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## Subsidiary Body for Implementation

Fifty-second to fifty-fifth session

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Item 3(c) of the provisional agenda

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

**Reports on national greenhouse gas inventory data from Parties included in Annex I to the Convention for 1990–2016, 1990–2017, 1990–2018 and 1990–2019**

## National greenhouse gas inventory data for the period 1990–2019

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 tables, and 41 Parties their national inventory reports, by the deadline of 15 April 2021. In 1990–2019, total aggregate GHG emissions without emissions and removals from land use, land-use change and forestry (LULUCF) for all Annex I Parties decreased by 14.9 per cent, while total GHG emissions and removals with LULUCF decreased by 18.9 per cent. For Annex I Parties with economies in transition, GHG emissions without and with LULUCF decreased by 41.0 and 49.6 per cent, respectively. For Annex I Parties that do not have economies in transition, GHG emissions without and with LULUCF decreased by 3.7 and 5.4 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 13 August 2021.

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\* This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.



## Abbreviations and acronyms

Annex I Party	Party included in Annex I to the Convention
C	confidential
CH <sub>4</sub>	methane
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
COP	Conference of the Parties
CRF	common reporting format
EIT Party	Party with economy in transition
F-gas	fluorinated gas
GHG	greenhouse gas
IE	included elsewhere
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
N <sub>2</sub> O	nitrous oxide
NA	not applicable
NE	not estimated
NIR	national inventory report
NO	not occurring
non-EIT Party	Party that does not have an economy in transition
UNFCCC Annex I inventory reporting guidelines	“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”

## I. Introduction

### A. Mandate

1. COP 19 requested Annex I Parties to submit national inventory data on GHG emissions by sources and removals by sinks by 15 April of each year.<sup>1</sup> COP 20 requested the secretariat to compile and summarize information on the GHG inventory data submitted by Annex I Parties, inter alia, for consideration by the COP and the subsidiary bodies.<sup>2</sup>

### B. Scope

2. This document shows the status of reporting of GHG inventories by Annex I Parties in 2021 (see chap. 0 below) and provides a summary of the latest available data on GHG emissions and removals for 1990–2019 (see chap. 0 below). Data are provided for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, as well as for F-gases,<sup>3</sup> 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>4</sup> aggregate<sup>5</sup> GHG emissions, both without and with net GHG emissions and removals from LULUCF.

3. The information provided in this document is based on information in the national GHG inventories<sup>6</sup> received from all 43 Annex I Parties (see table 1) as at 13 August 2021.

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

4. 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

5. According to the UNFCCC Annex I inventory reporting guidelines,<sup>7</sup> Annex I Parties are required to submit annually NIRs and CRF tables containing data for the base year up to two years prior to the year of submission. In 2021, all 43 Annex I Parties provided GHG data for 1990<sup>8</sup>–2019.

6. By 15 April 2021, CRF tables from 43 Parties and NIRs from 41 Parties had been received. Within six weeks of that date, all 43 Parties had submitted their CRF tables and NIRs. After the initial submissions, three Parties submitted revised versions of their CRF tables and five Parties resubmitted their NIRs. The dates of the initial submissions of the CRF tables are shown in table 1.

<sup>1</sup> Decision 24/CP.19, para. 3.

<sup>2</sup> Decision 13/CP.20, paras. 8 and 10.

<sup>3</sup> Hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, an unspecified mix of hydrofluorocarbons and perfluorocarbons, and nitrogen trifluoride taken together.

<sup>4</sup> The term “total” implies that emissions from the CRF sectors are summed; the inclusion of emissions from LULUCF in the sum is indicated separately; unless stated otherwise, totals do not include indirect CO<sub>2</sub> emissions.

<sup>5</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 and F-gases using the global warming potential values agreed under the Convention.

<sup>6</sup> <https://unfccc.int/ghg-inventories-annex-i-parties/2021>.

<sup>7</sup> Decision 24/CP.19, annex I.

<sup>8</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, are Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

Table 1  
**Greenhouse gas inventory submissions from Annex I Parties in 2021**

<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	15 April 2021	Liechtenstein	14 April 2021
Austria	15 April 2021	Lithuania	15 April 2021
Belarus	14 April 2021	Luxembourg	13 April 2021
Belgium	14 April 2021	Malta	15 April 2021
Bulgaria	15 April 2021	Monaco	14 April 2021
Canada	12 April 2021	Netherlands	15 April 2021
Croatia	14 April 2021	New Zealand	14 April 2021
Cyprus	9 April 2021	Norway	15 April 2021
Czechia	14 April 2021	Poland	14 April 2021
Denmark	15 April 2021	Portugal	13 April 2021
Estonia	15 April 2021	Romania	13 April 2021
European Union	14 April 2021	Russian Federation	15 April 2021
Finland	13 April 2021	Slovakia	14 April 2021
France	15 April 2021	Slovenia	12 April 2021
Germany	14 April 2021	Spain	15 April 2021
Greece	15 April 2021	Sweden	14 April 2021
Hungary	15 April 2021	Switzerland	12 April 2021
Iceland	15 April 2021	Turkey	13 April 2021
Ireland	13 April 2021	Ukraine	15 April 2021
Italy	12 April 2021	United Kingdom	15 April 2021
Japan	13 April 2021	United States	15 April 2021
Latvia	13 April 2021		

<sup>a</sup> The dates of submission of NIRs may be different.

## B. Recalculations

7. 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.

8. In 2021, all 43 Annex I Parties reported recalculations that had an impact on their GHG emissions for 1990 (see table 2). The recalculations resulted from changes in activity data, emission factors and methodologies. For total aggregate GHG emissions without LULUCF, the impact of the change was less than 1 per cent for 34 Parties and more than 2 per cent for 2 Parties. For total aggregate GHG emissions with LULUCF, the impact of the change was less than 1 per cent for 26 Parties and more than 3 per cent for 6 Parties.

Table 2  
**Impact of inventory recalculations conducted by Annex I Parties in 2021**

<i>Party</i>	<i>Impact on GHG emissions for 1990 without LULUCF (%)</i>	<i>Impact on GHG emissions for 1990 with LULUCF (%)</i>
Australia	-0.31	-0.35
Austria	-0.09	-0.42
Belarus	1.01	-7.45
Belgium	-0.52	-0.64
Bulgaria	-1.67	-1.75
Canada	-0.28	0.20
Croatia	-1.53	-2.02
Cyprus	-2.10	-2.18
Czechia	-0.07	-0.73
Denmark	0.14	0.19
Estonia	1.91	-1.46
European Union	0.18	1.33
Finland	0.01	2.18
France	-0.78	-0.80
Germany	-0.07	4.32
Greece	-0.02	-0.02
Hungary	0.48	0.36
Iceland	-1.34	-1.54
Ireland	-1.93	-1.42
Italy	0.52	0.53
Japan	-0.08	-0.34
Latvia	-1.60	-15.63
Liechtenstein	0.05	0.06
Lithuania	-0.47	-0.23
Luxembourg	-0.11	-0.23
Malta	0.98	1.12
Monaco	-0.004	-0.004
Netherlands	-0.51	-0.68
New Zealand	2.42	16.49
Norway	0.03	-4.50
Poland	0.15	0.29
Portugal	0.38	0.51
Romania	0.32	-2.47
Russian Federation	-0.90	-0.74
Slovakia	-0.18	-0.21
Slovenia	0.32	-0.05
Spain	0.21	0.22
Sweden	0.08	-5.41
Switzerland	-0.27	-0.44
Turkey	0.09	0.12
Ukraine	0.05	0.15
United Kingdom	-0.37	1.88
United States	0.09	-0.75

9. Table 3 presents a comparison of the estimates of total aggregate GHG emissions in 1990 contained in Annex I Parties' 2020 and 2021 GHG inventory submissions.

Table 3

**Comparison of estimates reported in 2020 and 2021 of total aggregate greenhouse gas emissions of Annex I Parties in 1990**

	<i>Estimate reported in 2020</i>	<i>Estimate reported in 2021</i>	<i>Explanation of the difference between the estimates reported in 2020 and 2021</i>
<b>Total aggregate GHG emissions without LULUCF (Gt CO<sub>2</sub> eq)</b>			
All Annex I Parties	19.25	19.21	Aggregate impact of inventory recalculations conducted by individual Annex I Parties
Annex I EIT Parties	5.82	5.79	Inventory recalculations (e.g. Bulgaria, Croatia and Russian Federation)
Annex I non-EIT Parties	13.43	13.42	Inventory recalculations (e.g. Australia, France and Ireland)
<b>Total aggregate GHG emissions with LULUCF (Gt CO<sub>2</sub> eq)</b>			
All Annex I Parties	17.98	17.96	Aggregate impact of inventory recalculations conducted by individual Annex I Parties
Annex I EIT Parties	5.56	5.51	Inventory recalculations (e.g. Belarus, Romania and Russian Federation)
Annex I non-EIT Parties	12.42	12.44	Inventory recalculations (e.g. Canada, Italy and Spain)

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

#### A. Total aggregate greenhouse gas emissions

10. From 1990 to 2019, total aggregate GHG emissions without LULUCF for all Annex I Parties decreased by 14.9 per cent, from 19,213.89 to 16,342.97 Mt CO<sub>2</sub> eq. During the same period, total aggregate GHG emissions with LULUCF decreased by 18.9 per cent, from 17,955.98 to 14,555.08 Mt CO<sub>2</sub> eq. From 2000 to 2019, GHG emissions without and with LULUCF decreased by 9.0 and 9.6 per cent, respectively. Between 2018 and 2019, GHG emissions decreased by 2.1 per cent without LULUCF and by 1.8 per cent with LULUCF.

