



**Conference of the Parties serving as the meeting
of the Parties to the Kyoto Protocol**

Seventeenth session

Sharm el-Sheikh, 6–18 November 2022

Item 4(b) of the provisional agenda

**Reporting from and review of Parties included in
Annex I**

**Annual compilation and accounting report for the
second commitment period for Annex B Parties under
the Kyoto Protocol (for 2019, 2020, 2021 and 2022)**

**Annual compilation and accounting report for Annex B
Parties under the Kyoto Protocol for 2022**

Note by the secretariat*

Summary

The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, by decision 13/CMP.1, requested the secretariat to begin publishing annual compilation and accounting reports after completion of the initial review under Article 8 of the Kyoto Protocol and resolution of any questions of implementation. This report contains key initial accounting parameters, based on the reports on the reviews of the reports to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol, where available; information on transactions and holdings of Kyoto Protocol units reported for 2021; and data on greenhouse gas emissions for Parties included in Annex I with commitments inscribed in the third column of Annex B in the Doha Amendment to the Kyoto Protocol. The information contained in this report is based on the latest 2021 and 2022 annual submissions and the reports to facilitate the calculation of the assigned amount for the second commitment period, where available, as at 19 August 2022.

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

Abbreviations and acronyms

AAU	assigned amount unit
Annex B Party	Party included in Annex I ¹ with a commitment inscribed in the third column of Annex B in the Doha Amendment to the Kyoto Protocol
CER	certified emission reduction
CH ₄	methane
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
ERU	emission reduction unit
EU	European Union
GHG	greenhouse gas
HFC	hydrofluorocarbon
ICER	long-term certified emission reduction
LULUCF	land use, land-use change and forestry
N ₂ O	nitrous oxide
NF ₃	nitrogen trifluoride
PFC	perfluorocarbon
RMU	removal unit
SEF	standard electronic format
SF ₆	sulfur hexafluoride
tCER	temporary certified emission reduction

¹ Defined in Article 1, para. 7, of the Kyoto Protocol.

I. Introduction

A. Mandate

1. Parties to the Convention that are also Parties to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol were required to start reporting supplementary information under Article 7, paragraph 1, of the Kyoto Protocol with the inventory submission due under the Convention for the first year of the commitment period after the Kyoto Protocol had entered into force for that Party.² The information reported is to include the following:

(a) GHG emissions from the sources listed in Annex A to the Kyoto Protocol, submitted as part of the annual GHG inventory;

(b) Anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and any other elected activities under Article 3, paragraph 4, of the Kyoto Protocol;

(c) Transactions and holdings of Kyoto Protocol units: AAUs, CERs, ERUs, ICERs, RMUs and tCERs.

2. CMP 1 requested the secretariat to publish annual compilation and accounting reports after completion of the initial review under Article 8 of the Kyoto Protocol and resolution of any questions of implementation relating to adjustments under Article 5, paragraph 2, of the Kyoto Protocol or to the assigned amount pursuant to Article 3, paragraphs 7–8, and to forward the report to the CMP, the Compliance Committee and each Party concerned.³

B. Scope of the note

3. The Doha Amendment⁴ entered into force on 31 December 2020 as per the threshold set out in Articles 20–21 of the Kyoto Protocol. This report covers information reported by all Annex B Parties and reviewed as at 19 August 2022,⁵ including the initial accounting parameters for the second commitment period of the Kyoto Protocol and relevant supplementary information reported under Article 7, paragraph 1, of the Kyoto Protocol. It includes an overview of the information reported by Parties in 2022 on (1) total GHG emissions from the sources listed in Annex A to the Kyoto Protocol reported for 2019 and 2020; (2) GHG emissions and removals from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and any other elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2019 and 2020; and (3) transactions and holdings of Kyoto Protocol units as at 31 December 2021.

4. Information is also provided in this report on the eligibility of the Annex B Parties to participate in the flexibility mechanisms under the Kyoto Protocol.

5. Detailed information provided by individual Annex B Parties, as well as information reported by Parties included in Annex I that do not have commitments inscribed in the third column of Annex B in the Doha Amendment (i.e. Japan, New Zealand and Russian Federation) is contained in the addendum to this report.

6. The initial reports, initial review reports and annual submissions of GHG inventories and accounting information reported by Parties are available on the UNFCCC website.⁶

² Decision 15/CMP.1, para. 2.

³ Decision 13/CMP.1, para. 4.

⁴ Adopted through decision 1/CMP.8.

⁵ The accounting parameters presented in this report are based on the final values available in the initial review reports published as at 19 August 2022, as at which date Belarus had not submitted its initial report.

⁶ <https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-kyoto-protocol/second-commitment-period/initial-reports> and <https://unfccc.int/ghg-inventories-annex-i-parties/2022>.

