 1990<sup>5</sup> to 2015.

7. By 15 April 2017, CRF tables had been received from 36 Parties and NIRs had been received from 35 Parties. Within six weeks of 15 April 2017, a total of 42 Parties had submitted their CRF tables and 39 Parties had submitted their NIRs. After the initial submissions, 11 Parties submitted revised versions of their CRF tables and 11 Parties resubmitted their NIRs. The dates of the initial submissions of the CRF tables are shown in table 1.

Table 1  
**Greenhouse gas inventory submissions from Annex I Parties in 2017**

<i>Party</i>	<i>CRF tables submission date<sup>a</sup></i>	<i>Party</i>	<i>CRF tables submission date<sup>a</sup></i>
Australia	27 May 2017	Liechtenstein	27 March 2017
Austria	12 April 2017	Lithuania	14 April 2017
Belarus	1 June 2017	Luxembourg	6 April 2017
Belgium	11 April 2017	Malta	8 May 2017
Bulgaria	11 April 2017	Monaco	20 April 2017
Canada	13 April 2017	Netherlands	14 April 2017
Croatia	12 April 2017	New Zealand	26 May 2017
Cyprus	8 May 2017	Norway	7 April 2017
Czechia	12 April 2017	Poland	13 April 2017
Denmark	10 April 2017	Portugal	12 April 2017
Estonia	13 April 2017	Romania	14 April 2017
European Union	14 April 2017	Russian Federation	14 April 2017
Finland	11 April 2017	Slovakia	11 April 2017
France	13 April 2017	Slovenia	12 April 2017
Germany	11 April 2017	Spain	12 April 2017
Greece	11 April 2017	Sweden	12 April 2017
Hungary	15 April 2017	Switzerland	13 April 2017
Iceland	13 April 2017	Turkey	14 April 2017
Ireland	12 April 2017	Ukraine	24 May 2017
Italy	11 April 2017	United Kingdom	13 April 2017
Japan	13 April 2017	United States	14 April 2017
Latvia	13 April 2017		

*Abbreviation:* CRF = common reporting format.

<sup>a</sup> Dates after 15 April 2017 are shown in italics. The dates of submission of the national inventory reports may be different.

## B. Recalculations

8. According to the UNFCCC Annex I inventory reporting guidelines, Parties should, where necessary, conduct recalculations in order to improve the quality of their emission estimates and ensure the consistency of the time series.

9. In 2017, all 43 Annex I Parties reported recalculations that had an impact on their estimated GHG emissions for 1990 (see table 2). The recalculations resulted from changes in activity data, emission factors and methodologies. For total aggregate GHG emissions

<sup>5</sup> Unless otherwise specified, for certain Parties base year data are used instead of 1990 data. The Parties that may use a base year other than 1990, as stipulated in decisions 9/CP.2 and 11/CP.4, provided data for their respective base years. Such Parties and their base years are Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

without LULUCF, the change was less than 1 per cent for 29 Parties and more than 3 per cent for 1 Party. For total aggregate GHG emissions with LULUCF, the change was less than 1 per cent for 20 Parties and more than 3 per cent for 9 Parties.

Table 2  
**Inventory recalculations by Annex I Parties in 2017**

<i>Party</i>	<i>Impact on GHG emissions for 1990 without LULUCF (%)</i>	<i>Impact on GHG emissions for 1990 with LULUCF (%)</i>
Australia	0.3	5.8
Austria	-0.1	1.0
Belarus	2.6	6.2
Belgium	0.2	-0.1
Bulgaria	2.0	2.2
Canada	-0.3	-2.7
Croatia	-0.2	0.03
Cyprus	-0.1	-0.1
Czechia	-0.3	-0.4
Denmark	0.4	-1.4
Estonia	1.1	21.4
European Union	-0.2	0.1
Finland	0.1	6.2
France	0.2	1.0
Germany	0.1	0.1
Greece	-1.6	-1.5
Hungary	-0.1	-0.2
Iceland	-2.1	-9.5
Ireland	0.03	-0.7
Italy	-0.4	0.2
Japan	-0.2	-0.5
Latvia	-0.8	-3.2
Liechtenstein	0.01	-0.4
Lithuania	-0.3	-0.2
Luxembourg	-1.0	-1.0
Malta	20.6	20.9
Monaco	-1.9	-1.9
Netherlands	-0.1	-0.1
New Zealand	-1.9	-6.6
Norway	-0.4	-0.4
Poland	-1.6	-1.8
Portugal	-1.9	-1.7
Romania	-1.2	-1.2
Russian Federation	0.01	0.01
Slovakia	0.3	0.3
Slovenia	-0.1	-1.2
Spain	2.6	2.9
Sweden	-0.4	-0.03
Switzerland	0.1	1.2
Turkey	3.0	3.5

<i>Party</i>	<i>Impact on GHG emissions for 1990 without LULUCF (%)</i>	<i>Impact on GHG emissions for 1990 with LULUCF (%)</i>
Ukraine	2.6	2.1
United Kingdom	-0.4	0.3
United States	-0.5	-2.0

*Abbreviations:* GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

10. Table 3 presents a comparison of the estimates of total aggregate GHG emissions in 1990 contained in Annex I Parties' 2016 and 2017 GHG inventory submissions.

Table 3

**Comparison of estimates reported in 2016 and 2017 of total aggregate greenhouse gas emissions of Annex I Parties in 1990**

	<i>Estimate reported in 2016</i>	<i>Estimate reported in 2017</i>	<i>Explanation of the difference between the estimates reported in 2016 and 2017</i>
<b>Total aggregate GHG emissions without LULUCF (thousands of Tg CO<sub>2</sub> eq)</b>			
All Annex I Parties	19.77	19.75	Aggregate impact of inventory recalculations by individual Annex I Parties
Annex I EIT Parties	6.38	6.40	Inventory recalculations, for example by Belarus, Bulgaria and Ukraine
Annex I non-EIT Parties	13.38	13.35	Inventory recalculations, for example by Spain, United Kingdom and United States
<b>Total aggregate GHG emissions with LULUCF (thousands of Tg CO<sub>2</sub> eq)</b>			
All Annex I Parties	18.81	18.74	Aggregate impact of inventory recalculations by individual Annex I Parties
Annex I EIT Parties	6.38	6.40	Inventory recalculations, for example by Belarus, Bulgaria and Ukraine
Annex I non-EIT Parties	12.43	12.34	Inventory recalculations, for example by Japan, Portugal and Turkey

*Abbreviations:* EIT = economy in transition, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

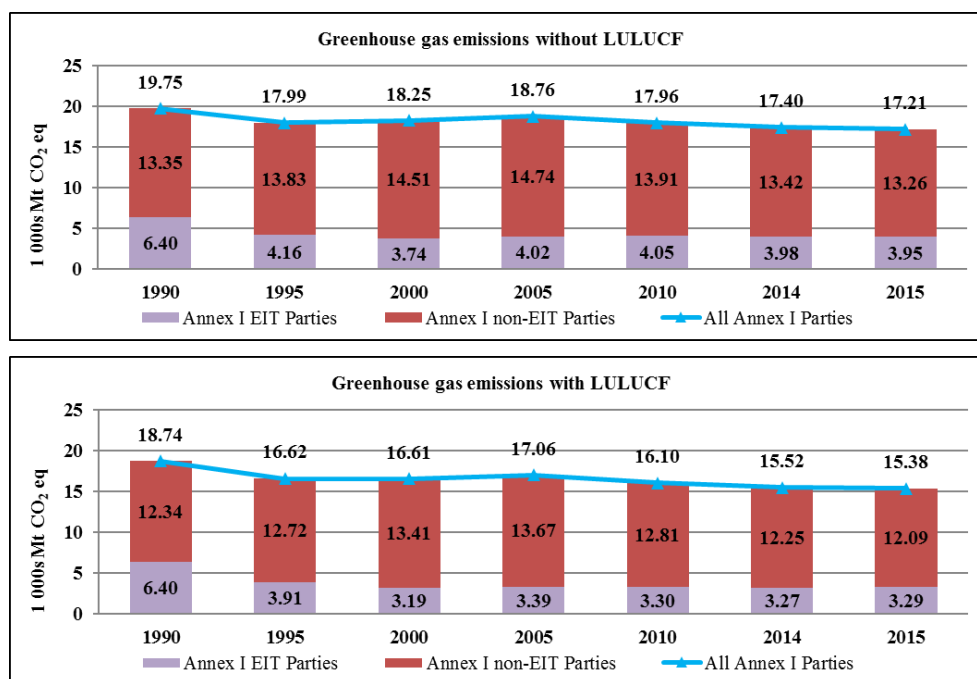
### III. Overview of emission trends and sources in Annex I Parties

#### A. Total aggregate greenhouse gas emissions

11. From 1990 to 2015, total aggregate GHG emissions without emissions and removals from LULUCF for all Annex I Parties decreased by 12.9 per cent, from 19,754.58 Mt CO<sub>2</sub> eq to 17,209.21 Mt CO<sub>2</sub> eq. During the same period, total aggregate GHG emissions with LULUCF decreased by 17.9 per cent, from 18,740.44 Mt CO<sub>2</sub> eq to 15,379.38 Mt CO<sub>2</sub> eq. From 2000 to 2015, GHG emissions without and with LULUCF decreased by 5.7 per cent and 7.4 per cent, respectively. Between 2014 and 2015, GHG emissions decreased by 1.1 per cent without LULUCF and by 0.9 per cent with LULUCF.

