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THE MULTILATERAL FUND FOR THE
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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. The three countries¹ have been urged not to request funding from the Multilateral Fund for the phase-out of their ODS consumption and production (where applicable), and therefore are not required to submit the mandatory progress report on the implementation of country programmes (CP)². However, data from these countries is included in some parts of the report to ensure a global analysis of ODS production and consumption trends.

2. Parties are encouraged to submit their 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 2016. All countries that submitted requests for funding to the 80th meeting also submitted 2016 CP data, except for Dominica and Morocco.

Table 1. A7 and CP reports submitted by A5 Parties (as of 3 October 2017)

Data	2013	2014	2015	2016
A7	147	147	147	136
CP	144*	143**	141***	134****

(*) Except for the Central African Republic as there are 145 A5 countries.

(**) Except for Yemen as there are 144 A5 countries (excluding Croatia).

(***) Except for Burundi, Mali and Yemen.

(****) Except for Algeria, Djibouti, Dominica, Guinea Bissau, Kuwait, Morocco, Saudi Arabia, South Sudan, Uganda and Yemen.

¹ 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.

² CP data reports represent the sole source of information on the sector distribution of controlled substances in A5 countries.

Scope of the document

3. 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 2013 freeze for HCFCs, the final phase-out of methyl bromide (MB) and TCA and the 10 per cent reduction of HCFCs by 2015, in the consumption and production sectors. It assumes that the latest consumption reported under A7 or CP reports has taken into account the phase-out from completed projects³

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

Part III: Data on the implementation of CPs for HCFCs⁴: This section presents an analysis on the data contained in CP data reports, including HCFC production versus consumption, sector distribution of HCFCs, other information extracted from CP reports and issues related to CP data reports

Recommendation

4. This document also includes the following two annexes:

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

Annex II: HCFC analysis

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

Licensing and quota systems

5. All countries have established licensing systems pursuant to Article 4B of the Montreal Protocol. The Government of Mauritania⁵ has had an operational quota and licensing system since July 2017, including the accelerated control measures for HCFCs, which requires that any new import of ODS must be authorized by the Ozone Unit and the Ministry of trade.

6. The Government of Burundi is finalizing the formal HCFC quota system. UNEP indicated that the draft of the quota and licensing system submitted by the national ozone unit is still awaiting the Government's approval.

7. The Executive Committee may wish to request UNEP to report to the 81st meeting on the finalization of the formal HCFC quota system by the Government of Burundi.

³ Up to December 2016, 280,209 ODP tonnes of consumption and 201,277 ODP tonnes of production had been phased out from completed projects. The completed projects were valued at US \$2.4 billion out of an approved total of approximately US \$3.1 billion.

⁴ 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)).

⁵ Stage I of the HCFC phase-out management plan (HPMP) for Mauritania has been submitted to the 80th meeting (UNEP/OzL.Pro/ExCom/80/44).

Production and consumption

8. The complete phase-out of production and consumption of MB and TCA for all A5 countries 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 are the only substances under the Montreal Protocol where consumption and production is still allowed.

Production sector

9. MB is produced in China⁶. An MB production closure phase-out plan was approved for China, providing for the country to produce at levels lower than those allowed under the Montreal Protocol.⁷ In 2016, 59.8 ODP tonnes of MB were produced in China, in line with decision XXVII/3.

10. There are six A5 countries⁸ that produced HCFCs, as shown in Table 2. The aggregated production in 2016 was 25 per cent below the aggregated production baseline.

Table 2. HCFC production for 2016 reported by A5 countries under A7 or CP data (ODP tonnes)

Party	Source	2016	Baseline	% reduction
Argentina	A7	95.8	224.6	57.3
China	CP	22,513.6	29,122.0	22.7
Korea (Democratic People's Republic of)	A7	24.8	27.6	10.1
India	A7	1,665.5	2,399.5	30.6
Mexico	A7	166.8	697.0	76.1
Republic of Korea	A7	240.3	395.1	39.2
Venezuela (Bolivarian Republic of)	A7	14.3	123.1	88.4
Total		24,480.84	32,593.80	24.9

11. The levels of the three main HCFCs produced in A5 countries are shown in Table 3. An HCFC production phase-out management plan was approved for China.⁹

Table 3. Production levels of the three main HCFCs (A7, CP ODP tonnes)

Party	2010	2011	2012	2013	2014	2015	2016	Baseline
HCFC-22								
Argentina	233.8	221.0	230.5	107.3	125.7	134.5	95.8	224.6
China	17,124.6	17,968.1	20,050.1	15,866.9	16,497.0	13,391.0	14,086.8*	29,122.0**
Democratic People's Republic of Korea (the)	27.4	26.4	28.7	31.8	28.9	27.4	24.8	27.6
India	2,236.8	1,504.0	1,565.4	1,352.1	1,465.7	1,727.6	1,665.5	2,399.5
Mexico	694.0	649.7	298.3	317.1	223.5	160.9	166.8	697.0
Republic of Korea	414.9	392.4	306.7	357.6	364.7	348.9	240.3	395.1
Venezuela (Bolivarian Republic of)	119.2	134.3	160.3	121.2	86.1	37.2	14.3	123.1
Total HCFC-22	20,435.8	20,503.5	22,333.2	17,796.4	18,427.0	15,478.6	16,054.0	32,593.8

⁶ The Republic of Korea also produced MB.

⁷ Decision 47/54. The Agreement between the Government and the Executive Committee allows China to produce MB for QPS applications, feedstock and critical uses approved by the Parties. A progress report on the implementation of the China MB production sector has been submitted to the 80th meeting (UNEP/OzL.Pro/ExCom/80/12).

⁸ The Republic of Korea also produces HCFC-22.

⁹ UNEP/OzL.Pro/ExCom/68/SGP-InS/2 and Add.1.

