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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-eighth Meeting
Montreal, 15-19 November 2021[1]

PROJECT PROPOSALS: COLOMBIA

This document consists of the comments and recommendation of the Secretariat on the following project proposals:

Phase-out

• HCFC phase-out management plan (stage II, fourth tranche)	UNDP, UNEP and Government of Germany
• HCFC phase-out management plan (stage III, first tranche)	UNDP and Government of Germany

[1] Online meetings and an intersessional approval process will be held in November and December 2021 due to coronavirus disease (COVID-19)

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

COLOMBIA

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNDP (lead), UNEP, Germany	75th	65% by 2021

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2020	63.21 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2020	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					21.54				21.54
HCFC-123			0.20		0.09				0.29
HCFC-141b		39.30	0.65		1.42				41.37
HCFC-141b in imported pre-blended polyol		0.09							0.09

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	225.6	Starting point for sustained aggregate reductions:	225.6
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	201.94	Remaining:	23.59

(V) BUSINESS PLAN		2021	Total
UNDP	ODS phase-out (ODP tonnes)	6.02	6.02
	Funding (US $)	275,133	275,133
UNEP	ODS phase-out (ODP tonnes)	0.59	0.59
	Funding (US $)	28,250	28,250
Government of Germany	ODS phase-out (ODP tonnes)	1.27	1.27
	Funding (US $)	61,273	61,273

(VI) PROJECT DATA			2015	2016	2017	2018	2019	2020	2021	Total
Montreal Protocol consumption limits			203.01	203.01	203.01	203.01	203.01	146.62	146.62	n/a
Maximum allowable consumption (ODP tonnes)			203.01	203.01	203.01	203.01	203.01	90.24	78.96	n/a
Agreed funding (US $)	UNDP	Project costs	2,342,591	0	0	1,268,007	635,749	0	257,134	4,503,481
		Support costs	163,981	0	0	88,761	44,502	0	17,999	315,244
	UNEP	Project costs	50,000	0	0	50,000	50,000	0	25,000	175,000
		Support costs	6,500	0	0	6,500	6,500	0	3,250	22,750
	Germany	Project costs	325,800	0	0	162,900	0	0	54,300	543,000
		Support costs	41,838	0	0	20,919	0	0	6,973	69,730
Funds approved by ExCom (US $)		Project costs	2,718,391	0	0	1,480,907	685,749	0		4,885,047
		Support costs	212,319	0	0	116,180	51,002	0		379,501
Total funds requested for approval at this meeting (US $)		Project costs							336,434	336,434
		Support costs							28,222	28,222

Secretariat's recommendation:	For blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Colombia, UNDP as the lead implementing agency has submitted a request for funding for the fourth and final tranche of stage II of the HCFC phase-out management plan (HPMP), at a total cost of US $364,656, consisting of US $257,134, plus agency support costs of US $17,999 for UNDP, US $25,000, plus agency support costs of US $3,250 for UNEP, and US $54,300, plus agency support costs of US $6,973 for the Government of Germany.[2] The submission includes a progress report on the implementation of the third tranche, the verification reports on HCFC consumption for 2019 and 2020 and the tranche implementation plan for 2021 to 2022.

Report on HCFC consumption

2. The Government of Colombia reported a consumption of 63.21 ODP tonnes of HCFC in 2020, which is 72 per cent below the HCFC baseline for compliance. The 2016-2020 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Colombia (2016-2020 Article 7 data)

HCFC	2016	2017	2018	2019	2020	Baseline
Metric tonnes (mt)						
HCFC-22	947.44	806.21	769.29	765.23	391.66	1,292.6
HCFC-123	78.81	8.31	32.50	10.50	14.59	110.4
HCFC-124	0.00	0.00	0.00	0.00	0.00	1.8
HCFC-141b	753.26	944.75	319.91	345.27	376.13	1,379.5
HCFC-142b	0.00	1.25	0.00	0.00	0.00	7.5
Sub-total (mt)	**1,779.51**	**1,760.52**	**1,121.7**	**1,121.00**	**782.38**	**2,791.7**
HCFC-141b in imported pre-blended polyols*	7.94	7.75	12.37	3.36	0.79	n/a
ODP tonnes						
HCFC-22	52.11	44.34	42.31	42.09	21.54	71.1
HCFC-123	1.58	0.17	0.65	0.21	0.29	2.2
HCFC-124	0.00	0.00	0.00	0.00	0.00	0.0
HCFC-141b	82.86	103.92	35.19	37.98	41.38	151.7
HCFC-142b	0.00	0.08	0.00	0.00	0.00	0.5
Sub-total (ODP tonnes)	**136.54**	**148.51**	**78.15**	**80.28**	**63.21**	**225.6**
HCFC-141b in imported pre-blended polyols*	0.87	0.85	1.36	0.37	0.09	n/a

* Country programme (CP) data.

3. Consumption of HCFC-22 declined substantially in 2020 due to the COVID-19 pandemic, as well as reductions in servicing due to implementation of activities under the HPMP and the increased entry into the market of R-410A and R-410A-based equipment; there was no HCFC-22 refrigeration and air-conditioning (RAC) manufacturing in 2020 due to the use of stocks by manufacturers and depressed demand. There was a small increase in consumption of HCFC-141b likely due to stockpiling by polyurethane (PU) foam manufacturers in advance of the 1 January 2021 ban on imports of HCFC-141b in bulk and contained in pre-blended polyols. Colombia exported 152.63 mt of HCFC-141b contained in pre-blended polyols in 2019; data on exports in 2020 was not yet available. Consumption of HCFC-141b in the fire protection sector, an unsafe practice that was to be banned by 31 December 2017, continued to decrease in light of the 1 January 2021 ban on imports of HCFC-141b and the anticipated ban on the use of HCFC-141b in the fire protection sector. HCFC-123 was used to service chillers and in the fire protection sector.

[2] As per the letter of 6 July 2021 from the Ministry of Environment and Sustainable Development of Colombia to UNDP.

CP implementation report

4. The Government of Colombia reported HCFC sector consumption data under the 2020 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification reports

5. The verification reports confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2019 and 2020 was correct (as shown in Table 1 above). The verification concluded that Colombia fully met all the targets specified in the Agreement between the country and the Executive Committee and was in compliance with the Montreal Protocol, and noted *inter alia* that the system of licences, quotas, and permits for the import and export of ODS is effective; the register of importers is effective and transparent; and penalties arising from infringements of environmental licence compliance are considered under Law 1333 of 2009.

6. The verifier further noted that there had been some cases of inconsistencies between an enterprise's quota and the authorized import, including a case in 2020 where an enterprise was able to import HCFC-22 although it did not have a quota; and that some quota approvals had been granted without previously checking the availability of the quota. UNDP confirmed that the national ozone unit (NOU) would propose improvements in the Digital Government Strategy of the Colombian State through the use of updated information and communication technologies and capacity building; and will meet with the National Authority for Environmental Licensing, the Ministry of Commerce, Industry and Tourism, and the National Tax and Customs Direction to exchange information and identify improvement opportunities.

Progress report on the implementation of the third tranche of the HPMP

Legal framework

7. The Government has continued to implement a licensing and quota system for HCFC imports and exports; from 1 January 2013, banned the manufacture and import of HCFC-based domestic refrigeration equipment; from 1 January 2018, implemented the globally harmonized system (GHS) of classification and labelling of chemicals; adapted ISO 5149: 2014 parts 1, 2, 3, and 4 as a national technical standard to enable the safe introduction of flammable and toxic refrigerants; and from 1 January 2021 banned the import but not export of HCFC-141b pure and contained in pre-blended polyols .

8. Due to its legal complexity and restrictions from the pandemic, the draft Act[3] banning the use of HCFC-141b in the fire protection sector, the use of HCFC-141b pure and contained in imported pre-blended polyols in the manufacture of PU foam, and the manufacture and import of HCFC-22-based packaged type and condensed air-conditioning (AC) equipment with a cooling capacity of less than 5 tonnes, which had been expected by 1 January 2021, was delayed and is expected by 1 January 2022. That draft Act also includes a ban on the manufacture and import of HFC-based domestic refrigerators and a ban on the import and manufacture of HCFC-based RAC and fire-fighting equipment, except for HCFC-123-based fire-fighting equipment.[4] Colombia ratified the Kigali Amendment on 25 February 2021.