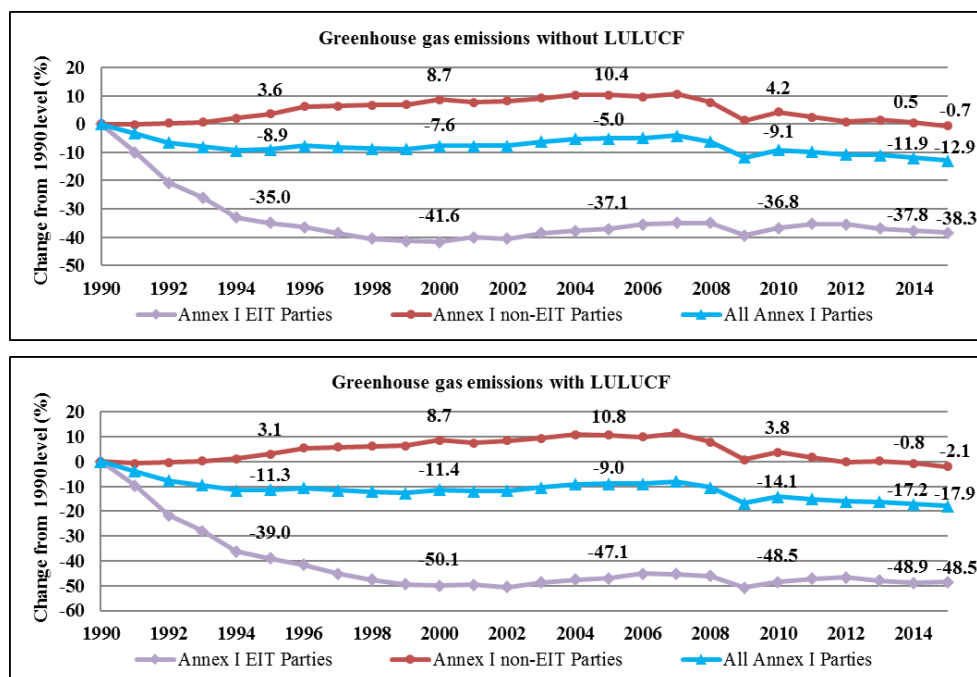
12. Figures 1 and 2 show the trends in total aggregate GHG emissions from 1990 to 2015 for all Annex I Parties taken together, for Annex I Parties with economies in transition (Annex I EIT Parties) and for Annex I Parties that do not have economies in transition.

Figure 1  
Greenhouse gas emissions of Annex I Parties, 1990, 1995, 2000, 2005, 2010, 2014 and 2015



Abbreviations: EIT = economy in transition, LULUCF = land use, land-use change and forestry.

Figure 2  
Changes in greenhouse gas emissions of Annex I Parties, 1990–2015



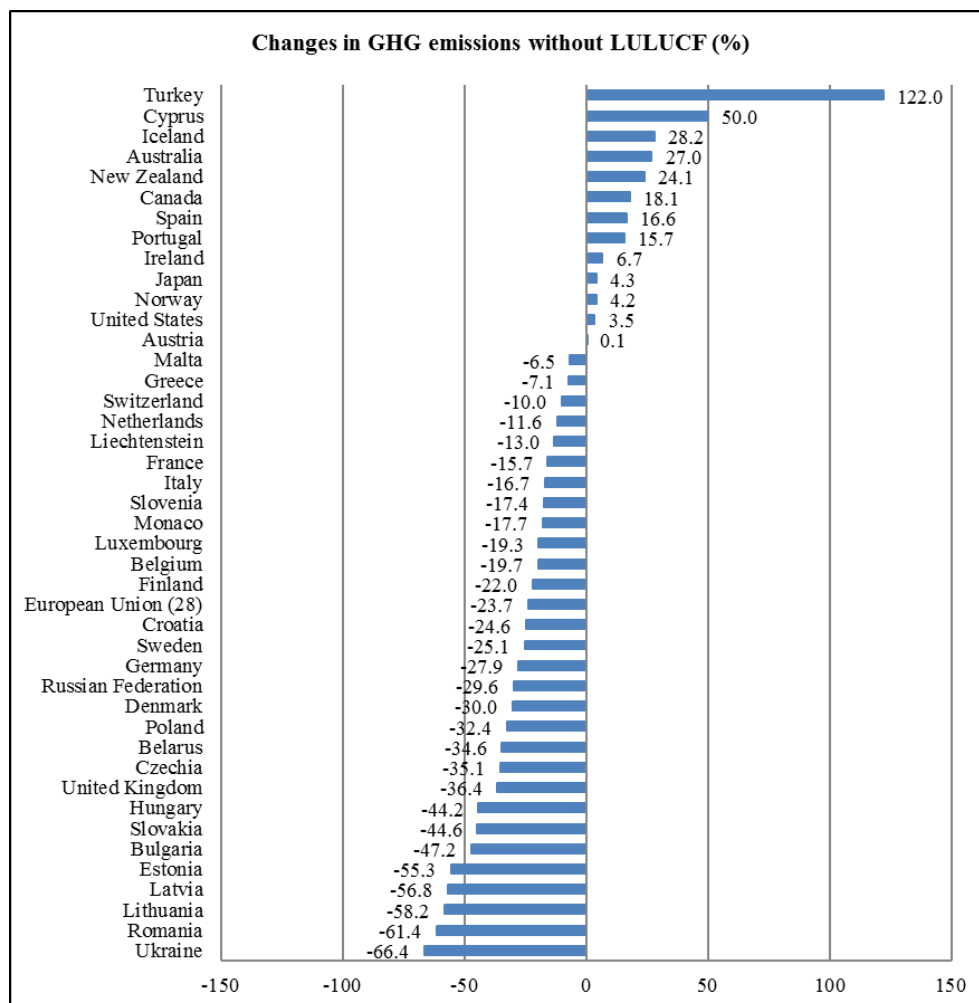
Abbreviations: EIT = economy in transition, LULUCF = land use, land-use change and forestry.

13. For Annex I EIT Parties, GHG emissions from 1990 to 2015 decreased by 38.3 per cent without LULUCF and by 48.5 per cent with LULUCF. From 2000 to 2015, GHG emissions without and with LULUCF increased by 5.7 per cent and 3.1 per cent, respectively. Between 2014 and 2015, GHG emissions decreased by 0.8 per cent without LULUCF and increased by 0.6 per cent with LULUCF.

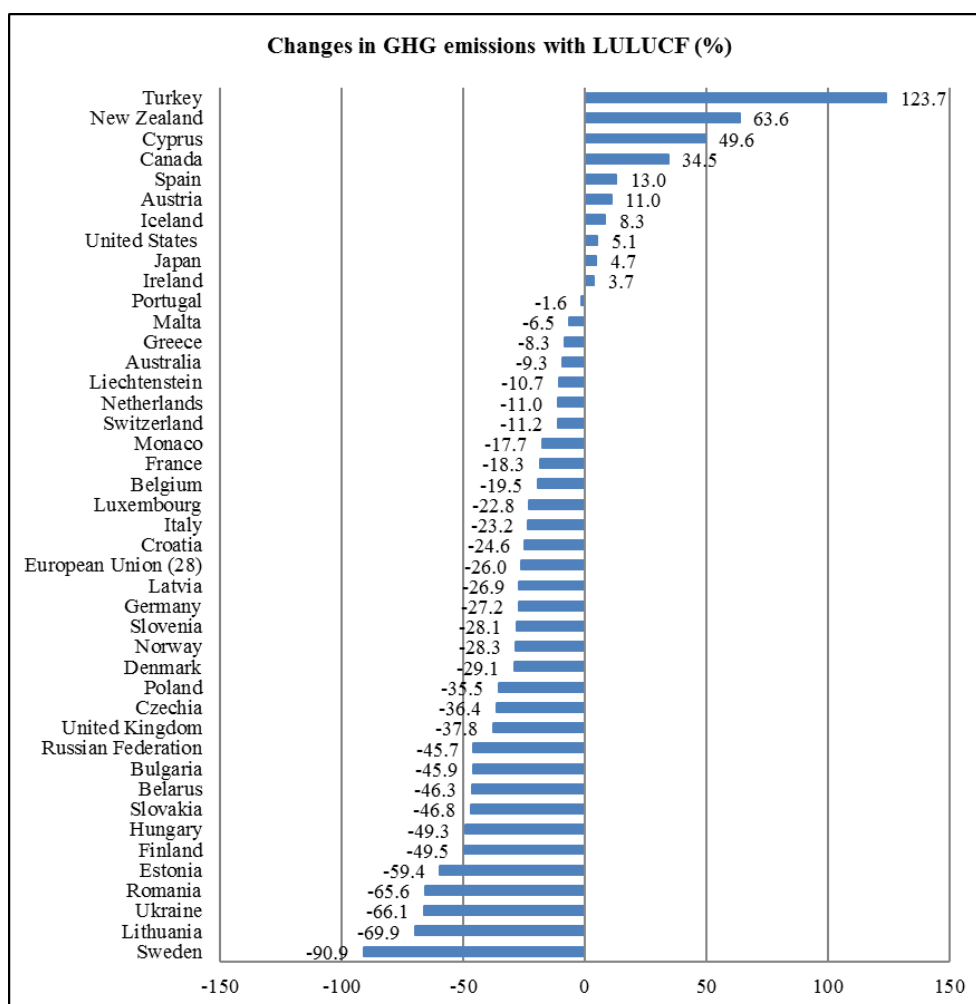
14. For Annex I Parties that do not have economies in transition, from 1990 to 2015, GHG emissions decreased by 0.7 per cent without LULUCF and by 2.1 per cent with LULUCF. From 2000 to 2015, GHG emissions without and with LULUCF decreased by 8.6 per cent and 9.9 per cent, respectively. Between 2014 and 2015, GHG emissions showed a decrease of 1.2 per cent without LULUCF and of 1.3 per cent with LULUCF.

