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

**Fifteenth session**

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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**

**Annual compilation and accounting report for Annex B  
Parties under the Kyoto Protocol for 2019**

**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 in 2019; 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 both final values (from the reports on the reviews of the 2018 annual submissions and of the reports to facilitate the calculation of the assigned amount for the second commitment period, where available) and provisional values (reported by Parties in their 2019 annual submissions).


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

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## Abbreviations and acronyms

AAU	assigned amount unit
Annex B Party	Party included in Annex I <sup>1</sup> with commitments inscribed in the third column of Annex B in the Doha Amendment to the Kyoto Protocol
CER	certified emission reduction
CH <sub>4</sub>	methane
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
E	considered to meet the eligibility requirements under: Article 6 of the Kyoto Protocol, pursuant to decision 9/CMP.1, annex, paragraph 22; Article 12, pursuant to decision 3/CMP.1, annex, paragraph 32; and Article 17, pursuant to decision 11/CMP.1, annex, paragraph 3
ERU	emission reduction unit
GHG	greenhouse gas
HFC	hydrofluorocarbon
initial report	report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol
initial review report	report on the review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol
ICER	long-term certified emission reduction
LULUCF	land use, land-use change and forestry
N	found by the enforcement branch of the Compliance Committee not to meet the eligibility requirements under Articles 6, 12 and 17 before 16 months have elapsed since the submission of the Party's report to facilitate the calculation of its assigned amount pursuant to Article 3, paragraphs 7 and 8, and to demonstrate its capacity to account for its emissions and assigned amount <sup>2</sup>
NF <sub>3</sub>	nitrogen trifluoride
N <sub>2</sub> O	nitrous oxide
PFC	perfluorocarbon
RMU	removal unit
SEF	standard electronic format
SF <sub>6</sub>	sulfur hexafluoride
tCER	temporary certified emission reduction

<sup>1</sup> The term "Party included in Annex I" is defined in Article 1, para. 7, of the Kyoto Protocol.

<sup>2</sup> In accordance with decisions 3/CMP.1, annex, para. 32; 9/CMP.1, annex, para. 22; and, 11/CMP.1, annex, para. 3.

## 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.<sup>3</sup> 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 and 8, and to forward the report to the CMP, the Compliance Committee and each Party concerned.<sup>4</sup>

### B. Scope of the note

3. This annual compilation and accounting report was prepared prior to the completion of the review of all initial reports of Annex B Parties under Article 8 of the Kyoto Protocol.<sup>5</sup>

4. This report covers information reported by all 38 Annex B Parties and reviewed as at 19 October 2019,<sup>6</sup> 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 also includes an overview of the information reported by Parties in 2019 on (1) total GHG emissions from the sources listed in Annex A to the Kyoto Protocol reported for 2016 and 2017; (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 2016 and 2017; and (3) transactions and holdings of Kyoto Protocol units as at 31 December 2018.

5. Information is also provided in this report on the eligibility of the 38 Annex B Parties to participate in the flexibility mechanisms under the Kyoto Protocol.

6. Detailed information on the assigned amounts of individual Annex B Parties and other accounting information provided under the Kyoto Protocol, where applicable, is contained in document FCCC/KP/CMP/2019/6/Add.1, which also contains relevant information reported in accordance with decision 2/CMP.8, paragraph 4, and decision 3/CMP.11, paragraph 14, and information reported on a voluntary basis by Parties included in Annex I<sup>7</sup> that do not

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<sup>3</sup> Decision 15/CMP.1.

<sup>4</sup> Decision 13/CMP.1, para. 4.

<sup>5</sup> As at 19 October 2019, Belarus had not submitted its initial report.

<sup>6</sup> The accounting parameters presented in this report are based on the final values available in the initial review reports published as at 19 October 2019. Where the review of annual information submitted by Parties had been completed, the associated values are presented as final, and where it was pending the values are provisional.