11. For Annex I EIT Parties, GHG emissions decreased by 41.0 per cent without LULUCF and by 49.6 per cent with LULUCF from 1990 to 2019. From 2000 to 2019, GHG emissions without and with LULUCF increased by 1.7 and 4.7 per cent, respectively. Between 2018 and 2019, GHG emissions without LULUCF decreased by 1.7 per cent, whereas emissions with LULUCF increased by 0.8 per cent.

12. For Annex I non-EIT Parties, GHG emissions decreased by 3.7 per cent without LULUCF and by 5.4 per cent with LULUCF from 1990 to 2019. From 2000 to 2019, GHG emissions without and with LULUCF decreased by 11.4 and 12.4 per cent, respectively. Between 2018 and 2019, GHG emissions without and with LULUCF decreased by 2.2 and 2.3 per cent, respectively.

13. Figures 1–2 show the trends in total aggregate GHG emissions from 1990 to 2019 for all Annex I Parties taken together, for Annex I EIT Parties and for Annex I non-EIT Parties.

Figure 1  
Greenhouse gas emissions of Annex I Parties, 1990–2019

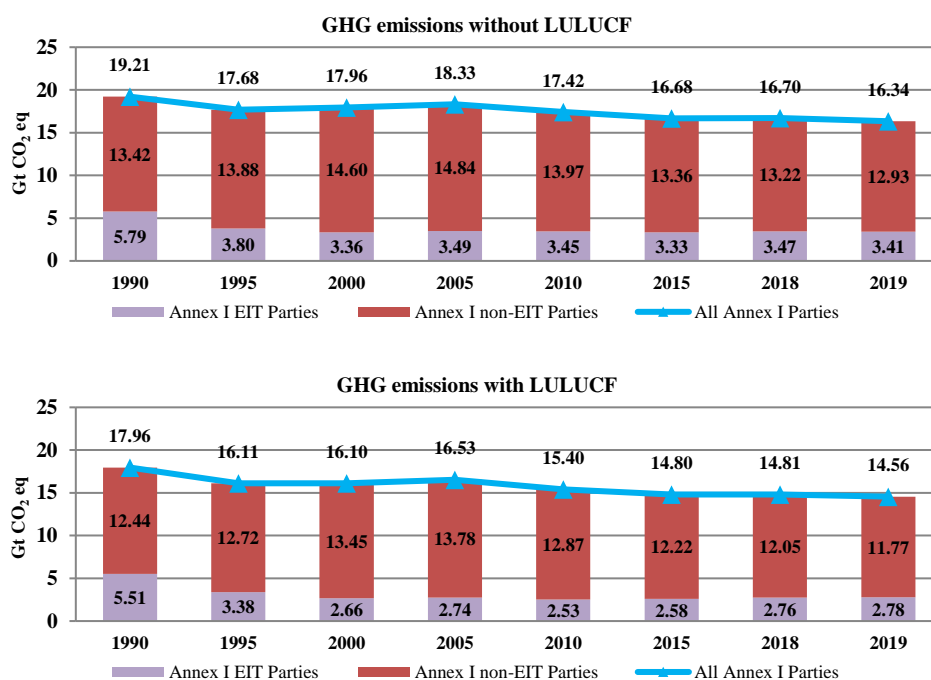
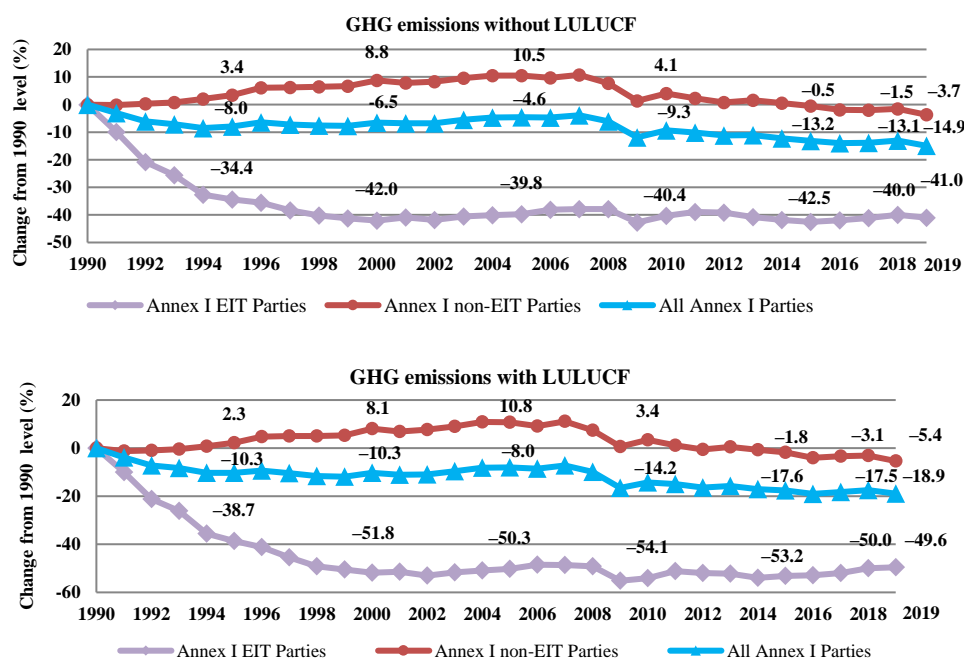
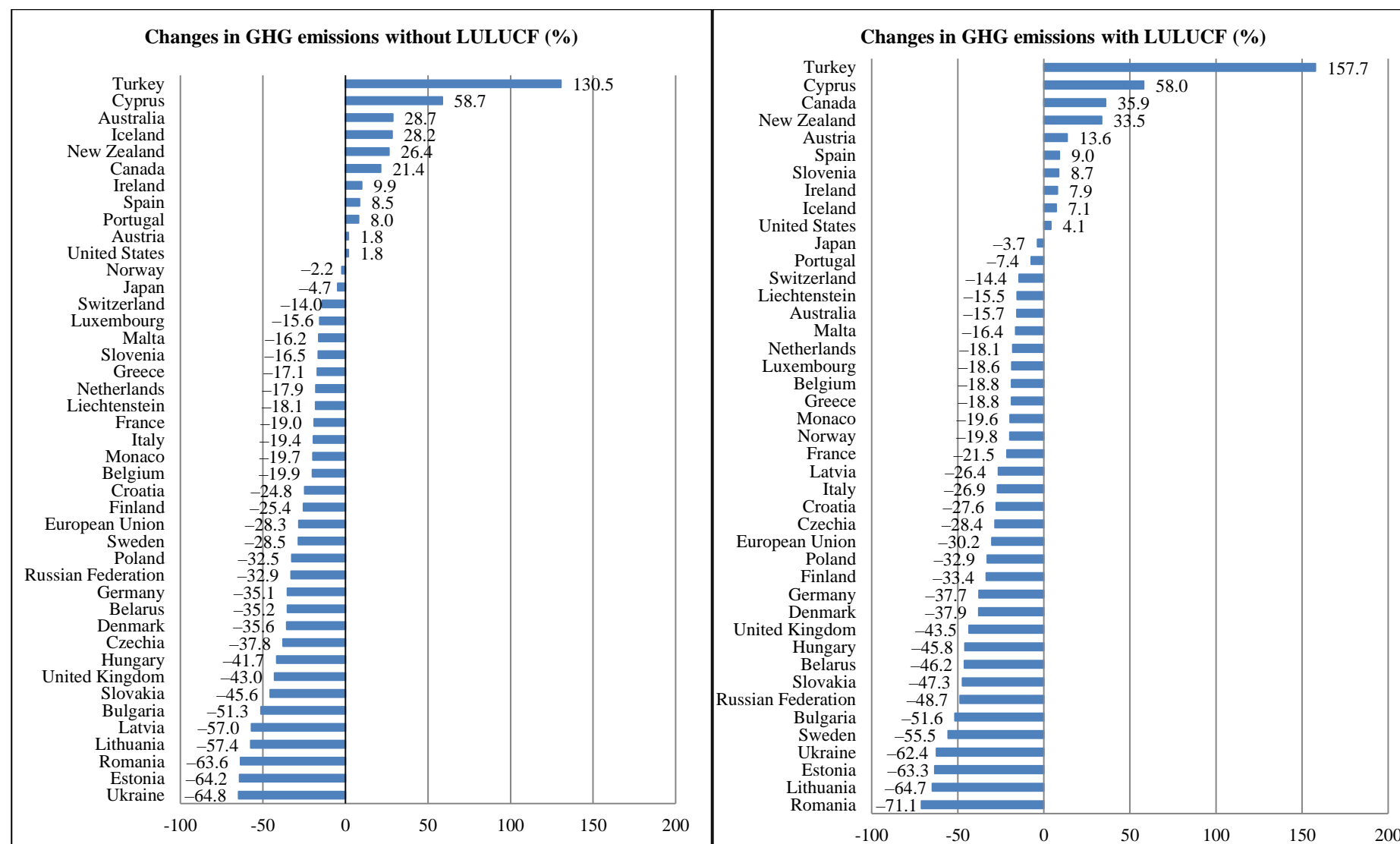


Figure 2  
Changes in greenhouse gas emissions of Annex I Parties, 1990–2019



14. The changes in total aggregate GHG emissions in 1990–2019 varied considerably among Parties (see figure 3). The largest decrease in emissions without LULUCF was in Ukraine (by 64.8 per cent), while the largest decrease in emissions with LULUCF was in Romania (by 71.1 per cent). The greatest increases in emissions without and with LULUCF were in Turkey (by 130.5 and 157.7 per cent, respectively).