[3] Draft Act: "By which, in development of the Montreal Protocol, the manufacture and import of equipment and products that contain and/or require the controlled substances in Annexes A, B, C and E of the Montreal Protocol is prohibited and other provisions are adopted."

[4] The timeline for the implementation of the ban on HCFC-123-based fire-fighting equipment is discussed in paragraph 49 of the present document.

Activities in the foam sector

9. The conversion of the foam enterprises Olaflex (rigid sheets) and Rojas Hermanos (discontinuous panels) to cyclopentane was completed in October and February of 2019, respectively, resulting in the phase-out of 65.76 mt (7.23 ODP tonnes) of HCFC-141b; other conversions are ongoing, as follows:

(a) The conversion of Espumlatex (rigid sheets) to hydrofluoro-olefins (HFOs): testing of reduced HFO and other low-global warming potential (GWP) formulations have been completed, trials are ongoing, and commercial manufacture with the new formulation is expected by 31 October 2021;

(b) Development of formulations at three systems houses (Espumlatex, GMP, and Olaflex) and assistance to 91 downstream foam enterprises, with confirmation of the participation of a further 23 pending: Espumlatex tested HFO-based formulations, held seven dissemination meetings with downstream users, and completed field tests for 15 of them; GMP tested HFO-based formulations and completed field tests for some downstream users, in collaboration with a non-Article-5-owned enterprise; Olaflex finished modifications to its mixing processes, tested HFO-based formulations, and plans to start manufacturing HFO-based formulations by 1 November 2021;

(c) QIC, a systems house originally included in the HPMP, decided not to participate in the project;[5] instead, a 100 per cent locally-owned systems house Geos Quimica signed an agreement to participate, confirmed the participation of 17 downstream users, tested HFO-based formulations, held two dissemination meetings with participating users, and completed field tests for 15 of them; and

(d) Synthesia, a 100 per cent non-Article-5-owned enterprise with experience in HFO-based formulations, signed an agreement to participate in the project, confirmed the participation of nine downstream users, held one dissemination meeting with participating users, and completed field tests for one of them. UNDP confirmed that, in line with the Multilateral Fund's policy on eligibility and UNDP's practice, funding has not and will not be provided to Synthesia for developing the foam formulations; funding will be provided to eligible Synthesia's downstream foam users, similarly to the funding provided through the other four systems houses.

Activities in the servicing sector

10. The following activities were undertaken:

(a) Initiation of a study of national refrigerant leakage; compilation and analysis of data reported by 23 importers, and 13 monitoring visits to refrigerant distributors; continued participation in the iPIC mechanism;[6] meeting for 23 representatives of National Institute of Food and Drugs Monitoring and the Ministry of Commerce, Industry and Tourism on detection of illegal ODS imports; four workshops for 80 customs officers and environmental inspectors on ODS regulations and illegal imports; terms of reference for the update to the online course for customs training; and procurement of 12 30 lb and one 100 lb refillable cylinders for six servicing shops;

(b) Commissioning and start-up of the natural refrigerants training centre, and two workshops for 31 trainers on the safe use of low-GWP refrigerants, with a focus on ammonia and

[5] Document UNEP/OzL.Pro/ExCom/84/43 incorrectly reported the participation of QIC in the project.

[6] Informal Prior-Informed Consent mechanism, for exchange of information on intended trade between trade partners in ODS, ODS-containing mixtures, products and equipment.

carbon dioxide; two workshops for 96 trainers and five certification evaluators on the Montreal Protocol, good servicing practices, operational requirements for ammonia- and carbon dioxide-based systems, and the safe handling of flammable alternatives;

(c) Development of evaluation instruments for labour competence standards for four applications (non-flammable and non-toxic refrigerants, flammable refrigerants, toxic refrigerants, and high pressure refrigerants); training for five experts in the evaluation and certification for good practices for R-600a; and certification of 210 technicians in the environmental handling of refrigerants, 1,841 technicians in non-flammable and non-toxic refrigerants applications, and 244 technicians in flammable applications;

(d) Six awareness meetings for 256 technicians on certification, the sound management of refrigerants gases, and the recovery, recycle, and reclaim (RRR) network; five virtual workshops for 1,249 technicians on the safe use of hydrocarbon refrigerants and good servicing practices; and purchase and distribution of 285 toolkits (e.g., four-way manifold for hydrocarbon refrigerants, vacuum pump, digital scale, hydrocarbon electronic leak detector) for servicing hydrocarbon-based RAC equipment;

(e) Initiation of a feasibility study to develop a local, low-cost refrigerant recovery machine, with development of a prototype expected by November 2021; six workshops for 96 technicians on refrigerant recovery, and five workshops for 73 participants on recovery, reuse, and reclamation; 1,677 kg of HCFC-22 and 678 kg of HFC-134a were reclaimed in 2019 and 2020; and

(f) Awareness-raising activities including the preparation of a brochure on two tax incentives to encourage the uptake of low-GWP, high energy-efficiency RAC equipment; four (virtual) workshops for 501 participants from the health and food sectors on low-GWP, high energy-efficiency technologies;[7] participation in the 2020 virtual national RAC fair (ExpoAcaire) to raise awareness of the national strategy for sustainable cooling; nine virtual awareness-raising meetings for 90 participants from systems houses clients, a printed newsletter and four digital newsletters issued on the phase-out of HCFC-141b; publication of a guideline on good practices for maintenance and recharge of portable HCFC-123 fire extinguishers, and three presentations to the union of the fire extinguishing sector on the Montreal Protocol and good practices in the maintenance and recharging of portable fire extinguishers with HCFC-123.

Project implementation and monitoring unit (PMU)

11. During the third tranche, the PMU prepared an annual report per project, held six meetings to follow up on the implementation of the projects, conducted an audit on the implementation of the projects, and facilitated the preparation of the 2019-2020 verification report. As of August 2021, of the US $480,834 approved, 78 per cent (US $373,879) had been disbursed as shown in Table 2.

[7] The implementation plan for the third tranche included US $41,000 for one pilot project on low-GWP technology at an end-user that was yet to be selected. In light of decision 84/84, this project was reformulated to a technical assistance activity to promote the uptake of low-GWP, energy efficient equipment at end-users.

Table 2. PMU disbursement by activity and tranche

Activity	Disbursement (US $)		
	First tranche	Second tranche	Third tranche
Consultants	185,132	6,088	105,804
Monitoring meetings	21,562	0	0
Travel expenses	30,265	687	0
Miscellaneous	751	0	0
Independent verification of consumption	7,615	8,975	7,000
Total	**245,325**	**15,750**	**112,804**

Level of fund disbursement

12. As of June 2021, of the US $4,885,047 approved so far, US $3,015,752 had been disbursed (US $2,431,052 for UNDP, US $96,000 for UNEP, and US $488,700 for Germany) as shown in Table 3. The balance of US $1,869,295 will be disbursed in 2021 and 2022, including for incremental operating costs (IOCs) in the PU foam manufacturing sector, which UNDP had not yet disbursed, in line with decision 77/35(a)(vi).

