UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/76/54
19 April 2016

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-sixth Meeting
Montreal, 9-13 May 2016

PROJECT PROPOSAL: VENEZUELA (BOLIVARIAN REPUBLIC OF)

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

Phase-out

- HCFC phase-out management plan (stage II, first tranche) UNIDO and UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Venezuela (Bolivarian Republic of)

(I) PROJECT TITLE	AGENCY
HCFC phase-out plan (Stage II)	UNIDO and UNDP

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2014	104.63

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2014
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123					0.08				0.08
HCFC-124					0.21				0.21
HCFC-141		10.34							10.34
HCFC-141b in imported pre-blended polyol		6.20							6.20
HCFC-142b					1.30				1.30
HCFC-22				0.44	87.55				87.99

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	207.0	Starting point for sustained aggregate reductions:	208.86
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	23.16	Remaining:	185.7

(V) BUSINESS PLAN			2016	2017	2018	2019	2020	Total
UNDP		ODS phase-out (ODP tonnes)	0.0	20.7	0.0	20.7	0.0	41.5
		Funding (US $)	0.0	1,412,865	0.0	1,412,865	0.0	2,824,730
UNIDO		ODS phase-out (ODP tonnes)	20.0	0.0	20.0	0.0	5.0	45.0
		Funding (US $)	1,867,636	0.0	1,867,636	00	466,909	4,202,182

(VI) PROJECT DATA			2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			186.25	186.25	186.25	186.25	134.55	
Maximum allowable consumption (ODP tonnes)			186.25	186.25	186.25	186.25	120.03	
Project costs requested in principle (US$)	UNIDO	Project costs	600,000	575,000	596,000	0	196,144	1,967,144
		Support costs	42,000	40,250	41,720	0	13,730	137,700
	UNDP	Project costs	76,420	200,000	200,000	800,000	50,000	1,326,420
		Support costs	5,349	14,000	14,000	56,000	3,500	92,849
Total project costs requested in principle (US $)			676,420	775,000	796,000	800,000	246,144	3,293,564
Total support costs requested in principle (US $)			47,349	54,250	55,720	56,000	17,230	230,549
Total funds requested in principle (US $)			723,769	829,250	851,720	856,000	263,374	3,524,113

(VII) Request for funding for the first tranche (2015)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNIDO	600,000	42,000
UNDP	76,420	5,349

Funding request:	Approval of funding for the first tranche (2016) as indicated above
Secretariat's recommendation:	For individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Venezuela (Bolivarian Republic of), UNIDO as the lead implementing agency, has submitted to the 76th meeting stage II of the HCFC phase-out management plan (HPMP) at a total cost of US $4,995,078, consisting of US $1,967,144, plus agency support costs of US $137,700 for UNIDO and US $2,701,153, plus agency support costs of US $189,081 for UNDP, as originally submitted. The implementation of stage II of the HPMP will phase out 50.48 ODP tonnes of HCFCs, including 1.91 ODP tonnes of HCFC-141b contained in imported pre-blended polyols, and assist Venezuela (Bolivarian Republic of) in meeting the Montreal Protocol compliance target of 35 per cent reduction by 2020.

2. The first tranche for stage II of the HPMP being requested at this meeting amounts to US $600,000, plus agency support costs of US $42,000 for UNIDO, and US $50,000, plus agency support cost of US $3,500 for UNDP, as originally submitted.

Status of implementation of stage I of the HPMP

3. Stage I of the HPMP for Venezuela (Bolivarian Republic of) was approved at the 63rd meeting at a total cost of US $1,894,500, plus agency support costs, to phase out 23.16 ODP tonnes of HCFC-22 used in the refrigeration servicing sector[1,2]. With the approval of stage I, the Government of Venezuela committed to reducing 10 per cent of its HCFC baseline (20.70 ODP tonnes) by 2015.

ODS policy and regulatory framework

4. The Government of Venezuela (Bolivarian Republic of) has established an operational licensing and quota system for the production, import and export of ODS, including HCFCs. In addition, the Government has developed norms on the control, import and handling of HFCs, and is currently assessing the institutional and legal framework for the import, production, transport and commercialization of hydrocarbons (HC).

5. The responsibilities of the National Ozone Unit (NOU) are divided between the Direction of Air Quality Control (DAQC), within the Ministry of Popular Power for Eco-socialism and Waters (MPPEW, previously Ministry of Environment) and FONDOIN, a Government foundation reporting to the Ministry of Popular Power for Industry and Commerce (MPPIC). The Integrated Service of Customs and Tribute Administration (SENIAT) handles HCFC imports and reports them to MPPEW through the National Institute for Statistics (INE).

Progress in implementation of stage I activities

6. At the 75th meeting, the Executive Committee was informed on a number of organizational changes that had delayed the implementation of the technicians training programme, the strengthening of the ODS regulatory framework and the customs training. Upon the request of the Government, all the activities related to ODS control were transferred from UNEP to UNIDO, and a revised plan of action was submitted by UNIDO for the fourth and final tranche[3].

7. An overview of the results achieved so far is presented below:

(a) *Regulatory framework:* A seminar on HCFC identification was held with the participation of 120 customs officers and other legal enforcement officers, and 12

[1] Stage I of the HPMP as submitted, proposed phase-out activities in five enterprises in the foam sector, but they were subsequently deferred to stage II.
[2] UNEP/OzL.Pro/ExCom/63/54.
[3] Decision 75/65.

refrigerant identifiers were distributed to customs and one to the NOU; the ODS import and export licensing system software was updated; three study tours were organized with participation of NOU staff and stakeholders to visit HC-based equipment producers, a programme on final disposal of refrigeration equipment, a reclaiming centre and two refrigeration fairs in Mexico, Colombia and Panama; and public awareness activities were implemented; and

(b) *Refrigeration servicing sector:* The manual on good refrigeration practices was updated, and a new manual on handling HCs as an alternative refrigerant was developed, 80 trainers and 1,314 technicians received training in good refrigeration practices, and 1,181 technicians were certified; 36 vocational centres received sets of training tools including 16 sets of refrigeration simulator training software; a refrigeration leak reduction programme addressed to end-users started in July 2015, and a programme to replace HCFC-22-based equipment with HC-290-based equipment was established;

(c) *Project implementation and monitoring unit (PMU):* FONDOIN is responsible for the implementation and monitoring of the HPMP.

