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EXECUTIVE COMMITTEE OF  
 THE MULTILATERAL FUND FOR THE  
 IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Eighty-eighth Meeting

Montreal, 15-19 November 2021[[1]](#footnote-1)

**COUNTRY PROGRAMME DATA AND PROSPECTS FOR COMPLIANCE**

# **Introduction**

# A total of 147 countries are currently classified as Article 5 (A5) Parties, including the Republic of Korea, Singapore, and the United Arab Emirates. These three countries[[2]](#footnote-2) 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]](#footnote-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 ODS production and consumption trends.

# 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)). Table 1 summarizes data reports submitted by A5 Parties between 2013 and 2020. All countries that submitted requests for funding to the 88th meeting also submitted 2020 CP data.

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Data** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
| A7 (as of 6 October 2021) | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 130 |
| CP (as of 8 October 2021) | 145 | 144\* | 144 | 144 | 144 | 144 | 144 | 131\*\* |

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

\*\* Except for Central African Republic (the), Cote d'Ivoire, Cuba, Guinea, Mali, Mauritania, Myanmar, Saint Kitts and Nevis, Seychelles, South Africa, South Sudan, Suriname and Venezuela (Bolivarian Republic of).

Scope of the document

# This document consists of the following three parts:

## Part 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 CFC, halon, carbon tetrachloride (CTC), methyl bromide (MB) and methyl chloroform (TCA), and 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. It assumes that the latest consumption reported under A7 or CP data reports has taken into account the phase-out from completed projects.[[4]](#footnote-4) This section also provides data on HFC under A7 or CP data reports

## Part II: A5 countries subject to decisions on compliance by the Parties

## Part III: Analysis of CP data for HCFCs[[5]](#footnote-5) and HFCs:[[6]](#footnote-6) Regarding HCFCs, this section presents an analysis on the data contained in CP data reports, including HCFC production versus consumption, sector distribution of HCFCs, prices of controlled substances and alternative substances, and issues related to CP reports. Regarding HFCs, this section presents an analysis on consumption data contained in the 2020 CP data reports. Out of the 131 CP data reports for 2020 submitted, 89 reports contained HFC data.

# This document also includes the following three annexes:

Annex I: MB consumption and production for quarantine and pre‑shipment (QPS) applications

Annex II: HCFC analysis

Annex III: HFC data (measured in CO2-equivalent)

PART I: STATUS OF AND PROSPECTS FOR COMPLIANCE OF A5 COUNTRIES

# **Licensing and quota systems**

# 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. Sixty-two (39 low‑volume‑consuming (LVC) and 23 non-LVC countries) of the 88 countries that have ratified the Kigali Amendment have established a HFC licensing system.

**Production and consumption**

# The complete phase-out of production and consumption of CFC, halon, 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 Parties. Therefore, Annex C Group I (HCFCs) substances and Annex F (for those A5 countries that had ratified the Kigali Amendment) are the only substances under the Montreal Protocol where consumption and production is still allowed.

Production sector[[7]](#footnote-7)

# MB is produced in one A5 country (China).[[8]](#footnote-8) 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.[[9]](#footnote-9) In 2019, zero ODP tonnes of MB were produced.

# 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 32.6 per cent below the aggregated production baseline.

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

| **Party** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **Baseline** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **HCFC-22** |  |  |  |  |  |  |  |  |  |  |
| Argentina | 230.5 | 107.3 | 125.7 | 134.5 | 95.8 | 100.3 | 65.6 | 88.3 | 66.3 | 224.6 |
| China | 20,050.1 | 15,866.9 | 16,497.0 | 13,391.0 | 14,086.3 | 13,445.7 | 13,636.4 | 13,598.2 | \*\* | 29,122.0\* |
| Democratic People's Republic of Korea (the) | 28.7 | 31.8 | 28.9 | 27.4 | 24.8 | 24.8 | 24.8 | 27.0 | 27.0 | 27.6 |
| India | 1,565.4 | 1,352.1 | 1,465.7 | 1,727.6 | 1,665.5 | 1,789.5 | 1,908.0 | 1,933.1 | 1,354.8 | 2,399.5 |
| Mexico | 298.3 | 317.1 | 223.5 | 160.9 | 166.8 | 190.1 | 183.8 | 134.8 | 20.2 | 697.0 |
| Republic of Korea | 306.7 | 357.6 | 364.7 | 348.9 | 240.3 | 305.6 | 289.9 | 271.5 | 254.3 | 395.1 |
| Venezuela (Bolivarian Republic of) | 160.3 | 121.2 | 86.1 | 37.2 | 14.3 | 15.0 | 1.9 | 0.0 | # | 123.1 |
| Total HCFC-22 | 22,639.9 | 18,153.9 | 18,791.7 | 15,827.6 | 16,293.8 | 15,871.0 | 16,110.3 | 16,052.9 | 1,722.6 | 32,988.9 |
| **HCFC-141b** |  |  |  |  |  |  |  |  |  |  |
| China | 12,884.4 | 9,583.6 | 9,560.2 | 7,246.5 | 7,278.2 | 7,076.8 | 6,321.1 | 6,101.6 | # | \* |
| **HCFC-142b** |  |  |  |  |  |  |  |  |  |  |
| China | 1,440.4 | 1,102.0 | 1,076.8 | 1,224.3 | 1,110.5 | 1,115.5 | 756.3 | 816.0 | # | \* |
| **Total** | **36,964.7** | **28,839.6** | **29,428.6** | **24,298.3** | **24,682.5** | **24,063.3** | **23,187.8** | **22,970.4** | **1,722.6** | **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 6 October 2021, A7 data for China and Venezuela (Bolivarian Republic of) have not been submitted.

# An HCFC production phase-out management plan (HPPMP) was approved for one country (China).[[10]](#footnote-10) One A5 country (the Democratic People’s Republic of Korea) has reported 26.95 ODP tonnes of HCFC production for the year 2020 which was in compliance with the plan of action in decision XXXII/6. Funding has not been approved for the HCFC production sector for this country.

Consumption sector

# *CFC, halon, CTC, MB and TCA*

# All A5 countries have reported zero consumption of CFC, halon and TCA in 2019 or 2020.

# Only two A5 countries have reported CTC consumption in 2020 for laboratory and analytical‑use (Mexico (0.1 ODP tonnes) and (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 until 31 December 2021 (decision XXVI/5).

# Only two A5 countries[[11]](#footnote-11) have reported MB consumption in 2019 or 2020, as shown in Table 3. Although their consumption was above the 2015 Montreal Protocol compliance target, the Parties approved consumption of MB for critical uses for these countries.

**Table 3. MB consumption reported by A5 countries (ODP tonnes)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **Source** | **Year of latest consumption** | **Baseline** | **Latest consumption** |
| Argentina\* | A7 | 2020 | 411.3 | 12.3 |
| South Africa\*\* | A7 | 2019 | 602.7 | 24.6 |

**\*** Allowable level of consumption of 12.37 ODP tonnes for 2020 per decision XXXI/4.

**\*\*** Allowable level of consumption of 24.60 ODP tonnes for 2019 per decision XXX/9.

# Thirty-seven A5 countries reported MB consumption and two A5 countries reported MB production for QPS applications under A7 data, as shown in Annex I to the present document. The consumption for these applications is not eligible for funding.

# ***HCFC consumption***

# A total of 147 A5 countries have an established HCFC baseline for compliance, with an aggregated latest consumption level of 21,047.9 ODP tonnes (333,443.1 metric tonnes), as shown in Table 4. The three main HCFCs are: HCFC‑22 (71.3 per cent of the total consumption measured in ODP tonnes), HCFC‑141b (25.4 per cent) and HCFC-142b (3.1 per cent).

**Table 4. Baseline and latest 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 | 1,751.8 | 35.0 | 75.0 |
| HCFC-124 | 1,270.7 | 28.0 | 128.0 | 2.8 | 10.1 |
| HCFC-141b | 107,871.6 | 11,865.9 | 48,596.7 | 5,345.6 | 45.1 |
| HCFC-142b | 33,195.5 | 2,157.7 | 10,131.1 | 658.5 | 30.5 |
| HCFC-22 | 394,654.7 | 21,706.0 | 272,834.9 | 15,005.9 | 69.1 |
| HCFC-225 | 30.4 | 2.1 | 0.1 | 0.0 | 0.2 |
| HCFC-225ca | 70.0 | 1.8 | 0.3 | 0.0 | 0.4 |
| HCFC-225cb | 20.9 | 0.7 | 0.3 | 0.0 | 1.5 |
| **Total** | **539,450.8** | **35,808.9** | **333,443.1** | **21,047.9** | **58.8** |

\* Including Republic of Korea (1,229.1 ODP tonnes), Singapore (76.1 ODP tonnes) and the United Arab Emirates (353.6 ODP tonnes).

# Two A5 countries have reported HCFC consumption above the 2020 Montreal Protocol compliance target in 2020 (the Central African Republic and the Democratic People’s Republic of Korea[[12]](#footnote-12)). Stage I of the HCFC phase-out management plan (HPMP) for the Central African Republic was cancelled at the 82nd meeting due to security issues in the country impeding the continuation of the HPMP implementation. UNEP informed that it is assisting the country to address the issue relating to HCFC consumption exceeding the compliance target in 2020. The Democratic People’s Republic of Korea’s has reported 2020 consumption of 63.75 ODP tonnes which was in compliance with the plan of action in decision XXXII/6. UNIDO submitted a progress report on the implementation of stage I of the HPMP for the Democratic People’s Republic of Korea at the 85th meeting.[[13]](#footnote-13)

*HCFC phase-out management plans*

# All 145 countries have received financial assistance for the preparation of project proposals to phase out HCFCs. As a result, the Executive Committee has approved stage I of the HPMPs for 145 countries,[[14]](#footnote-14) stage II for 84 countries and stage III for four countries, at a total value of US $1.13 billion (approved in principle) of which US $907.4 million has been disbursed to address compliance with the Montreal Protocol control levels as follows:

## One non‑LVC country (Qatar) to address compliance up to 2015. This country has submitted a request for stage II at the 88th meeting;[[15]](#footnote-15) it is in compliance with the Montreal Protocol;

## Fifty-three countries (31 LVC and 22 non-LVC countries), to address compliance up to 2020;

## Twenty-eight countries to address compliance up to 2025; and

## Sixty countries (Belize, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Brunei Darussalam, Cambodia, the Cook Islands, Costa Rica, Cuba, the Dominican Republic, Croatia,[[16]](#footnote-16) Ecuador, El Salvador, Eswatini (the Kingdom of), the Gambia, Ghana, Guatemala, Guyana, Honduras, Jamaica, Kenya, Kiribati, Kyrgyzstan, the Lao People's Democratic Republic, Lesotho, Malawi, Maldives, the Marshall Islands, Mauritius, Micronesia (Federated States of), Mongolia, Montenegro, Namibia, Nauru, Nepal, Nicaragua, Niue, Palau, Panama, Papua New Guinea, Paraguay, Rwanda, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Seychelles, Sierra Leone, Solomon Islands, Sri Lanka, Tonga, Trinidad and Tobago, Turkey, Tuvalu, Uganda, the United Republic of Tanzania, Uruguay, Vanuatu, Zambia and Zimbabwe), to completely phase out HCFCs between 2020 and 2035.