Figure 3  
**Changes in total aggregate emissions of individual Annex I Parties, 1990–2019**





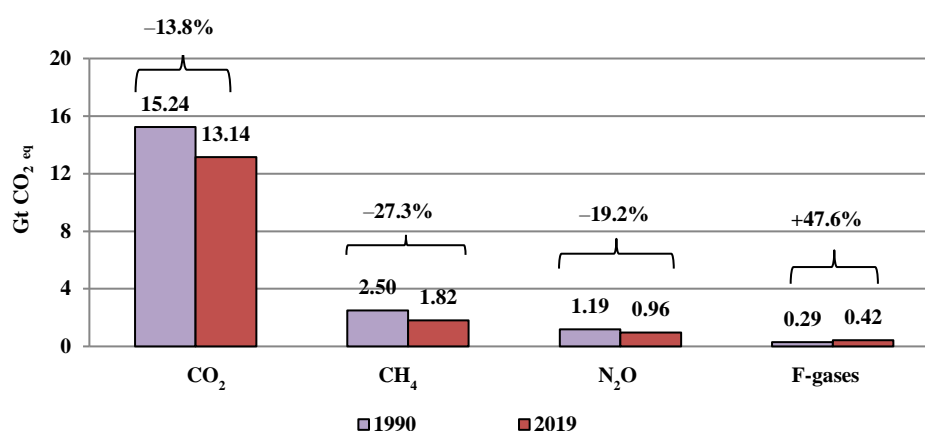
## B. Greenhouse gas emissions by gas

15. Throughout 1990–2019, CO<sub>2</sub> accounted for the largest share of total emissions, contributing 79.3 per cent in 1990 and 80.4 per cent in 2019. CH<sub>4</sub> was the second-highest contributor to total GHG emissions (13.0 per cent in 1990 and 11.1 per cent in 2019), followed by N<sub>2</sub>O (6.2 per cent in 1990 and 5.9 per cent in 2019). F-gases contributed 1.5 per cent in 1990 and 2.6 per cent in 2019 to the total GHG emissions.

16. Figure 4 shows the contribution of each GHG to the total emissions without LULUCF for 1990 and 2019 and the changes in the total emissions of each GHG in 1990–2019. Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O decreased, while emissions of F-gases increased by 47.6 per cent.

Figure 4

### Greenhouse gas emissions without land use, land-use change and forestry of Annex I Parties by gas, 1990 and 2019



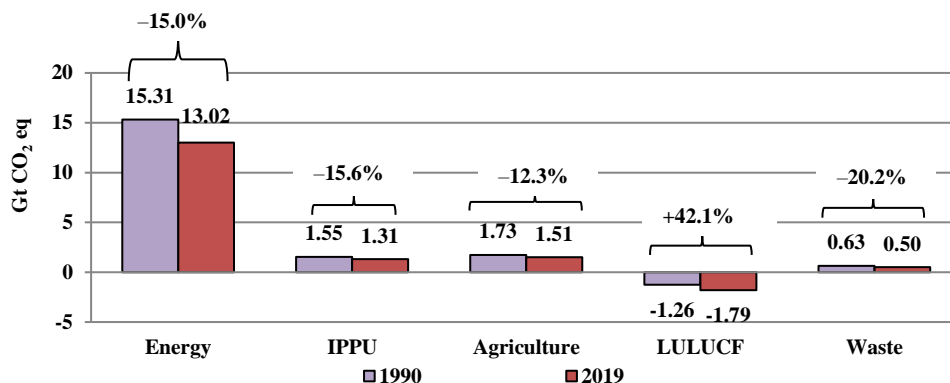
17. Between 2018 and 2019, emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and F-gases decreased by 2.6, 0.3, 0.2 and 0.6 per cent, respectively.

## C. Greenhouse gas emissions by sector

18. From 1990 to 2019, emissions from all sectors decreased (see figure 5). The waste sector experienced the largest relative decrease in emissions (by 20.2 per cent), followed by the IPPU, energy and agriculture sectors. Over the same period net GHG removals from LULUCF increased by 42.1 per cent, from -1,257.91 to -1,787.90 Mt CO<sub>2</sub> eq.

19. Between 2018 and 2019, emissions from the energy and IPPU sectors decreased by 2.5 and 1.4 per cent, respectively. In contrast, emissions from the agriculture and waste sectors increased over the same period, by 0.1 and 0.4 per cent, respectively. Net GHG removals from LULUCF decreased by 5.0 per cent.

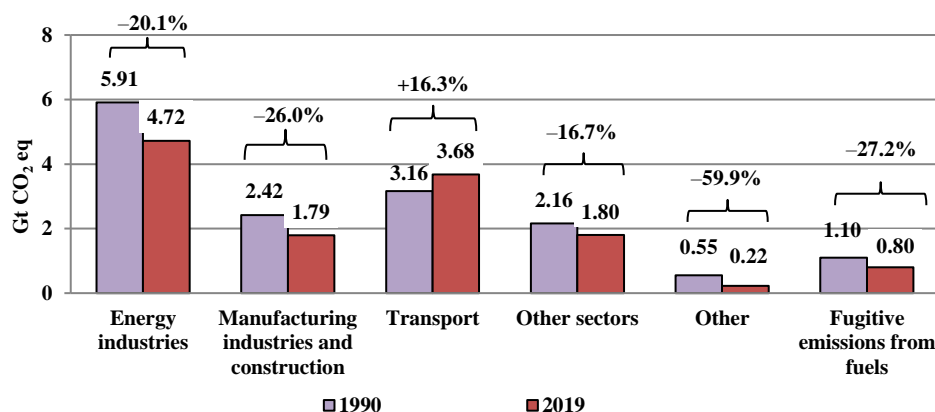
Figure 5  
**Greenhouse gas emissions and removals of Annex I Parties by sector, 1990 and 2019**



Note: The sector other is not included in this figure because its contribution to total GHG emissions was very small. Emissions from that sector increased by 11.8 per cent between 1990 and 2019.

20. Within the energy sector, GHG emissions decreased in all subsectors except transport, where emissions increased by 16.3 per cent, from 1990 to 2019 (see figure 6). The largest relative emission reduction (by 59.9 per cent) occurred in the subsector other.

Figure 6  
**Greenhouse gas emissions of Annex I Parties in the energy sector, 1990 and 2019**

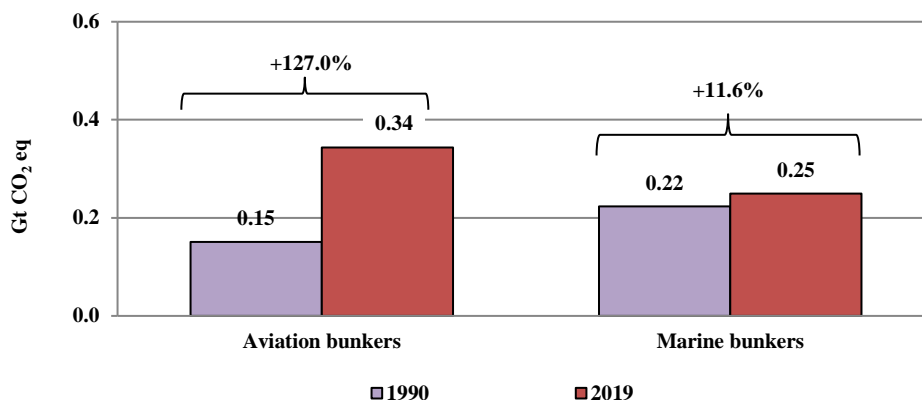


Note: The CO<sub>2</sub> transport and storage subsector is not included in this figure because its contribution to total GHG emissions was very small. Emissions from that subsector increased by 9,156.3 per cent between 1990 and 2019.

21. Between 2018 and 2019, emissions from energy industries decreased by 6.6 per cent. Similarly, emissions from manufacturing industries and construction, transport and other sectors decreased by 1.0, 0.1 and 0.5 per cent, respectively. In the same period, emissions from the subsector other and fugitive emissions from fuels increased by 3.6 and 2.9 per cent, respectively.

22. Emissions from international bunkers increased by 127.0 per cent for aviation and by 11.6 per cent for navigation in 1990–2019 (see figure 7).

Figure 7  
Greenhouse gas emissions from international bunker fuels for Annex I Parties, 1990 and 2019



23. Between 2018 and 2019, emissions from international bunkers increased by 1.7 per cent for aviation and decreased by 2.8 per cent for navigation.