8. A of February 2016, of the total funds of US $1,894,500 approved, US $1,432,379 had been disbursed. The remaining US $462,121 will be disbursed in 2016.

Stage II of the HPMP

9. The Government of Venezuela (Bolivarian Republic of) is committing in stage II to reducing HCFC consumption by 35 per cent of the baseline by 2020. Stage II proposes to: strengthen HCFC import controls; phase out the consumption of 30.75 ODP tonnes of HCFC-141b pure or contained in imported pre-blended polyols used in the polyurethane (PU) foam sector; maintain HCFC-22 consumption in the refrigeration servicing sector; and support the refrigeration and air-conditioning manufacturing sector.

HCFC consumption and sector distribution

10. Venezuela (Bolivarian Republic of) produces, imports and exports HCFCs. HCFC-22 is the only HCFC being produced in the country. HCFC consumption in 2015 was 45.72 ODP tonnes as shown in Table 1.

Table 1. HCFC consumption in Venezuela (Bolivarian Republic of) (2010-2014 Article 7 data, 2015 as per verification report)

HCFC	2011	2012	2013	2014	2015*	Baseline
Metric tonnes						
HCFC-22	2,643.3	3,519.0	2,264.2	1,685.4	831.2	2,938.7
HCFC-123	12.0	10.5	0.0	4.0	0.0	3.3
HCFC-124	0.0	6.0	0.0	9.6	0.0	0.0
HCFC-141b	176.8	469.1	93.1	94.0	0.0	359.6
HCFC-142b	0.0	10.0	0.0	20.0	0.0	87.4
Subtotal (mt)	**2,832.1**	**4,014.6**	**2,357.3**	**1,813.0**	**831.2**	**3,389.0**
HCFC-141b in imported pre-blended polyols**	4.5	17.5	11.3	56.4	39.1	***17.4
Total (mt)	2,836.6	4,032.1	2,368.6	1,869.4	870.3	

HCFC	2011	2012	2013	2014	2015*	Baseline
ODP tonnes						
HCFC-22	145.38	193.54	124.53	92.69	45.72	161.36
HCFC-123	0.24	0.21	0.00	0.08	0.00	0.07
HCFC-124	0.00	0.13	0.00	0.21	0.00	0.00
HCFC-141b	19.45	51.60	10.24	10.34	0.00	39.56
HCFC-142b	0.00	0.65	0.00	1.30	0.00	5.68
Subtotal (ODP tonnes)	**165.07**	**246.18**	**134.77**	**104.63**	**45.72**	**206.94**
HCFC-141b in imported pre-blended polyols**	0.50	1.92	1.24	6.20	4.30	***1.91
Total (ODP tonnes)	**165.57**	**248.10**	**136.01**	**110.83**		

* Not reported but verified.
**CP implementation report data.
*** Average consumption between 2007 and 2009.

11. The consumption of HCFCs decreased from 246.18 ODP tonnes in 2012 to 45.76 ODP tonnes in 2015, representing over 75 per cent of the maximum allowable consumption of 186.30 ODP tonnes in 2015.

12. The production level of HCFC-22 increased from 27.1 ODP tonnes in 2002 to 160.3 ODP tonnes in 2012. In 2013 the trend reversed itself and production decreased to 37.21 ODP tonnes in 2015, as shown in Table 2.

Table 2. HCFC-22 production in Venezuela (Bolivarian Republic of) (2010-2014 Article 7 data, 2015 as per verification report)

	2010	2011	2012	2013	2014	2015*
Metric tonnes	2,166.92	2,442.55	2,914.09	2,203.94	1,565.63	676.50
ODP tonnes	119.18	134.34	160.27	121.22	86.11	37.21

* Not reported but verified

13. The significant decrease in HCFC consumption and production is related to the difficulties in importing refrigerants and raw materials into the country due to the shortage of foreign currency caused by falling world oil prices (oil exports represent 96 per cent of the country's export earnings). In 2014 there were only three active HCFC importers in the country, as compared to nine in 2008 as reported during submission of stage I of the HPMP. Two other importers obtained permits for the year 2014 but did not import.

14. Table 3 presents the consumption of HCFCs by sector as reported in the country programme (CP) data for 2014.

Table 3. Distribution of HCFCs use by sector and substance in (2014)

HCFC	Sector	HCFC use			
		mt	mt (%)	ODP tonnes	ODP tonnes (%)
Manufacturing					
HCFC-22	RAC	8.00	0.45	0.44	0.41
HCFC-141b	PU foam	94.00	5.27	10.34	9.74
HCFC-141b	Formulated polyol	56.37	3.16	6.20	5.84
Subtotal		**158.37**	**8.88**	**16.98**	**16.00**
Servicing					
HCFC-22	RAC	1,591.73	89.24	87.55	82.50
HCFC-142b	RAC	20.00	1.12	1.30	1.23
HCFC-123	RAC	4.00	0.22	0.08	0.08
HCFC-124	RAC	9.60	0.54	0.21	0.20
Subtotal		**1,625.33**	**91.12**	**89.14**	**84.00**
Total		***1,783.70**		***106.12**	

*The difference between the HCFC use in the CP report and the reported consumption of 1,813.0 mt (104.63 ODP tonnes) is possibly due to stockpiled production.

15. Over 91 per cent of the HCFC (measured in mt) used in 2014 was used for servicing refrigeration and air-conditioning systems, while 5.27 per cent was used for manufacturing foams, as shown in Table 3.

HCFC consumption in manufacturing sectors

HCFC consumption in the PU foam manufacturing sector

16. Consumption of HCFC-141b has decreased considerably since 2012. Imports of pure HCFC-141b have been partially replaced by imports of HCFC-141b contained in imported pre-blended polyols. Given the low level of imports, enterprises continue operating with HCFC-141b that were previously stocked.