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

*Remaining HCFC consumption*

# Implementation of approved stages I, II and III of the HPMPs will result in the phase-out of approximately 72 per cent of the starting point for aggregate reduction of HCFC consumption and 86 per cent of the consumption of HCFC‑141b contained in imported pre-blended polyols. Table 5 shows the aggregate remaining HCFC consumption[[17]](#footnote-17) by type of HCFC 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 | 30.25 | 9.11 | 20.84 | 30.1 |
| HCFC-124 | 26.42 | 26.10 | 2.32 | 23.78 | 8.9 |
| HCFC-141 | 0.94 | 0.94 | 0.94 | 0.00 | 100.0 |
| HCFC-141b | 10,668.24 | 10,676.36 | 10,475.89 | 200.47 | 98.1 |
| HCFC-142b | 2,000.80 | 2,016.90 | 1,379.44 | 637.46 | 68.4 |
| HCFC-21 | 0.74 | 0.74 | 0.74 | 0.00 | 100.0 |
| HCFC-22 | 20,424.65 | 19,851.51 | 11,503.45 | 8,250.53 | 57.9 |
| HCFC-225 | 2.82 | 2.82 | 1.13 | 1.69 | 40.1 |
| HCFC-225ca | 0.42 | 0.42 | 0.00 | 0.42 | 0.0 |
| HCFC-225cb | 0.68 | 0.68 | 0.00 | 0.68 | 0.0 |
| **Total** | **33,157.61** | **32,606.72** | **23,373.02** | **9,135.87** | **71.7** |
| HCFC-141b polyol\*\* | 0.00 | 657.20 | 563.43 | 90.53 | 85.7 |

\* As of the 87th meeting.

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

*HFC consumption*

# Of the 147 A5 countries, 108 countries have reported HFC data in 2018, 2019 or 2020. Eighty-two of the 108 countries have ratified the Kigali Amendment. Annex III to the present document includes information on the latest reported HFC consumption data (measured in CO2-equivalent) for these 108 countries.

## **PART II: A5 COUNTRIES SUBJECT TO DECISIONS ON COMPLIANCE**

# At their Thirty-Second Meeting, the Parties to the Montreal Protocol found one A5 country (the Democratic People’s Republic of Korea)[[18]](#footnote-18) in non-compliance with its obligations under the Montreal Protocol.

**PART III: DATA ON THE IMPLEMENTATION OF CPs FOR HCFCs AND HFCs**

**HCFC data**

**HCFC production versus consumption**

# Since 2011, the reported levels of the three main HCFCs produced in A5 countries have been above the levels of consumption except for HCFC‑142b in 2011, as shown in Table 6.

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

| **HCFC** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Production** | | | | | | | | | | |
| HCFC-22 | 21,665.7 | 23,552.4 | 18,769.0 | 19,816.3 | 16,782.6 | 16,191.2 | 15,725.9 | 16,061.3 | 15,959.3 | 12,583.5 |
| HCFC-141b | 12,311.5 | 12,884.4 | 9,583.6 | 9,560.2 | 7,246.5 | 7,278.2 | 7,076.8 | 6,321.1 | 6,101.6 | 4,623.3 |
| HCFC-142b | 1,759.8 | 1,440.4 | 1,102.0 | 1,076.8 | 1,224.3 | 1,110.5 | 1,115.5 | 756.3 | 816.0 | 418.3 |
| **Consumption** | | | | | | | | | | |
| HCFC-22 | 19,847.6 | 22,581.7 | 17,817.0 | 17,399.4 | 15,289.4 | 15,497.0 | 15,184.7 | 15,196.5 | 14,946.5 | 11,810.9 |
| HCFC-141b | 11,978.2 | 11,735.9 | 8,981.3 | 8,348.3 | 6,772.5 | 6,384.9 | 6,312.2 | 5,726.0 | 5,532.2 | 3,695.6 |
| HCFC-142b | 1,827.9 | 1,439.4 | 1,014.5 | 761.0 | 890.8 | 726.2 | 774.3 | 430.1 | 486.7 | 179.5 |
| **Production – consumption** | | | | | | | | | | |
| HCFC-22 | 1,818.1 | 970.7 | 952.0 | 2,416.9 | 1,493.2 | 694.2 | 541.2 | 864.8 | 1,012.8 | 772.6 |
| HCFC-141b | 333.3 | 1,148.5 | 602.3 | 1,211.9 | 474.0 | 893.3 | 764.6 | 595.1 | 569.4 | 927.7 |
| HCFC-142b | (68.1) | 1.0 | 87.5 | 315.8 | 333.5 | 384.3 | 341.2 | 326.2 | 329.3 | 238.8 |

**Sector distribution of HCFC consumption**

# Table 7 presents the sector distribution of aggregated HCFC consumption for the period 2011 to 2020, where countries are grouped as follows: China, as the largest consumer (and producer) of HCFCs; the 14 largest consuming countries (excluding China);[[19]](#footnote-19) and all other countries. In 2020, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were the refrigeration servicing (41.5 per cent of the total), foam (31.0 per cent of the total) and the refrigeration manufacturing sectors (25.2 per cent). As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more relevant.

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

| **Sector** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **China** | | | | | | | | | | |
| Aerosol | 70.5 | 95.4 | 137.8 | 186.2 | 180.4 | 189.4 |  | 154.0 | 163.7 |  |
| Foam | 9,576.0 | 9,031.0 | 7,473.9 | 7,404.0 | 5,522.7 | 5,872.8 | 6,220.8 | 5,679.4 | 5,669.2 | 4,241.9 |
| Fire-fighting |  |  |  |  |  |  |  |  |  |  |
| Refrigeration manufacturing | 6,740.3 | 6,586.7 | 6,014.3 | 5,602.0 | 4,951.7 | 5,107.1 | 5,106.2 | 4,856.9 | 4,746.9 | 3,149.4 |
| Refrigeration servicing | 3,827.0 | 4,857.8 | 3,103.8 | 3,161.7 | 2,412.0 | 2,638.3 | 2,881.4 | 3,316.8 | 3,258.3 | 2,984.4 |
| Solvent | 514.1 | 524.1 | 466.0 | 484.8 | 418.5 | 413.4 | 397.0 | 375.1 | 385.0 | 308.0 |
| **Total for China** | **20,727.8** | **21,094.9** | **17,195.8** | **16,838.7** | **13,485.3** | **14,221.1** | **14,605.4** | **14,382.3** | **14,223.2** | **10,683.7** |
| **14 largest A5 consuming countries\*** | | | | | | | | | | |
| Aerosol | 82.8 | 75.0 | 123.8 | 19.3 | 87.3 | 42.4 | 5.5 | 26.9 | 7.8 | 1.1 |
| Foam | 3,517.3 | 3,867.4 | 2,645.6 | 2,153.0 | 2,077.0 | 1,572.7 | 1,501.9 | 1,275.5 | 1,058.7 | 349.0 |
| Fire-fighting | 9.8 | 6.0 | 5.4 | 4.0 | 4.0 | 4.2 | 4.9 | 2.3 | 2.9 | 2.2 |
| Refrigeration manufacturing | 2,674.2 | 3,142.9 | 2,233.7 | 1,932.1 | 1,862.6 | 1,473.8 | 1,291.6 | 1,238.6 | 1,010.0 | 788.0 |
| Refrigeration servicing | 3,246.7 | 4,213.6 | 3,029.3 | 3,008.3 | 3,148.6 | 3,262.9 | 2,805.0 | 2,615.4 | 2,835.3 | 2,430.8 |
| Solvent | 80.0 | 76.3 | 43.3 | 38.5 | 37.1 | 29.6 | 53.9 | 47.5 | 62.7 | 56.2 |
| **Total 14 largest consuming countries** | **9,610.8** | **11,381.3** | **8,081.1** | **7,155.3** | **7,216.7** | **6,385.6** | **5,662.8** | **5,206.3** | **4,977.3** | **3,627.2** |
| **129 remaining A5 countries** | | | | | | | | | | |
| Aerosol | 0.1 | 0.2 | 0.7 | 0.4 | 0.3 | 0.1 | 0.5 |  |  |  |
| Foam | 1,061.5 | 1,258.8 | 963.2 | 916.0 | 869.0 | 826.9 | 731.2 | 497.5 | 472.7 | 379.9 |
| Fire-fighting | 9.4 | 13.3 | 8.6 | 11.2 | 14.0 | 11.1 | 7.7 | 3.2 | 4.4 | 1.4 |
| Refrigeration manufacturing | 703.8 | 400.7 | 314.3 | 290.2 | 248.9 | 236.1 | 217.3 | 178.7 | 180.0 | 100.4 |
| Refrigeration servicing | 2,178.1 | 2,372.2 | 1,995.8 | 2,011.0 | 1,861.3 | 1,695.3 | 1,610.1 | 1,556.0 | 1,503.0 | 1,243.8 |
| Solvent | 38.0 | 34.1 | 5.2 | 3.5 | 4.9 | 5.1 | 3.1 | 3.2 | 3.3 | 0.3 |
| **Total 129 remaining A5 countries** | **3,990.8** | **4,079.3** | **3,287.7** | **3,232.3** | **2,998.3** | **2,774.7** | **2,569.9** | **2,238.6** | **2,163.3** | **1,725.9** |
| **All A5 countries** | | | | | | | | | | |
| Aerosol | 153.4 | 170.5 | 262.2 | 205.9 | 268.0 | 232.0 | 6.0 | 180.9 | 171.5 | 1.1 |
| Foam | 14,154.8 | 14,157.2 | 11,082.6 | 10,473.0 | 8,468.7 | 8,272.4 | 8,453.8 | 7,452.5 | 7,200.6 | 4,970.8 |
| Fire-fighting | 19.1 | 19.4 | 14.1 | 15.2 | 18.0 | 15.2 | 12.6 | 5.6 | 7.3 | 3.6 |
| Refrigeration manufacturing | 10,118.3 | 10,130.3 | 8,562.2 | 7,824.3 | 7,063.2 | 6,817.0 | 6,615.1 | 6,274.2 | 5,936.9 | 4,037.9 |
| Refrigeration servicing | 9,251.8 | 11,443.6 | 8,128.9 | 8,181.0 | 7,422.0 | 7,596.5 | 7,296.5 | 7,488.3 | 7,596.6 | 6,659.0 |
| Solvent | 632.0 | 634.5 | 514.5 | 526.9 | 460.4 | 448.2 | 454.0 | 425.8 | 450.9 | 364.5 |
| **Total all A5 countries** | **34,329.4** | **36,555.5** | **28,564.6** | **27,226.3** | **23,700.4** | **23,381.4** | **22,838.1** | **21,827.2** | **21,363.8** | **16,036.9** |
| % of total for China | 60.4 | 57.7 | 60.2 | 61.8 | 56.9 | 60.8 | 64.0 | 65.9 | 66.6 | 66.6 |
| % of total for 14 largest A5 consuming countries | 28.0 | 31.1 | 28.3 | 26.3 | 30.4 | 27.3 | 24.8 | 23.9 | 23.3 | 22.6 |
| % of total for 129 remaining A5 countries | 11.6 | 11.2 | 11.5 | 11.9 | 12.7 | 11.9 | 11.3 | 10.3 | 10.1 | 10.8 |