Table 3. Financial report of stage II of the HPMP for Colombia (US $)

Agency	First tranche		Second tranche		Third tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNDP	2,342,591	1,789,068	1,268,007	260,209	635,749	381,775	4,246,347	2,431,052
UNEP	50,000	50,000	50,000	46,000	50,000	0	155,000	96,000
Germany	325,800	325,800	162,900	162,900	0	0	488,700	488,700
Total	**2,718,391**	**2,164,868**	**1,480,907**	**469,109**	**685,749**	**381,775**	**4,885,047**	**3,015,752**
Disbursement rate (%)	**80**		**32**		**56**		**62**	

Implementation plan for the fourth and final tranche of the HPMP

13. The following activities will be implemented in 2021 and 2022:

(a) Continued monitoring of the licensing, permits, and quota system; continued participation in the informal Prior Informed Consent (iPIC) mechanism; monitoring visits to refrigerant distributors in five cities; two committee meetings on ODS trade control with customs and the Ministry of Trade, Industry and Tourism; one dissemination workshop to present the results of the pilot project on the use of refillable cylinders; and four workshops and three virtual courses for 350 customs officers on ODS trade control (UNEP) (US $25,000);

(b) Two train-the-trainers workshops (30 participants each) in the safe use of low-GWP refrigerants, and development of a digital training guideline on the safe use of carbon dioxide and R-290 in stand-alone commercial refrigeration equipment (Germany) (US $54,300);

(c) Promotion of the certification process for technicians in the RAC servicing sector through virtual and in-person awareness meetings, workshops, and seminars resulting in the certification of approximately 500 technicians (UNDP) (US $14,576);

(d) Two reports assessing the market penetration of hydrocarbon-based refrigeration equipment (US $20,000) (UNDP);

(e) Continued monitoring of the RRR network, and two workshops for 50 RAC technicians and operators of the collection and reclamation centres (UNDP) (US $20,000);

(f) Continued technical assistance to promote the uptake of low-GWP, energy efficient RAC equipment at end-users through at least three workshops for 150 end-users and technology providers to showcase experiences in adopting low-GWP, energy efficient technologies, tax incentives for such technologies, good practices for maintenance and management of equipment, benefits of training and certification, and the availability of the RRR services (UNDP) (US $22,000);

(g) Continued awareness-raising campaigns and technical assistance for strengthening the regulatory framework for the phase out of HCFCs (UNDP) (US $73,075); and

(h) Project implementation and monitoring, including independent verification of consumption (UNDP) (US $107,483).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Progress report on the implementation of the third tranche of the HPMP

Legal framework

14. The Government of Colombia has already issued HCFC import quotas for 2021 at 30.21 ODP tonnes, which is lower than the Montreal Protocol control targets.

15. The bans on the use of HCFC-141b in the fire protection sector (expected by 31 December 2017, in line with decision 75/44(b)(ii)), for all uses of HCFC-141b pure and contained in imported pre-blended polyols (expected by 31 December 2020, in line with decision 75/44(b)(iii)), and on the manufacture and import of packaged type and condensed AC equipment that used HCFC-22 with a cooling capacity of less than 5 tonnes (expected by 1 January 2021, in line with decision 75/44(b)(iv)) were delayed as the Government decided to combine the legislative measures into a single draft Act. The remaining steps for finalization of the Act are approval by the vice-minister of Environment and the legal office, and signature of the draft Act by the ministers of Environment and of Industry and Commerce, which was expected by December 2021; entry into force of the bans would be upon those signatures. It was agreed that UNDP would provide an update to confirm the finalization of the Act and the entry into force of the bans to the 90th meeting.

Activities in the foam sector

16. Conversion of enterprises in the foam sector have not yet been completed notwithstanding the 1 January 2021 ban on the import of HCFC-141b pure and contained in pre-blended polyols; enterprises are still manufacturing HCFC-141b-based PU foam using stocks of HCFC-141b, which is permitted until the forthcoming ban on all uses of HCFC-141b pure and contained in pre-blended polyols enters into force. Noting that UNDP would not be able to provide assistance to enterprises after the completion of the project, the Secretariat encouraged UNDP to do its utmost to ensure as many eligible downstream users as possible participate in the project.

17. Stage II included the conversion of over 791 downstream customers to phase out 161.53 mt of HCFC-141b; the conversion of the 117 SMEs that confirmed their participation in the project will phase out 139.09 mt of HCFC-141b; the further 23 SMEs whose confirmation was still pending would result in the phase-out of an additional 9.61 mt of HCFC-141b. UNDP confirmed that it would, as part of the final progress report on stage II of the HPMP, provide a list of the downstream users assisted and their associated

phase-out, and would, upon completion of the PU foam projects, return to the Multilateral Fund the funds associated with those enterprises that did not participate in the project, calculated at US $10.96/kg.

18. In line with decision 84/70(b), UNDP provided information indicating IOCs incurred during the conversion to reduced HFOs of US $9.10/kg of HCFC-141b. Using the prices provided by UNDP, the Secretariat calculated the IOCs taking into account the additional CO_2 generated from the reaction of the isocyanate and the HFO reduced with water, which did not appear to be considered in UNDP's calculation. In all scenarios, the values obtained by the Secretariat were above US $2.13/kg specified in decision 75/44(b)(vi), the lowest being US $3.78/kg, obtained using a price of US $3.90/kg for HCFC-141b reported by the country in its 2020 CP report and US $17.00/kg for HFO-1233zd(E). The Secretariat considers it unlikely that IOCs would fall below the cut-off of US $2.13/kg specified in decision 75/44(b)(vi) as long as the substantial difference in price of HFO-1233zd(E) and HCFC-141b remains.

Activities in the servicing sector

19. Regarding the feasibility study to develop a local, low-cost refrigerant recovery machine, UNDP was not yet clear when the local enterprise would be able to start selling locally manufactured machines, nor the approximate annual sales as that would depend on the outcomes of the study, expected to be completed by December 2021. It was agreed that UNDP would include an update on the status of manufacturing of the enterprise, if any, as part of the final report of stage II of the HPMP to be submitted with the second tranche of stage III of the HPMP.

Update on the status of manufacturing at Industrias Thermotar Ltda (Thermotar)

20. At the 81st meeting, UNDP, on behalf of the Government of Colombia, had submitted the final report of the demonstration project for the use of R-290 as an alternative refrigerant in commercial AC manufacturing at Industrias Thermotar Ltda. At the time, the enterprise had not yet been able to sell any R-290-based equipment as the enterprise was waiting for the first stock of R-290-based compressors and to finish the training of service technicians. At the 84th meeting, UNDP reported that manufacturing was expected to start once R-290 compressors were delivered at the end of November 2019; and the enterprise completed the training of service technicians.

21. Since the 84th meeting, and notwithstanding the COVID-19 pandemic, which forced the temporary closure of the Thermotar and other enterprises for several months, the enterprise was able to manufacture and sell approximately 28 R-290-based units, including several that were exported in the region; and has developed an R-290-based training unit.

PMU

22. Remaining balances for the PMU (estimated at US $106,955) were due to changes in staff at the PMU and the COVID-19 pandemic, which resulted in lower travel and meeting-related expenses. UNDP confirmed that funding under stage II would only be used for activities undertaken until the date of completion of stage II, that the final progress report of stage II would include detailed information on the activities undertaken by the PMU and associated costs, and that UNDP would return any remaining balances associated with the PMU upon financial completion of stage II.

Completion of stage II

23. UNDP has confirmed that stage II of the HPMP for Colombia will be completed on 31 December 2022 as established in paragraph 14 of the Agreement.

Gender policy implementation[8]

24. The operational policy on gender mainstreaming was put in place after the approval of stage II and therefore was not included in the original implementation plan; nevertheless, a training workshop on gender was included for the investment projects in the PU foam sector. Further, a UNDP consultant for gender and climate change was designated to support the NOU, and two workshops were conducted in April 2020 to train 12 consultants on the basics of gender and gender mainstreaming. Gender disaggregated data is now collected at all training sessions.

Sustainability of the HCFC phase-out

25. The Government of Colombia has an enforceable licensing and quota system, and has implemented bans on the manufacture and import of HCFC-based domestic refrigerators, freezers, and combined refrigerator-freezers, and on the import of HCFC-141b in bulk and contained in pre-blended polyols (effective 1 January 2021). Forthcoming bans, expected to enter into force by 31 December 2021, on all uses of HCFC-141b, on the import and manufacture of all HCFC-based RAC and fire-fighting equipment, except for HCFC-123-based fire-fighting equipment, as well as the continued use of the system of licences, quotas, and permits and register of importers, and the continued strict control and monitoring of imports, will further strengthen the sustainability of the HCFC phase-out.