17. During the preparation of stage II, 103 enterprises in the PU foam sector were identified. Sinthesis, a locally owned systems house, imports HCFC-141b and formulates various PU foam systems. Euroquim, a distributor, imports fully formulated polyols with HCFC-141b for all market applications. Table 4 presents an estimate of the distribution of HCFC-141b use among several PU foam applications.

Table 4. Estimated distribution of HCFC-141b use in rigid PU foam applications

Application	Consumption (Average 2012-2014)	
	Mt	Percentage
Discontinuous panels	116.76	42.6%
Continuous sheets for air conditioners	55.67	20.3%
Insulation foam for commercial refrigeration systems	52.15	19.0%
Thermo-ware	29.55	10.8%
Insulated pipes	7.72	2.8%
Distributor to several small users (insulation foam)	4.80	1.8%
Insulation for refrigerated transportation	4.43	1.6%
Various applications	1.69	0.6%
Spray	1.46	0.5%
Total	**274.23**	**100.0%**

18. The five largest PU foam enterprises use 57 per cent of the HCFC-141b in the country. The remaining consumption is mainly by SMEs which are supplied by Sinthesis and Euroquim. The distribution of HCFC-141b use among PU foam enterprises is presented in Table 5.

Table 5. Distribution of HCFC-141b use among PU foam enterprises

Enterprise	Application	Starting date	Baseline equipment	Consumption (Avg. 2012-2014)	
				mtt	%
P3 Venezolana	Continuous PU sheets	2001	Continuous line with low pressure dispenser	55.67	19.9
Liderfrío	Discontinuous panels	1996	Low pressure dispenser (6000 g/sec), two presses	36.96	13.2
Decocar	Thermo-ware	1972	One high pressure and three low pressure dispensers	29.35	10.5
Puntoplas	Discontinuous panels	1967	Manual foaming	19.45	7.0
Tecoven	Commercial refrigeration	1978	High pressure dispenser (40 kg/min)	18.75	6.7
Remaining 45 SMEs	Various*	Before Sept-07	Various*	119.37	42.7
Total				**279.55**	**100.0**

*Detailed information on applications and baseline equipment was included in the proposal.

HCFC consumption in the RAC manufacturing sector

19. The total consumption capacity of RAC equipment manufacturing in the sector is 58.41 mt.

However, in the last six years HCFC consumption has decreased from 23.8 to 8.0 mt due to the economic situation. The ten largest enterprises manufacturing domestic and commercial air-conditioners and industrial chiller systems consumed between 2012 and 2014 an average of 12.1 mt. The remaining consumption was by a large number of very small enterprises. The majority of the enterprises do not consume HCFCs directly since they manufacture equipment to be charged upon installation at the end-user's site (the sector charges approximately 25 per cent of the capacity of the equipment produced). The main enterprises in the sector and their consumption between 2012 and 2014 are listed in Table 6.

Table 6. HCFC-22 consumption by main refrigeration and air-conditioning manufacturing enterprises (2012 – 2014)

Sector	Enterprise	Products	Consumption (US $)
Domestic	Haier Venezuela	Domestic AC	0.0
	Siragon	Domestic AC	2.8
Commercial	Frioven	Commercial AC	2.4
	Climar	Commercial AC	1.8
	Difusores Friodan	Commercial AC	0.9
	Maca	Commercial AC	0.6
	Transca Infrica	Commercial AC	0.0
Industrial	Termodinamica Maracay	Industrial chiller systems	1.6
	Dical	Industrial chiller systems	1.2
	Fricor	Industrial chiller systems	0.8
Total			**12.1**

HCFC consumption in the refrigeration servicing sector

20. Based on the results of the survey carried out for the preparation of stage II of the HPMP, 43.3 per cent of total HCFC consumption (in mt) was for servicing commercial refrigerators and air-conditioning equipment; 35.9 per cent for servicing domestic air-conditioning equipment; 13.6 per cent for servicing industrial refrigeration and air-conditioning equipment; and 1.6 per cent for servicing domestic refrigeration equipment. Given the forced reduction of HCFCs due to difficulties with importing HCFCs and raw materials to produce HCFCs, specific sectors were prioritized in the country: food, health, transport and Government, leaving less refrigerant available to serve residential air-conditioning and other applications.

Remaining eligible consumption in Venezuela (Bolivarian Republic of)

21. Stage II of the HPMP for Venezuela (Bolivarian Republic of) proposes to phase out a total of 50.53 ODP tonnes of HCFCs, consisting of 19.73 ODP tonnes of HCFC-22, 28.89 ODP tonnes of HCFC-141b and 1.91 ODP tonnes of HCFC-141b contained in imported pre-blended polyols. The proposed phase-out will reduce the remaining eligible consumption of HCFC-22 to 118.74 ODP tonnes, and the remaining eligible consumption of HCFC-141b to 10.67 ODP tonnes. The consumption of HCFC-141b contained in imported pre-blended polyols would be completely phased out (Table 7).

Table 7. Overview of the remaining HCFC consumption in Venezuela (Bolivarian Republic of)

HCFC	Starting point	Reduction in stage I	Remaining consumption after stage I	Reduction proposed in stage II	Remaining consumption for future stages
Metric tonnes					
HCFC-22	2,938.70	421.09	2,517.64	358.73	2,158.91
HCFC-141b	359.60	-	359.64	262.64	97.00
HCFC-123	3.50	-	3.50	-	3.50
HCFC-142b	87.40	-	87.38	-	87.38
HCFC-141b (polyols)*	17.34	-	17.34	17.34	-
Total	**3,406.54**	**421.09**	**2,985.45**	**638.70**	**2,346.75**

HCFC	Starting point	Reduction in stage I	Remaining consumption after stage I	Reduction proposed in stage II	Remaining consumption for future stages
ODP tonnes					
HCFC-22	161.63	23.16	138.47	19.73	118.74
HCFC-141b	39.56	-	39.56	28.89	10.67
HCFC-123	0.07	-	0.07	-	0.07
HCFC-142b	5.68	-	5.68	-	5.68
HCFC-141b (polyols)*	1.91	-	1.91	1.91	-
Total	**208.86**	**23.16**	**185.69**	**50.48**	**135.16**

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

Proposed activities in stage II of the HPMP

Activities in the manufacturing sector

PU foam manufacturing sector

22. Of the 103 HCFC-based foam enterprises identified, 50 enterprises with a consumption of 279.55 mt (30.75 ODP tonnes) of HCFC-141b were eligible and included in stage II of the HPMP for their conversion. The remaining consumption in the sector is attributed to very small enterprises, which will receive technical assistance to introduce low-GWP alternatives through the systems houses included in the project.

