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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-first Meeting  
Montreal, 2-6 December 2013

**PROJECT PROPOSAL: CAMEROON**

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, second tranche)

UNIDO

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

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (Stage I)	UNIDO (lead)

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2012	73.78 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2012</b>	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b		2.2		0.5		3.5			6.2
HCFC-141b in Imported Pre-blended Polyol		5.1		4.7					9.7
HCFC-142b									
HCFC-22				5.0	33.6	29.0			67.5

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	88.8	Starting point for sustained aggregate reductions:	77.56
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	20.5	Remaining:	57.06

<b>(V) BUSINESS PLAN</b>		2013	2014	2015	2016	2017	Total
UNIDO	ODS phase-out (ODP tonnes)	3.9	0.0	1.3	0.0	1.3	6.4
	Funding (US \$)	193,500	0	63,571	0	63,571	320,642

<b>(VI) PROJECT DATA</b>			2011	2012	2013	2014	2015	2016	2017	Total
Montreal Protocol consumption limits			n/a	n/a	88.8	88.8	79.92	79.92	79.92	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	82.4	82.4	74.2	74.2	65.9	
Agreed Funding (US\$)	UNIDO	Project costs	884,453		180,000		59,136		59,136	1,182,725
		Support costs	66,334		13,500		4,435		4,435	88,704
Funds approved by ExCom (US\$)		Project Costs	884,453	0	0	0	0	0	0	884,453
		Support Costs	66,334	0	0	0	0	0	0	66,334
Total funds requested for approval at this meeting (US\$)		Project Costs	0	0	<b>180,000</b>	0	0	0	0	180,000
		Support Costs	0	0	<b>13,500</b>	0	0	0	0	13,500

<b>Secretariat's recommendation:</b>	For blanket approval
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## PROJECT DESCRIPTION

1. On behalf of the Government of Cameroon UNIDO, as the designated implementing agency, has submitted to the 71<sup>st</sup> meeting of the Executive Committee a request for funding of the second tranche of stage I of the HCFC phase-out management plan (HPMP)<sup>1</sup> at the amount of US \$180,000, plus agency support costs of US \$13,500. The submission includes a progress report on the implementation of the first tranche of the HPMP together with the tranche implementation plan for 2014 to 2015.

### Progress report on the implementation of the first tranche of the HPMP

2. Stage I of the HPMP for Cameroon includes the modification of HCFC related regulations and activities in the foam and refrigeration servicing sector. The results achieved so far are described below.

#### *Policy development*

3. Existing regulations on import, distribution, trading, handling and storage of chemicals, including HCFCs, were evaluated and adjusted. Data collection and reporting on imports of HCFCs and HCFC-based equipment were improved<sup>2</sup> and meetings were held with key departments in the Government to present the HPMP and the current legislative framework for chemicals. The document on standards for refrigeration and air-conditioning (RAC) is under preparation, and will be based on the European standards.

#### *Foam manufacturing sector*

4. Seven portable high-pressure foam dispensers were procured and delivered as part of the project to phase out the use of HCFC-141b in pipe insulation. A methyl formate-based foam system was acquired from South Africa for trials at each beneficiary enterprise.

5. Specifications have been finalized for the safety items needed by the three manufacturers that have converted to methylene chloride in flexible foam. A workshop to demonstrate the use of methyl formate to small and medium size enterprises (SMEs) consuming HCFC-141b in other applications is being organized for 2014.

#### *Refrigeration servicing sector*

6. A train-the-trainers workshop for customs officers was completed with 40 participants who will go on to train operating customs officers and environmental inspectors. The concept, training design and course content for training in good practices for refrigeration technicians has been completed, and the first training sessions are scheduled for the last quarter of 2013 and the first quarter of 2014 for 250 technicians.

### Status of fund disbursement

7. As of August 2013, of the US \$884,453 in funds approved for the first tranche, US \$503,599 had been disbursed (57 per cent). The balance of US \$380,854 will be disbursed in 2014 (Table 1).