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

# 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** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **HCFC-22** | | | | | | | | | | |
| Aerosol | 103.9 | 124.9 | 116.4 | 129.5 | 134.2 | 132.0 | 0.3\*\*\*\* | 102.3 | 91.1 |  |
| Foam\* | 1,725.7 | 2,079.2 | 1,805.6 | 1,731.9 | 1,177.3 | 1,518.5 | 1,687.2 | 1,682.3 | 1,616.4 | 1,328.6 |
| Fire-fighting | 6.2 | 0.1 |  |  |  |  |  |  |  |  |
| Refrigeration manufacturing | 9,270.7 | 9,474.9 | 8,012.7 | 7,518.0 | 6,747.4 | 6,590.5 | 6,330.0 | 5,999.0 | 5,760.1 | 3,897.8 |
| Refrigeration servicing | 8,711.8 | 10,873.6 | 7,882.3 | 8,019.8 | 7,229.8 | 7,255.5 | 7,166.7 | 7,412.5 | 7,478.5 | 6,584.2 |
| Solvent | 29.3 | 29.0 |  | 0.3 | 0.7 | 0.6 | 0.4 | 0.4 | 0.4 | 0.3 |
| **Total HCFC-22** | **19,847.6** | **22,581.7** | **17,817.0** | **17,399.4** | **15,289.4** | **15,497.0** | **15,184.7** | **15,196.5** | **14,946.5** | **11,810.9** |
| **HCFC-141b** | | | | | | | | | | |
| Aerosol | 49.4 | 45.4 | 145.8 | 76.4 | 132.0 | 99.9 | 5.7\*\*\*\* | 78.7 | 80.4 | 1.1 |
| Foam | 10,412.3 | 10,355.0 | 7,712.9 | 7,394.0 | 5,828.1 | 5,522.9 | 5,547.5 | 4,943.4 | 4,814.0 | 3,181.6 |
| Fire-fighting | 6.0 | 9.3 | 6.7 | 7.6 | 9.3 | 5.2 | 6.3 | 1.8 | 3.0 | 0.7 |
| Refrigeration manufacturing\*\* | 814.7 | 629.6 | 529.6 | 282.9 | 294.2 | 204.8 | 264.9 | 255.8 | 159.7 | 125.6 |
| Refrigeration servicing | 98.7 | 96.4 | 75.7 | 66.5 | 54.6 | 108.8 | 37.1 | 26.4 | 28.0 | 22.7 |
| Solvent | 597.1 | 600.2 | 510.6 | 521.0 | 454.4 | 443.3 | 450.8 | 420.0 | 447.1 | 363.9 |
| **Total HCFC‑141b** | **11,978.2** | **11,735.9** | **8,981.3** | **8,348.3** | **6,772.5** | **6,384.9** | **6,312.2** | **5,726.0** | **5,532.2** | **3,695.6** |
| **HCFC-142b** | | | | | | | | | | |
| Aerosol | 0.1 | 0.2 | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Foam\*\*\* | 1,401.7 | 990.2 | 863.7 | 686.2 | 773.8 | 608.3 | 701.0 | 398.5 | 412.3 | 134.7 |
| Fire-fighting |  |  |  |  |  |  |  |  |  |  |
| Refrigeration manufacturing | 11.1 | 7.8 | 6.5 | 8.0 | 7.2 | 6.9 | 6.1 | 5.9 | 5.9 | 4.2 |
| Refrigeration servicing | 414.7 | 441.3 | 144.4 | 66.7 | 107.9 | 110.9 | 67.3 | 25.7 | 68.5 | 40.6 |
| Solvent | 0.3 |  |  |  |  |  |  |  |  |  |
| **Total HCFC‑142b** | **1,827.9** | **1,439.4** | **1,014.5** | **761.0** | **890.8** | **726.2** | **774.3** | **430.1** | **486.7** | **179.5** |
| **Other HCFCs** | 675.7 | 798.5 | 751.7 | 717.6 | 747.8 | 773.3 | 566.8 | 474.6 | 398.4 | 350.9 |
| **Total** | **34,329.4** | **36,555.5** | **28,564.6** | **27,226.3** | **23,700.4** | **23,381.4** | **22,838.1** | **21,827.2** | **21,363.8** | **16,036.9** |

\* 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).

**HFC data**

# At its 84th meeting, the Executive Committee *inter alia* approved the revised CP data format to include Annex F (HFC) substances noting that the revised format would be used starting in 2020 for 2019 CP data reporting, with a trial period from 2020 to 2022,[[20]](#footnote-20) and requested the Secretariat to revise Section B1 for data reporting on manufacturing of blends containing Annex F substances for consideration at the 85th meeting. [[21]](#footnote-21)

# In line with the revised CP data report format, the document on Country programme data and prospects for compliance submitted to the 86th meeting,[[22]](#footnote-22) presented the first analysis of HFC data reported by A5 Parties under their CP data or A7 data reports. It included an analysis of the sectoral distribution of all reported HFCs measured in metric tonnes and CO2 equivalent. It also included an analysis of the trend in the consumption of HFCs reported by A5 Parties under the surveys of ODS alternatives carried out in line with decision 79/43.[[23]](#footnote-23)

# The present document presents an analysis of the HFC consumption reported by the 89 A5 Parties under their CP data reports for 2020. Of the 131 countries which submitted 2020 CP data as of 8 October 2021, 82 countries have ratified the Kigali Amendment. Only 71 of the 82 countries have provided HFC data in their 2020 CP reports on time for this analysis. In addition, 18 countries that have not ratified the Kigali Amendment have provided HFC data in their 2020 CP reports.

# The sector distribution of aggregated HFC consumption for the 88 countries[[24]](#footnote-24) that have submitted 2020 CP data is presented in Table 9. Of these 88 countries, 58 are LVC countries and they account for 62.2 per cent of the aggregated HCFC baseline for all LVC countries; 30 are non-LVC countries and they account for 16.5 per cent of the HCFC baselines for all non-LVC countries. The HFC data reported by LVC and non-LVC countries account for 8.9 per cent and 91.1 per cent, respectively of the total HFC consumption data reported for the year 2020.

