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EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL Sixty-fourth Meeting Montreal, 25-29 July 2011

#### PROJECT PROPOSAL: COSTA RICA

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

## Costa Rica

(I) PROJECT TITLE	AGENCY
HPMP	UNDP (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2010	31.7 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2009
Chemical	Aerosol	Foam	Fire fighting	Refrigerat	ion	Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123		0.0		0.0					0.0
HCFC-124					0.1				0.1
HCFC-141b				1.0					1.0
HCFC-142b									
HCFC-22				0.4	10.2				10.6

(IV) CONSUMPTION DATA (ODP tonnes)											
2009 - 2010 baseline: 22.95 Starting point for sustained aggregate reductions:											
	CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)										
Already approved:	0.0	Remaining:	8								

(V) BUS	SINESS PLAN	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNDP	ODS phase-out (ODP tonnes)	1.4	0.3	1.4	0.0	0.0	1.2	0.0	0.0	0.4	0.0	4.7
	Funding (US \$)	202,891	22,291	202,891	0	0	180,600	0	0	60,200	0	668,873

(VI) PROJECT	Γ DATA		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	23	23	20.7	20.7	20.7	20.7	20.7	15	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	23	23	12	12	12	12	12	6.8	
Project Costs requested in	UNDP	Project costs	761,523		168,000		62,000		106,000		56,000		1,153,523
principle(US \$)		Support costs	57,114		12,600		4,650		7,950		4,200		86,514
Total project co principle (US \$		ed in	761,523		168,000		62,000		106,000		56,000		1,153,523
Total support costs requested in principle (US \$)			57,114		12,600		4,650		7,950		4,200		86,514
Total funds requ (US \$)	uested in p	rinciple	818,367		180,600		66,650		113,950		60,200		1,240,037

(VII) Request for fundi	(VII) Request for funding for the first tranche (2011)											
Agency	Funds requested (US \$)		Support costs (US \$)									
UNDP	761,523			57,114								
Funding request:		Appro	val of funding for the first tranche (2011) as indicated above									
Secretariat's recommer	ndation:	Individual consideration										

#### PROJECT DESCRIPTION

- 1. On behalf of the Government of Costa Rica UNDP, as the implementing agency, has submitted to the 64<sup>th</sup> Meeting of the Executive Committee stage I of an HCFC phase-out management plan (HPMP) at a total cost, as originally submitted, of US \$1,240,509 plus agency support costs of US \$90,113. The HPMP covers strategies and activities to meet 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 \$793,523 plus agency support of US \$59,514 for UNDP as originally submitted.

## **Background**

## **ODS** regulations

3. The Ministry of Environment, Energy and the Telecommunications is the national body responsible for the implementation of the Montreal Protocol in the country. The Ozone Technical Office (OTO), operating under the Ministry, is the agency responsible for coordinating and implementing activities under the Montreal Protocol. The Government has promulgated a set of regulations, including regulations on the Montreal Protocol on Substances that deplete the Ozone Layer, to control the import, export and consumption of ozone-depleting substances (ODS). The regulations were amended in 2010 through Executive Decree 35676-S-H-MAG-MIANET to make the licensing system mandatory for all ODS and ODS-containing equipment including HCFCs.

## **HCFC** consumption

4. Since the country does not have any HCFC production capacity, all HCFCs are imported. The survey undertaken during the HPMP preparation showed that HCFCs are predominantly used in the refrigeration servicing sector as refrigerants with a small quantity of HCFC-123 used in fire extinguishers. The types of HCFCs include HCFC-22 and HCFCs contained in refrigerants blends (HCFC-141b, HCFC-142b and HCFC-124). The country also imports HCFC-141b-based pre-blended polyol for production of flexible polyurethane foam, however, the HCFC-141b contained in imported pre-blended polyols had not been reported under Article 7 data for 2009, and therefore not counted as consumption. Table 1 shows the level of HCFC consumption in the country.