C. Possible action by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

7. The CMP may wish to take note of the information contained in this document and to take any further action required.

II. Status of reporting and eligibility

A. Status of initial report submissions, annual submissions and the review process

8. As at 19 August 2022, 37 Annex B Parties had submitted their initial reports in accordance with decision 2/CMP.8, and the initial review reports (following the technical review conducted in accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol”⁷) had been published for those Parties (the dates of submission of the former and publication of the latter are shown in table 1).

Table 1

Status of submission of reports to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol of Annex B Parties and of publication of initial review reports

<i>Annex B Party</i>	<i>Doha Amendment acceptance date</i>	<i>Second commitment period initial report original submission date</i>	<i>Second commitment period initial review report publication date</i>
Australia	9 November 2016	7 May 2016	26 April 2017
Austria	21 December 2017	15 June 2016	31 May 2017
Belarus ^a	–	–	–
Belgium	14 November 2017	15 June 2016	20 June 2017
Bulgaria	21 December 2017	27 May 2016	21 June 2017
Croatia	21 December 2017	15 June 2016	28 March 2017
Cyprus	10 December 2015	15 June 2016	20 October 2017
Czechia	21 December 2017	15 June 2016	31 August 2017
Denmark	21 December 2017	15 June 2016	9 August 2017
Estonia	21 December 2017	15 June 2016	22 March 2017
EU	21 December 2017	23 September 2016	14 May 2018
Finland	16 November 2017	29 June 2016	15 March 2017
France	30 November 2017	16 June 2016	26 July 2017
Germany	14 November 2017	15 June 2016	12 April 2017
Greece	21 December 2017	15 June 2016	31 August 2017
Hungary	1 October 2015	15 June 2016	8 March 2017
Iceland	7 October 2015	19 September 2016	29 March 2017
Ireland	21 December 2017	17 June 2016	20 July 2017
Italy	18 July 2016	15 April 2016	31 May 2017
Kazakhstan	–	4 July 2017	18 February 2019
Latvia	21 December 2017	15 June 2016	7 March 2017
Liechtenstein	23 February 2015	15 April 2016	21 September 2017
Lithuania	22 November 2017	16 June 2016	6 March 2017
Luxembourg	21 September 2017	1 August 2016	30 August 2017
Malta	21 December 2017	29 July 2016	21 July 2017
Monaco	27 December 2013	4 August 2017	23 March 2018
Netherlands	22 November 2017	15 June 2016	23 June 2017

⁷ Decision 22/CMP.1, annex, in conjunction with decision 4/CMP.11.

<i>Annex B Party</i>	<i>Doha Amendment acceptance date</i>	<i>Second commitment period initial report original submission date</i>	<i>Second commitment period initial review report publication date</i>
Norway	12 June 2014	15 April 2016	27 March 2017
Poland	28 September 2018	14 June 2016	20 June 2017
Portugal	22 November 2017	15 June 2016	5 September 2017
Romania	3 May 2016	15 June 2016	21 June 2017
Slovakia	16 November 2017	15 June 2016	3 March 2017
Slovenia	21 December 2017	15 June 2016	22 August 2017
Spain	14 November 2017	13 June 2016	14 July 2017
Sweden	14 November 2017	15 June 2016	6 April 2017
Switzerland	28 August 2015	15 April 2016	19 April 2017
Ukraine	–	10 June 2016	19 April 2017
United Kingdom	17 November 2017	1 July 2016	4 December 2017

^a Had not submitted its initial report as at 19 August 2022.

9. As at 19 August 2022, all Annex B Parties had submitted their 2022 GHG inventories, including both the common reporting format tables and the national inventory report. Overall, 36 Annex B Parties had submitted⁸ supplementary information under Article 7, paragraph 1, of the Kyoto Protocol, information on GHG emissions and removals from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and elected activities under Article 3, paragraph 4, of the Kyoto Protocol; and SEF tables for the period from 1 January to 31 December 2021.

B. Status of eligibility

10. The status of eligibility of Annex B Parties to participate in the flexibility mechanisms under the Kyoto Protocol pursuant to decisions 3/CMP.1, 9/CMP.1, 11/CMP.1, 15/CMP.1 and 1/CMP.8 is provided in table 2.

11. The status of eligibility for each Annex B Party was updated in the compilation and accounting database upon the entry into force of the Doha Amendment on 31 December 2020.

Table 2

Status of eligibility of Annex B Parties to participate in the Kyoto Protocol mechanisms

<i>Annex B Party</i>	<i>Status^a</i>	<i>Last change in eligibility status (date and time)^b</i>
Australia	E	11 July 2009, 00:00:01
Austria	E	5 April 2008, 00:00:01
Belarus ^c	–	–
Belgium	E	22 April 2008, 00:00:01
Bulgaria	E	4 February 2011, 15:42:12
Croatia	E	8 February 2012, 09:53:32
Cyprus ^d	E	31 December 2020, 00:00:01
Czechia	E	24 February 2008, 00:00:01
Denmark	E	20 April 2008, 00:00:01
Estonia	E	15 April 2008, 00:00:01
EU	E	18 April 2008, 00:00:01
Finland	E	22 April 2008, 00:00:01
France	E	21 April 2008, 00:00:01
Germany	E	27 April 2008, 00:00:01
Greece	E	14 November 2008, 09:00:00
Hungary	E	30 December 2007, 00:00:01

⁸ Belarus and Kazakhstan had not.