**Table 9. Sector distribution of HFCs consumed in 2020 (metric tonnes)**

| **HFC** | **Aerosol** | **Foam** | **Fire fighting** | **Refrigeration manufacturing** | | | **Ref. servicing** | **Solvent** | **Other** | **Total\*\*\*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Other** | **AC** | **Total\*** |
| HFC-125 |  |  | 435.5 | 7.5 | 593.6 |  | 1,624.3 |  | 186.8 | 3,310.9 |
| HFC-134a | 1,865.4 | 1,055.8 |  | 4,587.3 | 5,995.6 | 2,734.5 | 29,710.2 |  | 866.3 | 46,815.0 |
| HFC-143a |  |  |  | 54.0 |  |  | 241.3 |  | 208.9 | 504.2 |
| HFC-152a | 3,350.4 | 1,443.4 |  | 18.4 |  |  | 127.3 |  | 29.7 | 4,969.1 |
| HFC-227ea | 0.3 |  | 785.2 |  |  |  | 5.5 |  | 47.8 | 838.8 |
| HFC-23 (use)\*\* |  |  | 21.8 | 0.8 |  |  | 2.2 | 1.0 | 1.0 | 27.2 |
| HFC-236fa |  |  | 79.6 |  |  |  |  |  |  | 79.6 |
| HFC-245fa |  | 144.4 |  |  |  |  |  |  | 77.2 | 221.6 |
| HFC-32 |  |  |  |  | 4,640.6 | 9.9 | 2,319.9 |  | 185.9 | 7,694.7 |
| HFC-365mfc | 4.8 | 113.3 | 192.0 |  |  |  |  |  |  | 310.1 |
| HFC-43-10mee |  |  |  |  |  |  |  | 81.3 | 1.7 | 83.0 |
| R-404A |  |  |  | 1,245.6 | 708.0 | 184.7 | 7,954.8 |  | 221.4 | 10,314.5 |
| R-407A |  |  |  | 5.5 | 4.5 | 0.0 | 95.5 |  |  | 105.6 |
| R-407C |  |  |  | 116.2 | 149.0 | 81.7 | 2,611.7 |  | 49.6 | 3,008.3 |
| R-407F |  |  |  |  |  | 25.5 | 81.5 |  |  | 107.1 |
| R-410A |  |  |  | 80.5 | 16,815.3 | 743.0 | 13,729.7 |  | 216.4 | 31,584.8 |
| R-413A |  |  |  |  |  |  | 122.5 |  |  | 122.5 |
| R-417A |  |  |  |  | 0.0 | 1.0 | 211.4 |  | 2.7 | 215.1 |
| R-417B |  |  |  |  |  |  | 156.5 |  |  | 156.5 |
| R-422A |  |  |  |  |  |  | 9.3 |  |  | 9.3 |
| R-422B |  |  |  |  |  |  | 1.1 |  |  | 1.1 |
| R-422D |  |  |  |  |  |  | 161.5 |  |  | 161.5 |
| R-427A |  |  |  |  |  |  | 45.3 |  |  | 45.3 |
| R-437A |  |  |  |  |  |  | 208.5 |  |  | 208.5 |
| R-438A |  |  |  |  |  |  | 85.3 |  | 1.5 | 86.7 |
| R-448A |  |  |  |  |  | 1.2 | 64.2 |  |  | 66.4 |
| R-449A |  |  |  |  |  | 0.6 | 27.0 |  |  | 27.6 |
| R-449C |  |  |  |  |  |  | 3.1 |  | 0.2 | 3.2 |
| R-451A |  |  |  |  |  |  | 1.8 |  |  | 1.8 |
| R-452A |  |  |  |  |  |  | 3.7 |  |  | 5.2 |
| R-453A |  |  |  |  |  |  | 1.3 |  |  | 1.3 |
| R-454B |  |  |  |  |  |  | 0.0 |  |  | 0.0 |
| R-455A |  |  |  |  |  |  | 0.3 |  |  | 0.3 |
| R-507A |  |  |  | 38.2 |  | 218.2 | 1,392.3 |  | 488.8 | 2,137.8 |
| R-508B |  |  |  | 108.4 |  | 0.1 | 27.3 |  | 0.0 | 135.8 |
| R-513A |  |  |  |  |  |  | 16.1 |  |  | 16.1 |
| HFC-227ea in imported pre-blended polyol |  | 1.4 |  |  |  |  |  |  |  | 1.4 |
| HFC-245fa in imported pre-blended polyol |  | 116.1 |  |  |  |  |  |  |  | 116.1 |
| HFC-365mfc in imported pre-blended polyol |  | 50.6 |  |  |  | 2.5 | 2.6 |  |  | 55.6 |
| Other HFCs[[25]](#footnote-25) |  | 637.0 | 0.0 | 0.0 | 0.0 | 0.0 | 277.1 | 0.3 | 14.3 | 928.8 |
| **Total** | **5,220.8** | **3,562.1** | **1,514.1** | **6,262.2** | **28,906.6** | **4,002.9** | **61,322.0** | **82.6** | **2,600.1** | **114,478.6** |
| **LVC** |  | **236.8** | **8.6** | **124.1** |  | **307.3** | **9,441.0** |  | **20.6** | **10,139.8** |
| **Non-LVC** | **5,220.8** | **3,325.3** | **1,505.5** | **6,138.1** | **28,906.6** | **3,695.6** | **51,881.0** | **82.6** | **2,579.6** | **104,338.8** |

\*If break-down of consumption in manufacturing is not available, information is provided in column “Total”.

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

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

# In 2020, the five sectors with the largest consumption of HFCs (measured in metric tonnes) were the refrigeration servicing (53.6 per cent of the total), refrigeration manufacturing – air-conditioning (AC) (25.3 per cent), refrigeration manufacturing – others (5.5 per cent), aerosol (4.6 per cent) and foam (3.1 per cent).

# The sector distribution of aggregated HFC consumption in CO2-equivalent is presented in Table 10. R-404A, HFC-125, HFC-134a, R-507A and R-410A account for 89 per cent of the total consumption in CO2‑equivalent; refrigeration servicing, refrigeration manufacturing – AC, and refrigeration manufacturing – others, account for 57.3 percent, 23.9 per cent and 6.3 per cent of the total consumption, respectively.

**Table 10. Sector distribution of HFCs consumed in 2020 (‘000 tons CO2-equivalent)**

| **HFC** | **Aerosol** | **Foam** | **Fire fighting** | **Refrigeration manufacturing** | | | **Ref. servicing** | **Solvent** | **Other** | **Total\*\*\*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Other** | **AC** | **Total\*** |
| HFC-125 |  |  | 1,524.1 | 26.1 | 2,077.4 |  | 5,685.1 |  | 653.6 | 11,588.0 |
| HFC-134a | 2,667.5 | 1,509.9 |  | 6,559.8 | 8,573.7 | 3,910.4 | 42,485.6 |  | 1,238.8 | 66,945.5 |
| HFC-143a | 0.0 |  |  | 241.4 |  |  | 1,078.6 |  | 933.8 | 2,253.8 |
| HFC-152a | 415.4 | 179.0 |  | 2.3 |  |  | 15.8 |  | 3.7 | 616.2 |
| HFC-227ea | 1.0 |  | 2,528.3 |  |  |  | 17.8 |  | 154.0 | 2,701.0 |
| HFC-23 (use)\*\* |  |  | 323.1 | 11.3 |  |  | 32.9 | 15.1 | 15.2 | 402.0 |
| HFC-236fa |  |  | 781.3 |  |  |  |  |  |  | 781.3 |
| HFC-245fa |  | 148.7 |  |  |  |  |  |  | 79.5 | 228.2 |
| HFC-32 |  |  |  |  | 3,132.4 | 6.6 | 1,565.9 |  | 125.4 | 5,193.9 |
| HFC-365mfc | 3.8 | 90.0 | 152.4 |  |  |  |  |  |  | 246.2 |
| HFC-43-10mee |  |  |  |  |  |  |  | 132.8 | 2.8 | 135.6 |
| R-404A |  |  |  | 4,885.3 | 2,776.9 | 724.5 | 31,198.6 |  | 868.3 | 40,453.5 |
| R-407A |  |  |  | 11.6 | 9.5 | 0.1 | 201.3 |  |  | 222.5 |
| R-407C |  |  |  | 206.1 | 264.4 | 145.0 | 4,633.1 |  | 88.1 | 5,336.6 |
| R-407F |  |  |  |  |  | 46.6 | 148.7 |  | 0.0 | 195.4 |
| R-410A |  |  |  | 168.0 | 35,110.4 | 1,551.3 | 28,667.5 |  | 451.8 | 65,949.1 |
| R-413A |  |  |  |  |  |  | 251.5 |  |  | 251.5 |
| R-417A |  |  |  |  |  | 2.3 | 496.1 |  | 6.4 | 504.7 |
| R-417B |  |  |  |  |  |  | 473.8 |  |  | 473.8 |
| R-422A |  |  |  |  |  |  | 29.4 |  |  | 29.4 |
| R-422B |  |  |  |  |  |  | 2.7 |  |  | 2.7 |
| R-422D |  |  |  |  |  |  | 440.7 |  |  | 440.7 |
| R-427A |  |  |  |  |  |  | 96.8 |  |  | 96.8 |
| R-437A |  |  |  |  |  |  | 376.4 |  |  | 376.4 |
| R-438A |  |  |  |  |  |  | 193.1 |  | 3.3 | 196.4 |
| R-448A |  |  |  |  |  | 1.7 | 89.0 |  |  | 92.0 |
| R-449A |  |  |  |  |  | 0.9 | 38.0 |  |  | 38.9 |
| R-449C |  |  |  |  |  |  | 3.8 |  | 0.2 | 4.1 |
| R-451A |  |  |  |  |  |  | 0.3 |  |  | 0.3 |
| R-452A |  |  |  |  |  |  | 8.0 |  |  | 8.0 |
| R-453A |  |  |  |  |  |  | 2.3 |  |  | 2.3 |
| R-454B |  |  |  |  |  |  | 0.02 |  |  | 0.0 |
| R-455A |  |  |  |  |  |  | 0.04 |  |  | 0.0 |
| R-507A |  |  |  | 152.1 |  | 869.4 | 5,548.3 |  | 1,947.7 | 8,519.0 |
| R-508B |  |  |  | 1,451.5 |  | 1.7 | 366.0 |  | -0.1 | 1,819.2 |
| R-513A |  |  |  |  |  |  | 10.1 |  |  | 10.1 |
| HFC-227ea in imported pre-blended polyol |  | 4.6 |  |  |  |  |  |  |  | 4.6 |
| HFC-245fa in imported pre-blended polyol |  | 119.6 |  |  |  |  |  |  |  | 119.6 |
| HFC-365mfc in imported pre-blended polyol |  | 40.2 |  |  |  | 1.9 | 2.1 |  |  | 44.2 |
| Other HFCs[[26]](#footnote-26) |  | 613.6 |  |  |  |  | 379.5 | 0.4 | 6.7 | 1,000.2 |
| **Grand Total** | **3,087.7** | **2,705.6** | **5,309.2** | **13,715.5** | **51,944.6** | **7,262.3** | **124,538.7** | **148.3** | **6,579.4** | **217,284.0** |

\*If break-down of consumption in manufacturing is not available, information is provided in column “Total”.

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

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

# In 2020, the most consumed HFCs including blends were HFC-134a (34.1 per cent), R-404A (31.1 per cent), R-410A (16.4 per cent), R-507A (7.5 per cent) and R‑407C (3.8per cent) for LVC countries, and R-410A (31.9 per cent of the total), HFC-134a (30.4 per cent), R-404A (17.2 per cent), and HFC-125 (5.9 per cent) for non-LVC countries.

# In addition, 13 countries (three LVC and ten non-LVC countries) reported a total consumption of 27.16 metric tonnes of HFC-23 used in the fire fighting, refrigeration manufacturing – others, and RAC servicing sector including Argentina, Chile, Ecuador, Malaysia, Maldives, Mauritius, Mexico, Pakistan, Peru, Philippines (the), Tunisia, Turkey and Viet Nam. Three countries have an obligation to report 2020 data on HFC-23 production and generation under the Kigali Amendment: Argentina, the Democratic People’s Republic of Korea and Mexico. The Democratic People’s Republic of Korea and Mexico have reported HFC-23 emissions for one facility in their respective countries of 9.1 metric tonnes and 39.28 metric tonnes in 2020, respectively, totalling 48.38 metric tonnes.