Table 1: HCFC level of consumption in Costa Rica

	Article 7 data								Survey data						
Year	Substances (metric tonnes) Te			Total (t	tonnes)		Substances (metric tonnes)				Total (tonnes)				
	HCFC- 22	HCFC- 142b	HCFC- 141b	HCFC- 123	HCFC- 124	metric	ODP	HCFC- 22	HCFC- 142b	HCFC- 141b	HCFC- 123	HCFC- 124	metric	ODP	
2006	145.7	3.3	17.2	0.0	5.6	171.8	10.2	145.8	3.3	17.2	0.0	5.6	171.9	10.2	
2007	247.7	7.3	14.4	0.0	5.5	274.9	15.8	247.6	7.3	203.7	0.0	5.5	464.2	36.6	
2008	137.3	8.1	23.5	0.0	0.1	169.0	10.7	137.2	8.1	179.4	0.1	0.1	325.0	27.8	
2009	192.8	5.2	28.3	0.7	5.9	232.9	14.2	192.8	5.2	176.8	0.7	5.9	381.5	30.5	

5. HCFC-22 is the least expensive refrigerant used in the country. The alternative refrigerants used in the country mainly include HFC-134a, and HFC blends (R-402B, R-404A, R-406A and R-410A). Import of hydrocarbon refrigerant is at the level of experimental samples.

## Sectoral distribution of HCFCs consumption

6. The survey covered all importers, manufacturers and representative service workshops. The HCFC consumption in different sectors is shown in Table 2.

Table 2: Sector distribution of HCFC consumption in 2009

Contain	HCFC consumption (tonnes)					
Sector	metric	ODP				
Refrigeration servicing sector	232.2	14.2				
Foam sector*	148.6	16.3				
Fire extinguisher	0.7	0.0				
Total	381.5	30.5				

<sup>\*</sup>including HCFC-141b in imported pre-blended polyols

7. The HCFC consumption in the refrigeration servicing sector accounts for 61 per cent of the total consumption in the country in 2009. The survey data gave the total number of households, then the proportion of households that have air-conditioners, servicing rates and unit charges were estimated. Based on these data, the total number of equipment installed in the domestic, commercial and industrial sectors are estimated as 195,000 units in 2009. The average charge for different types of equipment was estimated and used to calculate the total installed capacity. The amounts of HCFCs required for servicing the equipment are calculated as 85 metric tonnes (mt). A summary of HCFC consumption in the refrigeration servicing sector is shown in Table 3.

Table 3: HCFCs consumption by sector

Type	Total units	Total charg	e (tonnes)	Servicing demand (tonnes)		
		metric	ODP	metric	ODP	
Residential air-conditioning	100,000	100	5.5	10	0.55	
Commercial/air conditioning	95,000	211.85	11.65	75	4.13	
Total	195,000	312	17	85	5	

8. The major equipment imported was air-conditioning units and refrigerators. The total number of refrigeration and air-conditioning (RAC) equipment units, using HCFC refrigerants, imported to the country was 31,057 units in 2010. The country forecasts its future HCFC consumption based on the estimated needs for servicing existing RAC equipment and for charging new installations. The table below provides a summary of the forecast HCFC consumption, including HCFC-141b contained in imported pre-blended polyols, until 2020.

Table 4: Forecast consumption of HCFCs

		2009	2010*	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Constrained HCFC	mt	381.5	446.4	502.1	561.3	339.7	339.7	305.7	305.7	305.7	305.7	305.7	220.8
consumption	ODP	30.5	35.0	39.8	44.5	26.9	26.9	24.2	24.2	24.2	24.2	24.2	17.5
Unconstrained	mt	381.5	446.4	502.1	561.3	620.4	679.7	738.9	827.56	926.86	1038.1	1162.7	1302.2
HCFC consumption	ODP	30.5	35.0	39.8	44.5	49.2	53.9	58.6	65.6	73.5	82.3	92.1	103.2

<sup>\*</sup>based on estimates from actual 2010 imports

## HCFC-141b consumption from the pre-blended polyols

9. Costa Rica also imports HCFC-141b-based pre-blended polyols for the production of rigid polyurethane insulation foam, which is used for manufacture of domestic refrigeration equipment. The level of imports of pre-blended polyols is shown in Table 5.