Conclusion

26. The verified consumption of the country was 72 per cent below the country's baseline for compliance and 30 per cent below the target in the country's Agreement with the Executive Committee, and the country's import licensing and quota system is operational and will enable HCFC consumption reductions in advance of the Montreal Protocol's phase-out schedule. Notwithstanding the 1 January 2021 ban on the import of HCFC-141b pure and contained in pre-blended polyols, the conversion of the PU foam sector has not yet been completed due to the COVID-19 pandemic and continued limited commercial availability of HFOs in the local market; the conversion of the remaining PU foam manufacturers will be completed by 31 October 2021. While the unsafe practice of using HCFC-141b in the fire fighting sector continues well after the expected phase-out of this use, the 1 January 2021 ban on the imports of HCFC-141b ensure that this use will soon be phased out, in line with the forthcoming ban on the use of HCFC-141b in the fire protection sector expected by 31 December 2021. The level of disbursement for the third tranche is 56 per cent, and 62 per cent of the overall funding approved. The activities undertaken in the servicing sector are part of a well-planned, coherent framework to strengthen the sector and facilitate the introduction of low-GWP alternatives, and are expected to ensure the long-term sustainability of the activities and continue to enable the country to meet its compliance obligations under the Protocol. The NOU will address the recommendations in the verification report by proposing improvements on the use of updated information and communication technologies and capacity building, and will meet with the National Authority for Environmental Licensing, the Ministry of Commerce, Industry and Tourism, and the National Tax and Customs Direction to exchange information and identify improvement opportunities.

RECOMMENDATION

27. The Fund Secretariat recommends that the Executive Committee:

(a) Takes note of the progress report on the implementation of the third tranche of stage II of the HCFC phase-out management plan (HPMP) for Colombia; and

[8] Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.

(b) Requests the Government of Colombia, UNDP, UNEP and the Government of Germany to submit a progress report on the implementation of the work programme associated with the final tranche as part of the request for the second tranche of stage III of the HPMP.

28. The Fund Secretariat further recommends blanket approval of the fourth and final tranche of stage II of the HPMP for Colombia, and the corresponding 2021-2022 tranche implementation plan, at the funding levels shown in the table below, on the understanding that UNDP would provide to the 90th meeting confirmation of the finalization of the draft Act described in document UNEP/OzL.Pro/ExCom/88/44 and the entry into force of the bans on the use of HCFC-141b in the fire protection sector, for all uses of HCFC-141b pure and contained in pre-blended polyols, and on the manufacture and import of HCFC-based refrigeration and air-conditioning equipment:

	Project title	**Project funding (US $)**	**Support cost (US $)**	**Implementing agency**
(a)	HCFC phase-out management plan (stage II, fourth tranche)	257,134	17,999	UNDP
(b)	HCFC phase-out management plan (stage II, fourth tranche)	25,000	3,250	UNEP
(c)	HCFC phase-out management plan (stage II, fourth tranche)	54,300	6,973	Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

COLOMBIA

(I) PROJECT TITLE	AGENCY
HCFC phase-out plan (stage III)	UNDP (lead), Government of Germany

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2020	63.21 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									**Year:** 2020
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					21.54				21.54
HCFC-123			0.20		0.09				0.29
HCFC-141b		39.30	0.65		1.42				41.37
HCFC-141b in imported pre-blended polyol		0.09							0.09

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	225.6	Starting point for sustained aggregate reductions:	225.6
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	201.94	Remaining:	23.59

(V) BUSINESS PLAN		2021	2022	2023	Total
UNDP	ODS phase-out (ODP tonnes)	0.00	7.30	3.65	10.95
	Funding (US $)	0	681,300	340,650	1,021,950
Government of Germany	ODS phase-out (ODP tonnes)	0.00	0.00	0.00	0.00
	Funding (US $)	0	0	0	0

(VI) PROJECT DATA			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Montreal Protocol consumption limits			146.64	146.64	146.64	146.64	73.32	73.32	73.32	73.32	73.32	0	n/a
Maximum allowable consumption (ODP tonnes)			78.96	42.91	42.91	30.21	30.21	30.21	30.21	14.19	14.19	0	n/a
Project costs requested in principle (US $)	UNDP	Project costs	409,000	0	479,688	0	0	587,083	0	0	207,864	0	1,683,635
		Support costs	28,630	0	33,578	0	0	41,096	0	0	14,550	0	117,854
	Germany	Project costs	0	0	395,000	0	0	0	0	0	0	0	395,000
		Support costs	0	0	51,350	0	0	0	0	0	0	0	51,350
Total project costs requested in principle (US $)			409,000	0	874,688	0	0	587,083	0	0	207,864	0	2,078,635
Total support costs requested in principle (US $)			28,630	0	84,928	0	0	41,096	0	0	14,550	0	169,204
Total funds requested in principle (US $)			437,630	0	959,616	0	0	628,179	0	0	222,414	0	2,247,839

(VII) Request for approval of funding for the first tranche (2021)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNDP	409,000	28,630
Germany	0	0
Total	409,000	28,630

Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

Background

29. On behalf of the Government of Colombia, UNDP as the lead implementing agency has submitted a request for stage III of the HCFC phase-out management plan (HPMP), at a total cost of US $2,498,450, consisting of US $1,940,000, plus agency support costs of US $135,800 for UNDP, and US $395,000, plus agency support costs of US $27,650 for the Government of Germany, as originally submitted.[9] The implementation of stage III of the HPMP will phase out the remaining consumption of HCFCs by 2030.

30. The first tranche of stage III of the HPMP being requested at this meeting amounts to US $499,690, consisting of US $467,000, plus agency support costs of US $32,690 for UNDP only, as originally submitted.

Status of implementation of stages I and II of the HPMP

31. Stage I of the HPMP for Colombia was originally approved at the 62nd meeting[10] and revised at the 66th meeting[11] to meet the 10 per cent reduction from the baseline by 2015, at a total cost of US $6,821,483, plus agency support costs, to phase out 78.91 ODP tonnes of HCFCs used in the refrigeration and air-conditioning (RAC) servicing sector, the solvent sector, and the aerosol sector, and includes the US $5,621,483, plus agency support costs, approved at the 60th meeting for the phase-out of 56.02 ODP tonnes of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigeration subsector by four enterprises (decision 60/30).

32. Stage II of the HPMP for Colombia was approved at the 75th meeting[12] to meet the 35 per cent reduction from the baseline by 2020, at a total cost of US $5,221,481, plus agency support costs, to phase out 122.3 ODP tonnes of HCFCs used in the RAC servicing sector, the foam sector, and the fire protection sector. An overview of implementation of stage II, including an analysis of the HCFC consumption, the progress and financial reports on the implementation, and the request for the fourth and final tranche submitted to the current meeting, is available in paragraphs 1 to 26 of the present document.

33. In addition, also at the 75th meeting, the Executive Committee approved the demonstration project for the use of R-290 (propane) as an alternative refrigerant in commercial air-conditioning (AC) manufacturing at Industrias Thermotar Ltda (Thermotar) in Colombia to phase out 0.73 ODP tonnes of HCFC-22 (decision 75/40).

Stage III of the HPMP

Remaining consumption eligible for funding

34. After deducting 78.91 ODP tonnes of HCFCs associated with stage I of the HPMP, 122.3 ODP tonnes associated with stage II, and 0.73 ODP tonnes associated with the demonstration project at Thermotar, the remaining consumption eligible for funding in stage III amounts to 23.59 ODP tonnes of HCFCs.

[9] As per the letter of 26 July 2021 from the Ministry of Environment and Sustainable Development of Colombia to UNDP.
[10] UNEP/OzL.Pro/ExCom/62/62
[11] Annex XII of UNEP/OzL.Pro/ExCom/66/54
[12] UNEP/OzL.Pro/ExCom/75/85

Sector distribution of HCFCs

35. It is estimated that there are between 12,000 and 20,000 technicians in the servicing sector, consuming HCFC-22 to service unitary and split systems, commercial AC, medium and large condensing units, and centralized refrigeration systems as shown in Table 4. HCFC-22 represents 16 per cent of the refrigerants used in the servicing sector, followed by HFC-134a (42 per cent, mostly for domestic refrigeration and mobile AC), R-410A (17 per cent, AC), R-507A (14 per cent, industrial and commercial refrigeration), R-404A (5 per cent, industrial and commercial refrigeration), R-407C (4 per cent, AC), and other blends.[13] HCFC-123 (2 per cent), is used to service chillers and, in the fire protection sector, to service portable fire extinguishers (approximately 40 per cent) and in the assembly of new fire protection equipment (approximately 60 per cent); the use of HCFC-141b in the fire protection sector is expected to be banned by 31 December 2021; HFC-125 and HFC-227ea accounted for approximately 12 per cent of the controlled substances consumed in the fire protection sector.

