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THE MULTILATERAL FUND FOR THE
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Item 5 of the provisional agenda¹

COUNTRY PROGRAMME DATA AND PROSPECTS FOR COMPLIANCE

Introduction

1. 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 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 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)). Table 1 summarizes data reports submitted by A5 Parties between 2013 and 2021. As of 8 May 2022, the countries that submitted requests for funding to the 90th meeting but not 2021 CP data are Argentina, Bangladesh, Botswana, Cabo Verde, the Gambia, Sao Tome and Principe, Serbia, Somalia, Turkey, and Uganda.

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

Data	2013	2014	2015	2016	2017	2018	2019	2020	2021
A7 (as of 6 May 2022)	147	147	147	147	147	147	147	147	43
CP (as of 8 May 2022)	145	144*	144	144	144	144	144	144	92

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

¹ UNEP/OzL.Pro/ExCom/90/1

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.

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

Scope of the document

3. This document consists of the following four 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 CFCs, halons, 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 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 HCFCs⁵ and HFCs⁶: 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. As of 8 May 2022, only 92 CP data reports were submitted for 2021, and 74 of these reports contained HFC data; therefore, the analysis is made only up to 2020.⁷

Part IV: Section B1 of the updated revised format of CP data reports (decision 84/7(d))

4. This document also includes the following four 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)

Annex IV: Revised Section B1 for country programme data reporting

⁴ As of 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 \$3.89 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 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)).

⁷ The analysis in document UNEP/OzL.Pro/ExCom/88/8 was also based on data reported for 2020.

I. Status of and prospects for compliance for A5 countries

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 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

6. MB is produced in one A5 country (China).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 In 2020, zero ODP tonnes of MB were produced.

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 46 per cent below the aggregated production baseline.

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

Party	2013	2014	2015	2016	2017	2018	2019	2020	2021	Baseline
HCFC-22										
Argentina	107.3	125.7	134.5	95.8	100.3	65.6	88.3	66.3		224.6
China	15,866.9	16,497.0	13,391.0	14,086.3	13,445.7	13,636.4	13,598.2	11,042.2		29,122.0*
Democratic People's Republic of Korea (the)	31.8	28.9	27.4	24.8	24.8	24.8	27.0	27.0	24.8	27.6
India	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	317.1	223.5	160.9	166.8	190.1	183.8	134.8	20.2		697.0
Republic of Korea	357.6	364.7	348.9	240.3	305.6	289.9	271.5	254.3		395.1
Venezuela (Bolivarian Republic of)	121.2	86.1	37.2	14.3	15.0	1.9	0.0	0.0		123.1
Total HCFC-22	18,153.9	18,791.7	15,827.6	16,293.8	15,871.0	16,110.3	16,052.9	12,764.8	24.8	32,988.9
HCFC-141b										
China	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										
China	1,102.0	1,076.8	1,224.3	1,110.5	1,115.5	756.3	816.0	418.3		*
Total	28,839.6	29,428.7	24,298.3	24,682.6	24,063.3	23,187.7	22,970.4	17,806.4	24.8	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.

⁸ The Democratic People's Republic of Korea reported production of MB only in 1991 and 1995.

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 was submitted to the 88th meeting (UNEP/OzL.Pro/ExCom/88/18/Add.1).

8. An HCFC production phase-out management plan (HPPMP) was approved for one country (China).¹⁰ One A5 country (the Democratic People’s Republic of Korea) has reported 24.81 ODP tonnes of HCFC production for the year 2021, which is above the production target set in the plan of action in decision XXXII/6. The 68th meeting of the Implementation Committee will consider the country’s compliance status for 2021 in light of the data reported. Funding has not been approved for the HCFC production sector for this country.

Consumption sector

CFCs, halons, CTC, MB and TCA

9. All A5 countries have reported zero consumption of CFCs, halons and TCA in 2020 or 2021.

10. Only three A5 countries have reported CTC consumption in 2020 or 2021 for laboratory and analytical-use (Mexico (0.02 ODP tonnes), China (123.8 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 XXXI/5).

11. Only two A5 countries¹¹ have reported MB consumption in 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	2020	602.7	9.1

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

** Allowable level of consumption of 20.58 ODP tonnes for 2020 per decision XXXI/4.

12. Thirty-six 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.

HCFCs

13. A total of 147 A5 countries have an established HCFC baseline for compliance, with an aggregated latest consumption level of 17,443.3 ODP tonnes (278,397.6 metric tonnes), as shown in Table 4. The three main HCFCs are: HCFC-22 (73.2 per cent of the total consumption measured in ODP tonnes), HCFC-141b (24.5 per cent) and HCFC-142b (2.15 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	1,696.8	33.9	72.6
HCFC-124	1,270.7	28.0	63.9	1.4	5.0
HCFC-141b	107,871.6	11,865.9	38,822.2	4,270.4	36.0
HCFC-142b	33,195.5	2,157.7	5,770.1	375.1	17.4
HCFC-22	394,654.7	21,706.0	232,044.6	12,762.5	58.8

¹⁰ Stage II of the HPPMP for China was approved at the 86th meeting. The Agreement was approved at the 87th meeting.

¹¹ A total of 100 A5 countries received financial assistance from the Multilateral Fund to phase out consumption and production (two countries) of MB.

HCFC	Baseline		Consumption*		% of baseline
	Metric tonnes	ODP tonnes	Metric tonnes	ODP tonnes	
HCFC-225	30.4	2.1	0.1	0.0	0.2
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	539,450.8	35,808.9	278,397.6	17,443.3	48.7

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

14. Two A5 countries have reported HCFC consumption above the 2020 Montreal Protocol compliance target (the Democratic People's Republic of Korea¹² and Mauritania). Stage I of the HCFC phase-out management plan (HPMP) for Mauritania was approved at the 80th meeting and revised at the 88th meeting. The Democratic People's Republic of Korea's has reported 2021 consumption of 58.03 ODP tonnes, which is above the consumption target set in the plan of action in decision XXXII/6. The 68th meeting of the Implementation Committee will consider the country's compliance status for 2021 in light of the data reported. 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 An updated progress report contained in document UNEP/OzL.Pro/ExCom/90/9, is being submitted to the 90th meeting for the consideration of the Executive Committee.

HCFC phase-out management plans

15. 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 stage II for 95 countries and stage III for eight countries, at a total value of US \$1.16 billion (approved in principle) of which US \$960.15 million has been disbursed to address compliance with the Montreal Protocol control levels as follows:

- (a) Forty countries (24 low-volume-consuming (LVC) and 16 non-LVC countries), to address compliance up to 2020;
- (b) Thirty-one countries to address compliance up to 2025; and
- (c) Seventy-one countries¹⁵ to completely phase out HCFCs between 2020 and 2035.

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

¹² Decision XXXII/6.

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.

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.

¹⁵ Belize, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Brunei Darussalam, Cabo Verde, Cambodia, Chile, Colombia, the Cook Islands, Costa Rica, Cuba, the Democratic Republic of the Congo, the Dominican Republic, Croatia (which became a non-Article 5 country in 2014, and completely phased out HCFCs by 2015), Ecuador, El Salvador, Eswatini (the Kingdom of), Ethiopia, Fiji, the Gambia, Georgia, 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, North Macedonia, Oman, Palau, Panama, Papua New Guinea, Paraguay, the Republic of Moldova, Rwanda, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Seychelles, Sierra Leone, Solomon Islands, Sri Lanka, the Sudan, Tonga, Trinidad and Tobago, Turkey, Tuvalu, Uganda, the United Republic of Tanzania, Uruguay, Vanuatu, Zambia and Zimbabwe.