Party	2010	2011	2012	2013	2014	2015	2016	Baseline
HCFC-141b								
China	10,874.3	12,311.5	12,884.4	9,583.6	9,560.2	7,246.5	7,278.2*	**
HCFC-142b								
China	1,979.2	1,759.8	1,440.4	1,102.0	1,076.8	1,224.3	1,110.5*	**
Total	33,289.3	34,574.7	36,658.0	28,482.0	29,064.0	23,949.4	24,442.8	32,593.8

* CP data.

** 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.

Consumption sector

MB and TCA

12. Only five A5 countries¹⁰ have reported MB consumption above the 2015 Montreal Protocol compliance target, as shown in Table 4. For three countries, Argentina, China and Mexico, the Parties approved consumption of MB for critical uses. In the case of Jamaica, MB consumption reported under A7 was zero in 2015 (A7 data for 2016 has not yet been reported).

Table 4. A5 countries with MB consumption after 1 January 2015

Country	Source	Latest data	ODP tonnes	
			Baseline	Consumption
Argentina*	A7	2016	411.3	77.5
China**	CP	2016	1,102.10	59.82
Jamaica	CP	2016	4.9	0.9
Mexico***	A7	2016	1,130.80	49.4
South Africa**** ¹¹	A7	2016	602.7	74.6

* Allowable level of consumption of 77.55 ODP tonnes per decision XXVII/3.

** Allowable level of consumption of 59.85 ODP tonnes per decision XXVII/3.

*** Allowable level of consumption of 50.97 ODP tonnes per decision XXVII/3.

**** Allowable level of consumption of 44.44 ODP tonnes per decision XXVII/3.

13. There are also 34 A5 countries that have reported MB consumption for QPS applications under CP data, as shown in Annex I to the present document. The consumption for these countries is not eligible for funding.

14. All A5 countries have reported zero consumption of TCA in 2015 or 2016.

HCFC consumption

15. A total of 147 A5 countries have an established HCFC baseline for compliance, with an aggregated latest consumption level of 359,969.5 mt (23,018.3 ODP tonnes) of HCFCs, as shown in Table 5. The main HCFCs are: HCFC-22 (68.7 per cent of the total consumption measured in ODP tonnes), HCFC-141b (27.8 per cent) and HCFC-142b (3.3 per cent).

¹⁰ A total of 100 A5 countries received financial assistance from the Multilateral Fund to phase out consumption and production (two countries) of MB.

¹¹ Reported 2016 consumption for South Africa is above the allowed level for that year. The issue is being clarified between the Ozone Secretariat and the country.

Table 5. Baseline and latest HCFC consumption data by type of HCFC

HCFC	Baseline		Consumption		% of total (ODP tonnes)
	Metric tonnes	ODP tonnes	Metric tonnes	ODP tonnes	
HCFC-123	1,450.0	29.0	2,261.7	45.2	0.2
HCFC-124	1,181.0	26.0	355.3	7.8	0.0
HCFC-141b	94,412.4	10,385.4	58,105.3	6,391.6	27.8
HCFC-142b	30,746.4	1,998.5	11,552.4	750.9	3.3
HCFC-22	358,383.1	19,711.1	287,608.4	15,818.5	68.7
HCFC-225	5.6	0.4	48.0	3.4	0.0
HCFC-225ca	56.5	1.4	38.2	1.0	0.0
HCFC-225cb	9.6	0.3	0.2	0.01	0.0
Total	486,244.6	32,152.1	359,969.5	23,018.3	100.0
HCFC-141b polyol*	5,283.6	581.2	6,628.3	729.1	

* HCFC-141b contained in imported pre-blended polyols, only available in CP data.

HPMPs

16. All 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 HPMPs for 143 countries and stage II for 26 countries¹², at a total value of US \$1.25 billion (approved in principle) of which US \$631.85 million has been disbursed to address compliance with the Montreal Protocol control levels as follows:

- (a) Eight countries (two low-volume-consuming (LVC) and six non-LVC countries) to address compliance up to 2015;
- (b) One hundred and eleven countries (62 LVC and 37 non-LVC countries, and the 12 Pacific Island Countries (PICs)) to address compliance up to 2020;
- (c) Thirteen countries to address compliance up to 2025;
- (d) Eleven LVC countries (Bhutan, Cambodia, Croatia¹³, Guyana, Kyrgyzstan, Maldives, Mauritius, Namibia, Papua New Guinea, Saint Vincent and the Grenadines, and Seychelles), to completely phase out HCFCs between 2020 and 2025.

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

18. Two A5 countries have not received funding other than for project preparation.¹⁴ In the case of Syrian Arab Republic, funding was approved for the phase-out of 12.9 ODP tonnes of HCFC in the refrigeration and air-conditioning sector as a stand-alone project outside its HPMP, representing 9.6 per cent of the baseline (Table 6). The stage I proposal of the HPMP for Mauritania has been submitted to the 80th meeting.

¹² In addition, stage I of the HPMP for Mauritania and stage II of the HPMPs for Kenya, Nigeria (which has subsequently been withdrawn), Peru, the Philippines and Timor-Leste have been submitted to the 80th meeting.

¹³ Croatia became a non-Article 5 country in 2014, and completely phased out HCFCs by 2015.

¹⁴ Submission of stage I of the HPMP for Syrian Arab Republic in the 2019 business plan.

Table 6. A5 countries without an approved HPMP (ODP tonnes)

Country	Baseline	Starting point	Approved projects	Remaining
Mauritania	20.5			20.5
Syrian Arab Republic	135.0	135.0	12.9	122.1
Total	159.6	135.0	12.9	142.6

Remaining HCFC consumption

19. Implementation of stages I and II of the HPMPs approved will result in the phase-out of approximately 59 per cent of the starting point for aggregate reduction of HCFC consumption and 87 per cent of the consumption of HCFC-141b contained in imported pre-blended polyols. Table 7 shows the aggregate remaining HCFC consumption¹⁵ by type of HCFC in all A5 countries.