# **Prices of HCFCs, HFCs and alternatives**

# The average prices of HCFCs, HFCs and alternatives reported by A5 countries since 2011 are summarized in Table 11.[[27]](#footnote-27) 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)[[28]](#footnote-28) that is usually obtained from importers.

**Table 11. Average price of HCFCs, HFCs and alternatives[[29]](#footnote-29)**

| **Substance** | **Average price (US $/kg)\*** | | | | | | | | | | **Range (US $/kg)** | **Countries (2020)\*\*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |  |  |
| HCFC-22 | 9.28 | 10.06 | 9.24 | 10.08 | 10.07 | 9.25 | 10.18 | 10.24 | 9.64 | 10.70 | 1.61 (China) to 93.38 (Chile) | 119 |
| HCFC-141b | 6.73 | 6.73 | 6.65 | 7.77 | 7.08 | 10.00 | 9.40 | 10.99 | 8.23 | 12.78 | 2.20 (Iran (Islamic Republic of)) to 135.66 (Chile) | 26 |
| R‑600a | 20.97 | 20.49 | 20.20 | 18.02 | 15.23 | 15.98 | 15.80 | 16.03 | 16.72 | 18.50 | 1.78 (China) to 141.05 (Saint Vincent and the Grenadines) | 89 |
| R‑290 | 22.23 | 15.60 | 14.38 | 21.26 | 19.08 | 16.13 | 16.48 | 15.92 | 21.80 | 24.64 | 2.50 (Indonesia) to 191.65 (Saint Vincent and the Grenadines) | 65 |
| HFC-134a | 16.64 | 14.96 | 13.65 | 13.30 | 14.26 | 12.83 | 13.94 | 12.35 | 12.31 | 12.75 | 2.82 (Paraguay) to 101.34 (Chile) | 111 |
| R-404A | 20.68 | 18.71 | 15.41 | 15.11 | 15.42 | 15.32 | 15.97 | 14.77 | 13.76 | 14.29 | 2.50 (Dominican Republic (the)) to 93.52 (Chile) | 108 |
| R-407C | 21.36 | 19.04 | 16.06 | 15.19 | 13.97 | 12.71 | 13.94 | 13.71 | 13.02 | 13.79 | 2.50 (Dominican Republic (the)) to 86.20 (Chile) | 89 |
| R-410A | 21.70 | 19.91 | 16.05 | 15.28 | 14.61 | 16.44 | 15.47 | 14.78 | 14.50 | 14.69 | 2.22 (China) to 106.70 (Chile) | 113 |
| R-507A | 20.78 | 15.84 | 13.59 | 12.21 | 11.65 | 11.76 | 13.33 | 13.07 | 12.99 | 13.24 | 2.69 (Paraguay) to 93.33 (Chile) | 63 |

\* All zero entries were excluded.

\*\* Number of A5 countries that reported prices in 2020.

**Issues related to CP data reports**

Timely submission of CP data reports

# In reviewing the timely submission of the CP data reports, the Secretariat noted progress for the year 2020 compared to 2019 as shown in Table 12. Although there is a slight decrease in the monthly submission rates when compared with that of 2019, it can be attributed to the new format and the evolving situation of the COVID-19 pandemic. The Secretariat noted the efforts made by implementing agencies in following up on the submission of outstanding CP data reports, and keeping the Secretariat informed on progress on a regular basis.

**Table 12. Monthly rates of submission of CP data reports (as at 8 October 2021)**

| **Month** | **2013** | | **2014** | | **2015** | | **2016** | | **2017** | | **2018** | | **2019** | | **2020** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** | **No\*** | **(%)\*** |
| January |  |  |  |  | 1 | 0.69 |  |  | 3 | 2.08 |  |  |  |  |  |  |
| February | 1 | 0.69 | 2 | 1.39 | 5 | 4.17 | 9 | 6.25 | 1 | 2.78 | 7 | 4.86 | 1 | 0.69 | 2 | 1.39 |
| March | 3 | 2.76 | 15 | 11.81 | 33 | 27.08 | 9 | 12.50 | 8 | 8.33 | 14 | 14.58 | 9 | 6.94 | 11 | 9.03 |
| April | 38 | 28.97 | 48 | 45.14 | 27 | 45.83 | 49 | 46.53 | 60 | 50.00 | 64 | 59.03 | 63 | 50.69 | 50 | 43.75 |
| May | 35 | 53.10 | 24 | 61.81 | 22 | 61.11 | 26 | 64.58 | 39 | 77.08 | 30 | 79.86 | 29 | 70.83 | 42 | 72.92 |
| June | 11 | 60.69 | 18 | 74.31 | 14 | 70.83 | 10 | 71.53 | 15 | 87.50 | 4 | 82.64 | 4 | 73.61 | 7 | 77.78 |
| July | 6 | 64.83 | 9 | 80.56 | 8 | 76.39 | 7 | 76.39 | 3 | 89.58 | 2 | 84.03 | 8 | 79.17 | 3 | 79.86 |
| August | 6 | 68.97 | 3 | 82.64 | 5 | 79.86 | 2 | 77.78 | 7 | 94.44 | 3 | 86.11 | 5 | 82.64 | 4 | 82.64 |
| September | 22 | 84.14 | 7 | 87.50 | 8 | 85.42 | 19 | 90.97 | 4 | 97.22 | 6 | 90.28 | 10 | 89.58 | 6 | 86.81 |
| October | 12 | 92.41 | 9 | 93.75 | 8 | 90.97 | 7 | 95.83 | 1 | 97.92 | 10 | 97.22 | 2 | 90.97 | 6 | 90.97 |
| November | 2 | 93.79 |  |  | 1 | 91.67 | 2 | 97.22 | 1 | 98.61 | 1 | 97.92 | 3 | 93.06 |  |  |
| December |  |  | 2 | 95.14 |  |  |  |  |  |  | 1 | 98.61 | 8 | 98.61 |  |  |
| After Dec. | 9 | 100.00 | 7 | 100.00 | 12 | 100.00 | 4 | 100.00 | 2 | 100.00 | 2 | 100.00 | 2 | 100.00 |  |  |
| **Total** | **145** |  | **144** |  | **144** |  | **144** |  | **144** |  | **144** |  | **144** |  | **131** |  |
| **Outstanding** | **0** |  | **0** |  | **0** |  | **0** |  | **0** |  | **0** |  | **0** |  | **13** |  |

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

# The Executive Committee may wish to request the Secretariat to send a letter to the Governments of Central African Republic (the), Cote d'Ivoire, Cuba, Guinea, Mali, Mauritania, Myanmar, Saint Kitts and Nevis, Seychelles, South Africa, South Sudan (the), Suriname and Venezuela (Bolivarian Republic of). regarding the outstanding CP data reports for 2020, urging the submission of those reports as soon as possible, as delays affect the ability of the Secretariat to have comprehensive data on consumption and production levels of controlled substances.

Data discrepancies between CP data reports and A7 data

# The review of the 2020 import data reported under A7 and CP reports revealed potential data discrepancies, as shown in Table 13.

**Table 13. Differences between 2020 A7 and CP consumption data (ODP tonnes)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **ODS** | **Agency for IS** | **A7 data** | **CP data** | **Difference** | **HCFC-141b polyol\*** | **Remarks** |
| Brazil | Halon | UNDP | 0.0 | 32.3 | -32.3 |  | CP data is for recovered halons. |
| Costa Rica | HCFC | UNDP | 4.0 | 4.1 | -0.1 | 0.1 | Issue being clarified with UNDP pending their response. |
| Burundi | HCFC | UNEP | 0.0 | 1.3 | -1.3 | 0.0 | Issue being clarified with UNEP pending their response. |
| Haiti | HCFC | UNEP | 0.0 | 1.6 | -1.6 | 0.0 | Issue being clarified with UNEP pending their response. |
| Somalia | HCFC | UNEP | 10.6 | 10.5 | 0.1 | 0.1 | Issue being clarified with UNEP pending their response. |
| Thailand | HCFC | IBRD | 350.1 | 350.4 | -0.3 | 1.3 | CP data is correct. Thailand will submit revised 2020 A7 data to the Ozone Secretariat. |

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

# The Executive Committee may wish to request relevant implementing agencies to continue assisting the respective governments listed in Table 13 in clarifying the discrepancies between the CP data and A7 data.

# The Secretariat noted the following related to CP data submission for HFCs for the year 2020:

1. There were some data reporting errors such as errors in quantities of HFCs, reporting of HFCs in incorrect uses (e.g., use of HFC-245fa in RAC servicing), and incorrect substance reported (e.g., HFC-134 instead of HFC-134a, HFC-152 instead of HFC-152a). The agencies worked with the countries and where necessary, corrections were made in HFC data and confirmed to the Secretariat; and
2. HFC data submitted by the countries to the Ozone Secretariat under A7 of the Protocol could include pure HFCs or HFC blends in line with decision XXX/10. Countries may therefore choose to report pure HFCs after estimating the quantities of individual HFCs from the blends; this poses challenges in reconciliation of HFC data reported under A7 and under CP reports at the country level, as HFCs contained in blends are reported as blends under CP data reports.

**RECOMMENDATION**

# 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/88/8, including that, as at 8 October 2021, 131 countries had submitted 2020 CP data and 13 countries had not done so;

## To request:

### The Secretariat to send letters to the Governments of Central African Republic (the), Cote d'Ivoire, Cuba, Guinea, Mali, Mauritania, Myanmar, Saint Kitts and Nevis, Seychelles, South Africa, South Sudan, Suriname and Venezuela (Bolivarian Republic of) regarding the outstanding CP data reports for 2020, urging them to submit those reports as soon as possible; and

### Relevant implementing agencies to continue assisting the respective governments in clarifying the discrepancies between the 2020 CP data and Article 7 data and to report back no later than the 90th meeting.

