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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Sixty-second Meeting  
Montreal, 29 November - 3 December 2010

**PROJECT PROPOSAL: COLOMBIA**

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

Phase-out

- HCFC phase-out management plan (stage I, first tranche) UNEP/UNDP

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**

**Colombia**

(I) PROJECT TITLE	AGENCY
HCFC phase-out management plan (stage I)	UNDP (lead), UNEP

<b>(II) LATEST ARTICLE 7 DATA</b>		Year: 2009		209.7 (ODP tonnes)					
<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>						<b>Year: 2009</b>			
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector
				Manufacturing	Servicing				
HCFC-123			2.1						2.1
HCFC-124					0.1				0.1
HCFC-141b	0.1	125.1			6.6	0.6			132.4
HCFC-142b					0.4				0.4
HCFC-22	0.0	7.7		6.7	60.3				74.7

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline (estimate):	223.4	Starting point for sustained aggregate reductions:	223.4
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	56.0	Remaining:	144.4

<b>(V) BUSINESS PLAN</b>		2010	2011	2012	2013	2014	Total
Japan	ODS phase-out (ODP tonnes)	0.0	1.9	2.6	0.1	0.1	4.7
	Funding (US \$)	0	162,539	222,720	6,016	6,016	397,291
UNDP	ODS phase-out (ODP tonnes)	56.0	0.0	0.0	0.0		56.0
	Funding (US \$)	6,043,000	0	0	0	0	6,043,000

<b>(VI) PROJECT DATA</b>			2010	2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	n/a	223.4	223.4	201.0	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	223.4	223.4	201.0	
Project Costs requested in principle(US\$)	UNDP	Project costs	6,021,483*	0	550,000	0	150,000		6,721,483
		Support costs	451,611*	0	41,250	0	11,250		504,111
	UNEP	Project costs	50,000	0	50,000	0	0		100,000
		Support costs	6,500	0	6,500	0	0		13,000
Total project costs requested in principle (US \$)			6,071,483	0	600,000	0	150,000	0	6,821,483
Total support costs requested in principle (US \$)			458,111	0	47,750	0	11,250	0	517,111
Total funds requested in principle (US \$)			6,529,594	0	647,750	0	161,250	0	7,338,594

\* US \$5,621,483 and agency support costs of US \$421,611 for UNDP was approved at the 60th Meeting for the phase-out of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigerator subsector.

<b>(VII) Request for funding for the first tranche (2010)</b>			
Agency	Funds requested (US \$)	Support costs (US \$)	ODS phase-out (ODP tonnes)
UNDP	400,000	30,000	
UNEP	50,000	6,500	

<b>Funding request:</b>	Approval of funding for the first tranche (2010) as indicated above
<b>Secretariat's recommendation:</b>	Individual consideration

## PROJECT DESCRIPTION

1. On behalf of the Government of Colombia, UNDP as the lead implementing agency, has submitted to the 62<sup>nd</sup> Meeting of the Executive Committee an HCFC phase-out management plan (HPMP) (stage I) at a total cost of US \$5,602,056 plus agency support costs of US \$420,154.22 for UNDP, and US \$250,000.00 plus agency support costs of US \$32,500.00 for UNEP, as originally submitted. The Government of Colombia is requesting at the 62<sup>nd</sup> Meeting approval of US \$1,544,529 and agency support costs of US \$115,840 for UNDP and US \$130,000 and agency support costs of US \$16,900 for UNEP for the implementation of the annual implementation plan for 2010-2011 of the HPMP.

2. The Executive Committee approved US \$5,621,483 plus agency support costs of US \$421,611 for UNDP at the 60<sup>th</sup> Meeting for the phase-out of 56.02 ODP tonnes (598.6 metric tonnes) of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigeration subsector by four enterprises (decision 60/30).

### ODS legislation

3. Colombia currently regulates imports and exports of HCFCs through an “environmental license” issued by the Ministry of Environment, Housing and Territorial Development which is compulsory for any importer or exporter of ODS. The purpose of the license is to ensure appropriate use of the ODS. Colombia does not have an HCFC quota system for imports. During HPMP preparation the Government identified the need to issue a National Norm by the end of April 2011 to establish the net import percentages to be allocated to each importer according to the HCFC market situation and expected future demand. The reduction in imports resulting from these quotas will depend on the projects to phase-out HCFCs that will be approved by the Executive Committee, taking into account the freeze and reduction commitments of 2013 and 2015.

### HCFC consumption and sectoral distribution

4. Colombia has no HCFC production and there have been no exports of HCFCs since 2005 (except for some HCFC-141b in pre-blended polyols exported to other Article 5 countries. Table 1 shows the 2004-2009 level of HCFC consumption in Colombia under Article 7 of the Montreal Protocol.