Table 4. Sectoral distribution of HCFC-22 in Colombia in 2020

Sector/Applications	Equipment inventory	Average charge (kg)	Leakage rate (%)	Consumption (mt)
Room AC (unitary and split)	519,127	1.01	25-35	131.52 - 184.13
Commercial AC (roof top, multi-split, chillers)	199,551	6.04	18-30	216.86 - 361.43
Commercial refrigeration (medium condensing units)	5,188	1.58	20-40	1.64 - 3.28
Industrial refrigeration (medium to large condensing units, centralized systems)	10,818	16.03	20-35	34.68 - 60.69
Total	734,684			384.70 - 609.23

Phase-out strategy in stage III of the HPMP

36. Stage III of the HPMP proposes to reduce HCFC consumption by 81 per cent of the country's baseline by 2022, 85 per cent by 2025, and 100 per cent by 2030. HCFCs would not be imported as of 1 January 2030, except for the allowance for a servicing tail between 2030-2040 where required, and consistent with the provisions of the Montreal Protocol. The lessons learned and infrastructure established during the implementation of stage II of the HPMP will be used in stage III, which will focus on strengthening the national capacity to reduce ODS emissions in the RAC sector by improving the capacity of technicians in good servicing practices; strengthening the refrigerant recovery, recycling, and reclamation (RRR) network; promoting the uptake of low-global warming potential (GWP), energy efficient technology in the country's commercial and industrial sector; technical assistance and equipment to phase out consumption in the fire protection sector; and strengthening HCFC-related policies, regulations, and enforcement.

Proposed activities in stage III of the HPMP

37. Stage III proposes the following activities:

(a) *HCFC policy and regulations:* Adjustment to the resolution that controls HCFC limits, including the 1 January 2030 phase-out and provisions to manage the servicing tail for the period 2030-2040; completion of regulatory impact assessment to issue HCFC regulations; at least two training sessions for 60 participants across Government (including the Ministry of Environment and Sustainable Development, the Ministry of Trade, Industry and Tourism, National Tax and Customs Direction, National Learning Service (SENA), and others) on legal measures to control and reduce ODS emissions and consumption; three documents to raise public awareness of the HCFC phase-out (UNDP) (US $75,000);

[13] Including R-422D, R-407F, R-422A, R-449A, R-514A, R-452A, and R-508B.

(b) *ODS customs and enforcement training:* Continued monitoring of the licensing, permits and quotas system for HCFCs imports and exports to detect and prevent illegal trade, including at least 25 monitoring visits to refrigerant gas trading shops per year, preparation of awareness-raising materials for HCFC importers and traders, and continued participation in the informal Prior Informed Consent (iPIC) mechanism; at least one annual training for 50 customs officers on controls of HCFCs and equipment that may contain HCFCs, as well as the application of standardized customs control procedures, seizures and penalties when irregularities are detected; calibration and servicing of existing refrigerant identifiers and procurement of three identifiers capable of detecting HCFC and HFC blends; and establishment of the ODS Trade Control Inter-Institutional Committee comprising the national ozone unit (NOU), the National Tax and Customs Direction, the Fiscal and Customs Police Management Directorate, the Ministry of Trade, Industry and Tourism, the National Authority for Environmental Licensing, the Office of the Attorney General, and Interpol, at least one annual meeting of the committee, and three training workshops for committee members on HCFC regulations and controls (UNDP) (US $140,000);

(c) *Technician training for natural refrigerants in commercial refrigeration:* Establishment of a second natural refrigerants training centre to improve institutional capacities for the training of technicians in the safe use of natural refrigerants in an additional region of the country,[14] including procurement of a CO_2/R-290 cascade "mini-supermarket" demonstration unit and servicing tools,[15] and two train-the-trainers workshops for 30 trainers (Germany) (US $395,000);

(d) *RAC technician certification and tools:* Review and update of national standards for labour competence related to the safe use of low-GWP refrigerants; at least four annual activities to promote labour competence certification for the RAC sector; at least four trainings for assessment and certification leaders; at least 3,000 technicians certified in good refrigeration practices; and procurement of 150 sets of tools to safely service hydrocarbon-based commercial refrigeration equipment (e.g., vacuum pumps, manifold, set of hoses with ball valves for hydrocarbons, precision load scale, hydrocarbon leak detector, and digital vacuum gauge) (UNDP) (US $591,520);

(e) *RRR network support:* Assessment of RRR network, including operational costs, prices of reclaimed gas and market demand, and optimization of the business model; implementation of the business plan to recover, identify, guide, and collect refrigerant gases in three regions, building on the Sustainable and Climate-Friendly Phase-out of Ozone-Depleting Substances (SPODS)[16] initiative funded by the European Union (EU); update the mobile application "Manage your refrigerant gas;" at least four annual workshops with 60 technicians and end-users to promote the services offered by the RRR network; provision of five sets of tools to enable the recovery of liquid refrigerants (HCFC-123, including recovery unit for liquid refrigerants, precision scale, analyser, and heating belt for 30-lb cylinders with thermostat); and a feasibility study on establishing local manufacturing of rechargeable gas cylinders, including manufacturing of prototypes and carrying out performance tests (UNDP) (US $310,000);

[14] Stage II included the establishment of a natural refrigerants training centre in Bogota. The second training centre will be in another region with different climate conditions, and will allow for the training of technicians that could not travel to Bogota.

[15] The country will track the uptake of cascade CO_2/R-290 technology and include such reporting in future tranche submissions.

[16] https://www.green-cooling-initiative.org/about-us/our-projects/sustainable-and-climate-friendly-phase-out-of-ods-spods/colombia

(f) *Technical assistance to promote the uptake of low-GWP, energy efficient technology in the commercial and industrial sector:*

(i) *Technical assistance to phase out HCFC consumption in the cold chain, petrochemical and industrial sectors:* Assessment of HCFC consumption; consultancy for data collection and analysis, a market assessment of low-GWP, energy-efficient technology, and an assessment of the environmental benefits associated with the uptake of such technology; and promotion of such technology through two workshops for 60 end-users and RAC technicians (UNDP) (US $155,000);

(ii) *Technical assistance to phase out HCFC consumption and improve the energy efficiency of RAC systems in supermarkets:* Workshops and outreach to stores, supermarkets, and technology suppliers to identify key barriers to the introduction of low-GWP, energy-efficient equipment; study on technologies to detect leaks and maintain the tightness of refrigerant circuits in centralized refrigeration systems; study on low-GWP, energy-efficient technologies in commercial AC systems, including R-290 ducted centralized AC units such as those manufactured by Thermotar, including optimal sizing depending on store characteristics, installation options, requirements for supplies and servicing, and investment analyses; and monitoring visits to supermarkets that adopted the technology, including to quantify energy savings and reduced refrigerant consumption, and outreach visits to supermarkets that are considering the technology (UNDP) (US $185,000);

(g) *Programme to address HCFC-123 in the fire protection sector:* Development of labour competence standards in the fire protection sector, with the support of SENA, with a focus on recharging and maintaining portable fire extinguishers; training of 15 assessment and certification leaders and 100 technicians on the new labour standards; national seminar to promote the guideline on good environmental practices in the maintenance, recharge, and use of portable HCFC-123 fire extinguishers, developed under stage II, and three workshops to raise awareness on good practices in the maintenance, recharge, and use of portable HCFC-123 fire extinguishers and promotion of certification; and technical assistance and provision of tools for analyzing and recovering HCFC-123 from fire protection equipment to two enterprises in the RRR network (UNDP) (US $48,480); and

(h) *Awareness-raising and education:* Implementation of a communication strategy on the HCFC phase-out, including at least one annual newsletter on the relation between the HCFC phase-out and the environment, health, and responsible consumption and production, two annual newsletters for the general public on implementation of the HPMP, and one annual awareness-campaign on ozone-layer preservation; at least three outreach and coordination events with stakeholders in the fire-fighting and commercial and industrial RAC sectors to promote responsible consumption and production; and integration of ozone-related topics in at least one university through the University Environment Project (UNDP) (US $50,000).

Project implementation and monitoring unit (PMU)

38. The system established under stage II of the HPMP will continue into stage III, where the NOU monitor activities, report on progress, and work with stakeholders to phase out HCFCs. The cost of those activities amounts to US $195,000 (UNDP) with the following breakdown: national consultants (US $160,000), stakeholder meetings (US $15,000), and independent verification of consumption (US $20,000).

