UNITED NATIONS **EP**

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/65/29
20 October 2011

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-fifth Meeting
Bali, Indonesia, 13-17 November 2011

PROJECT PROPOSAL: CUBA

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

Phase-out

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

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Cuba

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNDP (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2010	22.1 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2010
Chemical	Aerosol	Foam	Fire	Refrigeration		Solvent	Process	Lab	Total sector
				Manufacturing	Servicing				
HCFC123									
HCFC124					0.0				0.0
HCFC141b				4.3					4.3
HCFC142b				0.0					0.0
HCFC22				1.5	16.3				17.8

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline(estimate):	16.9	Starting point for sustained aggregate reductions:	30.2
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	15.32

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNDP	ODS phase-out (ODP tonnes)	3.0	0.0	1.2	0.0	0.0	1.2	0.0	0.0	0.4	0.0	5.8
	Funding (US $)	341,357	0	90,300	0	0	90,300	0	0	30,100	0	552,057

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	16.9	16.9	15.2	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	16.9	16.9	15.2	
Project Costs requested in principle(US$)	UNDP	Project costs	1,000,000	0	345,527	0	18,000	1,363,527
		Support costs	75,000	0	25,915	0	1,350	102,265
Total project costs requested in principle (US $)			1,000,000	0	345,527	0	18,000	1,363,527
Total support costs requested in principle (US $)			75,000	0	25,915	0	1,350	102,265
Total funds requested in principle (US $)			1,075,000		371,442	0	19,350	1,465,792

(VII) Request for funding for the first tranche (2011)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNDP	1,000,000	75,000

Funding request:	Approval of funding for the first tranche (2011) as indicated above
Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Cuba UNDP, as the designated implementing agency, has submitted to the 65th meeting of the Executive Committee stage I of the HCFC phase-out management plan (HPMP) at a total cost of US $2,217,533 plus agency support costs of US $166,315, as originally submitted, to implement activities that will enable the country to comply with the Montreal Protocol control targets up to the 35 per cent reduction in HCFC consumption by 2020.

2. The first tranche for stage I being requested at this meeting amounts to US $829,000 plus agency support costs of US $62,175 for UNDP, as originally submitted.

ODS policy and regulatory framework

3. The Government of Cuba has ratified all the amendments to the Montreal Protocol.

4. The Ozone Technical Office (OTOZ) under the Ministry of Science, Technology and Environment (CITMA) is the designated focal point for the Montreal Protocol and the Vienna Convention. The Government of Cuba established the ozone-depleting-substances (ODS) import/export licensing system, including permits and quotas, through the CITMA Resolution 65 of 1999. HCFCs are included in the licensing system. CITMA-OTOZ is responsible for establishing and allocating the country's annual import quotas per substance. The quota system for HCFCs will start to be enforced from 1 January 2013. The ban on manufacturing and import of CFC-based equipment will be extended to HCFCs when the manufacturing sectors are converted to alternative technologies.

HCFC consumption and sector distribution

5. HCFC-22 is the main HCFC consumed in the country. It is used for servicing refrigeration and air-conditioning (RAC) equipment as well as manufacturing of RAC systems. HCFC-141b imported in bulk is used for flushing refrigeration equipment during servicing. Small amounts of HCFC-123, HCFC-142b and HCFC-124 are also used in servicing. Based on the consumption data reported under Article 7 of the Montreal Protocol for 2009 and 2010, the HCFC baseline for compliance has been estimated at 283.62 metric tonnes (mt) (16.88 ODP tonnes).

6. HCFC consumption presents a decreasing trend between 2006 and 2009 as a result of an economic crisis. However, it shows a recovery in 2010 to the highest consumption level recorded. The Government of Cuba expects further growth in the coming years based on economic recovery and historic levels of CFC consumption. Table 1 presents the HCFC consumption in Cuba.

Table 1. HCFC consumption in Cuba reported under Article 7 of the Montreal Protocol

Substance	2005	2006	2007	2008	2009	2010	Baseline
Metric tonnes (mt)							
HCFC-22	293.64	286.99	235.65	230.21	195.12	322.97	259.05
HCFC-141b	0.00	0.47	13.26	0.00	8.57	38.65	23.61
HCFC-123	0.14	0.00	0.63	0.54	0.00	0.00	0.00
HCFC-142b	0.00	0.00	0.00	9.19	0.22	0.50	0.36
HCFC-124	0.00	0.00	0.00	0.34	0.37	0.83	0.60
Total Article 7 data (mt)	**293.78**	**287.46**	**249.54**	**240.28**	**204.28**	**362.95**	**283.62**
ODP tonnes							
HCFC-22	16.15	15.78	12.96	12.66	10.73	17.76	14.25
HCFC-141b	0.00	0.05	1.46	0.00	0.94	4.25	2.60
HCFC-123	0.00	0.00	0.01	0.01	0.00	0.00	0.00
HCFC-142b	0.00	0.00	0.00	0.60	0.01	0.03	0.02
HCFC-124	0.00	0.00	0.00	0.01	0.01	0.02	0.01
Total Article 7 ODP tonnes	**16.15**	**15.84**	**14.43**	**13.28**	**11.70**	**22.07**	**16.88**

7. In addition to the HCFCs reported under Article 7, HCFC-141b-based polyol systems are imported into the country for the production of polyurethane (PU) foam.