**Table 1: Consumption of HCFCs in Colombia (Article 7 data)**

HCFC	2004	2005	2006	2007	2008	2009
<b>Metric tonnes</b>						
HCFC-22	914.9	1,028.3	1,147.2	855.2	1,221.2	1,359.0
HCFC-141b	593.2	856.8	871.7	1,431.6	1,250.4	1,203.5
HCFC-123	21.2	63.9	77.9	77.4	73.7	106.4
HCFC-142b	119.2			1.0	0.9	5.4
HCFC-124				2.3	0.1	2.9
Total (metric tonnes)	1,648.4	1,949.0	2,096.8	2,367.5	2,546.3	2,677.2
<b>ODP tonnes</b>						
HCFC-22	50.3	56.6	63.1	47.0	67.2	74.7
HCFC-141b	65.2	94.2	95.9	157.5	137.5	132.4
HCFC-123	0.4	1.3	1.6	1.5	1.5	2.1
HCFC-142b	7.7	-	-	0.1	0.1	0.4
HCFC-124	-	-	-	0.1	0.0	0.1
Total (ODP tonnes)	123.7	152.1	160.5	206.2	206.2	209.7

5. HCFC-141b used in the foam sector accounts for the majority of the HCFC consumption (in ODP tonnes) in the country followed by HCFC-22 mainly used in the refrigeration and air-conditioning

sector. Smaller amounts of HCFCs are also used in the solvent/aerosol sectors and as fire extinguishing agents. The sectoral distribution of HCFCs in Colombia (based on the 2009/2010 average consumption) is shown in Table 2 below.

**Table 2: Sectoral distribution of HCFCs in Colombia based on 2009/2010 average**

Sector/sub-sector'	HCFC	Tonnes	ODP tonnes	% of total (ODP tonnes)
<b>Foam sector</b>				
Domestic refrigeration	HCFC-141b	451.9	49.7	
	HCFC-22	211.3	11.6	
Commercial refrigeration	HCFC-141b	72.5	8.0	
Continuous panels	HCFC-141b	128.4	14.1	
Industrial refrigeration and construction	HCFC-141b	232.0	25.5	
Spray foam	HCFC-141b	21.8	2.4	
Integral skin	HCFC-141b	19.7	2.2	
Polyol formulation	HCFC-141b	313.8	34.5	
Total foam sector		1,451.4	148.0	66.3%
<b>Refrigeration/air conditioning</b>				
Cold rooms manufacture	HCFC-22	94.0	5.2	
Maintenance	HCFC-22	1,111.9	61.2	
	HCFC-123	27.3	0.6	
	HCFC-142b	5.7	0.4	
	HCFC-124	3.1	0.1	
Total refrigeration/air conditioning		1,242.0	67.3	30.1%
<b>Solvents and aerosols</b>				
Flushing	HCFC-141b	46.6	5.1	
Cleaning of electronic equipment	HCFC-141b	4.1	0.5	
Silicon coating process of needles	HCFC-141b	4.1	0.5	
Aerosols	HCFC-22	4.6	0.3	
Total solvents and aerosols		59.4	6.3	2.8%
<b>Fire extinguishing</b>				
Fire extinguishing	HCFC-123	86.3	1.7	
Total fire extinguishing		86.3	1.7	0.8%
<b>Total consumption</b>		<b>2,839.1</b>	<b>223.4</b>	<b>100.0%</b>

#### HCFC phase-out strategy

6. The Government of Colombia has designed a two-step strategy that aims to achieve an accelerated HCFC phase out. In stage I (2010-2015) HCFC consumption will be reduced by 60 per cent and in stage 2 (2015-2025) by 97.5 per cent with a service tail of 2.5 per cent for the refrigeration servicing sector in the period 2025 to 2030. In 2015 Colombia intends to review the progress of the implementation of this strategy to analyze the possibility of complete HCFC phase-out by 2020.

7. The HPMP proposes a systematic phase-out approach that prioritizes the phase-out of HCFCs with high ODP value and applications with global warming impact particularly those that use HCFC-141b and HCFC-22. In the short term, HCFC phase-out projects in the refrigeration manufacturing sector will be prepared where technical and economically viable alternatives with minimum impact on the climate are available. Growth in HCFC consumption in other sectors, such as HCFC-22 in the refrigeration servicing sector, will be controlled through awareness, technician programmes and recovery and recycling of refrigerants.