23. Stage II includes the complete phase-out of the consumption of 30.75 ODP tonnes of HCFC-141b pure and contained in imported pre-blended polyols to HFO-based foam formulations developed in-house by three large sized enterprises and developed by systems houses for group projects. It also includes trial and testing at the downstream users (US $589,000), and incremental operational costs (US $2,094,064). Given the alternative selected, the project does not include the retrofit or procurement of foam dispensers or safety items. Details on enterprises included, application, consumption and cost are summarized in Table 8.

Table 8. Total cost for the conversion of the PU foam sector

Enterprise	Applications/No. of enterprises	HCFC-141b		Cost (US $)				CE (US $)
		mt	ODP tonnes	Capital	Operation	Total cost	Requested	
Euroquim – group project	Various*/22 enterprises	145.51	16.01	90,860	1,129,339	1,220,199	1,220,199	8.39
Shintesis – group project	Various*/25 enterprises	48.98	5.39	228,640	463,901	692,541	536,872	10.98
Lider Frio C.A.	Discontinuous panels	36.96	4.07	93,500	184,800	278,300	278,300	7.54
Decocar C.A	Thermoware	29.35	3.23	71,500	146,752	218,252	218,252	7.45
Tecoven	Insulation foam for commercial refrigeration	18.75	2.06	104,500	169,272	273,772	205,530	10.99
Subtotal		**279.55**	**30.75**	**589,000**	**2,094,064**	**2,683,064**	**2,459,153**	**8.79**
PMU							242,000	
Total							**2,701,153**	**9.66**

*Continuous and discontinuous panels; insulation foam for commercial refrigeration; refrigerated transportation and pipes; thermoware; and spray.

RAC manufacturing sector

24. Stage II of the HPMP proposes the conversion of the entire RAC manufacturing sector through technical assistance activities to promote the introduction of low-GWP-energy-efficient alternative refrigerants, and safety considerations; workshops on technical and economic aspects of the use of alternatives; the production of technical material on the subject, and the installation and testing of one

prototype using alternative refrigerant in each one of the three subsectors, namely, residential and commercial air-conditioning and industrial refrigeration. The level of funds requested for the technical assistance to the RAC manufacturing sector is US $245,000. No HCFC-22 reductions have been associated to this project.

Activities in the refrigeration servicing sector

25. Stage II of the HPMP proposes to sustain the reduced levels of consumption of HCFC-22 used in the refrigeration servicing sector through implementation of the following activities at a total amount of US $1,722,144, with a cost-effectiveness of US $4.8/kg:

(a) *Technical assistance for enhanced control of trade of HCFC-based substances and equipment (US $45,000):* Improve the control of ODS imports through modification of the legal framework to include ban on import and new installations of HCFC-based RAC equipment, training to 300 customs officers and awareness workshop for 200 Government officers;

(b) *Technician training and certification programme (US $1,170,000):* Training of additional 1,200 technicians in good operation, maintenance and servicing practices, including recovery and re-use; alternative refrigerant and equipment development, and correct selection and adoption of HCFC alternative technologies. Certification of 1,000 technicians and workshops; update of training material; and distribution of 1,500 good practices tool kits[4] to refrigeration technicians;

(c) *HCFC conservation programme in the hospital and food conservation sectors and private servicing enterprises (US $157,144):* Training on equipment and refrigerant conservation, and technical assistance to large end-users on equipment inventory and assessment, equipment repair (leaks), development of equipment and refrigerant performance indexes, record keeping and monitoring of equipment, and refrigerant log. The programme intends to assist 40 different installations per year (20 from the hospital sector and 20 from the food conservation sector);

(d) *Demonstration project for promotion of low-GWP energy efficient-technologies (US $200,000):* Accelerate the introduction of low-GWP, energy-efficient alternatives into the market by demonstrating safety considerations, the energy advantages of HC-based equipment (2,000 window air-conditioners) at two Ministries, and assessing safety and energy use compared to HCFC-based equipment. Raise awareness on the safe use of HCs to seek support for the approval of the related regulation for the use of HCs as refrigerants, and promotion of local manufacturing of HC-based equipment. Design and implementation of standards and regulations for the use of HCs as refrigerants, and promotion seminars; and

(e) *Implementation and monitoring activities (US $150,000):* FONDOIN will be responsible for the implementation of stage II in cooperation with national partners (MPPIC, MPPEW, SENIAT and others). The monitoring activities will include periodic reports and analysis on project results in order to facilitate corrective actions.

[4] Tool kits contain sets of extra-long hoses, pinch-off valves, a goggles and glove set, hexagonal and square ratchet wrenches, two recovery cylinders, service manifold, vacuum gauge, and vacuum pump for approximately US $900.

Total cost of stage II of the HPMP

26. The total cost of stage II of the HPMP has been estimated at US $4,668,297, as originally submitted (excluding support costs). The proposed activities will result in the phase-out of 50.48 ODP tonnes of HCFCs with an overall cost effectiveness of US $7.31/kg. Detailed activities and cost breakdown, as originally submitted, are shown in Table 9.