PU foam manufacturing sector

8. All the HCFC-141b used in the manufacturing of PU foams is contained in pre-blended polyols imported from Bayer (Brazil) and from Synthesia, a systems house located in the Colon Duty Free Zone in Panama. There is no production of polyols or isocyanates in Cuba and no systems houses. There are five enterprises manufacturing PU foam in Cuba mostly for the industrial, commercial and domestic refrigeration sectors, and the construction sector:

(a) Refrigeracion Caribe: It is the largest consumer of HCFC-141b in the country. It manufactures insulating panels for the industrial refrigeration and construction markets in two production lines located in two different plants. The discontinuous line produced between 2007 and 2009 an annual average of 59,700 m^2 (80 mm thickness) of panels for cold rooms using a low-pressure dispenser (1997). The continuous line produced between 2007 and 2009 an annual average of 366,842 m^2 (60 mm thickness) of panels for the construction market using a low-pressure dispenser (2003);

(b) Lancomet: It is the second largest PU foam manufacturer. It produces laminated panels for cold rooms and the construction market. Between 2007 and 2009 it produced an annual average of 101,288 m^2 (80 mm thickness) of panels with an injection machine installed in 2001;

(c) FRIARC: It manufactures insulation foam for the commercial refrigeration sector. Between 2007 and 2009 it produced an annual average of 4,700 units of display cases and horizontal freezers. It has a low-pressure injection machine acquired in 2000;

(d) INPUD: It is the only manufacturer of insulation foam for domestic refrigeration, established in 1964, with an average annual production of 7,100 units between 2007 and 2009. The enterprise has a low-pressure injection machine; and

(e) IDA: It is the only manufacturer of insulated tanks for solar heaters. It has a low-pressure injection equipment installed in 1981.

9. The amounts of HCFC-141b used by these enterprises are presented in Table 2. None of these enterprises received funding from the Multilateral Fund during the phase-out of CFCs.

Table 2. Foam enterprises in Cuba using imported polyols containing HCFC-141b

Enterprise	HCFC-141b (mt) (*)				Average ODP tonnes	Equipment
	2007	2008	2009	Average		
Panel Manufacturing						
Refrigeración Caribe - continous	68.56	68.64	77.40	71.53	7.87	1 LP
Refrigeración Caribe - discontinous	17.83	8.37	19.47	15.22	1.67	1 LP
Lancomet	25.31	25.77	26.41	25.83	2.84	1 LP
Commercial Refrigeration						
FRIARC	4.96	5.21	5.73	5.30	0.58	1 LP
Domestic Refrigeration						
INPUD	2.29	2.40	2.46	2.39	0.26	1 LP
Solar Heaters						
IDA	0.99	1.04	1.15	1.06	0.12	1 LP
Total	**119.94**	**111.43**	**132.62**	**121.33**	**13.35**	

(*)In line with decision 61/47 on pre-blended polyols, the average HCFC consumption of 121.33 mt (13.35 ODP tonnes) between 2007 and 2009 was used as basis for the formulation of the foam project included in stage I of the HPMP.

RAC manufacturing sector

10. The RAC manufacturing sector in Cuba consumes 24.00 mt (1.32 ODP tonnes) of HCFC-22, representing 7.4 per cent of the HCFC-22 imported into the country. It is composed of one company, FRIOCLIMA, that produces air-conditioning equipment (90 percent) and refrigeration equipment (10 per cent). The main systems manufactured by FRIOCLIMA are split units with capacities between 1 ton of refrigeration (TR) and 5 TR with HCFC-22 charges between 0.25 and 12 kgs; condensing units for medium capacity refrigeration, roof top air-conditioning units, air handler, direct expansion units and water coolers from 35 TR to 200 TR with HCFC-22 charges above 5 kgs. All of its products contain HCFC-22. Between 2006 and 2010 FRIOCLIMA produced an annual average of 70 air-conditioning units, 500 condenser units and 90 roof top units.

RAC servicing sector

11. The RAC servicing sector represents 92.6 per cent of the consumption of HCFC-22 in Cuba. Servicing is provided by 6,100 technicians, 5,100 of them associated to 525 service shops and maintenance groups, and the remaining 1,000 working independently. While the independent technicians serve mostly domestic air-conditioning units, the service shops and the maintenance groups serve equipment from all the subsectors. The installed capacity of HCFC-22-based RAC equipment in Cuba is 985.71 mt (54.22 ODP tonnes). Domestic air-conditioning units represent 29 per cent of the national installed capacity, followed by industrial air-conditioning (22 per cent), commercial air-conditioning (20 per cent) and industrial refrigeration (19 per cent). Table 3 below presents the installed capacity of HCFC-22 per sub-sector.

