

**United Nations
Environment
Programme**Distr.
GENERAL

UNEP/OzL.Pro/ExCom/96/5

24 April 2025

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-sixth Meeting
Montreal, 26-30 May 2025
Item 5 of the provisional agenda¹

COUNTRY PROGRAMME DATA AND PROSPECTS FOR COMPLIANCE**Introduction**

1. A total of 147 countries are classified as Article 5 (A5) Parties, including the Republic of Korea, Singapore, and the United Arab Emirates. These three countries² have been urged not to request funding from the Multilateral Fund for the phase-out of their consumption and production (where applicable) of controlled substances and, therefore, are not required to submit the mandatory progress report on the implementation of their country programme (CP).³ However, data on the consumption and production of controlled substances from these three countries is included in some parts of the document to ensure a global analysis of Ozone-Depleting Substances (ODS) production and consumption trends.

2. Parties are encouraged to submit annually their Article 7 (A7) data by 30 June, and no later than 30 September (decision XV/15). In addition, A5 Parties are required to submit CP data eight weeks prior to the first meeting of the year of the Executive Committee, if possible, and no later than 1 May (decision 74/9(b)(iv)). The new online CP data reporting system was officially launched on 1 January 2025. In December 2024, the Secretariat provided access credentials to all Article 5 countries. As of the writing of this document, the new reporting system had been used by 38 countries, of which 16 had officially submitted their 2024 data through the system.

3. Table 1 summarizes data reports submitted by A5 Parties between 2014 and 2024. As of 8 April 2025, the countries that submitted requests for funding to the 96th meeting but not 2024 CP data are Angola, Armenia, Bangladesh, Barbados, Belize, Bosnia and Herzegovina, Botswana, Brazil, Cameroon, the Central African Republic, Chile, Cuba, Dominica, El Salvador, Ethiopia, Fiji, Ghana, Grenada, Guatemala, Haiti, Honduras, Indonesia, the Islamic Republic of Iran, Iraq, Kuwait, Liberia, Libya, Mexico,

¹ UNEP/OzL.Pro/ExCom/96/1

² The aggregated HCFC baseline for compliance for the three countries amounts to 2,681.2 ODP tonnes. In addition, the Republic of Korea produces HCFC-22 with a baseline of 395.1 ODP tonnes.

³ CP data reports represent the sole source of information on the sector distribution of controlled substances in A5 countries.

Morocco, Namibia, North Macedonia, Oman, Papua New Guinea, the Philippines, the Republic of Moldova, Rwanda, Saint Kitts and Nevis, South Africa, Sri Lanka, Suriname, Thailand, Türkiye, Turkmenistan, and the United Republic of Tanzania.

Table 1. A7 and CP data reports submitted by A5 Parties

Data	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
A7 (as of 3 April 2025)	147	147	147	147	147	147	147	147	147	145	9
CP (as of 8 April 2025)	144*	144	144	144	144	144	144	144	144	143	16

* Excluding Croatia, which became a non-Article 5 country in 2014.

4. The present document consists of the following sections:

- I. Status of and prospects for compliance of A5 countries: This section presents a summary of the status of licensing and quota systems, and the results of the analysis of the status of compliance with the final phase-out of CFCs, halons, carbon tetrachloride (CTC), methyl bromide (MB) and methyl chloroform (TCA); the 2013 freeze, the 10 per cent reduction by 2015 and the 35 per cent reduction of HCFCs by 2020 in the consumption and production sectors; and the 2024 freeze of HFCs in the consumption and production sectors. It assumes that the latest consumption reported under A7 or CP data reports has taken into account the phase-out from completed projects.⁴
- II. A5 countries subject to decisions on compliance by the Parties
- III. Analysis on the CP implementation reports for HCFCs⁵ and HFCs: This section presents an analysis on the data contained in CP data reports. Regarding HCFCs, it includes HCFC production versus consumption and sector distribution of HCFCs; on HFCs, it includes sector distribution of HFCs. This section also provides information on prices of controlled substances and alternative substances. As of 8 April 2025, only 16 CP data reports for 2024 have been submitted. Therefore, this section presents an analysis on consumption data contained in the CP data reports up to 2023.⁶
- IV. Issues related to CP implementation reports
- V. Revised format of sections D and E of country programme data reports
- VI. Recommendation

I. Status of and prospects for compliance of A5 countries

I.1 Production and consumption

5. The complete phase-out of production and consumption of CFCs, halons, CTC for all A5 countries occurred on 1 January 2010, except for CFC consumption in metered-dose inhalers and CTC consumption in laboratory and analytical use. The complete phase-out of production and consumption of MB and TCA occurred on 1 January 2015, except for those countries where critical uses for MB were approved by the

⁴ As of December 2023, completed projects had phased out 292,081 ODP tonnes of consumption and 204,189 ODP tonnes of production. The completed projects were valued at US \$3.26 billion out of an approved total of approximately US \$3.8 billion.

⁵ The Executive Committee requested the Secretariat to assess the HCFC compliance requirements for all A5 countries in the document Status reports and compliance, to serve as a guide for preparation of the business plan of the Multilateral Fund (decision 67/6(c)).

⁶ The analysis in documents UNEP/OzL.Pro/ExCom/95/8 and Add.1 was also based on data reported for 2023.

Parties. Therefore, Annex C Group I (HCFCs) substances and Annex F are the only substances under the Montreal Protocol where consumption and production are still allowed.

A. Production sector

6. MB is produced in one A5 country (China).⁷ An MB production closure phase-out plan was approved providing for the country to produce at levels lower than those allowed under the Montreal Protocol.⁸ In 2023, no such production was reported under A7.

7. There are seven A5 countries that produced HCFCs. The levels of the three main HCFCs produced (i.e., HCFC-22, HCFC-141b, HCFC-142b) are shown in table 2. The aggregated latest production for controlled uses was 60 per cent below the aggregated production baseline.

Table 2. Production for controlled uses of the three main HCFCs (A7, ODP tonnes)

Country	2015	2016	2017	2018	2019	2020	2021	2022	2023	Baseline
HCFC-22										
Argentina	134.5	95.8	100.3	65.6	88.3	66.3	56.6	72.1	91.8	224.6
China	13,391.0	14,086.3	13,445.7	13,636.4	13,598.2	11,042.2	10,011.8	11,155.9	9,730.6	29,122.0*
Democratic People's Republic of Korea (the)	27.4	24.8	24.8	24.8	27.0	27.0	24.8	24.8	**	27.6
India	1,727.6	1,665.5	1,789.5	1,936.4	1,937.0	1,354.8	1,156.2	942.0	1,218.3	2,399.5
Mexico	160.9	166.8	190.1	183.8	134.8	56.7	138.4	217.4	147.2	697.0
Republic of Korea (the)	348.9	240.3	305.6	289.9	271.5	254.3	221.0	199.6	167.2	395.1
Venezuela (Bolivarian Republic of)	37.2	14.3	15.0	1.9	0.0	0.0	0.0	0.0	0.0	123.1
Total HCFC-22	15,827.6	16,293.8	15,871.0	16,138.7	16,056.7	12,801.3	11,608.7	12,611.8	11,355.2	32,988.9
HCFC-141b										
China	7,246.5	7,278.2	7,076.8	6,321.1	6,101.6	4,623.3	3,545.1	3,850.4	1,770.8	*
HCFC-142b										
China	1,224.3	1,110.5	1,115.5	756.3	816.0	418.3	472.3	126.7	185.5	*
Total	24,298.4	24,682.6	24,063.3	23,216.1	22,974.3	17,842.9	15,626.2	16,588.9	13,311.5	32,988.9

* The HCFC production baseline is 29,122 ODP tonnes and includes all HCFCs produced by China, mainly HCFC-22, HCFC-141b and HCFC-142b, and to a lesser extent HCFC-123 and HCFC-124.

** As of 3 April 2025, A7 data for the Democratic People's Republic of Korea had not been submitted.

8. An HCFC production phase-out management plan (HPPMP) was approved for one country (China).⁹

9. One A5 country, the Democratic People's Republic of Korea, has reported 24.79 ODP tonnes of HCFC production for the year 2022, which is below the production target set in the plan of action in decision XXXII/6 of the Parties. At their Thirty-Sixth Meeting, the Parties noted with concern that the Democratic People's Republic of Korea did not strictly adhere to its commitments for 2021, as set out in its plan of action to return to compliance contained in decision XXXII/6, and that the Party was in non-compliance with control measures for 2021. Despite several requests by the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol in its recommendations 68/4, 69/4, 70/2 and 72/3 and repeated reminders by the Ozone Secretariat, the Party has not yet provided an explanation for the deviations and has not submitted a revised plan of action, if appropriate, to ensure its return to compliance with the control measures of the Montreal Protocol for HCFCs in 2023, along with a progress report on the establishment of additional national policies facilitating the phase-out of HCFCs that

⁷ The Democratic People's Republic of Korea reported production of MB only in 1991 and 1995.

⁸ The Agreement between the Government of China and the Executive Committee allows for the production of MB for QPS applications, feedstock and critical uses approved by the Parties (decision 47/54). The implementation of the China MB production sector was completed by 31 December 2021.

⁹ Stage II of the HPPMP for China was approved at the 86th meeting. The Agreement was approved at the 87th meeting.

might include, but would not be limited to, bans on imports, on production or on new installations, along with certification of refrigeration technicians and companies, as set out in its plan of action to return to compliance contained in decision XXXII/6.

10. In addition, the Democratic People's Republic of Korea has not reported its 2023 data as required under A7, paragraph 3, of the Montreal Protocol, and this places the Party in non-compliance with its 2023 data reporting obligations under the Montreal Protocol until such time as the Ozone Secretariat receives its outstanding data, as is also noted in paragraph 3 of decision XXXVI/13. The Parties subsequently decided, *inter alia*, to urge the Democratic People's Republic of Korea to provide an explanation for the deviations, together with A7 data for 2023, as a matter of urgency, and by no later than 31 March 2025, and, if appropriate, to submit a revised plan of action to ensure its return to compliance with the control measures of the Montreal Protocol for HCFCs in 2023, for consideration by the Implementation Committee at its 74th meeting (decision XXXVI/16).

11. As of 3 April 2025, A7 data on HFC production was available for four HFC producing countries, as shown in table 3.

Table 3. Production of HFCs (A7, CO₂-equivalent (CO₂-eq) tonnes)

Country	2019	2020	2021	2022	2023	Baseline
China		1,212,188,514	1,427,291,523	1,581,392,661	1,471,784,754	1,852,528,591
Democratic People's Republic of Korea (the)	430,430	496,210	510,510	531,960	*	1,102,320
India			40,516,755	58,175,796	62,993,108	
Republic of Korea (the)		3,485,675	3,487,995	3,644,621	2,769,080	11,991,777

*As of 3 April 2025, A7 data for the Democratic People's Republic of Korea had not been submitted.