Table 7. Total remaining HCFC consumption by substance (ODP tonnes)*

HCFC	Baseline	Starting point	Approved	Remaining	% of approved
HCFC-123	32.72	60.08	12.20	47.88	20.31
HCFC-124	26.57	26.07	0.96	25.11	3.68
HCFC-141	1.90	0.94	0.94	0.00	100.00
HCFC-141b	10,700.69	10,738.09	10,460.97	277.12	97.42
HCFC-142b	1,992.30	2,012.16	1,282.91	729.25	63.76
HCFC-21	1.50	0.74	0.74	0.00	100.00
HCFC-22	20,356.03	19,970.66	7,756.27	12,214.39	38.84
HCFC-225	2.82	1.60	0.00	1.60	0.00
HCFC-225ca	1.80	1.64	1.22	0.42	74.39
HCFC-225cb	0.70	0.68	0.00	0.68	0.00
Total	33,117.03	32,812.66	19,516.21	13,296.45	59.48
HCFC-141b polyol**	0.00	572.60	500.85	71.75	87.47

* As at the 79th meeting.

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

PART II: A5 COUNTRIES SUBJECT TO DECISIONS ON COMPLIANCE

20. At their Twenty-eighth Meeting, the Parties noted with concern that Yemen had not reported its 2015 A7 data, placing the country in non-compliance with its data reporting obligations under the Montreal Protocol, and urged Yemen to report the required data to the Ozone Secretariat as quickly as possible (decision XXVIII/9). In this regard, the Secretariat had reported to the 79th meeting that Yemen had submitted Article 7 data for both 2015 and 2016.

PART III: DATA ON THE IMPLEMENTATION OF CPs FOR HCFCs**HCFC production versus consumption**

21. Since 2010, the reported levels of the three main HCFCs produced in A5 countries have been above the levels of consumption except for HCFC-141b in 2010, and HCFC-142b in 2011, as shown in Table 8.

¹⁵ The remaining HCFC consumption eligible for funding depends on the starting point for aggregate reductions in HCFC consumption selected by each Article 5 country in their HPMP.

Table 8. HCFC production versus consumption of the three main HCFCs (ODP tonnes)

HCFC	2010	2011	2012	2013	2014	2015	2016
Production							
HCFC-22	20,817.8	21,665.7	23,552.4	18,769.0	20,266.4	16,782.6	16,191.2
HCFC-141b	10,762.0	12,311.5	12,884.4	9,583.6	9,560.2	7,246.5	7,278.2
HCFC-142b	1,979.2	1,759.8	1,440.4	1,102.0	1,076.8	1,224.3	1,110.5
Consumption							
HCFC-22	20,783.8	19,848.6	22,566.5	17,799.2	17,486.7	15,183.8	14,288.7
HCFC-141b	10,846.7	11,978.2	11,735.9	9,027.8	8,752.9	6,771.4	6,092.9
HCFC-142b	1,977.3	1,828.0	1,439.8	1,014.5	770.0	889.7	681.3
Production – consumption							
HCFC-22	34.0	1,817.1	985.9	969.8	2,779.7	1,598.8	1,902.5
HCFC-141b	-84.7	333.3	1,148.5	555.8	807.3	475.1	1,185.3
HCFC-142b	1.9	-68.2	0.6	87.5	306.8	334.6	429.2

Sector distribution of HCFC consumption

22. Table 9 presents the sector distribution of aggregated HCFC consumption for the period 2009 to 2016. In 2016, the three sectors with the largest consumption of HCFCs (measured in ODP tonnes) were the foam (36.8 per cent of the total), the refrigeration manufacturing (30.2 per cent) and the refrigeration servicing sectors (29.8 per cent). As the phase-out of HCFCs in the foam and refrigeration manufacturing sectors progresses, the refrigeration servicing sector becomes more relevant.

Table 9. Sector distribution of HCFC consumption (2009-2016) (ODP tonnes)

Sector	2009	2010	2011	2012	2013	2014	2015	2016
Aerosol	76.4	137.8	153.4	170.5	262.2	306.1	268.0	232.0
Foam	11,952.7	13,226.4	14,155.3	14,005.7	11,029.8	10,587.2	8,396.0	8,013.4
Fire-fighting	7.5	23.1	19.1	19.4	14.2	15.3	18.1	15.0
Refrigeration manufacturing	9,385.1	10,456.5	10,118.3	10,287.5	8,520.8	7,951.9	7,128.9	6,573.7
Refrigeration servicing	8,078.8	9,842.0	9,252.9	11,429.9	8,251.3	8,327.6	7,311.9	6,476.1
Solvent	500.5	549.5	632.0	634.5	514.5	526.9	459.8	447.6
Tobacco	12.8	11.7						
Total	30,013.7	34,247.0	34,331.1	36,547.5	28,592.9	27,715.0	23,582.7	21,757.8

23. Sector distribution of HCFC consumption varies according to the level of consumption and the size of the manufacturing sector as shown in Table 10, where countries are grouped as follows: China, as the largest consumer (and producer) of HCFCs; the 14 largest consuming countries (excluding China); and all other countries.

Table 10. Sector distribution of HCFC consumption by group of countries (ODP tonnes)

Sector	2009	2010	2011	2012	2013	2014	2015	2016
China								
Aerosol		59.6	70.5	95.4	137.8	186.2	180.4	189.4
Foam	7,475.8	8,388.5	9,576.0	9,031.0	7,473.9	7,404.0	5,522.7	5,872.8
Fire-fighting								
Refrigeration manufacturing	6,227.6	6,795.0	6,740.3	6,586.7	6,014.3	5,602.0	4,951.7	5,107.1
Refrigeration servicing	3,814.0	3,982.0	3,827.0	4,857.8	3,103.8	3,161.7	2,412.0	2,638.3
Solvent	467.0	497.1	514.1	524.1	466.0	484.8	418.5	413.4
Tobacco	12.8	11.7						
Total for China	17,997.1	19,733.8	20,727.8	21,094.9	17,195.8	16,838.7	13,485.3	14,221.1
14 largest A5 consuming countries								
Aerosol	76.4	77.6	82.9	75.2	124.4	119.9	87.6	42.5
Foam	3,132.6	3,798.8	3,563.8	3,932.2	2,641.5	2,306.6	2,080.8	1,431.3