Table 3. Installed capacity of HCFC-22 in Cuba

SUBSECTOR	UNITS	Installed capacity	
		MT	ODP
Commercial refrigeration	81,596	18.48	1.02
Industrial refrigeration (cold rooms)	11,498	187.21	10.30
Refrigerated transport	3,355	70.36	3.87
Domestic AC (public and private)	716,928	283.46	15.59
Commercial AC	79,509	206.40	11.35
Industrial AC (chillers and MAC)	2,279	219.80	12.09
TOTAL	**895,165**	**985.71**	**54.22**

12. The results of the HCFC consumption survey undertaken by the Government of Cuba during the preparation of the HPMP indicated that the three subsectors requiring the largest amount of HCFCs for servicing are the domestic air-conditioning sector (32 per cent), the commercial air-conditioning sector (23 per cent) and the industrial refrigeration sector (21 per cent). The survey also estimated 444.00 mt as the actual need for HCFCs in the RAC servicing sector, which is higher than the actual consumption reported of 338.95 mt for this sector in 2010. The reason for the difference is the limitation of imports during the last four years as a result of the economic crisis. The supply of compressors, components and HCFC refrigerant could not satisfy the demand for servicing, which was exacerbated by 80 per cent of the RAC equipment being more than 10 years old, a high rate of compressors being damaged due to the instability in the electricity grid, and a general accelerated deterioration of refrigeration systems due to the corrosion caused by salt in the coastal zones. As the economic situation improves, imports grow accordingly to supply the increased demand, which explains the sharp increase in consumption in 2010 of HCFC-22 for servicing and HCFC-141b for flushing.

HCFC phase-out strategy

13. The Government of Cuba has adopted a two-staged approach to phasing out HCFCs: stage I, to meet the freeze on HCFC consumption in 2013, the 10 per cent reduction from the baseline by 2015, and the 35 per cent reduction from the baseline by 2020; and stage II, to completely phase out HCFC consumption by 2030. To meet its obligations during stage I of the HPMP, the Government is proposing to reduce the consumption of HCFC-22 in servicing RAC equipment; to phase out the HCFC-22 used in the manufacturing of RAC equipment; and to phase out the use of HCFC-141b contained in imported pre-blended polyols in the manufacturing of PU foams.

Proposed phase-out activities and costs

Regulatory and dissemination actions

14. Under this component the Government of Cuba is proposing the following actions at a total cost of US $38,000:

(a) Review of existing regulations: it includes review of HCFC handling and emission norms, improvement of the HCFC licensing and quota system, improvement of the tariff codes system, ban on the installation of new capacity to produce HCFC-based equipment and ban on imports of HCFC-based equipment when the manufacturing sectors are converted to alternative technologies (US $10,000);

(b) Training of custom officers to reinforce customs controls at the entry point and improve HCFC data recording (US $15,000); and

(c) Environmental education, dissemination and public awareness about the elimination of HCFCs (US $13,000).

PU foam sector plan

15. In order to achieve the complete phase-out of HCFC-141b contained in imported polyol systems in Cuba, stage I proposes to convert all the enterprises manufacturing foam to pre-blended hydrocarbon (HC) technology. The project is based on the choice of HC technology as the best option for the PU foam sector in Cuba because it has an acceptable performance in thermal conductivity, is a widely approved technology for the applications existing in Cuba, is easily available in the country, has relatively low incremental operating costs in comparison with other options and low-global warming potential (GWP).

16. The project will convert the five enterprises to pre-blended HC by establishing a local systems house to pre-blend the polyols and blowing agent and supply the companies. At the systems house level the project will provide installation of an underground storage tank for HCs with a capacity of 25/30 cubic meters, a pre-mixing unit to blend the polyols and HCs, storage tanks for fully formulated polyols to ensure safe operation, and central safety system (sensors, alarms, ventilation, control panel).

17. For the downstream enterprises the project will provide the replacement of all foam dispenser equipment; installation of a safety system and gas monitoring including safety control panel, ventilation systems for the storage, dosing and foaming areas, safety systems for the foaming line with sensors and alarm devices, one fire extinguishing system, the electric grounding of all equipment and the development of proper safety procedures; trials, training and safety audits.

18. The total cost for the conversion of the foam enterprises and establishment of a pre-blending unit has been estimated at US $2,863,162. Operating costs were calculated on the basis of baseline prices and formulations materials from the participating enterprises and information gathered by UNDP on

replacement formulations and materials. Applying the cost-effectiveness threshold for the foam sector (US $7.83/kg plus 25 per cent for introducing a low GWP technology), the eligible funding for the investment component is US $1,187,533. The counterpart funding to be contributed by the enterprises is estimated at US $1,675,323. Table 4 shows the funding being requested by enterprise.