Table 9. Total cost of stage II of the HPMP for Venezuela (Bolivarian Republic of)

Sector	Application	Substance	mt	ODP tonnes	CE	Funds requested (US $)
PU foam	Investment project	HCFC-141b	279.55	30.75	8.80	2,459,153
	PMU foam sector	HCFC-141b				242,000
Subtotal PU foam sector			**279.55**	**30.75**	**9.67**	**2,701,153**
RAC manufacturing sector	Technical assistance	HCFC-22	-	-	-	245,000
Subtotal RAC manufacturing sector			**-**	**-**	**-**	**245,000**
Servicing sector	Technical assistance for sustained reduction of HCFC use	HCFC-22	358.78	19.73	4.80	1,327,144
	Demonstration project for promotion of low GWP energy efficient-technologies	HCFC-22				200,000
	Technical assistance for enhanced control of trade of HCFC-based substances and equipment	HCFC-22				45,000
	Implementation and monitoring activities	HCFC-22				150,000
Subtotal RAC servicing sector			**358.78**	**19.73**	**4.80**	**1,722,144**
Total stage II			**638.33**	**50.48**	**7.31**	**4,668,297**

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

27. The Secretariat reviewed stage II of the HPMP for Venezuela (Bolivarian Republic of) in light of stage I, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decision 74/50), and the 2016-2018 business plan of the Multilateral Fund.

Verification of HCFC consumption in 2015

28. An issue of communication between the NOU and the customs authority had been discussed during the review of stage I[5]. This issue was identified in the context of CFC consumption verifications in 2008 and 2009, and accordingly, UNIDO included in stage I activities to enhance cooperation, connect more customs officers to the on-line system on imports and request NOU's access to import data in the customs integrated system. At the 75th meeting when the last tranche of stage I was submitted, this issue had not been entirely resolved. The verification report still included data from the National Institute of Statistics (INE) instead of direct data from customs (as per decision 63/57(f)). Accordingly, the Executive Committee requested the submission of a verification report on the country's HCFC consumption in 2015 with the submission of stage II (decision 75/65(d)(ii)).

29. The verification report submitted to the 76th meeting included comparisons between data from the NOU and the customs authority, demonstrating compliance with the consumption targets. Although there were delays in the activities related to customs under stage I, a new channel of communication was

[5] Paragraph 20 of document UNEP/OzL.Pro/ExCom/63/54.

established with the customs authorities as a result of high-level meetings held between the authorities of the Ministries of Finance and Industry and the NOU. Software to manage the licensing system was developed and installed in the MPPEW, and is expected to facilitate information exchange with customs. Incorporation of more customs officers to the online customs system, providing direct access by the NOU to the integrated customs system, and continuous training of customs officers will continue to be a priority during stage II of the HPMP.

Overarching strategy for stage II

30. In reviewing the proposal, it was noted that, due to oil prices and the drop in foreign currency available for imports, the estimated HCFC consumption in 2015 was 45.72 ODP tonnes (over 75 per cent below the HCFC consumption baseline), which already places the country in compliance with the 2020 consumption targets. It was also noted that there were no imports of HCFC-141b. In view of these facts, UNIDO provided the following clarifications:

(a) The decrease in HCFC consumption is a restriction in supply due to external circumstances rather than a sustained reduction in HCFC consumption driven by the replacement of HCFC-based equipment and the introduction of alternatives. This severe reduction in HCFC supply is causing the shutdown of several manufacturing enterprises and a significant portion of RAC equipment, and the use of inappropriate refrigerants (contaminated or not properly labelled);

(b) The current situation in the local market could change by an increase in international oil market prices, or an increase in national production of oil and consumer goods, although this would take time. However, it can be expected that when the current situation changes, the amount of HCFC-22 produced locally (87 per cent of the consumption) could be increased to the maximum allowed levels to supply unsatisfied demand for both the manufacturing and servicing sectors; and

(c) Accordingly, the strategy defined for the refrigeration servicing sector, which comprises 94 per cent of HCFC consumption in the country, is not focused on reducing HCFC consumption, but rather on maintaining the low HCFC consumption achieved, while preventing damage to the RAC equipment in operation through good practices and the introduction of alternatives like HCs. It also proposes to continue implementing the end-users programme on leak reduction started in stage I to maximize the re-use of existing HCFC-22 and extend the life cycle of installed HCFC-based equipment.

31. In the context of the current low level of consumption in the country, it would appear that no HCFC phase-out activities would be required to ensure compliance; however, the Secretariat considers it important to maintain the momentum of the activities initiated in stage I, including the training and certification programme for refrigeration technicians, with a focus on HCFC refrigerant containment and the proper installation, operation and servicing of equipment designed to operate with low-GWP technologies. Activities to promote the proper introduction of low-GWP based equipment will allow the gradual replacement of obsolete HCFC-based equipment by the time the economic situation starts to improve. The demonstration of safe installation and energy-efficient operation of this type of equipment at Government-level buildings might raise awareness and generate support for updating the regulatory framework to support the introduction of low-GWP technology.

PU foam manufacturing sector

Financial status of beneficiary enterprises

32. The Secretariat noted the thorough data collection, identification of eligible enterprises and project development. Noting the economic constraints in the country and in line with decision 25/3 on possible enterprise bankruptcy, the Secretariat requested more information on the results of the preliminary screening of financial viability of the enterprises included in the plan, to minimize the risk of enterprise bankruptcy after project implementation has begun. UNDP (as the lead agency for the foam sector plan) reassured the Secretariat regarding the good financial standing of all the selected enterprises, and confirmed that during project implementation beneficiary enterprises would be monitored, and that instances of bankruptcy and their impact on ODS phase-out and funding would be reported. UNDP also clarified that the selection of HFO-based technology minimizes the risk to the Fund, as most of the project's resources would be executed after 2017.

HCFC consumption at beneficiary enterprises

33. The average consumption for the years 2012-2014 was used as reference for the PU foam project. However, it was noted that using the last three years of consumption would not necessarily represent the most accurate situation of consumption in the country. For instance, in 2012 there was a major stockpile of HCFC-141b and in 2015 there were no imports of HCFC-141b pure due to the economic situation. In discussions with UNDP, it was agreed to use officially reported consumption as reference, in line with existing policies and guidelines, in order to remove atypical deviations in the consumption, it was agreed not to use 2012 (where a major import for stockpiles took place) and 2015 (where imports were zero due to the economic factors explained), resulting in a consumption of 127.34 mt (93.53 mt of pure HCFC-141b and 33.81 mt of HCFC-141b contained in imported pre-blended polyols).