15. The changes in total aggregate GHG emissions over the period 1990–2015 varied considerably among Parties (see figure 3). The largest decrease in emissions without LULUCF was in Ukraine (by 66.4 per cent), while the largest decrease in emissions with LULUCF was in Sweden (by 90.9 per cent). On the other hand, the greatest increases in emissions without and with LULUCF were in Turkey (by 122.0 per cent and 123.7 per cent, respectively).

Figure 3  
**Changes in total aggregate emissions of individual Annex I Parties, 1990–2015**







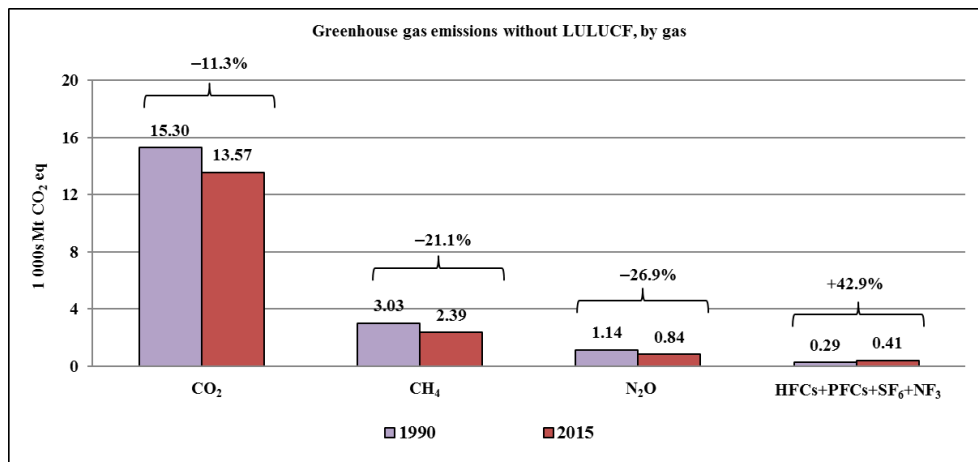
Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

## B. Greenhouse gas emissions by gas

16. Throughout the period 1990–2015, CO<sub>2</sub> accounted for the largest share of total emissions, contributing 77.4 per cent in 1990 and 78.9 per cent in 2015. CH<sub>4</sub> was the second-highest contributor to total GHG emissions (15.3 per cent in 1990 and 13.9 per cent in 2015), followed by N<sub>2</sub>O (5.8 per cent in 1990 and 4.9 per cent in 2015). The emissions of HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> taken together contributed 1.46 per cent in 1990 and 2.39 per cent in 2015 to the total GHG emissions.

17. Figure 4 shows the contribution of each GHG to the total emissions without LULUCF for 1990 and 2015 and the changes in the total emissions of each GHG over the period 1990–2015. Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O decreased, while emissions of HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> taken together increased by 42.9 per cent.

Figure 4  
**Greenhouse gas emissions without land use, land-use change and forestry of Annex I Parties by gas, 1990 and 2015**



Abbreviation: LULUCF = land use, land-use change and forestry.

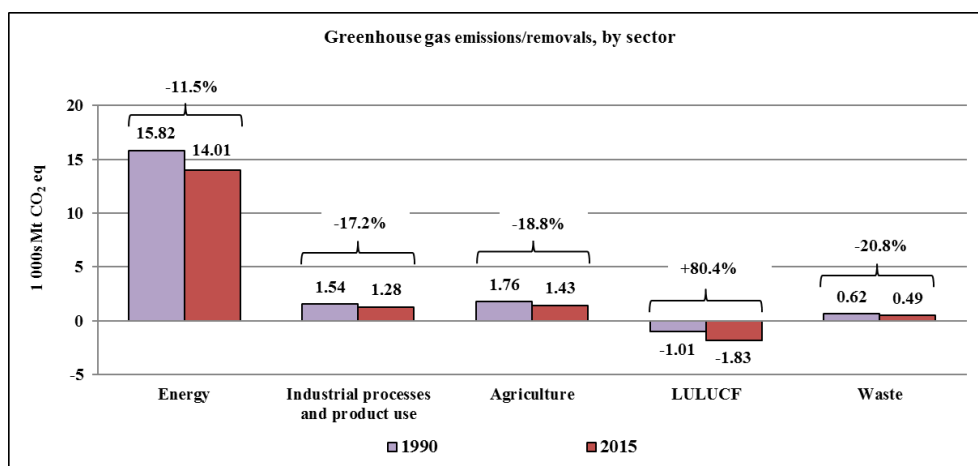
18. Between 2014 and 2015, emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O decreased by 1.3 per cent, 0.7 per cent and 0.4 per cent, respectively. During the same period, emissions of HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> taken together increased by 0.6 per cent.

### C. Greenhouse gas emissions by sector

19. From 1990 to 2015, emissions from the energy, industrial processes and product use, agriculture and waste sectors decreased (see figure 5). The waste sector experienced the largest relative decrease in emissions (by 20.8 per cent), followed by the agriculture, industrial processes and product use and energy sectors. Over the same period, net GHG removals from LULUCF increased by 80.4 per cent, from -1,014.14 Mt CO<sub>2</sub> eq to -1,829.83 Mt CO<sub>2</sub> eq.

20. Between 2014 and 2015, emissions from the energy, industrial process and product use and waste sectors decreased by 1.3 per cent, 1.3 per cent and 0.1 per cent, respectively. Emissions from the agriculture sector increased by 0.3 per cent. Net GHG removals from LULUCF decreased by 2.6 per cent.

Figure 5  
**Greenhouse gas emissions and removals of Annex I Parties by sector, 1990 and 2015<sup>a</sup>**



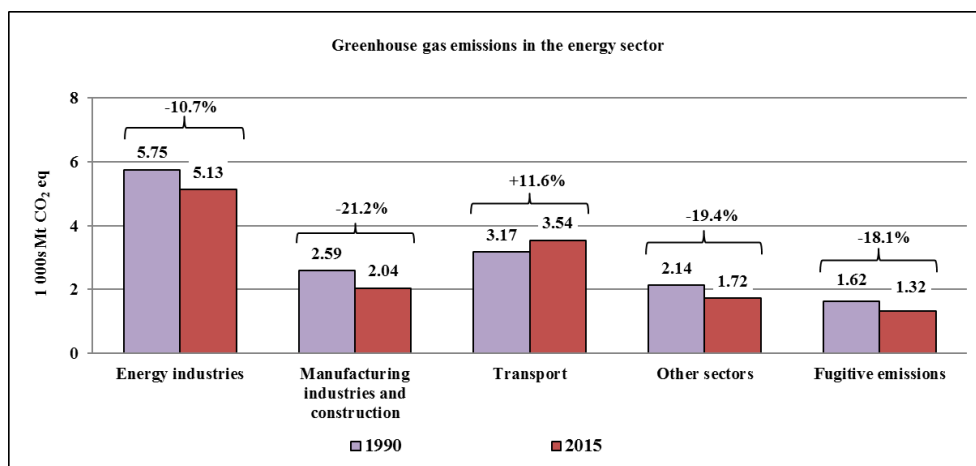
Abbreviation: LULUCF = land use, land-use change and forestry.

<sup>a</sup> The sector other is not included in this figure because its contribution to the total greenhouse gas emissions was very small. The emissions from that sector increased by 2 per cent between 1990 and 2015.

21. Within the energy sector, from 1990 to 2015, GHG emissions decreased in all subsectors except transport, where emissions increased by 11.6 per cent (see figure 6). The largest relative emission reduction occurred in manufacturing industries and construction (where emissions decreased by 21.2 per cent).

Figure 6

**Greenhouse gas emissions of Annex I Parties in the energy sector, 1990 and 2015<sup>a</sup>**



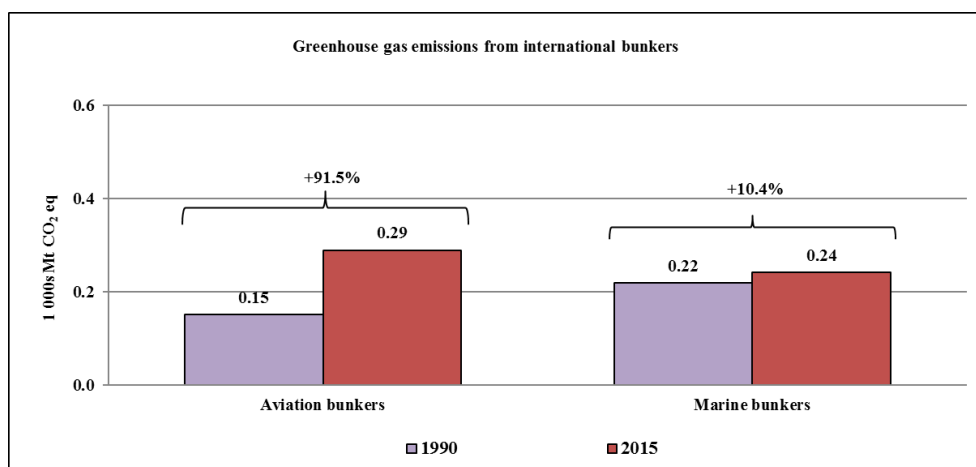
<sup>a</sup> The sector CO<sub>2</sub> transport and storage is not included in this figure because its contribution to the total greenhouse gas emissions was very small.