<sup>7</sup> The term "Party included in Annex I" is defined in Article 1, para. 7, of the Kyoto Protocol.

have commitments inscribed in the third column of Annex B in the Doha Amendment (i.e. Japan, New Zealand and Russian Federation).<sup>8</sup>

7. The initial reports, initial review reports and annual submissions of GHG inventories and accounting information reported by Parties are available on the UNFCCC website.<sup>9</sup>

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

8. 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

9. As at 19 October 2019, 37 Annex B Parties<sup>10</sup> 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”<sup>11</sup>) 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 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 <sup>a</sup>	–	–	–
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
European Union	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

<sup>8</sup> As at the publication of this document, the Doha Amendment, adopted through decision 1/CMP.8, had not yet entered into force.

<sup>9</sup> <https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-kyoto-protocol/second-commitment-period/initial-reports> and <https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2019>.

<sup>10</sup> As at 19 October 2019, Belarus had not submitted its initial report.

<sup>11</sup> 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>
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
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

<sup>a</sup> Had not submitted its initial report as at 19 October 2019.

10. As at 19 October 2019, all 38 Annex B Parties had submitted their 2019 GHG inventories, including both the common reporting format tables and the national inventory report, 37 of which submitted supplementary information under Article 7, paragraph 1, of the Kyoto Protocol. Thirty-six Annex B Parties had also submitted 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.<sup>12</sup>

11. As at 19 October 2019, 36 Annex B Parties had further submitted SEF tables for the period from 1 January to 31 December 2018.<sup>13</sup>

## B. Status of eligibility

12. 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.

13. The status of eligibility for each Annex B Party will be updated in the compilation and accounting database once, for the Party, the annual review of the relevant information reported in 2019 has been completed, any questions of implementation have been resolved and the Doha Amendment has entered into force.

Table 2

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

<i>Annex B Party</i>	<i>Status</i>	<i>Last change in eligibility status (date and time)<sup>a</sup></i>
Australia	E	11 July 2009, 00:00:01
Austria	E	5 April 2008, 00:00:01
Belarus <sup>b</sup>	–	–
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 <sup>b</sup>	–	–
Czechia	E	24 February 2008, 00:00:01

<sup>12</sup> As at 19 October 2019, Belarus and Kazakhstan had not submitted such information.

<sup>13</sup> As at 19 October 2019, Belarus and Kazakhstan had not submitted SEF tables for the second commitment period of the Kyoto Protocol for the period from 1 January to 31 December 2018.

<i>Annex B Party</i>	<i>Status</i>	<i>Last change in eligibility status (date and time)<sup>a</sup></i>
Denmark	E	20 April 2008, 00:00:01
Estonia	E	15 April 2008, 00:00:01
European Union	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
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 <sup>c</sup>	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 <sup>b</sup>	–	–
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	9 March 2012, 15:32:22
United Kingdom	E	11 April 2008, 00:00:01

<sup>a</sup> All times are in Greenwich Mean Time.

<sup>b</sup> The eligibility of the Party to participate in the flexibility mechanisms under the Kyoto Protocol had not been established as at 19 October 2019.

<sup>c</sup> The establishment of the eligibility of Kazakhstan is subject to the resolution of the question of implementation in accordance with the final decision (dated 26 June 2019) of the enforcement branch of the Compliance Committee (CC-2019-1-6/Kazakhstan/EB, para. 6, and annex, para. 26(c)), in accordance with decision 7/CMP.9, para. 5. Detailed information on the question of implementation is contained in that decision, available at <https://unfccc.int/sites/default/files/resource/Kazakhstan%20Final%20decision.pdf>.

### III. Main accounting parameters

#### A. Key initial accounting parameters

14. Table 3 shows the base years chosen for the accounting of fluorinated gases (i.e. HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>), the GHG emissions from the sources listed in Annex A to the Kyoto Protocol in the base year, 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 calculation of the assigned amount pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis, in the Doha Amendment

15. 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 SF<sub>6</sub>, and 1995 or 2000 as the base year for total emissions of NF<sub>3</sub> for the purpose of calculating its assigned amount pursuant to Article 3, paragraph 7 bis, in the Doha Amendment. The European Union has multiple base

years (1990, 1995 or 2000) for fluorinated gases, depending on the base years elected by the individual member States and Iceland.