Year MABE **Fibrocentro** Beirute Dole OMEGA Other small Total Total (ODP **BASF** enterprises (mt) tonnes) 2007 159.80 7.95 2.88 0.07 9.60 9.01 189.31 20.82 132.27 4.93 1.54 0.21 9.60 7.43 155.98 17.16 2008 2009 123.67 6.46 0.15 7.07 1.60 9.60 148.55 16.34 135.47 5.60 3.10 0.10 9.60 7.69 161.56 17.77 2010 130.47 Average of 5.66 2.08 0.15 9.60 7.40 155.36 17.09 3 years

Table 5: Level of imports of HCFC-141b contained in the pre-blended polyols

## Estimated baseline for HCFC consumption

10. The estimated baseline for HCFC consumption was calculated by the country at 339.7 mt (24.6 ODP tonnes) by using the average of the 2009 reported consumption of 232.9 mt (14.2 ODP tonnes), and the estimated 2010 consumption of 446.4 mt (35 ODP tonnes). The Government estimated its HCFC consumption in 2010 based on actual import data for this year. This also included the HCFC-141b in the imported pre-blended polyols during 2010.

## HCFC phase-out strategy

- 11. The Government is proposing to follow the Montreal Protocol schedule and adopt a staged approach to achieve 97.5 reduction of HCFCs by 2030 with a service tail to 2040. The current submission only consists of stage I of the HPMP to meet a 35 per cent reduction by 2020. In stage I of the HPMP, the country will control the imports of bulk HCFCs through applying a strict licensing and quota system following the reduction schedule in the Montreal Protocol. The country will also reduce the demand for HCFCs for servicing existing equipment through refrigerant recovery and reuse, and the capacity building of technicians in better servicing practices. It will also build capacity of customs officers to support the control and monitoring of HCFC imports to achieve gradual reduction of the use of HCFC refrigerants in accordance with country commitments under the Montreal Protocol, and develop a mechanism for storage of unwanted ODS including HCFC.
- 12. The country included the HCFC-141b consumption contained in imported pre-blended polyols in the overarching strategy for stage I of the HPMP. The HCFC phase-out strategy in the foam sector is divided in two phases: the country will address the HCFC manufacturing sector initially through the phase-out of HCFC-141b in the largest user (Mabe). The phase-out of HCFC-141b in the smaller enterprises is proposed to be addressed later because, with the exception of Mabe, Costa Rica's foam sector is comprised of small producers that make it very difficult at this moment to select a HCFC replacement technology that represents a positive impact on climate change, and there is no strong local systems company that can lead the conversion process. The summary of activities and proposed implementation period is shown in Table 5.

<u>Table 5: Specific activities of the HPMP and proposed period of implementation</u>

Description of activities	Implementation schedule
Policy review, amendments of regulations, development of quota system for HCFCs,	2011-2013
Establish a ban on the imports of HCFC and HCFC-containing equipment	2011-2012
Assistance for the refrigeration servicing sector through improving capacity of technicians and institutions	2012-2020
Encouraging users of refrigeration and air-conditioning equipment to use environmentally friendly equipment and refrigerants	2015-2030
Achieve gradual reduction of the HCFC refrigerants and HCFC-141b in accordance with country commitments under the Montreal Protocol through recovery, reuse and recycling	2013-2018
Develop a mechanism for storage of unwanted ODS including HCFC.	2013-2030
Conversion of foam insulation in domestic refrigeration manufacturing to non-HCFC technology (Mabe)	2011-2013
Information, public educating and communication	2011-2020
Project management and monitoring	2012-2020

#### Conversion in the foam sector

13. The HPMP includes an investment proposal for the conversion of Mabe. Mabe is the largest user of HCFC-141b in fully formulated polyols in Costa Rica. It produces polyurethane rigid insulation foam for domestic refrigerators. Annually, the company produces almost 400,000 units of domestic refrigerators which it supplies to Central America. Based on technical and economic considerations of available non-HCFC technologies, Mabe will replace 14 ODP tonness (127.4 mt) of HCFC-141b used as a blowing agent with cyclopentane at a cost of US \$1,636,179, of which US \$641,509 are being requested from the Multilateral Fund with the remainder (US \$994,670) constituting a financial counterpart by the company. The capital costs requested for Mabe include storage and blending of HC (US \$220,000), retrofitting the foam equipment for HC use (US \$465,000), safety related equipment (US \$467,200) as well as trials, training, testing and a safety audit (US \$150,000) and contingencies (US \$130,220) for a total of US \$1,432,420. Incremental operating costs were estimated at US \$203,760. The cost-effectiveness of the project was calculated at US \$12.84/kg. The company is 48.5 per cent foreignowned and will provide counterpart funding at the level indicated above.