B. Consumption sector

CFCs, halons, CTC, MB and TCA

12. All A5 countries have reported zero consumption of CFCs, halons, MB and TCA in 2022, 2023 or 2024.

13. Only two A5 countries have reported 2023 CTC consumption for laboratory and analytical-use (China (109.4 ODP tonnes) and the Republic of Korea (0.2 ODP tonnes)). Although the consumption was above the 2010 Montreal Protocol compliance target, the Parties have extended the global laboratory and analytical-use exemption indefinitely beyond 2021, without prejudice to the Parties deciding to review the exemption at a future meeting (decision XXXI/5).

14. Thirty-two A5 countries reported MB consumption and two A5 countries reported MB production for quarantine and pre-shipment (QPS) applications under A7 data, as shown in annex I to the present document. The consumption for these applications is not eligible for funding.

HCFCs

15. A total of 147 A5 countries have an established HCFC baseline for compliance, with an aggregated latest consumption level of 12,965 ODP tonnes (220,875 metric tonnes), as shown in table 4. The three main HCFCs are: HCFC-22 (85.1 per cent of the total consumption measured in ODP tonnes), HCFC-141b (13 per cent) and HCFC-142b (1.6 per cent).

Table 4. Baseline and latest (2022, 2023 or 2024) HCFC consumption data by type of HCFC (A7 data)

HCFC	Baseline		Consumption*		% of baseline
	Metric tonnes	ODP tonnes	Metric tonnes	ODP tonnes	
HCFC-123	2,337.0	46.7	1,658.8	33.2	71.0
HCFC-124	1,270.7	28.0	10.7	0.2	0.8
HCFC-141b	107,871.6	11,865.9	15,341.0	1,687.5	14.2
HCFC-142b	33,195.5	2,157.7	3,177.3	206.5	9.6
HCFC-22	394,504.8	21,697.8	200,676.6	11,037.2	50.9
HCFC-225	30.4	2.1	10.1	0.7	33.2
HCFC-225ca	70.0	1.8	0.0	0.0	0.0
HCFC-225cb	20.9	0.7	0.0	0.0	0.0
Total	539,300.9	35,800.6	220,874.6	12,965.4	36.2

* Including Republic of Korea (778.1 ODP tonnes), Singapore (19.5 ODP tonnes) and the United Arab Emirates (359.0 ODP tonnes).

16. One A5 country, the Democratic People's Republic of Korea, has reported HCFC consumption above the 2020 Montreal Protocol compliance target. The country has reported 2022 consumption of 57.84 ODP tonnes, which is below the consumption target set in the plan of action in decision XXXII/6 of the Parties. As previously explained in paragraphs 9 and 10, at their Thirty-Sixth Meeting, the Parties decided, *inter alia*, to urge the Democratic People's Republic of Korea to provide an explanation for the deviations, together with A7 data for 2023, as a matter of urgency, and by no later than 31 March 2025, and, if appropriate, to submit a revised plan of action to ensure its return to compliance with the control measures of the Montreal Protocol for HCFCs in 2023, for consideration by the Implementation Committee at its 74th meeting (decision XXXVI/16).

HCFC phase-out management plans

17. All 145 countries have received financial assistance for the preparation of project proposals to phase out HCFCs. As a result, as of the 95th meeting, the Executive Committee has approved stage I of the HPMPs for 145¹⁰ countries,¹¹ stage II for 120 countries and stage III for 20 countries, at a total value of US \$1.34 billion (approved in principle) of which US \$1.14 billion has been disbursed to address compliance with the Montreal Protocol control levels as follows:

- (a) Nine countries (eight low-volume-consuming (LVC) and one non-LVC countries), to address compliance up to 2020;
- (b) Twenty-five countries to address compliance up to 2025 or 2027; and
- (c) One hundred and seven countries¹² to completely phase out HCFCs between 2020 and 2031.

¹⁰ Including Croatia, which became a non-Article 5 country in 2014.

¹¹ For various reasons, stage I of the HPMPs for three countries (Antigua and Barbuda, the Central African Republic and Yemen) were cancelled at the 82nd meeting and stage I of the HPMP for Haiti was cancelled at the 95th meeting.

¹² Algeria, the Bahamas, Barbados, Belize, Benin, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cabo Verde, Cambodia, Chad, Chile, Colombia, the Comoros, the Congo, the Cook Islands, Costa Rica, Cote d'Ivoire, Croatia (which became a non-Article 5 country in 2014, and completely phased out HCFCs by 2015), Cuba, the Democratic Republic of the Congo, the Dominican Republic, Ecuador, El Salvador, Eritrea, Eswatini, Ethiopia, Fiji, Gabon, the Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Honduras, India, Indonesia, Jamaica, Jordan, Kenya, Kiribati, Kyrgyzstan, the Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, the Marshall Islands, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Mozambique, Namibia, Nauru, Nepal, Nicaragua, the Niger, Niue, North Macedonia, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, the Philippines, the Republic of Moldova, Rwanda, Saint Lucia,

18. Annex II to the present document includes an analysis of the latest reported HCFC consumption data and control measures addressed by approved HPMPs.

Remaining HCFCs

19. Implementation of approved stages I, II and III of the HPMPs will result in the phase-out of approximately 84 per cent of the starting point for aggregate reduction of HCFC consumption and 96 per cent of the consumption of HCFC-141b contained in imported pre-blended polyols. Table 5 shows the aggregate remaining HCFC consumption¹³ by type of HCFCs in A5 countries that are receiving assistance from the Fund.

Table 5. Total remaining HCFC consumption by substance (ODP tonnes)*

HCFC	Baseline	Starting point	Approved	Remaining	% of approved
HCFC-123	31.90	30.21	23.09	7.09	76.43
HCFC-124	26.42	26.14	23.12	3.04	88.45
HCFC-141	0.94	0.94	0.94	0.00	100.00
HCFC-141b	10,668.24	10,674.76	10,644.06	30.41	99.71
HCFC-142b	2,000.80	2,016.80	1,525.67	489.38	75.65
HCFC-21	0.74	0.74	0.74	0.00	100.00
HCFC-22	20,424.65	19,884.85	15,223.04	4,661.08	76.56
HCFC-225	2.82	2.82	1.53	1.29	54.26
HCFC-225ca	0.42	0.42	0.00	0.42	0.00
HCFC-225cb	0.68	0.68	0.00	0.68	0.00
Total	33,157.61	32,638.36	27,442.19	5,193.39	84.08
HCFC-141b polyol**	0.00	657.00	631.06	19.38	96.05

* As of the 95th meeting.

** HCFC-141b contained in imported pre-blended polyols.

HFCs

20. Of the 147 A5 countries, 120 countries have established HFC baselines. One hundred and thirteen of the 120 Article 5 countries have ratified the Kigali Amendment.¹⁴ Annex III to the present document includes an analysis of the 2023 or 2024 reported HFC consumption data (A7 or CP data) and provides the control measures addressed by approved Kigali HFC implementation plans (KIPs). As of the 95th meeting, the Executive Committee has approved stage I of the KIPs for 65 countries.¹⁵

21. Of the 117 countries that have established HFC baselines and have reported 2023 or 2024 A7 or CP data, 28 countries reported consumption levels that are greater than their baseline levels (26 countries for 2023 and two countries for 2024). Eighteen of these 28 countries have approved stage I of KIPs, three

Saint Vincent and the Grenadines, Samoa, Saudi Arabia, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, Sri Lanka, the Sudan, Suriname, Togo, Tonga, Trinidad and Tobago, Türkiye, Tuvalu, Uganda, the United Republic of Tanzania, Uruguay, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Zambia, and Zimbabwe.

¹³ The remaining HCFC consumption eligible for funding depends on the starting point for aggregate reductions in HCFC consumption selected by each A5 country in their HPMP.

¹⁴ Seven countries have established baselines but have not ratified the Kigali Amendment.

¹⁵ Albania, Armenia, Benin, Bolivia (Plurinational State of), Burkina Faso, Cambodia, Cameroon, Chad, Chile, Colombia, the Congo, the Cook Islands, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Eswatini, the Gambia, Ghana, Grenada, Guatemala, Honduras, Jordan, Kiribati, Kyrgyzstan, the Lao People's Democratic Republic, Lesotho, Liberia, Malawi, Malaysia, the Marshall Islands, Mauritius, Mexico, Micronesia (Federated States of), Montenegro, Mozambique, Nauru, Nicaragua, the Niger, Nigeria, Niue, North Macedonia, Palau, Panama, Paraguay, Peru, Rwanda, Saint Lucia, Samoa, Senegal, Seychelles, Sierra Leone, Solomon Islands, Togo, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Turkmenistan, Tuvalu, Uruguay, Vanuatu, Viet Nam, and Zimbabwe.

countries have submitted stage I of KIPs to the 96th meeting, six countries have KIP preparation projects already approved, and one country has a KIP preparation project included in the 2025-2027 business plan.

22. Two countries have requested for exemption for high-ambient-temperature (HAT) as per the Ozone Secretariat namely, Eritrea and Guinea-Bissau.¹⁶

23. At their Thirty-Fifth Meeting, through decision XXXV/16, the Parties acknowledged that eight countries namely, Botswana, Cuba, Mauritius, Mongolia, the Republic of Moldova, Rwanda, Saint Lucia and Turkmenistan have experienced demonstrated reductions in their respective levels of consumption of HFCs during the years 2020–2022, as compared to 2018–2019, and are expected to have calculated levels of consumption of HFCs in 2024 that exceed their respective calculated baselines; these eight countries have expressed concern in writing to the Ozone Secretariat regarding the impact of the COVID-19 pandemic on their baselines.

24. The Parties also agreed that the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol should defer, until 2026 data becomes available, any consideration of the compliance status with regard to control measures for consumption of Annex F substances, for any of the eight countries listed in paragraph 23, on the understanding that the country will continue to make every effort to comply with these control measures, and urged the countries that have not already done so to submit expeditiously their respective KIPs for consideration by the Executive Committee.

25. Of these eight countries, the Executive Committee approved stage I of the KIPs for Cuba, Mauritius, Rwanda, Saint Lucia, and Turkmenistan noting that, if their respective HFC consumption levels for the years 2024 or 2025 were above the Montreal Protocol control limits or the maximum allowable consumption in the future Agreement between the respective Government and the Executive Committee, on the understanding that the respective Government would continue to make every effort to meet those control limits, the Secretariat would inform and seek guidance from the Executive Committee on the procedure to follow in light of decision XXXV/16. The Republic of Moldova has submitted stage I of its KIP to the 96th meeting.