Sector	2009	2010	2011	2012	2013	2014	2015	2016
Fire-fighting	6.7	21.2	16.8	16.8	12.9	12.8	12.0	10.6
Refrigeration manufacturing	2,398.1	2,844.4	2,503.6	2,971.5	2,072.0	1,953.7	1,723.6	1,081.4
Refrigeration servicing	2,105.9	3,357.9	3,206.0	4,217.4	3,005.8	3,140.6	3,131.0	2,226.2
Solvent	0.7	43.9	81.1	77.2	43.5	39.1	37.7	29.9
Tobacco								
Total 14 largest consuming countries	7,720.4	10,143.7	9,454.2	11,290.2	7,900.1	7,572.8	7,072.7	4,822.0
129 remaining A5 countries								
Aerosol	0.0	0.6						
Foam	1,344.2	1,039.2	1,015.6	1,042.5	914.4	876.6	792.5	709.3
Fire-fighting	0.8	1.8	2.4	2.6	1.3	2.4	6.2	4.4
Refrigeration manufacturing	759.5	817.1	874.4	729.4	434.5	396.3	453.5	385.2
Refrigeration servicing	2,158.9	2,502.1	2,219.9	2,354.6	2,141.8	2,025.3	1,768.9	1,611.5
Solvent	32.8	8.6	36.8	33.3	5.0	2.9	3.5	4.2
Tobacco								
Total other countries	4,296.2	4,369.5	4,149.1	4,162.4	3,497.0	3,303.5	3,024.7	2,714.7
Grand total	30,013.70	34,247.00	34,331.10	36,547.50	28,592.90	27,715.00	23,582.70	21,757.80
Percent of total for China (%)	60.0	57.6	60.4	57.7	60.1	60.8	57.2	65.4
Percent of total for 14 largest A5 consuming countries (%)	25.7	29.6	27.5	30.9	27.6	27.3	30.0	22.2
Percent of total for 129 remaining A5 countries (%)	14.3	12.8	12.1	11.4	12.2	11.9	12.8	12.5

24. The sector distribution of the three main HCFCs consumed in A5 countries is presented in Table 11. The analysis shows a sustained reduction in the overall consumption of these substances, except in the aerosol sector for HCFC-22 and HCFC-141b and in the servicing sector for HCFC-22.

Table 11. Sector distribution of the main HCFCs consumed in A5 countries (ODP tonnes)

Sector	2009	2010	2011	2012	2013	2014	2015	2016
HCFC-22								
Aerosol	42.4	95.7	103.9	124.9	116.4	150.0	134.2	132.0
Foam*	1,590.2	1,772.9	1,725.7	2,077.3	1,803.4	1,748.9	1,176.7	1,517.9
Fire-fighting	0.0	11.1	6.2	0.1	0.1	0.1	0.1	
Refrigeration manufacturing	8,610.2	9,641.4	9,270.7	9,475.6	7,971.3	7,480.5	6,750.8	6,284.9
Refrigeration servicing	7,518.1	9,262.5	8,712.8	10,859.5	7,908.0	8,106.8	7,121.9	6,353.9
Solvent	32.2	0.3	29.3	29.0		0.3		
Tobacco								
Total HCFC-22	17,793.0	20,783.8	19,848.6	22,566.5	17,799.2	17,486.7	15,183.8	14,288.7
HCFC-141b								
Aerosol	34.1	41.3	49.4	45.4	145.8	156.0	132.0	99.9
Foam	7,947.9	9,376.2	10,412.3	10,201.9	7,666.4	7,494.7	5,766.9	5,232.9
Fire-fighting		4.2	6.0	9.3	6.7	7.6	9.3	5.2
Refrigeration manufacturing**	749.0	789.6	814.7	782.7	529.6	447.9	355.3	265.6
Refrigeration servicing	125.9	77.7	98.7	96.4	168.7	125.6	53.6	46.0
Solvent	466.5	546.0	597.1	600.2	510.6	521.0	454.4	443.3

Sector	2009	2010	2011	2012	2013	2014	2015	2016
Tobacco	12.8	11.7						
Total HCFC-141b	9,336.1	10,846.7	11,978.2	11,735.9	9,027.8	8,752.9	6,771.4	6,092.9
HCFC-142b								
Aerosol	0.0	0.2	0.1	0.2	0.0	0.0	1.8	0.0
Foam***	1,605.5	1,503.9	1,401.7	986.8	859.8	695.8	772.7	625.8
Fire-fighting								
Refrigeration manufacturing	3.8	6.5	11.1	11.2	6.5	8.0	8.3	8.0
Refrigeration servicing	396.9	466.0	414.8	441.6	148.2	66.1	106.8	47.5
Solvent	0.7	0.6	0.3					
Tobacco								
Total HCFC-142b	2,006.9	1,977.3	1,828.0	1,439.8	1,014.5	770.0	889.7	681.3
Other HCFCs	877.7	639.3	676.3	805.4	751.3	705.5	737.8	694.9
Total	30,013.7	34,247.0	34,331.1	36,547.5	28,592.9	27,715.0	23,582.7	21,757.8

* Used as co-blowing agent.

** Used for insulation of refrigeration equipment.

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

Prices of HCFCs and alternatives

25. The average prices of HCFCs and alternatives reported by A5 countries since 2009 are summarized in Table 12¹⁶. The average prices provided by A5 countries 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)¹⁷ that is usually obtained from importers.