Gender policy implementation[17]

39. As initial actions on gender mainstreaming, the NOU will collect data to produce gender-disaggregated indicators; present reports that show the disaggregated figures (e.g., number of women in each activity); collect baseline data of women technicians in the RAC sector to compare with the number of women involved in activities of the HPMP; introduce gender-responsive language in awareness-raising communications; incorporate gender in the recruitment postings of new consultants and NOU staff, encouraging women to apply; and consider adding gender training for new hires.

40. In addition, UNDP requested US $190,000 to promote gender equity under stage III of the HPMP, including US $25,000 for a gender analysis to identify the needs and priorities of women and men in stage III, the structural barriers to gender equality, and the priority areas where interventions would take place; US $144,000 for a national consultancy to design, implement and monitor an action plan to be developed based on the data collected to promote gender equality and women's empowerment in the activities of the HPMP; and US $10,000 for at least four awareness-raising and training workshops for stakeholders, US $6,000 for at least two training workshops on women's empowerment and leadership, and US $5,000 for at least three publications with specific content on gender perspective.

Total cost of stage III of the HPMP

41. The total cost of stage III of the HPMP for Colombia has been estimated at US $2,335,000 (plus agency support costs), as originally submitted, for achieving 67.5 per cent reduction from its HCFC baseline consumption by 2025 and 100 per cent reduction by 2030. The proposed activities and cost breakdown are summarized in Table 5.

Table 5. Total cost of stage III of the HPMP for Colombia as submitted

Activity	Agency	Cost (US $)
HCFC policy and regulations	UNDP	75,000
ODS customs and enforcement training	UNDP	140,000
Technician training for natural refrigerants in commercial refrigeration	Germany	395,000
RAC technician certification and tools	UNDP	591,520
RRR network support	UNDP	310,000
Technical assistance to promote the uptake of low-GWP, energy-efficient technology in supermarkets, the cold chain, petrochemical and industrial sectors	UNDP	340,000
Programme to address HCFC-123 in the fire protection sector	UNDP	48,480
Awareness-raising and education	UNDP	50,000
Project coordination and management	UNDP	195,000
Promotion of gender equity	UNDP	190,000
Total		**2,335,000**

Activities planned for the first tranche of stage III

42. The first funding tranche of stage III of the HPMP at the total amount of US $467,000 will be implemented between January 2022 and December 2024 and will include the following activities:

(a) *HCFC policy and regulations:* Legal review and economic impact assessment of updated HCFC regulations and control measures; one awareness-raising session for 30 participants on updated ODS regulations and control measures; two annual meetings with 40 participants comprising of RAC technicians, owners of supermarkets, and stakeholders

[17] Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.

in the petrochemical and industrial sectors on regulations and control measures (UNDP) (US $30,500);

(b) *ODS customs and enforcement training:* Design and dissemination of educational materials for HCFC importers and traders; two training sessions for 100 customs agents, tax and customs police, and environmental authorities on control of HCFCs and equipment that may contain HCFCs; calibration and servicing of existing refrigerant identifiers and procurement of three identifiers; and establishment and meeting of the ODS Trade Control Inter-Institutional Committee, and two training workshops for members on HCFC regulations and controls (UNDP) (US $56,000);

(c) *RAC technician certification and tools:* Review and update of national standards for labour competence related to the safe use of flammable refrigerants; two workshops for 60 technicians and end-users to promote labour competence certification for the RAC sector; two trainings for 30 assessment and certification leaders; and 600 technicians certified in good refrigeration practices (UNDP) (US $129,500);

(d) *RRR network support:* Assessment of RRR network and optimization of the business model; update of the mobile application "Manage your refrigerant gas;" eight workshops to promote the services offered by the RRR network; provision of five sets of tools to five collection or reclaim centres in the country to enable the recovery of liquid refrigerants (UNDP) (US $130,000);

(e) *Awareness-raising and education:* Consultancy to design the communication and dissemination strategy; preparation and dissemination of educational materials; production of advertisements; two awareness-raising campaigns on the importance of preserving the ozone layer and the benefits of the HCFC phase-out; four campaigns in mass media formats; preparation and printing of newsletters; and environmental education campaigns coordinated with the School Environmental Programs (PRAE) (UNDP) (US $14,000);

(f) *Gender policy:* National consultant to design, implement, and monitor the action plan to promote gender equality and women's empowerment; gender analysis to address the needs and priorities of women and men in HPMP activities and identification of structural barriers to gender equality and priority areas for intervention; awareness-raising and training workshops for institutions on gender mainstreaming; training workshops on women's empowerment and leadership for women; and the design and publication of outreach material (UNDP) (US $58,000); and

(g) *Project coordination and management:* Activity monitoring, two annual progress reports, two meetings with stakeholders, and one consumption verification report (UNDP) (US $49,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

43. The Secretariat reviewed stage III of the HPMP in light of stage II, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage III of HPMPs (decision 74/50), and the 2021-2023 business plan of the Multilateral Fund.

Overarching strategy

44. The Government of Colombia proposes to meet the 100 per cent reduction of its HCFC baseline consumption by 1 January 2030, and to maintain a maximum annual consumption of HCFC in the period of 2030 to 2040 consistent with Article 5, paragraph 8 ter(e)(i) of the Montreal Protocol.[18] In line with decision 86/51, the Government of Colombia agreed that, to allow for consideration of the final tranche of its HPMP, it would submit a detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption was in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the 2030-2040 period, and propose modifications to its Agreement with the Executive Committee covering the period beyond 2030.

45. In explaining how Colombia would ensure that consumption in 2030-2040 was strictly limited to those uses specified in paragraph 8 ter(e)(i) of Article 5 of the Protocol, including *inter alia* those identified in the adjustment to the Protocol in decision XXX/2, UNDP clarified that in line with national regulations, importers of substances controlled under the Montreal Protocol require an environmental licence; each environmental licence specifies the approved uses. During the implementation of stage III of the HPMP, a review of the legal framework, including the scope of the environmental licence associated with the substances controlled by the Montreal Protocol, will be conducted to ensure that servicing tail consumption is properly addressed and controlled.

HCFC phase-out and duration of stage III

46. The Secretariat asked why the Government of Colombia decided to prepare stage III of the HPMP for the total phase-out in 2030 rather than for the 67.5 per cent reduction in 2025 only, noting that its 2020 consumption was already 72 per cent below the HCFC baseline for compliance and that Colombia was not a low-volume consuming (LVC) country. UNDP explained that all investment projects had already been addressed in previous stages and the activities to be undertaken in the servicing sector are not expected to change substantially in the coming years; it would not be cost-effective to undertake the preparatory work for a further stage in two years; the total phase-out was consistent with other stage III HPMPs for non-LVCs recently approved by the Executive Committee; and a comprehensive strategy would allow Colombia to undertake the necessary long-term planning for the complete phase-out of HCFCs.

Regulations to support HCFC phase-out

47. While the forthcoming ban on the import and manufacture of all HCFC-based RAC equipment, expected to implemented by 31 December 2021, will be critical to ensuring the successful phase-out of HCFCs by 2030 and to minimize the servicing needs in the 2030 to 2040 period, the Secretariat considered other regulations that would further support the total phase-out of HCFCs, such as regulations requiring recovery of HCFCs during the servicing of RAC equipment, prohibition on venting of HCFCs during installation, servicing, and decommissioning of RAC equipment (including establishing penalties for contraventions to the prohibition), a regulation requiring leak checking and record-keeping practices for larger equipment (e.g., above 3 kg of refrigerant), mandatory recovery of HCFC from containers and equipment at their end-of-life, a prohibition on disposable cylinders, establishment of a code of practice for RAC technicians, the implementation of a mandatory certification scheme, and sale of HCFCs to certified technicians only.

48. UNDP explained that carrying out the monitoring and enforcement of such mandatory regulations was beyond the capacity of the country; accordingly, the country had decided to implement a strategy based on voluntary standards, in particular the recently adopted national labour competence standards, as well as

[18] HCFC consumption may exceed zero in any year so long as the sum of its calculated levels of consumption over the ten-year period from 1 January 2030 to 1 January 2040 divided by 10, does not exceed 2.5 per cent of the HCFC baseline.

the ISO 5149:2014 standard, which was adapted as a Colombian technical standard. The certification on labour competencies for the RAC sector began in 2005, but certification is not mandatory; activities under stage III will further strengthen the certification scheme and demand for certified technicians. Similarly, a prohibition on disposable cylinders was not considered applicable to Colombia's current market conditions.