I.2 Licensing and quota systems

26. All A5 countries have established licensing systems pursuant to Article 4B of the Montreal Protocol and had confirmed that an enforceable national system capable of ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule is in place. One hundred and thirteen of the 120 A5 countries¹⁷ that have ratified the Kigali Amendment¹⁸ have established an HFC licensing system.

II. A5 countries subject to decisions on compliance by the Parties

27. One Party, the Democratic People's Republic of Korea, is subject to decision XXXVI/16 of the Parties as explained in paragraphs 9, 10 and 16 above.

¹⁶ Six countries (Benin, Chad, Egypt, the Gambia, Nigeria, and Senegal) withdrew their requests to use the HAT exemption in accordance with paragraph 29 of decision XXVIII/2.

¹⁷ Of the 120 countries that have ratified the Kigali Amendment, seven countries have not established HFC baselines.

¹⁸ As of 12 November 2024

III. Analysis on the CP implementation reports for HCFCs and HFCs

Key messages from the CP data analysis

- In 2023, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were first the refrigeration servicing, second the refrigeration manufacturing sector and third, the foam sector.
- Significant decrease in consumption and production of HCFCs in 2020, 2021, 2022 and 2023; this reduction is due to a combination of the control measure for HCFCs in 2020, HCFC phase-out project implementation and challenges affecting business activities as a result of the COVID-19 pandemic.
- As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more prevalent, though the consumption is decreasing over time.
- 120 A5 countries reported HFC CP data for 2023.
- R-410A, HFC-134a, R-507A, R-404A, HFC-227ea, HFC-32 and HFC-23 (use) account for 93.6% of the total consumption in CO₂-eq tonnes; refrigeration servicing accounts for 35.5%, refrigeration manufacturing – refrigeration 24.7%, and refrigeration manufacturing – AC 20.7%.
- Most consumed HFCs including blends in 2023 were R-404A, HFC-134a, R-410A, R-507A, R-407C and R-407A for LVC countries, and R-410A, HFC-134a, R-507A, R-404A, HFC-227ea, and HFC-32 for non-LVC countries.¹⁹ There is an increase in consumption of HFC blends like R-417A, R-417B, R-437A that are used as retrofits due to the decrease in availability of HCFC-22 for servicing, higher costs of HCFC-22 and substitution of high-global-warming-potential HFCs in commercial refrigeration.

III.1 HCFC data

A. HCFC production versus consumption

28. Since 2013, the reported levels of the three main HCFCs produced in A5 countries have been above the levels of consumption except for HCFC-142b in 2022 and 2023, as shown in table 6. The data reported shows a significant decrease in consumption and production in 2020, 2021, 2022 and 2023 and this is primarily due to the reduction required to achieve the 2020 controlled targets, implementation of HCFC phase-out activities and the challenges related to the COVID-19 pandemic. The production and consumption in 2022 have experienced growth at an overall level mainly due to post-COVID-19 recovery of business activities.

Table 6. HCFC production versus consumption of the three main HCFCs (ODP tonnes)

HCFC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Production											
HCFC-22	18,769.0	19,816.3	16,782.6	16,191.2	15,725.9	16,061.3	15,959.3	12,583.5	11,405.5	12,415.3	11,187.4
HCFC-141b	9,583.6	9,560.2	7,246.5	7,278.2	7,076.8	6,321.1	6,101.6	4,623.3	3,545.1	3,850.4	1,770.8
HCFC-142b	1,102.0	1,076.8	1,224.3	1,110.5	1,115.5	756.3	816.0	418.3	472.3	126.7	185.5
Consumption											
HCFC-22	17,817.0	17,399.4	15,289.4	15,497.6	15,182.9	15,197.3	14,975.2	11,999.4	11,337.6	11,890.9	10,203.5
HCFC-141b	8,981.3	8,348.3	6,772.5	6,384.9	6,312.2	5,736.0	5,534.3	3,701.1	3,135.2	3,402.2	1,328.3
HCFC-142b	1,014.5	761.0	890.8	726.2	774.3	430.1	486.7	179.9	318.6	131.9	188.6
Production – consumption											
HCFC-22	952.0	2,416.9	1,493.2	693.6	543.0	864.0	984.1	584.1	67.9	524.4	983.9
HCFC-141b	602.3	1,211.9	474.0	893.3	764.6	585.1	567.3	922.2	409.9	448.2	442.5
HCFC-142b	87.5	315.8	333.5	384.3	341.2	326.2	329.3	238.4	153.7	(5.2)	(3.1)

¹⁹ LVC and non-LVC classification is based on HCFC baseline.

B. Sector distribution of HCFC consumption

29. Table 7 presents the sector distribution of aggregated HCFC consumption for the period 2013 to 2023, where countries are grouped as follows: China, as the largest consumer (and producer) of HCFCs; the 14 largest consuming countries (excluding China);²⁰ and all other countries.

30. In 2023, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were the refrigeration servicing (57 per cent of the total), the refrigeration manufacturing (25.4 per cent), and the foam sectors (16.2 per cent). As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more relevant, though the consumption is decreasing over time.

Table 7. Sector distribution of HCFC consumption by group of countries (ODP tonnes)

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2023 (% of total)
China												
Aerosol	137.8	186.2	180.4	189.4		154.0	163.7					0.0
Foam	7,473.9	7,404.0	5,522.7	5,872.8	6,220.8	5,679.4	5,669.2	4,241.9	3,822.8	4,140.0	1,656.5	13.9
Firefighting												0.0
Refrigeration manufacturing	6,014.3	5,602.0	4,951.7	5,107.1	5,106.2	4,856.9	4,746.9	3,149.4	3,040.0	3,177.5	2,708.6	22.8
Refrigeration servicing	3,103.8	3,161.7	2,412.0	2,638.3	2,881.4	3,316.8	3,258.3	2,984.4	2,990.4	2,984.8	2,874.7	24.2
Solvent	466.0	484.8	418.5	413.4	397.0	375.1	385.0	308.0	275.0	275.0	121.0	1.0
Total for China	17,195.8	16,838.7	13,485.3	14,221.1	14,605.4	14,382.3	14,223.2	10,683.7	10,128.2	10,577.3	7,360.9	62.0
14 largest A5 consuming countries*												
Aerosol	123.8	19.3	87.3	42.4	5.5	26.9	7.8	1.1	2.6	3.0	4.8	0.0
Foam	2,645.6	2,153.0	2,077.0	1,572.7	1,501.9	1,275.5	1,058.7	335.2	271.1	191.5	102.8	0.9
Firefighting	5.4	4.0	4.0	4.2	4.9	2.3	2.9	2.0	2.4	2.5	1.8	0.0
Refrigeration manufacturing	2,233.7	1,932.1	1,862.6	1,473.8	1,291.6	1,238.6	1,010.0	784.4	596.4	577.4	283.5	2.4
Refrigeration servicing	3,029.3	3,008.3	3,148.6	3,262.9	2,805.0	2,615.0	2,836.1	2,532.8	2,442.0	2,699.0	2,681.1	22.6
Solvent	43.3	38.5	37.1	29.6	53.9	57.5	63.7	75.1	53.1	90.9	44.8	0.4
Total 14 largest consuming countries	8,081.1	7,155.3	7,216.7	6,385.6	5,662.8	5,215.8	4,979.1	3,730.6	3,367.6	3,564.3	3,118.8	26.3
129 remaining A5 countries												
Aerosol	0.7	0.4	0.3	0.1	0.5							0.0
Foam	963.2	916.0	869.0	826.9	731.2	497.5	476.6	393.1	237.0	180.1	162.8	1.4
Firefighting	8.6	11.2	14.0	11.1	7.7	3.2	4.4	1.4	1.9	0.7	1.5	0.0
Refrigeration manufacturing	314.3	290.2	248.9	236.1	217.3	179.0	180.1	97.7	73.4	64.2	21.9	0.2
Refrigeration servicing	1,995.8	2,011.0	1,861.3	1,695.9	1,608.3	1,557.1	1,530.7	1,337.3	1,218.8	1,205.1	1,212.6	10.2
Solvent	5.2	3.5	4.9	5.1	3.1	3.2	3.3	0.9	0.7	3.1	1.6	0.0
Total 129 remaining A5 countries	3,287.7	3,232.3	2,998.3	2,775.3	2,568.1	2,240.0	2,195.1	1,830.4	1,531.8	1,453.2	1,400.3	11.8
All A5 countries												
Aerosol	262.2	205.9	268.0	232.0	6.0	180.9	171.5	1.1	2.6	3.0	4.8	0.0
Foam	11,082.6	10,473.0	8,468.7	8,272.4	8,453.8	7,452.5	7,204.5	4,970.1	4,330.9	4,511.6	1,922.0	16.2
Firefighting	14.1	15.2	18.0	15.2	12.6	5.6	7.3	3.4	4.3	3.2	3.3	0.0
Refrigeration manufacturing	8,562.2	7,824.3	7,063.2	6,817.0	6,615.1	6,274.4	5,937.1	4,031.6	3,709.8	3,819.1	3,014.0	25.4

²⁰ Argentina, Brazil, Egypt, India, Indonesia, Iran (Islamic Republic of), Kuwait, Malaysia, Mexico, Nigeria, Saudi Arabia, South Africa, Thailand, and Türkiye.

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2023 (% of total)
Refrigeration servicing	8,128.9	8,181.0	7,422.0	7,597.1	7,294.7	7,488.9	7,625.1	6,854.5	6,651.2	6,888.8	6,769.3	57.0
Solvent	514.5	526.9	460.4	448.2	454.0	435.8	451.9	384.0	328.8	369.1	167.4	1.4
Total all A5 countries	28,564.6	27,226.3	23,700.4	23,382.0	22,836.3	21,838.1	21,397.4	16,244.7	15,027.6	15,594.8	11,880.9	100.0
% of total for China	60.2	61.8	56.9	60.8	64.0	65.9	66.5	65.8	67.4	67.8	62.0	
% of total for 14 largest A5 consuming countries	28.3	26.3	30.4	27.3	24.8	23.9	23.3	23.0	22.4	22.9	26.3	
% of total for 129 remaining A5 countries	11.5	11.9	12.7	11.9	11.2	10.3	10.3	11.3	10.2	9.3	11.8	

*Argentina, Brazil, Egypt, India, Indonesia, Iran (Islamic Republic of), Kuwait, Malaysia, Mexico, Nigeria, Saudi Arabia, South Africa, Thailand, and Türkiye.

31. The sector distribution of the three main HCFCs consumed in A5 countries is presented in table 8. The analysis shows a sustained reduction in the overall consumption of these substances.