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<sup>1</sup>The HPMP for Cameroon was approved by the Executive Committee at its 64<sup>th</sup> meeting to meet the 20 per cent reduction in HCFC consumption by 1 January 2017.

<sup>2</sup> Data on ODS and ODS-based equipment imports is being collected on a daily basis when importers apply for required visas at the National Ozone Unit (NOU). Furthermore, a gap analysis of the global harmonized system for chemicals is being completed to improve HCFC data reporting.

**Table 1. Financial report of the first tranche of the HPMP for Cameroon**

Description	Funds (US \$)		
	Approved*	Disbursed	Balance
Policy development	125,000	75,000	50,000
Investment project rigid PU pipe insulation	214,900	199,745	15,155
Technical assistance flexible foam sector and SMEs	96,000	20,147	75,853
Customs and awareness component	160,000	80,000	80,000
Refrigeration servicing sector	270,000	108,439	161,561
Monitoring and coordination	18,553	18,268	285
<b>Total</b>	<b>884,453</b>	<b>503,599</b>	<b>380,854</b>

Annual plans for the second tranche of the HPMP

8. The main activities to be implemented during the second tranche of stage I of the HPMP include:
- (a) *Policy development:* Further amendment to existing regulations to include the ban on imports of HCFC-141b pure or contained in pre-blended polyols for foams after 2015, and for all other sectors by 2017, the ban on imports of equipment containing HCFC-141b by 2017 and the ban on the manufacturing or installation of new HCFC-based RAC equipment by 2017; and development of a web-based quota and licensing system (US \$25,000);
  - (b) *Technical assistance for the flexible foam sector:* Technical assistance to three manufacturers of flexible foam that have converted to methylene chloride; and training for SMEs in other applications on the use of methyl formate (no additional funding is being requested for activities in the foam sector); and
  - (c) *Refrigeration servicing sector:* Implementation of the technicians' certification scheme and database; supply of recovery equipment, identifiers and tools to certified technicians; and upgrade of one recycling centre to a reclamation facility in 2015 (US \$155,000).

**SECRETARIAT'S COMMENTS AND RECOMMENDATION****COMMENTS**Operational licensing system

9. In line with decision 63/17, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports is in place and that the system is capable of ensuring the country's compliance with the Montreal Protocol's HCFC phase-out schedule.

10. Import authorizations can only be issued when the importer has a valid visa from the National Ozone Unit, which is valid for thirty days. Quotas have already been established up to 2017.

HCFC consumption baseline and starting point

11. At the time of approval of the HPMP, the HCFC baseline for compliance had been estimated at 93.70 ODP tonnes, based on the consumption reported under Article 7 of the Montreal Protocol for 2009 (104.20 ODP tonnes) and an estimated consumption of 83.10 ODP tonnes for 2010.

12. During the preparation of the HPMP, it was found that in 2009, the data reported under Article 7 (104.20 ODP tonnes) was higher than that in the survey (81.70 ODP tonnes) as the use of methylene chloride in flexible foams was mistakenly recorded as HCFC-141b consumption. As a result, the estimated HCFC baseline for compliance based on the consumption data reported under Article 7

(93.70 ODP tonnes) was higher than the one estimated by the country in the HPMP (82.40 ODP tonnes). Consequently, the Government of Cameroon agreed to establish its starting point for sustained aggregate reduction in HCFC consumption at 82.40 ODP tonnes.

13. Since the approval of the HPMP the consumption for 2010 has been reported under Article 7 of the Montreal Protocol at 73.40 ODP tonnes; however, the Government of Cameroon did not submit and does not intend to submit a request for revision of the 2009 consumption to the Ozone Secretariat as it reported the best possible estimates for the years before ratification (2005 to 2009) and found no legal basis for obtaining corrected data. Therefore, the established HCFC baseline for compliance is 88.80 ODP tonnes, based on the consumption reported under Article 7 of the Montreal Protocol for 2009 (104.20 ODP tonnes) and 2010 (73.40 ODP tonnes), and the starting point for sustained aggregate reduction in HCFC consumption is 77.56 ODP tonnes calculated using the consumption of 81.70 ODP tonnes reported under the HPMP survey for 2009 and actual consumption of 73.40 ODP tonnes reported for 2010 (Table 2).