49. The Secretariat recalled decision XXX/2, whereby the Parties decided *inter alia* to include the servicing of fire suppression and fire protection equipment existing on 1 January 2030 in the permissible uses for the 2030-2040 servicing tail in Article 5 countries. Accordingly, the Secretariat suggested that the country implement a ban on the import and assembly of HCFC-123-based fire suppression and fire protection equipment by 1 January 2030. However, the currently available alternatives for this application appear to be high-GWP alternatives (e.g., HFC-236fa, with a GWP of 9,810); therefore, the Secretariat suggested Colombia not implement an early ban at this time but rather (i) undertake activities to ensure the proper handling and management of stocks of HFC-123, and (ii) monitor the availability of low-GWP alternatives with a view to consider establishing an earlier ban should such alternatives become available before 2030. UNDP confirmed the country's commitment to that approach.

Additional funding for the implementation of the Multilateral Fund gender policy

50. While the Executive Committee had indicated that gender should be included in project implementation in line with decision 84/92, this was not an additional cost to the HPMP but should rather be integrated within the activities. Accordingly, the additional funding to promote gender equity, while well-intentioned, was not eligible. The Secretariat further noted that UNDP had to date been able to meet its own gender equality strategy, which was introduced in 2008, without additional funding from the Multilateral Fund, and sought confirmation that UNDP would be able to implement stage III of the HPMP in line with decision 84/92 and its own gender policy. UNDP agreed to remove the requested additional funding, confirmed that UNDP would be able to implement stage III of the HPMP in line with decision 84/92 and its own gender policy, and clarified that the intent of the request was to increase the level of ambition by aiming for a gender marker GEN2 ("gender equality as significant objective"); however, additional resources would be required to develop specific activities aimed at gender mainstreaming to achieve that level of ambition.

Technical and cost-related issues

RAC servicing sector

51. Stage III included US $40,000 for a feasibility study on establishing local manufacturing of rechargeable gas cylinders, including manufacturing of prototypes and carrying out performance tests. While supporting the goal of making more affordable refillable cylinders available to the local market, the Secretariat noted the country did not intend to implement a prohibition on disposable cylinders; moreover, it was unlikely that a Colombian manufacturing facility could establish the required economies-of-scale to compete with international refillable cylinder manufacturers absent such a prohibition and substantial demand from other Article 5 countries in the region. Accordingly, UNDP agreed to remove the study from the HPMP.

Fire protection sector

52. The country aims to avoid the importation of high-GWP HFCs for the fire protection sector by maximizing the recovery of HCFC-123 and strengthening servicing practices. To that end, national labour competency standards for the sector will be developed under the first tranche and are expected to be implemented by December 2023. The Secretariat inquired whether HCFC-123 could be recovered from the decommissioning of chillers and reused in portable fire extinguishers, or whether it would need to be reclaimed in order to meet necessary quality standards. UNDP confirmed that Colombia's RRR network did not have equipment suitable to reclaim HCFC-123, and that the intent of recovering HCFC-123 from

chillers was to reuse it in the RAC sector. During the implementation of stage III, UNDP will, in collaboration with experts from the fire control sector, examine whether HCFC-123 recovered from chillers could be used in portable fire extinguishers.

Total project cost, phase-out targets, and tranche distribution

53. The original submission had inadvertently not taken into account decision 75/40; accordingly, funding for the servicing sector was reduced by US $60,332 by: removing the feasibility study on establishing local manufacturing of rechargeable gas cylinders (US $40,000); a reduction of US $5,000 each for the activities to strengthen HCFC phase-out policies and regulatory framework, and to strengthen HCFC trade control and equipment that may contain HCFCs, based on a rationalization in the budget for national legal consultants; rationalizing US $10,000 from the technical assistance to phase out HCFC consumption and improve the energy efficiency of RAC systems in supermarkets; reducing the contingency for tools for technicians by US $332; and a reduction of US $6,033 from the PMU.

54. Accordingly, the total cost for stage III of the HPMP amounts to US $2,078,635 (Table 6), plus agency support costs, in line with decision 74/50, the country's 2020 HCFC consumption, and the remaining consumption eligible for funding, comprising US $1,841,188 for the servicing sector calculated at US $4.80/kg using the remaining eligible consumption of HCFC-22 and HCFC-123 of 20.94 ODP tonnes (383.58 mt), plus US $48,480 for the fire protection sector calculated at US $4.80/kg based on a phase-out of 0.20 ODP tonnes (10.1 mt) of HCFC-123, and US $188,967 for project coordination and management. In addition, Colombia's remaining consumption eligible for funding included 0.49 ODP tonnes of HCFC-142b, 0.04 ODP tonnes of HCFC-124, and an additional 1.92 ODP tonnes of HCFC-123; that consumption was phased out without assistance from the Multilateral Fund. The funding for the first tranche was agreed as submitted.

Table 6: Total agreed cost of stage III of the HPMP for Colombia

Activity	Agency	Cost (US $)
HCFC policy and regulations	UNDP	70,000
ODS customs and enforcement training	UNDP	135,000
Technician training for natural refrigerants in commercial refrigeration	Germany	395,000
RAC technician certification and tools	UNDP	591,188
RRR network support	UNDP	270,000
Technical assistance to promote the uptake of low-GWP, energy-efficient technology in supermarkets, the cold chain, petrochemical and industrial sectors	UNDP	330,000
Programme to address HCFC-123 in the fire protection sector	UNDP	48,480
Awareness-raising and education	UNDP	50,000
Project coordination and management	UNDP	188,967
Total		**2,078,635**

55. The Secretariat noted that the 2021 quota was already below the proposed 2025 target, and invited the Government to consider additional, interim targets. Given the substantial impacts of the COVID-19 pandemic on the country's economy, and the possibility of a recovery in the coming years, the Government considered it prudent to retain the 2022-2023 targets as proposed, and reduced the targets for 2024 and 2028 to 87 per cent and 94 per cent below the country's baseline for compliance, respectively.

56. The Secretariat discussed with UNDP the proposed tranche distribution for stage III, noting the potential challenges posed by a prolonged pandemic and the importance of ensuring a balanced distribution according to the needs, including for the 2030-2040 period. UNDP proposed that the last tranche of stage III

will be in 2029 instead of 2030.[19] Given that the reduction of 94 percent of HCFC consumption will be met in 2028, activities would need to be implemented to completely phase out HCFCs by 2030. On that basis, the last tranche was agreed to be provided in 2029.

Impact on the climate

57. The proposed activities in the servicing sector, which include better containment of refrigerants through training and provision of equipment, will reduce the amount of HCFC-22 used for RAC servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in savings of approximately 1.8 CO_2-equivalent tonnes. Similarly, each kilogramme of HCFC-123 not emitted due to better practices in the maintenance, recharge, and use of portable HCFC-123 fire extinguishers, and recovery of HCFC-123 from fire protection equipment, will result in savings of approximately 77 kilogrammes of CO_2. A calculation of the impact on the climate was provided in the HPMP. The activities planned by Colombia, including its efforts to promote low-GWP alternatives, refrigerant recovery and reuse, and improved servicing of portable fire extinguishers indicate that the implementation of the HPMP will reduce the emission of refrigerants into the atmosphere, resulting in climate benefits.

2021-2023 draft business plan of the Multilateral Fund

58. UNDP and the Government of Germany are requesting US $2,078,635, plus agency support costs, for the implementation of stage III of the HPMP for Colombia. The total requested value of US $1,397,246, including agency support costs for the period of 2021-2023, is US $375,295 above the amount in the business plan.

Draft Agreement

59. A draft Agreement between the Government of Colombia and the Executive Committee for the phase-out of HCFCs in stage III of the HPMP is contained in Annex I to the present document.