<i>Annex B Party</i>	<i>Status^a</i>	<i>Last change in eligibility status (date and time)^b</i>
Iceland	E	11 May 2008, 00:00:01
Ireland	E	19 April 2008, 00:00:01
Italy	E	19 April 2008, 00:00:01
Kazakhstan ^{c, e}	N	–
Latvia	E	29 April 2008, 00:00:01
Liechtenstein	E	22 April 2008, 00:00:01
Lithuania	E	24 October 2012, 10:47:02
Luxembourg	E	29 April 2008, 00:00:01
Malta ^d	E	31 December 2020, 00:00:01
Monaco	E	7 September 2008, 00:00:01
Netherlands	E	21 April 2008, 00:00:01
Norway	E	22 April 2008, 00:00:01
Poland	E	29 April 2008, 00:00:01
Portugal	E	28 April 2008, 00:00:01
Romania	E	13 July 2012, 12:42:59
Slovakia	E	4 February 2008, 00:00:01
Slovenia	E	22 April 2008, 00:00:01
Spain	E	19 April 2008, 00:00:01
Sweden	E	19 April 2008, 00:00:01
Switzerland	E	10 March 2008, 00:00:01
Ukraine	E ^f	9 March 2012, 15:32:22
United Kingdom	E	11 April 2008, 00:00:01

^a In this table, “E” means considered to meet the eligibility requirements under Article 6 of the Kyoto Protocol, pursuant to decision 9/CMP.1, annex, para. 22; Article 12, pursuant to decision 3/CMP.1, annex, para. 32; and Article 17, pursuant to decision 11/CMP.1, annex, para. 3; and “N” means found by the enforcement branch of the Compliance Committee not to meet the eligibility requirements under Articles 6, 12 and 17 of the Kyoto Protocol before 16 months had elapsed since the submission of the Party’s report to facilitate the calculation of its assigned amount pursuant to Article 3, paras. 7–8, and not to have demonstrated its capacity to account for its emissions and assigned amount in accordance with decisions 3/CMP.1, annex, para. 32; 9/CMP.1, annex, para. 22; and 11/CMP.1, annex, para. 3.

^b All times are in Greenwich Mean Time.

^c As at 19 August 2022, the Party had not ratified the Doha Amendment.

^d Upon the entry into force of the Doha Amendment, the assigned amount for this Party was recorded in the compilation and accounting database and the eligibility of the Party to participate in the flexibility mechanisms under the Kyoto Protocol was established, as applicable.

^e As at 19 August 2022, Kazakhstan had submitted the fourth progress report under the plan of the enforcement branch of the Compliance Committee, which contains information on the activities implemented in respect of questions of implementation raised in the 2019 annual review report (FCCC/ARR/2019/KAZ), the 2017 annual review report (FCCC/ARR/2017/KAZ) and the initial review report (FCCC/IRR/2017/KAZ) as per the final decision of 13 January 2021 confirming the preliminary findings of the enforcement branch of the Compliance Committee in the Committee’s document CC-2020-1-4/Kazakhstan/EB, in accordance with decision 7/CMP.9, para. 5. Detailed information on the final decision on preliminary findings is contained in the above-mentioned decision of the Committee, available at <https://unfccc.int/process-and-meetings/the-kyoto-protocol/compliance-under-the-kyoto-protocol/questions-of-implementation-kazakhstan-2020>.

^f The eligibility of Ukraine was established for the first commitment period. Ukraine has not ratified the Doha Amendment.

III. Main accounting parameters

12. This chapter presents the information provided by the 35 Annex B Parties that have ratified the Doha Amendment.

A. Key initial accounting parameters

13. Table 3 shows the base years chosen for the accounting of fluorinated gases (i.e. HFCs, PFCs, SF₆ and NF₃), the GHG emissions from the sources listed in Annex A to the Kyoto Protocol in the base year used for calculating the assigned amounts pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment, and the assigned amounts established pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment.

1. Total base-year greenhouse gas emissions used for calculating the assigned amount pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment

14. Article 3, paragraph 8 and 8 bis, in the Doha Amendment allows any Party included in Annex I to use 1995 as its base year for HFCs, PFCs and SF₆, and 1995 or 2000 as the base year for total emissions of NF₃ for the purpose of calculating its assigned amount pursuant to Article 3, paragraph 7 bis, in the Doha Amendment. The EU has multiple base years (1990, 1995 or 2000) for fluorinated gases, depending on the base years elected by its 27 individual member States, Iceland and the United Kingdom of Great Britain and Northern Ireland.