**Table 2. Baseline and starting point for sustained aggregate reduction in HCFC consumption**

Baseline/starting point	2009 (ODP tonnes)	2010 (ODP tonnes)	Average (ODP tonnes)
Estimated baseline (64 <sup>th</sup> meeting)	104.20	83.10	93.70
Starting point (64 <sup>th</sup> meeting) (*)	81.70	83.10	82.40
Established baseline based on Article 7	104.20	73.40	88.80
Revised starting point (*)	81.70	73.40	77.56

(\*) Uses the consumption for 2009 reported under the HPMP survey

14. The Government of Cameroon agreed to maintain the maximum allowable consumption of HCFCs as originally reflected in the Agreement between the Government of Cameroon and the Executive Committee, which is below the HCFC established baseline for compliance and the Montreal Protocol control targets from 2013 to 2017 (Table 3).

**Table 3. Maximum allowable total consumption of HCFCs in Cameroon for stage I of the HPMP**

		2011	2012	2013	2014	2015	2016	2017
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	88.80	88.80	79.92	79.92	79.92
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	82.40	82.40	74.20	74.20	65.90

15. Upon ratification of the Beijing and Montreal amendments in August 2009, the Government of Cameroon developed the HCFC licensing and import quota allocation procedure, which has been successfully enforced since 2011 to accurately monitor and limit consumption to below the baseline level as shown in Table 4.

**Table 4. Article 7 HCFC consumption in Cameroon (2007-2012)**

Substance	2007	2008	2009	2010	2011	2012	Baseline
<b>Metric tonnes (mt)</b>							
HCFC-22	160.00	198.50	1,206.60	1,221.02	1,228.10	1,228.10	1,213.81
HCFC-141b	25.30	35.50	344.20	56.70	56.70	56.7	200.45
<b>Total Article 7 data (mt)</b>	<b>185.30</b>	<b>234.00</b>	<b>1,550.80</b>	<b>1,277.70</b>	<b>1,284.80</b>	<b>1,284.80</b>	<b>1,414.26</b>
<b>ODP tonnes</b>							
HCFC-22	8.8	10.9	66.4	67.2	67.55	67.55	66.80
HCFC-141b	2.8	3.9	37.8	6.2	6.24	6.24	22.00
<b>Total Article 7 ODP tonnes</b>	<b>11.6</b>	<b>14.8</b>	<b>104.2</b>	<b>73.4</b>	<b>73.78</b>	<b>73.78</b>	<b>88.80</b>

### Technical issues

16. With regard to safety considerations in handling methyl formate polyols and their availability and affordability in the country of these polyols once the trials in the assisted enterprises are completed. UNIDO explained that a demonstration activity will take place with the participation of the equipment supplier, the polyols supplier and UNIDO, together with training programmes on spray foam alternatives. The demonstration will be followed by a technical report and a product testing where foam samples will be sent to a certified laboratory in Europe to assess their physical properties. The delivered foaming machines can be used with different formulations (e.g., methyl formate, water-based HFO, or HFC mixtures). The methyl formate based systems will be supplied by a well-established enterprise in South Africa, which has already sent samples for the trials and the training sessions.

17. Concerning the activities in the refrigeration servicing sector, UNIDO indicated that the first tranche focuses, in particular, in updating the code of good practices, a survey on refrigeration sector standards and upgrade of the vocation institute curricula<sup>3</sup>, while the mandatory certification is foreseen in the updated legislation, with application procedures still to be finalized.