**Annex I**

**MB CONSUMPTION AND PRODUCTION FOR QPS APPLICATIONS**

|  |  |  |
| --- | --- | --- |
| **Country** | **Year of latest consumption** | **Latest consumption (ODP tonnes)** |
| **Consumption** |  |  |
| Argentina | 2020 | 25.80 |
| Bahrain | 2020 | 8.20 |
| Brazil | 2020 | 60.50 |
| Chile | 2020 | 43.80 |
| China | 2019 | 522.70 |
| Costa Rica | 2020 | 6.60 |
| Egypt | 2020 | 91.20 |
| El Salvador | 2020 | 102.80 |
| Ethiopia | 2020 | 12.50 |
| Fiji | 2020 | 9.50 |
| Guatemala | 2020 | 6.00 |
| Honduras | 2020 | 15.90 |
| India | 2020 | 1,262.50 |
| Indonesia | 2020 | 43.20 |
| Iran (Islamic Republic of) | 2020 | 13.20 |
| Jamaica | 2020 | 2.50 |
| Jordan | 2019 | 4.80 |
| Kenya | 2020 | 1.70 |
| Malaysia | 2020 | 81.60 |
| Mexico | 2020 | 143.60 |
| Morocco | 2020 | 6.10 |
| Myanmar | 2020 | 33.00 |
| Nicaragua | 2019 | 17.80 |
| Pakistan | 2020 | 134.40 |
| Peru | 2020 | 3.40 |
| Philippines (the) | 2020 | 9.80 |
| Republic of Korea (the) | 2020 | 193.00 |
| Saudi Arabia | 2020 | 9.00 |
| Singapore | 2020 | 55.70 |
| South Africa | 2019 | 47.50 |
| Sri Lanka | 2020 | 19.90 |
| Suriname | 2019 | 3.20 |
| Thailand | 2020 | 93.70 |
| Turkey | 2020 | 27.30 |
| United Arab Emirates (the) | 2020 | 25.80 |
| Uruguay | 2020 | 70.90 |
| Viet Nam | 2020 | 465.00 |
| **Total consumption** |  | **3,674.10** |
| **Production** |  |  |
| China | 2019 | 663.80 |
| India | 2020 | 2,477.40 |
| **Total production** |  | **3,141.20** |

**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 | 2020 | 23.6 | 6.1 | 0 | 0 | 0 | 35% by 2020 and 67.5% by 2025 |
| Albania | A7 | 2020 | 6.0 | 3.1 | 0 | 0 | 0 | 35% by 2020 and 67.5% by 2025 |
| Algeria | A7 | 2020 | 62.1 | 39.3 | 0 | 0 | 0 | 20% by 2017 |
| Angola | A7 | 2020 | 16.0 | 9.2 | 0 | 0 | 0 | 10% by 2015 and 67.5% by 2025 |
| Antigua and Barbuda | A7 | 2020 | 0.3 | 0.0 | 0 | 0 | 0 | HPMP cancelled |
| Argentina | A7 | 2020 | 400.7 | 126.2 | 0 | 0 | 0 | 17.5% by 2017 and 50% by 2022 |
| Armenia | A7 | 2020 | 7.0 | 2.2 | 0 | 0 | 0 | 10% by 2015 and 66.6% by 2020 |
| Bahamas (the) | A7 | 2020 | 4.8 | 2.6 | 0 | 0 | 0 | 35% by 2020 |
| Bahrain | A7 | 2020 | 51.9 | 32.8 | 0 | 0 | 0 | 35% by 2020 |
| Bangladesh | A7 | 2020 | 72.6 | 46.5 | 0 | 0 | 0 | 30% by 2018 and 67.5% by 2025 |
| Barbados | A7 | 2020 | 3.7 | 0.9 | 0 | 0 | 0 | 35% by 2020 |
| Belize | A7 | 2020 | 2.8 | 1.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Benin | A7 | 2020 | 23.8 | 13.5 | 0 | 0 | 0 | 35% by 2020 |
| Bhutan | A7 | 2020 | 0.3 | 0.0 | 0 | 0 | 0 | 100% by 2025 |
| Bolivia (Plurinational State of) | A7 | 2020 | 6.1 | 2.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Bosnia and Herzegovina | A7 | 2020 | 4.7 | 1.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2026 |
| Botswana | CP | 2020 | 11.0 | 5.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Brazil | A7 | 2020 | 1,327.3 | 452.8 | 0 | 0 | 0 | 10% by 2015 and 45% by 2021 |
| Brunei Darussalam | A7 | 2020 | 6.1 | 3.7 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Burkina Faso | A7 | 2020 | 28.9 | 6.4 | 0 | 0 | 0 | 35% by 2020 |
| Burundi | A7 | 2020 | 7.2 | 0.0 | 0 | 0 | 0 | 35% by 2020 |
| Cabo Verde | A7 | 2020 | 1.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 |
| Cambodia | A7 | 2020 | 15.0 | 6.7 | 0 | 0 | 0 | 100% by 2035 |
| Cameroon | A7 | 2020 | 88.8 | 32.5 | 0 | 0 | 0 | 20% by 2017 and 75% by 2025 |
| Central African Republic (the) | A7 | 2020 | 12.0 | 8.8 | 0 | 0 | 13 | HPMP cancelled |
| Chad | A7 | 2020 | 16.1 | 10.1 | 0 | 0 | 0 | 35% by 2020 |
| Chile | A7 | 2020 | 87.5 | 27.0 | 0 | 0 | 0 | 10% by 2015 and 65% by 2021 |
| China | CP | 2020 | 19,269.0 | 10,683.7 | 0 | 0 | 0 | 10% by 2015 and 37.6% by 2020 |
| Colombia | A7 | 2020 | 225.6 | 63.2 | 0 | 0 | 0 | 10% by 2015 and 65% by 2021 |
| Comoros (the) | A7 | 2020 | 0.1 | 0.1 | 0 | 0 | 0 | 35% by 2020 |
| Congo (the) | A7 | 2020 | 10.1 | 6.4 | 0 | 0 | 0 | 35% by 2020 |
| Cook Islands (the) | A7 | 2020 | 0.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Costa Rica | A7 | 2020 | 14.1 | 4.0 | 0 | 0 | 0 | 35% by 2020 and 97.5% by 2030 |
| Cote d'Ivoire | A7 | 2019 | 63.8 | 41.4 | 0 | 0 | 0 | 35% by 2020 |
| Cuba | A7 | 2019 | 16.9 | 6.3 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Democratic People's Republic of Korea (the) \*\* | A7 | 2020 | 78.0 | 63.8 | 0 | 0 | 26 | 15% by 2018 |
| Democratic Republic of the Congo (the) | A7 | 2020 | 66.2 | 2.1 | 0 | 0 | 0 | 10% by 2017 |
| Djibouti | A7 | 2020 | 0.7 | 0.4 | 0 | 0 | 0 | 35% by 2020 |
| Dominica | CP | 2020 | 0.4 | 0.0 | 0 | 0 | 0 | 35% by 2020 |
| Dominican Republic (the) | A7 | 2020 | 51.2 | 29.0 | 0 | 0 | 0 | 10% by 2015, 40% by 2020 and 100% by 2030 |
| Ecuador | A7 | 2020 | 23.5 | 13.5 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Egypt | A7 | 2020 | 386.3 | 250.0 | 0 | 0 | 0 | 25% by 2018 and 70% by 2025 |
| El Salvador | A7 | 2020 | 11.7 | 2.7 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Equatorial Guinea | A7 | 2020 | 6.3 | 1.0 | 0 | 0 | 0 | 35% by 2020 |
| Eritrea | A7 | 2020 | 1.1 | 0.6 | 0 | 0 | 0 | 35% by 2020 |
| Eswatini (the Kingdom of) | CP | 2020 | 1.7 | 0.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Ethiopia | A7 | 2020 | 5.5 | 3.4 | 0 | 0 | 0 | 35% by 2020 |
| Fiji | A7 | 2020 | 5.7 | 2.1 | 0 | 0 | 0 | 35% by 2020 |
| Gabon | A7 | 2020 | 30.2 | 15.4 | 0 | 0 | 0 | 35% by 2020 |
| Gambia (the) | A7 | 2020 | 1.5 | 0.2 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Georgia | A7 | 2020 | 5.3 | 0.9 | 0 | 0 | 0 | 35% by 2020 |
| Ghana | A7 | 2020 | 57.3 | 16.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Grenada | A7 | 2020 | 0.8 | 0.2 | 0 | 0 | 0 | 35% by 2020 |
| Guatemala | A7 | 2020 | 8.3 | 4.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Guinea | A7 | 2020 | 22.6 | 1.7 | 0 | 0 | 0 | 35% by 2020 |
| Guinea Bissau | CP | 2020 | 2.8 | 1.1 | 0 | 0 | 0 | 35% by 2020 |
| Guyana | A7 | 2020 | 1.8 | 0.9 | 0 | 0 | 0 | 10% by 2015 and 100% by 2030 |
| Haiti | A7 | 2020 | 3.6 | 0.0 | 0 | 0 | 0 | 35% by 2020 |
| Honduras | A7 | 2020 | 19.9 | 7.2 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| India | A7 | 2020 | 1,608.2 | 297.5 | 0 | 0 | 0 | 10% by 2015 and 60% by 2023 |
| Indonesia | A7 | 2020 | 403.9 | 188.4 | 0 | 0 | 0 | 20% by 2018 and 55% by 2023 |
| Iran (Islamic Republic of) | A7 | 2020 | 380.5 | 163.7 | 0 | 0 | 0 | 10% by 2015 and 75% by 2023 |
| Iraq | A7 | 2020 | 108.4 | 66.4 | 0 | 0 | 0 | 13.82% by 2019 and 69% by 2025 |
| Jamaica | A7 | 2020 | 16.3 | 5.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Jordan | CP | 2020 | 83.0 | 29.2 | 0 | 0 | 0 | 20% by 2017 and 50% by 2022 |
| Kenya | A7 | 2020 | 52.2 | 6.4 | 0 | 0 | 0 | 21.1% by 2017 and 100% by 2030 |
| Kiribati | A7 | 2020 | 0.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Kuwait | A7 | 2020 | 418.6 | 253.8 | 0 | 0 | 0 | 39.2% by 2020 |
| Kyrgyzstan | A7 | 2020 | 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 | 2020 | 2.3 | 1.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Lebanon | A7 | 2020 | 73.5 | 35.1 | 0 | 0 | 0 | 18% by 2017 and 75% by 2024 |
| Lesotho | A7 | 2020 | 3.5 | 0.5 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Liberia | A7 | 2020 | 5.3 | 1.6 | 0 | 0 | 0 | 35% by 2020 |
| Libya\*\*\* | A7 | 2020 | 118.4 | 75.0 | 0 | 0 | 0 | 10% by 2020 |
| Madagascar | A7 | 2020 | 24.9 | 5.5 | 0 | 0 | 0 | 35% by 2020 |
| Malawi | A7 | 2020 | 10.8 | 3.3 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Malaysia | A7 | 2020 | 515.8 | 228.4 | 0 | 0 | 0 | 15% by 2016 and 42.9% by 2022 |
| Maldives | A7 | 2020 | 4.6 | 0.1 | 0 | 0 | 0 | 100% by 2020 |
| Mali | A7 | 2019 | 15.0 | 7.5 | 0 | 0 | 0 | 35% by 2020 |
| Marshall Islands (the) | A7 | 2020 | 0.2 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Mauritania | A7 | 2019 | 20.5 | 13.9 | 0 | 0 | 4 | 67.5% by 2025 |
| Mauritius | A7 | 2020 | 8.0 | 2.0 | 0 | 0 | 0 | 100% by 2030 |
| Mexico | A7 | 2020 | 1,148.8 | 120.0 | 0 | 0 | 0 | 30% by 2018 and 67.5% by 2022 |
| Micronesia (Federated States of) | A7 | 2020 | 0.2 | 0.1 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Mongolia | A7 | 2020 | 1.4 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Montenegro | A7 | 2020 | 0.8 | 0.1 | 0 | 0 | 0 | 35% by 2020 and 100% by 2025 |
| Morocco | A7 | 2020 | 51.4 | 25.3 | 0 | 0 | 0 | 20% by 2020 |
| Mozambique | CP | 2020 | 8.7 | 2.2 | 0 | 0 | 0 | 35% by 2020 |
| Myanmar | A7 | 2020 | 4.3 | 2.0 | 0 | 0 | 0 | 35% by 2020 |
| Namibia | A7 | 2020 | 8.4 | 0.7 | 0 | 0 | 0 | 100% by 2025 |
| Nauru | A7 | 2020 | 0.0 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Nepal | CP | 2020 | 1.1 | 0.4 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Nicaragua | CP | 2020 | 6.8 | 2.7 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Niger (the) | A7 | 2020 | 16.0 | 10.0 | 0 | 0 | 0 | 35% by 2020 |
| Nigeria | A7 | 2020 | 344.9 | 166.7 | 0 | 0 | 0 | 10% by 2015 and 51.35% by 2023 |
| Niue | A7 | 2020 | 0.0 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| North Macedonia | A7 | 2020 | 1.8 | 0.4 | 0 | 0 | 0 | 35% by 2020 |
| Oman | A7 | 2020 | 31.5 | 16.0 | 0 | 0 | 0 | 10% by 2015 and 35% by 2020 |
| Pakistan | A7 | 2020 | 248.1 | 122.2 | 0 | 0 | 0 | 10% by 2015 and 50% by 2020 |
| Palau | A7 | 2020 | 0.2 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Panama | A7 | 2020 | 24.8 | 11.3 | 0 | 0 | 0 | 10% by 2015, 35% by 2020 and 100% by 2030 |
| Papua New Guinea | A7 | 2020 | 3.3 | 1.1 | 0 | 0 | 0 | 100% by 2025 |
| Paraguay | A7 | 2020 | 18.0 | 10.9 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Peru | A7 | 2020 | 26.9 | 12.3 | 0 | 0 | 0 | 10% by 2015 and 67.5% by 2025 |
| Philippines (the) | A7 | 2020 | 162.0 | 50.6 | 0 | 0 | 0 | 10% by 2015 and 50% by 2021 |
| Qatar | A7 | 2020 | 86.9 | 56.4 | 0 | 0 | 0 | 20% by 2015 |
| Republic of Korea (the) | A7 | 2020 | 1,908.0 | 1,229.1 | 0 | 0 | 0 |  |
| Republic of Moldova (the) | A7 | 2020 | 1.0 | 0.6 | 0 | 0 | 0 | 10% by 2015 and 35% by 2020 |
| Rwanda | A7 | 2020 | 4.1 | 1.7 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Saint Kitts and Nevis | A7 | 2020 | 0.5 | 0.0 | 0 | 0 | 0 | 35% by 2020 |
| Saint Lucia | A7 | 2020 | 1.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Saint Vincent and the Grenadines | A7 | 2020 | 0.3 | 0.0 | 0 | 0 | 0 | 100% by 2025 |
| Samoa | A7 | 2020 | 0.3 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Sao Tome and Principe | A7 | 2020 | 2.2 | 0.1 | 0 | 0 | 0 | 35% by 2020 |
| Saudi Arabia | A7 | 2020 | 1,468.7 | 880.5 | 0 | 0 | 0 | 40% by 2020 |
| Senegal | A7 | 2020 | 36.2 | 13.2 | 0 | 0 | 0 | 35% by 2020 |
| Serbia | A7 | 2020 | 8.4 | 5.3 | 0 | 0 | 0 | 35% by 2020 and 67.5% by 2025 |
| Seychelles | A7 | 2020 | 1.4 | 0.0 | 0 | 0 | 0 | 100% by 2025 |
| Sierra Leone | A7 | 2020 | 1.7 | 0.6 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Singapore | A7 | 2020 | 216.1 | 76.1 | 0 | 0 | 0 |  |
| Solomon Islands | A7 | 2020 | 2.0 | 0.1 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Somalia | A7 | 2020 | 45.1 | 10.6 | 0 | 0 | 0 | 35% by 2020 |
| South Africa | A7 | 2019 | 369.7 | 110.7 | 0 | 0 | 0 | 35% by 2020 |
| South Sudan | A7 | 2019 | 4.1 | 1.4 | 0 | 0 | 0 | 35% by 2020 |
| Sri Lanka | A7 | 2020 | 13.9 | 8.6 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Sudan (the) | A7 | 2020 | 52.7 | 10.6 | 0 | 0 | 0 | 30% by 2017 and 75% by 2020 |
| Suriname | A7 | 2019 | 2.0 | 0.6 | 0 | 0 | 0 | 35% by 2020 |
| Syrian Arab Republic | A7 | 2020 | 135.0 | 82.0 | 0 | 0 | 0 | 67.5% by 2025 |
| Thailand | A7 | 2020 | 927.6 | 350.1 | 0 | 0 | 0 | 15% by 2018 and 61.8% by 2023 |
| Timor Leste | A7 | 2020 | 0.5 | 0.2 | 0 | 0 | 0 | 10% by 2015 and 78% by 2025 |
| Togo | A7 | 2020 | 20.0 | 10.9 | 0 | 0 | 0 | 35% by 2020 |
| Tonga | A7 | 2020 | 0.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Trinidad and Tobago | A7 | 2020 | 46.0 | 14.5 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Tunisia | A7 | 2020 | 40.7 | 23.2 | 0 | 0 | 0 | 15% by 2020 and 67.5% by 2025 |
| Turkey | A7 | 2020 | 551.5 | 1.8 | 0 | 0 | 0 | 100% by 2025 |
| Turkmenistan | A7 | 2020 | 6.8 | 3.8 | 0 | 0 | 0 | 35% by 2020 and 67.5% by 2025 |
| Tuvalu | A7 | 2020 | 0.1 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Uganda | A7 | 2020 | 0.2 | 0.1 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| United Arab Emirates (the) | A7 | 2020 | 557.1 | 353.6 | 0 | 0 | 0 |  |
| United Republic of Tanzania (the) | A7 | 2020 | 1.7 | 1.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Uruguay | A7 | 2020 | 23.4 | 11.2 | 0 | 0 | 0 | 10% by 2015, 35% by 2020 and 100% by 2030 |
| Vanuatu | A7 | 2020 | 0.3 | 0.0 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Venezuela (Bolivarian Republic of) | A7 | 2019 | 207.0 | 0.0 | 0 | 0 | 0 | 10% by 2015 and 42% by 2020 |
| Viet Nam | A7 | 2020 | 221.2 | 142.2 | 0 | 0 | 0 | 10% by 2015 and 35% by 2020 |
| Yemen | A7 | 2020 | 158.2 | 99.1 | 0 | 0 | 0 | HPMP cancelled |
| Zambia | A7 | 2020 | 5.0 | 2.2 | 0 | 0 | 0 | 35% by 2020 and 100% by 2030 |
| Zimbabwe | A7 | 2020 | 17.8 | 6.3 | 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 DATA IN Metric tonnes - CO2-EQUIVALENT**