24. A comparison of the percentage changes in total aggregate GHG emissions from 1990 to the latest available year reported in Annex I Parties' 2020 and 2021 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 2020 and 2021**

	<i>Estimate reported in 2020</i>	<i>Estimate reported in 2021</i>	<i>Explanation of the difference between the estimates reported in 2020 and 2021</i>
<b>Change in total aggregate GHG emissions without LULUCF from 1990 to the latest available year (%)</b>			
All Annex I Parties	-12.73	-14.94	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	-38.70	-41.03	Decreases in emissions between 2018 and 2019 and inventory recalculations (e.g. Czechia, Poland and Russian Federation)
Annex I non-EIT Parties	-1.49	-3.69	Decreases in emissions between 2018 and 2019 and inventory recalculations (e.g. Australia, 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	-17.05	-18.94	Combined impact of changes for individual Annex I Parties
Annex I EIT Parties	-48.32	-49.56	Decreases in emissions between 2018 and 2019 and inventory recalculations (e.g. Estonia, Poland and Ukraine)
Annex I non-EIT Parties	-3.06	-5.37	Decreases in emissions between 2018 and 2019 and inventory recalculations (e.g. Germany, Japan and United States)

## D. Emission data for individual Annex I Parties

25. 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 5–6; 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 F-gases 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.

26. The cells with an en dash (–) in the tables denote that either data were not available or notation keys, such as “NA”, “NE”, “NO”, “IE” or “C”, were used to report emission data. Negative values denote removals; positive values denote emissions.

27. The changes in emissions from 1990 to 2019 were calculated using exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the tables.

Table 5  
**Total aggregate anthropogenic emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and F-gases without emissions and removals from land use, land-use change and forestry**

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	423 672	487 778	535 549	549 732	545 153	28.7
Austria	78 420	80 129	84 337	78 628	79 842	1.8
Belarus <sup>a</sup>	139 152	79 717	90 695	89 065	90 116	–35.2
Belgium	145 719	148 883	133 634	117 895	116 651	–19.9
Bulgaria <sup>a, b</sup>	114 801	57 864	59 796	57 282	55 955	–51.3
Canada	601 524	733 511	702 803	728 476	730 245	21.4
Croatia <sup>a</sup>	31 387	25 563	27 753	23 536	23 605	–24.8
Cyprus	5 571	8 309	9 444	8 811	8 842	58.7
Czechia <sup>a</sup>	197 072	149 272	139 606	128 555	122 639	–37.8
Denmark	71 098	71 748	64 664	49 621	45 812	–35.6
Estonia <sup>a</sup>	41 045	17 496	21 218	20 206	14 699	–64.2
European Union <sup>c</sup>	5 657 987	5 155 595	4 779 612	4 223 100	4 057 595	–28.3
Finland	71 075	70 163	75 622	56 282	53 021	–25.4
France	547 128	552 419	513 462	452 034	442 985	–19.0
Germany	1 248 577	1 042 612	941 805	855 890	809 799	–35.1
Greece	103 289	126 471	118 500	92 308	85 631	–17.1
Hungary <sup>a, b</sup>	110 477	74 917	66 057	64 735	64 433	–41.7
Iceland	3 683	4 127	4 866	4 822	4 722	28.2
Ireland	54 400	68 459	61 949	62 526	59 778	9.9
Italy	518 720	555 466	516 474	428 549	418 281	–19.4
Japan	1 269 015	1 373 755	1 300 452	1 245 021	1 209 493	–4.7
Latvia <sup>a</sup>	25 868	10 059	11 820	11 261	11 132	–57.0
Liechtenstein	229	247	228	181	187	–18.1
Lithuania <sup>a</sup>	47 792	19 426	20 742	20 150	20 368	–57.4
Luxembourg	12 727	9 658	12 176	10 565	10 743	–15.6
Malta	2 596	2 813	2 968	2 041	2 175	–16.2
Monaco	103	109	88	87	83	–19.7
Netherlands	219 604	217 578	211 675	186 319	180 309	–17.9
New Zealand	65 129	75 398	78 316	80 578	82 318	26.4
Norway	51 475	55 117	55 266	52 211	50 334	–2.2
Poland <sup>a, b</sup>	579 219	396 595	413 502	411 852	390 745	–32.5
Portugal	58 784	81 668	68 727	67 132	63 470	8.0
Romania <sup>a, b</sup>	307 371	138 767	116 144	115 091	111 767	–63.6
Russian Federation <sup>a</sup>	3 158 804	1 891 846	2 013 432	2 133 582	2 119 432	–32.9
Slovakia <sup>a</sup>	73 386	48 670	45 364	42 159	39 948	–45.6
Slovenia <sup>a, b</sup>	20 432	18 582	19 614	17 522	17 065	–16.5
Spain	290 001	388 212	357 876	333 250	314 529	8.5
Sweden	71 239	68 149	64 557	52 170	50 920	–28.5
Switzerland	53 631	52 931	54 721	46 370	46 108	–14.0
Turkey <sup>d</sup>	219 572	298 954	399 143	522 477	506 080	130.5
Ukraine <sup>a</sup>	942 574	427 603	407 124	339 798	332 114	–64.8
United Kingdom	794 869	711 973	608 732	466 667	453 101	–43.0
United States	6 442 651	7 313 616	6 991 106	6 671 449	6 558 345	1.8
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						32
<i>Number of Parties showing a change in emissions within 1%:</i>						0
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						11

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

Table 6

**Total aggregate anthropogenic emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and F-gases with emissions and removals from land use, land-use change and forestry**

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	615 478	542 258	600 322	527 223	518 866	-15.7
Austria	66 224	63 502	78 612	73 501	75 206	13.6
Belarus <sup>a</sup>	108 473	38 930	40 429	49 726	58 352	-46.2
Belgium	142 317	146 959	132 470	116 781	115 552	-18.8
Bulgaria <sup>a, b</sup>	95 823	40 057	47 128	47 698	46 393	-51.6
Canada	544 707	711 770	695 498	736 887	740 123	35.9
Croatia <sup>a</sup>	24 940	18 679	20 790	18 142	18 048	-27.6
Cyprus	5 352	8 274	9 046	8 412	8 457	58.0
Czechia <sup>a</sup>	190 111	140 515	132 196	132 673	136 203	-28.4
Denmark	77 606	76 330	66 692	53 096	48 225	-37.9
Estonia <sup>a</sup>	38 086	13 711	16 775	19 634	13 984	-63.3
European Union <sup>c</sup>	5 464 793	4 861 340	4 470 386	3 966 652	3 814 474	-30.2
Finland	57 527	55 058	54 811	48 072	38 320	-33.4
France	525 543	535 262	477 911	421 634	412 579	-21.5
Germany	1 273 439	1 022 056	932 008	837 605	793 335	-37.7
Greece	101 182	124 530	115 457	88 216	82 150	-18.8
Hungary <sup>a, b</sup>	108 585	73 859	61 504	60 076	58 865	-45.8
Iceland	12 875	13 311	14 160	13 928	13 794	7.1
Ireland	59 531	74 343	68 192	67 312	64 220	7.9
Italy	515 229	534 550	474 551	392 547	376 719	-26.9
Japan	1 203 671	1 289 013	1 230 470	1 189 125	1 159 359	-3.7
Latvia <sup>a</sup>	13 567	-1 695	9 942	10 945	9 979	-26.4
Liechtenstein	235	272	249	202	199	-15.5
Lithuania <sup>a</sup>	42 342	9 993	10 325	13 636	14 932	-64.7
Luxembourg	12 812	8 936	12 058	10 375	10 430	-18.6
Malta	2 603	2 821	2 972	2 042	2 175	-16.4
Monaco	103	109	88	87	83	-19.6
Netherlands	225 676	223 108	216 694	190 954	184 831	-18.1
New Zealand	41 115	48 582	48 624	53 822	54 893	33.5
Norway	39 507	35 529	30 992	35 505	31 697	-19.8
Poland <sup>a, b</sup>	560 081	360 187	379 629	375 792	375 702	-32.9
Portugal	60 013	76 403	59 845	60 432	55 602	-7.4
Romania <sup>a, b</sup>	282 165	110 716	87 112	88 911	81 550	-71.1
Russian Federation <sup>a</sup>	3 086 562	1 419 767	1 299 679	1 546 914	1 584 619	-48.7
Slovakia <sup>a</sup>	63 710	38 809	39 216	36 489	33 606	-47.3
Slovenia <sup>a, b</sup>	15 612	12 237	12 277	18 497	16 964	8.7
Spain	254 005	348 655	320 403	294 368	276 952	9.0
Sweden	34 713	26 132	25 999	16 861	15 430	-55.5
Switzerland	51 616	58 132	51 894	45 594	44 175	-14.4
Turkey <sup>d</sup>	163 795	237 402	325 724	427 902	422 086	157.7
Ukraine <sup>a</sup>	884 223	381 482	375 068	340 674	332 163	-62.4
United Kingdom	812 970	724 077	614 931	472 328	459 144	-43.5
United States	5 541 855	6 459 658	6 207 222	5 870 013	5 769 118	4.1
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						33
<i>Number of Parties showing a change in emissions within 1%:</i>						0
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						10

<sup>a</sup> EIT Party.<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.<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 Annex I Parties.