Table 12. Average price of HCFCs and alternatives

Substance	Average price (US \$/kg)								Range (US \$/kg)	Countries reporting price (2016)
	2009	2010	2011	2012	2013	2014	2015	2016		
HCFC-141b	5.00	6.02	6.73	6.73	6.65	7.77	7.08	10.00	1.50 (Dominican Republic (the)) to 48.00 (Oman)	33
HCFC-22	7.35	8.61	9.28	10.06	9.24	10.08	10.07	9.32	1.45 (Thailand) to 42.00 (Oman)	102
Isobutane (HC-600a)	24.36	21.08	20.97	20.49	20.20	18.02	15.23	15.50	2.00 (Mexico) to 58.00 (Cote d'Ivoire)	52
Propane (HC-290)	20.53	21.79	22.23	15.60	14.38	21.26	19.08	15.95	2.00 (Mexico) to 56.00 (Paraguay)	34
HFC-134a	12.52	15.14	16.64	14.96	13.65	13.30	14.26	12.84	2.62 (Guyana) to 112.00 (Oman)	101
R-404A	16.13	18.67	20.68	18.71	15.41	15.11	15.42	15.21	3.10 (Myanmar) to 110.00 (Cook Islands)	96
R-407C	16.95	20.80	21.36	19.04	16.06	15.19	13.97	12.38	3.10 (China and Myanmar) to 49.00 (Cabo Verde)	82
R-410A	16.44	20.26	21.70	19.91	16.05	15.28	14.61	16.30	3.00 (China and Thailand) to 255.00 (Cook Islands (the))	96
R-507A	17.48	17.55	20.78	15.84	13.59	12.21	11.65	11.20	3.10 (Myanmar) to 39.00 (Cabo Verde)	39

* All zero entries were excluded.

Issues related to CP data reports

Timely submission of CP data reports

26. In reviewing the timely submission of the CP data reports, the Secretariat noted no particular progress for the year 2016 compared to 2015 as shown in Table 13. Of the 62 countries with outstanding

¹⁶ Several of the CP data reports submitted by Article 5 countries contain price data for both ODS and alternative substances.

¹⁷ Decision 68/4(b)(iv) requested Governments to report, on a voluntary basis, the average import FOB price for each ODS and ODS substitute in the revised CP format.

2016 CP data reports at the time of the preparation of the Country programme data and prospects for compliance document for the 79th meeting, 51 had submitted their reports as at 3 October 2017. The Secretariat noted the efforts made by UNEP in following up the submission of outstanding CP data reports and keeping the Secretariat informed on progress on a regular basis.

27. The Executive Committee may wish to request the Secretariat to send letters to the governments of countries with outstanding 2014, 2015, and 2016 CP data reports, and urge them to submit their CP data reports as soon as possible, as delays affect the ability of the Secretariat to undertake the relevant analyses of ODS consumption and production levels.

Table 13. Monthly rates of submission of CP data reports (as at 3 October 2017)

Month	2011		2012		2013		2014		2015		2016	
	No*	(%)*	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
January	1	0.69	1	0.69					1	0.69		
February	1	1.39			1	0.69	2	1.39	5	4.17	9	6.25
March	3	3.47	4	3.47	3	2.76	15	11.81	33	27.08	9	12.50
April	20	17.36	20	16.67	38	28.97	48	45.14	27	45.83	49	46.53
May	35	41.67	36	42.36	35	53.10	24	61.81	22	61.11	26	64.58
June	18	54.17	17	54.17	11	60.69	18	74.31	14	70.83	10	71.53
July	9	60.42	8	59.72	6	64.83	9	80.56	8	76.39	7	76.39
August	7	65.28	7	64.58	6	68.97	3	82.64	5	79.86	2	77.78
September	21	79.86	13	73.61	22	84.14	7	87.50	8	85.42	19	90.97
October	8	85.42	17	85.42	12	92.41	9	93.75	8	90.97	2	92.36
November	4	88.19	1	86.11	2	93.79			1	91.67		
December			1	86.81			2	95.14				
After Dec.	16	99.31	17	98.61	8	99.31	6	99.31	9	97.92		
Total	143		142		144		143		141		133	

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

Data discrepancies between CP data reports and A7 data

28. In line with decision 79/4(b)(iii), the implementing agencies have provided feedback on the resolution of data discrepancies between the 2015 CP and Article 7 reports, as shown in Table 14.

Table 14: Differences between 2015 A7 and CP HCFC consumption data (ODP tonnes)

Country	Agency for institutional project	A7 data	CP data	Difference	HCFC-141b polyol*	Remarks
Morocco	UNEP	16.8	18.1	-1.3	11.5	Being clarified.
Nigeria	UNDP	247.7	170.4	77.3	39.8	Issue being clarified.

29. The Executive Committee may wish to request UNEP to continue assisting the Government of Morocco and Nigeria in clarifying data discrepancies between 2015 CP data and A7 data and report back to the 81st meeting.

30. The review of the 2016 HCFC import data reported under A7 and CP reports revealed a number of discrepancies, as shown in Table 15.

Table 15. Differences between 2016 A7 and CP HCFC consumption data (ODP tonnes)

Country	Agency for institutional project	A7 data	CP data	Difference	HCFC-141b polyol*	Remarks
Argentina	UNDP	228.2	205.9	22.4	23.2	Issue has been clarified. A7 data will be updated
Philippines (the)	UNEP	114.9	115.4	-0.5	0.0	CP data corrected and A7 being corrected.

Country	Agency for institutional project	A7 data	CP data	Difference	HCFC-141b polyol*	Remarks
South Africa		144.2	142.3	1.8	0.0	Issue being clarified.
Swaziland	UNEP	1.4	1.2	0.2	0.0	Issue has been clarified. A7 data will be updated.
Syrian Arab Republic	UNIDO	56.9	39.7	17.2	0.0	Issue being clarified.
Turkey	UNIDO	27.0	27.5	-0.5	0.0	Issue being clarified.

31. The Executive Committee may wish to request relevant implementing agencies to continue assisting the Governments of Argentina, the Philippines, South Africa, Swaziland, Syrian Arab Republic and Turkey in clarifying data discrepancies between 2016 CP data and A7 data and report back to the 81st meeting.