Remaining HCFCs

17. Implementation of approved stages I, II and III of the HPMPs will result in the phase-out of approximately 72.5 per cent of the starting point for aggregate reduction of HCFC consumption and 88.9 per cent of the consumption of HCFC-141b contained in imported pre-blended polyols. Table 5 shows the aggregate remaining HCFC consumption¹⁶ 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	30.23	11.60	18.63	38.4
HCFC-124	26.42	26.14	2.36	23.78	9.0
HCFC-141	0.94	0.94	0.94	0.00	100.0
HCFC-141b	10,668.24	10,676.35	10,476.46	199.89	98.1
HCFC-142b	2,000.80	2,016.80	1,383.42	633.38	68.6
HCFC-21	0.74	0.74	0.74	0.00	100.0
HCFC-22	20,424.65	19,851.38	11,751.25	8,100.13	59.2
HCFC-225	2.82	2.82	1.43	1.39	50.7
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	32,606.50	23,628.20	8,978.30	72.5
HCFC-141b polyol**	0.00	657.00	584.18	72.82	88.9

* As of the 88th meeting.

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

HFCs

18. Of the 147 A5 countries, 115 countries have reported HFC data in 2019, 2020 or 2021. Ninety of the 115 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 115 countries.

Licensing and quota systems

19. 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. Seventy-two (44 LVC and 28 non-LVC countries) of the 93 countries that have ratified the Kigali Amendment¹⁷ have established an HFC licensing system.

II. A5 countries subject to decisions on compliance

20. At their Thirty-Third Meeting, the Parties did not find any Article 5 countries in non-compliance with their obligations under the Montreal Protocol.

¹⁶ 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.

¹⁷ As of 22 April 2022

III. Data analysis on the implementation of CPs for HCFCs and HFCs

Key messages from the data analysis

- In 2020, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were first the refrigeration servicing, second the foam sector and third, the refrigeration manufacturing sector.
- As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more prevalent.
- 101 A5 countries (66 LVCs and 35 non-LVCs) reported HFC data for 2020.
- HFC-125, HFC-134a, R-404A, R-507A, R-407C and R-410A account for 91% of the total consumption in CO₂ equivalent; refrigeration servicing 61.8%, refrigeration manufacturing – AC 19.8%, and refrigeration manufacturing – others 4.9%.
- Most consumed HFCs including blends in 2020 were R-404A, HFC-134a, R-410A, R-507A and R-407C for LVC countries, and HFC-134a, R-410A, R-404A, and HFC-125 for non-LVC countries .

HCFC data

HCFC production versus consumption

21. 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	12,043.2
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	3,696.9
HCFC-142b	1,827.9	1,439.4	1,014.5	761.0	890.8	726.2	774.3	430.1	486.7	183.7
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	540.3
HCFC-141b	333.3	1,148.5	602.3	1,211.9	474.0	893.3	764.6	595.1	569.4	926.4
HCFC-142b	(68.1)	1.0	87.5	315.8	333.5	384.3	341.2	326.2	329.3	234.6

Sector distribution of HCFC consumption

22. 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);¹⁸ and all other countries.

23. In 2020, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were the refrigeration servicing (42.4 per cent of the total), foam (30.6 per cent of the total) and the refrigeration manufacturing sectors (24.8 per cent). As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more relevant.

¹⁸ Argentina, Brazil, Egypt, India, Indonesia, Iran (Islamic Republic of), Kuwait, Malaysia, Mexico, Nigeria, Saudi Arabia, South Africa, Thailand and Turkey.

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

Sector	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020 (% of total)
China											
Aerosol	70.5	95.4	137.8	186.2	180.4	189.4		154.0	163.7		0.0
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	26.1
Fire-fighting											0.0
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	19.4
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	18.3
Solvent	514.1	524.1	466.0	484.8	418.5	413.4	397.0	375.1	385.0	308.0	1.9
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	65.6
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	0.0
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	2.1
Fire-fighting	9.8	6.0	5.4	4.0	4.0	4.2	4.9	2.3	2.9	2.2	0.0
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	4.8
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	2,588.0	15.9
Solvent	80.0	76.3	43.3	38.5	37.1	29.6	53.9	47.5	62.7	56.2	0.3
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	3,784.4	23.3
129 remaining A5 countries											
Aerosol	0.1	0.2	0.7	0.4	0.3	0.1	0.5				0.0
Foam	1,061.5	1,258.8	963.2	916.0	869.0	826.9	731.2	497.5	472.7	381.3	2.3
Fire-fighting	9.4	13.3	8.6	11.2	14.0	11.1	7.7	3.2	4.4	1.4	0.0
Refrigeration manufacturing	703.8	400.7	314.3	290.2	248.9	236.1	217.3	178.7	180.0	98.6	0.6
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	1,325.5	8.1
Solvent	38.0	34.1	5.2	3.5	4.9	5.1	3.1	3.2	3.3	0.3	0.0
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	1,807.2	11.1
All A5 countries											
Aerosol	153.4	170.5	262.2	205.9	268.0	232.0	6.0	180.9	171.5	1.1	0.0
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	4,972.2	30.6
Fire-fighting	19.1	19.4	14.1	15.2	18.0	15.2	12.6	5.6	7.3	3.6	0.0
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	4,036.1	24.8
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	6,897.9	42.4
Solvent	632.0	634.5	514.5	526.9	460.4	448.2	454.0	425.8	450.9	364.5	2.2
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	16,275.4	100.0
% of total for China	60.4	57.7	60.2	61.8	56.9	60.8	64.0	65.9	66.6	65.6	
% 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	23.3	

Sector	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020 (% of total)
% 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	11.1	

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

24. 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	3,896.0
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	6,818.3
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	12,043.2
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	3,182.9
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	3,696.9
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	44.8
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	183.7
Other HCFCs	675.7	798.5	751.7	717.6	747.8	773.3	566.8	474.6	398.4	351.6
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	16,275.4

* 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

25. 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 (decision 84/7(c)), 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 (decision 84/7(d)).¹⁹

26. The present document presents an analysis of the HFC consumption reported by the 101 A5 Parties under their CP data reports for 2020. Of the 144 countries which submitted 2020 CP data as of 8 May 2022, 93 countries have ratified the Kigali Amendment. Only 84 of the 93 countries have provided HFC data in their 2020 CP reports on time for this analysis. In addition, 17 countries that have not ratified the Kigali Amendment have provided HFC data in their 2020 CP reports.