22. Between 2014 and 2015, emissions from energy industries and fugitive emissions decreased, whereas emissions from manufacturing industries and construction, transport and other sectors increased.

23. Over the period 1990–2015, emissions from international bunkers increased, by 91.5 per cent for aviation and by 10.4 per cent for navigation (see figure 7).

Figure 7

**Greenhouse gas emissions from international bunker fuels for Annex I Parties, 1990 and 2015**



24. Between 2014 and 2015, emissions from international bunkers increased by 2.6 per cent for aviation and decreased by 1.4 per cent for navigation.

25. A comparison of the percentage changes in total aggregate GHG emissions from 1990 to the latest available year reported in Annex I Parties' 2016 and 2017 inventory submissions is presented in table 4, with explanations for the differences in the estimates.

Table 4

**Comparison of the changes in the total aggregate greenhouse gas emissions of Annex I Parties reported in 2016 and 2017**

	<i>Estimate reported in 2016</i>	<i>Estimate reported in 2017</i>	<i>Explanation of the difference between the estimates reported in 2016 and 2017</i>
<b>Change in total aggregate GHG emissions without LULUCF from 1990 to the latest available year (%)</b>			
All Annex I Parties	-11.35	-12.88	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	-38.00	-38.34	Decreases in emissions between 2014 and 2015 and inventory recalculations, for example for Belarus, Estonia and Ukraine
Annex I non-EIT Parties	1.36	-0.68	Decreases in emissions between 2014 and 2015 and inventory recalculations, for example for Canada, Germany and United States
<b>Change in total aggregate GHG emissions with LULUCF from 1990 to the latest available year (%)</b>			
All Annex I Parties	-15.85	-17.93	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	-47.99	-48.53	Decreases in emissions between 2014 and 2015 and inventory recalculations, for example for Belarus, Latvia and Ukraine
Annex I non-EIT Parties	0.66	-2.07	Decreases in emissions between 2014 and 2015 and inventory recalculations, for example for Canada, Sweden and United States

*Abbreviations:* EIT = economy in transition, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

#### **D. Emission data for individual Annex I Parties**

26. Tables 5–17 show detailed GHG data for individual Annex I Parties. Total aggregate GHG emissions without and with emissions and removals from LULUCF are provided in tables 5 and 6; emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (without and with emissions and removals from LULUCF) are provided in tables 7–12; emissions of HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> taken together are provided in table 13; emissions and removals from LULUCF are provided in tables 14–16; and indirect CO<sub>2</sub> emissions are provided in table 17.

27. Blank cells in the tables denote that either data were not available or notation keys, such as “NO” (not occurring), “NE” (not estimated), “NA” (not applicable), “IE” (included elsewhere) or “C” (confidential), were used to report emission data. Negative values denote removals; positive values denote emissions.

28. The changes in emissions from 1990 to 2015 were calculated using the exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the tables. An en dash (–) signifies a percentage change exceeding 10,000 per cent.

Table 5

**Total aggregate anthropogenic emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	419 843	484 842	537 159	525 792	533 283	27.0
Austria	78 805	80 534	85 059	76 381	78 851	0.1
Belarus <sup>a</sup>	136 915	81 283	93 883	93 661	89 608	-34.6
Belgium	146 294	149 480	132 437	114 079	117 443	-19.7
Bulgaria <sup>a, b</sup>	116 382	59 366	60 301	57 505	61 483	-47.2
Canada	611 001	738 186	700 838	727 158	721 801	18.1
Croatia <sup>a</sup>	31 154	25 255	27 329	23 049	23 502	-24.6
Cyprus	5 622	8 326	9 574	8 424	8 431	50.0
Czechia <sup>a</sup>	195 827	148 225	138 626	125 839	127 127	-35.1
Denmark	70 493	71 313	64 261	51 801	49 321	-30.0
Estonia <sup>a</sup>	40 403	17 313	21 143	21 081	18 040	-55.3
European Union <sup>c</sup>	5 642 685	5 152 235	4 775 202	4 284 831	4 307 968	-23.7
Finland	71 125	69 899	75 585	59 072	55 507	-22.0
France	550 068	555 748	516 766	460 077	463 650	-15.7
Germany	1 250 915	1 042 958	941 750	904 262	901 932	-27.9
Greece	103 081	126 328	118 309	99 353	95 715	-7.1
Hungary <sup>a, b</sup>	109 505	73 461	65 405	57 879	61 092	-44.2
Iceland	3 556	3 884	4 669	4 472	4 557	28.2
Ireland	56 103	69 076	61 692	57 758	59 878	6.7
Italy	519 917	552 864	505 047	423 324	433 025	-16.7
Japan	1 268 259	1 385 047	1 303 702	1 361 930	1 322 568	4.3
Latvia <sup>a</sup>	26 141	10 336	12 202	11 190	11 303	-56.8
Liechtenstein	229	248	230	202	199	-13.0
Lithuania <sup>a</sup>	48 041	19 600	20 782	19 869	20 096	-58.2
Luxembourg	12 730	9 617	12 150	10 756	10 269	-19.3
Malta	2 382	2 661	3 019	2 930	2 227	-6.5
Monaco	99	108	87	80	82	-17.7
Netherlands	220 751	219 378	213 922	187 373	195 039	-11.6
New Zealand	64 574	75 143	78 077	80 268	80 155	24.1
Norway	51 729	54 639	55 233	53 331	53 908	4.2
Poland <sup>a, b</sup>	570 371	390 597	406 973	382 969	385 843	-32.4
Portugal	59 403	82 291	69 292	64 196	68 741	15.7
Romania <sup>a, b</sup>	301 359	140 163	120 900	115 413	116 427	-61.4
Russian Federation <sup>a</sup>	3 767 792	2 273 166	2 601 180	2 645 819	2 651 212	-29.6
Slovakia <sup>a</sup>	74 460	49 863	46 560	40 678	41 269	-44.6
Slovenia <sup>a, b</sup>	20 372	19 093	19 603	16 610	16 831	-17.4
Spain	287 828	385 588	356 761	324 215	335 662	16.6
Sweden	71 637	68 698	64 555	53 836	53 690	-25.1
Switzerland	53 357	52 365	54 370	48 620	48 038	-10.0
Turkey <sup>d</sup>	213 972	296 473	406 805	455 615	475 056	122.0
Ukraine <sup>a</sup>	962 203	427 315	413 316	368 317	322 927	-66.4
United Kingdom	796 816	713 092	615 675	526 370	506 765	-36.4
United States	6 363 064	7 213 873	6 925 468	6 739 686	6 586 655	3.5
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						30
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						1
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						12

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 6

**Total aggregate anthropogenic emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub> with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	579 348	551 257	562 037	526 816	525 565	-9.3
Austria	66 666	64 307	79 172	71 496	74 027	11.0
Belarus <sup>a</sup>	115 810	48 040	53 757	63 553	62 198	-46.3
Belgium	143 508	147 324	130 524	112 149	115 537	-19.5
Bulgaria <sup>a, b</sup>	100 994	49 756	50 694	50 370	54 608	-45.9
Canada	511 726	675 773	672 652	694 232	688 258	34.5
Croatia <sup>a</sup>	24 564	17 750	20 065	16 458	18 510	-24.6
Cyprus	5 521	8 252	9 408	8 250	8 262	49.6
Czechia <sup>a</sup>	189 339	139 420	131 426	118 038	120 486	-36.4
Denmark	75 395	75 521	63 465	51 946	53 475	-29.1
Estonia <sup>a</sup>	38 668	13 917	19 219	19 326	15 681	-59.4
European Union <sup>c</sup>	5 410 922	4 851 379	4 454 971	3 975 426	4 003 114	-26.0
Finland	58 453	48 189	48 288	30 736	29 516	-49.5
France	523 589	532 664	477 421	420 217	427 840	-18.3
Germany	1 219 604	1 004 997	925 382	889 385	887 352	-27.2
Greece	100 903	124 216	114 984	98 910	92 575	-8.3
Hungary <sup>a, b</sup>	107 698	72 694	60 854	52 518	54 580	-49.3
Iceland	13 690	14 023	15 005	14 794	14 831	8.3
Ireland	61 900	75 014	65 862	62 398	64 192	3.7
Italy	516 662	536 621	473 438	388 987	396 806	-23.2
Japan	1 204 804	1 296 238	1 233 611	1 296 815	1 261 628	4.7
Latvia <sup>a</sup>	17 354	3 641	14 221	15 533	12 680	-26.9
Liechtenstein	233	270	251	216	208	-10.7
Lithuania <sup>a</sup>	44 529	9 780	10 881	12 537	13 391	-69.9
Luxembourg	12 779	8 915	11 997	10 300	9 864	-22.8
Malta	2 385	2 664	3 021	2 933	2 230	-6.5
Monaco	99	108	87	80	82	-17.7
Netherlands	226 811	225 423	220 057	194 048	201 749	-11.0
New Zealand	34 451	42 774	47 463	56 472	56 373	63.6
Norway	41 279	31 153	29 362	28 582	29 589	-28.3
Poland <sup>a, b</sup>	553 564	359 134	376 249	350 801	356 998	-35.5
Portugal	61 245	77 204	58 381	54 498	60 275	-1.6
Romania <sup>a, b</sup>	285 032	117 345	102 403	97 155	98 169	-65.6
Russian Federation <sup>a</sup>	3 930 043	1 920 867	2 020 883	2 076 025	2 132 231	-45.7
Slovakia <sup>a</sup>	65 469	40 144	40 547	34 556	34 841	-46.8
Slovenia <sup>a, b</sup>	15 573	12 977	12 803	10 903	11 202	-28.1
Spain	262 684	348 018	318 328	284 839	296 890	13.0
Sweden	34 933	30 775	16 513	8 660	3 177	-90.9
Switzerland	53 078	57 383	53 117	47 784	47 144	-11.2
Turkey <sup>d</sup>	183 753	260 265	359 980	396 100	411 035	123.7
Ukraine <sup>a</sup>	910 319	388 771	382 883	355 237	308 203	-66.1
United Kingdom	802 516	713 583	609 854	518 944	499 397	-37.8
United States	5 543 467	6 461 499	6 208 268	5 978 327	5 827 723	5.1
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						33
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						10