8. The specific phase-out targets proposed in the HPMP are summarized in Table 3 below.

**Table 3: HCFC phase-out targets proposed in the HPMP for Colombia**

<b>Stage I: 2011-2015</b>	<b>Stage II: 2015-2025</b>
<p>Phase-out of 60 per cent of total HCFC consumption by 2015</p> <p>HCFC-141b and HCFC-22 phase-out in the domestic refrigeration sub-sector</p> <p>HCFC-141b phase-out in the three largest producers of commercial refrigeration equipment and in the manufacture of continuous panels</p> <p>80 per cent reduction in HCFC-141b consumption for the industrial refrigeration and construction sectors and the remaining commercial refrigeration manufacturers.</p> <p>HCFC-141b and HCFC-22 phase-out in emissive uses (cleaning of electronic equipment, aerosols and silicon coating process for needles).</p> <p>HCFC-141b phase out used in flushing pipes</p> <p>40 per cent reduction in HCFC-22 consumption for the maintenance of the refrigeration and air conditioning equipment</p> <p>10 per cent reduction in HCFC-123 consumption in the fire extinguishing sector</p>	<p>Complete HCFC phase-out except for 2.5 per cent of total consumption in the refrigeration servicing sector in the period 2025-2030</p> <p>Imports of HCFC-141b and HCFC based blends for refrigeration and air conditioning will be banned from 1 January 2020</p> <p>Imports of all HCFC, except for the 2.5 per cent for the service tail, will be banned from 1 January 2025</p>

Total cost of the HPMP

9. The total costs associated with the stage I of the HPMP for Colombia have been estimated at US \$11,473,539. Of this amount, US \$5,621,483 was approved for the conversion from HCFC-141b in the domestic refrigeration sub-sector at the 60<sup>th</sup> Meeting. During stage I, the legal and institutional framework and the resources and capacity to implement the critical investment projects and activities to phase-out 146.2 ODP tonnes of HCFC will be further developed. HPMP activities and projects are organized within five programmes as shown in Table 4.

**Table 4: Summary of HCFC phase-out activities and estimated costs**

<b>Programme areas</b>	<b>ODP tonnes</b>	<b>Time frame</b>	<b>Funds (US\$)</b>
<b>HCFC phase-out in the foam sector</b>			
Conversion from HCFC-141b to hydrocarbons in the domestic refrigeration subsector*	61.3	2011 - 2013	5,621,483
Conversion from HCFC-141b to hydrocarbons in the upper consumption level of commercial refrigeration subsector	5.7	2011 - 2013	505,991
Terminal Conversion Programme for the Foam Sector	27.8	2013 - 2015	2,474,890
<b>Sub-total</b>	<b>94.8</b>		<b>8,602,364</b>
<b>HCFC phase-out in the refrigeration/air conditioning sector</b>			
Ancillary equipment for recovery/recycling (cylinders, scales, gauges), technician certification, end user awareness	11.0	2011 - 2015	900,000
Phase-out of HCFC-141b in flushing activities	5.1	2011 - 2013	209,860
<b>Sub-total</b>	<b>16.1</b>		<b>1,109,860</b>
<b>HCFC phase-out in emissive uses</b>			
Phase-out of HCFC-141b as a solvent in the manufacture of hypodermic needles.	0.5	2013 - 2015	33,141

<b>Programme areas</b>	<b>ODP tonnes</b>	<b>Time frame</b>	<b>Funds (US\$)</b>
Technical assistance for the phase out of HCFC-141b consumption as a cleaning agent in electronic equipment	0.5	2013 - 2015	32,892
Technical assistance for the phase out of HCFC-22 consumption in the aerosols sector.	0.3	2014 - 2015	36,654
Technical assistance for the reduction of HCFC-123 consumption in the fire extinguisher sector.	0.2		38,853
<b>Sub-total</b>	<b>1.5</b>		<b>141,540</b>
<b>Formulation/ implementation of policies to support the HCFC phase out</b>			
Technical assistance for strengthening the regulatory framework; enhanced control of trade in HCFC-based equipment; environmental education, dissemination and awareness-raising	22.7	2011 - 2015	700,966
<b>Implementation and monitoring</b>			
Implementation and monitoring activities	11.2	2011 - 2015	918,810
<b>TOTAL</b>	<b>146.2</b>		<b>11,473,539</b>

(\*) Funding approved at the 60<sup>th</sup> Meeting of the Executive Committee.

#### Implementation modalities

10. UNDP will be responsible for the implementation of the investment projects in the refrigeration manufacturing sector. UNEP, as the cooperating agency, together with UNDP will implement non-investment activities in the refrigeration servicing sector, emissive uses applications, technical and policy assistance, and implementation and monitoring.