RECOMMENDATION

60. The Executive Committee may wish to consider:

(a) Approving, in principle, stage III of the HCFC phase-out management plan (HPMP) for Colombia for the period from 2021 to 2030, in the amount of US $2,247,839, consisting of US $1,683,635, plus agency support costs of US $117,854 for UNDP, and US $395,000, plus agency support costs of US $51,350 for the Government of Germany, on the understanding that no more funding from the Multilateral Fund would be provided for the phase-out of HCFCs;

(b) Noting the commitment of the Government of Colombia:

(i) To reduce HCFC consumption by 81 per cent by 1 January 2022, 87 per cent by 1 January 2024, and 94 per cent by 1 January 2028; and

(ii) To completely phase out HCFCs by 1 January 2030 and to ban the import of HCFCs by 1 January 2030, except for those allowed for a servicing tail between 2030 and 2040, where required, consistent with the provisions of the Montreal Protocol;

[19] Bilateral and implementing agencies, when preparing multi-year HCFC phase-out management plans, were requested to ensure that the last tranche comprised 10 per cent of the total funding for the refrigeration servicing sector in the Agreement and was scheduled for the last year of the plan (decision 62/17).

(c) Deducting 23.59 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;

(d) Approving the draft Agreement between the Government of Colombia and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage III of the HPMP, contained in Annex I to the present document;

(e) That, to allow for consideration of the final tranche of its HPMP, the Government of Colombia should submit:

(i) A detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption was in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the 2030-2040 period;

(ii) If Colombia were intending to have consumption during the 2030-2040 period, in line with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol, the proposed modifications to the Agreement between the Government of Colombia and the Executive Committee covering the period beyond 2030; and

(f) Approving the first tranche of stage III of the HPMP for Colombia, and the corresponding tranche implementation plans, in the amount of US $US $409,000, plus agency support costs of US $28,630 for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF COLOMBIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE III OF THE HCFC PHASE-OUT MANAGEMENT PLAN

Purpose

1. This Agreement represents the understanding of the Government of Colombia (the "Country") and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A ("The Substances") to a sustained level of zero ODP tonnes by 1 January 2030 in compliance with Montreal Protocol schedule.

2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets, and Funding") in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3, 4.2.3, 4.3.3, 4.4.3, 4.5.3 and 4.6.3 (remaining consumption eligible for funding).

3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A ("Funding Approval Schedule").

4. The Country agrees to implement this Agreement in accordance with the stage II of the HCFC phase-out management plan (HPMP) approved ("the Plan"). In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding in accordance with the Funding Approval Schedule when the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;

(b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;

(c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A ("Format of Tranche Implementation Reports and Plans") covering each previous calendar year; that it had achieved a significant level of implementation of

activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

(d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A ("Monitoring Institutions and Roles") will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

(a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in sub-paragraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:

(i) Issues potentially concerning the rules and policies of the Multilateral Fund;

(ii) Changes which would modify any clause of this Agreement;

(iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches;

(iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche; and

(v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would decrease the overall funding level under this Agreement accordingly;

(b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report;

(c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

Considerations for the refrigeration servicing sector

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector included in the Plan, in particular:

(a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and

(b) The Country and relevant bilateral and/or implementing agencies would take into consideration relevant decisions on the refrigeration servicing sector during the implementation of the Plan.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the "Lead IA") and the Government of Germany has agreed to be the cooperating implementing agency (the "Cooperating IA") under the lead of the Lead IA in respect of the Country's activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and/or Cooperating IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). The Cooperating IA will support the Lead IA by implementing the Plan under the overall co-ordination of the Lead IA. The role of the Lead IA and Cooperating IA are contained in Appendix 6-A and Appendix 6-B, respectively. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

Non-compliance with the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A ("Reductions in Funding for Failure to Comply") in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	71.1
HCFC-123	C	I	2.2
HCFC-124	C	I	0.04
HCFC-141b	C	I	151.7
HCFC-142b	C	I	0.5
Sub-total			225.6
HCFC-141b contained in imported pre-blended polyols	C	I	n/a
Total			225.6

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	146.64	146.64	146.64	146.64	73.32	73.32	73.32	73.32	73.32	0	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	78.96	42.91	42.91	30.21	30.21	30.21	30.21	14.19	14.19	0	n/a
2.1	Lead IA (UNDP) agreed funding (US $)	409,000	0	479,688	0	0	587,083	0	0	207,864	0	1,683,635
2.2	Support costs for Lead IA (US $)	28,630	0	33,578	0	0	41,096	0	0	14,550	0	117,854

Row	Particulars	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
2.3	Cooperating IA (Germany) agreed funding (US $)	0	0	395,000	0	0	0	0	0	0	0	395,000
2.4	Support costs for Cooperating IA (US $)	0	0	51,350	0	0	0	0	0	0	0	51,350
3.1	Total agreed funding (US $)	409,000	0	874,688	0	0	587,083	0	0	207,864	0	2,078,635
3.2	Total support costs (US $)	28,630	0	84,928	0	0	41,096	0	0	14,550	0	169,204
3.3	Total agreed costs (US $)	437,630	0	959,616	0	0	628,179	0	0	222,414	0	2,247,839
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)											20.85
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)											50.24
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)											0.00
4.2.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)											2.21
4.2.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)											0.00
4.2.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)											0.00
4.3.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)											0.04
4.3.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)											0.00
4.3.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)											0.00
4.4.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)											0.00
4.4.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)											151.70
4.4.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)											0.00
4.5.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)											0.49
4.5.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)											0.00
4.5.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)											0.00
4.6.1	Total phase-out of HCFC-141b contained in imported pre-blended polyols agreed to be achieved under this Agreement (ODP tonnes)											0.00
4.6.2	Phase-out of HCFC-141b contained in imported pre-blended polyols to be achieved in previously approved projects (ODP tonnes)											111.70
4.6.3	Remaining eligible consumption for HCFC-141b contained in imported pre-blended polyols (ODP tonnes)											0.00

*Date of completion of stage II as per stage II Agreement: 31 December 2022

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

(a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include the amount of ODS phased out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds

during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes;

(b) An independent verification report of the Plan results and the consumption of the Substances, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;

(c) A written description of the activities to be undertaken during the period covered by the requested tranche, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;

(d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database; and

(e) An Executive Summary of about five paragraphs, summarizing the information of the above sub-paragraphs 1(a) to 1(d).

2. In the event that in a particular year two stages of the HPMP are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:

(a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and

(b) If the stages under implementation have different HCFC consumption targets under Appendix 2-A of each Agreement in a particular year, the lower HCFC consumption target will be used as reference for compliance with these Agreements and will be the basis for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The Ministry of Environment and Sustainable Development (MADS) is the entity responsible for the coordination and management of programs and activities under stage III of the HPMP. This ministry is supported by the Ozone Technical Unit (UTO), which is currently part of the Group of Chemical Substances and Hazardous Waste of the Sectorial, Urban and Environmental Affairs Direction.

2. The UTO works as an institution of a public character to coordinate activities of the Plan, supported by MADS and other government entities and implementing partners. Collaborations with further government entities and private associations also contribute to the development, monitoring, and implementation of the Plan and adherence to the Montreal Protocol.

3. Coordination and monitoring of the Plan will be accomplished through the operational monitoring of stage III activities, verification of funding disbursements, and the monitoring and assessment of implemented activities in advanced stages of the Plan.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:

   (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;

   (b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;

   (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;

   (d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future Tranche Implementation Plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

   (e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee, and should include the activities implemented by the Cooperating IA;

   (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual tranche implementation reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HCFC consumption targets had been met;

   (g) Ensuring that appropriate independent technical experts carry out the technical reviews;

   (h) Carrying out required supervision missions;

   (i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;

   (j) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;

   (k) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of the Lead IA and the Cooperating IA;

   (l) Ensuring that disbursements made to the Country are based on the use of the indicators;

   (m) Providing assistance with policy, management and technical support when required;

   (n) Reaching consensus with the Cooperating IA on any planning, co-ordination and reporting arrangements required to facilitate the implementation of the Plan; and

   (o) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCIES

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the Plan, including at least the following:

(a) Providing assistance for policy development when required;

(b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities;

(c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A; and

(d) Reaching consensus with the Lead IA on any planning, co-ordination and reporting arrangements required to facilitate the implementation of the Plan.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US $176.23 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years.

2. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the HPMP being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors that lead to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.