Table 4. PU foam sector plan cost

Enterprise	Cost (US $)				
	ICC	IOC	Total	Funds requested	Counterpart funding
Refrigeración Caribe	771,857	331,411	1,103,267	849,143	254,124
Lamcomet	385,928	93,169	479,097	252,790	226,307
FRIARC	268,228	22,593	290,821	51,873	238,949
INPUD	268,228	9,002	277,230	23,352	253,878
IDA	268,228	4,519	272,747	10,375	262,372
System House	440,000	NA	440,000	0	440,000(*)
TOTAL	**2,402,470**	**460,693**	**2,863,163**	**1,187,533**	**1,675,630**

(*) The cost for the systems house to be distributed among the counterpart funding that the enterprises will contribute.

Activities in the RAC manufacturing sector

19. Stage I of the HPMP includes the phase-out of 24 mt (1.32 ODP tonnes) of HCFC-22 used by the company FRIOCLIMA through an investment project to convert its production of industrial RAC equipment, splits and condensers to one or several alternatives to be determined at a future stage in view of the lack of commercially available ODS-free technologies for these applications in Cuba. Alternatives so far considered include HCs and HFC-32. The Government of Cuba proposes to submit this investment component during stage I of the HPMP, when the existing uncertainties related to alternative technologies are resolved. An indicative cost of US $400,000 was provided by UNDP for this activity; however, the actual cost will have to be determined at a future stage based on the technology selected.

Activities in the RAC servicing sector

20. The following activities in the RAC servicing sector are included in stage I of the HPMP for Cuba at a total cost of US $560,000:

(a) Use of incentives to convert RAC equipment to HCFC-free alternatives to reduce the need of HCFCs for servicing: Building up from Cuba's experience with HC in the RAC sector, the project will be implemented through pilot projects to test HC alternatives in different applications followed by scale-up replication. The project will facilitate a systematic reconversion of the RAC sector (US $350,000);

(b) Implementation, expansion and consolidation of the network for the recovery, recycling, regeneration and storage for destruction of HCFCs: This activity will strengthen the existing recovery and recycling network, which was instrumental to the successful recovery of more than 120 mt of CFC-12 from domestic refrigeration units in the past. The existing equipment will be upgraded to handle HCFCs and additional equipment will be provided (US $60,000); and

(c) Training activities to support end-user and recovery and recycling activities as follows:

(i) Training and certification of 1,000 technicians on good practices in converting RAC equipment to HCFC-free alternatives, including elimination of the use of HCFC-141b for flushing (US $80,000);

(ii) Training and certification of technicians on installation, maintenance, repair and use of HCFC alternatives including the use of flammable, toxic and low GWP refrigerant (US $10,000);

(iii) Technical assistance for the introduction of alternative refrigerants in Cuba through seminars, workshops and international fairs to build technicians' capacity and assess alternative technologies (US $50,000); and

(iv) Technical assistance and training to end-users in the RAC sector (US $10,000).

21. An additional US $32,000 are requested for implementation and monitoring, which includes coordination of activities under the leadership of OTOZ, establishment of an steering committee to make policy decisions, and organization of regional and national workshops to support the HPMP.

Total cost of stage I of the HPMP

22. The total cost for the implementation of stage I of the HPMP as submitted is estimated at US $2,217,533 (excluding agency support costs) to phase out 4.17 ODP tonnes of HCFC-22, 2.60 ODP tonnes of HCFC-141b, and 13.35 ODP tonnes of HCFC-141b contained in imported pre-blended polyols. (Table 5)

Table 5. Total cost of stage I of the HPMP for Cuba

Activities	Impact ODP tonnes		Funds requested
	HCFC-22	HCFC-141b	(US $)
RAC servicing sector			
Incentives for RAC equipment conversion			350,000
HCFC recovery, recycling, regeneration and storage			60,000
Training on conversion to HCFC-free RAC equipment			80,000
Training in installation, maintenance and use of alternatives			10,000
Technical assistance for the introduction of alternative refrigerants in Cuba			50,000
Technical assistance to end users in the RAC sector			10,000
Total RAC servicing sector	2.85	2.60	**560,000**
PU foam sector plan		13.35(*)	1,187,533
Investment project RAC manufacturing sector (Frioclima)	1.32		400,000
Regulatory and awareness actions			38,000
Implementation and monitoring			32,000
Grand Total	**4.17**	**15.95**	**2,217,533**

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

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

23. The Secretariat reviewed the HPMP for Cuba in the context of the guidelines for the preparation of HPMPs (decision 54/39), the criteria for funding HCFC phase-out in the consumption sector agreed at the 60th meeting (decision 60/44), subsequent decisions on HPMPs and the 2011-2014 business plan of the Multilateral Fund. The Secretariat discussed technical and cost-related issues with UNDP, which were satisfactorily addressed as summarized below.