### **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

#### **COMMENTS**

11. The Secretariat reviewed the HPMP for Colombia in the context of the guidelines for the preparation of HPMPs (decision 54/39), the project for the phase-out of 56.02 ODP tonnes (598.6 metric tonnes) of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigeration subsector approved by the Executive Committee at its 60<sup>th</sup> Meeting, the criteria for funding HCFC phase-out in the consumption sector agreed at the 60<sup>th</sup> Meeting (decision 60/44) and the adjusted 2010-2014 consolidated business plan as noted by the Executive Committee at its 61<sup>st</sup> Meeting.

#### HCFC consumption and use in Colombia

12. Based on the 2009 reported consumption under Article 7 of the Montreal Protocol (209.7 ODP tonnes) and the estimated 2010 consumption (237.0 ODP tonnes), the Government of Colombia has estimated its baseline for HCFC consumption at 223.4 ODP tonnes, which has also been selected as the starting point for aggregate reduction in HCFC consumption. The calculation of the baseline included consumption of 34.5 ODP tonnes of HCFC-141b in pre-blended polyols that were exported to other Article 5 countries. It is the understanding of the Government that in light of decision 61/47(d) no funding will be requested for the phase-out of the 34.5 ODP tonnes of HCFCs contained in exported pre-blended polyols since it is not eligible. However the baseline has been estimated at 223.4 ODP tonnes since decision 61/47(d) neither modifies the global reporting system for HCFC consumption nor the starting point for aggregate reductions in HCFC consumption.

Second-stage conversion projects

13. The HPMP for Colombia included detailed information on all the HCFC-consuming manufacturing enterprises in the country and the incremental costs for their conversion to non-HCFC technologies. The majority of the 26 enterprises that were converted from CFC to HCFC technology are still in operation.

HCFC accelerated phase-out and growth

14. The Government of Colombia is proposing the phase-out of 60 per cent of its HCFC consumption by 2015, an additional 25 per cent by 2020 with a 97.5 per cent reduction by 2025. However, the current policies of the Multilateral Fund are for funding activities that would allow Article 5 countries to meet their 2013 and 2015 phase-out targets; therefore, funding in addition to that required to meet the 2013 and 2015 control targets cannot be recommended for approval at this time. UNDP reported that the HPMP strategy is consistent with the low carbon development strategy being implemented in Colombia. The Government is committed to implementing the low carbon development strategy and to achieving significant HCFC phase out by 2015 in order to maximize ozone and climate benefits. Colombia intends to complement Multilateral Fund financing with the institutional capacity consolidated during the last few years and other resources available from national strategies and programmes. After further consultations with major stakeholders, the Government of Colombia re-designed its phase-out strategy, as shown in Table 5.

**Table 5: Revised HCFC phase-out targets proposed in the HPMP for Colombia**

Stage I: 2011-2015	Stage 2: 2015-2030
<p>Phase-out of 10 per cent of total HCFC consumption by 2015.</p> <p>Phase-out of HCFC-141b and HCFC-22 in the domestic refrigeration sub-sector; HCFC-141b and HCFC-22 in emissive uses (cleaning of electronic equipment, aerosols and silicon coating process for needles); and HCFC-141b used in flushing pipes.</p> <p>Certification of 2,000 technicians in good practices in refrigerants management.</p> <p>Strengthening ODS containment strategy on HCFC-22 through strengthening the current five reclaiming centres and creation of five refrigeration storage centres.</p> <p>Strengthening ODS regulations through quotas, ban on production and import of ODS-based domestic refrigeration equipment, proposal to control imports of HCFC-22 based equipment.</p> <p>Technical assistance to end-users for proper handling of HCFC-22 based equipment and disseminate the use of low GWP alternative technologies.</p> <p>Strengthening Customs through training of customs officers, providing HCFC-based identifiers</p> <p>Establishing an information system to support HPMP implementation, and frequent monitoring implementation of the activities by regions.</p>	<p>Imports of HCFC-141b will be banned from 1 January 2030.</p> <p>Imports of all HCFC, except for the 2.5 per cent for the service tail, will be banned from 1 January 2030.</p> <p>Specific activities to be defined in phase II of the HPMP.</p>

Additional phase-out activities

15. The HPMP has included funding requests for the following activities:

- (a) Phase-out activities in the refrigeration servicing (US \$1,109,860) and solvent sectors (US \$141,540), where 8.0 ODP tonnes of HCFC-141b (representing 2.6 per cent of the total consumption) is used as refrigeration circuit cleaning agent;
- (b) Formulation and implementation of policies to support the HCFC phase-out (US \$700,966); and
- (c) Project monitoring unit (US \$918,810) was estimated for activities to phase-out 60 per cent of the HCFC consumption. Considering that several of the activities proposed in the HPMP are not required to meet the 2013 freeze and the 2015 10 per cent reduction in the baseline consumption, the Secretariat requested that the cost of this activity should be adjusted accordingly.