| **Country** | **Source** | **Year of latest consumption** | **Latest consumption** | **Ratified Kigali Amendment** |
| --- | --- | --- | --- | --- |
| Afghanistan | A7 | 2019 | 275,000 |  |
| Albania | A7 | 2020 | 748,209 | Yes |
| Antigua and Barbuda | CP | 2020 | 35,309 |  |
| Argentina | A7 | 2020 | 12,190,682 | Yes |
| Armenia | A7 | 2020 | 195,790 | Yes |
| Bangladesh | A7 | 2020 | 4,048,769 | Yes |
| Barbados | A7 | 2020 | 318,983 | Yes |
| Benin | A7 | 2020 | 1,253,696 | Yes |
| Bhutan | A7 | 2020 | 2,876 | Yes |
| Bolivia (Plurinational State of) | A7 | 2020 | 425,800 | Yes |
| Botswana | CP | 2020 | 173,598 | Yes |
| Brazil | A7 | 2020 | 39,896,041 |  |
| Brunei Darussalam | CP | 2020 | 543,002 |  |
| Burkina Faso | A7 | 2020 | 509,029 | Yes |
| Burundi | CP | 2020 | 51,780 | Yes |
| Cabo Verde | A7 | 2020 | 22,797 | Yes |
| Cambodia | A7 | 2020 | 885,328 | Yes |
| Cameroon | CP | 2020 | 3,364,717 | Yes |
| Chad | A7 | 2020 | 28,386,005 | Yes |
| Chile | A7 | 2020 | 4,465,255 | Yes |
| Colombia | A7 | 2020 | 5,064,307 | Yes |
| Comoros (the) | A7 | 2020 | 35,941 | Yes |
| Cook Islands (the) | A7 | 2020 | 1,521 | Yes |
| Costa Rica | A7 | 2020 | 1,098,990 | Yes |
| Cote d'Ivoire | A7 | 2019 | 24,855,307 | Yes |
| Cuba | A7 | 2019 | 1,255,133 | Yes |
| Democratic People's Republic of Korea | A7 | 2020 | 496,210 | Yes |
| Djibouti | A7 | 2020 | 0 |  |
| Dominican Republic (the) | A7 | 2020 | 2,472,708 | Yes |
| Ecuador | A7 | 2020 | 2,211,928 | Yes |
| Equatorial Guinea | A7 | 2020 | 280,362 |  |
| Eswatini (the Kingdom of) | CP | 2020 | 32,390 | Yes |
| Ethiopia | A7 | 2020 | 302,722 | Yes |
| Fiji | A7 | 2020 | 224,248 | Yes |
| Gabon | A7 | 2020 | 1,805,193 | Yes |
| Ghana | A7 | 2020 | 471,391 | Yes |
| Grenada | A7 | 2020 | 32,006 | Yes |
| Guatemala | A7 | 2020 | 972,320 |  |
| Guinea | A7 | 2020 | 0 | Yes |
| Guinea Bissau | CP | 2020 | 743,921 | Yes |
| Guyana | A7 | 2020 | 60,724 |  |
| Haiti | A7 | 2020 | 0 |  |
| Honduras | A7 | 2020 | -287,009 | Yes |
| India | A7 | 2020 | 0 | Yes |
| Jordan | CP | 2020 | 2,669,252 | Yes |
| Kenya | A7 | 2020 | 603,944 |  |
| Kiribati | A7 | 2020 | 7,063 | Yes |
| Kyrgyzstan | A7 | 2020 | 291,736 | Yes |
| Lao People's Democratic Republic (the) | A7 | 2020 | 76,944 | Yes |
| Lebanon | A7 | 2020 | 0 | Yes |
| Lesotho | A7 | 2020 | 46,820 | Yes |
| Liberia | A7 | 2020 | 73,313 | Yes |
| Madagascar | A7 | 2020 | 1,090,927 |  |
| Malawi | A7 | 2020 | 196,209 | Yes |
| Malaysia | A7 | 2020 | 14,569,917 | Yes |
| Maldives | A7 | 2020 | 289,202 | Yes |
| Mali | A7 | 2019 | 108,522 | Yes |
| Marshall Islands (the) | A7 | 2020 | 7,067 | Yes |
| Mauritius | A7 | 2020 | 503,851 | Yes |
| Mexico | A7 | 2020 | 48,211,034 | Yes |
| Micronesia (Federated States of) | A7 | 2020 | 8,341 | Yes |
| Montenegro | A7 | 2020 | 170,362 | Yes |
| Namibia | A7 | 2020 | 796,190 | Yes |
| Nauru | A7 | 2020 | 0 |  |
| Nicaragua | CP | 2020 | 462,177 | Yes |
| Niger (the) | A7 | 2020 | 985,514 | Yes |
| Nigeria | A7 | 2020 | 2,616,728 | Yes |
| Niue | A7 | 2020 | 0 | Yes |
| North Macedonia | A7 | 2020 | 360,629 | Yes |
| Oman | A7 | 2020 | 1,821,602 |  |
| Pakistan | A7 | 2020 | 9,456,060 |  |
| Palau | A7 | 2020 | 7,676 | Yes |
| Panama | A7 | 2020 | 1,263,720 | Yes |
| Paraguay | A7 | 2020 | 1,461,774 | Yes |
| Peru | A7 | 2020 | 2,179,188 | Yes |
| Philippines (the) | A7 | 2020 | 7,170,780 |  |
| Qatar | CP | 2019 | 21,878,613 |  |
| Rwanda | A7 | 2020 | 268,616 | Yes |
| Saint Lucia | A7 | 2019 | 54,429 |  |
| Saint Vincent and the Grenadines | A7 | 2020 | 16,509 |  |
| Samoa | A7 | 2020 | 24,593 | Yes |
| Sao Tome and Principe | A7 | 2020 | 17,696 | Yes |
| Senegal | A7 | 2020 | 1,829,973 | Yes |
| Serbia | A7 | 2020 | 2,644,622 |  |
| Seychelles | A7 | 2020 | 140,392 | Yes |
| Sierra Leone | A7 | 2020 | 250,376 | Yes |
| Somalia | A7 | 2020 | 0 | Yes |
| South Africa | A7 | 2019 | 10,074,432 | Yes |
| Sri Lanka | A7 | 2020 | 478,419 | Yes |
| Sudan (the) | A7 | 2020 | 1,244,369 |  |
| Suriname | A7 | 2019 | 132,696 |  |
| Syrian Arab Republic | A7 | 2018 | 7,587,048 | Yes |
| Timor-Leste | A7 | 2019 | 13,645 |  |
| Togo | A7 | 2020 | 607,767 | Yes |
| Tonga | A7 | 2020 | 3,930 | Yes |
| Trinidad and Tobago | A7 | 2020 | 4,425,345 | Yes |
| Tunisia | A7 | 2020 | 1,719,614 | Yes |
| Turkey | CP | 2020 | 17,519,695 |  |
| Turkmenistan | A7 | 2020 | 586,253 | Yes |
| Tuvalu | A7 | 2020 | 296 | Yes |
| Uganda | A7 | 2020 | 48,950 | Yes |
| United Republic of Tanzania (the) | A7 | 2020 | 252,760 |  |
| Uruguay | A7 | 2020 | 613,574 | Yes |
| Vanuatu | A7 | 2020 | 11,915 | Yes |
| Venezuela (Bolivarian Republic of) | A7 | 2019 | 240,541 |  |
| Viet Nam | A7 | 2020 | 9,414,958 | Yes |
| Zambia | A7 | 2020 | 282,182 | Yes |
| Zimbabwe | A7 | 2020 | 1,009,387 |  |