16. The total GHG emissions of 37 Annex B Parties<sup>14</sup> in the base year<sup>15</sup> amounted to 7,857.7 Mt CO<sub>2</sub> eq, including total GHG emissions of 7,703.9 Mt CO<sub>2</sub> 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 CO<sub>2</sub> eq.

Table 3

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

<i>Annex B Party</i>	<i>Base year defined under the Kyoto Protocol<sup>a</sup></i>			<i>Base-year emissions<sup>b</sup> (t CO<sub>2</sub> eq)</i>	<i>Emission reduction/ limitation target (% of base-year level)<sup>c</sup></i>	<i>Assigned amount (t CO<sub>2</sub> eq)</i>
	<i>CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O</i>	<i>HFCs, PFCs and SF<sub>6</sub></i>	<i>NF<sub>3</sub></i>			
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
Belarus <sup>d</sup>	–	–	–	–	–	–
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
European Union <sup>e,f</sup>	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
Kazakhstan	1990	1995	2000	371 295 113	95.0	2 821 842 860
Latvia	1990	1995	1995	26 409 077	80.0	76 633 439
Liechtenstein	1990	1990	1990	231 554	84.0	1 556 044
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

<sup>14</sup> The total includes the emissions of the European Union but excludes the emissions of the individual European Union member States and Iceland in order to avoid double counting.

<sup>15</sup> The total GHG emissions in the base year refers to the total GHG emissions that were used for calculation of the assigned amount pursuant to Article 3, paras. 7 bis, 8 and 8 bis, in the Doha Amendment.



<i>Annex B Party</i>	<i>Base year defined under the Kyoto Protocol<sup>a</sup></i>			<i>Base-year emissions<sup>b</sup> (t CO<sub>2</sub> eq)</i>	<i>Emission reduction/ limitation target (% of base-year level<sup>c</sup>)</i>	<i>Assigned amount (t CO<sub>2</sub> eq)</i>
	<i>CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O</i>	<i>HFCs, PFCs and SF<sub>6</sub></i>	<i>NF<sub>3</sub></i>			
Ukraine	1990	1990	1990	937 954 204	76.0	5 702 761 558
United Kingdom	1990	1995	1995	803 191 325	80.0	2 744 937 332
<b>Total<sup>f</sup></b>				<b>7 857 687 800</b>		<b>51 353 516 145</b>

*Note:* The information in this table is based on the final values available in the initial review reports published as at 19 October 2019, unless stated otherwise (see table footnotes below).

<sup>a</sup> Parties included in Annex I may choose to use 1995 as the base year for total emissions of HFCs, PFCs and SF<sub>6</sub>, and 1995 or 2000 as the base year for emissions of NF<sub>3</sub> in accordance with Article 3, para. 8 and 8 bis, in the Doha Amendment.

<sup>b</sup> Refers to the total base-year GHG emissions used for calculation of 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 CO<sub>2</sub> eq; Denmark, 8,807 t CO<sub>2</sub> eq; European Union, 5,560,495 t CO<sub>2</sub> eq; Ireland, 8,230 t CO<sub>2</sub> eq; Luxembourg, 268,381 t CO<sub>2</sub> eq; Netherlands, 752,270 t CO<sub>2</sub> eq; Portugal, 4,276,759 t CO<sub>2</sub> eq; and United Kingdom of Great Britain and Northern Ireland, 246,048 t CO<sub>2</sub> eq.

<sup>c</sup> 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 European Union and its 28 member States and Iceland agreed to meet their targets jointly in accordance with Article 4 of the Kyoto Protocol.

<sup>d</sup> As at 19 October 2019, Belarus had not submitted its initial report for the second commitment period.

<sup>e</sup> The base year for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O is 1990 for Iceland and all European Union member States, except Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

<sup>f</sup> The assigned amount of the European Union (15,813,089,338 t CO<sub>2</sub> eq) is the difference between (1) the joint assigned amount of the European Union, its member States and Iceland, 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 CO<sub>2</sub> eq), and (2) the sum of the individual assigned amounts of the 28 member States and Iceland (21,791,343,942 t CO<sub>2</sub> eq) determined in line with the terms of the joint fulfilment agreement.