Table 7

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

Party	kt					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	278 155	349 635	405 106	415 340	416 564	49.8
Austria	62 140	66 139	72 000	66 565	67 962	9.4
Belarus <sup>a</sup>	103 758	54 706	62 775	60 962	61 022	-41.2
Belgium	120 308	126 720	114 544	100 227	99 746	-17.1
Bulgaria <sup>a, b</sup>	89 606	45 466	47 861	43 638	42 223	-52.9
Canada	458 007	566 552	558 804	579 470	582 390	27.2
Croatia <sup>a</sup>	22 978	19 661	21 019	17 698	17 779	-22.6
Cyprus	4 652	7 120	8 100	7 340	7 340	57.8
Czechia <sup>a</sup>	164 203	127 127	117 603	106 132	100 812	-38.6
Denmark	54 867	55 626	50 697	36 267	32 540	-40.7
Estonia <sup>a</sup>	37 650	15 485	18 995	17 945	12 380	-67.1
European Union <sup>c</sup>	4 485 269	4 176 880	3 947 306	3 438 424	3 288 082	-26.7
Finland	56 968	57 038	64 103	45 849	42 546	-25.3
France	400 186	416 850	391 249	338 990	332 503	-16.9
Germany	1 052 477	899 852	832 949	754 112	711 428	-32.4
Greece	83 426	102 999	97 361	71 808	65 736	-21.2
Hungary <sup>a, b</sup>	85 418	58 365	52 069	49 408	49 080	-42.5
Iceland	2 228	2 932	3 625	3 663	3 551	59.3
Ireland	32 944	45 249	41 794	39 195	37 275	13.1
Italy	439 550	470 493	436 154	349 020	339 772	-22.7
Japan	1 158 007	1 264 375	1 214 816	1 143 458	1 105 881	-4.5
Latvia <sup>a</sup>	19 661	7 081	8 554	7 859	7 648	-61.1
Liechtenstein	199	217	191	142	148	-25.4
Lithuania <sup>a</sup>	35 768	11 876	13 945	13 696	13 923	-61.1
Luxembourg	11 823	8 710	11 207	9 568	9 752	-17.5
Malta	2 408	2 546	2 580	1 538	1 669	-30.7
Monaco	98	100	78	75	71	-27.4
Netherlands	161 807	171 085	181 538	159 020	153 154	-5.3
New Zealand	25 649	32 339	35 031	35 789	37 495	46.2
Norway	35 332	42 537	46 203	43 884	42 218	19.5
Poland <sup>a, b</sup>	472 044	317 692	334 888	336 992	319 521	-32.3
Portugal	45 334	65 698	53 017	51 492	47 629	5.1
Romania <sup>a, b</sup>	210 977	92 364	77 943	77 609	74 846	-64.5
Russian Federation <sup>a</sup>	2 525 518	1 471 259	1 613 113	1 691 647	1 679 449	-33.5
Slovakia <sup>a</sup>	61 475	41 152	38 412	36 030	33 773	-45.1
Slovenia <sup>a, b</sup>	16 769	15 043	16 432	14 494	14 006	-16.5
Spain	231 194	311 385	283 873	269 713	251 498	8.8
Sweden	57 378	54 710	53 126	42 095	40 937	-28.7
Switzerland	44 153	43 618	45 049	36 868	36 742	-16.8
Turkey <sup>d</sup>	151 508	229 791	314 380	419 437	399 345	163.6
Ukraine <sup>a</sup>	705 830	285 337	294 078	232 033	222 579	-68.5
United Kingdom	601 052	568 300	512 471	382 604	369 730	-38.5
United States	5 113 455	6 010 508	5 675 786	5 375 491	5 255 816	2.8
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						<i>31</i>
<i>Number of Parties showing a change in emissions within 1%:</i>						<i>0</i>
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						<i>12</i>

<sup>a</sup> EIT Party.<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.<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 Annex I Parties.

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

Party	kt					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	446 550	381 590	447 727	375 785	373 870	–16.3
Austria	49 792	49 376	66 142	61 287	63 174	26.9
Belarus <sup>a</sup>	73 054	13 890	12 488	21 588	29 200	–60.0
Belgium	116 893	124 747	113 285	99 002	98 532	–15.7
Bulgaria <sup>a, b</sup>	70 448	27 253	34 908	33 687	32 286	–54.2
Canada	399 839	543 311	550 323	586 819	591 279	47.9
Croatia <sup>a</sup>	16 481	12 575	13 951	12 181	12 097	–26.6
Cyprus	4 433	7 076	7 700	6 940	6 955	56.9
Czechia <sup>a</sup>	157 147	118 297	110 098	110 211	114 328	–27.2
Denmark	61 042	59 910	52 456	39 461	34 674	–43.2
Estonia <sup>a</sup>	34 357	11 362	14 197	17 001	11 296	–67.1
European Union <sup>c</sup>	4 261 791	3 852 251	3 609 840	3 152 917	3 015 433	–29.2
Finland	39 757	38 438	40 214	34 852	25 057	–37.0
France	374 351	394 700	351 282	304 265	297 740	–20.5
Germany	1 074 783	876 761	820 112	732 417	691 623	–35.7
Greece	81 249	100 823	94 284	67 680	62 110	–23.6
Hungary <sup>a, b</sup>	83 480	57 218	47 458	44 697	43 451	–48.0
Iceland	7 949	8 662	9 513	9 387	9 235	16.2
Ireland	37 469	50 496	46 877	43 116	40 895	9.1
Italy	433 848	448 128	393 451	312 412	297 537	–31.4
Japan	1 092 337	1 179 345	1 144 578	1 087 305	1 055 485	–3.4
Latvia <sup>a</sup>	6 259	–5 816	5 558	6 126	5 067	–19.0
Liechtenstein	206	241	211	164	160	–22.3
Lithuania <sup>a</sup>	30 186	2 311	3 371	7 018	8 304	–72.5
Luxembourg	11 887	7 967	11 072	9 367	9 430	–20.7
Malta	2 415	2 552	2 582	1 539	1 669	–30.9
Monaco	98	100	78	75	71	–27.3
Netherlands	167 801	176 532	186 454	163 556	157 574	–6.1
New Zealand	1 327	5 209	5 048	8 832	9 882	644.5
Norway	22 956	22 497	21 446	26 684	23 089	0.6
Poland <sup>a, b</sup>	450 856	279 897	299 977	298 937	302 485	–32.9
Portugal	45 687	59 596	43 215	44 362	39 339	–13.9
Romania <sup>a, b</sup>	184 555	62 602	47 094	48 980	42 071	–77.2
Russian Federation <sup>a</sup>	2 421 471	963 343	864 609	1 055 248	1 103 935	–54.4
Slovakia <sup>a</sup>	51 693	31 212	32 216	30 301	27 363	–47.1
Slovenia <sup>a, b</sup>	11 882	8 642	9 049	15 438	13 874	16.8
Spain	194 512	270 998	245 984	230 622	213 508	9.8
Sweden	19 158	10 969	12 864	5 017	3 715	–80.6
Switzerland	42 055	48 759	42 163	36 031	34 749	–17.4
Turkey <sup>d</sup>	95 605	167 962	240 895	324 728	315 159	229.6
Ukraine <sup>a</sup>	647 248	238 922	261 789	232 721	222 434	–65.6
United Kingdom	611 417	572 940	511 673	381 317	368 792	–39.7
United States	4 204 732	5 145 371	4 879 969	4 550 605	4 443 121	5.7
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						32
<i>Number of Parties showing a change in emissions within 1%:</i>						1
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						10

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

Table 9  
**Total anthropogenic CH<sub>4</sub> emissions without emissions and removals from land use, land-use change and forestry**

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	123 254	115 905	104 167	105 111	98 904	–19.8
Austria	10 394	8 395	7 272	6 326	6 194	–40.4
Belarus <sup>a</sup>	18 852	13 346	14 717	15 628	15 736	–16.5
Belgium	11 533	10 234	8 172	7 345	7 265	–37.0
Bulgaria <sup>a, b</sup>	15 193	8 440	7 201	6 431	6 246	–58.9
Canada	93 257	120 789	101 406	98 664	97 761	4.8
Croatia <sup>a</sup>	4 305	3 282	3 867	3 614	3 557	–17.4
Cyprus	660	792	838	878	890	34.7
Czechia <sup>a</sup>	23 489	15 170	14 096	12 735	12 448	–47.0
Denmark	7 949	8 219	7 678	7 352	7 215	–9.2
Estonia <sup>a</sup>	1 927	1 250	1 252	1 115	1 115	–42.1
European Union <sup>c</sup>	712 146	594 306	480 154	435 614	427 739	–39.9
Finland	7 693	6 570	5 347	4 542	4 492	–41.6
France	69 592	69 039	62 148	56 885	56 466	–18.9
Germany	117 807	86 739	57 608	51 359	49 271	–58.2
Greece	11 042	11 736	11 068	10 189	10 016	–9.3
Hungary <sup>a, b</sup>	13 540	10 572	8 913	8 324	8 238	–39.2
Iceland	602	657	655	609	569	–5.4
Ireland	13 752	14 387	12 577	15 139	14 731	7.1
Italy	49 331	51 848	47 339	43 472	42 967	–12.9
Japan	43 828	37 458	31 938	28 566	28 416	–35.2
Latvia <sup>a</sup>	3 624	1 885	1 822	1 768	1 771	–51.1
Liechtenstein	19	17	19	19	20	1.9
Lithuania <sup>a</sup>	6 945	3 843	3 605	3 008	2 952	–57.5
Luxembourg	584	588	594	591	582	–0.3
Malta	126	193	183	192	202	60.6
Monaco	2	1	1	1	1	–51.0
Netherlands	31 833	24 194	19 358	17 344	17 217	–45.9
New Zealand	32 795	35 772	34 519	34 536	34 621	5.6
Norway	6 027	5 968	5 381	4 769	4 566	–24.2
Poland <sup>a, b</sup>	73 516	52 348	50 550	47 661	45 276	–38.4
Portugal	9 591	11 122	10 154	9 136	9 171	–4.4
Romania <sup>a, b</sup>	65 807	31 875	26 115	23 119	22 930	–65.2
Russian Federation <sup>a</sup>	441 515	309 824	310 069	312 733	315 421	–28.6
Slovakia <sup>a</sup>	7 301	4 824	3 867	3 319	3 305	–54.7
Slovenia <sup>a, b</sup>	2 599	2 492	2 170	1 936	1 923	–26.0
Spain	36 647	42 254	39 462	38 566	38 493	5.0
Sweden	7 425	6 836	5 219	4 347	4 214	–43.3
Switzerland	5 862	5 188	5 061	4 757	4 673	–20.3
Turkey <sup>d</sup>	42 488	43 667	51 353	58 085	60 264	41.8
Ukraine <sup>a</sup>	183 074	118 353	84 892	67 740	69 779	–61.9
United Kingdom	129 656	106 104	62 574	49 804	49 499	–61.8
United States	776 873	707 563	692 149	655 936	659 713	–15.1
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						34
<i>Number of Parties showing a change in emissions within 1%:</i>						1
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						8

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.