15. The total GHG emissions of 35 Annex B Parties⁹ in the base year¹⁰ amounted to 6,548.4 Mt CO₂ eq, including total GHG emissions of 6,394.7 Mt CO₂ eq from the sources listed in Annex A to the Kyoto Protocol and emissions from LULUCF (net emissions and removals in the base year from the conversion of forests (deforestation)) of 153.7 Mt CO₂ eq.

Table 3

Base-year emissions and assigned amounts for the second commitment period of the Kyoto Protocol

Annex B Party	Base year defined under the Kyoto Protocol ^a			Base-year emissions ^b (t CO ₂ eq)	Emission reduction/ limitation target (% of base-year level) ^c	Assigned amount (t CO ₂ eq)
	CO ₂ , CH ₄ and N ₂ O	HFCs, PFCs and SF ₆	NF ₃			
Australia	1990	1990	1990	566 786 410	99.5	4 511 619 826
Austria	1990	1990	2000	78 855 136	80.0	405 712 317
Belgium	1990	1995	1995	147 811 094	80.0	584 228 513
Bulgaria	1988	1995	1995	114 105 323	80.0	222 945 983
Croatia	1990	1990	2000	31 204 631	80.0	162 271 086
Cyprus	1990	1995	1995	5 627 236	80.0	47 450 128
Czechia	1990	1995	1995	198 316 406	80.0	520 515 203
Denmark	1990	1995	1995	70 801 910	80.0	269 377 890
Estonia	1990	1995	1995	39 996 697	80.0	51 056 976
EU ^{d, e}	1990	1990 or 1995	1995 or 2000	5 875 692 700	80.0	15 813 089 338
Finland	1990	1995	1995	71 350 147	80.0	240 544 599
France	1990	1990	1995	548 055 757	80.0	3 014 714 832
Germany	1990	1995	1995	1 253 599 336	80.0	3 592 699 888
Greece	1990	1995	2000	107 564 136	80.0	480 791 166
Hungary	1985–1987	1995	1995	109 574 819	80.0	434 486 280
Iceland	1990	1990	1995	3 633 558	80.0	15 327 217
Ireland	1990	1995	1995	56 425 830	80.0	343 519 892
Italy	1990	1990	1995	521 920 601	80.0	2 410 291 421
Latvia	1990	1995	1995	26 409 077	80.0	76 633 439
Liechtenstein	1990	1990	1990	231 554	84.0	1 556 044

⁹ The total includes the emissions of the EU but excludes the emissions of the individual EU member States, Iceland and the United Kingdom in order to avoid double counting.

¹⁰ The total GHG emissions for each Party in the base year refers to the total GHG emissions that were used for calculating the assigned amount pursuant to Article 3, paras. 7 bis, 8 and 8 bis, in the Doha Amendment as contained in the initial review reports.

Annex B Party	Base year defined under the Kyoto Protocol ^a			Base-year emissions ^b (t CO ₂ eq)	Emission reduction/ limitation target (% of base-year level) ^c	Assigned amount (t CO ₂ eq)
	CO ₂ , CH ₄ and N ₂ O	HFCs, PFCs and SF ₆	NF ₃			
Lithuania	1990	1995	1995	48 196 540	80.0	113 600 821
Luxembourg	1990	1995	1995	13 141 245	80.0	72 454 473
Malta	1990	1990	1995	1 974 638	80.0	9 299 769
Monaco	1990	1995	1990	99 319	78.0	619 751
Netherlands	1990	1995	1995	223 950 669	80.0	924 777 902
Norway	1990	1990	2000	51 921 771	84.0	348 914 303
Poland	1988	1995	2000	580 020 010	80.0	1 583 938 824
Portugal	1990	1995	2000	65 028 094	80.0	429 581 969
Romania	1989	1989	2000	304 920 568	80.0	656 059 490
Slovakia	1990	1990	2000	74 271 511	80.0	202 268 939
Slovenia	1986	1995	1995	20 327 584	80.0	99 425 782
Spain	1990	1995	1995	283 361 698	80.0	1 766 877 232
Sweden	1990	1995	1995	72 057 123	80.0	315 554 578
Switzerland	1990	1990	1990	53 706 729	84.2	361 768 524
United Kingdom	1990	1995	1995	803 191 325	80.0	2 744 937 332
Total^f				6 548 438 483		42 828 911 727

Note: The information in this table is based on the final values available in the initial review reports published as at 19 August 2022, unless stated otherwise (see table footnotes below).

^a Parties included in Annex I may choose 1995 as the base year for total emissions of HFCs, PFCs and SF₆, and 1995 or 2000 as the base year for emissions of NF₃ in accordance with Article 3, para. 8 and 8 bis, in the Doha Amendment.