#### Cost of the HPMP

- 14. The total cost of stage I of the HPMP has been estimated at US \$1,201,509 based on the estimated baseline of 339.7 mt (24.6 ODP tonnes). This will result in a 35 per cent reduction in HCFC consumption by 2020, of 118.9 mt.
- 15. The detailed cost breakdown for stage I activities is listed in Table 6.

Table 6: Total cost of stage I HPMP

Description of Activities	Funds requested (US\$)
Build capacity of service technicians and professionals	48,000
Establish a mechanisms that facilitate users' selection of efficient	60,000
equipment, incentives system that promotes the commercialization	
of equipment with the eco-efficiency seal	
Update the import and export control systems for reliable and easy	80,000
to access for authorized users	

Description of Activities	Funds requested (US\$)
Strengthen capacity of HCFC recovery and use	105,000
Establish a mechanism for storage of unwanted ODS including	155,000
HCFCs	
Programme management and monitoring	112,000
Sub- Total	560,000
Conversion of HCFC-141b in the production of PU rigid	641,509
insulation foam for domestic refrigeration in Mabe	
TOTAL	1,201,509

#### SECRETARIAT COMMENTS AND RECOMMENDATION

## **COMMENTS**

16. The Secretariat reviewed the HPMP for Costa Rica 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 60<sup>th</sup> meeting (decision 60/44), subsequent decisions on HPMPs made at the 62<sup>nd</sup> and 63<sup>rd</sup> meetings and the 2011-2014 business plan of the Multilateral Fund.

## Issue related to HCFC consumption

- 17. The Secretariat provided comments and observations on the methodology of the data collection and survey and analysed the information provided in the HPMP. It noted that while the survey was comprehensive, it did not verify historical data earlier than 2009 but rather concentrated on the existing installed HCFC stock in current equipment from 2009. It also noted that following a close verification of 2009 HCFC imports and of other data gathered through the survey, the HPMP was able to confirm consistency between data submitted under Article 7 and the survey.
- 18. With regard to the consumption of HCFC-141b contained in imported pre-blended polyols, the Secretariat sought clarification whether this was recorded as consumption in 2009. UNDP confirmed that this was not reported in 2009 as consumption but was reported in 2010. This was taken into account in the calculation of the baseline of 339.7 mt (24.6 ODP tonnes) which was estimated by using the average of the reported actual consumption for 2009 of 232.9 mt (14.2 ODP tonnes) and estimated consumption for 2010 of 446.4 mt (35.0 ODP tonnes) where the 2010 data was based on customs reports. Subsequent to the submission of the HPMP to the Secretariat, Costa Rica had officially submitted its 2010 data under Article 7, which was not consistent with the estimated 2010 data in the HPMP. Based on the reported 2010 data of 379.32 mt (31.7 ODP tonnes) the baseline was recalculated at 306.12 mt (22.95 ODP tonnes). Out of this, the baseline for the refrigeration sector is 206.9 mt.
- 19. The Secretariat noted some discrepancies in the data provided for the amount of HCFC required for the servicing sector as compared to the figure imported into the country, and sought clarification on possible stockpiling. UNDP indicated that the equipment numbers included in the table for servicing were based only on what is currently installed calculated through a percentage of the population, and did not include new equipment that would require HCFC-22 as well. As there has been an increase in total HCFC-based equipment, the HCFC demand would therefore be expected to increase. Based on the above information, the Secretariat considered that the figure obtained from the survey is at a reasonable level.

## Starting point for aggregate reduction in HCFC consumption

20. The Government of Costa Rica has agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the average of the actual consumption in 2009 and 2010 reported under Article 7 of the Montreal Protocol, which has been estimated at 306.12 mt (22.95 ODP tonnes).