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

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	142 423	134 174	121 505	118 824	112 080	–21.3
Austria	10 418	8 419	7 296	6 350	6 218	–40.3
Belarus <sup>a</sup>	18 860	13 355	14 722	15 640	15 762	–16.4
Belgium	11 534	10 234	8 172	7 345	7 265	–37.0
Bulgaria <sup>a, b</sup>	15 194	8 575	7 216	6 435	6 259	–58.8
Canada	94 149	121 765	102 171	99 335	98 384	4.5
Croatia <sup>a</sup>	4 307	3 379	3 869	3 615	3 560	–17.3
Cyprus	660	799	839	879	890	34.8
Czechia <sup>a</sup>	23 540	15 211	14 150	12 757	12 476	–47.0
Denmark	8 211	8 461	7 906	7 590	7 453	–9.2
Estonia <sup>a</sup>	1 993	1 317	1 319	1 186	1 183	–40.6
European Union <sup>c</sup>	725 002	607 517	491 926	446 851	439 148	–39.4
Finland	9 224	7 916	6 322	5 308	5 258	–43.0
France	70 598	70 804	63 351	58 086	57 690	–18.3
Germany	119 467	88 394	59 404	53 325	51 146	–57.2
Greece	11 105	11 944	11 085	10 208	10 138	–8.7
Hungary <sup>a, b</sup>	13 564	10 598	8 922	8 333	8 254	–39.1
Iceland	4 073	4 111	4 059	3 990	3 956	–2.9
Ireland	14 212	14 820	13 272	15 600	15 156	6.6
Italy	50 617	52 562	47 689	43 625	43 148	–14.8
Japan	43 934	37 546	32 011	28 633	28 485	–35.2
Latvia <sup>a</sup>	4 179	2 449	2 352	2 558	2 573	–38.4
Liechtenstein	19	17	19	19	20	1.9
Lithuania <sup>a</sup>	6 948	3 846	3 606	3 009	2 953	–57.5
Luxembourg	584	588	594	591	582	–0.3
Malta	126	193	183	192	202	60.6
Monaco	2	1	1	1	1	–51.0
Netherlands	31 833	24 194	19 358	17 344	17 217	–45.9
New Zealand	32 889	35 849	34 614	34 616	34 698	5.5
Norway	6 176	6 123	5 538	4 930	4 727	–23.5
Poland <sup>a, b</sup>	73 565	52 387	50 563	47 679	45 301	–38.4
Portugal	9 891	11 464	10 634	9 234	9 269	–6.3
Romania <sup>a, b</sup>	65 807	31 887	26 115	23 124	22 938	–65.1
Russian Federation <sup>a</sup>	462 705	330 109	332 814	342 859	340 787	–26.3
Slovakia <sup>a</sup>	7 311	4 849	3 885	3 340	3 329	–54.5
Slovenia <sup>a, b</sup>	2 604	2 493	2 171	1 936	1 924	–26.1
Spain	36 960	42 546	39 550	38 606	38 645	4.6
Sweden	7 893	7 305	5 661	4 841	4 659	–41.0
Switzerland	5 891	5 202	5 073	4 769	4 685	–20.5
Turkey <sup>d</sup>	42 564	43 827	51 376	58 102	60 312	41.7
Ukraine <sup>a</sup>	183 112	118 369	84 930	67 757	69 798	–61.9
United Kingdom	134 400	110 837	67 364	54 669	54 398	–59.5
United States	781 825	713 781	699 175	669 725	673 509	–13.9
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						34
<i>Number of Parties showing a change in emissions within 1%:</i>						1
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						8

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

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

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	16 011	19 091	19 347	19 626	18 801	17.4
Austria	4 231	4 232	3 303	3 447	3 447	–18.5
Belarus <sup>a</sup>	16 542	11 665	13 201	12 472	13 350	–19.3
Belgium	10 065	10 199	7 544	5 655	5 530	–45.1
Bulgaria <sup>a, b</sup>	9 999	3 919	4 053	4 942	5 650	–43.5
Canada	38 504	35 527	32 555	36 853	36 602	–4.9
Croatia <sup>a</sup>	2 853	2 460	2 433	1 672	1 711	–40.0
Cyprus	256	308	274	249	255	–0.4
Czechia <sup>a</sup>	9 296	6 442	5 354	5 850	5 555	–40.2
Denmark	8 239	7 051	5 382	5 336	5 520	–33.0
Estonia <sup>a</sup>	1 469	679	794	913	976	–33.5
European Union <sup>c</sup>	388 665	307 003	242 103	238 354	236 253	–39.2
Finland	6 361	5 809	4 784	4 695	4 831	–24.1
France	65 570	54 481	41 177	39 220	38 793	–40.8
Germany	64 897	42 727	37 002	35 808	35 122	–45.9
Greece	7 446	6 348	5 467	4 264	4 290	–42.4
Hungary <sup>a, b</sup>	11 141	5 411	3 730	4 872	4 878	–56.2
Iceland	357	343	306	307	296	–17.0
Ireland	7 670	8 055	6 451	7 254	6 855	–10.6
Italy	26 080	28 505	18 968	17 462	17 227	–33.9
Japan	31 825	29 864	22 174	20 129	19 795	–37.8
Latvia <sup>a</sup>	2 583	1 027	1 222	1 360	1 444	–44.1
Liechtenstein	10	10	9	9	9	–9.5
Lithuania <sup>a</sup>	5 079	3 684	2 929	2 868	2 919	–42.5
Luxembourg	318	327	314	331	337	5.7
Malta	61	66	56	46	46	–24.7
Monaco	2	3	4	3	3	28.5
Netherlands	17 488	15 529	8 183	8 008	7 892	–54.9
New Zealand	5 755	6 966	7 643	8 326	8 363	45.3
Norway	4 123	3 833	2 480	2 358	2 385	–42.2
Poland <sup>a, b</sup>	33 512	25 289	21 978	23 276	22 101	–34.0
Portugal	3 858	4 444	3 455	3 215	3 252	–15.7
Romania <sup>a, b</sup>	26 141	12 773	11 029	12 041	11 654	–55.4
Russian Federation <sup>a</sup>	139 337	73 405	72 202	82 302	84 171	–39.6
Slovakia <sup>a</sup>	4 295	2 561	2 443	2 091	2 135	–50.3
Slovenia <sup>a, b</sup>	821	856	726	741	813	–1.0
Spain	17 892	21 549	17 766	18 314	18 322	2.4
Sweden	5 759	5 339	4 828	4 595	4 698	–18.4
Switzerland	3 362	3 276	3 101	3 020	3 103	–7.7
Turkey <sup>d</sup>	24 951	24 766	29 829	39 287	40 229	61.2
Ukraine <sup>a</sup>	53 434	23 781	27 373	38 642	38 092	–28.7
United Kingdom	46 795	27 312	20 780	20 149	20 328	–56.6
United States	452 658	444 650	454 951	459 212	457 142	1.0
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						34
<i>Number of Parties showing a change in emissions within 1%:</i>						3
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						6