<sup>g</sup> For the base-year emissions, the total includes the base-year emissions of the European Union but does not include the base-year emissions of the individual member States and Iceland in order to avoid double counting. However, for the assigned amounts, the total includes the assigned amount of the European Union, its individual member States and Iceland because the assigned amount of the European Union is the difference between the joint assigned amount and the sum of the individual assigned amounts of the member States and Iceland.

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

17. 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 CO<sub>2</sub> 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 28 European Union member States and Iceland have been calculated under the joint fulfilment agreement of the European Union for meeting commitments under the Kyoto Protocol.

18. For the second commitment period, the total assigned amount of 37<sup>16</sup> Annex B Parties taken together is 51,353,516,145 t CO<sub>2</sub> eq.

## B. Greenhouse gas emissions and removals in 2016 and 2017

19. The aggregated totals for Annex B Parties presented in this section include the emissions of the European Union but exclude the emissions of its individual member States and Iceland in order to avoid double counting. The emissions of Belarus could not be included

<sup>16</sup> The total includes the assigned amount of the European Union, its individual member States and Iceland, but does not include the assigned amount of Belarus, which had not submitted its initial report for the second commitment period of the Kyoto Protocol as at 19 October 2019.

in the totals as it had not submitted its initial report for the second commitment period of the Kyoto Protocol as at 19 October 2019.

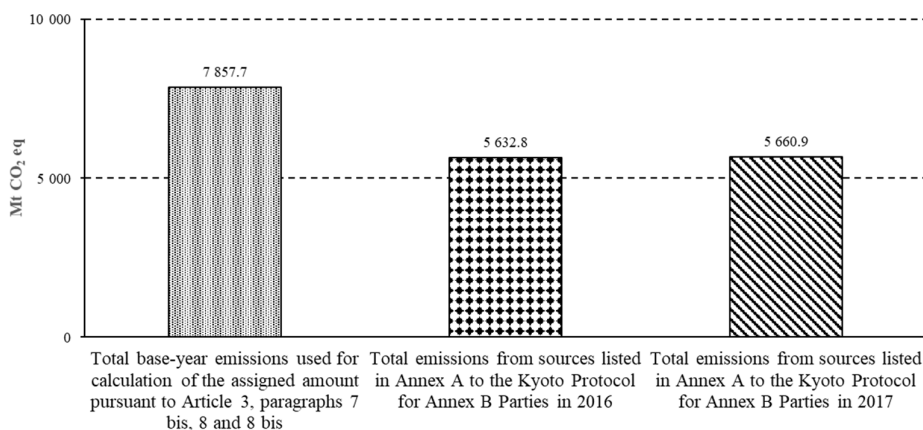
20. The information on GHG emissions provided here includes indirect CO<sub>2</sub> emissions, where reported.

### 1. Emissions from sources listed in Annex A to the Kyoto Protocol in 2016 and 2017

21. 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 2017 amounted to 5,660.9 Mt CO<sub>2</sub> eq. This is 28 per cent lower than the base-year level defined under the Kyoto Protocol and 0.5 per cent higher than the 2016 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 2016 and 2017



Notes: (1) The values for total GHG emissions from sources listed in Annex A to the Kyoto Protocol for Annex B Parties in 2016 and 2017, which are based on information submitted in 2019, are presented here provisionally and may change depending on the outcomes of the ongoing annual reviews; (2) the totals include the emissions of the European Union but not of its individual member States and Iceland; (3) the emissions of Belarus could not be included in the totals as it had not submitted its initial report for the second commitment period of the Kyoto Protocol as at 19 October 2019.

### 2. Difference in the data for 2016 on emissions from Annex A sources between the 2018 and 2019 annual submissions

22. Two sets of data on GHG emissions from sources listed in Annex A to the Kyoto Protocol are considered in this report: the values reported in the 2018 annual submissions, which have been reviewed, where applicable, and the latest available values, reported in the 2019 annual submissions, the review of which is in progress.