Table 8. Sector distribution of the main HCFCs consumed in A5 countries (ODP tonnes)

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
HCFC-22											
Aerosol	116.4	129.5	134.2	132.0	0.3****	102.3	91.1		0.1	0.0	0.0
Foam*	1,805.6	1,731.9	1,177.3	1,518.5	1,687.2	1,682.3	1,616.4	1,328.6	1,203.5	1,335.6	611.3
Firefighting											
Refrigeration manufacturing	8,012.7	7,518.0	6,747.4	6,590.5	6,330.0	5,999.3	5,760.2	3,891.5	3,654.7	3,764.7	2,975.3
Refrigeration servicing	7,882.3	8,019.8	7,229.8	7,256.1	7,164.9	7,413.1	7,507.1	6,779.2	6,479.2	6,790.4	6,616.7
Solvent		0.3	0.7	0.6	0.4	0.4	0.4	0.1	0.1	0.1	0.2
Total HCFC-22	17,817.0	17,399.4	15,289.4	15,497.6	15,182.9	15,197.3	14,975.2	11,999.4	11,337.6	11,890.9	10,203.5
HCFC-141b											
Aerosol	145.8	76.4	132.0	99.9	5.7****	78.7	80.4	1.1	2.5	2.9	4.8
Foam	7,712.9	7,394.0	5,828.1	5,522.9	5,547.5	4,943.4	4,816.1	3,168.2	2,740.1	2,968.6	1,073.6
Firefighting	6.7	7.6	9.3	5.2	6.3	1.8	3.0	0.7			
Refrigeration manufacturing**	529.6	282.9	294.2	204.8	264.9	255.8	159.7	125.6	40.0	39.2	25.0
Refrigeration servicing	75.7	66.5	54.6	108.8	37.1	26.4	28.0	21.9	23.9	22.5	57.7
Solvent	510.6	521.0	454.4	443.3	450.8	430.0	447.2	383.6	328.7	369.0	167.2
Total HCFC-141b	8,981.3	8,348.3	6,772.5	6,384.9	6,312.2	5,736.0	5,534.3	3,701.1	3,135.2	3,402.2	1,328.3
HCFC-142b											
Aerosol	0.0	0.0	1.8	0.0	0.0						
Foam***	863.7	686.2	773.8	608.3	701.0	398.5	412.3	134.7	179.0	68.3	100.2
Firefighting											
Refrigeration manufacturing	6.5	8.0	7.2	6.9	6.1	5.9	5.9	4.2	4.2	4.3	4.2
Refrigeration servicing	144.4	66.7	107.9	110.9	67.3	25.7	68.5	41.0	135.4	59.3	84.2
Solvent											
Total HCFC-142b	1,014.5	761.0	890.8	726.2	774.3	430.1	486.7	179.9	318.6	131.9	188.6
Other HCFCs	751.7	717.6	747.8	773.3	566.8	474.7	401.2	364.2	236.2	169.8	160.5
Total	28,564.6	27,226.3	23,700.4	23,382.0	22,836.3	21,838.1	21,397.4	16,244.7	15,027.6	15,594.8	11,880.9

* Used as co-blowing agent.

** Used for insulation of refrigeration equipment.

*** Used for the production of extruded polystyrene foam.

**** The steep reduction between 2016 and 2017 is due to reduction of consumption in one country (China).

III.2 HFC data

32. The present section presents an analysis of the HFC consumption reported by the 120 A5 countries under their CP data reports for 2023. Of the 143 countries which submitted 2023 CP data as of 8 April 2025, 116 countries have ratified the Kigali Amendment. Only 109 of the 116 countries have provided HFC data in their 2023 CP reports on time for this analysis. In addition, 11 countries that have not ratified the Kigali Amendment have provided HFC data in their 2023 CP reports.

33. The sector distribution of aggregated HFC consumption for the 120 countries that have submitted 2023 CP data is presented in table 9. Of these 120 countries,²¹ 79 are LVC countries and they account for 93.1 per cent of the aggregated HCFC baseline for all LVC countries; 41 are non-LVC countries and they account for 81 per cent of the HCFC baselines for all non-LVC countries. The HFC data reported by LVC and non-LVC countries account for 4 per cent and 96 per cent, respectively, of the total HFC consumption data reported for the year 2023.

Table 9. Sector distribution of HFCs consumed in 2023 (metric tonnes)

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total*
				Refrigeration	AC	Other unidentified manufacturing				
HFC-125	1.8		1,268.1	176.5	2,766.5		1,460.3		1,180.1	6,852.3
HFC-134	0.0						5.1			5.1
HFC-134a	8,837.2	559.4	0.0	30,301.5	36,872.1	7,270.4	91,304.2	150.0	1,009.4	177,675.2
HFC-143a	0.0						455.0		1,034.2	1,489.2
HFC-152a	6,922.3	5,328.8			0.4		12,647.9	2,662.6	1,958.7	29,726.0
HFC-227ea	405.7	11.2	33,957.2				91.1			34,465.1
HFC-236ea	0.0						0.0		109.0	109.0
HFC-236fa	0.0		536.5				1.1		1.3	538.9
HFC-245fa	0.0	11,179.8	21.5	500.0			61.7		476.4	12,293.5
HFC-32	0.0			9,797.9	113,892.4	1,259.0	13,432.3	0.0	1,681.4	140,064.5
HFC-365mfc	0.0	833.4					0.0	33.7	0.1	867.2
HFC-41	0.0			1.0			0.0	0.1	44.2	45.3
HFC-43-10mee	0.0	4.3					0.6	36.5		41.4
HFC-23**	0.0		13.7	6.7			33.2	5.6	1,865.4	1,944.1
R-401A	0.0						1.4			1.4
R-404A	0.0			12,650.2	0.2	332.0	19,294.9		66.4	34,345.5
R-407A	0.0			3.0		14.2	419.5			561.6
R-407C	0.0			491.8	501.6	21.2	7,209.4		20.8	8,372.9
R-407F				36.3		2.0	127.8		0.2	166.1
R-407H							24.3			24.3
R-408A				1.2			0.5			1.7
R-410A	0.0			43,588.5	51,872.4	4,080.3	71,055.3	140.3	108.6	172,135.0
R-417A					4.9		599.5		3.6	608.0
R-417B							176.7			176.7
R-417C							14.2			14.2
R-422A							0.7		0.0	0.7
R-422D							129.6			129.6
R-426A				40.0			5.4			45.4
R-427A							3.7		0.0	3.7
R-434A				0.1	0.1	0.0	0.1			0.3
R-437A							103.0			103.0
R-438A				260.0			461.7			721.7
R-442A				0.3			1.6			1.9
R-448A				31.6			101.8			133.4
R-449A				40.6		0.5	257.1			298.2
R-449C				0.9			6.0			6.9

²¹ LVC and non-LVC classification is based on HCFC baseline.

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total*
				Refrigeration	AC	Other unidentified manufacturing				
R-452A				53.7			59.2		0.1	113.0
R-453A				2.6	2.6		13.4		0.0	18.7
R-454A				0.2			0.0			0.2
R-454A					0.0		0.0			0.0
R-454B					300.4		127.5			427.9
R-454C				0.2	2.5		0.2			2.9
R-455A				0.0			0.6			0.7
R-470A							0.8		0.0	0.8
R-470B									0.01	0.01
R-471A							0.3		0.1	0.4
R-507A	0.0			25,835.9	129.2	117.6	8,705.5		90.1	35,531.5
R-507C							10.9			10.9
R-508B	0.0			3.1	0.0		1.7			4.8
R-512A	0.1				0.1		0.2			0.3
R-513A				48.5	24.2		24.2	0.8		97.7
R-515B					0.1		1.3		0.1	1.6
HFC-227ea in imported pre-blended polyol		2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
HFC-245fa in imported pre-blended polyol	0.0	51.3								51.3
HFC-365mfc in imported pre-blended polyol	0.0	517.1	0.0							517.1
Others	1.4	1,901.2	2.3	0.0	0.0	0.0	47.3	11.8	6.0	1,970.0
Total	16,168.4	20,388.5	35,799.2	123,872.3	206,369.9	13,097.1	228,479.8	3,041.3	9,656.3	662,720.8
LVC***	174.4	404.9	43.7	43.5	38.5	530.8	24,922.9	10.1	183.5	26,352.4
Non-LVC***	15,994.0	19,983.6	35,755.5	123,828.8	206,331.4	12,566.3	203,556.9	3,031.2	9,472.8	636,368.4

* Sectoral breakdown columns may not add up to Total because some countries only reported total and no sectoral breakdown.

** HFC-23 is used as a pure substance and in R-508B blend of which HFC-23 is one component.

*** LVC and non-LVC classification is based on HCFC baseline.

34. In 2023, the five sectors with the largest consumption of HFCs (measured in metric tonnes) were the refrigeration servicing (34.5 per cent), refrigeration manufacturing – air-conditioning (AC) (31.1 per cent of the total), refrigeration (18.7 per cent), fire fighting (5.4 per cent) and foam (3.1 per cent).

35. The sector distribution of aggregated HFC consumption in CO₂-equivalent is presented in table 10. R-410A, HFC-134a, R-507A, R-404A, HFC-227ea, HFC-32 and HFC-23 account for 93.6 per cent of the total consumption in CO₂-equivalent; refrigeration servicing, refrigeration manufacturing – refrigeration, and refrigeration manufacturing – AC, account for 35.5 percent, 24.7 per cent and 20.7 per cent of the total consumption, respectively.