Starting point for aggregate reduction in HCFC consumption

24. The HPMP had defined the starting point for aggregate reduction in HCFC consumption at 35.42 ODP tonnes, calculated as the HCFC consumption of 22.07 ODP tonnes reported under Article 7 in 2010, plus the 2007-2009 average amount of HCFC-141b contained in imported pre-blended polyols of 13.35 ODP tonnes. However, since the HCFC baseline for compliance has been estimated for Cuba, it was agreed to calculate the starting point based in the estimated baseline of 16.88 ODP tonnes instead of the last reported year, plus the 13.35 ODP tonnes of HCFC-141b contained in imported pre-blended polyols. This resulted in a starting point of 30.23 ODP tonnes.

HCFC consumption

25. Cuba was categorized in the past as a non-low-volume-consuming country (non-LVC) due to its CFC consumption level (CFC baseline 625.1 ODP tonnes); however, Cuba's HCFC baseline of 283.62 mt is below 360 mt. The level of funding for activities in the servicing sector will be established in line with decision 60/44 (f)(xii).

Issues related to the PU foam sector plan

Justification for inclusion in stage I of the HPMP

26. Upon request for a justification on the need to convert the foam sector at this moment as this part of the HPMP does not contribute towards compliance, UNDP explained that the Government of Cuba submitted this project in line with the Meeting of the Parties' decision XIX/6 that gives priority to the phase-out of HCFCs with the greater ODP, the replacement with substitutes that minimize the climate change impact and the conversion of the small and medium enterprises. The Government also submitted the project in line with decision 61/47 and commits, by the time the last foam manufacturing plant had been converted to a non-HCFC technology, to ban the import and the use of HCFC-141b pre-blended polyol systems. Furthermore, the use of HCFC-141b in this sector (i.e. 121.33 mt, 2007-2009 average consumption) represents 38 per cent of the total HCFC uses in the country in ODP terms.

Technology selection

27. The Secretariat drew UNDP's attention to a number of issues identified, including the use of HC in enterprises with very low consumption levels of HCFCs (three companies consume less than 6 mt of HCFC-141b); the absence of a local systems house with the expertise to handle polyols in general and HC-based polyols in particular; the level of co-financing required to introduce this technology representing 90 per cent of the cost of the project in three companies, and the lack of information on the performance of this technology[1]. Based on subsequent discussions on the issues raised, UNDP submitted

[1] While the FTOC Assessment Report 2010 acknowledges one successful case of using pre-bended HC in Northern Europe, the information on the use of this technology is limited. The Executive Committee approved at its 58th and 59th meetings two projects for the validation/demonstration of low cost options for the use of HC as foaming agent in the manufacture of PU foams in Egypt and a conversion demonstration from HCFC-141b-based to cyclopentane-based pre-blended polyol in the manufacture of rigid polyurethane foam in a company

a revised proposal where the two larger companies, Refrigeracion Caribe and Lancomet, with HCFC consumption of 86.75 mt and 25.83 mt respectively, will be converted to HC blended in-situ; whereas the three smaller companies, FRIARC, INPUD and IDA, with HCFC consumption of 5.3 mt, 2.39 mt and 1.06 mt respectively, will be converted to water-based systems technology.

Enterprises eligibility and incremental cost

28. The revised project for the conversion to HC includes a small storage tank, a pre-mixing station, foam dispenser equipment and safety related equipment, training, tests, trials, safety audit and incremental operating costs for the use of HC at a cost of US $875,004 for Refrigeracion Caribe and US $446,542 for Lancomet. The conversion to water blown systems includes a high pressure foam dispenser, training tests and trials for each of the three companies assisted. The total cost of the revised project is US $1,789,460 with a cost effectiveness of US $14.74/kg. However, given the cost-effectiveness threshold for foam conversion projects of US $9.79/kg, the total level of funds requested for this project is US $1,187,527, with the remaining balance of US $601,933 to be covered by the beneficiary enterprises. Table 6 presents the agreed cost of the PU foam project.

Table 6. Agreed cost PU foam sector plan for Cuba

ENTERPRISE	COST (US$)		
	CAPITAL	OPERATING	TOTAL
Refrigeración Caribe	816,200	58,804	875,004
Lancomet	429,000	17,542	446,542
FRIARC	154,000	3,580	157,580
INPUD	154,000	1,618	155,618
IDA	154,000	716	154,716
TOTAL	**1,707,200**	**82,260**	**1,789,460**
TOTAL FUNDS REQUESTED			**1,187,527**
Cost effectiveness (US $)			**9.79**

Issues related to the RAC manufacturing sector

29. The Secretariat noted that the project for RAC manufacturing was not fully developed given the lack of a cost-effective and sustainable technology for the conditions prevailing in Cuba. Given that all the activities proposed in stage I of the HPMP must be fully developed prior to its submission to the Executive Committee, (i.e. no stand alone projects could be approved after 2010 (decision 54/39 (d))) the Secretariat was unable to recommend it for approval. If the project is not included in the present submission, the next opportunity to submit it would be for stage II in 2020. In view of this, the Secretariat suggested to UNDP to submit stage I of the HPMP up to 2015 instead of 2020, and in 2014 submit stage II of the HPMP including a fully developed investment project for the RAC manufacturing sector, once all the uncertainties in technology have been resolved.