<sup>a</sup> EIT Party

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

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

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	20 253	23 347	24 161	22 959	22 031	8.8
Austria	4 359	4 343	3 413	3 574	3 575	-18.0
Belarus <sup>a</sup>	16 559	11 684	13 218	12 494	13 383	-19.2
Belgium	10 076	10 248	7 639	5 766	5 644	-44.0
Bulgaria <sup>a, b</sup>	10 179	4 190	4 322	5 307	6 011	-40.9
Canada	38 965	36 052	32 966	37 244	36 969	-5.1
Croatia <sup>a</sup>	2 901	2 564	2 537	1 794	1 834	-36.8
Cyprus	256	311	275	249	256	-0.4
Czechia <sup>a</sup>	9 340	6 475	5 395	5 868	5 576	-40.3
Denmark	8 310	7 106	5 422	5 379	5 561	-33.1
Estonia <sup>a</sup>	1 736	950	1 081	1 214	1 277	-26.4
European Union <sup>c</sup>	406 092	324 166	258 570	256 176	254 372	-37.4
Finland	8 493	7 959	6 888	6 716	6 852	-19.3
France	68 814	57 709	44 390	42 343	41 926	-39.1
Germany	65 792	43 608	38 246	37 251	36 588	-44.4
Greece	7 452	6 375	5 485	4 280	4 314	-42.1
Hungary <sup>a, b</sup>	11 163	5 475	3 779	4 913	4 922	-55.9
Iceland	357	343	307	308	297	-16.8
Ireland	7 816	8 259	6 915	7 659	7 253	-7.2
Italy	27 005	29 241	19 397	17 915	17 720	-34.4
Japan	32 046	30 064	22 356	20 319	19 988	-37.6
Latvia <sup>a</sup>	3 129	1 607	1 809	1 987	2 071	-33.8
Liechtenstein	11	10	10	10	10	-8.3
Lithuania <sup>a</sup>	5 207	3 813	3 084	3 032	3 101	-40.4
Luxembourg	340	348	331	342	347	2.0
Malta	62	67	56	46	47	-25.2
Monaco	2	3	4	3	3	28.4
Netherlands	17 566	15 611	8 286	8 107	7 994	-54.5
New Zealand	5 969	7 204	7 838	8 447	8 474	42.0
Norway	4 382	4 130	2 806	2 691	2 716	-38.0
Poland <sup>a, b</sup>	35 513	26 637	23 003	25 253	24 070	-32.2
Portugal	4 435	4 939	3 894	3 548	3 576	-19.4
Romania <sup>a, b</sup>	27 356	14 472	12 845	14 486	14 204	-48.1
Russian Federation <sup>a</sup>	149 953	88 958	84 208	101 906	99 506	-33.6
Slovakia <sup>a</sup>	4 392	2 615	2 473	2 128	2 179	-50.4
Slovenia <sup>a, b</sup>	882	912	772	772	843	-4.5
Spain	18 264	22 087	18 094	18 483	18 584	1.8
Sweden	6 984	6 593	6 089	5 870	5 985	-14.3
Switzerland	3 417	3 322	3 148	3 068	3 150	-7.8
Turkey <sup>d</sup>	25 001	24 882	29 871	39 404	40 373	61.5
Ukraine <sup>a</sup>	53 627	24 059	27 569	38 812	38 266	-28.6
United Kingdom	49 786	30 043	22 987	22 232	22 410	-55.0
United States	455 632	449 612	459 859	468 872	466 813	2.5
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						35
<i>Number of Parties showing a change in emissions within 1%:</i>						1
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						7

<sup>a</sup> EIT Party

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

Table 13  
Total aggregate anthropogenic emissions of F-gases

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	6 252	3 147	6 929	9 655	10 885	74.1
Austria	1 656	1 364	1 761	2 290	2 239	35.2
Belarus <sup>a</sup>	–	0.1	2	3	7	–
Belgium	3 813	1 730	3 373	4 667	4 110	7.8
Bulgaria <sup>a, b</sup>	3	40	682	2 271	1 837	>10 000
Canada	11 755	10 643	10 038	13 489	13 492	14.8
Croatia <sup>a</sup>	1 251	160	434	553	558	–55.4
Cyprus	3	89	233	344	357	–
Czechia <sup>a</sup>	84	532	2 552	3 838	3 823	4 438.7
Denmark	42	853	907	666	537	1 166.7
Estonia <sup>a</sup>	–	82	177	234	227	–
European Union <sup>c</sup>	71 907	77 406	110 050	110 708	105 521	46.7
Finland	53	745	1 387	1 196	1 153	2 087.4
France	11 779	12 049	18 887	16 940	15 222	29.2
Germany	13 395	13 293	14 247	14 611	13 978	4.3
Greece	1 376	5 388	4 603	6 048	5 589	306.2
Hungary <sup>a, b</sup>	378	568	1 345	2 132	2 238	491.4
Iceland	496	195	281	243	306	–38.3
Ireland	35	769	1 128	938	916	2 549.4
Italy	3 759	4 620	14 013	18 594	18 314	387.2
Japan	35 354	42 058	31 524	52 868	55 401	56.7
Latvia <sup>a</sup>	–	65	221	274	269	–
Liechtenstein	0.0001	4	9	10	10	>10 000
Lithuania <sup>a</sup>	–	23	263	578	574	–
Luxembourg	1	33	61	75	72	5 493.1
Malta	0.01	8	150	265	258	>10 000
Monaco	0.1	4	5	8	7	8 739.6
Netherlands	8 476	6 770	2 596	1 947	2 046	–75.9
New Zealand	930	321	1 124	1 928	1 839	97.7
Norway	5 993	2 779	1 202	1 201	1 165	–80.6
Poland <sup>a, b</sup>	147	1 267	6 086	3 923	3 846	2 511.9
Portugal	–	404	2 102	3 288	3 418	–
Romania <sup>a, b</sup>	4 447	1 755	1 057	2 322	2 337	–47.4
Russian Federation <sup>a</sup>	52 434	37 358	18 048	46 900	40 391	–23.0
Slovakia <sup>a</sup>	315	133	642	720	735	133.3
Slovenia <sup>a, b</sup>	243	191	285	352	323	33.1
Spain	4 268	13 024	16 775	6 657	6 215	45.6
Sweden	677	1 264	1 385	1 133	1 072	58.3
Switzerland	254	849	1 510	1 725	1 590	527.3
Turkey <sup>d</sup>	625	730	3 582	5 667	6 242	898.2
Ukraine <sup>a</sup>	236	132	780	1 383	1 664	605.7
United Kingdom	17 367	10 257	12 908	14 111	13 544	–22.0
United States	99 666	150 894	168 220	180 811	185 675	86.3
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						7
<i>Number of Parties showing a change in emissions within 1%:</i>						0
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						30

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

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

Party	kt					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	168 395	31 955	42 621	-39 554	-42 694	-125.4
Austria	-12 348	-16 762	-5 858	-5 278	-4 788	-61.2
Belarus <sup>a</sup>	-30 704	-40 816	-50 287	-39 373	-31 822	3.6
Belgium	-3 415	-1 973	-1 258	-1 225	-1 214	-64.5
Bulgaria <sup>a,b</sup>	-19 159	-18 213	-12 953	-9 951	-9 937	-48.1
Canada	-58 169	-23 241	-8 481	7 349	8 889	-115.3
Croatia <sup>a</sup>	-6 497	-7 086	-7 069	-5 517	-5 682	-12.5
Cyprus	-219	-45	-400	-401	-385	75.7
Czechia <sup>a</sup>	-7 055	-8 831	-7 506	4 079	13 515	-291.6
Denmark	6 175	4 284	1 759	3 194	2 133	-65.5
Estonia <sup>a</sup>	-3 293	-4 123	-4 798	-944	-1 084	-67.1
European Union <sup>c</sup>	-223 478	-324 629	-337 467	-285 507	-272 650	22.0
Finland	-17 212	-18 601	-23 890	-10 997	-17 489	1.6
France	-25 835	-22 150	-39 967	-34 725	-34 763	34.6
Germany	22 307	-23 091	-12 838	-21 694	-19 805	-188.8
Greece	-2 177	-2 176	-3 077	-4 127	-3 626	66.6
Hungary <sup>a, b</sup>	-1 938	-1 147	-4 611	-4 711	-5 629	190.4
Iceland	5 720	5 729	5 888	5 723	5 684	-0.6
Ireland	4 526	5 247	5 083	3 920	3 620	-20.0
Italy	-5 702	-22 366	-42 702	-36 608	-42 235	640.7
Japan	-65 671	-85 030	-70 238	-56 153	-50 396	-23.3
Latvia <sup>a</sup>	-13 402	-12 897	-2 996	-1 733	-2 581	-80.7
Liechtenstein	7	24	20	21	11	70.4
Lithuania <sup>a</sup>	-5 582	-9 565	-10 574	-6 679	-5 620	0.7
Luxembourg	64	-743	-135	-201	-322	-607.7
Malta	6	7	3	0.5	0.2	-97.2
Monaco	-0.01	-0.05	-0.06	-0.03	0.06	-720.4
Netherlands	5 994	5 447	4 916	4 536	4 420	-26.3
New Zealand	-24 322	-27 130	-29 983	-26 957	-27 613	13.5
Norway	-12 376	-20 039	-24 757	-17 200	-19 129	54.6
Poland <sup>a, b</sup>	-21 188	-37 795	-34 911	-38 055	-17 036	-19.6
Portugal	353	-6 102	-9 802	-7 130	-8 290	-2 448.4
Romania <sup>a, b</sup>	-26 422	-29 762	-30 849	-28 629	-32 775	24.0
Russian Federation <sup>a</sup>	-104 047	-507 917	-748 504	-636 398	-575 514	453.1
Slovakia <sup>a</sup>	-9 783	-9 940	-6 196	-5 728	-6 411	-34.5
Slovenia <sup>a, b</sup>	-4 887	-6 402	-7 383	945	-132	-97.3
Spain	-36 682	-40 387	-37 888	-39 091	-37 991	3.6
Sweden	-38 220	-43 741	-40 263	-37 078	-37 222	-2.6
Switzerland	-2 098	5 141	-2 886	-836	-1 993	-5.0
Turkey <sup>d</sup>	-55 903	-61 829	-73 485	-94 709	-84 186	50.6
Ukraine <sup>a</sup>	-58 582	-46 415	-32 290	688	-145	-99.8
United Kingdom	10 365	4 640	-798	-1 286	-938	-109.0
United States	-908 722	-865 138	-795 818	-824 885	-812 695	-10.6
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						26
<i>Number of Parties showing a change in emissions within 1%:</i>						2
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						15