27. The sector distribution of aggregated HFC consumption for the 101 countries that have submitted 2020 CP data is presented in Table 9. Of these 101 countries, 66 are LVC countries and they account for 73.3 per cent of the aggregated HCFC baseline for all LVC countries; 35 are non-LVC countries and they account for 19.4 per cent of the HCFC baselines for all non-LVC countries. The HFC data reported by LVC and non-LVC countries account for 10 per cent and 90 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			438.8	7.5	593.6		1,624.3	186.8	3,314.2	
HFC-134							424.3		424.3	
HFC-134a	1,944.5	1,055.8		4,587.3	6,000.7	2,756.2	38,683.3	866.3	57,011.2	
HFC-143a				54.0			241.3	208.9	580.5	
HFC-152a	3,350.4	1,443.4		18.4			127.3	29.7	4,969.1	
HFC-227ea	0.3		785.2				7.2	47.8	840.5	
HFC-23 (use)**			21.8	0.8			2.4	1.0	27.3	
HFC-236fa			79.6						79.6	
HFC-245fa		144.4						77.2	259.4	
HFC-32					4,640.6	9.9	2,325.8	185.9	7,702.2	
HFC-365mfc	4.8	305.3							310.1	
HFC-43-10mee							81.3	1.7	83.0	
R-404A				1,245.6	708.0	184.7	10,055.4	221.4	13,066.6	
R-407A				5.5	4.5	0.03	2,553.6		2,563.7	
R-407C				116.2	149.0	81.7	5,222.4	49.6	5,706.8	
R-407F						25.5	81.5		107.1	
R-407H							0.4		0.4	
R-410A				80.5	16,815.3	743.0	16,756.6	216.4	35,155.7	
R-413A							122.5		122.5	
R-417A					0.0	1.0	225.2	2.7	228.9	
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-426A							2.4		2.4	
R-427A							45.3		45.3	
R-437A							211.2		211.2	
R-438A							85.7	1.5	87.2	
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							0.04		0.04	
R-455A							0.3		0.3	

¹⁹ 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)).

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total***
				Other	AC	Total*				
HFC-125			438.8	7.5	593.6		1,624.3	186.8	3,314.2	
R-507A				38.2		218.2	1,440.8	488.8	2,787.8	
R-507C							47.2		47.2	
R-508B				108.4		0.1	27.3	0.0	135.8	
R-513A							16.1		16.1	
R-514A							0.5		0.5	
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 ²⁰		639.0					280.9	0.3	934.5	
Total	5,299.9	3,756.1	1,325.5	6,262.2	28,911.7	4,024.5	81,043.2	82.6	2,600.1	137,428.6
Percentage of total	3.9%	2.7%	1.0%	4.6%	21.0%	2.9%	59.0%	0.1%	1.9%	100%
LVC	79.1	236.8	12.0	124.1	5.1	307.3	12,891.2		20.6	13,677.5
Non-LVC	5,220.8	3,519.3	1,313.5	6,138.1	28,906.6	3,717.2	68,152.1	82.6	2,579.6	123,751.1

*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.

28. In 2020, the five sectors with the largest consumption of HFCs (measured in metric tonnes) were the refrigeration servicing (59 per cent of the total), refrigeration manufacturing – air-conditioning (AC) (21 per cent), refrigeration manufacturing – others (4.6 per cent), aerosol (3.9 per cent) and foam (2.7 per cent).

29. The sector distribution of aggregated HFC consumption in CO₂-equivalent is presented in Table 10. HFC-125, HFC-134a, R-404A, R-507A, R-407C and R-410A account for 91 per cent of the total consumption in CO₂-equivalent; refrigeration servicing, refrigeration manufacturing – AC, and refrigeration manufacturing – others, account for 61.8 percent, 19.8 per cent and 4.9 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			1,535.9	26.1	2,077.4	0.0	5,685.2		653.6	11,599.8
HFC-134				0.0	0.0	0.0	466.7			466.7
HFC-134a	2,780.6	1,509.9		6,559.8	8,581.0	3,941.3	55,317.2		1,238.8	81,526.0
HFC-143a				241.4			1,078.6		933.8	2,594.6
HFC-152a	415.4	179.0		2.3			15.8		3.7	616.2
HFC-227ea	1.0		2,528.3				23.1		154.0	2,706.3
HFC-23 (use)**			323.1	11.3			35.5	15.1	15.2	404.7
HFC-236fa			781.3							781.3
HFC-245fa		148.7							79.5	267.2
HFC-32		0.0			3,132.4	6.6	1,569.9		125.4	5,199.0
HFC-365mfc	3.8	242.4								246.2
HFC-43-10mee								132.8	2.8	135.6
R-404A				4,884.8	2,776.6	724.4	39,433.1		868.3	51,242.1
R-407A				11.6	9.5	0.1	5,380.5			5,401.7
R-407C				206.1	264.3	145.0	9,263.7		88.0	10,123.1
R-407F				0.0	0.0	46.6	148.6			195.4

²⁰ This includes data reported HFC consumption in blends with a trade name by Argentina, Chile, Colombia, Mexico and Nicaragua; these countries also provided the estimated composition of different HFCs in these blends.

HFC	Aerosol	Foam	Fire fighting	Refrigeration manufacturing			Ref. servicing	Solvent	Other	Total***
				Other	AC	Total*				
R-407H				0.0	0.0	0.0	0.7			0.7
R-410A				167.9	35,102.0	1,551.0	34,979.5		451.7	73,387.5
R-413A				0.0	0.0	0.0	154.2			154.2
R-417A				0.0	0.0	2.3	528.3		6.4	536.9
R-417B				0.0	0.0	0.0	473.8			473.8
R-422A				0.0	0.0	0.0	29.4			29.4
R-422B				0.0	0.0	0.0	2.7			2.7
R-422D				0.0	0.0	0.0	440.7			440.7
R-426A				0.0	0.0	0.0	3.6			3.6
R-427A				0.0	0.0	0.0	96.8			96.8
R-437A				0.0	0.0	0.0	381.2			381.2
R-438A				0.0	0.0	0.0	194.1		3.3	197.4
R-448A				0.0	0.0	1.6	88.9		0.0	92.0
R-449A				0.0	0.0	0.9	37.7		0.0	38.5
R-449C				0.0	0.0	0.0	3.8		0.2	4.1
R-451A				0.0	0.0	0.0	0.3		0.0	0.3
R-452A				0.0	0.0	0.0	8.0		0.0	8.0
R-453A				0.0	0.0	0.0	2.3		0.0	2.3
R-454B				0.0	0.0	0.0	0.0		0.0	0.0
R-455A				0.0	0.0	0.0	0.0		0.0	0.0
R-507A				152.1	0.0	869.4	5,741.6		1,947.7	11,109.5
R-507C				0.0	0.0	0.0	182.6		0.0	182.6
R-508B				737.7	0.0	0.9	186.1		0.0	924.6
R-513A				0.0	0.0	0.0	10.1		0.0	10.1
HFC-227ea in imported pre-blended polyol		4.6		0.0	0.0	0.0	0.0		0.0	4.6
HFC-245fa in imported pre-blended polyol		119.6		0.0	0.0	0.0	0.0		0.0	119.6
HFC-365mfc in imported pre-blended polyol		40.2		0.0	0.0	1.9	2.1		0.0	44.2
Other HFCs ²¹		615.5		0.0	0.0	0.0	286.9		6.2	908.7
Total	3,200.8	2,859.9	5,168.5	13,001.1	51,943.2	7,291.9	162,253.1	147.9	6,578.8	262,659.8

*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.

30. In 2020, the most consumed HFCs including blends were R-404A (33.4 per cent of the total), HFC-134a (31.5 per cent), R-410A (17.4 per cent), R-507A (6.1 per cent) and R-407C (4.9 per cent) for LVC countries, and HFC-134a (31 per cent of the total), R-410A (29.3 per cent), R-404A (17.8 per cent), and HFC-125 (4.9 per cent) for non-LVC countries.