30. UNDP explained that the Government of Cuba would prefer to maintain stage I of the HPMP up to 2020 as submitted, because this would allow Cuba to implement additional phase-out activities in the first years when HCFC consumption is expected to increase given the reduction on imports in 2009, and the subsequent increasing imports to cover the unsatisfied demand for HCFCs in the past. Considering that the consumption of HCFCs in 2010 is already 79.33 mt (5.19 ODP tonnes) above the baseline, it is urgent for Cuba to start activities to reduce HCFC consumption to the baseline level starting as many activities as possible from 2012.

in China. The final results of these projects including assessment on the applicability of this technology, safety and logistical considerations, availability of materials (polyols, long term stable formulations, etc), and conditions required at the downstream user for its application, have not been submitted to the Executive Committee nor disseminated to other systems houses.

31. While the Secretariat appreciates the importance of implementing the investment component in Cuba as soon as the technology is available before 2020, it was unable to agree on a future submission as a stand-alone project in view of decision 54/39 (d). Even though it was not its preference, the Government of Cuba agreed that stage I of its HPMP would cover up to 2015, and the investment project in the RAC manufacturing sector would be submitted along with stage II of the HPMP.

32. With regards to the estimated cost of US $400,000 provided by UNDP, the Secretariat notes that this cost is only indicative. The final cost would be based, among others, on the selection of the alternative technology.

Issues related to the RAC servicing sector

33. The Secretariat reviewed the activities proposed for the RAC servicing sector in light of the status of implementation of the CFC National Phase-Out Plan (NPP) of Cuba. It was noted that notwithstanding the total phase-out of CFCs achieved on 1 January 2010, as of December 2010 (latest information available on the progress reports submitted by UNDP to the 64th meeting) the NPP still had an unspent balance of US $236,605 and only US $ 101,924 were planned for use in 2011 for activities related to CFC phase-out. UNDP informed that the NPP is in its final stage of implementation, and despite the successful ban on CFC imports, there is still a demand for CFCs for servicing operating refrigeration equipment in the country. Accordingly, the present focus of the NPP is to reconvert the commercial refrigeration sector from CFCs to non-ODS alternatives (i.e. HFCs and HCs depending on the characteristics of the equipment), for which the remaining funds have been committed. As of the time of submission a total of US $121,000 had been spent and US $40,000 had been obligated for activities up to December 2011. The balance of US $75,605 is programmed for expenditure in early 2012 before the initiation of the implementation of stage I of the HPMP. UNDP and the Government of Cuba advised that any remaining activities under the NPP will be complementary to the HCFC phase-out.

34. The Secretariat considered that the strategy for the servicing sector up to 2020 was adequate, and discussed with UNDP the possibility of maintaining the same elements in light of the change in the strategy to meet the reductions up to the 2015 through stage I of the HPMP and allow the country to submit the investment project in the manufacturing sector as part of stage II before 2020. UNDP provided a plan of action with a reduced budget. The technical assistance to end-users was removed as it could be provided through the conversions but in essence the original strategy was maintained. The regulatory and monitoring activities, initially submitted in addition to the level of funds allocated by decision 60/44, were included within the overall allocation for servicing of US $176,000. Table 7 shows the cost of the activities in the servicing sector included in stage I of the HPMP.

Table 7. Cost of the activities in the servicing sector included in stage I of the HPMP

Activities	Impact ODP tonnes		Scenario 2015	Impact ODP tonnes		Scenario 2020
	HCFC-22	HCFC-141b	(US $)	HCFC-22	HCFC-141b	(US $)
Servicing sector						
Incentives for RAC equipment conversion			70,000			350,000
HCFC recovery, recycling, regeneration and storage			30,000			60,000
Training on conversion to HCFC-free RAC equipment			40,000			80,000
Training in installation, maintenance and use of alternatives			10,000			10,000
Technical assistance for the introduction of alternative refrigerants in Cuba			15,000			25,000
Phase-out of HCFC-141b used in flushing			5,000			10,000
Implementation and monitoring			6,000			25,000
Total RAC servicing sector		**1.56**	**176,000**	**2.85**	**2.60**	**560,000**