Table 10. Sector distribution of HFCs consumed in 2023 ('000 tons CO₂-equivalent)

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total*
				Refrigeration	AC	Other unidentified manufacturing				
HFC-125	6	0	4,438	618	9,683	0	5,111	0	4,130	23,983
HFC-134	0	0	0	0	0	0	6	0	0	6
HFC-134a	12,637	800	0	43,331	52,727	10,397	130,565	214	1,443	254,076
HFC-143a	0	0	0	0	0	0	2,034	0	4,623	6,657
HFC-152a	858	661	0	0	0	0	1,568	330	243	3,686

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total*
				Refrigeration	AC	Other unidentified manufacturing				
HFC-227ea	1,306	36	109,342	0	0	0	293	0	0	110,978
HFC-236ea	0	0	0	0	0	0	0	0	149	149
HFC-236fa	0	0	5,263	0	0	0	11	0	13	5,287
HFC-245fa	0	11,515	22	515	0	0	64	0	491	12,662
HFC-32	0	0	0	6,614	76,877	850	9,067	0	1,135	94,544
HFC-365mfc	0	662	0	0	0	0	0	27	0	689
HFC-41	0	0	0	0	0	0	0	0	4	4
HFC-43-10mee	0	7	0	0	0	0	1	60	0	68
HFC-23**	0	0	202	100	0	0	492	84	27,608	28,772
R-401A	0	0	0	0	0	0	0	0	0	0
R-404A	0	0	0	49,609	1	1,302	75,667	0	260	134,689
R-407A	0	0	0	6	0	30	884	0	0	1,183
R-407C	0	0	0	872	890	38	12,788	0	37	14,852
R-407F	0	0	0	66	0	4	233	0	0	303
R-407H	0	0	0	0	0	0	36	0	0	36
R-408A	0	0	0	3	0	0	1	0	0	4
R-410A	0	0	0	90,991	108,284	8,518	148,328	293	227	359,332
R-417A	0	0	0	0	11	0	1,407	0	8	1,426
R-417B	0	0	0	0	0	0	535	0	0	535
R-417C	0	0	0	0	0	0	26	0	0	26
R-422A	0	0	0	0	0	0	2	0	0	2
R-422D	0	0	0	0	0	0	354	0	0	354
R-426A	0	0	0	60	0	0	8	0	0	69
R-427A	0	0	0	0	0	0	8	0	0	8
R-434A	0	0	0	0	0	0	0	0	0	1
R-437A	0	0	0	0	0	0	186	0	0	186
R-438A	0	0	0	589	0	0	1,046	0	0	1,634
R-442A	0	0	0	1	0	0	3	0	0	4
R-448A	0	0	0	44	0	0	141	0	0	185
R-449A	0	0	0	57	0	1	359	0	0	416
R-449C	0	0	0	1	0	0	8	0	0	9
R-452A	0	0	0	115	0	0	127	0	0	242
R-453A	0	0	0	5	5	0	24	0	0	33
R-454A	0	0	0	0	0	0	0	0	0	0
R-454A	0	0	0	0	0	0	0	0	0	0
R-454B	0	0	0	0	140	0	59	0	0	199
R-454C	0	0	0	0	0	0	0	0	0	0
R-455A	0	0	0	0	0	0	0	0	0	0
R-470A	0	0	0	0	0	0	1	0	0	1
R-470B	0	0	0	0	0	0	0	0	0	0
R-471A	0	0	0	0	0	0	0	0	0	0
R-507A	0	0	0	102,956	515	469	34,691	0	359	141,593
R-507C	0	0	0	0	0	0	43	0	0	43
R-508B	0	0	0	21	0	0	12	0	0	33
R-512A	0	0	0	0	0	0	0	0	0	0
R-513A	0	0	0	30	15	0	15	1	0	61
R-515B	0	0	0	0	0	0	0	0	0	0
HFC-227ea in imported pre-blended polyol	0	6	0	0	0	0	0	0	0	6
HFC-245fa in imported pre-blended polyol	0	53	0	0	0	0	0	0	0	53
HFC-365mfc in imported	0	411	0	0	0	0	0	0	0	411

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total*
				Refrigeration	AC	Other unidentified manufacturing				
pre-blended polyol										
Others	1	1,728	0	0	0	0	68	11	5	1,814
Total	14,809	15,879	119,268	296,603	249,149	21,606	426,271	1,019	40,738	1,201,304

* Sectoral breakdown columns may not add up to “Total” because some countries only reported total and no sectoral breakdown.

** HFC-23 is used as a pure substance and in R-508B blend of which HFC-23 is one component.

36. In 2023, in tonnes CO₂-equivalent terms, the most consumed HFCs including blends were R-404A (34.4 per cent of the total), HFC-134a (28.1 per cent), R-410A (19.6 per cent), R-507A (7.3 per cent), R-407C (6.4 per cent) and R-407A (1.3 per cent) for LVC countries, and R-410A (30.4 per cent of the total), HFC-134a (20.8 per cent), R-507A (12 per cent), R-404A (10.1 per cent), HFC-227ea (9.7 per cent), and HFC-32 (8.2 per cent) for non-LVC countries.²²

37. In addition, 24 countries reported a total consumption of 1,944.06 metric tonnes of HFC-23 used in the fire fighting, refrigeration, refrigeration servicing, solvent, and other sectors. These countries are Argentina, Bangladesh, Brazil, China, Egypt, El Salvador, Fiji, Indonesia, Malaysia, Maldives, Mauritius, Mexico, Morocco, Namibia, Panama, Peru, the Philippines, Serbia, Seychelles, South Africa, Sri Lanka, Türkiye, Uruguay, and Viet Nam.

38. Pursuant to decision 94/3(b), the Secretariat requested information from three countries that had submitted HFC-23 (use) in “other”; two countries clarified that the data reported in “other” should be for “refrigeration servicing”. However, as of date, information on details of use of HFC-23 for the remaining country is not available.

39. Two countries (Argentina and Mexico) have an obligation to report 2023 data under the CP data report on HFC-23 production and generation. Argentina and Mexico have reported zero and 0.0043 mt of HFC-23 by-product emissions, respectively. In addition, and as of date, China and India have reported 901.72 mt and zero mt of HFC-23 by-product emissions, respectively.

III.3 Prices of HCFCs, HFCs and alternatives

40. The average prices of HCFCs, HFCs and alternatives reported by A5 countries since 2012 are summarized in table 11.²³ The average prices provided are mainly from retailers and suppliers, which can include taxes and transportation costs. However, the price data in project proposals is freight on board (FOB)²⁴ that is usually obtained from importers.

²² LVC and non-LVC classification is based on HCFC baseline.

²³ Several of the CP data reports submitted by A5 countries contain price data for both controlled substances and alternative substances. This information is provided on voluntary basis.

²⁴ Decision 68/4(b)(iv) requested Governments to report on a voluntary basis, the average import FOB price for each controlled substance and substitute in the revised CP format.

Table 11. Average price of HCFCs, HFCs and alternatives²⁵

Substance	Average price (US \$/kg)*												Range (US \$/kg)	Countries (2023)**
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
HCFC-22	10.06	9.24	10.08	10.07	9.25	10.18	10.24	9.64	10.54	11.02	10.76	14.08	0.16 (Dominican Republic (the)) to 180.00 (Rwanda)	112
HCFC-141b	6.73	6.65	7.77	7.08	10.00	9.40	10.99	8.23	12.78	8.66	8.98	12.15	3.11 (China) to 80.43 (Belize)	14
R-600a	20.49	20.20	18.02	15.23	15.98	15.80	16.03	16.72	18.30	19.05	19.41	15.86	1.80 (Brazil) to 141.05 (Saint Vincent and the Grenadines)	85
R-290	15.60	14.38	21.26	19.08	16.13	16.48	15.92	21.80	23.85	21.17	22.38	20.95	1.75 (Brazil) to 191.65 (Saint Vincent and the Grenadines)	75
HFC-134a	14.96	13.65	13.30	14.26	12.83	13.94	12.35	12.31	12.71	13.66	13.51	12.10	0.16 (Dominican Republic (the)) to 51.00 (Turkmenistan)	110
R-404A	18.71	15.41	15.11	15.42	15.32	15.97	14.77	13.76	14.28	16.01	15.68	14.88	2.63 (Guyana) to 52.00 (Turkmenistan)	111
R-407C	19.04	16.06	15.19	13.97	12.71	13.94	13.71	13.02	13.78	15.44	14.36	14.37	2.81 (Guyana) to 77.49 (Dominica)	90
R-410A	19.91	16.05	15.28	14.61	16.44	15.47	14.78	14.50	14.68	16.33	15.03	14.21	3.00 (Argentina) to 54.49 (Chile)	109
R-507A	15.84	13.59	12.21	11.65	11.76	13.33	13.07	12.99	13.58	16.36	15.03	14.36	3.12 (Argentina) to 47.00 (Mozambique)	59

* All zero entries were excluded.

** Number of A5 countries that reported prices in 2023.

IV. Issues related to CP implementation reports

IV.1 Timely submission of CP data reports

41. In reviewing the timely submission of the CP data reports, the Secretariat noted that, as shown in table 12 there is a slight decrease in the overall submission rate for 2023 when compared with that of 2022. The Secretariat noted the efforts made by bilateral and implementing agencies in following up on the submission of outstanding CP data reports, and keeping the Secretariat informed on progress on a regular basis.²⁶

Table 12. Monthly rates of submission of CP data reports (as at 8 April 2025)

Month	2017		2018		2019		2020		2021		2022		2023		2024**	
	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*
January	3	2.08									2	1.39				
February	1	2.78	7	4.86	1	0.69	2	1.39	1	0.69	6	5.56	4	2.78	2	1.39
March	8	8.33	14	14.58	9	6.94	11	9.03	20	14.58	11	13.19	8	8.33	11	9.03
April	60	50.00	64	59.03	63	50.69	51	44.44	60	56.25	53	50.00	49	42.36	3	11.11
May	39	77.08	30	79.86	29	70.83	42	73.61	27	75.00	45	81.25	35	66.67		
June	15	87.50	4	82.64	4	73.61	7	78.47	6	79.17	5	84.72	7	71.53		
July	3	89.58	2	84.03	8	79.17	4	81.25	2	80.56	3	86.81	16	82.64		
August	7	94.44	3	86.11	5	82.64	4	84.03	5	84.03	3	88.89	7	87.50		
September	4	97.22	6	90.28	10	89.58	6	88.19	5	87.50	4	91.67	4	90.28		
October	1	97.92	10	97.22	2	90.97	8	93.75	6	91.67	8	97.22	6	94.44		
November	1	98.61	1	97.92	3	93.06	0	93.75	4	94.44	0	97.22	0	94.44		
December			1	98.61	8	98.61	0	93.75	7	99.31	0	97.22	3	96.53		
After Dec.	2	100.00	2	100.00	2	100.00	9	100.00	1	100.00	4	100.00	4	99.31		
Total	144		144		144		144		144		144		143		16	

²⁵ At its 79th meeting, the Executive Committee requested the Secretariat to include in the document on the Overview of issues identified during project review (issued at each meeting) a summary of the prices of the controlled substances and the alternatives to be phased in, as communicated by enterprises requesting funding in any new project proposals, including clarification of any differences between those and the prices reported in the CP data reports (decision 79/4(c)).

²⁶ Due to the United Nations Security Council Resolution 1718, the Democratic People's Republic of Korea has not received support from the Multilateral Fund since 2017. Consequently, the recommendation requesting the country's submission of the CP data report for 2023 has been removed.

Month	2017		2018		2019		2020		2021		2022		2023		2024**	
	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*
Outstanding	0		0		0		0		0		0		1		128	

* No: Number of A5 countries reporting. (%): Cumulative reporting.

** Data for Belize, Botswana, Cuba, El Salvador, Iraq, and the Republic of Moldova was submitted after the cut-off date and was not included in the analysis.

Data discrepancies between CP data reports and A7 data

42. In line with decision 95/6(b)(i), the discrepancies between CP data and A7 data for 2023 have been resolved for all countries included in table 12 of document UNEP/OzL.Pro/ExCom/95/8.