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 7

**Total anthropogenic CO<sub>2</sub> emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	278 353	349 984	406 811	393 572	402 160	44.5
Austria	62 293	66 346	72 547	64 204	66 724	7.1
Belarus <sup>a</sup>	100 663	53 951	62 301	61 317	57 024	-43.4
Belgium	120 166	126 522	113 351	96 540	100 249	-16.6
Bulgaria <sup>a, b</sup>	89 374	45 160	47 758	45 188	48 294	-46.0
Canada	463 497	570 000	553 721	572 728	568 094	22.6
Croatia <sup>a</sup>	23 390	19 789	21 204	17 777	17 919	-23.4
Cyprus	4 621	7 096	8 005	6 878	6 860	48.4
Czechia <sup>a</sup>	161 650	125 788	116 159	102 799	103 770	-35.8
Denmark	54 883	55 629	50 689	38 779	36 449	-33.6
Estonia <sup>a</sup>	37 069	15 363	19 015	18 910	15 885	-57.1
European Union <sup>c</sup>	4 457 424	4 162 646	3 930 649	3 468 723	3 498 051	-21.5
Finland	56 949	57 026	64 007	47 757	44 382	-22.1
France	401 974	417 896	392 652	337 606	342 459	-14.8
Germany	1 052 247	899 286	832 437	794 829	792 054	-24.7
Greece	83 375	102 982	97 343	78 658	74 963	-10.1
Hungary <sup>a, b</sup>	85 565	58 545	52 217	44 034	46 778	-45.3
Iceland	2 158	2 768	3 437	3 296	3 369	56.1
Ireland	32 841	45 193	41 630	36 633	38 393	16.9
Italy	434 968	466 241	425 304	347 071	357 199	-17.9
Japan	1 157 165	1 275 777	1 215 011	1 266 601	1 225 239	5.9
Latvia <sup>a</sup>	19 781	7 073	8 530	7 151	7 239	-63.4
Liechtenstein	199	217	191	161	160	-19.7
Lithuania <sup>a</sup>	35 807	11 806	13 713	12 874	13 142	-63.3
Luxembourg	11 812	8 673	11 185	9 797	9 306	-21.2
Malta	2 171	2 418	2 638	2 481	1 757	-19.1
Monaco	95	98	75	69	69	-27.9
Netherlands	162 271	171 650	182 546	158 043	165 127	1.8
New Zealand	25 429	32 359	35 018	35 585	35 911	41.2
Norway	35 704	42 202	45 838	43 966	44 664	25.1
Poland <sup>a, b</sup>	470 886	317 099	332 132	307 602	310 639	-34.0
Portugal	45 371	65 683	52 616	47 741	52 017	14.6
Romania <sup>a, b</sup>	208 314	92 958	82 266	77 196	78 013	-62.6
Russian Federation <sup>a</sup>	2 589 896	1 504 293	1 663 338	1 671 083	1 670 809	-35.5
Slovakia <sup>a</sup>	61 935	41 266	38 536	33 442	33 817	-45.4
Slovenia <sup>a, b</sup>	16 650	15 430	16 361	13 513	13 598	-18.3
Spain	231 310	311 934	284 367	254 637	271 726	17.5
Sweden	57 548	54 727	53 024	43 255	43 346	-24.7
Switzerland	44 171	43 607	45 053	39 269	38 751	-12.3
Turkey <sup>d</sup>	148 195	227 719	322 057	359 220	383 427	158.7
Ukraine <sup>a</sup>	706 202	279 514	293 479	256 178	223 081	-68.4
United Kingdom	595 297	560 582	507 470	433 371	415 721	-30.2
United States	5 123 043	6 001 356	5 699 930	5 565 495	5 411 409	5.6
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						29
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						14

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 8  
**Total anthropogenic CO<sub>2</sub> emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	418 476	399 175	414 665	378 270	380 320	-9.1
Austria	49 986	49 961	66 505	59 164	61 744	23.5
Belarus <sup>a</sup>	79 536	20 680	22 153	31 186	29 501	-62.9
Belgium	117 367	124 302	111 310	94 440	98 162	-16.4
Bulgaria <sup>a, b</sup>	73 918	35 259	38 055	37 978	41 326	-44.1
Canada	362 417	505 544	524 434	538 416	533 148	47.1
Croatia <sup>a</sup>	16 763	12 088	13 864	11 109	12 827	-23.5
Cyprus	4 521	7 013	7 838	6 705	6 691	48.0
Czechia <sup>a</sup>	155 024	116 860	108 791	94 912	97 034	-37.4
Denmark	59 739	59 775	49 814	38 837	40 509	-32.2
Estonia <sup>a</sup>	35 333	11 963	17 085	17 148	13 519	-61.7
European Union <sup>c</sup>	4 205 706	3 840 910	3 591 665	3 140 845	3 174 427	-24.5
Finland	41 466	32 679	34 449	17 230	16 205	-60.9
France	372 167	390 861	349 902	294 543	303 372	-18.5
Germany	1 019 229	859 653	814 391	778 240	775 753	-23.9
Greece	81 130	100 643	93 992	78 196	71 803	-11.5
Hungary <sup>a, b</sup>	83 711	57 687	47 605	38 600	40 195	-52.0
Iceland	9 862	10 501	11 434	11 295	11 323	14.8
Ireland	38 283	50 653	45 008	40 619	42 060	9.9
Italy	429 383	448 393	392 706	311 813	320 136	-25.4
Japan	1 093 427	1 186 712	1 144 690	1 201 240	1 164 070	6.5
Latvia <sup>a</sup>	10 114	-557	9 596	10 413	7 535	-25.5
Liechtenstein	202	238	211	175	167	-17.1
Lithuania <sup>a</sup>	31 769	1 606	3 388	5 082	5 974	-81.2
Luxembourg	11 839	7 950	11 015	9 327	8 888	-24.9
Malta	2 174	2 421	2 640	2 484	1 760	-19.0
Monaco	95	98	75	68	69	-27.8
Netherlands	168 326	177 632	188 575	164 594	171 708	2.0
New Zealand	-4 964	-297	4 142	11 595	11 947	-340.7
Norway	24 805	18 223	19 440	18 687	19 812	-20.1
Poland <sup>a, b</sup>	453 865	285 220	300 746	274 313	280 666	-38.2
Portugal	46 260	59 684	41 006	37 645	43 044	-7.0
Romania <sup>a, b</sup>	190 747	68 414	61 926	57 093	57 911	-69.6
Russian Federation <sup>a</sup>	2 720 461	1 116 200	1 048 195	1 066 450	1 115 129	-59.0
Slovakia <sup>a</sup>	52 857	31 496	32 484	27 276	27 343	-48.3
Slovenia <sup>a, b</sup>	11 799	9 263	9 517	7 769	7 934	-32.8
Spain	205 562	273 613	245 538	214 937	232 462	13.1
Sweden	19 193	15 078	3 031	-3 933	-9 166	-147.8
Switzerland	43 776	48 532	43 713	38 346	37 771	-13.7
Turkey <sup>d</sup>	117 966	191 504	275 231	299 705	319 406	170.8
Ukraine <sup>a</sup>	654 090	240 496	262 556	242 667	207 937	-68.2
United Kingdom	598 520	558 790	499 940	424 353	406 808	-32.0
United States	4 292 807	5 228 174	4 970 220	4 784 422	4 632 757	7.9
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						33
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						10

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.