31. In addition, 14 countries (four LVC and ten non-LVC countries) reported a total consumption of 27.34 metric tonnes of HFC-23 used in the fire fighting, refrigeration manufacturing – others, refrigeration servicing, solvent and other sectors including Argentina, Chile, Ecuador, Malaysia, Maldives, Mauritius, Mexico, Pakistan, Peru, the Philippines, Seychelles, 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, which have reported HFC-23 emissions for one facility in their respective countries of 36.17 metric tonnes, 9.1 metric tonnes and 39.28 metric tonnes in 2020, respectively, totalling 84.55 metric tonnes.

²¹ See footnote 23.

Prices of HCFCs, HFCs and alternatives

32. The average prices of HCFCs, HFCs and alternatives reported by A5 countries since 2011 are summarized in Table 11.²² 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)²³ that is usually obtained from importers.

Table 11. Average price of HCFCs, HFCs and alternatives²⁴

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	10.54	0.88 (Democratic Republic of the Congo) to 93.38 (Chile)	128
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	18.30	1.78 (China) to 141.05 (Saint Vincent and the Grenadines)	96
R-290	22.23	15.60	14.38	21.26	19.08	16.13	16.48	15.92	21.80	23.85	0.71 (Cuba) to 191.65 (Saint Vincent and the Grenadines)	70
HFC-134a	16.64	14.96	13.65	13.30	14.26	12.83	13.94	12.35	12.31	12.71	2.82 (Paraguay) to 101.34 (Chile)	119
R-404A	20.68	18.71	15.41	15.11	15.42	15.32	15.97	14.77	13.76	14.28	2.50 (Dominican Republic (the)) to 93.52 (Chile)	117
R-407C	21.36	19.04	16.06	15.19	13.97	12.71	13.94	13.71	13.02	13.78	2.50 (Dominican Republic (the)) to 86.20 (Chile)	94
R-410A	21.70	19.91	16.05	15.28	14.61	16.44	15.47	14.78	14.50	14.68	2.22 (China) to 106.70 (Chile)	122
R-507A	20.78	15.84	13.59	12.21	11.65	11.76	13.33	13.07	12.99	13.58	2.69 (Paraguay) to 93.33 (Chile)	66

* All zero entries were excluded.

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

Timely submission of CP data reports

33. In reviewing the timely submission of the CP data reports, the Secretariat noted progress for the year 2021 compared to 2020 as shown in Table 12. There is a slight increase in the monthly submission rates when compared with that of 2020. 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 May 2022)

Month	2014		2015		2016		2017		2018		2019		2020		2021	
	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*
January			1	0.69			3	2.08								
February	2	1.39	5	4.17	9	6.25	1	2.78	7	4.86	1	0.69	2	1.39	1	0.69
March	15	11.81	33	27.08	9	12.50	8	8.33	14	14.58	9	6.94	11	9.03	19	13.89
April	48	45.14	27	45.83	49	46.53	60	50.00	64	59.03	63	50.69	51	44.44	60	55.56
May	24	61.81	22	61.11	26	64.58	39	77.08	30	79.86	29	70.83	42	73.61	12**	63.89
June	18	74.31	14	70.83	10	71.53	15	87.50	4	82.64	4	73.61	7	78.47		
July	9	80.56	8	76.39	7	76.39	3	89.58	2	84.03	8	79.17	4	81.25		

²² 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.

²³ 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.

²⁴ 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)).

Month	2014		2015		2016		2017		2018		2019		2020		2021	
	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*	No*	(%)*
August	3	82.64	5	79.86	2	77.78	7	94.44	3	86.11	5	82.64	4	84.03		
September	7	87.50	8	85.42	19	90.97	4	97.22	6	90.28	10	89.58	6	88.19		
October	9	93.75	8	90.97	7	95.83	1	97.92	10	97.22	2	90.97	8	93.75		
November			1	91.67	2	97.22	1	98.61	1	97.92	3	93.06	0	93.75		
December	2	95.14							1	98.61	8	98.61	0	93.75		
After Dec.	7	100.00	12	100.00	4	100.00	2	100.00	2	100.00	2	100.00	9	100.00		
Total	144		144		144		144		144		144		144		92	
Outstanding	0		0		0		0		0		0		0		52	

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

(**) Submission as of 8 May 2022

IV. Section B1 of the updated revised format of CP data reports

34. At its 84th meeting, in approving the updated revised format of CP data reports, the Executive Committee requested the Secretariat to revise Section B1 for data reporting on manufacturing of blends containing Annex F substances contained in Annex III to document UNEP/OzL.Pro/ExCom/84/9/Rev.1, for consideration at the 85th meeting (decision 84/7(d)).

35. In response to decision 84/7(d), the Secretariat modified Section B1 to facilitate reporting of information on HFC blends, after discussions and consultations with bilateral and implementing agencies, and it was submitted for consideration of the Executive Committee at the 86th meeting. During the extended intersessional approval process, views were expressed with regard to the difficulty in tracking the flow and diverse sources of HFCs and HFC blends, and the involvement of complicated calculation which would result in erroneous data reporting and inconsistency, and to discussing the format at a physical meeting. 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 90th meeting of the Executive Committee.

36. The draft updated revised format with background information for Section B1 along with two examples for filling the data is presented in Annex IV to the present document.

37. Further, at the 88th meeting, the Executive Committee requested the Secretariat to include, in the document on CP data and prospects for compliance to be submitted to the 90th meeting, ways of adjusting the requirements for CP reports to allow for reconciliation of the HFC data reported therein with those reported under Article 7 (decision 88/7(c)(iii)).

38. Pursuant to this decision, the Secretariat reviewed the process of CP data reporting and possible ways for reconciling the CP data for HFCs with Article 7 data, so that the supply of HFCs that would be available from Article 7 data can be reconciled with the different uses of the HFCs provided in the CP data report. Based on the review, the Secretariat noted the following:

For countries that are import-dependent on HFCs and HFC blends

- (a) The data reported under CP data report can be reconciled with Article 7 data based on composition of the individual blends.

For countries that import/export HFCs and manufacture HFC blends locally

- (b) In addition to imports of HFC blends, the quantity of HFCs used for manufacturing HFC blends need to be separately reported in section B1 of the format. The difference between HFC blends supply (i.e., HFC blends imported minus exported) and use of HFC blends in

different end-uses in the CP data report format could provide an estimate of HFC blends manufactured in the country; however, this may not reflect the actual quantities of HFC blends manufactured in the country due to factors such as stockpiling of HFC blends for future use and draw-down from existing stocks of HFC blends. Based on the estimates of HFC blends manufactured, the pure HFCs used for manufacturing of HFC blends and pure HFCs used for different end-uses can be reconciled.

For countries that **produce** HFCs and manufacture HFC blends

- (c) In addition to imports/exports of HFCs and HFC blends, as mentioned in sub-paragraph (b) above, the quantity of HFCs used for manufacturing HFC blends needs to be separately reported in section B1 of the format. The difference between HFC blends supply (i.e., HFC blends imported minus exported) and use of HFC blends in different end-uses in the CP data report format could provide an estimate of HFC blends manufactured in the country; however, this may not reflect the actual quantities of HFC blends manufactured in the country due to factors such as stockpiling of HFC blends for future use and draw-down from existing stocks of HFC blends. Based on the estimates of HFC blends manufactured, the pure HFCs used for manufacturing of HFC blends and pure HFCs used for different end-uses can be reconciled.