V. Revised format of sections D and E of country programme data reports

43. At its 93rd meeting, the Executive Committee requested the Secretariat to provide options for consideration by the Executive Committee, at its 96th meeting, on potential modifications to the CP data reporting format, specifically in relation to HFC-23 generated, destroyed or maintained as stocks, taking into consideration any decision taken by the Meeting of the Parties pursuant to paragraph 3 of decision XXXV/7 (decision 93/7(b)(iii)).

44. In response to the decision, the Secretariat modified sections D and E of the CP data reporting format based on the revised A7 data reporting forms 3 and 6 approved at the Thirty-Sixth Meeting of the Parties (decision XXXVI/12) for consideration by the Executive Committee. The draft revised sections are presented in annexes IV and V to the present document.

45. Once the draft revised sections D and E of the CP data reporting format have been endorsed, they will be integrated into the new online CP data reporting system for the reporting of 2025 data in 2026. The practical manual for CP data reporting will also be revised to reflect these changes.

VI. Recommendation

46. The Executive Committee may wish:

- To note the information on country programme (CP) data and prospects for compliance contained in document UNEP/OzL.Pro/ExCom/96/5, and that, as at 8 April 2025, 16 countries had submitted 2024 CP data;
- [To note also that an additional [??] countries had submitted 2024 CP data after the issuance of document UNEP/OzL.Pro/ExCom/96/5;]
- To note further that the new online CP data reporting system was officially launched on 1 January 2025, and that, as of 23 April 2025, it had been used by 38 countries, of which 16 had officially submitted their 2024 data;
- To approve the draft revised format of sections D and E of CP data reports as contained in annexes IV and V to the present document; and
- To request the Secretariat to update the practical manual for CP data reporting to reflect the changes in sections D and E after the 96th meeting.

Annex I

MB CONSUMPTION AND PRODUCTION FOR QPS APPLICATIONS

Country	Year of latest consumption	Latest consumption (ODP tonnes)
Consumption		
Argentina	2023	15.1
Bahrain	2023	1.1
Barbados	2023	0.1
Brazil	2023	58.7
Chile	2023	50.9
China	2023	210.9
Costa Rica	2023	4.2
Egypt	2023	134.4
El Salvador	2023	153.1
Fiji	2023	4.9
Honduras	2023	10.3
India	2023	894.5
Indonesia	2023	75.9
Jordan	2023	4.2
Malaysia	2023	68.7
Mexico	2023	205.6
Morocco	2023	6.0
Myanmar	2023	30.0
Nicaragua	2023	25.4
Nigeria	2023	9.0
Pakistan	2023	281.1
Papua New Guinea	2023	0.2
Peru	2024	0.6
Philippines (the)	2023	14.7
Singapore	2023	25.7
South Africa	2023	1.9
Sri Lanka	2023	21.9
Thailand	2023	113.6
Türkiye	2023	19.8
United Arab Emirates (the)	2023	25.8
Uruguay	2023	46.9
Viet Nam	2023	522.0
Total consumption		3,037.2
Production		
China	2023	650.7
India	2023	3,276.0
Total production		3,926.6

Annex II
HCFC ANALYSIS*

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Afghanistan	A7	2023	23.6	13.7	0	0	0	35% by 2020 and 67.5% by 2025
Albania	A7	2023	6.0	2.2	0	0	0	35% by 2020 and 67.5% by 2025
Algeria	A7	2023	62.1	39.7	0	0	0	20% by 2017 and 100% by 2030
Angola	A7	2023	16.0	3.8	0	0	0	10% by 2015 and 67.5% by 2025
Antigua and Barbuda	CP	2024	0.3	0.0	0	0	0	HPMP cancelled
Argentina	A7	2023	400.7	163.4	0	0	0	17.5% by 2017 and 50% by 2024
Armenia	A7	2023	7.0	2.3	0	0	0	10% by 2015 and 66.6% by 2020
Bahamas (the)	A7	2023	4.8	2.4	0	0	0	35% by 2020 and 100% by 2030
Bahrain	A7	2023	51.9	29.6	0	0	0	35% by 2020 and 73.5% by 2025
Bangladesh	A7	2023	72.6	29.9	0	0	0	30% by 2018 and 67.5% by 2025
Barbados	A7	2023	3.7	0.5	0	0	0	35% by 2020 and 100% by 2030
Belize	A7	2023	2.8	0.7	0	0	0	35% by 2020 and 100% by 2030
Benin	A7	2023	23.8	9.7	0	0	0	35% by 2020 and 100% by 2030
Bhutan	A7	2023	0.3	0.0	0	0	0	100% by 2025
Bolivia (Plurinational State of)	A7	2023	6.1	1.6	0	0	0	35% by 2020 and 100% by 2030
Bosnia and Herzegovina	A7	2023	4.7	0.0	0	0	0	35% by 2020 and 100% by 2026
Botswana	A7	2023	11.0	4.8	0	0	0	35% by 2020 and 100% by 2030
Brazil	A7	2023	1,327.3	491.6	0	0	0	10% by 2015, 45% by 2021 and 100% by 2030
Brunei Darussalam	A7	2023	6.1	3.0	0	0	0	35% by 2020 and 100% by 2030
Burkina Faso	A7	2023	28.9	4.1	0	0	0	35% by 2020 and 100% by 2030
Burundi	A7	2023	7.2	0.7	0	0	0	35% by 2020 and 100% by 2030
Cabo Verde	A7	2023	1.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Cambodia	A7	2023	15.0	6.9	0	0	0	100% by 2035
Cameroon	A7	2023	88.8	24.8	0	0	0	20% by 2017 and 75% by 2025
Central African Republic (the)	A7	2023	12.0	6.1	0	0	0	HPMP cancelled

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Chad	A7	2023	16.1	10.0	0	0	0	35% by 2020 and 100% by 2030
Chile	A7	2023	87.5	18.8	0	0	0	10% by 2015, 65% by 2021 and 100% by 2030
China	A7	2023	19,269.0	7,360.7	0	0	0	10% by 2015 and 76% by 2026
Colombia	A7	2023	225.6	19.8	0	0	0	10% by 2015, 65% by 2021 and 100% by 2030
Comoros (the)	A7	2023	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Congo (the)	A7	2023	10.1	5.2	0	0	0	35% by 2020 and 100% by 2030
Cook Islands (the)	A7	2023	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Costa Rica	A7	2023	14.1	3.8	0	0	0	35% by 2020 and 97.5% by 2030
Cote d'Ivoire	A7	2023	63.8	30.3	0	0	0	35% by 2020 and 100% by 2030
Cuba	A7	2023	16.9	0.6	0	0	0	35% by 2020 and 100% by 2030
Democratic People's Republic of Korea (the)**	A7	2022	78.0	57.8	0	0	14	15% by 2018
Democratic Republic of the Congo (the)	A7	2023	66.2	0.9	0	0	0	10% by 2017 and 100% by 2030
Djibouti	A7	2023	0.7	0.3	0	0	0	35% by 2020
Dominica	A7	2023	0.4	0.0	0	0	0	35% by 2020
Dominican Republic (the)	CP	2024	51.2	28.3	0	0	0	10% by 2015, 40% by 2020 and 100% by 2030
Ecuador	A7	2023	23.5	9.0	0	0	0	35% by 2020 and 100% by 2030
Egypt	CP	2024	386.3	215.1	0	0	0	25% by 2018 and 70% by 2025
El Salvador	A7	2023	11.7	4.7	0	0	0	35% by 2020 and 100% by 2030
Equatorial Guinea	CP	2024	6.3	0.5	0	0	0	35% by 2020
Eritrea	CP	2024	1.1	0.4	0	0	0	35% by 2020 and 100% by 2030
Eswatini	A7	2023	1.7	0.4	0	0	0	35% by 2020 and 100% by 2030
Ethiopia	A7	2024	5.5	1.0	0	0	0	35% by 2020 and 100% by 2030
Fiji	A7	2023	5.7	2.0	0	0	0	35% by 2020 and 100% by 2030
Gabon	A7	2023	30.2	7.3	0	0	0	35% by 2020 and 100% by 2030
Gambia (the)	A7	2023	1.5	0.2	0	0	0	35% by 2020 and 100% by 2030
Georgia	CP	2024	5.3	1.5	0	0	0	35% by 2020 and 100% by 2030

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Ghana	A7	2023	57.3	14.8	0	0	0	35% by 2020 and 100% by 2030
Grenada	A7	2023	0.8	0.1	0	0	0	35% by 2020 and 100% by 2030
Guatemala	A7	2023	8.3	2.0	0	0	0	35% by 2020 and 100% by 2030
Guinea	A7	2024	22.6	0.8	0	0	0	35% by 2020 and 100% by 2030
Guinea-Bissau	A7	2023	2.8	0.7	0	0	0	35% by 2020 and 100% by 2030
Guyana	A7	2023	1.8	0.3	0	0	0	10% by 2015 and 100% by 2030
Haiti	A7	2023	3.6	2.0	0	0	0	HPMP cancelled
Honduras	A7	2023	19.9	6.2	0	0	0	35% by 2020 and 100% by 2030
India	A7	2023	1,608.2	322.4	0	0	0	10% by 2015, 60% by 2023 and 100% by 2030
Indonesia	A7	2023	403.9	149.4	0	0	0	20% by 2018, 55% by 2023 and 100% by 2030
Iran (Islamic Republic of)	A7	2023	380.5	93.7	0	0	0	10% by 2015 and 75% by 2024
Iraq	A7	2023	108.4	66.4	0	0	0	13.82% by 2019 and 69% by 2025
Jamaica	A7	2024	16.3	1.0	0	0	0	35% by 2020 and 100% by 2030
Jordan	A7	2023	83.0	15.7	0	0	0	20% by 2017, 50% by 2022 and 100% by 2030
Kenya	A7	2023	52.2	5.5	0	0	0	21.1% by 2017 and 100% by 2030
Kiribati	A7	2023	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Kuwait	A7	2023	418.6	147.0	0	0	0	39.2% by 2020 and 67.5% by 2025
Kyrgyzstan	CP	2024	4.1	0.0	0	0	0	10% by 2015, 97.5% by 2020 and 100% by 2025
Lao People's Democratic Republic (the)	A7	2023	2.3	1.5	0	0	0	35% by 2020 and 100% by 2030
Lebanon	CP	2024	73.5	18.3	0	0	0	18% by 2017, 75% by 2024 and 100% by 2030
Lesotho	A7	2023	3.5	0.4	0	0	0	35% by 2020 and 100% by 2030
Liberia	A7	2024	5.3	0.8	0	0	0	35% by 2020 and 100% by 2030
Libya***	A7	2023	118.4	61.8	0	0	0	10% by 2020 and 80.5% by 2027
Madagascar	A7	2023	16.6	9.1	0	0	0	35% by 2020 and 100% by 2030