### Conclusion

18. The Government of Cameroon has been active in establishing regulations to ensure proper control and handling of HCFCs. Through its quota system the Government has been able to maintain stable consumption below the baseline up to the first control measure. The investment project and the technical assistance in the foam sector are unfolding as planned and the ban on HCFC-141b imports will enter into force after 2015 once all the assisted foam enterprises are converted. While activities in the servicing sector have not yet tangible outputs, they are aimed at enhancing local capacity to operate in a self-sustained manner.

### Revision to the HPMP Agreement

19. The HPMP for Cameroon was approved prior to the establishment of its HCFC baseline for compliance. Accordingly, in approving the HPMP the Executive Committee requested the Secretariat to, *inter alia*, update Appendix 2-A (“The targets, and funding”) to the Agreement with the figures for the maximum allowable consumption, and to notify the Committee of the resulting levels accordingly (decision 64/41(g)). Based on the data reported by the Government of Cameroon under Article 7, the relevant paragraphs of the Agreement have been updated, and a new paragraph has been added to indicate that the updated Agreement supersedes that reached at the 64<sup>th</sup> meeting, as shown in Annex I to the present document. The full revised Agreement will be appended to the final report of the 71<sup>st</sup> meeting.

<sup>3</sup> Initially, the HPMP will support the technician training until vocational institutes and refrigeration associations develop their self-sustained training programmes.

**RECOMMENDATION**

20. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan (HPMP) for Cameroon;
- (b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Cameroon and the Executive Committee, based on the established HCFC baseline for compliance and the revised funding level, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 65<sup>th</sup> meeting, as contained in Annex I to the present document; and
- (c) Further notes that the revised starting point for sustained aggregate reduction in HCFC consumption was 77.56 ODP tonnes, calculated using estimated consumption of 81.70 ODP tonnes reported under the HPMP survey for 2009 and actual consumption of 73.40 ODP tonnes reported for 2010.

21. The Fund Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Cameroon, and the corresponding 2014-2015 tranche implementation plan, with associated support costs at the funding level shown in the table below:

	<b>Project Title</b>	<b>Project Funding (US \$)</b>	<b>Support Cost (US \$)</b>	<b>Implementing Agency</b>
(a)	HCFC phase-out management plan (stage I, second tranche)	180,000	13,500	UNIDO

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**Annex I**

**TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF CAMEROON AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS**

(Relevant changes are in bold font for ease of reference)

1. This Agreement represents the understanding of the Government of Cameroon (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 65.9 ODP tonnes by 1 January 2017 in compliance with Montreal Protocol schedules.

**16. This updated Agreement supersedes the Agreement reached between the Government of Cameroon and the Executive Committee at the 64<sup>th</sup> meeting of the Executive Committee.**

**APPENDICES**

**APPENDIX 1-A: THE SUBSTANCES**

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	<b>66.76</b>
HCFC-141b	C	I	<b>10.80</b>
Total			<b>77.56</b>



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

		2011	2012	2013	2014	2015	2016	2017	Total	
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	<b>88.80</b>	<b>88.80</b>	<b>79.92</b>	<b>79.92</b>	<b>79.92</b>	n/a	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	<b>82.40</b>	<b>82.40</b>	<b>74.20</b>	<b>74.20</b>	<b>65.90</b>	n/a	
2.1	Lead IA (UNIDO) agreed funding (US \$)	884,453	0	180,000	0	59,136	0	59,136	1,182,725	
2.2	Support costs for Lead IA (US \$)	66,334	0	13,500	0	4,435		4,435	88,704	
3.1	Total agreed funding (US \$)	884,453	0	180,000	0	59,136	0	59,136	1,182,725	
3.2	Total support cost (US \$)	66,334	0	13,500	0	4,435	0	4,435	88,704	
3.3	Total agreed costs (US \$)	950,787	0	193,500	0	63,571		63,571	1,271,429	
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)									9.7
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)									0
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)									<b>57.06</b>
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)									<b>10.80</b>
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)									0
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)									0

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