Separate reporting of HFCs as pure substances and in blends

- (d) HFC data in CP data report should include data on pure HFCs and HFC blends separately; this is essential for understanding the use of different HFCs and the HFC blends in different applications and other relevant project review processes.

39. The Executive Committee requested the Secretariat to prepare a report on the outcome of the use of the revised format for CP data reports during the trial period for consideration at the first meeting of 2023 (decision 84/7(e)). During this revision, information on ways to report HFC data in CP reports to facilitate reconciliation with those reported under Article 7 could be included based on the outcomes of the discussions on this matter at the 90th meeting.

RECOMMENDATION

40. The Executive Committee may wish:

- (a) To note the information on country programme (CP) data and prospects for compliance contained in document UNEP/OzL.Pro/ExCom/90/5, including that, as at 8 May 2022, 92 countries had submitted 2021 CP data and 52 countries had not done so;
- (b) To approve the draft updated revised format of Section B1 of CP data reports as contained in Annex IV to the present document; and
- (c) To request the Secretariat to update the practical manual for CP data reporting with information on ways to report HFC data in CP reports to facilitate reconciliation with those reported under Article 7 based on the outcomes of the discussions on this matter at the 90th meeting.

Annex I

MB CONSUMPTION AND PRODUCTION FOR QPS APPLICATIONS

Country	Year of latest consumption	Latest consumption (ODP tonnes)
Consumption		
Argentina	2020	25.8
Bahrain	2021	6.8
Brazil	2021	52.5
Chile	2020	43.8
China	2020	478.6
Costa Rica	2020	6.6
Dominican Republic (the)	2021	9.0
Egypt	2021	160.8
El Salvador	2020	102.8
Ethiopia	2020	12.5
Fiji	2020	9.5
Guatemala	2021	13.8
Honduras	2020	15.9
India	2020	1,262.5
Indonesia	2020	43.2
Iran (Islamic Republic of)	2021	13.2
Jamaica	2021	2.9
Jordan	2020	4.8
Kenya	2020	1.7
Malaysia	2020	81.6
Mexico	2020	143.6
Morocco	2020	6.1
Myanmar	2020	33.0
Nicaragua	2020	16.9
Pakistan	2020	134.4
Philippines (the)	2020	9.8
Republic of Korea (the)	2020	193.0
Saudi Arabia	2020	9.0
Singapore	2020	55.7
South Africa	2020	19.2
Sri Lanka	2020	19.9
Thailand	2020	93.7
Turkey	2020	27.3
United Arab Emirates (the)	2020	25.8
Uruguay	2020	70.9
Viet Nam	2020	465.0
Total consumption		3,671.6
Production		
China	2020	635.6
India	2020	2,477.4
Total production		3,113.0

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	CP	2021	6.0	2.0	0	0	0	35% by 2020 and 67.5% by 2025
Algeria	CP	2021	62.1	38.3	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	CP	2021	7.0	0.6	0	0	0	10% by 2015 and 66.6% by 2020
Bahamas (the)	A7	2021	4.8	2.1	0	0	0	35% by 2020
Bahrain	A7	2021	51.9	24.6	0	0	0	35% by 2020 and 73.5% by 2025
Bangladesh	A7	2020	72.6	46.5	0	0	0	30% by 2018 and 67.5% by 2025
Barbados	CP	2021	3.7	0.5	0	0	0	35% by 2020
Belize	A7	2021	2.8	0.5	0	0	0	35% by 2020 and 100% by 2030
Benin	A7	2021	23.8	12.9	0	0	0	35% by 2020
Bhutan	CP	2021	0.3	0.0	0	0	0	100% by 2025
Bolivia (Plurinational State of)	CP	2021	6.1	1.1	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	A7	2020	11.0	5.4	0	0	0	35% by 2020 and 100% by 2030
Brazil	A7	2021	1,327.3	490.9	0	0	0	10% by 2015 and 45% by 2021
Brunei Darussalam	CP	2021	6.1	3.8	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	1.3	0	0	0	35% by 2020
Cabo Verde	A7	2021	1.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Cambodia	CP	2021	15.0	5.5	0	0	0	100% by 2035
Cameroon	A7	2021	88.8	29.5	0	0	0	20% by 2017 and 75% by 2025
Central African Republic (the)	A7	2020	12.0	7.2	0	0	0	HPMP cancelled
Chad	A7	2021	16.1	10.1	0	0	0	35% by 2020
Chile	CP	2021	87.5	14.8	0	0	0	10% by 2015, 65% by 2021 and 100% by 2030
China	A7	2020	19,269.0	10,682.7	0	0	0	10% by 2015 and 37.6% by 2020