16. The requirement for demonstrating the need for implementing activities in the servicing sector to meet the reduction steps in 2013 and 2015 was also noted (as stipulated in decision 60/44(f)(xv)). Addressing these issues, UNDP indicated that activities in the refrigeration and air conditioning servicing sector included in phase I of the HPMP will be critical to ensure compliance with the 2013 and 2015 control measures as they will contribute to reducing the stepped growing trend in HCFC-22 consumption, undermining the impact achieved through the implementation of the HCFC-141b phase-out project already approved. The additional support to the regulatory framework in place is a fundamental component to support the HCFC phase-out strategy. Furthermore, not addressing the refrigeration and air conditioning servicing sector at this point would result in a very effective structure that was instrumental in achieving orderly and sustained phase-out of the CFCs in that sector being dismantled by 2015. For example the infrastructure for refrigerants containment that was established for CFCs and also effectively working with HCFC-22 would lose momentum. It should also be noted that through the established infrastructure, 50 per cent of refrigeration technician population has been certified. Also, the additional work for adopting sound decisions on maintenance and conversion of end-users in the commercial and industrial subsectors would not be possible. The small amount of resources proposed for the servicing sector would ensure that the Ozone Unit can continue having the means to extend successful ongoing activities, and having the required influence with the refrigeration servicing companies and end-users to contain uncontrolled growth of HCFC 22, as well as avoid uncontrolled replacement of HCFC-22 by equipment with higher GWP refrigerants (as compared to HCFC-22) for some applications, until appropriate alternatives are available, thereby avoiding a negative effect on the climate. Considering that the HCFCs used in the refrigeration servicing and solvents sectors reach the atmosphere once they are emitted, technical assistance activities to address this consumption have also been included.

17. Subsequently, the Government of Colombia adjusted the additional phase-out activities in line with the revised phase-out strategy and took into account the issues during the project review, as follows:

- (a) HCFC phase-out activities in the refrigeration servicing sector (US \$463,299), including certification of refrigeration technicians, awareness activities for end-users, phase-out of HCFC-141b for flushing circuits and support for the recovery and recycling of HCFCs (phase-out of 11.2 ODP tonnes of HCFCs);
- (b) HCFC phase-out activities in emissive uses (US \$63,974), including HCFC-141b as a solvent in the manufacture of hypodermic needles and as a cleaning agent in electronic equipment and HCFC-consumption in the aerosols sector (phase-out of 1.7 ODP tonnes of HCFCs);



- (c) Formulation and implementation of policies to support the HCFC phase-out (US \$336,364), for strengthening the established regulatory framework for the elimination of HCFCs; enhanced control of trade in HCFC-based substances and equipment; and environmental education, dissemination and awareness-raising for the elimination of HCFCs (phase-out of 5.0 ODP tonnes of HCFCs); and
- (d) Project monitoring unit (US \$336,363, with an associated phase-out of 5.0 ODP tonnes of HCFCs).

### Impact on climate

18. Climate change is a priority in Colombia. The climate change initiative is linked with the National Energy Programme which is focused on the development of new energy-generation capacity and improvements in energy efficiency. The energy efficiency plan includes projects relevant to ODS phase-out (energy consumption of refrigeration and buildings, phase-out and destruction of ODSs, tax incentives for energy efficiency and ODS conversion programmes). Colombia's climate change goals are linked to action on the phase-out of substances with high global warming potential (GWP) values, including HCFCs.

19. The implementation of stage I of the HPMP in Colombia would avoid the emission into the atmosphere of some 690,350 tonnes of CO<sub>2</sub>-equivalent associated with the HCFC-141b foam conversion projects approved at the 60<sup>th</sup> Meeting and the HCFC-141b to be phased from emissive uses and in the servicing sector. Further reductions in CO<sub>2</sub> emissions could be achieved through the introduction of good refrigeration servicing practices resulting in lower amounts of refrigerant being released into the atmosphere during equipment operation and maintenance (Table 6).