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Malawi	CP	2024	10.8	1.6	0	0	0	35% by 2020 and 100% by 2030
Malaysia	A7	2023	515.8	153.5	0	0	0	15% by 2016, 42.9% by 2022 and 100% by 2030
Maldives	A7	2024	4.6	0.0	0	0	0	100% by 2020
Mali	CP	2023	15.0	4.4	0	0	0	35% by 2020
Marshall Islands (the)	A7	2023	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Mauritania	A7	2023	20.5	8.7	0	0	0	67.5% by 2025
Mauritius	A7	2023	8.0	1.2	0	0	0	100% by 2030
Mexico	A7	2023	1,148.8	168.2	0	0	0	30% by 2018, 67.5% by 2023 and 100% by 2030
Micronesia (Federated States of)	A7	2023	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Mongolia	A7	2023	1.4	0.1	0	0	0	35% by 2020 and 100% by 2030
Montenegro	A7	2023	0.8	0.0	0	0	0	35% by 2020 and 100% by 2025
Morocco	A7	2023	51.4	17.3	0	0	0	20% by 2020 and 67.5% by 2025
Mozambique	A7	2023	8.7	2.0	0	0	0	35% by 2020 and 100% by 2030
Myanmar	A7	2023	4.3	2.2	0	0	0	35% by 2020
Namibia	A7	2023	8.4	0.3	0	0	0	100% by 2025
Nauru	A7	2023	0.0	0.0	0	0	0	35% by 2020 and 100% by 2030
Nepal	A7	2023	1.1	0.4	0	0	0	35% by 2020 and 100% by 2030
Nicaragua	A7	2023	6.8	1.6	0	0	0	35% by 2020 and 100% by 2030
Niger (the)	A7	2023	16.0	5.6	0	0	0	35% by 2020 and 100% by 2030
Nigeria	A7	2023	344.9	103.7	0	0	0	10% by 2015, 51.35% by 2023 and 67.5% by 2025
Niue	A7	2023	0.0	0.0	0	0	0	35% by 2020 and 100% by 2030
North Macedonia	A7	2023	1.8	0.0	0	0	0	35% by 2020 and 100% by 2028
Oman	A7	2023	31.5	11.7	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030
Pakistan	A7	2023	248.1	118.9	0	0	0	10% by 2015, 50% by 2020 and 100% by 2030
Palau	A7	2023	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Panama	A7	2023	24.8	8.9	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Papua New Guinea	A7	2023	3.3	0.7	0	0	0	100% by 2025
Paraguay	A7	2024	18.0	10.8	0	0	0	35% by 2020 and 100% by 2030
Peru	A7	2024	26.9	13.3	0	0	0	10% by 2015, 67.5% by 2025 and 100% by 2030
Philippines (the)	A7	2023	162.0	64.5	0	0	0	10% by 2015, 50% by 2021 and 100% by 2030
Qatar	A7	2023	86.9	56.5	0	0	0	20% by 2015 and 67.5% by 2026
Republic of Korea (the)	A7	2023	1,908.0	778.1	0	0	0	
Republic of Moldova (the)	A7	2023	1.0	0.3	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030
Rwanda	A7	2023	4.1	1.2	0	0	0	35% by 2020 and 100% by 2030
Saint Kitts and Nevis	A7	2023	0.5	0.0	0	0	0	35% by 2020
Saint Lucia	A7	2023	1.1	0.1	0	0	0	35% by 2020 and 100% by 2030
Saint Vincent and the Grenadines	A7	2024	0.3	0.0	0	0	0	100% by 2025
Samoa	A7	2023	0.3	0.0	0	0	0	35% by 2020 and 100% by 2030
Sao Tome and Principe	A7	2023	2.2	0.0	0	0	0	35% by 2020
Saudi Arabia	A7	2023	1,468.7	697.6	0	0	0	40% by 2020 and 100% by 2030
Senegal	A7	2023	36.2	10.2	0	0	0	35% by 2020 and 81.1% by 2025
Serbia	A7	2023	8.4	3.8	0	0	0	35% by 2020 and 67.5% by 2025
Seychelles	A7	2024	1.4	0.0	0	0	0	100% by 2025
Sierra Leone	A7	2023	1.7	0.6	0	0	0	35% by 2020 and 100% by 2030
Singapore	A7	2023	216.1	19.5	0	0	0	
Solomon Islands	A7	2023	2.0	0.1	0	0	0	35% by 2020 and 100% by 2030
Somalia	A7	2023	45.1	10.6	0	0	0	35% by 2020 and 100% by 2030
South Africa	A7	2023	369.7	74.5	0	0	0	35% by 2020 and 100% by 2030
South Sudan	A7	2023	4.1	0.9	0	0	0	35% by 2024
Sri Lanka	A7	2023	13.9	8.6	0	0	0	35% by 2020 and 100% by 2030
Sudan (the)	A7	2023	52.7	3.3	0	0	0	30% by 2017, 75% by 2020 and 100% by 2030
Suriname	A7	2023	2.0	0.0	0	0	0	35% by 2020 and 100% by 2030
Syrian Arab Republic	A7	2023	135.0	51.1	0	0	0	67.5% by 2025

Country	Source	Year of latest consumption	Baseline (ODP tonnes)	Latest consumption (ODP tonnes)	% over freeze	% over 10% reduction	% over 35% reduction	Control addressed by HPMPs
Thailand	A7	2023	927.6	292.7	0	0	0	15% by 2018 and 61.8% by 2023
Timor-Leste	A7	2023	0.5	0.1	0	0	0	10% by 2015 and 78% by 2025
Togo	A7	2023	20.0	5.7	0	0	0	35% by 2020 and 100% by 2030
Tonga	A7	2023	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Trinidad and Tobago	A7	2023	46.0	10.1	0	0	0	35% by 2020 and 100% by 2030
Tunisia	A7	2023	40.7	17.9	0	0	0	15% by 2020 and 67.5% by 2025
Türkiye	A7	2023	551.5	2.3	0	0	0	100% by 2025
Turkmenistan	A7	2023	6.8	4.3	0	0	0	35% by 2020 and 67.5% by 2025
Tuvalu	A7	2023	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Uganda	A7	2023	0.2	0.1	0	0	0	35% by 2020 and 100% by 2030
United Arab Emirates (the)	A7	2023	557.1	359.0	0	0	0	
United Republic of Tanzania (the)	A7	2023	1.7	0.7	0	0	0	35% by 2020 and 100% by 2030
Uruguay	A7	2023	23.4	8.1	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030
Vanuatu	A7	2023	0.3	0.0	0	0	0	35% by 2020 and 100% by 2030
Venezuela (Bolivarian Republic of)	A7	2023	207.0	58.6	0	0	0	10% by 2015 and 100% by 2027
Viet Nam	A7	2023	221.2	137.5	0	0	0	10% by 2015, 35% by 2022 and 100% by 2030
Yemen	A7	2023	158.2	80.5	0	0	0	HPMP cancelled
Zambia	A7	2023	5.0	2.1	0	0	0	35% by 2020 and 100% by 2030
Zimbabwe	A7	2023	17.8	3.6	0	0	0	35% by 2020 and 100% by 2030

(*) Excluding the Republic of Korea, Singapore, and the United Arab Emirates which do not request assistance from the Multilateral Fund for their phase-out of controlled substances. They are included in the table above.

(**) The Democratic People's Republic of Korea's latest consumption is below the consumption set in the plan of action in decision XXXII/6.

(***) Libya's latest consumption is below the consumption set in the plan of action in decision XXVII/11.

Annex III

HFC ANALYSIS IN CO₂-EQUIVALENT TONNES*

Country	Group	Ratified Kigali Amendment **	Source	Year of consumption	Baseline	Consumption	Control measures addressed by KIPs (approval)
Afghanistan	I						
Albania	I	Yes	A7	2023	883,849	1,904,288	10% of baseline in 2029
Algeria	I						
Angola	I	Yes	A7	2023	3,878,000	13,218,297	
Antigua and Barbuda	I						
Argentina	I	Yes	A7	2023	19,219,484	15,743,179	
Armenia	I	Yes	A7	2023	475,254	664,716	10% of baseline in 2029
Bahamas (the)	I	Yes	A7	2023	227,203	152,602	
Bahrain	II	Yes					
Bangladesh	I	Yes	A7	2023	5,473,532	4,586,619	
Barbados	I	Yes	A7	2023	295,419	163,309	
Belize	I	Yes	A7	2023	502,263	383,298	
Benin	I	Yes	A7	2023	1,875,057	901,445	10% of baseline in 2029
Bhutan	I	Yes	A7	2023	13,105	2,313	
Bolivia (Plurinational State of)	I	Yes	A7	2023	677,884	475,782	15% of baseline in 2029
Bosnia and Herzegovina	I	Yes	A7	2023	1,066,653	1,854,872	
Botswana	I	Yes	A7	2023	389,992	185,236	
Brazil	I	Yes	A7	2023	79,503,644	37,407,024	
Brunei Darussalam	I		A7	2023		343,383	
Burkina Faso	I	Yes	A7	2023	1,049,523	442,731	30% of baseline in 2029
Burundi	I	Yes	A7	2023	207,530	58,129	
Cabo Verde	I	Yes	A7	2023	38,791	108,860	
Cambodia	I	Yes	A7	2023	1,263,376	977,412	10% of baseline in 2029
Cameroon	I	Yes	A7	2023	4,760,203	3,579,009	30% of baseline in 2030
Central African Republic (the)	I						
Chad	I	Yes	A7	2023	3,573,612	3,346,060	10% of baseline in 2029
Chile	I	Yes	A7	2023	6,698,107	4,943,654	10% of baseline in 2029
China	I	Yes	A7	2023	905,144,032	769,361,542	
Colombia	I	Yes	A7	2023	8,652,982	6,206,292	18.3% of baseline in 2029
Comoros (the)	I	Yes	A7	2023	34,958	20,205	
Congo (the)	I	Yes	A7	2023	504,649	261,413	48.7% of baseline in 2029
Cook Islands (the)	I	Yes	A7	2023	6,461	13,152	10% of baseline in 2029
Costa Rica	I	Yes	A7	2023	1,450,799	1,803,777	10% of baseline in 2029
Cote d'Ivoire	I	Yes			21,289,132		
Cuba	I	Yes	A7	2023	1,030,662	1,368,669	10% of baseline in 2029
Democratic People's Republic of Korea (the)	I	Yes			1,906,435		
Democratic Republic of the Congo (the)	I						
Djibouti	I	Yes					
Dominica	I		A7	2023		13,370	