23. Total GHG emissions from sources listed in Annex A to the Kyoto Protocol in 2016 reported by Parties in their 2019 annual submissions amounted to 5,632.8 Mt CO<sub>2</sub> eq, which is 0.09 per cent higher than the total reported by Annex B Parties for the same year in their 2018 annual submissions (5,627.6 Mt CO<sub>2</sub> eq). The change is due to recalculations made by Parties in preparing their GHG inventories.

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

24. Of the Parties that had submitted an initial report as at 19 October 2019, 33 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, 34 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-four 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 European Union, for which the periodicity of reporting is determined by its individual member States and Iceland.

Table 4

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

<i>Activity under Article 3, paragraph 4, of the Kyoto Protocol</i>	<i>Number of Parties by type of accounting period elected</i>		
	<i>No accounting</i>	<i>Annual</i>	<i>Entire commitment period</i>
Forest management	0	2	34
Cropland management	27	1	8
Grazing land management	27	1	8
Revegetation	33	0	3
Wetland drainage and rewetting	35	0	1

*Note:* The Party counts do not include the European Union.

25. 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 October 2019, 37 Annex B Parties<sup>17</sup> 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 2019 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 and 4, of the Kyoto Protocol for 2016 and 2017 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 and 4, of the Kyoto Protocol for 2016 and 2017 (provisional values)**

<i>Activity under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</i>	<i>Number of reporting Parties</i>	<i>Net GHG emissions or removals (t CO<sub>2</sub> eq) in 2016</i>	<i>Net GHG emissions or removals (t CO<sub>2</sub> eq) in 2017</i>
<i>Article 3, paragraph 3, activities</i>			
Afforestation and reforestation	32	-89 772 886	-83 626 723
Deforestation	33	75 828 522	66 800 528
<b>Net emissions or removals</b>	<b>33</b>	<b>-13 944 364</b>	<b>-16 826 195</b>
<i>Article 3, paragraph 4, activities</i>			
Forest management	33	-563 955 030	-525 769 347
Cropland management	9	26 385 160	25 848 457
Grazing land management	8	26 212 017	31 244 619
Revegetation	3	-1 870 348	-1 913 513
Wetland drainage and rewetting	0		
<b>Net emissions or removals</b>	<b>33</b>	<b>-513 228 201</b>	<b>-470 589 783</b>

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

<sup>17</sup> As at 19 October 2019, Belarus had not submitted such information.

26. As at 31 December 2018, and pending the entry into force of the Doha Amendment, 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.

**4. Difference in the data for 2016 on emissions and removals from land use, land-use change and forestry activities between the 2018 and 2019 annual submissions**

27. 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 2016: the values reported in the 2018 annual submissions, which have been reviewed, where applicable, and the values reported in the 2019 annual submissions,<sup>18</sup> which are the latest available data, the review of which is in progress.

28. The net GHG emissions and removals from the above-mentioned activities in 2016 reported by 37 Parties in their 2018 annual submissions amounted to  $-497.2$  Mt CO<sub>2</sub> eq. Those net GHG removals are 6.03 per cent higher than reported by the same Annex B Parties<sup>19</sup> for 2016 in their 2019 annual submissions ( $-527.2$  Mt CO<sub>2</sub> eq). The change is due primarily to recalculations made by Parties in preparing their GHG inventories.

**C. Transactions and holdings of Kyoto Protocol units**

29. This section provides a provisional overview<sup>20</sup> 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 2018 for the 36 Annex B Parties that reported their SEF tables with information on Kyoto Protocol units in 2019.

30. In this section, aggregated quantities of Kyoto Protocol units and counts of Parties include the individual member States of the European Union and Iceland but exclude the European Union in order to avoid double counting.

**1. Transactions of Kyoto Protocol units**

31. 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.

32. Between 1 January and 31 December 2018, 14 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. Fourteen Parties, of which eleven are European Union member States, transferred a total quantity of 9.48 million CERs into the voluntary cancellation account. Similarly, two European Union member States transferred a total quantity of 0.5 million ERUs into the voluntary cancellation account.