**Table 6. Impact on the climate**

<b>Substance</b>	<b>GWP</b>	<b>Tonnes/year</b>	<b>CO<sub>2</sub>-eq (tonnes/year)</b>
<b>Before conversion</b>			
HCFC-141b	713	537.3	383,095
HCFC-22	1,780	178.6	317,908
Total		715.9	701,003
<b>After conversion</b>			
Cyclopentane	25	426.1	10,653
<b>Net impact</b>			(690,350)

### Co financing and total cost of the HPMP

20. In regard to co-financing opportunities that will be sought for mobilizing additional resources to maximize the environmental benefits from the HPMP for Colombia, UNDP indicated that the Government intends to develop its economy based on low carbon emission technologies and strategies. The proposed strategies will be financed from different sources, including national resources and economic instruments, such as tax exemptions. Participation in carbon markets (CDM and voluntary) is being promoted in areas such as ODS destruction. Furthermore the Ministry of Environment, Housing and Territorial Development aims to build a national proposal for the elimination of HCFCs under a national appropriate mitigation actions framework. As an example, UNDP indicated that a project with the Global Environment Facility (GEF) and the World Bank could help to replace old commercial refrigerators with new systems based on hydrocarbon refrigerant and solar energy technology. The manufacturers of commercial refrigerators will also co-finance the phase-out of HCFC-141b. Several national companies are already introducing HCFC-free and HFC-free technologies, with the support of the Ministry of Environment.

Adjusted 2010-2014 business plans

21. Table 6 shows the level of funding and amounts of HCFCs to be phased out according to the adjusted 2010-2014 business plan of the Multilateral Fund. The level of funding requested for the implementation of the Stage I of the HPMP of US \$7,338,594 (including support cost) is about the same as in the adjusted business plan (i.e., US \$7,105,933). It is to be noted that the Government of Canada is not participating in the implementation of the stage I of the HPMP, and UNEP will be implementing a component of the non-investment activities.

**Table 9. Adjusted 2010-2014 business plan of the Multilateral Fund**

Agency	2010	2011	2012	2013	2014	Total
<b>Funding (US\$)</b>						
Japan	-	162,539	222,720	6,016	6,016	397,291
Canada	-	226,000	-	-	-	226,000
UNDP	6,161,252	118,252	118,252	84,886	-	6,482,642
Total	6,161,252	506,791	340,972	90,901	6,016	7,105,933
<b>Phase-out (ODP tonnes)</b>						
Japan	-	1.9	2.6	0.1	0.1	4.7
Canada	-	-	-	-	-	-
UNDP	60.9	4.9	4.9	4.2	-	75.0
Total	60.9	6.8	7.6	4.3	0.1	79.7

Draft agreement

22. A draft agreement between the Government of Colombia and the Executive Committee for phase-out of consumption of HCFCs is contained in Annex I to the present document.

**RECOMMENDATION**

23. The HPMP for Colombia is submitted for individual consideration. The Executive Committee may wish to consider:

- (a) Noting that the Government of Colombia agreed at the 62<sup>nd</sup> Meeting to establish as its starting point for sustained aggregate reduction in HCFC consumption the consumption based on the average consumption forecast for 2009 and 2010 (223.4 ODP tonnes);
- (b) Approving in principle stage I of the HCFC phase-out management plan (HPMP) for Colombia, at the amount of US \$6,721,483 plus agency support costs of US \$ 504,111 for UNDP and US \$100,000 plus agency support costs of US \$13,000 for UNEP, noting that US \$5,621,483 plus agency support costs of US \$421,611 for UNDP was approved at the 60<sup>th</sup> Meeting for the phase-out of 56.02 ODP tonnes of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigerator subsector;
- (c) Approving the Agreement between the Government of Colombia and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;
- (d) Requesting the Secretariat, once the baseline data is known, to update Appendix 2-A to include the Agreement with the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting levels of maximum allowable consumption accordingly; and
- (e) Approving the first implementation plan for 2010-2011, and the first tranche of the HPMP for Colombia at the amount of US \$400,000 and agency support costs of

US \$30,000 for UNDP, and US \$50,000 and agency support costs of US \$6,500 for UNEP; and

- (f) Deducting 22.9 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption.

## Annex I

### **DRAFT AGREEMENT BETWEEN COLOMBIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUROCARBONS**

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”) prior to 1 January 2015 in compliance with Montreal Protocol schedules to a sustained level of 201.0 ODP tonnes representing the maximum consumption allowed for 2015 under the Montreal Protocol reduction 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 which exceeds the level defined in row 1.2 of Appendix 2-A (maximum allowable total consumption of Annex C, Group I substances) 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 which exceeds the level defined in rows 4.1.3, 4.2.3, 4.3.3, 4.4.3 and 4.5.3 (remaining eligible consumption).
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 (the “Targets and Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (the “Funding Approval Schedule”).
4. The Country will meet the consumption limits for each of the Substances as indicated in Appendix 2-A. It will also accept independent verification, to be commissioned by the relevant bilateral or implementing agency, of achievement of these consumption limits as described in sub-paragraph 5(b) of this Agreement.
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 60 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:
  - (a) That the Country has met the Targets for all relevant years. Relevant years are all years since the year in which the hydrochlorofluorocarbons phase-out management plan (HPMP) was approved. Exempt are years for which no obligation for reporting of country programme data exists at the date of the Executive Committee Meeting at which the funding request is being presented;
  - (b) That the meeting of these Targets has been independently verified, except if the Executive Committee decided that such verification would not be required;