Country	Group	Ratified Kigali Amendment **	Source	Year of consumption	Baseline	Consumption	Control measures addressed by KIPs (approval)
Dominican Republic (the)	I	Yes	CP	2024	3,834,089	3,034,650	10% of baseline in 2029
Ecuador	I	Yes	A7	2023	3,179,294	3,161,086	14% of baseline in 2029
Egypt	I	Yes	CP	2024	19,290,350	17,233,528	
El Salvador	I	Yes	A7	2023	922,362	1,122,854	10% of baseline in 2029
Equatorial Guinea	I		CP	2024	271,411	52,398	
Eritrea	I	Yes	A7	2023	169,249	157,236	
Eswatini	I	Yes	A7	2023	105,500	106,607	10% of baseline in 2029
Ethiopia	I	Yes	A7	2024	347,035	45,035	
Fiji	I	Yes	A7	2023	443,528	329,493	
Gabon	I	Yes	A7	2023	2,182,210	763,753	
Gambia (the)	I	Yes	A7	2023	271,515	260,165	10% of baseline in 2029
Georgia	I	Yes	CP	2024	813,152	445,786	
Ghana	I	Yes	A7	2023	1,805,702	715,052	58% of baseline in 2030
Grenada	I	Yes	A7	2023	52,815	66,612	10% of baseline in 2029
Guatemala	I	Yes	A7	2023	1,217,998	1,038,394	15.9% of baseline in 2029
Guinea	I	Yes	A7	2024	1,826,976	1,836,016	
Guinea-Bissau	I	Yes	A7	2023	722,391	589,847	
Guyana	I		A7	2023	146,169	240,283	
Haiti	I		A7	2023	149,322	83,633	
Honduras	I	Yes	A7	2023	1,449,723	1,850,102	15.5% of baseline in 2029
India	II	Yes	A7	2023		51,165,562	
Indonesia	I	Yes	A7	2023	23,370,721	1,535,575	
Iran (Islamic Republic of)	II						
Iraq	II						
Jamaica	I						
Jordan	I	Yes	A7	2023	2,808,101	1,671,435	54% of baseline in 2030
Kenya	I	Yes	A7	2023	1,543,824	283,816	
Kiribati	I	Yes	A7	2023	8,176	5,641	10% of baseline in 2029
Kuwait	II	Yes					
Kyrgyzstan	I	Yes	CP	2024	450,382	250,036	10% of baseline in 2029
Lao People's Democratic Republic (the)	I	Yes	A7	2023	324,226	283,415	10% of baseline in 2029
Lebanon	I	Yes	CP	2024	2,556,533	1,568,531	
Lesotho	I	Yes	A7	2023	103,221	27,069	51.6% of baseline in 2029
Liberia	I	Yes	A7	2024	180,909	33,330	32% of baseline in 2029
Libya	I						
Madagascar	I		A7	2023	1,719,334	1,641,815	
Malawi	I	Yes	CP	2024	428,435	161,445	54% of baseline in 2030
Malaysia	I	Yes	A7	2023	26,703,717	5,043,404	10% of baseline in 2029
Maldives	I	Yes	A7	2024	434,219	390,586	
Mali	I	Yes	CP	2023	399,935	-6,101	
Marshall Islands (the)	I	Yes	A7	2023	10,824	31,619	10% of baseline in 2029
Mauritania	I						
Mauritius	I	Yes	A7	2023	665,957	530,740	10% of baseline in 2029
Mexico	I	Yes	A7	2023	76,982,664	50,254,745	10% of baseline in 2029
Micronesia (Federated States of)	I	Yes	A7	2023	13,600	17,412	10% of baseline in 2029

Country	Group	Ratified Kigali Amendment **	Source	Year of consumption	Baseline	Consumption	Control measures addressed by KIPs (approval)
Mongolia	I	Yes	A7	2023	57,309	27,778	
Montenegro	I	Yes	A7	2023	155,854	191,587	19.43% of baseline in 2029
Morocco	I	Yes	A7	2023	2,134,520	4,579,557	
Mozambique	I	Yes	A7	2023	655,255	1,156,651	10% of baseline in 2029
Myanmar	I		A7	2023		863,290	
Namibia	I	Yes	A7	2023	774,924	730,358	
Nauru	I	Yes	A7	2023	1,204	2,525	10% of baseline in 2029
Nepal	I						
Nicaragua	I	Yes	A7	2023	582,295	432,186	10% of baseline in 2029
Niger (the)	I	Yes	A7	2023	1,222,358	608,920	35.2% of baseline in 2029
Nigeria	I	Yes	A7	2023	15,187,779	22,809,651	10.13% of baseline in 2029
Niue	I	Yes	A7	2023	201	0	10% of baseline in 2029
North Macedonia	I	Yes	A7	2023	397,843	275,505	18.7% of baseline in 2029
Oman	II	Yes	A7	2023		2,300,559	
Pakistan	II		CP	2023		4,947,533	
Palau	I	Yes	A7	2023	10,368	6,360	10% of baseline in 2029
Panama	I	Yes	A7	2023	2,543,386	2,733,914	10% of baseline in 2029
Papua New Guinea	I	Yes	A7	2023		365,343	
Paraguay	I	Yes	A7	2024	1,684,582	1,517,927	10% of baseline in 2029
Peru	I	Yes	A7	2024	2,735,721	1,926,192	10% of baseline in 2029
Philippines (the)	I	Yes	A7	2023	11,903,687	8,073,416	
Qatar	II						
Republic of Korea (the)	I	Yes	A7	2023	89,248,915	64,890,681	
Republic of Moldova (the)	I	Yes	A7	2023	521,391	452,288	
Rwanda	I	Yes	A7	2023	338,197	222,119	25% of baseline in 2029
Saint Kitts and Nevis	I		A7	2023		801	
Saint Lucia	I	Yes	A7	2023	83,735	95,871	10% of baseline in 2029
Saint Vincent and the Grenadines	I	Yes	A7	2024	25,280	45,975	
Samoa	I	Yes	A7	2023	20,557	14,555	10% of baseline in 2029
Sao Tome and Principe	I	Yes	A7	2023	71,039	28,976	
Saudi Arabia	II						
Senegal	I	Yes	A7	2023	2,786,915	2,261,398	20.5% of baseline in 2029
Serbia	I	Yes	A7	2023	3,261,874	8,446,488	
Seychelles	I	Yes	A7	2024	249,400	157,112	10% of baseline in 2029
Sierra Leone	I	Yes	A7	2023	350,905	298,480	10% of baseline in 2029
Singapore	I	Yes	A7	2023	10,583,428	5,770,315	
Solomon Islands	I	Yes	A7	2023	69,516	36,147	30% of baseline in 2029
Somalia	I	Yes	A7	2023	1,276,672	784,355	
South Africa	I	Yes	A7	2023	13,843,139	8,748,739	
South Sudan	I		A7	2023	221,410	52,267	
Sri Lanka	I	Yes	A7	2023	1,170,234	1,156,405	
Sudan (the)	I		A7	2023	1,743,144	199,440	
Suriname	I		A7	2023	272,996	24,230	
Syrian Arab Republic	I	Yes	A7	2023	18,150,706	12,671,604	
Thailand	I	Yes			59,270,951		

Country	Group	Ratified Kigali Amendment **	Source	Year of consumption	Baseline	Consumption	Control measures addressed by KIPs (approval)
Timor-Leste	I						
Togo	I	Yes	A7	2023	1,124,896	736,797	15% of baseline in 2029
Tonga	I	Yes	A7	2023	7,676	7,415	10% of baseline in 2029
Trinidad and Tobago	I	Yes	A7	2023	5,681,787	4,967,441	10% of baseline in 2029
Tunisia	I	Yes	A7	2023	2,367,840	2,140,607	23.8% of baseline in 2030
Türkiye	I	Yes	A7	2023	37,117,410	20,337,396	14.4% of baseline in 2029
Turkmenistan	I	Yes	A7	2023	597,121	572,109	10% of baseline in 2029
Tuvalu	I	Yes	A7	2023	2,206	1,816	10% of baseline in 2029
Uganda	I	Yes	A7	2023	39,432	15,600	
United Arab Emirates (the)	II	Yes					
United Republic of Tanzania (the)	I	Yes	A7	2023	218,611	223,266	
Uruguay	I	Yes	A7	2023	1,012,431	696,550	10% of baseline in 2029
Vanuatu	I	Yes	A7	2023	20,482	21,568	10% of baseline in 2029
Venezuela (Bolivarian Republic of)	I	Yes	A7	2023	5,157,619	1,449,844	
Viet Nam	I	Yes	A7	2023	13,991,360	13,830,601	10% of baseline in 2029
Yemen	I						
Zambia	I	Yes	A7	2023	699,513	823,415	
Zimbabwe	I	Yes	A7	2023	1,210,624	842,264	37% of baseline in 2029

(*) Excluding the Republic of Korea, Singapore, and the United Arab Emirates which do not request assistance from the Multilateral Fund for their phase-out of controlled substances. They are included in the table above.

(**) As of 12 November 2024.

Annex IV

DRAFT REVISED FORMAT OF SECTION D OF COUNTRY PROGRAMME DATA REPORTS

REVISED COUNTRY PROGRAMME REPORT FORMAT (2023 DATA AND BEYOND)				
COUNTRY:		YEAR: January to December of the year	YYYY	
SECTION D. ANNEX F, GROUP II - DATA ON HFC-23 GENERATION (METRIC TONNES)				
NOTE: Fill in this form only if your country generated HFC-23				
	Total production for all uses	Production for feedstock uses within your country	Production for exempted essential, critical, high-ambient-temperature or other uses within your country*	
			Quantity	Decision / type of use* or remarks
HFC-23				
HFC-23 ¹				
* Against each substance produced for exempted essential, critical, high-ambient-temperature or other uses, please specify the Meeting of the Parties decision that approved the use.				
¹ Unintentional generation.				

Annex V

DRAFT REVISED FORMAT OF SECTION E OF COUNTRY PROGRAMME DATA REPORTS

REVISED COUNTRY PROGRAMME REPORT FORMAT (2023 DATA AND BEYOND)										
COUNTRY:		YEAR: January to December of the year			YYYY					
SECTION E. ANNEX F, GROUP II - DATA ON QUANTITY OF EMISSIONS OF HFC-23 FROM FACILITIES MANUFACTURING ANNEX C GROUP I OR ANNEX F SUBSTANCES (METRIC TONNES)										
NOTE: Fill in this form only if your country generated HFC-23 from any facility that produced (manufactured) Annex C Group I or Annex F substances										
Columns shaded in grey are provided on a voluntary basis										
Facility name or identifier	Total amount generated* (tonnes)	Amount stored at the beginning of the year (tonnes)	Amount generated and captured (tonnes)			Amount used for feedstock without prior capture (tonnes)	Amount destroyed in the facility without prior capture (tonnes)	Amount of generated emissions (tonnes)	Amount stored at the end of the year (tonnes)	Remarks
			For uses excluding feedstocks	For feedstock use in your country	For destruction ¹					
Total										

* "Total amount generated" refers to the total amount whether captured or not.

¹ This includes amounts transferred to other facilities.