## Technical and cost issues

## Refrigeration servicing sector

- 21. The Secretariat reviewed the technical proposal and considered to what extent activities in the servicing sector, particularly training, would draw upon the work already completed with CFC phase-out. UNDP responded that in the case of Costa Rica, training has historically been the most cost-effective tool to promote change and progress, and has proven particularly successful in the implementation of the Montreal Protocol in the country. It also mentioned that the equipment that is envisaged is related to the refrigerant recovery and recycling system and will aim at reinforcing the existing infrastructure built during the earlier CFC phase-out.
- 22. It also sought clarification on a proposal for a demonstration project as part of the overarching refrigeration servicing activities and queried what this would include. UNDP explained that Costa Rica has adopted a very forward looking environmental strategy which includes carbon neutrality by 2021 and green purchases policy by the public sector, which is in the process of being introduced. The technical assistance for demonstration of equipment running on CO<sub>2</sub> and medium scale equipment with ammonia will allow the evaluation of the viability of these technologies under the local conditions and provide opportunities for local industry for more cost-effective and eco-efficient alternatives to HCFCs. These demonstration projects are intended to be completed by 2017.
- 23. The Secretariat also discussed the funding requested for the regulatory framework for HCFCs as it related to decision 54/39, the guidelines for HPMP preparation. UNDP explained that during the preparation of the HPMP, consultations on the effectiveness of the related CFC phase out arrangements were made and options to strengthen the support for HCFC phase out identified. The additional activities that are required to strengthen the regulatory framework to control HCFC consumption are included in stage I and are seen as necessary to create the enabling legal and policy framework to support HCFC phase out. UNDP indicated that several of these interventions are significant additions to the framework that supported the ODS phase out in the country. The quota system for HCFC imports will be in place by 2013.
- 24. Based on the Article 7 data, the maximum level of funding for activities in the servicing sector allowed under decision 60/44 (f)(xii), would be US \$560,000. The activities in the servicing sector were agreed as shown in Table 6.

#### Foam conversion project

25. The Secretariat reviewed the foam conversion project based on guidelines for the calculation of incremental costs, as well as decision 60/44. It sought clarification on some cost elements that were thought to be high based on experience with similar foam projects already approved. UNDP agreed to adjust the cost of the project to US \$1,154,040, of which US \$593,523 is eligible for funding while the rest would constitute counterpart funding from the enterprise, resulting in a cost-effectiveness of US \$9.08/kg.

## Impact on the climate

26. 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<sub>2</sub>-equivalent tonnes saved. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by the country, in particular training for technicians on improved service practice, and refrigerant recovery and reuse, indicate that it is likely that the country will achieve the reduction of 12,700 CO<sub>2</sub>-equivalent tonnes in emission to 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.

27. A calculation of the impact on the climate of the HCFC-141b used in the foam manufacturing enterprise in Costa Rica (Mabe) based only on the GWP values of the blowing agents and their level of consumption before and after conversion is as follows: 127.4 mt of HCFC-141b will be phased out, 82.8 mt HC will be phased in, and 90,709 tonnes of  $CO_2$  that would have been emitted into the atmosphere will have been avoided (Table 8).

**GWP** Substance Tonnes/year CO<sub>2</sub>-eq (tonnes/year) **Before conversion** HCFC-141b 725 127.4 92,365 **After conversion** Cyclopentane 20 82.8 1,656 **Net impact** (90.709)

Table 8: Calculation of the impact on the climate

## Co-financing

28. 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, the Government proposed in the HPMP that it will explore the support of other funding institutions as well as the private sector to co-finance some of the strategic actions included in the HPMP so that the country's commitments can be met in the shortest possible time. The Secretariat encouraged UNDP to urge the Government of Costa Rica to continue exploring such co-financing opportunities for stage II of the HPMP.

#### 2011-2014 business plan of the Multilateral Fund

- 29. UNDP is requesting US \$1,153,523 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2011-2014 of US \$999,237 including support cost is above that in the business plan for the period. The difference in the figures is due to the difference in baseline between business plan and actual HPMP submitted.
- 30. Based on the Secretariat's estimated baseline consumption in the servicing sector of 206.9 mt, the country's allocation up to 2020 reduction should be US \$560,000 in line with decision 60/44.

#### Project management, monitoring and evaluation

31. Monitoring and evaluation activities are planned to take place throughout the implementation period. The OTO will implement and monitor the project activities with the support from UNEP.