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
Colombia	CP	2021	225.6	25.4	0	0	0	10% by 2015, 65% by 2021 and 100% by 2030
Comoros (the)	A7	2021	0.1	0.0	0	0	0	35% by 2020
Congo (the)	A7	2020	10.1	6.4	0	0	0	35% by 2020
Cook Islands (the)	CP	2021	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	2021	63.8	35.8	0	0	0	35% by 2020
Cuba	A7	2021	16.9	0.0	0	0	0	35% by 2020 and 100% by 2030
Democratic People's Republic of Korea (the) **	A7	2021	78.0	58.0	0	0	14	15% by 2018
Democratic Republic of the Congo (the)	A7	2020	66.2	2.1	0	0	0	10% by 2017 and 100% by 2030
Djibouti	A7	2020	0.7	0.4	0	0	0	35% by 2020
Dominica	CP	2021	0.4	0.1	0	0	0	35% by 2020
Dominican Republic (the)	A7	2021	51.2	12.1	0	0	0	10% by 2015, 40% by 2020 and 100% by 2030
Ecuador	A7	2021	23.5	10.2	0	0	0	35% by 2020 and 100% by 2030
Egypt	A7	2021	386.3	209.2	0	0	0	25% by 2018 and 70% by 2025
El Salvador	CP	2021	11.7	4.0	0	0	0	35% by 2020 and 100% by 2030
Equatorial Guinea	A7	2021	6.3	0.9	0	0	0	35% by 2020
Eritrea	CP	2021	1.1	0.6	0	0	0	35% by 2020
Eswatini (the Kingdom of)	A7	2020	1.7	0.4	0	0	0	35% by 2020 and 100% by 2030
Ethiopia	CP	2021	5.5	3.4	0	0	0	35% by 2020 and 100% by 2030
Fiji	CP	2021	5.7	0.1	0	0	0	35% by 2020 and 100% by 2030
Gabon	A7	2021	30.2	10.7	0	0	0	35% by 2020
Gambia (the)	A7	2021	1.5	0.2	0	0	0	35% by 2020 and 100% by 2030
Georgia	CP	2021	5.3	0.9	0	0	0	35% by 2020 and 100% by 2030
Ghana	CP	2021	57.3	16.6	0	0	0	35% by 2020 and 100% by 2030
Grenada	A7	2021	0.8	0.1	0	0	0	35% by 2020
Guatemala	A7	2021	8.3	2.9	0	0	0	35% by 2020 and 100% by 2030
Guinea	CP	2021	22.6	1.4	0	0	0	35% by 2020
Guinea Bissau	A7	2021	2.8	0.8	0	0	0	35% by 2020
Guyana	CP	2021	1.8	0.5	0	0	0	10% by 2015 and 100% by 2030
Haiti	CP	2021	3.6	1.1	0	0	0	35% by 2020
Honduras	CP	2021	19.9	7.2	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
India	A7	2020	1,608.2	297.5	0	0	0	10% by 2015 and 60% by 2023
Indonesia	CP	2021	403.9	172.4	0	0	0	20% by 2018 and 55% by 2023
Iran (Islamic Republic of)	A7	2021	380.5	123.8	0	0	0	10% by 2015 and 75% by 2023
Iraq	A7	2021	108.4	66.4	0	0	0	13.82% by 2019 and 69% by 2025
Jamaica	A7	2021	16.3	1.1	0	0	0	35% by 2020 and 100% by 2030
Jordan	A7	2020	83.0	29.2	0	0	0	20% by 2017 and 50% by 2022
Kenya	CP	2021	52.2	4.2	0	0	0	21.1% by 2017 and 100% by 2030
Kiribati	CP	2021	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 and 67.5% by 2025
Kyrgyzstan	CP	2021	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	CP	2021	73.5	26.1	0	0	0	18% by 2017 and 75% by 2024
Lesotho	A7	2021	3.5	0.4	0	0	0	35% by 2020 and 100% by 2030
Liberia	CP	2021	5.3	1.4	0	0	0	35% by 2020
Libya***	A7	2021	118.4	75.0	0	0	0	10% by 2020
Madagascar	A7	2021	24.9	9.5	0	0	0	35% by 2020
Malawi	A7	2021	10.8	2.8	0	0	0	35% by 2020 and 100% by 2030
Malaysia	CP	2021	515.8	181.6	0	0	0	15% by 2016 and 42.9% by 2022
Maldives	A7	2021	4.6	0.1	0	0	0	100% by 2020
Mali	A7	2020	15.0	7.5	0	0	0	35% by 2020
Marshall Islands (the)	CP	2021	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Mauritania	A7	2020	20.5	13.8	0	0	3	67.5% by 2025
Mauritius	CP	2021	8.0	1.4	0	0	0	100% by 2030
Mexico	CP	2021	1,148.8	130.3	0	0	0	30% by 2018 and 67.5% by 2022
Micronesia (Federated States of)	CP	2021	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Mongolia	CP	2021	1.4	0.2	0	0	0	35% by 2020 and 100% by 2030
Montenegro	A7	2021	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 and 67.5% by 2025
Mozambique	A7	2021	8.7	2.2	0	0	0	35% by 2020
Myanmar	A7	2020	4.3	2.0	0	0	0	35% by 2020
Namibia	CP	2021	8.4	0.7	0	0	0	100% 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
Nauru	A7	2020	0.0	0.0	0	0	0	35% by 2020 and 100% by 2030
Nepal	CP	2021	1.1	0.2	0	0	0	35% by 2020 and 100% by 2030
Nicaragua	A7	2020	6.8	2.7	0	0	0	35% by 2020 and 100% by 2030
Niger (the)	A7	2021	16.0	9.1	0	0	0	35% by 2020
Nigeria	CP	2021	344.9	150.2	0	0	0	10% by 2015 and 51.35% by 2023
Niue	CP	2021	0.0	0.0	0	0	0	35% by 2020 and 100% by 2030
North Macedonia	A7	2021	1.8	0.0	0	0	0	35% by 2020 and 100% by 2028
Oman	A7	2021	31.5	14.9	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030
Pakistan	CP	2021	248.1	120.6	0	0	0	10% by 2015 and 50% by 2020
Palau	CP	2021	0.2	0.0	0	0	0	35% by 2020 and 100% by 2030
Panama	A7	2021	24.8	10.8	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	CP	2021	18.0	11.7	0	0	0	35% by 2020 and 100% by 2030
Peru	A7	2021	26.9	9.4	0	0	0	10% by 2015 and 67.5% by 2025
Philippines (the)	CP	2021	162.0	60.4	0	0	0	10% by 2015 and 50% by 2021
Qatar	A7	2021	86.9	56.5	0	0	0	20% by 2015 and 67.5% by 2026
Republic of Korea (the)	A7	2020	1,908.0	1,229.1	0	0	0	
Republic of Moldova (the)	CP	2021	1.0	0.5	0	0	0	10% by 2015, 35% by 2020 and 100% by 2030
Rwanda	A7	2020	4.1	1.7	0	0	0	35% by 2020 and 100% by 2030
Saint Kitts and Nevis	A7	2021	0.5	0.0	0	0	0	35% by 2020
Saint Lucia	CP	2021	1.1	0.2	0	0	0	35% by 2020 and 100% by 2030
Saint Vincent and the Grenadines	A7	2021	0.3	0.0	0	0	0	100% by 2025
Samoa	CP	2021	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	CP	2021	1,468.7	879.9	0	0	0	40% by 2020
Senegal	A7	2020	36.2	13.2	0	0	0	35% by 2020 and 81.1% by 2025
Serbia	A7	2020	8.4	5.3	0	0	0	35% by 2020 and 67.5% by 2025
Seychelles	A7	2021	1.4	0.0	0	0	0	100% 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
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	2020	369.7	150.8	0	0	0	35% by 2020
South Sudan	A7	2021	4.1	1.7	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, 75% by 2020 and 100% by 2030
Suriname	A7	2020	2.0	0.3	0	0	0	35% by 2020
Syrian Arab Republic	CP	2021	135.0	65.4	0	0	0	67.5% by 2025
Thailand	CP	2021	927.6	279.0	0	0	0	15% by 2018 and 61.8% by 2023
Timor-Leste	CP	2021	0.5	0.2	0	0	0	10% by 2015 and 78% by 2025
Togo	A7	2021	20.0	8.8	0	0	0	35% by 2020
Tonga	CP	2021	0.1	0.0	0	0	0	35% by 2020 and 100% by 2030
Trinidad and Tobago	CP	2021	46.0	8.8	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	CP	2021	6.8	4.4	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	CP	2021	0.3	0.0	0	0	0	35% by 2020 and 100% by 2030
Venezuela (Bolivarian Republic of)	CP	2021	207.0	0.0	0	0	0	10% by 2015 and 42% by 2020
Viet Nam	CP	2021	221.2	141.8	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	2021	17.8	4.1	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.