Total cost agreed for stage I of the HPMP

35. The total agreed cost for the implementation of stage I of the HPMP is presented in Table 8 below.

Table 8. Total agreed cost of stage I of the HPMP for Cuba

Activities	Impact ODP tonnes		Funds requested (US $)
	HCFC-22	HCFC-141b	
RAC servicing sector			
Incentives for RAC equipment conversion			70,000
HCFC recovery, recycling, regeneration and storage			30,000
Training on conversion to HCFC-free RAC equipment			40,000
Training in installation, maintenance and use of alternatives			10,000
Technical assistance for the introduction of alternative refrigerants in Cuba			15,000
Phase out of HCFC-141b in flushing			5,000
Monitoring			6,000
Total RAC servicing sector		1.56	**176,000**
PU foam sector plan		13.35*	**1,187,527**
Grand Total		**14.91**	**1,363,527**

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

Impact on the climate

36. The net impact on the climate of the phase-out of HCFC-141b in the five foam manufacturing enterprises included in stage I was calculated as the difference in the direct emissions between HCFCs and the alternative technologies (cyclopentane and water). The calculation is presented in Table 9 below.

Table 9. Climate impact of PU foam sector plan in Cuba

Substance	GWP	Tonnes/year	CO_2-eq (tonnes/year)
Before conversion			
HCFC-141b	725	121.33	87,964
After conversion			
Cyclopentane	20	74.30	1,486
Net impact			**86,478**

37. The proposed technical assistance activities in the HPMP, which include the introduction of better servicing practices and enforcement of HCFC import controls, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogram (kg) of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO_2-equivalent tonnes saved. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by Cuba, in particular the PU foam sector plan complemented by its strong reliance on the use of hydrocarbons in the service sector and its above-average efforts to improve servicing practices and reduce associated refrigerant emissions indicate that it is likely that the country will achieve the 12,852 CO_2-equivalent tonnes that would not be emitted into the atmosphere as estimated in the 2011-2014 business plan. However, at this time, the Secretariat is not in a position to quantitatively estimate the impact on the climate. The impact might be established through an assessment of implementation reports by, *inter alia,* comparing the levels of refrigerants used annually from the commencement of the implementation of the HPMP, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22 based equipment being retrofitted.

Co-financing

38. In response to decision 54/39(h) on potential financial incentives and opportunities for additional resources to maximize the environmental benefits from HPMPs pursuant to paragraph 11(b) of decision XIX/6 of the Nineteenth Meeting of the Parties, UNDP indicated that the Government of Cuba has explored sources of co-financing for HCFC phase-out activities, but no source could be identified during the preparation of the HPMP. The main co-financing will come from the Government of Cuba, which has a great interest in meeting its commitments under the Montreal Protocol. In addition, the enterprises involved in the PU foam sector plan will contribute with counterpart funding that amounts to US $601,933.

2011-2014 business plan of the Multilateral Fund

39. UNDP is requesting US $1,363,527 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2011-2014 of US $1,446,442 including support costs is above that in the business plan. The difference in the figures is due to difference in baseline between the business plan and the actual HPMP submitted and the submission of the PU foam project to phase out HCFC-141b contained in imported pre-blended polyols, which is larger than the foam project included in the business plan.

40. Based on the estimated HCFC baseline consumption in the servicing sector of 259.62 mt, Cuba's allocation up to the 2015 phase-out should be US $176,000 in line with decision 60/44 plus funding for the investment projects in the RAC manufacturing sector and the foams sector.

Draft Agreement

41. A draft Agreement between the Government of Cuba and the Executive Committee for HCFCs phase-out is contained in Annex I to the present document.

RECOMMENDATION

42. The Executive Committee may wish to consider:

(a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Cuba for the period 2011 to 2015 to meet the 10 per cent reduction in HCFC consumption, at the amount of US $1,363,527 plus agency support costs of US $102,265 for UNDP, on the understanding that;

(i) US $176,000 were provided to address HCFC consumption in the refrigeration servicing sector to reach up to and include the 10 per cent reduction in 2015 in line with decision 60/44; and

(ii) US $1,187,527 were provided for the investment component for the phase-out of 13.35 ODP tonnes of HCFC-141b contained imported pre-blended polyols used in the foam manufacturing sector;

(b) Noting that the Government of Cuba had agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption an estimated baseline of 16.88 ODP tonnes, calculated using actual consumption of 11.70 ODP tonnes and 22.07 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol, plus 13.35 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 30.23 ODP tonnes;

(c) Deducting 14.91 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption;

(d) Approving the draft Agreement between the Government of Cuba and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;

(e) Requesting the Fund Secretariat, once the baseline data were known, to update Appendix 2-A to the Agreement to include the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting change in the levels of maximum allowable consumption and of any potential related impact on the eligible funding level, with any adjustments needed being made when the next tranche was submitted; and

(f) Approving the first tranche of stage I of the HPMP for Cuba, and the corresponding implementation plan, at the amount of US $1,000,000 plus agency support costs of US $75,000 for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF CUBA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

1. This Agreement represents the understanding of the Government of Cuba (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 15.19 ODP tonnes by 1 January 2015 in compliance with Montreal Protocol schedules, with the understanding that this figure is to be revised one single time, once the baseline consumption for compliance has been established based on Article 7 data, with the funding to be adjusted accordingly, as per decision 60/44.