^b Refers to the total base-year GHG emissions used for calculating the assigned amount pursuant to Article 3, paras. 7 bis, 8 and 8 bis, in the Doha Amendment. Note that the following Parties included net emissions from LULUCF (deforestation) in their total GHG emissions for the base year in accordance with Article 3, para. 7 bis, in the Doha Amendment and decision 13/CMP.1, annex, para. 5(b): Australia, 148,163,361 t CO₂ eq; Denmark, 8,807 t CO₂ eq; EU, 5,560,495 t CO₂ eq; Ireland, 8,230 t CO₂ eq; Luxembourg, 268,381 t CO₂ eq; Netherlands, 752,270 t CO₂ eq; Portugal, 4,276,759 t CO₂ eq; and United Kingdom, 246,048 t CO₂ eq.

^c The emission reduction or limitation target is taken from the third column of Annex B in the Doha Amendment. For the second commitment period, the EU and its 27 member States, Iceland and the United Kingdom agreed to meet their targets jointly in accordance with Article 4 of the Kyoto Protocol.

^d The base year for CO₂, CH₄ and N₂O is 1990 for 27 individual EU member States, Iceland and the United Kingdom, except Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

^e The assigned amount of the EU (15,813,089,338 t CO₂ eq) is the difference between (1) the joint assigned amount of the EU, its 27 individual member States, Iceland and the United Kingdom, equalling 80 per cent of their base-year emissions as inscribed in the third column of Annex B in the Doha Amendment, multiplied by eight (37,604,433,280 t CO₂ eq), and (2) the sum of the individual assigned amounts of the 27 member States, Iceland and the United Kingdom (21,791,343,942 t CO₂ eq) determined in line with the terms of the joint fulfilment agreement.

^f For the base-year emissions, the total includes the base-year emissions of the EU but does not include the base-year emissions of its 27 individual member States, Iceland and the United Kingdom in order to avoid double counting. However, for the assigned amounts, the total includes the assigned amount of the EU, its 27 individual member States, Iceland and the United Kingdom because the assigned amount of the EU is the difference between the joint assigned amount and the sum of the individual assigned amounts of its 27 member States, Iceland and the United Kingdom.

2. Assigned amount pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment

16. Pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment, the assigned amount for the second commitment period of the Kyoto Protocol for each Party included in Annex I is calculated as the percentage inscribed for it in the third column of Annex B in the Doha Amendment of its aggregate anthropogenic CO₂ eq emissions of the GHGs from sources listed in Annex A to the Kyoto Protocol in the base year, multiplied by eight. The assigned amounts for the 27 individual EU member States, Iceland and the United Kingdom have been calculated under the joint fulfilment agreement of the EU for meeting commitments under the Kyoto Protocol.

17. For the second commitment period of the Kyoto Protocol, the total assigned amount of 35¹¹ Annex B Parties taken together is 42,828,911,727 t CO₂ eq.

B. Greenhouse gas emissions and removals in 2019 and 2020

18. The aggregated totals for Annex B Parties presented in this section include the emissions of the EU but exclude the emissions of its 27 individual member States, Iceland and the United Kingdom in order to avoid double counting.

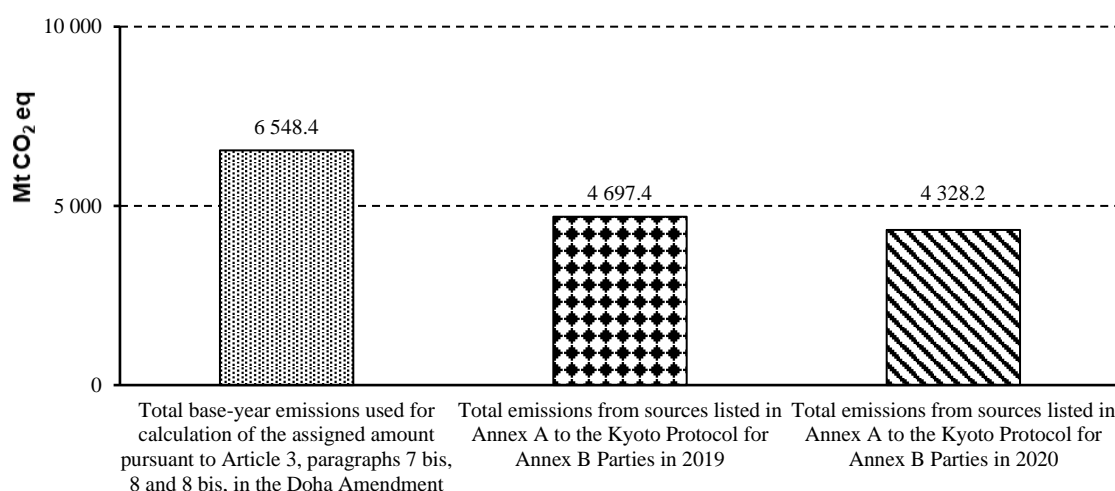
19. The information on GHG emissions provided here includes indirect CO₂ emissions, where reported.

1. Emissions from sources listed in Annex A to the Kyoto Protocol in 2019 and 2020

20. On the basis of the information submitted by Annex B Parties, the total GHG emissions of Annex B Parties from sources listed in Annex A to the Kyoto Protocol in 2020 amounted to 4,328.2 Mt CO₂ eq. This is 33.9 per cent lower than the base-year level defined under the Kyoto Protocol and 7.9 per cent lower than the 2019 level (see figure 1).