Second-stage conversions

34. The PU foam enterprises Decocar, Fibrocaven, Liderfrio, Tecnofrigo and Veniber, included in stage II of the HPMP, had previously received assistance from the Multilateral Fund to replace the use of CFC-11 with HCFC-141b as the foam blowing alternative[6]. Conversion included the replacement/retrofit of the foam dispensers and ancillary equipment. Regarding the eligibility of these second-stage conversions, the enterprises are converting to low-GWP alternatives and are therefore eligible for full funding in accordance with decision 74/50(b)(i) and (c)[7]. Moreover, technology selected for these enterprises is HFO, which does not require changes to the baseline equipment.

HCFC reductions with the PU foam sector plan

35. The foam projects proposed in stage II will completely phase out consumption of HCFC-141b (pure or contained in imported pre-blended polyols) in Venezuela (Bolivarian Republic of). As there is no more consumption of HCFC-141b in the country, UNDP confirmed that the remaining consumption of 39.56 ODP tonnes of HCFC-141b pure and 1.91 ODP tonnes in imported pre-blended polyols will be deducted from the starting point and that the Government of Venezuela (Bolivarian Republic of) will commit to establishing, by 1 January 2020, a ban on the import, export and use of HCFC-141b pure or contained in imported pre-blended polyols.

[6] VEN/FOA/22/INV/54, VEN/FOA/22/INV/56, VEN/FOA/25/INV/64, VEN/FOA/26/INV/66, and VEN/FOA/38/INV/96

[7] Full funding of eligible incremental costs of second-stage conversion projects would be considered in those cases where an Article 5 Party clearly demonstrated in its HPMP that such projects were necessary to comply with the Montreal Protocol HCFC targets up to and including the 35 per cent reduction step by 1 January 2020; and/or were the most cost-effective projects measured in ODP tonnes that the Party concerned could undertake in the manufacturing sector in order to comply with those targets; and/or would make the transition to low global-warming potential (GWP) alternatives.

Technology selected

36. In providing additional details on the specific HFO suppliers for the project, and on when an adequate supply of the technology would be made available to the country in line with decision 74/20(a)(iii), UNDP reassured the Secretariat that HFOs have been commercially available since 2013. One large-scale production facility in Los Angeles, United States of America, has been running for nearly two years, and HFOs are currently shipped to end-users around the world, including countries in Latin America. UNDP also indicated that multinational systems houses that are supplying the region have developed suitable HFO-based formulations for different applications, and HFO samples are being shipped to systems houses in Brazil, Colombia and Mexico. All these countries are committed to eliminating the use of HCFC-141b within the same period, and formulations to initiate field testing should be ready within the time scope of the project. It was also noted that implementation of the PU foam project will begin in 2018, providing additional time for the technology to become available in the local market.

Incremental costs

37. Upon rationalization of costs in line with preceding approvals (i.e., equipment to measure thermal conductivity at systems houses at US $26,500, and reduction of testing, training and technical assistance costs by including all enterprises in the group projects instead of assisting them individually), the final level of costs agreed to phase out 127.34 mt (14.01 ODP tonnes) was US $1,326,420, as shown in Table 10. However, all the remaining consumption of HCFC-141b eligible for funding will be deducted from the starting point.

Table 10. Agreed costs for the PU foam sector project

Project	Consumption (mt)	ICC	IOC	Total cost (US $)	CE (US $/kg)	Funds request (US $)
Euroquim	66.29	82,260	454,236	536,496	8.09	536,496
Sinthesis	61.06	234,190	488,480	722,670	11.84	669,340
Total	**127.34**	**316,450**	**942,716**	**1,259,166**	**9.47**	**1,205,836**
PMU						120,584
Grand total						**1,326,420**

Technical assistance for RAC manufacturing sector

38. While the Secretariat supports this activity, it was noted that no HCFC reductions were associated with the project. A possible option was to integrate it within the activities for the refrigeration servicing sector at US $4.80 per kg, given the type of the assistance proposed (i.e., workshops, test cases and technical documentation), the characteristics of the sector addressed (73 per cent of the consumption by very small enterprises and artisanal endeavours that most likely also provide servicing), and the fact that the majority of the HCFC is consumed by the clients (75 per cent of the equipment capacity is charged by the end-user). However, upon discussion it was agreed that the reductions should be associated with the HCFC-22 consumed by these enterprises in-factory and at the installation location. Accordingly, 3.21 ODP tonnes will be associated to this technical assistance.

Refrigeration servicing sector

39. Given the funds being requested for activities in the refrigeration servicing sector (US $1,722,144), it was agreed that the following specific outputs will be achieved before 2020:

(a) *Enhanced control of trade of HCFC-based substances and equipment:* Regular maintenance of the software on ODS import licensing and quota system; establishment of a ban on imports of RAC equipment running on HCFCs by 1 January 2020, and a ban on

new installations of RAC equipment running on HCFCs by 1 January 2020; inspection of suspect imports carried out as needed; planning and stock-taking customs meetings; training of 300 customs officers and 200 Government officers;

(b) *Training of technicians*: Formal agreements with the training centres to include permanently a "Good Practices Module" within the RAC technicians training programme; training of 60 RAC trainers and 2,000 RAC technicians; certification of 2,000 technicians; distribution of 1,800 good practices kits, 2,500 issues of the "Code of Good Practices in Refrigeration" and 750 issues of the "Training Manual on Good Practices - HCFCs"; and development of 240 posters and 1,250 technical cards;

(c) *HCFC conservation programmes:* Signing of 100 contracts with beneficiary institutions of the conservation programme; conservation programmes implemented in 100 refrigeration or air-conditioning installations; continued technical assistance and follow-up; and implementation of four seminars for the presentation and promotion of conservation programme benefits and results; and

(d) *Demonstration for promotion of low-GWP energy efficient technologies:* Drafting and approval of regulations for the use of HCs as refrigerants including transport, storage, distribution, installation, maintenance and use; issuance of safety and quality standards for HCs used as refrigerants; installation of approximately 500 HC-based AC equipment in key offices of selected ministries; technical comparison of safety and energy-efficiency records between other type of equipment and HC-based equipment in the same ministries; implementation of two promotion seminars, one for high-level government officers and one for the private sector.