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

Table 15  
**Anthropogenic CH<sub>4</sub> emissions from land use, land-use change and forestry**

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	19 169	18 269	17 338	13 713	13 176	–31.3
Austria	24	24	24	24	24	–1.5
Belarus <sup>a</sup>	8	9	5	12	26	229.3
Belgium	1	0.002	–	–	–	–
Bulgaria <sup>a,b</sup>	1	135	15	3	13	1 142.4
Canada	892	975	765	671	623	–30.2
Croatia <sup>a</sup>	1	97	2	1	3	112.7
Cyprus	0.05	7	1	1	1	899.8
Czechia <sup>a</sup>	50	40	54	22	28	–44.6
Denmark	262	243	228	238	239	–9.0
Estonia <sup>a</sup>	66	68	67	70	68	2.8
European Union <sup>c</sup>	12 857	13 211	11 772	11 237	11 410	–11.3
Finland	1 532	1 346	975	766	766	–50.0
France	1 006	1 764	1 203	1 201	1 225	21.7
Germany	1 660	1 655	1 797	1 965	1 875	13.0
Greece	63	208	16	19	121	93.7
Hungary <sup>a, b</sup>	25	26	9	10	16	–35.1
Iceland	3 472	3 454	3 404	3 381	3 387	–2.4
Ireland	460	434	696	460	425	–7.5
Italy	1 286	714	350	153	181	–85.9
Japan	105	88	74	66	69	–34.5
Latvia <sup>a</sup>	555	563	530	791	801	44.4
Liechtenstein	–	–	–	–	–	–
Lithuania <sup>a</sup>	3	4	1	1	1	–63.3
Luxembourg	–	–	–	–	–	–
Malta	–	–	–	–	–	–
Monaco	–	–	–	–	–	–
Netherlands	0.3	0.3	0.3	0.3	0.3	33.5
New Zealand	94	77	96	80	77	–18.1
Norway	150	154	157	161	161	7.8
Poland <sup>a, b</sup>	49	39	13	18	25	–49.4
Portugal	300	342	480	98	98	–67.2
Romania <sup>a, b</sup>	0.31	12	1	5	8	2 583.4
Russian Federation <sup>a</sup>	21 190	20 285	22 745	30 126	25 366	19.7
Slovakia <sup>a</sup>	10	25	18	21	25	143.0
Slovenia <sup>a, b</sup>	5	1	1	0.2	1	–81.0
Spain	314	292	88	40	152	–51.6
Sweden	468	469	443	494	445	–4.9
Switzerland	28	14	12	12	12	–57.7
Turkey <sup>d</sup>	76	160	23	17	48	–36.7
Ukraine <sup>a</sup>	38	16	38	17	20	–48.3
United Kingdom	4 744	4 733	4 790	4 865	4 898	3.2
United States	4 952	6 218	7 025	13 789	13 796	178.6
<i>Number of Parties showing a decrease in emissions by more than 1%:</i>						22
<i>Number of Parties showing a change in emissions within 1%:</i>						0
<i>Number of Parties showing an increase in emissions by more than 1%:</i>						16

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

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

Party	kt CO <sub>2</sub> eq					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	4 242	4 256	4 815	3 333	3 230	–23.8
Austria	128	111	110	127	128	0.3
Belarus <sup>a</sup>	17	20	16	22	32	91.5
Belgium	11	49	95	111	114	901.3
Bulgaria <sup>a, b</sup>	180	271	269	364	361	100.9
Canada	461	525	411	391	366	–20.5
Croatia <sup>a</sup>	48	104	104	122	123	155.5
Cyprus	0.02	3	0.4	0.3	0.2	899.8
Czechia <sup>a</sup>	44	33	41	17	21	–51.9
Denmark	71	55	41	43	41	–41.9
Estonia <sup>a</sup>	267	271	288	301	301	12.7
European Union <sup>c</sup>	17 427	17 163	16 468	17 822	18 119	4.0
Finland	2 132	2 150	2 104	2 021	2 021	–5.2
France	3 244	3 228	3 213	3 123	3 133	–3.4
Germany	895	881	1 244	1 443	1 466	63.8
Greece	6	27	17	16	24	270.4
Hungary <sup>a, b</sup>	21	64	49	42	45	110.2
Iceland	0.2	1	1	1	1	462.1
Ireland	146	204	464	405	398	172.8
Italy	925	735	430	453	493	–46.7
Japan	221	200	182	191	193	–12.6
Latvia <sup>a</sup>	546	580	587	627	627	14.8
Liechtenstein	0.3	0.3	0.4	0.4	0.4	33.9
Lithuania <sup>a</sup>	128	129	155	164	182	42.1
Luxembourg	21	21	17	11	10	–52.8
Malta	1	1	0.6	0.5	0.5	–55.3
Monaco	0.01	0.01	0.01	0.01	0.01	15.7
Netherlands	78	83	102	99	102	30.5
New Zealand	214	238	195	121	111	–48.2
Norway	259	297	326	333	331	28.0
Poland <sup>a, b</sup>	2 001	1 349	1 026	1 977	1 969	–1.6
Portugal	577	495	440	332	324	–43.9
Romania <sup>a, b</sup>	1 215	1 700	1 817	2 445	2 550	109.9
Russian Federation <sup>a</sup>	10 615	15 553	12 006	19 605	15 334	44.5
Slovakia <sup>a</sup>	97	55	30	37	44	–54.8
Slovenia <sup>a, b</sup>	61	56	46	31	30	–51.5
Spain	371	538	328	169	262	–29.5
Sweden	1 226	1 254	1 262	1 275	1 288	5.1
Switzerland	54	46	47	48	48	–12.0
Turkey <sup>d</sup>	50	116	42	117	143	185.4
Ukraine <sup>a</sup>	193	278	196	170	175	–9.5
United Kingdom	2 991	2 731	2 207	2 082	2 082	–30.4
United States	2 974	4 962	4 908	9 660	9 671	225.2
<i>Number of Parties showing a decrease in emissions of more than 1%:</i>						19
<i>Number of Parties showing a change in emissions within 1%:</i>						1
<i>Number of Parties showing an increase in emissions of more than 1%:</i>						23

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.

Table 17  
**Indirect CO<sub>2</sub> emissions**

Party	kt					Change 1990–2019 (%)
	1990	2000	2010	2018	2019	
Australia	–	–	–	–	–	–
Austria	–	–	–	–	–	–
Belarus <sup>a</sup>	–	–	–	–	–	–
Belgium	–	–	–	–	–	–
Bulgaria <sup>a, b</sup>	–	–	–	–	–	–
Canada	822	913	669	609	560	–31.9
Croatia <sup>a</sup>	–	–	–	–	–	–
Cyprus	6	7	11	8	8	25.2
Czechia <sup>a</sup>	1 877	1 191	987	697	659	–64.9
Denmark	1 137	845	496	284	270	–76.2
Estonia <sup>a</sup>	–	–	–	–	–	–
European Union <sup>c</sup>	4 320	2 960	2 287	1 682	1 634	–62.2
Finland	166	108	69	52	51	–69.1
France	–	–	–	–	–	–
Germany	–	–	–	–	–	–
Greece	–	–	–	–	–	–
Hungary <sup>a, b</sup>	–	–	–	–	–	–
Iceland	–	–	–	–	–	–
Ireland	–	–	–	–	–	–
Italy	–	–	–	–	–	–
Japan	5 536	4 298	2 462	2 106	2 058	–62.8
Latvia <sup>a</sup>	40	25	16	12	13	–68.7
Liechtenstein	–	–	–	–	–	–
Lithuania <sup>a</sup>	–	–	–	–	–	–
Luxembourg	–	–	–	–	–	–
Malta	–	–	–	–	–	–
Monaco	–	–	–	–	–	–
Netherlands	917	532	458	440	431	–53.0
New Zealand	–	–	–	–	–	–
Norway	–	–	–	–	–	–
Poland <sup>a, b</sup>	–	–	–	–	–	–
Portugal	88	189	200	136	156	77.6
Romania <sup>a, b</sup>	–	–	–	–	–	–
Russian Federation <sup>a</sup>	–	–	–	–	–	–
Slovakia <sup>a</sup>	88	65	49	53	45	–48.4
Slovenia <sup>a, b</sup>	–	–	–	–	–	–
Spain	–	–	–	–	–	–
Sweden	–	–	–	–	–	–
Switzerland	412	215	143	122	122	–70.4
Turkey <sup>d</sup>	–	–	–	–	–	–
Ukraine <sup>a</sup>	–	–	–	–	–	–
United Kingdom	–	–	–	–	–	–
United States	–	–	–	–	–	–

*Number of Parties showing a decrease in emissions of more than 1%:* 10

*Number of Parties showing a change in emissions within 1%:* 0

*Number of Parties showing an increase in emissions of more than 1%:* 2

*Note:* In accordance with annex I to decision 24/CP.19, Annex I Parties may report indirect CO<sub>2</sub> from the atmospheric oxidation of CH<sub>4</sub>, carbon monoxide and non-methane volatile organic compounds. In total, 12 Parties voluntarily reported indirect CO<sub>2</sub> emissions in their 2021 GHG inventory submissions.

<sup>a</sup> EIT Party.

<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 27 member States and the United Kingdom as a group and are reported separately from those of each individual Party.

<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 Annex I Parties.