33. 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 2018.

<sup>18</sup> In its 2018 and 2019 annual submissions, Belarus did not submit information on GHG emissions and removals from LULUCF activities under Article 3, para. 3, forest management under Article 3, para. 4, and, if any elected activities under Article 3, para. 4, of the Kyoto Protocol.

<sup>19</sup> This comparison could not include Belarus as it did not provide information on GHG emissions and removals from LULUCF activities under Article 3, para. 3, forest management under Article 3, para. 4, and, if any elected activities under Article 3, para. 4, of the Kyoto Protocol in its 2018 or 2019 annual submission.

<sup>20</sup> At the time of the preparation of this report, the annual review of the information reported by Annex B Parties in 2019 was in progress.

Table 6  
**Total Kyoto Protocol units acquired or transferred through external transactions between 1 January and 31 December 2018**

Transaction	Kyoto Protocol units (Mt CO <sub>2</sub> eq)						
	AAUs	ERUs	RMUs	CERs <sup>a</sup>	tCERs	ICERs	
Addition	Quantities acquired or forwarded <sup>a</sup>	0	5.34	0	62.82	0.37	0
	Number of Parties involved	0	2	0	18	2	0
Subtraction	Quantities transferred	0	5.34	0	42.94	0	0
	Number of Parties involved	0	2	0	14	0	0

Note: The transaction quantities and Party counts include the European Union member States and Iceland but exclude the European Union in order to avoid double counting.

<sup>a</sup> CERs are forwarded by the clean development mechanism registry.

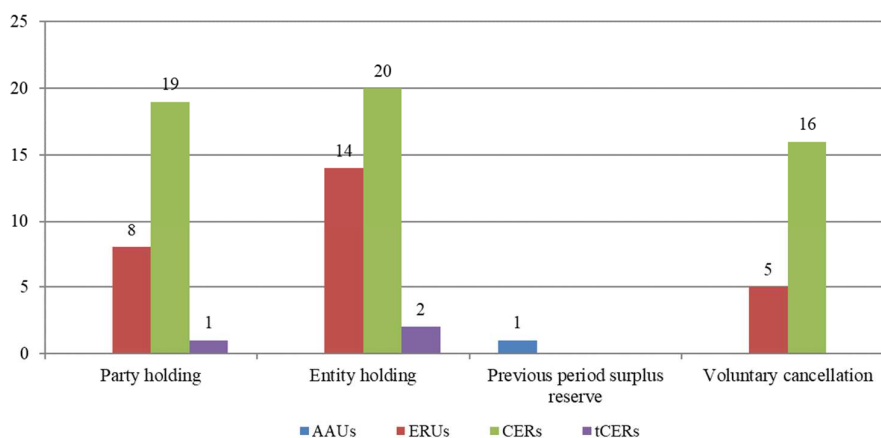
## 2. Holdings of Kyoto Protocol units by holding account type as at 31 December 2018

34. For the Annex B Parties that reported information on Kyoto Protocol units pursuant to decisions 13/CMP.1 and 15/CMP.1, there were 403 million Kyoto Protocol units in their national registries by the end of 2018, comprising 5.79 million AAUs, 163.31 million ERUs, 233.51 million CERs and 0.37 million tCERs in the different holding accounts, including previous period surplus reserve accounts and voluntary cancellation accounts.

35. Figure 2 shows the number of 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 2018 for Annex B Parties<sup>21</sup> are provided in table 7. Table 8 shows the breakdown of the total Kyoto Protocol units by Party.

36. Detailed information on the status of accounts for each Annex B Party can be found in document FCCC/KP/CMP/2019/6/Add.1.

Figure 2  
**Number of Annex B Parties holding Kyoto Protocol units in 2018, by account type**



<sup>21</sup> As at 19 October 2019, Belarus and Kazakhstan had not submitted SEF tables for the second commitment period of the Kyoto Protocol for the period from 1 January to 31 December 2018.