Table 9

**Total anthropogenic CH<sub>4</sub> emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	119 920	112 818	102 430	100 911	100 895	-15.9
Austria	10 514	8 447	7 211	6 650	6 575	-37.5
Belarus <sup>a</sup>	19 704	15 162	17 888	18 485	19 064	-3.3
Belgium	12 223	10 991	8 758	8 147	8 074	-33.9
Bulgaria <sup>a, b</sup>	16 869	10 159	7 739	7 387	7 314	-56.6
Canada	93 532	117 998	99 750	104 775	102 400	9.5
Croatia <sup>a</sup>	3 744	2 888	3 415	3 227	3 431	-8.4
Cyprus	692	843	914	868	877	26.7
Czechia <sup>a</sup>	23 451	15 221	14 243	13 628	13 694	-41.6
Denmark	7 663	7 946	7 384	6 983	6 884	-10.2
Estonia <sup>a</sup>	1 910	1 239	1 196	1 106	1 059	-44.5
European Union <sup>c</sup>	728 408	606 472	492 178	458 434	456 014	-37.4
Finland	7 746	6 614	5 373	4 919	4 875	-37.1
France	70 059	70 788	63 233	60 277	59 352	-15.3
Germany	120 293	87 736	58 260	56 009	55 616	-53.8
Greece	10 907	11 629	10 973	10 313	10 218	-6.3
Hungary <sup>a, b</sup>	12 544	8 923	8 067	7 703	7 626	-39.2
Iceland	523	564	590	553	556	6.2
Ireland	14 803	14 292	11 981	12 881	13 263	-10.4
Italy	54 242	53 067	48 694	44 225	43 212	-20.3
Japan	44 223	37 666	34 855	32 068	31 295	-29.2
Latvia <sup>a</sup>	3 539	1 848	1 836	1 957	1 884	-46.8
Liechtenstein	20	17	20	20	19	-0.2
Lithuania <sup>a</sup>	6 954	3 840	3 661	3 433	3 376	-51.4
Luxembourg	635	626	633	615	621	-2.1
Malta	155	174	180	172	178	14.9
Monaco	2	2	3	3	3	46.1
Netherlands	32 316	25 090	20 116	18 784	19 001	-41.2
New Zealand	32 522	35 297	34 047	34 800	34 192	5.1
Norway	5 800	5 704	5 398	5 318	5 192	-10.5
Poland <sup>a, b</sup>	70 015	49 388	48 178	46 595	47 176	-32.6
Portugal	10 201	12 105	11 346	10 703	10 812	6.0
Romania <sup>a, b</sup>	70 196	36 118	30 047	29 748	29 592	-57.8
Russian Federation <sup>a</sup>	942 071	632 746	824 939	856 297	864 062	-8.3
Slovakia <sup>a</sup>	7 199	5 355	4 531	4 216	4 352	-39.5
Slovenia <sup>a, b</sup>	2 556	2 459	2 180	1 981	2 037	-20.3
Spain	35 169	41 585	39 226	37 482	38 352	9.1
Sweden	7 640	7 051	5 508	4 977	4 872	-36.2
Switzerland	6 102	5 396	5 276	5 121	5 086	-16.7
Turkey <sup>d</sup>	41 244	42 288	51 219	56 834	51 439	24.7
Ukraine <sup>a</sup>	190 681	119 169	87 580	71 891	62 487	-67.2
United Kingdom	135 331	111 020	68 226	54 358	52 590	-61.1
United States	780 795	704 214	692 119	659 141	655 718	-16.0
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						33
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						1
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						9

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 10  
**Total anthropogenic CH<sub>4</sub> emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	132 681	123 832	112 290	110 474	109 553	-17.4
Austria	10 538	8 471	7 235	6 674	6 599	-37.4
Belarus <sup>a</sup>	19 712	15 171	17 893	18 492	19 120	-3.0
Belgium	12 224	10 991	8 758	8 147	8 074	-33.9
Bulgaria <sup>a, b</sup>	16 871	10 294	7 754	7 389	7 326	-56.6
Canada	94 796	119 456	100 520	105 763	103 400	9.1
Croatia <sup>a</sup>	3 745	2 985	3 417	3 227	3 445	-8.0
Cyprus	692	848	915	868	877	26.8
Czechia <sup>a</sup>	23 568	15 329	14 393	13 702	13 776	-41.5
Denmark	7 682	7 981	7 435	7 040	6 944	-9.6
Estonia <sup>a</sup>	1 910	1 240	1 196	1 107	1 059	-44.5
European Union <sup>c</sup>	735 276	613 795	497 586	463 301	461 059	-37.3
Finland	9 285	7 963	6 351	5 840	5 795	-37.6
France	71 007	72 454	64 415	61 349	60 462	-14.8
Germany	121 169	88 608	59 127	56 874	56 483	-53.4
Greece	10 969	11 835	10 989	10 322	10 229	-6.7
Hungary <sup>a, b</sup>	12 568	8 949	8 077	7 720	7 644	-39.2
Iceland	2 886	2 897	2 850	2 795	2 795	-3.1
Ireland	15 030	14 577	12 470	13 261	13 634	-9.3
Italy	55 759	54 001	49 048	44 561	43 500	-22.0
Japan	44 296	37 733	34 915	32 145	31 354	-29.2
Latvia <sup>a</sup>	3 843	2 186	2 145	2 333	2 257	-41.3
Liechtenstein	20	17	20	20	19	-0.2
Lithuania <sup>a</sup>	6 957	3 844	3 662	3 436	3 378	-51.4
Luxembourg	635	626	633	615	621	-2.1
Malta	155	174	180	172	178	14.9
Monaco	2	2	3	3	3	46.1
Netherlands	32 317	25 091	20 117	18 785	19 001	-41.2
New Zealand	32 615	35 384	34 157	34 880	34 271	5.1
Norway	5 940	5 848	5 547	5 467	5 341	-10.1
Poland <sup>a, b</sup>	70 059	49 420	48 210	46 630	47 210	-32.6
Portugal	10 565	12 510	11 642	10 744	10 953	3.7
Romania <sup>a, b</sup>	70 196	36 121	30 047	29 749	29 593	-57.8
Russian Federation <sup>a</sup>	963 253	653 063	847 730	878 937	886 627	-8.0
Slovakia <sup>a</sup>	7 206	5 366	4 546	4 233	4 369	-39.4
Slovenia <sup>a, b</sup>	2 556	2 459	2 181	1 981	2 038	-20.3
Spain	35 477	41 871	39 310	37 556	38 522	8.6
Sweden	8 102	7 521	5 998	5 506	5 374	-33.7
Switzerland	6 132	5 411	5 289	5 134	5 099	-16.8
Turkey <sup>d</sup>	41 244	42 288	51 219	56 834	51 439	24.7
Ukraine <sup>a</sup>	190 692	119 176	87 611	71 926	62 538	-67.2
United Kingdom	135 347	111 052	68 266	54 390	52 617	-61.1
United States	787 540	716 259	699 065	670 430	667 014	-15.3
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						34
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						1
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						8

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 11  
**Total anthropogenic N<sub>2</sub>O emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	15 327	18 949	19 348	20 199	18 443	20.3
Austria	4 342	4 354	3 399	3 507	3 517	-19.0
Belarus <sup>a</sup>	16 548	12 170	13 692	13 856	13 517	-18.3
Belgium	10 139	10 246	7 606	6 154	5 966	-41.2
Bulgaria <sup>a, b</sup>	10 135	4 007	4 129	3 828	4 704	-53.6
Canada	42 217	39 545	37 293	38 138	38 901	-7.9
Croatia <sup>a</sup>	2 769	2 419	2 322	1 625	1 728	-37.6
Cyprus	309	362	374	318	335	8.4
Czechia <sup>a</sup>	10 643	6 830	5 747	6 082	6 113	-42.6
Denmark	7 904	6 949	5 161	5 162	5 202	-34.2
Estonia <sup>a</sup>	1 424	630	755	845	871	-38.8
European Union <sup>c</sup>	384 989	305 220	239 234	235 047	235 992	-38.7
Finland	6 377	5 660	4 696	4 653	4 659	-26.9
France	66 192	55 037	41 932	41 647	41 442	-37.4
Germany	64 989	43 088	36 794	38 590	39 078	-39.9
Greece	7 423	6 329	5 469	4 485	4 506	-39.3
Hungary <sup>a, b</sup>	11 020	5 367	3 809	4 224	4 309	-60.9
Iceland	378	358	319	340	320	-15.5
Ireland	8 423	8 635	7 070	7 049	7 079	-16.0
Italy	26 949	29 347	19 537	18 153	18 203	-32.5
Japan	31 518	29 561	22 318	20 945	20 830	-33.9
Latvia <sup>a</sup>	2 822	1 405	1 674	1 868	1 942	-31.2
Liechtenstein	11	10	10	10	10	-9.7
Lithuania <sup>a</sup>	5 280	3 931	3 144	3 106	3 094	-41.4
Luxembourg	283	286	271	268	266	-6.0
Malta	56	61	54	46	45	-20.6
Monaco	2	3	4	4	4	128.4
Netherlands	17 687	15 711	8 126	8 065	8 332	-52.9
New Zealand	5 693	7 153	7 783	8 401	8 452	48.5
Norway	4 231	3 940	2 622	2 578	2 617	-38.1
Poland <sup>a, b</sup>	29 322	22 533	19 708	19 790	18 989	-35.2
Portugal	3 831	4 204	3 377	3 179	3 192	-16.7
Romania <sup>a, b</sup>	18 402	9 333	7 535	7 038	7 126	-61.3
Russian Federation <sup>a</sup>	183 378	98 744	94 890	90 105	90 440	-50.7
Slovakia <sup>a</sup>	5 012	3 109	2 851	2 340	2 343	-53.3
Slovenia <sup>a, b</sup>	924	1 012	774	758	819	-11.3
Spain	17 082	19 721	15 895	15 986	16 108	-5.7
Sweden	5 773	5 796	4 823	4 666	4 608	-20.2
Switzerland	2 829	2 547	2 496	2 400	2 352	-16.9
Turkey <sup>d</sup>	23 841	25 092	28 794	32 740	33 280	39.6
Ukraine <sup>a</sup>	65 085	28 496	31 471	39 371	36 570	-43.8
United Kingdom	48 865	29 191	22 493	21 905	21 705	-55.6
United States	359 547	361 923	370 497	335 482	334 814	-6.9
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						38
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						5