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 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 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 HCFC phase-out sector plans submitted. 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 had 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 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 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 annual implementation reports in the form of Appendix 4-A ("Format of 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;

(d) That the Country has submitted an annual 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; and

(e) That, for all submissions from the 68th meeting onwards, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the Country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this Agreement.

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 annual implementation plans 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 paragraph 4 above.

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 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 an annual implementation plan submitted as foreseen in sub-paragraph 5(d) above, or as a revision to an existing annual 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 annual implementation plan, or removal of an activity in the annual 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 annual implementation plan, under implementation at the time, and reported to the Executive Committee in the subsequent annual implementation report;

(c) Should the Country decide during implementation of the agreement to introduce an alternative technology other than that proposed in the approved HPMP, this would require approval by the Executive Committee as part of an Annual 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 remaining funds 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, 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") 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 agencies taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 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 kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once these decisions are taken, this specific case will not be an impediment 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 to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to the information necessary to verify compliance with this Agreement.

14. The completion of stage I 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 level has been specified in Appendix 2-A. Should there at that time still be activities that are outstanding, and 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 sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion 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	14.25
HCFC-124	C	I	0.01
HCFC-141b	C	I	2.60
HCFC-142b	C	I	0.02
HCFC-141b*			13.35
Total			30.23

* HCFC141b contained in imported pre-blended polyols (average 2007-2009)

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013	2014	2015	TOTAL
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	16.88	16.88	15.19	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	16.88	16.88	15.19	
2.1	Lead IA UNDP agreed funding (US $)	1,000,000	0	345,527	0	18,000	1,363,527
2.2	Support costs for Lead IA (US $)	75,000	0	25,915	0	1,350	102,265
3.1	Total agreed funding (US $)	1,000,000	0	345,527	0	18,000	1,363,527
3.2	Total support cost (US $)	75,000	0	25,915	0	1,350	102,265
3.3	Total agreed costs (US $)	1,075,000	0	371,442	0	19,350	1,465,792
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						0
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						n/a
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						14.25
4.2.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)						0.0
4.2.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)						n/a
4.2.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)						0.01
4.3.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						1.56
4.3.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)						n/a
4.3.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)						1.04
4.4.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)						0.0
4.4.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)						n/a
4.4.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)						0.02
4.5.1	Total phase-out of HCFC-141b in pre-blended polyols agreed to be achieved under this Agreement (ODP tonnes)						13.35
4.5.2	Phase-out of HCFC-141b in pre-blended polyols to be achieved in previously approved projects (ODP tonnes)						n/a
4.5.3	Remaining eligible consumption for HCFC-141b in pre-blended polyols (ODP tonnes)						0

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

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

APPENDIX 4-A: FORMAT OF IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Implementation Report and Plan 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 Annual 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) 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 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 annual implementation reports and annual implementation 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 annual 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).

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. Supervision will be provided by the Ministry of Science Technology and Environment, through the Ozone Technical Office (OTOZ), with assistance from the Lead IA.

2. Consumption will be monitored and determined from official data import and export of substances registered by the relevant government departments.

3. OTOZ will compile and report the following data and information each year or before the deadlines:

(a) Annual reports on the consumption of the substances to be submitted to the Ozone Secretariat, and

(b) Annual reports on progress in implementing the management plan HCFC will be submitted to the Executive Committee of the Multilateral Fund.

4. The OTOZ and the Lead IA will jointly hire a qualified independent entity to conduct a qualitative and quantitative performance assessment of the implementation of the HCFC phase-out management plan (HPMP).

5. The agency responsible for evaluation will have full access to relevant technical and financial information related to the implementation of the HPMP.

6. The agency responsible for evaluation shall prepare and submit to the OTOZ and the Lead IA a draft consolidated report at the end of each annual implementation plan, which will include the findings of the assessment and, where appropriate, recommendations to make the improvements or adjustments. The draft report will include the country's situation with regard to compliance with the provisions of this Agreement.

7. After incorporating the comments and explanations, if any, from the OTOZ and the Lead IA, the agency responsible for evaluation will finalize the report submitted to the OTOZ and the Lead IA.

8. The OTOZ will endorse the final report and the Lead IA will transmit it to the relevant meeting of the Executive Committee with the implementation plan and annual reports.

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 Implementation Plans and subsequent reports as per Appendix 4-A;

(c) Providing independent verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the 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 annual implementation plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

(e) Fulfilling the reporting requirements for the annual implementation reports, annual implementation plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee;

(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 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 each implementing or bilateral agency involved;

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

(k) 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 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 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 $180 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.

- - - -