Table 7  
**Total quantities<sup>a</sup> of Kyoto Protocol units by account type for Annex B Parties as at 31 December 2018**  
(Mt CO<sub>2</sub> eq)

<i>Account type</i>	<i>AAUs</i>	<i>ERUs</i>	<i>RMUs</i>	<i>CERs</i>	<i>tCERs</i>	<i>ICERs</i>
Party holding accounts	0	66.12	0	133.49	0.17	0
Entity holding accounts	0	96.66	0	83.93	0.20	0
Retirement account	0	0	0	0	0	0
Previous period surplus reserve account	5.79					
Article 3.3/3.4 net source cancellation accounts	0	0	0	0		
Non-compliance cancellation account	0	0	0	0		
Voluntary cancellation account	0	0.54	0	16.09	0	0
Cancellation account for remaining units after carry-over	0	0	0	0	0	0
Article 3.1 ter and quarter ambition increase cancellation account	0					
Article 3.7 ter cancellation account	0					
tCER cancellation account for expiry					0	
ICER cancellation account for expiry						0
ICER cancellation account for reversal of storage						0
ICER cancellation account for non-submission of certification report						0
tCER replacement account for expiry	0	0	0	0	0	
ICER replacement account for expiry	0	0	0	0		
ICER replacement account for reversal of storage	0	0	0	0		0
ICER replacement account for non-submission of certification report	0	0	0	0		0
<b>Total</b>	<b>5.79</b>	<b>163.31</b>	<b>0</b>	<b>233.51</b>	<b>0.37</b>	<b>0</b>

<sup>a</sup> "Total quantities" refers to the sum of the Kyoto Protocol units in each account type for Annex B Parties, excluding the European Union but including its individual member States and Iceland.

Table 8  
**Total quantities<sup>a</sup> of Kyoto Protocol units by Annex B Party as at 31 December 2018**  
(Mt CO<sub>2</sub> eq)

<i>Annex B Party</i>	<i>AAs</i>	<i>ERUs</i>	<i>RMUs</i>	<i>CERs</i>	<i>tCERs</i>	<i>iCERs</i>
Australia	0	0	0	15.85	0	0
Austria	0	0	0	2.57	0	0
Belarus <sup>b</sup>	–	–	–	–	–	–
Belgium	0	3.27	0	17.16	0	0
Bulgaria	0	0.62	0	0.08	0	0
Croatia	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0
Czechia	0	0	0	0.02	0	0
Denmark	0	0	0	0.30	0	0
Estonia	0	0	0	0	0	0
European Union	0	0	0	112.29	0	0
Finland	0	2.92	0	9.50	0	0
France	0	0	0	0.51	0	0
Germany	0	0.03	0	6.27	0	0
Greece	0	0	0	0	0	0
Hungary	0	3.88	0	5.34	0	0
Iceland	0	0	0	0	0	0
Ireland	0	0.07	0	5.26	0.18	0
Italy	0	1.11	0	4.36	0	0
Kazakhstan <sup>b</sup>	–	–	–	–	–	–
Latvia	0	0.01	0	0.02	0	0
Liechtenstein	0	0	0	0.26	0	0
Lithuania	0	2.33	0	0.25	0	0
Luxembourg	0	0	0	1.48	0	0
Malta	0	0	0	0	0	0
Monaco	0	0	0	0.03	0	0
Netherlands	0	0.01	0	3.79	0	0
Norway	0	0.82	0	22.24	0	0
Poland	0	37.57	0	42.97	0	0
Portugal	0	0	0	0	0	0
Romania	0	17.87	0	8.69	0	0
Slovakia	0	0	0	0	0	0
Slovenia	0	0	0	0	0	0
Spain	0	2.17	0	17.73	0.20	0
Sweden	0	0	0	14.67	0	0
Switzerland	5.79	0	0	28.25	0	0
Ukraine	0	0	0	0	0	0
United Kingdom	0	90.64	0	25.94	0	0

<sup>a</sup> “Total quantities” refers to the sum of the Kyoto Protocol units in each account type for each Annex B Party.

<sup>b</sup> Had not submitted SEF tables for 2018 as at 19 October 2019.