RECOMMENDATION

32. The Executive Committee may wish:

(a) To note:

- (i) The document on country programme (CP) data and prospects for compliance contained in UNEP/OzL.Pro/ExCom/80/8;
- (ii) That 133 countries had submitted 2016 CP data, 116 of them using the web-based system;
- (iii) With concern that ten countries (Algeria, Djibouti, Dominica, Guinea-Bissau, Kuwait, Morocco, Saudi Arabia, South Sudan, Uganda and Yemen) had not submitted 2016 CP data as of 3 October 2017;

(b) To request:

- (i) UNEP to report to the 81st meeting on the finalization of the formal HCFC quota system by the Government of Burundi;
- (ii) The Secretariat to send letters to the governments of countries with outstanding 2014, 2015 and 2016 CP data reports urging them to submit the reports immediately; and
- (iii) To request relevant implementing agencies to continue assisting relevant governments in clarifying data discrepancies between 2015 CP data and A7 data for Morocco and Nigeria, and between 2016 CP data and A7 data for Argentina, the Philippines, South Africa, Swaziland, Syrian Arab Republic and Turkey, and report back to the 81st meeting.

Annex I

MB CONSUMPTION FOR QPS APPLICATIONS

Country	Latest consumption	QPS (ODP tonnes)
Argentina	2016	24.24
Brazil	2016	42.36
Chile	2016	25.86
China	2016	684.98
Costa Rica	2016	5.94
Dominican Republic (the)	2016	10.80
Egypt	2016	189.00
El Salvador	2016	133.82
Fiji	2016	7.68
Guatemala	2016	12.00
Honduras	2016	17.82
India	2016	708.52
Indonesia	2016	76.80
Iran (Islamic Republic of)	2016	13.20
Jamaica	2016	1.50
Jordan	2016	7.20
Kenya	2016	0.30
Kiribati	2016	0.01
Mexico	2016	296.60
Morocco	2015	5.40
Myanmar	2016	8.40
Nicaragua	2016	9.60
Pakistan	2016	40.62
Peru	2016	2.40
Philippines (the)	2016	14.30
Saudi Arabia	2015	9.00
Solomon Islands	2016	0.60
Sri Lanka	2016	13.07
Thailand	2016	94.44
Turkey	2016	0.02
Turkmenistan	2016	7.20
Uruguay	2016	12.89
Vanuatu	2016	0.24
Viet Nam	2016	510.74

Annex II

HCFC ANALYSIS*

Country	Source ****	Year of latest consumption	Baseline (ODP t)	Latest consumption	% over freeze	% over 10% reduction	Control addressed by HPMPs
Afghanistan	A7	2016	23.60	20.02	0.0%	0.0%	35% by 2020
Albania	A7	2016	6.00	3.74	0.0%	0.0%	35% by 2020
Algeria	A7	2016	62.12	24.16	0.0%	0.0%	20% by 2017
Angola	A7	2016	16.00	11.55	0.0%	0.0%	10% by 2015 and 67.5% by 2025
Antigua and Barbuda	A7	2016	0.30	0.01	0.0%	0.0%	10% by 2015
Argentina	A7	2016	400.70	228.24	0.0%	0.0%	17.5% reduction in 2017 and 50% by 2022
Armenia	A7	2016	7.00	0.63	0.0%	0.0%	10% by 2015 and 66.6% by 2020
Bahamas (the)	A7	2016	4.80	3.74	0.0%	0.0%	35% by 2020
Bahrain	A7	2016	51.90	45.77	0.0%	0.0%	39% by 2020
Bangladesh	A7	2016	72.60	63.90	0.0%	0.0%	30% by 2018
Barbados	A7	2016	3.70	2.25	0.0%	0.0%	35% by 2020
Belize	A7	2016	2.80	2.15	0.0%	0.0%	35% by 2020
Benin	A7	2016	23.80	17.09	0.0%	0.0%	35% by 2020
Bhutan	A7	2016	0.30	0.14	0.0%	0.0%	100% by 2025
Bolivia (Plurinational State of)	A7	2016	6.10	3.47	0.0%	0.0%	35% by 2020
Bosnia and Herzegovina	A7	2016	4.70	2.34	0.0%	0.0%	35% by 2020
Botswana	CP	2016	11.00	9.43	0.0%	0.0%	35% by 2020
Brazil	A7	2016	1,327.30	875.29	0.0%	0.0%	10% by 2015, 35% by 2020 and 45% by 2021
Brunei Darussalam	A7	2016	6.10	3.75	0.0%	0.0%	35% by 2020
Burkina Faso	A7	2016	28.90	14.41	0.0%	0.0%	35% by 2020
Burundi	A7	2016	7.20	5.24	0.0%	0.0%	35% by 2020
Cabo Verde	A7	2016	1.10	0.13	0.0%	0.0%	35% by 2020
Cambodia	A7	2016	15.00	4.52	0.0%	0.0%	100% by 2035
Cameroon	A7	2016	88.80	65.84	0.0%	0.0%	20% by 2017
Central African Republic (the)	A7	2016	12.00	9.90	0.0%	0.0%	35% by 2020
Chad	A7	2016	16.10	14.06	0.0%	0.0%	35% by 2020
Chile	A7	2016	87.50	63.33	0.0%	0.0%	10% by 2015, 45% by 2020 and 65% by 2021
China	CP	2016	19,269.00	14,221.09	0.0%	0.0%	10% by 2015 and 37.6% by 2020
Colombia	A7	2016	225.60	136.55	0.0%	0.0%	10% by 2015, 60% by 2020 and 65% by 2021
Comoros (the)	A7	2016	0.10	0.09	0.0%	0.0%	35% by 2020