Figure 1

Total greenhouse gas emissions for Annex B Parties from sources listed in Annex A to the Kyoto Protocol in 2019 and 2020



Notes: (1) The values for total GHG emissions from sources listed in Annex A to the Kyoto Protocol for Annex B Parties in 2019 and 2020, which are based on information submitted in 2022, are presented here provisionally and may change depending on the outcomes of the ongoing annual reviews; and (2) the totals include the emissions of the EU but not of its 27 individual member States, Iceland and the United Kingdom.

2. Difference in the data for 2019 on emissions from Annex A sources between the 2021 and 2022 annual submissions

21. Two sets of data on GHG emissions from sources listed in Annex A to the Kyoto Protocol are considered in this section for comparison purposes: the values reported in the 2021 annual submissions, which have been reviewed, where applicable, and the latest available values, reported in the 2022 annual submissions, the review of which is in progress.

22. Total GHG emissions from sources listed in Annex A to the Kyoto Protocol in 2019 reported by Parties in their 2022 annual submissions amounted to 4,697.4 Mt CO₂ eq, which is 0.25 per cent lower than the total reported by Annex B Parties for the same year in their 2021 annual submissions (4,709.1 Mt CO₂ eq). The change is due to recalculations made by Parties in preparing their GHG inventories.

¹¹ The total includes the assigned amount of the EU, its 27 individual member States, Iceland and the United Kingdom.

3. Greenhouse gas emissions and removals from land use, land-use change and forestry activities

23. Of the Parties that had submitted an initial report as at 19 August 2022, 31 chose to account for LULUCF activities under Article 3, paragraph 3, of the Kyoto Protocol for the entire second commitment period at the end of the commitment period and 3 Parties chose to account for them annually. Similarly, 32 Parties chose to account for LULUCF activities under Article 3, paragraph 4, of the Kyoto Protocol for the entire second commitment period at the end of the commitment period and 2 Parties chose to account for them annually. In accordance with decision 2/CMP.7, all Parties included in Annex I shall account for anthropogenic GHG emissions by sources and removals by sinks resulting from any activity under Article 3, paragraph 4, of the Kyoto Protocol elected in the first commitment period and forest management. Twenty-three Parties elected not to account for any of the LULUCF activities other than forest management under Article 3, paragraph 4, of the Kyoto Protocol, while the other Parties chose to account for at least one of them (see table 4). The Party counts in this paragraph exclude the EU, for which the periodicity of reporting is determined by its 27 individual member States, Iceland and the United Kingdom.

Table 4

Summary of methods chosen by Parties in accounting for activities under Article 3, paragraph 4, of the Kyoto Protocol

Activity under Article 3, paragraph 4, of the Kyoto Protocol	Number of Parties by type of accounting period elected		
	No accounting	Annual	Entire commitment period
Forest management	0	2	32
Cropland management	25	1	8
Grazing land management	26	1	7
Revegetation	31	0	3
Wetland drainage and rewetting	33	0	1

Note: The Party counts do not include the EU.

24. In accordance with decision 15/CMP.1 in conjunction with decisions 3/CMP.11 and 2/CMP.8, Annex B Parties are required to include in their annual GHG inventories information on anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol. As at 19 August 2022, 35 Annex B Parties had reported information on GHG emissions and removals from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol in their 2022 annual submission. A summary of the information provided pursuant to decisions 2/CMP.7, 6/CMP.9 and 3/CMP.11 on the total net anthropogenic GHG emissions and removals for Annex B Parties from each of the LULUCF activities under Article 3, paragraphs 3–4, of the Kyoto Protocol for 2019 and 2020 is provided in table 5.

Table 5

Total net anthropogenic greenhouse gas emissions and removals for Annex B Parties from land use, land-use change and forestry activities under Article 3, paragraphs 3–4, of the Kyoto Protocol for 2019 and 2020

Activity under Article 3, paragraphs 3–4, of the Kyoto Protocol	Number of reporting Parties	Net GHG emissions or removals (t CO ₂ eq)	
		2019	2020
Article 3, paragraph 3, activities			
Afforestation and reforestation	32	– 65 944 705	– 68 928 216
Deforestation	32	65 110 633	63 524 008
Net emissions or removals		– 834 072	– 5 404 208
Article 3, paragraph 4, activities			
Forest management	33	– 354 341 578	– 81 620 319
Cropland management	9	26 587 211	31 869 198

Activity under Article 3, paragraphs 3–4, of the Kyoto Protocol	Number of reporting Parties	Net GHG emissions or removals (t CO ₂ eq)	
		2019	2020
Grazing land management	8	19 791 980	21 712 761
Revegetation	3	– 1 031 790	– 1 009 463
Wetland drainage and rewetting	1	210 357	204 591
Net emissions or removals		– 308 783 820	– 28 843 231

Note: GHG information includes the emissions of the EU but excludes the emissions of its 27 individual member States, Iceland and the United Kingdom in order to avoid double counting. Party counts exclude the EU but include its 27 individual member States, Iceland and the United Kingdom, if appropriate.