- (c) That the Country had submitted tranche implementation reports in the form of Appendix 4-A (the “Format of Tranche Implementation Report and Plan”) 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 and received approval from the Executive Committee for a tranche implementation plan in the form of Appendix 4-A (the “Format of Tranche Implementation Reports and Plans”) 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 (the “Monitoring Institutions and Roles”) will monitor and report on Implementation of the activities in the previous tranche implementation plan in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in sub-paragraph 5(b).

7. The Executive Committee agrees that the Country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the smoothest phase-down and phase-out of the Substances specified in Appendix 1-A. Reallocations categorized as major changes must be documented in advance in a Tranche Implementation Plan and approved by the Executive Committee as described in sub-paragraph 5(d). Major changes would relate to reallocations affecting in total 30 per cent or more of the funding of the last approved tranche, issues potentially concerning the rules and policies of the Multilateral Fund, or changes which would modify any clause of this Agreement. 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 Tranche Implementation Report. Any remaining funds will be returned to the Multilateral Fund upon closure of the last tranche of the plan.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, 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 bilateral and implementing agencies involved will take full account of the requirements of decisions 41/100 and 49/6 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. UNDP has agreed to be the lead implementing agency (the “Lead IA”) and UNEP has agreed to be cooperating implementing agency/agencies (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 any of the IA taking part in this Agreement.

10. The Lead IA will be responsible for carrying out the activities of the plan as detailed in the first submission of the HPMP with the changes approved as part of the subsequent tranche submissions, 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 have entered into a formal agreement regarding planning, reporting and responsibilities under this Agreement to facilitate a co-ordinated implementation of the Plan, including regular co-ordination meetings. 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.

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 amounts set out in Appendix 7-A in respect of each ODP tonne 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 these decisions are taken, this specific case will not be an impediment for future tranches as per paragraph 5.

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, 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 information necessary to verify compliance with this Agreement.

14. The completion of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption has been specified in Appendix 2-A. Should at that time activities be still outstanding which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per Appendix 4-A (a), (b), (d) and (e) continue until the time of the completion if not specified by the Executive Committee otherwise.

15. All of the agreements 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	78.20
HCFC-141b	C	I	142.44
HCFC-123	C	I	2.27
HCFC-142-b	C	I	0.37
HCFC-124	C	I	0.07

### APPENDIX 2-A: THE TARGETS, AND FUNDING

		2010	2011	2012	2013	2014	2015	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)							n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	n/a	223.4	223.4	201.0	n/a
2.1	Lead IA [UNDP] agreed funding(US \$)	6,021,483 *		550,000		150,000		6,721,483
2.2	Support costs for Lead IA(US \$)	451,611 *		41,250	-	11,250	-	504,111
2.3	Cooperating IA [UNEP] agreed funding (US \$)	50,000		50,000				100,000
2.4	Support costs for Cooperating IA (US \$)	6,500	-	6,500		-	-	13,000
3.1	Total agreed funding (US \$)	6,071,483	-	600,000	-	150,000	-	6,821,483
3.2	Total support cost (US \$)	458,111	-	47,750	-	11,250	-	517,111
3.3	Total agreed costs (US \$)	6,529,594	-	647,750	-	161,250	-	7,338,594
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)							15.17
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)							9.82
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)							53.21
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)							7.72
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)							46.20
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)							88.52
4.3.1	Total phase-out of HCFC-123 agreed to be achieved under this agreement (ODP tonnes)							0
4.3.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)							0
4.3.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)							2.27
4.4.1	Total phase-out of HCFC-142b agreed to be achieved under this agreement (ODP tonnes)							0
4.4.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)							0
4.4.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)							0.37
4.5.1	Total phase-out of HCFC-124 agreed to be achieved under this agreement (ODP tonnes)							0
4.5.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)							0
4.5.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)							0.07

\* US \$5,621,483 and agency support costs of US \$421,611 for UNDP was approved at the 60th Meeting for the phase-out of HCFCs used in the production of polyurethane rigid insulation foam in the domestic refrigerator subsector.