Country	Source ****	Year of latest consumption	Baseline (ODP t)	Latest consumption	% over freeze	% over 10% reduction	Control addressed by HPMPs
Congo (the)	A7	2016	10.14	7.93	0.0%	0.0%	35% by 2020
Cook Islands (the)	A7	2016	0.10	0.00	0.0%	0.0%	35% by 2020
Costa Rica	A7	2016	14.10	10.89	0.0%	0.0%	35% by 2020
Cote d'Ivoire	A7	2016	63.80	51.33	0.0%	0.0%	35% by 2020
Cuba	A7	2016	16.90	12.60	0.0%	0.0%	35% by 2020
Democratic People's Republic of Korea (the)	A7	2016	78.00	69.91	0.0%	0.0%	15% by 2018
Democratic Republic of the Congo (the)	A7	2016	66.21	9.35	0.0%	0.0%	10% by 2015
Djibouti	A7	2015	0.70	0.56	0.0%	0.0%	35% by 2020
Dominica	A7	2015	0.40	0.13	0.0%	0.0%	35% by 2020
Dominican Republic (the)	A7	2016	51.20	42.23	0.0%	0.0%	10% by 2015 and 40% by 2020
Ecuador	A7	2016	23.49	18.26	0.0%	0.0%	35% by 2020
Egypt	A7	2016	386.30	346.53	0.0%	0.0%	25% reduction in 2018 and 67.5% by 2025
El Salvador	A7	2016	11.70	6.41	0.0%	0.0%	35% by 2020
Equatorial Guinea	A7	2016	6.31	4.84	0.0%	0.0%	35% by 2020
Eritrea	A7	2016	1.09	0.94	0.0%	0.0%	35% by 2020
Ethiopia	A7	2016	5.50	4.59	0.0%	0.0%	35% by 2020
Fiji	A7	2016	8.40	4.10	0.0%	0.0%	35% by 2020
Gabon	A7	2016	30.20	20.90	0.0%	0.0%	35% by 2020
Gambia (the)	A7	2016	1.50	0.50	0.0%	0.0%	35% by 2020
Georgia	A7	2016	5.30	1.39	0.0%	0.0%	35% by 2020
Ghana	CP	2016	57.30	18.54	0.0%	0.0%	35% by 2020
Grenada	A7	2016	0.80	0.20	0.0%	0.0%	35% by 2020
Guatemala	A7	2016	8.30	5.60	0.0%	0.0%	35% by 2020
Guinea	A7	2016	22.60	4.70	0.0%	0.0%	35% by 2020
Guinea-Bissau	A7	2016	2.83	2.31	0.0%	0.0%	35% by 2020
Guyana	A7	2016	1.80	1.58	0.0%	0.0%	10% by 2015, 97.5% by 2025 and 100% by 2030
Haiti	A7	2016	3.63	2.99	0.0%	0.0%	35% by 2020
Honduras	A7	2016	19.90	13.44	0.0%	0.0%	35% by 2020
India	A7	2016	1,608.20	1,014.48	0.0%	0.0%	10% by 2015, 48% by 2020, 50% by 2021, 56% by 2022 and 60% by 2023
Indonesia	A7	2016	403.90	244.66	0.0%	0.0%	20% by 2018, 37.5% by 2020 and 55% by 2023
Iran (Islamic Republic of)	A7	2016	380.50	272.98	0.0%	0.0%	10% by 2015 and 75% by 2023

Country	Source ****	Year of latest consumption	Baseline (ODP t)	Latest consumption	% over freeze	% over 10% reduction	Control addressed by HPMPs
Iraq	A7	2016	108.40	93.23	0.0%	0.0%	13.82% by 2017
Jamaica	CP	2016	16.30	0.37	0.0%	0.0%	35% by 2020
Jordan	A7	2016	83.00	42.13	0.0%	0.0%	20% by 2017 and 50% by 2022
Kenya	A7	2016	52.20	15.07	0.0%	0.0%	21.1% by 2017
Kiribati	A7	2016	0.10	0.02	0.0%	0.0%	35% by 2020
Kuwait	A7	2015	418.60	338.98	0.0%	0.0%	39.2% by 2018
Kyrgyzstan	A7	2016	4.10	1.73	0.0%	0.0%	10% by 2015, 97.5% by 2020 and 100% by 2025
Lao People's Democratic Republic (the)	A7	2016	2.30	2.03	0.0%	0.0%	35% by 2020
Lebanon	A7	2016	73.50	58.86	0.0%	0.0%	18% by 2017, 50% by 2020 and 75% by 2025
Lesotho	A7	2016	3.50	0.71	0.0%	0.0%	35% by 2020
Liberia	A7	2016	5.30	2.84	0.0%	0.0%	35% by 2020
Libya**	A7	2016	118.38	118.36	0.0%	11.1%	10% by 2018
Madagascar	A7	2016	24.90	11.83	0.0%	0.0%	35% by 2020
Malawi	A7	2016	10.80	8.23	0.0%	0.0%	35% by 2020
Malaysia	A7	2016	515.80	318.62	0.0%	0.0%	15% by 2016, 22.4% by 2019, 35% by 2020, 40% by 2021 and 42.9% by 2022
Maldives	A7	2016	4.60	2.40	0.0%	0.0%	100% by 2020
Mali	A7	2016	15.00	9.63	0.0%	0.0%	35% by 2020
Marshall Islands (the)	A7	2016	0.20	0.00	0.0%	0.0%	35% by 2020
Mauritania***	A7	2016	20.50	18.15	0.0%	0.0%	
Mauritius	A7	2016	8.00	6.04	0.0%	0.0%	100% by 2030
Mexico	A7	2016	1,148.80	519.66	0.0%	0.0%	30% by 2018 and 67.5% by 2022
Micronesia (Federated States of)	A7	2016	0.20	0.04	0.0%	0.0%	35% by 2020
Mongolia	A7	2016	1.40	0.45	0.0%	0.0%	35% by 2020
Montenegro	A7	2016	0.80	0.62	0.0%	0.0%	35% by 2020
Morocco	A7	2016	51.35	26.88	0.0%	0.0%	20% by 2017
Mozambique	A7	2016	8.69	7.04	0.0%	0.0%	35% by 2020
Myanmar	A7	2016	4.30	3.34	0.0%	0.0%	35% by 2020
Namibia	A7	2016	8.40	3.76	0.0%	0.0%	100% by 2025
Nauru	A7	2016	0.00	0.01	Over	Over	35% by 2020
Nepal	A7	2016	1.10	0.80	0.0%	0.0%	35% by 2020
Nicaragua	A7	2016	6.80	4.89	0.0%	0.0%	35% by 2020
Niger (the)	A7	2016	15.98	12.13	0.0%	0.0%	35% by 2020