Agreed cost of stage II of the HPMP

40. The agreed overall cost of stage II of the HPMP for Venezuela amounts to US $3,293,564 (excluding agency support cost), with an associated phase-out of 544.53 mt (36.95 ODP tonnes) of HCFCs, with an overall cost-effectiveness of US $6.05/kg. In addition, 249.64 mt (27.46 ODP tonnes) of HCFC-141b will be deducted from the remaining eligible consumption, achieving a total reduction of 794.17 mt (64.41 ODP tonnes) at a cost US $4.15/kg, as shown in Table 11. With approval of stage II, the Government commits to phase-out 42 per cent of the HCFC consumption baseline by 2020.

Table 11. Agreed cost for stage II of the HPMP for Venezuela (Bolivarian Republic of)

Sector	Application	Substance	mt	ODP tonnes	CE	Funds requested (US $)
PU foam	Investment project	HCFC-141b	127.34	14.01	9.47	1,205,836
	PMU					120,584
Subtotal PU foam sector			**127.34**	**14.01**	**10.42**	**1,326,420**
RAC manufacturing sector	Technical assistance	HCFC-22	58.41	3.21	4.19	245,000
Subtotal RAC manufacturing sector			**58.41**	**3.21**	**4.19**	**245,000**
RAC servicing sector	Technical assistance for sustained reduction of HCFC use	HCFC-22	358.78	19.73	4.80	1,327,144
	Demonstration project for promotion of low GWP energy efficient-technologies	HCFC-22				200,000
	Technical assistance for enhanced control of trade of HCFC-based substances and equipment	HCFC-22				45,000
	Implementation and monitoring activities	HCFC-22				150,000

Sector	Application	Substance	mt	ODP tonnes	CE	Funds requested (US $)
Subtotal RAC servicing sector			**358.78**	**19.73**	**4.80**	**1,722,144**
Total stage II funded			**544.53**	**36.95**	**6.05**	**3,293,564**
Additional unfunded reductions of HCFC-141b PU foam sector		HCFC-141b	249.64	27.46		-
Total stage II			**794.17**	**64.41**	**4.15**	**3,293,564**

Impact on the climate

41. The conversion of the remaining PU foam manufacturing enterprises in Venezuela (Bolivarian Republic of) would avoid the emission into the atmosphere of some 90.9 thousand tonnes of CO_2 equivalent per year, as shown in Table 12.

Table 12. Impact on the climate PU foam projects

Substance	GWP	Tonnes/year	CO_2-eq (tonnes/year)
Before conversion			
HCFC-141b	725	127.34	92,321.50
After conversion			
HFO	~20	71.02	1,420.31
Impact			**(90,901.19)**

42. In addition, the proposed technical assistance activities in the HPMP for the servicing sector, which include training and assistance to reduce leakage rates and to facilitate the adoption of low-GWP alternatives in Venezuela (Bolivarian Republic of), would also reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogram of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO_2 equivalent tonnes.

Co-financing

43. Based on the project as agreed, the cost of the foam sector was estimated at US $1,379,750, of which US $1,326,420 was requested from the Multilateral Fund, with the difference of US $53,330 provided by the beneficiary enterprises. In addition, the Government will provide co-financing in kind for the implementation of activities in the refrigeration servicing sector.

2016-2018 business plan of the Multilateral Fund

44. UNIDO and UNDP are requesting US $2,404,739 (including support cost) for the implementation of stage II of the HPMP (2016 2018). The total funding allocated for stage II in the 2016-2018 business plans for UNIDO and UNDP is US $5,148,137. The difference is due to a smaller project in the PU foam sector given the significant decrease in consumption of HCFC-141b in the country.

Draft Agreement

45. A draft Agreement between the Government of Venezuela (Bolivarian Republic of) and the Executive Committee for the phase-out of HCFCs in stage II of the HPMP is contained in Annex I to the present document.

RECOMMENDATION

46. The Executive Committee may wish to consider:

(a) Approving, in principle, stage II of the HCFC phase-out management plan (HPMP) for Venezuela (Bolivarian Republic of) for the period 2016 to 2020 to reduce HCFC consumption by 42 per cent of the baseline, in the amount of US $3,524,113,

consisting of US $1,967,144, plus agency support costs of US $137,700 for UNIDO and US $1,326,420 plus agency support costs of US $92,849 for UNDP;

(b) Noting the commitment of the Government of Venezuela (Bolivarian Republic of) to:

(i) Reduce HCFC consumption by 42 per cent by 2020;

(ii) Issue a ban on imports, exports and use of HCFC-141b pure or contained in pre-blended polyols by 1 January 2020; and

(iii) Issue a ban on import of refrigeration and air-conditioning (RAC) equipment operated with HCFCs and a ban on manufacturing and new installations of RAC equipment operating with HCFCs by 1 January 2020;

(c) Deducting 64.41 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;

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

(e) Approving the first tranche of stage II of the HPMP for Venezuela (Bolivarian Republic of), and the corresponding tranche implementation plans, in the amount of US $723,769, consisting of US $600,000, plus agency support costs of US $42,000 for UNIDO, and US $76,420, plus agency support costs of US $5,349 for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF VENEZUELA (BOLIVARIAN REPUBLIC OF) AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN

1. This Agreement represents the understanding of the Government of Venezuela (Bolivarian Republic of) (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 120.03 ODP tonnes by 1 January 2020 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.

5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless 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, 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.

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. This monitoring will also be subject to independent verification as described in paragraph 4 above.

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; and

(iv) Provision of funding for programmes or 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;

(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) Should the Country decide during implementation of the Agreement to introduce an alternative technology other than that proposed in the Plan, this would require approval by the Executive Committee as part of a Tranche Implementation Plan or the revision of the approved plan. Any submission of such a request for change in technology would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable. The Country agrees that potential savings in incremental costs related to the change of technology would decrease the overall funding level under this Agreement accordingly;

(d) Any enterprise to be converted to non-HCFC technology included in the Plan and that would be found to be ineligible under the guidelines of the Multilateral Fund (i.e., due to foreign ownership or establishment post the 21 September 2007 cut-off date), will not receive assistance. This information would be reported to the Executive Committee as part of the Tranche Implementation Plan; and

(e) 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.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-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 the relevant bilateral and/or implementing agencies will take into consideration decision 72/41 during the implementation of the Plan.