### **APPENDIX 3-A: FUNDING APPROVAL SCHEDULE**

1. Funding for the future tranches will be considered for approval not earlier than the first 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 Plan will consist of five parts:
  - (a) A narrative report regarding the progress in the previous tranche, reflecting on 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 further highlight successes, experiences and challenges related to the different activities included in the Plan, reflecting on changes in the circumstances in the country, and providing other relevant information. The report should also include information about and justification for any changes vis-à-vis the previously submitted tranche plan, 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 about activities in the current year;
  - (b) A verification report of the HPMP results and the consumption of the substances mentioned in Appendix 1-A, 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 in the next tranche, highlighting their interdependence, and taking into account experiences made and progress achieved in the implementation of earlier tranches. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall plan foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain any revisions to the overall plan which were found to be necessary;
  - (d) A set of quantitative information for the report and plan, submitted into a database. As per the relevant decisions of the Executive Committee in respect to the format required, the data should be submitted online. 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), and will cover the same time periods and activities; it will also capture the quantitative information regarding any necessary revisions of the overall plan as per sub-paragraph 1(c) above. While the quantitative information is required only for previous and future years, the format will include the option to submit in addition information regarding the current year if desired by the country and lead implementing agency; and
  - (e) An Executive Summary of about five paragraphs, summarizing the information of above sub-paragraphs 1(a) to 1(d).



## **APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. The Ministry of Environment, Housing and Territorial Development (MAVDT – Ministerio de Ambiente Vivienda y Desarrollo Territorial) is the entity responsible for coordinating and managing all the Montreal Protocol programmes, projects and activities, supported by the National Ozone Unit (UTO--Unidad Tecnica de Ozono), which currently is part of this Ministry's Directorate of Sustainable Sectorial Development.
2. The UTO will maintain the control and administrative management of the entire HPMP Phase I, as well as the monitoring of the projects implemented jointly with other participating entities. The regional environmental authorities, called Regional Environmental Corporations (CARs) are fundamental implementing partners, who will work in coordination with the regional level UTO consultants.
3. Among the participating entities are the customs office (DIAN), the Ministries of Commerce, Social Protection and Foreign Relations, industrial and merchants' associations (ANDI, Fenalco, Acaire), businesses using HCFCs and representatives of civil society.
4. All the monitoring activities within the HPMP Phase I will be coordinated and managed through its component 5: "Implementation and Monitoring Programme". The actual monitoring activities will be delegated to the CARs (Autonomous Regional Corporations of the Ministry of Environment), which are located in 5 different regions of the country: Bogotá, Barranquilla, Cali, Medellín and Pereira, which will report to the UTO, in charge of the overall monitoring of the plan.
5. The CARs will coordinate the monitoring activities with the corresponding public and private organizations according to their respective roles within the HPMP, which are described in component 5.
6. The DIAN (Customs Department) will have a particularly prominent role in the monitoring arrangements because of its mandate to monitor ODS imports, whose records will be used as a crosschecking reference in all the monitoring programmes for the different projects within the HPMP. This organization will also undertake the challenging task of monitoring and controlling illegal ODS imports in to country.
7. The certification organizations that operate in the country at the moment (Icontec and the Superintendence of Industry and Commerce) will also have a major participation in the design and implementation of monitoring activities.
8. The monitoring programme will be based on three axis: 1) Well designed forms for data collection, evaluation and reporting, 2) Regular programme of monitoring visits, and 3) Appropriate cross-checking of information from different sources.

### Verification and Reporting

9. The outcome of the different elements of the HPMP will be verified independently by an external organization. The Government and the independent organization will jointly design the verification procedures as part of the design phase of the monitoring programme.

Institution for conducting the verification

10. The Government of Colombia wishes to designate UNDP as the independent organization to carry out the verification of the HPMP results and the monitoring programme.

Frequency of verification and reporting

11. The monitoring reports will be produced each year, previous to the first meeting of the Excom. These reports will produce the input for the yearly implementation reports required by the Excom.

**APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY**

1. The Lead IA will be responsible for a range of activities. These can be specified in the project document further, but include 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 phase-out plan;
- (b) Assisting the Country in preparation of the Tranche Implementation Plans and subsequent reports as per Appendix 4-A;
- (c) Providing verification to the Executive Committee that the Targets have been met and associated annual 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 tranches and the overall Plan as specified in Appendix 4-A as well as project completion reports for submission to the Executive Committee. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;
- (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) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;
- (j) 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 co-ordinating implementing agencies, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;
- (k) Ensuring that disbursements made to the Country are based on the use of the indicators; and

- (l) Providing assistance with policy, management and technical support when required.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent organization 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 COOPERATING IMPLEMENTING AGENCY**

1. The Cooperating IA will be responsible for a range of activities. These activities can be specified in the respective project document further, but include at least the following:

- (a) Providing policy development assistance 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.

#### **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 \$2,500 per metric tonne 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.

#### **APPENDIX 8-A: SECTOR SPECIFIC ARRANGEMENTS**