Country	Source ****	Year of latest consumption	Baseline (ODP t)	Latest consumption	% over freeze	% over 10% reduction	Control addressed by HPMPs
Nigeria	A7	2016	344.88	234.74	0.0%	0.0%	10% by 2015
Niue	A7	2016	0.00	0.00	0.0%	0.0%	35% by 2020
Oman	CP	2016	31.50	20.11	0.0%	0.0%	10% by 2015 and 35% by 2020
Pakistan	A7	2016	247.40	216.00	0.0%	0.0%	10% by 2015 and 50% by 2020
Palau	A7	2016	0.20	0.12	0.0%	0.0%	35% by 2020
Panama	A7	2016	24.80	18.35	0.0%	0.0%	10% by 2015 and 35% by 2020
Papua New Guinea	A7	2016	3.30	2.15	0.0%	0.0%	100% by 2025
Paraguay	A7	2016	18.00	12.95	0.0%	0.0%	35% by 2020
Peru	A7	2016	26.88	22.21	0.0%	0.0%	10% by 2015
Philippines (the)	A7	2016	208.40	114.85	0.0%	0.0%	10% by 2015
Qatar	A7	2016	86.90	65.40	0.0%	0.0%	20% by 2015
Republic of Korea (the)	A7	2016	1,908.00	1,528.42	0.0%	0.0%	
Republic of Moldova (the)	A7	2016	1.00	0.00	0.0%	0.0%	10% by 2015 and 35% by 2020
Rwanda	A7	2016	4.10	2.76	0.0%	0.0%	35% by 2020
Saint Kitts and Nevis	A7	2016	0.50	0.26	0.0%	0.0%	35% by 2020
Saint Lucia	A7	2016	1.09	0.65	0.0%	0.0%	35% by 2020
Saint Vincent and the Grenadines	A7	2016	0.30	0.03	0.0%	0.0%	100% by 2025
Samoa	A7	2016	0.30	0.06	0.0%	0.0%	35% by 2020
Sao Tome and Principe	A7	2016	2.20	0.08	0.0%	0.0%	35% by 2020
Saudi Arabia	A7	2015	1,468.70	1,305.45	0.0%	0.0%	40% by 2020
Senegal	A7	2016	36.20	18.70	0.0%	0.0%	35% by 2020
Serbia	A7	2016	8.40	6.40	0.0%	0.0%	35% by 2020
Seychelles	A7	2016	1.40	0.34	0.0%	0.0%	100% by 2025
Sierra Leone	A7	2016	1.70	0.61	0.0%	0.0%	35% by 2020
Singapore	A7	2016	216.10	90.77	0.0%	0.0%	
Solomon Islands	A7	2016	2.00	0.24	0.0%	0.0%	35% by 2020
Somalia	CP	2016	45.10	15.45	0.0%	0.0%	35% by 2020
South Africa	A7	2016	369.70	144.15	0.0%	0.0%	35% by 2020
South Sudan	A7	2015	4.10	3.36	0.0%	0.0%	35% by 2020
Sri Lanka	A7	2016	13.90	10.54	0.0%	0.0%	35% by 2020
Sudan (the)	A7	2016	52.70	42.07	0.0%	0.0%	30% by 2017 and 75% by 2020
Suriname	A7	2016	2.00	0.99	0.0%	0.0%	35% by 2020
Swaziland	A7	2016	1.73	1.35	0.0%	0.0%	35% by 2020
Syrian Arab Republic***	A7	2016	135.00	56.93	0.0%	0.0%	

Country	Source ****	Year of latest consumption	Baseline (ODP t)	Latest consumption	% over freeze	% over 10% reduction	Control addressed by HPMPs
Thailand	A7	2016	927.60	589.10	0.0%	0.0%	15% by 2018
The former Yugoslav Republic of Macedonia	A7	2016	1.80	0.27	0.0%	0.0%	35% by 2020
Timor-Leste	A7	2016	0.50	0.09	0.0%	0.0%	10% by 2015
Togo	A7	2016	20.00	15.40	0.0%	0.0%	35% by 2020
Tonga	A7	2016	0.10	0.00	0.0%	0.0%	35% by 2020
Trinidad and Tobago	A7	2016	46.00	20.80	0.0%	0.0%	35% by 2020
Tunisia	A7	2016	40.70	25.51	0.0%	0.0%	15% by 2018
Turkey	A7	2016	551.47	26.95	0.0%	0.0%	86.4% by 2017
Turkmenistan	A7	2016	6.80	5.13	0.0%	0.0%	35% by 2020
Tuvalu	A7	2016	0.10	0.01	0.0%	0.0%	35% by 2020
Uganda	A7	2016	0.20	0.00	0.0%	0.0%	35% by 2020
United Arab Emirates (the)	A7	2016	557.10	473.97	0.0%	0.0%	
United Republic of Tanzania (the)	A7	2016	1.70	1.15	0.0%	0.0%	35% by 2020
Uruguay	A7	2016	23.40	16.43	0.0%	0.0%	10% by 2015 and 35% by 2020
Vanuatu	A7	2016	0.30	0.00	0.0%	0.0%	35% by 2020
Venezuela (Bolivarian Republic of)	A7	2016	207.00	26.59	0.0%	0.0%	10% by 2015 and 42% by 2020
Viet Nam	A7	2016	221.20	195.72	0.0%	0.0%	10% by 2015 and 35% by 2020
Yemen	A7	2016	158.20	92.29	0.0%	0.0%	15% by 2015
Zambia	A7	2016	5.00	2.75	0.0%	0.0%	35% by 2020
Zimbabwe	A7	2016	17.80	9.49	0.0%	0.0%	35% by 2020

(*) 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 ODSs.

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

(***) HPMP not yet approved and submitted to the 80th meeting.

(****) CP data excluding HCFC-141b contained in imported pre-blended polyol.