4. Difference in the data for 2019 on emissions and removals from land use, land-use change and forestry activities between the 2021 and 2022 annual submissions

25. There are two sets of data on GHG emissions from LULUCF activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2019: the values reported in the 2021 annual submissions, which have been reviewed, where applicable, and the values reported in the 2022 annual submissions, which are the latest available data, the review of which is in progress.

26. The net GHG emissions and removals from the activities mentioned in paragraph 25 above in 2019 reported by 35 Parties in their 2022 annual submissions amounted to –309.6 Mt CO₂ eq. Those net GHG removals are 5.8 per cent lower than reported by the same group of Parties for 2019 in their 2021 annual submissions (–328.5 Mt CO₂ eq). The change is due to recalculations made by Parties in preparing their GHG inventories.

C. Transactions and holdings of Kyoto Protocol units

27. This section provides an overview of additions to and subtractions from the assigned amount pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment at the end of 2021 for the 35 Annex B Parties that reported their SEF tables with information on Kyoto Protocol units in 2022.

28. In this section, aggregated quantities of Kyoto Protocol units and counts of Parties include the 27 individual EU member States, Iceland and the United Kingdom but exclude the EU in order to avoid double counting.

1. Transactions of Kyoto Protocol units

29. In decision 3/CMP.11 transactions of Kyoto Protocol units are classified as internal or external. An internal transaction does not involve another national registry, whereas an external transaction involves the transaction of Kyoto Protocol units from one national registry to another.

30. Between 1 January and 31 December 2021, 13 Parties executed at least one form of internal transaction. All transactions were related to the cancellation of Kyoto Protocol units, which were reported under the voluntary cancellation account. A total of 40.78 million CERs were transferred into the voluntary cancellation account by 13 Parties, of which 11 are EU member States. Similarly, five Parties, four of which are EU member States, transferred a total quantity of 3.62 million ERUs into the voluntary cancellation account.

31. As at 31 December 2021, no RMUs had been issued into national registries resulting from activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and, if any, elected activities under Article 3, paragraph 4, of the Kyoto Protocol, accounted in accordance with decisions 13/CMP.1, 2/CMP.7 and 6/CMP.9 for the second commitment period of the Kyoto Protocol.

32. Table 6 presents the total quantities of Kyoto Protocol units and the number of Parties involved in external transactions that occurred between 1 January and 31 December 2021.

Table 6
Total Kyoto Protocol units acquired or transferred through external transactions between 1 January and 31 December 2021

Transaction	Kyoto Protocol units (Mt CO ₂ eq)						
	AAUs	ERUs	RMUs	CERs ^a	tCERs	ICERs	
Addition	Quantities acquired or forwarded	0	0.23	0	184.80	0.00	0
	Number of Parties involved	0	3	0	22	3	0
Subtraction	Quantities transferred	0	0.23	0	101.33	0	0
	Number of Parties involved	0	4	0	16	0	0

Note: The transaction quantities and Party counts include the 27 individual EU member States, Iceland and the United Kingdom but exclude the EU in order to avoid double counting.

^a CERs are forwarded by the clean development mechanism registry.

2. Holdings of Kyoto Protocol units by holding account type as at 31 December 2021

33. For the Annex B Parties that reported information on Kyoto Protocol units pursuant to decisions 13/CMP.1 and 15/CMP.1, there were 28,828.49 million Kyoto Protocol units in their national registries by the end of 2021, comprising 28,272.24 million AAUs, 168.13 million ERUs, 385.25 million CERs and 2.87 million tCERs in the different holding accounts, including previous period surplus reserve accounts and voluntary cancellation accounts.

34. Figure 2 shows the number of Annex B Parties that hold Kyoto Protocol units in different account types. The total quantities of the different Kyoto Protocol units by account type as at 31 December 2021 for Annex B Parties are provided in table 7. Table 8 shows the breakdown of the total Kyoto Protocol units by Party.