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. UNIDO has agreed to be the lead implementing agency (the "Lead IA") and UNDP 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). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and Cooperating IA will reach consensus on the arrangements regarding inter-agency planning including regular co-ordination meetings, reporting and responsibilities under this Agreement in order to facilitate a co-ordinated implementation of the Plan. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IAs with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

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 kilogram 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 not 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 decision 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, and 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.

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.

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.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	161.63
HCFC-123	C	I	0.07
HCFC-124	C	I	0.00
HCFC-141b	C	I	39.56
HCFC-142b	C	I	5.68
Sub-total			206.94
HCFC-141b contained in imported pre-blended polyols	C	I	1.91
Total	C	I	208.86

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	186.25	186.25	186.25	186.25	134.55	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	186.25	186.25	186.25	186.25	120.03	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	600,000	575,000	596,000	0	196,144	1,967,144
2.2	Support costs for Lead IA (US $)	42,000	40,250	41,720	0	13,730	137,700
2.3	Cooperating IA (UNDP) agreed funding (US $)	76,420	200,000	200,000	800,000	50,000	1,326,420
2.4	Support costs for Cooperating IA (US $)	5,349	14,000	14,000	56,000	3,500	92,849
3.1	Total agreed funding (US $)	676,420	775,000	796,000	800,000	246,144	3,293,564
3.2	Total support costs (US $)	47,349	54,250	55,720	56,000	17,230	230,549
3.3	Total agreed costs (US $)	723,769	829,250	851,720	856,000	263,374	3,524,113
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						22.94
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						23.16
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						115.53
4.2.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)						0.00
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)						0.07
4.3.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)						0.00
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)						39.56
4.4.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)						0.00
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)						0.00
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)						5.68
4.6.1	Total phase-out of HCFC-141b contained in imported pre-blended polyols agreed to be achieved under this Agreement (ODP tonnes)						1.91
4.6.2	Phase-out of HCFC-141b contained in imported pre-blended polyols to be achieved in previously approved projects (ODP tonnes)						0.00
4.6.3	Remaining eligible consumption for HCFC-141b contained in imported pre-blended polyols (ODP tonnes)						0.00

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the last 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 calendar year, regarding the progress since the year prior to 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 ODS phase-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. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information on activities in the current year;

(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 until and including the year of the planned submission of the next tranche request, highlighting 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 cover the years specified in sub-paragraph 5(d) of the Agreement. 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. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), the Tranche Implementation Plan and any changes to the overall plan, and will cover the same time periods and activities; 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 more than one stage 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 in a particular year, the lower HCFC consumption target will be used as reference for compliance with the HPMP Agreements and for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The monitoring activities will be carried out within the HPMP Implementation, Monitoring and Control project, and will include the implementation of all the projects within the HPMP; regular monitoring of the project implementation and results; production of periodic reports on project results in order to facilitate corrective actions; production of timely project progress reports to the Executive Committee; and regular monitoring of market developments and trends at the national and international levels.

2. Specific responsibilities of different stakeholders are detailed below:

National Ozone Office:

- General and day-to-day coordination of the project.
- Establishment of strategic lines.
- Implementation of the technical, institutional, social and legal components of the HPMP.
- Close follow up of implementation of all the components of the HPMP.
- Main channel of communication with key stakeholders and implementing agencies.

Strategic partners:

- The Ministry of Popular Power for Industry and Commerce (MPPIC), as the mother organization where Fondoin is located, but also as the main official source of information for the private industry sector, as well as possible channel for some actions.
- The Ministry of Popular Power for Eco-socialism and Waters (MPPEW), which manages the direct liaison with the Montreal Protocol regime, the reporting obligations under the Montreal Protocol, the ODS import licensing system, monitoring and enforcement of compliance with Montreal Protocol related obligations at the national level through the 23 state representations of MPPEW (one in each state).
- The Ministry of Popular Power for Productive Economy (MPPEP), through Customs (SENIAT), for the verification of the ODS Import Quota System.
- The Ministry of Popular Power for Foreign Affairs (MPPRE), and the Ministry of Popular Power for Education (MPPE) for coordination of activities related to their areas of responsibility, through periodic and regular meetings.
- The academic sector through the different organizations involved in the training programmes, in particular the National Institution of Socialist Education (INCES).
- The Chamber of Commerce, the Chamber of Industry, the ODS producer, the main ODS importers, and a representative from the refrigeration servicing workshops for coordination of related activities.
- UNIDO as lead implementing agency and UNDP as cooperating agency.
- The mass communication media as the main channel for general information programmes.

Implementation and monitoring unit

- Day-to-day implementation of all project activities within the HPMP, including detailed design of the activities, engagement of stakeholders, local contracting of goods and services.
- Design, organization and implementation (on a quarterly basis) of project monitoring activities, including design of data collection and analysis instruments.
- Analysis and report of monitoring results on a quarterly basis, including design and implementation of corrective measures and / or technical assistance activities, and organization of the corresponding monitoring review meetings with the National Ozone Office.

- Preparation of annual progress reports for internal use, HPMP Annual Implementation Report and HPMP Annual Implementation Plan for the Executive Committee, as per the formats indicated in Appendix 4-A. It will also include the preparation of any other reports that may prove necessary for the proper functioning of the HPMP project.

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. The reporting requirements include the reporting about activities undertaken by the Cooperating IAs;

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

(g) Carrying out required supervision missions;

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

(i) 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, the allocation of the reductions to the different budget items and to the funding of the Lead IA and each Cooperating IA;

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

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

(l) Reaching consensus with the Cooperating IA on the any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan.

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; and

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

(d) Reaching consensus with the Lead IA on the any planning, coordination 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 $102.26 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. 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 related 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.