Annex II

(**) The Democratic People's Republic of Korea's latest consumption is above 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	CP	2021	155,768	Yes
Angola	A7	2020	3,812,357	Yes
Antigua and Barbuda	CP	2020	35,303	
Argentina	A7	2020	12,190,682	Yes
Armenia	CP	2021	317,041	Yes
Bangladesh	A7	2020	4,048,769	Yes
Barbados	CP	2021	150,993	Yes
Belize	CP	2021	3,776,712	
Benin	A7	2021	1,279,095	Yes
Bhutan	CP	2021	7,941	Yes
Bolivia (Plurinational State of)	CP	2021	347,970	Yes
Botswana	A7	2020	173,589	Yes
Brazil	A7	2021	50,519,115	
Brunei Darussalam	CP	2021	280,769	
Burkina Faso	A7	2020	509,029	Yes
Burundi	A7	2020	51,774	Yes
Cabo Verde	A7	2021	3,171	Yes
Cambodia	CP	2021	928,084	Yes
Cameroon	CP	2020	3,364,455	Yes
Chad	A7	2021	3,217,693	Yes
Chile	CP	2021	4,970,994	Yes
China	A7	2020	529,799,116	Yes
Colombia	CP	2021	5,086,349	Yes
Comoros (the)	A7	2021	40,697	Yes
Cook Islands (the)	CP	2021	6,576	Yes
Costa Rica	A7	2020	1,098,990	Yes
Cote d'Ivoire	A7	2021	25,276,054	Yes
Cuba	CP	2021	518,541	Yes
Democratic People's Republic of Korea	A7	2021	510,510	Yes
Dominica	CP	2021	3,435	
Dominican Republic (the)	A7	2021	2,071,578	Yes
Ecuador	A7	2021	1,911,824	Yes
El Salvador	CP	2021	985,085	Yes
Equatorial Guinea	A7	2021	73,076	
Eswatini (the Kingdom of)	A7	2020	32,388	Yes
Ethiopia	CP	2021	103,481	Yes
Fiji	CP	2021	237,234	Yes
Gabon	A7	2021	2,063,886	Yes
Gambia (the)	A7	2020	173,033	Yes
Ghana	CP	2021	550,123	Yes
Grenada	A7	2021	43,461	Yes
Guatemala	A7	2021	892,087	
Guinea	CP	2021	1,391,073	Yes
Guinea-Bissau	CP	2021	602,209	Yes
Guyana	CP	2021	112,245	
Haiti	CP	2021	98,829	
Honduras	CP	2021	1,227,052	Yes
Jordan	A7	2020	1,342,570	Yes

Country	Source	Year of latest consumption	Latest consumption	Ratified Kigali Amendment*
Kenya	CP	2021	365,395	
Kiribati	CP	2021	10,450	Yes
Kyrgyzstan	CP	2021	363,430	Yes
Lao People's Democratic Republic (the)	A7	2020	76,944	Yes
Lebanon	CP	2021	1,604,665	Yes
Lesotho	A7	2021	26,230	Yes
Liberia	CP	2021	85,249	Yes
Madagascar	A7	2021	1,437,172	
Malawi	A7	2021	196,557	Yes
Malaysia	CP	2021	13,508,345	Yes
Maldives	A7	2021	315,640	Yes
Mali	A7	2020	81,129	Yes
Marshall Islands (the)	CP	2021	4,380	Yes
Mauritius	CP	2021	335,951	Yes
Mexico	CP	2021	47,754,909	Yes
Micronesia (Federated States of)	CP	2021	8,582	Yes
Montenegro	A7	2021	108,905	Yes
Mozambique	A7	2021	438,536	Yes
Namibia	CP	2021	352,865	Yes
Nauru	A7	2021	11,210	
Nicaragua	A7	2020	462,178	Yes
Niger (the)	A7	2021	843,475	Yes
Nigeria	CP	2021	8,454,247	Yes
Niue	CP	2021	51	Yes
North Macedonia	A7	2021	344,429	Yes
Oman	A7	2021	2,185,181	
Pakistan	CP	2021	10,293,764	
Palau	CP	2021	6,626	Yes
Panama	A7	2021	1,946,551	Yes
Paraguay	CP	2021	891,611	Yes
Peru	A7	2021	1,605,215	Yes
Philippines (the)	CP	2021	6,013,429	
Qatar	CP	2019	21,878,454	
Republic of Moldova (the)	CP	2021	338,697	
Rwanda	A7	2020	268,616	Yes
Saint Lucia	CP	2021	29,342	Yes
Saint Vincent and the Grenadines	A7	2021	25,147	
Samoa	CP	2021	9,997	Yes
Sao Tome and Principe	A7	2020	17,696	Yes
Senegal	A7	2020	1,829,973	Yes
Serbia	A7	2020	2,644,622	Yes
Seychelles	A7	2021	233,760	Yes
Sierra Leone	A7	2020	250,376	Yes
Somalia	A7	2020	894,881	Yes
South Africa	A7	2020	8,221,905	Yes
South Sudan	A7	2021	166,868	
Sri Lanka	A7	2020	478,419	Yes
Sudan (the)	A7	2020	1,244,369	
Suriname	A7	2020	237,803	
Syrian Arab Republic	CP	2021	9,466,500	Yes
Timor-Leste	A7	2019	13,645	
Togo	A7	2021	635,045	Yes
Tonga	CP	2021	1,981	Yes
Trinidad and Tobago	CP	2021	5,201,433	Yes

Country	Source	Year of latest consumption	Latest consumption	Ratified Kigali Amendment*
Tunisia	A7	2020	1,719,614	Yes
Turkey	A7	2020	14,913,758	Yes
Turkmenistan	CP	2021	510,156	Yes
Tuvalu	A7	2020	296	Yes
Uganda	A7	2020	48,950	Yes
United Republic of Tanzania (the)	A7	2020	252,760	Yes
Uruguay	A7	2020	613,574	Yes
Vanuatu	CP	2021	13,781	Yes
Venezuela (Bolivarian Republic of)	CP	2021	799,335	
Viet Nam	CP	2021	10,470,051	Yes
Zambia	A7	2020	282,182	Yes
Zimbabwe	A7	2021	733,188	

*As of 22 April 2022.

Annex IV

REVISED SECTION B1 FOR COUNTRY PROGRAMME DATA REPORTING

1. CP data report mainly covers pure substances and blends containing one or more controlled substances; in the majority of A5 countries, all controlled substances including blends are imported.
2. However, some A5 countries are currently manufacturing HFC-blends *in situ* using either locally produced HFCs or imported HFCs, for their local market or for export to other A5 countries. In order to record HFC and HFC-blends in the CP data reports, the Secretariat has designed Section B1 to be used only in A5 countries that manufacture HFC blends. Section B1 is contained in Appendix A to the present document.
3. Column (1) of Section B1 lists all the 18 HFCs included in Annex F of the Montreal Protocol, differentiating between HFC locally produced (“Production”) or imported (“Import”); the amount of HFC produced or imported for use in different end-uses should be recorded in column (3) “Pure”. Columns (4) to (9) list the most commonly used HFC-blends in Article 5 countries (i.e., R-404A, R-407A, R-407C, R-410A, R-507A and R-508B). Columns (10) and (11) (“Others”) allow for reporting HFC-blends not included in Section B1. To reduce the risk of erroneous data reporting, Section B1 has identified only the cells where pure HFCs are components of HFC-blends. Column (12) “Total” is the total amount of the HFC imported or produced that includes quantities used as a pure substance (column (3)) plus the amounts used in HFC-blends (columns (4) to (11)). The data in column (12) should be reported in Section B of the CP data report, either under column “Production”, if such HFC was produced in the country, or under column “Import” if such HFC was imported; reporting the data in Section B and Section B1 is necessary to ensure consistency of production data reported under Article 7 of the Montreal Protocol. Column (13) (“Remarks”) should provide information on the exact percentage of each of the pure HFCs used for manufacturing such blend, and whether the pure HFCs were produced in situ or imported.
4. The total quantities of pure HFCs used in manufacturing different HFC-blends should be checked against the proportions applicable for the respective HFC-blends. The variances, if any, should be explained in the remarks column against the blends in Section B (e.g., stocks of HFCs that will be blended in a future year).

Example 1: Country ABC imports 50 mt of HFC-32 and 50 mt of HFC-125 and manufactures 100 mt of R-410A using these imports. R-410A manufactured is sold to local users in servicing refrigeration and air-conditioning equipment.