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 12  
**Total anthropogenic N<sub>2</sub>O emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	21 949	25 160	26 512	26 962	23 906	8.9
Austria	4 485	4 488	3 531	3 638	3 650	-18.6
Belarus <sup>a</sup>	16 561	12 188	13 708	13 872	13 574	-18.0
Belgium	10 151	10 310	7 734	6 324	6 147	-39.4
Bulgaria <sup>a, b</sup>	10 202	4 163	4 209	3 901	4 785	-53.1
Canada	42 758	40 129	37 625	38 536	39 305	-8.1
Croatia <sup>a</sup>	2 805	2 517	2 397	1 701	1 814	-35.3
Cyprus	309	366	375	318	335	8.4
Czechia <sup>a</sup>	10 663	6 845	5 765	6 094	6 126	-42.6
Denmark	7 931	6 976	5 188	5 192	5 236	-34.0
Estonia <sup>a</sup>	1 425	632	761	852	878	-38.4
European Union <sup>c</sup>	398 077	318 777	252 579	248 652	249 717	-37.3
Finland	7 649	6 948	5 979	5 922	5 925	-22.5
France	68 573	57 323	44 155	43 778	43 609	-36.4
Germany	65 819	43 890	37 602	39 437	39 933	-39.3
Greece	7 429	6 350	5 479	4 494	4 515	-39.2
Hungary <sup>a, b</sup>	11 041	5 432	3 860	4 280	4 361	-60.5
Iceland	445	431	399	421	402	-9.8
Ireland	8 552	8 829	7 372	7 325	7 355	-14.0
Italy	27 761	30 018	20 172	18 737	18 759	-32.4
Japan	31 727	29 751	22 488	21 116	21 000	-33.8
Latvia <sup>a</sup>	3 398	2 002	2 318	2 573	2 651	-22.0
Liechtenstein	11	10	10	10	10	-8.5
Lithuania <sup>a</sup>	5 803	4 307	3 566	3 563	3 555	-38.7
Luxembourg	304	307	288	282	279	-8.2
Malta	56	61	54	46	45	-20.6
Monaco	2	3	4	4	4	127.6
Netherlands	17 693	15 773	8 232	8 188	8 461	-52.2
New Zealand	5 870	7 354	7 934	8 515	8 554	45.7
Norway	4 541	4 288	3 001	2 959	3 001	-33.9
Poland <sup>a, b</sup>	29 492	22 916	20 338	20 876	20 083	-31.9
Portugal	4 420	4 711	3 781	3 535	3 559	-19.5
Romania <sup>a, b</sup>	19 643	11 056	9 378	8 881	8 969	-54.3
Russian Federation <sup>a</sup>	193 880	114 221	106 945	102 304	104 575	-46.1
Slovakia <sup>a</sup>	5 091	3 149	2 875	2 368	2 371	-53.4
Slovenia <sup>a, b</sup>	975	1 063	818	795	854	-12.4
Spain	17 378	20 186	16 205	16 238	16 431	-5.5
Sweden	6 964	7 053	6 284	6 150	6 106	-12.3
Switzerland	2 916	2 624	2 570	2 475	2 425	-16.8
Turkey <sup>d</sup>	23 851	25 099	28 794	32 740	33 280	39.5
Ukraine <sup>a</sup>	65 301	28 963	31 930	39 768	36 939	-43.4
United Kingdom	51 326	31 442	24 162	23 464	23 223	-54.8
United States	363 441	370 686	376 060	343 906	343 237	-5.6
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						38
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						5

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 13  
**Total aggregate anthropogenic emissions of HFCs, PFCs, SF<sub>6</sub>, MIX and NF<sub>3</sub>, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	6 243	3 091	8 570	11 109	11 786	88.8
Austria	1 656	1 387	1 901	2 020	2 034	22.9
Belarus <sup>a</sup>		0	2	2	3	
Belgium	3 766	1 720	2 722	3 238	3 155	-16.2
Bulgaria <sup>a, b</sup>	3	40	676	1 101	1 171	-
Canada	11 755	10 644	10 074	11 517	12 406	5.5
Croatia <sup>a</sup>	1 251	160	388	420	425	-66.0
Cyprus	0	25	281	359	359	-
Czechia <sup>a</sup>	84	386	2 477	3 330	3 550	4 120.9
Denmark	42	789	1 027	877	785	1 751.4
Estonia <sup>a</sup>		82	177	220	225	
European Union <sup>c</sup>	71 863	77 898	113 141	122 628	117 911	64.1
Finland	53	599	1 508	1 744	1 592	2 919.3
France	11 843	12 027	18 948	20 548	20 397	72.2
Germany	13 386	12 847	14 260	14 834	15 183	13.4
Greece	1 376	5 388	4 524	5 898	6 027	338.0
Hungary <sup>a, b</sup>	377	626	1 312	1 918	2 380	530.8
Iceland	496	194	322	283	312	-37.1
Ireland	35	955	1 012	1 194	1 143	3 143.4
Italy	3 758	4 209	11 512	13 876	14 411	283.4
Japan	35 354	42 042	31 518	42 315	45 204	27.9
Latvia <sup>a</sup>		10	162	214	237	
Liechtenstein	0	4	10	11	10	-
Lithuania <sup>a</sup>		23	266	456	484	
Luxembourg	1	32	60	76	76	8 563.9
Malta	0	8	147	231	247	-
Monaco	0	4	4	5	6	2 476.0
Netherlands	8 476	6 927	3 134	2 480	2 579	-69.6
New Zealand	930	334	1 230	1 482	1 600	72.1
Norway	5 993	2 793	1 375	1 469	1 435	-76.1
Poland <sup>a, b</sup>	147	1 578	6 955	8 982	9 039	6 038.3
Portugal		299	1 953	2 573	2 719	
Romania <sup>a, b</sup>	4 447	1 754	1 052	1 431	1 696	-61.9
Russian Federation <sup>a</sup>	52 448	37 383	18 013	28 334	25 901	-50.6
Slovakia <sup>a</sup>	315	133	642	679	758	140.6
Slovenia <sup>a, b</sup>	243	192	287	359	377	55.0
Spain	4 268	12 348	17 274	16 109	9 475	122.0
Sweden	675	1 123	1 200	938	863	27.9
Switzerland	254	816	1 545	1 830	1 849	629.4
Turkey <sup>d</sup>	693	1 374	4 736	6 821	6 910	897.5
Ukraine <sup>a</sup>	236	136	786	876	790	235.0
United Kingdom	17 322	12 299	17 486	16 737	16 749	-3.3
United States	99 679	146 381	162 923	179 569	184 714	85.3
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						8
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						30

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 14  
**Net anthropogenic CO<sub>2</sub> emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	140 123	49 191	7 854	-15 302	-21 839	-115.6
Austria	-12 307	-16 384	-6 042	-5 040	-4 980	-59.5
Belarus <sup>a</sup>	-21 127	-33 271	-40 148	-30 131	-27 523	30.3
Belgium	-2 799	-2 220	-2 041	-2 100	-2 087	-25.4
Bulgaria <sup>a, b</sup>	-15 457	-9 901	-9 703	-7 211	-6 968	-54.9
Canada	-101 080	-64 456	-29 287	-34 312	-34 946	-65.4
Croatia <sup>a</sup>	-6 627	-7 701	-7 340	-6 668	-5 092	-23.2
Cyprus	-100	-83	-167	-174	-168	67.6
Czechia <sup>a</sup>	-6 626	-8 928	-7 368	-7 887	-6 735	1.7
Denmark	4 856	4 146	-874	58	4 060	-16.4
Estonia <sup>a</sup>	-1 737	-3 399	-1 930	-1 762	-2 366	36.3
European Union <sup>c</sup>	-251 718	-321 736	-338 985	-327 877	-323 624	28.6
Finland	-15 483	-24 346	-29 558	-30 527	-28 177	82.0
France	-29 807	-27 035	-42 750	-43 063	-39 087	31.1
Germany	-33 018	-39 633	-18 045	-16 589	-16 301	-50.6
Greece	-2 246	-2 339	-3 351	-462	-3 160	40.7
Hungary <sup>a, b</sup>	-1 854	-858	-4 612	-5 434	-6 583	255.0
Iceland	7 704	7 733	7 996	8 000	7 954	3.2
Ireland	5 442	5 461	3 378	3 986	3 667	-32.6
Italy	-5 585	-17 848	-32 598	-35 258	-37 063	563.6
Japan	-63 737	-89 065	-70 321	-65 361	-61 169	-4.0
Latvia <sup>a</sup>	-9 667	-7 630	1 067	3 262	296	-103.1
Liechtenstein	3	22	21	13	8	147.2
Lithuania <sup>a</sup>	-4 038	-10 200	-10 325	-7 792	-7 168	77.5
Luxembourg	27	-723	-170	-470	-418	-1 648.7
Malta	3	3	2	3	3	5.6
Monaco	0	0	0	0	0	-646.9
Netherlands	6 054	5 982	6 029	6 551	6 581	8.7
New Zealand	-30 393	-32 656	-30 875	-23 990	-23 964	-21.2
Norway	-10 900	-23 979	-26 398	-25 279	-24 853	128.0
Poland <sup>a, b</sup>	-17 021	-31 878	-31 386	-33 289	-29 973	76.1
Portugal	888	-5 999	-11 609	-10 095	-8 973	-1 110.3
Romania <sup>a, b</sup>	-17 568	-24 544	-20 340	-20 102	-20 102	14.4
Russian Federation <sup>a</sup>	130 566	-388 092	-615 143	-604 633	-555 681	-525.6
Slovakia <sup>a</sup>	-9 078	-9 770	-6 052	-6 166	-6 474	-28.7
Slovenia <sup>a, b</sup>	-4 850	-6 167	-6 843	-5 744	-5 664	16.8
Spain	-25 748	-38 320	-38 829	-39 701	-39 264	52.5
Sweden	-38 356	-39 649	-49 993	-47 188	-52 512	36.9
Switzerland	-395	4 925	-1 340	-923	-981	148.3
Turkey <sup>d</sup>	-30 229	-36 215	-46 826	-59 515	-64 021	111.8
Ukraine <sup>a</sup>	-52 111	-39 018	-30 923	-13 511	-15 144	-70.9
United Kingdom	3 223	-1 792	-7 530	-9 018	-8 913	-376.6
United States	-830 236	-773 182	-729 710	-781 073	-778 652	-6.2
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						20
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						23