\*As of 27 September 2021.

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1. Online meetings and an intersessional approval process will be held in November and December 2021 due to coronavirus disease (COVID-19). [↑](#footnote-ref-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. [↑](#footnote-ref-2)
3. CP data reports represent the sole source of information on the sector distribution of controlled substances in A5 countries. [↑](#footnote-ref-3)
4. As at December 2020, completed projects had phased out 286,487 ODP tonnes of consumption and 204,189 ODP tonnes of production. The completed projects were valued at US $2.94 billion out of an approved total of approximately US $3.43 billion. [↑](#footnote-ref-4)
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)). [↑](#footnote-ref-5)
6. At its 84th meeting, the Executive Committee *inter alia* approved the revised CP data report format to include Annex F substances noting that the revised format would be used starting in 2020 for 2019 CP data reporting (decision 84/7(c)). [↑](#footnote-ref-6)
7. As of 6 October 2021, A7 data for China and Venezuela (Bolivarian Republic of) have not been submitted. [↑](#footnote-ref-7)
8. The Democratic People’s Republic of Korea reported production of MB only in 1991 and 1995. [↑](#footnote-ref-8)
9. 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). A progress report on the implementation of the China MB production sector has been submitted to the 88th meeting (UNEP/OzL.Pro/ExCom/88/18/Add.1) [↑](#footnote-ref-9)
10. Stage II of the HPPMP for China was approved at the 86th meeting. The Agreement was approved at the 87th meeting. [↑](#footnote-ref-10)
11. A total of 100 A5 countries received financial assistance from the Multilateral Fund to phase out consumption and production (two countries) of MB. [↑](#footnote-ref-11)
12. Decision XXXII/6. [↑](#footnote-ref-12)
13. Since the 85th meeting, consideration of the progress report included in the Reports on projects with specific reporting requirements has been deferred to each of the following meetings in line with the agreed procedures for holding Executive Committee meetings; that of the 88th meeting (UNEP/OzL.Pro/ExCom/88/18) has been deferred to the 90th meeting. [↑](#footnote-ref-13)
14. 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. [↑](#footnote-ref-14)
15. UNEP/OzL.Pro/ExCom/88/60 [↑](#footnote-ref-15)
16. Croatia became a non-Article 5 country in 2014, and completely phased out HCFCs by 2015. [↑](#footnote-ref-16)
17. 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. [↑](#footnote-ref-17)
18. In decision XXXII/6, the Parties *inter alia* noted with appreciation the submission by the Democratic People’s Republic of Korea of an explanation for its non-compliance and a plan of action to ensure its return to compliance with the Protocol’s HCFC consumption control measures and production control measures in 2023; and urged the country to work with the relevant implementing agencies to explore options for the implementation of its plan of action to phase out the consumption and production of HCFCs subject to the application of the relevant United Nations Security Council resolutions. [↑](#footnote-ref-18)
19. Argentina, Brazil, Egypt, India, Indonesia, Iran (Islamic Republic of), Kuwait, Malaysia, Mexico, Nigeria, Saudi Arabia, South Africa, Thailand and Turkey. [↑](#footnote-ref-19)
20. Decision 84/7(c) [↑](#footnote-ref-20)
21. Decision 84/7(d). Subsequently, the Executive Committee deferred consideration of the draft updated revised format of Section B1 of the CP data reports as contained in Annex IV to document UNEP/OzL.Pro/ExCom/86/8 at an in‑person Executive Committee meeting (decision 86/7(c)). [↑](#footnote-ref-21)
22. UNEP/OzL.Pro/ExCom/86/8 [↑](#footnote-ref-22)
23. During the intersessional approval process established for the 86th meeting, it was suggested to include the results from the surveys of ODS alternatives carried out, in the document to be submitted to the 86th meeting (paragraph 28 of document UNEP/OzL.Pro/ExCom/86/IAP/3). The analysis was contained in paragraph 30 and Table 11 of document UNEP/OzL.Pro/ExCom/86/8. No further analysis is required, noting that the surveys collected data for only three years (i.e., 2012 to 2015), no further data was collected between 2016 and 2019, and not all A5 Parties with an approved survey on ODSs had reported HFC data. [↑](#footnote-ref-23)
24. Excluding one country (Chad) for which the data is being clarified with the country. [↑](#footnote-ref-24)
25. This includes data reported HFC consumption in blends with a trade name by Argentina, Chile, and Colombia; these countries also provided the estimated composition of different HFCs in these blends. [↑](#footnote-ref-25)
26. See footnote 26. [↑](#footnote-ref-26)
27. 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. [↑](#footnote-ref-27)
28. 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. [↑](#footnote-ref-28)
29. # 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)).

    [↑](#footnote-ref-29)