Explanation for filling information in B1: Column “R-410A” (column (7)) includes 50 mt of HFC-32 and 50 mt of HFC-125, for a total of 100 mt (row Total (B1) at the bottom). The data in column “Total” (column (12)) needs to be included in cell on imports relating to HFC-32 and HFC-125 in Section B. Column “Remarks” (column (13)) should include details of use of HFCs including blends.

REVISED COUNTRY PROGRAMME REPORT FORMAT (2019 DATA AND BEYOND)													
COUNTRY:	ABC	YEAR: January to December of the year									2019		
SECTION B1. ANNEX F - DATA ON PRODUCTION OF CONTROLLED SUBSTANCES AND MANUFACTURING OF BLENDS (METRIC TONNES)													
NOTE: Data entry is required in UNSHADED cells only													
Substances		Pure (3)	Blends								Total (12)	Remarks (13)	
			R-404A (4)	R-407A (5)	R-407C (6)	R-410A (7)	R-507A (8)	R-508B (9)	XYZ (10)	Others ¹ (11)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Annex F													
Controlled Substances													
HFC-32	Production	0.00		0.00	0.00	0.00				0.00	0.00	0.00	
	Import					50.00						50.00	HFC-32 imported is used for manufacturing R-410A; data in column 12 is reported under imports for HFC-32 in section B.
HFC-41	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-125	Production	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
	Import	0.00	0.00	0.00	0.00	50.00	0.00			0.00	0.00	50.00	HFC-125 imported is used for manufacturing R-410A; data in column 12 is reported under imports for HFC-125 in section B.
HFC-134	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-134a	Production	0.00	0.00	0.00	0.00					0.00	0.00	0.00	
	Import	0.00	0.00	0.00	0.00					0.00	0.00	0.00	
HFC-143	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-143a	Production	0.00	0.00					0.00		0.00	0.00	0.00	
	Import	0.00	0.00					0.00		0.00	0.00	0.00	
HFC-152	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-152a	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-227ea	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-236cb	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-236ea	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-236fa	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-245ca	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-245fa	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-365mfc	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-43-10mcc	Production	0.00								0.00	0.00	0.00	
	Import	0.00								0.00	0.00	0.00	
HFC-23 (use)	Production	0.00							0.00	0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	0.00	
TOTAL (B1)		0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	

Example 2: Country ABC produces 46 mt of HFC-32 and imports 50 mt of HFC-125 and 150 mt of HFC-134a. The country manufactures 200 mt of R-407C (i.e. 25 per cent of HFC-125, 23 per cent of HFC-32 and 52 per cent of HFC-134a), and sells 46 mt of HFC-134a to local users for servicing refrigeration and air-conditioning equipment.

Explanation for filling information in B1: Column “R-407C” (column (6)) includes 46 mt of HFC-32 and 50 mt of HFC-125. The cell relating to HFC-134a imports in column “Pure” (column (3)) includes 46 mt, and the cell relating to import of HFC-134a for manufacturing in column R-407C (column (6)) includes 104 mt. The data in column “Total” (column (12)) needs to be included in the cell on production and imports relating to HFC-125, HFC-134a and HFC-32 in Section B. The percentage of HFC-125, HFC-32 and HFC-134a in column (6) is 25 per cent, 23 per cent and 52 per cent, respectively and matches with the composition of R-407C. Column “Remarks” (column (13)) should include details of use of HFCs including blends.

REVISED COUNTRY PROGRAMME REPORT (2019 DATA AND BEYOND)												
COUNTRY:		ABC		YEAR: January to December of the year							2019	
SECTION B1. ANNEX F - DATA ON PRODUCTION OF CONTROLLED SUBSTANCES AND MANUFACTURING OF BLENDS (METRIC TONNES)												
NOTE: Data entry is required in UNSHADED cells only												
Substances		Pure	Blends								Total	Remarks
			R-404A	R-407A	R-407C	R-410A	R-507A	R-508B	XYZ	Others ¹		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Annex F												
Controlled Substances												
HFC-32	Production											
	Import	0.00		0.00	46.00	0.00			0.00	0.00	46.00	R-407C blend contains 23 per cent HFC-32, 25 per cent HFC-125 and 52 per cent HFC-134a. HFC-32 produced is used for manufacturing this blend.
HFC-41	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-125	Production	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	
	Import											R-407C blend contains 23 per cent HFC-32, 25 per cent HFC-125 and 52 per cent HFC-134a. HFC-125 is imported and used for manufacturing this blend.
HFC-134	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-134a	Production	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
	Import											R-407C blend contains 23 per cent HFC-32, 25 per cent HFC-125 and 52 per cent HFC-134a. Of the total import of 150 mt of HFC-134a, 104 mt is used for manufacturing blends and 46 mt is used for sale to users in servicing sector
HFC-143	Production	46.00	0.00	0.00	104.00				0.00	0.00	150.00	
	Import	0.00							0.00	0.00	0.00	
HFC-143a	Production	0.00	0.00					0.00	0.00	0.00	0.00	
	Import	0.00	0.00					0.00	0.00	0.00	0.00	
HFC-152	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-152a	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-227ea	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236cb	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236ea	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236fa	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-245ca	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-245fa	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-365mfc	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-43-10mee	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-23 (use)	Production	0.00						0.00	0.00	0.00	0.00	
	Import	0.00						0.00	0.00	0.00	0.00	
TOTAL (B1)		46.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	246.00	

Appendix A

REVISED FORMAT FOR SECTION B1 OF THE CP DATA REPORT FORMAT

REVISED COUNTRY PROGRAMME REPORT (2019 DATA AND BEYOND)												
COUNTRY:			YEAR: January to December of the year						YYYY			
SECTION B1. ANNEX F - DATA ON PRODUCTION OF CONTROLLED SUBSTANCES AND MANUFACTURING OF BLENDS (METRIC TONNES)												
NOTE: Data entry is required in UNSHADED cells only												
Substances		Pure	Blends								Total	Remarks
			R-404A	R-407A	R-407C	R-410A	R-507A	R-508B	Others ¹	Others ¹		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Annex F												
Controlled Substances												
HFC-32	Production	0.00		0.00	0.00	0.00			0.00	0.00	0.00	
	Import	0.00		0.00	0.00	0.00			0.00	0.00	0.00	
HFC-41	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-125	Production	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	
	Import	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	
HFC-134	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-134a	Production	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
	Import	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
HFC-143	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-143a	Production	0.00	0.00					0.00	0.00	0.00	0.00	
	Import	0.00	0.00					0.00	0.00	0.00	0.00	
HFC-152	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-152a	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-227ea	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236cb	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236ea	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-236fa	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-245ca	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-245fa	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-365mfc	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-43-10mee	Production	0.00							0.00	0.00	0.00	
	Import	0.00							0.00	0.00	0.00	
HFC-23 (use)	Production	0.00						0.00	0.00	0.00	0.00	
	Import	0.00						0.00	0.00	0.00	0.00	
TOTAL (B1)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

¹ Please include blends that are manufactured using controlled substance in separate columns; include use data for these blends in Section B.

Note:

Please include individual component quantity for each of the blends (e.g., HFC-125 in R-410A) in the relevant cells, when blends are manufactured in the country.

When blends are imported in the country and/or exported from the country, please include that data in Section B against appropriate row.

Please ensure accurate calculation of components when blends are produced, based on standard composition ratios.