#### Draft Agreement

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

#### RECOMMENDATION

- 33. The Executive Committee may wish to consider:
  - (a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Costa Rica for the period 2011 to 2020, at the amount of US \$1,153,523, and agency support costs of US \$86,514 for UNDP, on the understanding that:
    - (i) US \$560,000 was provided to address HCFC consumption in the refrigeration servicing sector to reach up to and including the 35 per cent reduction in 2020 in line with decision 60/44; and
    - (ii) US \$593,523 was provided for the investment component for the phase-out of 14 ODP tonnes of HCFC-141b used in the manufacturing sector.
  - (b) Noting that the Government of Costa Rica had agreed to establish an estimated baseline of 22.95 ODP tonnes as its starting point for sustained aggregate reduction in HCFC consumption, calculated using actual reported consumption of 14.2 ODP and 31.7 ODP tonnes reported for 2009 and of 2010 respectively;
  - (c) Approving the draft Agreement between the Government of Costa Rica and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;
  - (d) Requesting the Fund Secretariat, once the baseline data were known, to update Appendix 2-A to the draft 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
  - (e) Approving the first tranche of stage I of the HPMP for Costa Rica, and the corresponding implementation plan, at the amount of US \$761,523 and agency support costs of US \$57,114 for UNDP.

#### Annex I

# DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF COSTA RICA 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 Uruguay (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 6.8 ODP tonnes by 1 January 2020 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 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 row 4.1.3 (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 ("Funding Approval Schedule").
- 4. 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 ("The Targets, and Funding") 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 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 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 and received approval from the Executive Committee for an annual implementation plan in the form of Appendix 4-A ("Format of 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; and
- (e) That, for all submissions from the 68<sup>th</sup> 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 in an annual implementation plan and approved by the Executive Committee as described in sub-paragraph 5(d) above. Major changes would relate to issues potentially concerning the rules and policies of the Multilateral Fund; changes which would modify any clause of this Agreement; changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and 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 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 annual implementation report; and
  - (c) 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") 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 carrying out the activities of the overall plan with the changes approved as part of the subsequent submissions, 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 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, the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead 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 sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A continue until the time of the completion if not specified by the Executive Committee otherwise.
- 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	С	I	10.03
HCFC-141b	С	I	12.47
HCFC 123	С	I	0.01
HCFC 124	С	I	0.09
HCFC 142b	С	I	0.40
TOTAL HCFCs	С	I	22.95

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

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol	n/a	n/a	23	23	20.7	20.7	20.7	20.7	20.7	15	n/a
	reduction schedule of											
	Annex C, Group I											
	substances											
	(ODP tonnes)											
1.2	Maximum allowable	n/a	n/a	23	23	12	12	12	12	12	6.8	
	total consumption of											
	Annex C, Group I											
	substances											
	(ODP tonnes)			1 10 000		42.000		101000		<b>7</b>		1 1 7 2 7 2 2
2.1	Lead IA UNDP agreed	761,523		168,000		62,000		106,000		56,000		1,153,523
2.2	funding(US \$)	55 114		12 (00		4.650		7.050		4.200		06.714
2.2	Support costs for Lead	57,114		12,600		4,650		7,950		4,200		86,514
2.1	IA(US \$)	7.61.500		160,000		62.000		106,000		56,000		1 152 522
3.1	Total agreed funding	761,523		168,000		62,000		106,000		56,000		1,153,523
3.2	(US \$)	57 114		12,600		4.650		7.050		4 200		06 514
3.2	Total support cost (US \$)	57,114		12,000		4,650		7,950		4,200		86,514
3.3	Total agreed costs	818,367		180,600		66,650		113,950		60,200		1,240,037
3.3	(US \$)	818,307		180,000		00,030		115,930		60,200		1,240,037
4.1.1	,	.22 HCEC.	.143 HCF	<u> </u> FC-124_HC	  FC-142	h (ODP to	nnes) ag	reed to be s	  chieved	under thi	<u> </u>	3.6
4.1.1	Total phase-out of HCFC-22, HCFC-143, HCFC-124, HCFC-142b (ODP tonnes) agreed to be achieved under this Agreement								3.0			
4.1.2	č							n/a				
4.1.3									6.8			
4.2.1								12.47				
4.2.1								n/a				
4.2.3								0				
4.2.3	Temaining engine consumption for fice-1410 (ODF tollies)							U				

## APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval not earlier than the second 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 regarding the progress since the approval of 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 until the planned submission of the next tranche request, 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 the Lead IA; 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 monitoring activities will be carried out within the HPMP Implementation, monitoring and control project, and will include the implementation of all the projects within the HPMP, the regular monitoring of the project implementation and results, the production of periodic reports on project results in order to facilitate corrective actions, the production of timely project progress reports to the Executive Committee, and regular monitoring of market developments and trends at the national and international levels.

#### 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 HPMP;
  - (b) Assisting the Country in preparation of the 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 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 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 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.

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