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 15  
**Anthropogenic CH<sub>4</sub> emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	kt CO <sub>2</sub> eq					Change from 1990 to 2015 (%)
	1990	2000	2010	2014	2015	
Australia	12 760	11 014	9 860	9 563	8 658	-32.2
Austria	24	24	24	24	24	-0.6
Belarus <sup>a</sup>	8	9	5	7	56	609.5
Belgium	1	0				
Bulgaria <sup>a, b</sup>	1	135	15	2	13	1 088.2
Canada	1 264	1 459	770	988	1 000	-20.9
Croatia <sup>a</sup>	1	97	2	0	14	1034.9
Cyprus	0	6	1	0	0	103.6
Czechia <sup>a</sup>	117	108	150	73	82	-30.2
Denmark	19	35	51	58	60	218.6
Estonia <sup>a</sup>	0	1	0	0	0	-82.2
European Union <sup>c</sup>	6 867	7 323	5 408	4 867	5 044	-26.5
Finland	1 539	1 349	978	921	920	-40.2
France	947	1 666	1 182	1 072	1 110	17.2
Germany	876	871	868	865	867	-1.0
Greece	62	207	16	9	11	-82.7
Hungary <sup>a, b</sup>	25	26	9	17	18	-27.3
Iceland	2 362	2 334	2 260	2 241	2 239	-5.2
Ireland	227	284	490	379	371	63.7
Italy	1 518	934	354	336	288	-81.0
Japan	73	67	60	76	59	-18.6
Latvia <sup>a</sup>	304	338	308	376	373	22.7
Liechtenstein						
Lithuania <sup>a</sup>	3	4	1	3	1	-49.9
Luxembourg						
Malta						
Monaco						
Netherlands	0	0	0	0	0	33.9
New Zealand	93	87	110	80	79	-14.9
Norway	140	145	148	149	149	6.4
Poland <sup>a, b</sup>	44	33	32	35	34	-22.7
Portugal	364	405	295	41	141	-61.3
Romania <sup>a, b</sup>	0	3	0	1	1	1 179.2
Russian Federation <sup>a</sup>	21 183	20 317	22 792	22 640	22 565	6.5
Slovakia <sup>a</sup>	7	11	15	17	17	125.8
Slovenia <sup>a, b</sup>		0	0	0	0	
Spain	308	285	84	74	170	-44.8
Sweden	462	470	491	528	502	8.6
Switzerland	29	15	13	13	13	-54.8
Turkey <sup>d</sup>	0	0	0	0	0	-71.3
Ukraine <sup>a</sup>	11	7	31	34	51	348.4
United Kingdom	17	32	40	32	26	59.0
United States	6 746	12 045	6 946	11 290	11 296	67.5
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						19
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						1
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						17

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 16  
**Anthropogenic N<sub>2</sub>O emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2014 and 2015**

Party	<i>kt CO<sub>2</sub> eq</i>					<i>Change from 1990 to 2015 (%)</i>
	1990	2000	2010	2014	2015	
Australia	6 622	6 211	7 164	6 763	5 464	-17.5
Austria	144	134	131	131	132	-7.9
Belarus <sup>a</sup>	14	19	16	16	57	312.7
Belgium	12	64	127	170	181	1 364.0
Bulgaria <sup>a, b</sup>	68	156	81	73	80	18.9
Canada	541	585	332	398	403	-25.4
Croatia <sup>a</sup>	37	99	75	76	86	135.2
Cyprus	0	4	0	0	0	116.5
Czechia <sup>a</sup>	21	15	18	12	13	-37.6
Denmark	27	27	27	29	34	24.4
Estonia <sup>a</sup>	1	1	6	7	7	358.3
European Union <sup>c</sup>	13 088	13 557	13 345	13 605	13 725	4.9
Finland	1 271	1 288	1 283	1 269	1 266	-0.4
France	2 381	2 285	2 222	2 131	2 167	-9.0
Germany	830	801	809	847	855	2.9
Greece	6	22	10	9	9	51.5
Hungary <sup>a, b</sup>	21	65	51	55	53	146.9
Iceland	67	72	80	81	82	22.2
Ireland	128	194	302	276	276	114.8
Italy	812	672	635	585	556	-31.5
Japan	209	189	169	171	170	-18.6
Latvia <sup>a</sup>	576	597	644	705	708	23.0
Liechtenstein	0	0	0	0	0	34.5
Lithuania <sup>a</sup>	523	376	422	457	461	-11.9
Luxembourg	21	21	17	14	13	-37.1
Malta						
Monaco	0	0	0	0	0	17.4
Netherlands	6	62	106	123	130	2 126.4
New Zealand	177	201	151	114	102	-42.4
Norway	310	347	379	381	384	23.8
Poland <sup>a, b</sup>	170	383	630	1 085	1 094	542.2
Portugal	589	507	404	356	367	-37.7
Romania <sup>a, b</sup>	1 241	1 723	1 843	1 843	1 843	48.5
Russian Federation <sup>a</sup>	10 502	15 477	12 055	12 199	14 135	34.6
Slovakia <sup>a</sup>	80	40	25	28	29	-64.1
Slovenia <sup>a, b</sup>	51	51	43	37	35	-31.0
Spain	296	466	311	251	322	8.7
Sweden	1 190	1 257	1 461	1 483	1 497	25.8
Switzerland	87	78	74	74	74	-15.3
Turkey <sup>d</sup>	10	7	0	0	0	-99.8
Ukraine <sup>a</sup>	215	467	459	397	369	71.3
United Kingdom	2 461	2 251	1 668	1 559	1 518	-38.3
United States	3 894	8 763	5 563	8 424	8 424	116.3
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						<i>16</i>
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						<i>1</i>
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						<i>25</i>

<sup>a</sup> A Party with an economy in transition.

<sup>b</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>c</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>d</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.



Table 17  
**Indirect CO<sub>2</sub> emissions,<sup>a</sup> 1990, 2000, 2010, 2014 and 2015**

Party	<i>kt CO<sub>2</sub> eq</i>					<i>Change from 1990 to 2015 (%)</i>
	1990	2000	2010	2014	2015	
Australia						
Austria						
Belarus <sup>b</sup>						
Belgium						
Bulgaria <sup>b, c</sup>						
Canada	709	632	463	430	440	-37.9
Croatia <sup>b</sup>						
Cyprus						
Czechia <sup>b</sup>	2 122	1 156	967	778	799	-62.4
Denmark	1 217	874	556	421	412	-66.1
Estonia <sup>b</sup>						
European Union <sup>d</sup>	4 395	2 708	2 012	1 647	1 662	-62.2
Finland	165	104	69	53	52	-68.6
France						
Germany						
Greece						
Hungary <sup>b, c</sup>						
Iceland						
Ireland						
Italy						
Japan	5 301	4 058	2 343	2 111	2 150	-59.4
Latvia <sup>b</sup>	43	26	16	20	17	-61.5
Liechtenstein						
Lithuania <sup>b</sup>						
Luxembourg						
Malta						
Monaco						
Netherlands	666	336	237	210	207	-68.9
New Zealand						
Norway						
Poland <sup>b, c</sup>						
Portugal	181	212	168	165	175	-3.4
Romania <sup>b, c</sup>						
Russian Federation <sup>b</sup>						
Slovakia <sup>b</sup>						
Slovenia <sup>b, c</sup>						
Spain						
Sweden						
Switzerland	412	188	123	120	113	-72.5
Turkey <sup>e</sup>						
Ukraine <sup>b</sup>						
United Kingdom						
United States						
<i>Number of Parties showing a decrease in emissions by more than 1 per cent:</i>						10
<i>Number of Parties showing a change in emissions within 1 per cent:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1 per cent:</i>						0

<sup>a</sup> In accordance with decision 24/CP.19, Annex I Parties may report indirect CO<sub>2</sub> from the atmospheric oxidation of methane, carbon monoxide and non-methane volatile organic compounds. Ten Parties voluntarily reported indirect CO<sub>2</sub> emissions in their 2017 inventory submissions.

<sup>b</sup> A Party with an economy in transition.

<sup>c</sup> Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

<sup>d</sup> Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

<sup>e</sup> Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.