35. Detailed information on the status of accounts for each Annex B Party can be found in the addendum to this report.¹²

Figure 2

Number of Annex B Parties holding Kyoto Protocol units in 2021, by account type

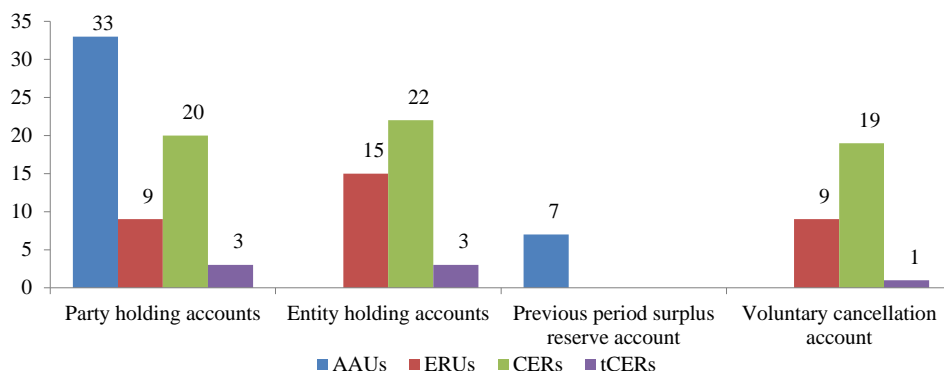


Table 7

Total quantities of Kyoto Protocol units by account type for Annex B Parties as at 31 December 2021

(Mt CO₂ eq)

Account type	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Party holding accounts	26 968.37	71.02	0	168.32	1.99	0
Entity holding accounts	0	90.45	0	116.37	0.87	0
Retirement account	0	0	0	0	0	0
Previous period surplus reserve account	1 303.86					
Article 3.3/3.4 net source cancellation accounts	0	0	0	0		

¹² FCCC/KP/CMP/2022/3/Add.1.

<i>Account type</i>	<i>AAUs</i>	<i>ERUs</i>	<i>RMUs</i>	<i>CERs</i>	<i>tCERs</i>	<i>lCERs</i>
Non-compliance cancellation account	0	0	0	0		
Voluntary cancellation account	0	6.66	0	100.56	0.02	0
Cancellation account for remaining units after carry-over	0	0	0	0	0	0
Article 3.1 ter and quater ambition increase cancellation account	0					
Article 3.7 ter cancellation account	0					
tCER cancellation account for expiry					0	
lCER cancellation account for expiry						0
lCER cancellation account for reversal of storage						0
lCER cancellation account for non-submission of certification report						0
tCER replacement account for expiry	0	0	0	0	0	
lCER replacement account for expiry	0	0	0	0		
lCER replacement account for reversal of storage	0	0	0	0		0
lCER replacement account for non-submission of certification report	0	0	0	0		0
Total	28 272.24	168.13	0	385.25	2.87	0

Note: “Total quantities” refers to the sum of the Kyoto Protocol units in each account type for Annex B Parties, excluding the EU but including its 27 individual member States, Iceland and the United Kingdom.

Table 8
Total quantities of Kyoto Protocol units by Annex B Party as at 31 December 2021
(Mt CO₂ eq)

<i>Annex B Party</i>	<i>AAUs</i>	<i>ERUs</i>	<i>RMUs</i>	<i>CERs</i>	<i>tCERs</i>	<i>lCERs</i>
Australia	4 511.62	0	0	47.27	0.02	0
Austria	405.72	0	0	3.15	0	0
Belgium	584.23	3.27	0	18.16	0	0
Bulgaria	222.95	0.62	0	0.08	0	0
Croatia	162.27	0	0	0	0	0
Cyprus	0	0	0	0	0	0
Czechia	520.52	0	0	0.01	0	0
Denmark	269.38	0	0	2.78	0	0
Estonia	51.06	0	0	0	0	0
EU	15 813.09	0	0	160.19	0	0
Finland	240.54	2.92	0	10.13	0	0
France	3 202.09	0.00	0	7.98	0	0
Germany	3 592.70	0.03	0	25.38	0	0
Greece	480.79	0	0	0	0	0
Hungary	601.48	3.88	0	5.34	0	0
Iceland	15.33	0	0	0	0	0
Ireland	343.52	0.07	0	8.20	0.64	0
Italy	2 410.29	1.11	0	5.08	0.14	0

<i>Annex B Party</i>	<i>AAUs</i>	<i>ERUs</i>	<i>RMUs</i>	<i>CERs</i>	<i>tCERs</i>	<i>ICERs</i>
Latvia	76.63	0.01	0	0.02	0	0
Liechtenstein	1.56	0	0	0.31	0	0
Lithuania	113.60	0.80	0	0.25	0	0
Luxembourg	72.45	0	0	1.57	0.29	0
Malta	9.30	0	0	0.00	0	0
Monaco	0.64	0	0	0.07	0	0
Netherlands	924.78	0.02	0	8.21	0	0
Norway	348.91	0.82	0	40.69	0	0
Poland	1 995.01	42.39	0	42.97	0	0
Portugal	429.58	0	0	0	0	0
Romania	1 188.65	17.87	0	8.69	0	0
Slovakia	202.27	0	0	0	0	0
Slovenia	99.43	0	0	1.40	0	0
Spain	1 766.88	2.17	0	19.23	1.47	0
Sweden	315.55	0	0	23.89	0.31	0
Switzerland	367.56	79.87	0	75.46	0	0
United Kingdom	2 744.94	12.29	0	28.91	0	0

Note: "Total quantities" refers to the sum of the Kyoto Protocol units in each account type for each Annex B Party.