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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-fourth Meeting
Montreal, 18-22 May 2015

PROJECT PROPOSAL: LIBERIA

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

Phase-out

- HCFC phase-out management plan (stage I, second tranche) Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
Liberia

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	Germany (lead)	63rd	35% by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2013	4.51 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2013	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b									
HCFC-142b									
HCFC-22					4.51				4.51

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	5.3	Starting point for sustained aggregate reductions:	5.3
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	1.85	Remaining:	3.45

(V) BUSINESS PLAN		2015	2016	2017	2018	2019	2020	Total
Germany	ODS phase-out (ODP tonnes)	0.8	0.0	0.0	0.0	0.0	0.2	1.0
	Funding (US \$)	142,380	0	0	0	0	35,595	177,975

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	5.3	5.3	4.77	4.77	4.77	4.77	4.77	3.45	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	5.3	5.3	4.77	4.77	4.77	4.77	4.77	3.45	n/a
Agreed funding (US\$)	Germany	Project costs	157,500				126,000					31,500	315,000
		Support costs	20,475				16,380					4,095	40,950
Funds approved by ExCom (US\$)		Project costs	157,500	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	157,500
		Support costs	20,475	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	20,475
Total funds requested for approval at this meeting (US\$)		Project costs	0	0	0	0	126,000	0	0	0	0	0	126,000
		Support costs	0	0	0	0	16,380	0	0	0	0	0	16,380

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Liberia, the Government of Germany as the designated implementing agency, has submitted to the 74th meeting a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$126,000 plus agency support costs of US \$16,380. The submission includes a progress report on the implementation of the first tranche and the tranche implementation plan for 2015 to 2019.

Report on HCFC consumption

HCFC consumption

2. The Government of Liberia reported a consumption of 4.51 ODP tonnes of HCFC in 2013 and estimated a consumption of 4.20 ODP tonnes in 2014. The 2010-2014 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Liberia (2010-2013 Article 7 data)

HCFC	2010	2011	2012	2013	2014*	Baseline
Metric tonnes (mt)						
HCFC-22	100.40	98.40	87.60	82.00	76.40	95.5
Total (mt)	100.40	98.40	87.60	82.00	76.40	95.5
ODP tonnes						
HCFC-22	5.5	5.41	4.82	4.51	4.20	5.3
Total (ODP tonnes)	5.5	5.41	4.82	4.51	4.20	5.3

*Preliminary.

3. The decreasing trend in HCFC-22 consumption is attributed to enforcement of the ODS regulations, including seizure of fake or contaminated refrigerants and imposition of fines on violators of the ODS regulations; training in better refrigeration servicing practices focused on reducing HCFC emissions; availability of alternative refrigerants and their use in air-conditioning units; and nationwide ozone protection awareness initiatives.

Country programme (CP) implementation report

4. The Government of Liberia reported sectoral HCFC consumption data under the 2013 CP implementation report which is consistent with the data reported under Article 7. The 2014 CP report will be submitted by 1 May 2015.

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

5. The following activities were undertaken and successfully implemented.

Legal framework

6. The HCFC import licensing and quota system is operational since 1 January 2012. Importers, wholesalers and industry stakeholders were informed through seminars and meetings about the guidelines and procedures regarding the licensing and quota system.

7. One hundred and six customs officers, environmental inspectors and other law enforcers (out of 200 targeted for stage I) received training on identification of refrigerants, checking import documentation of HCFC imports and other ozone protection-related issues. An inspection team was established to conduct routine inspection of ODS importers' warehouses and shops. The team seized from importers 287 cylinders of contaminated HFC-134a and other refrigerants.

Refrigeration servicing sector

Training and certification programme for refrigeration technicians

8. Fifteen air-conditioning technicians and engineers received training in the safe handling and application of hydrocarbons (HC) as refrigerants, as well as the safe handling and application of nitrogen compressed gas. One hundred sixty-five refrigeration and air-conditioning technicians, out of 300 targeted for stage I, were trained in best servicing practices and the safe handling of HC refrigerants. Technicians were certified upon successful completion of an assessment at the conclusion of the training courses.

Technical assistance programme

9. The National Ozone Unit (NOU) distributed three recovery units to the three regional retrofit centres created during the terminal CFC phase-out management plan. In addition, the NOU distributed six recovery and recycling sets, 12 cylinders of compressed nitrogen gas and 12 tool kits to selected refrigeration and air-conditioning servicing workshops to promote good refrigeration practices.

Awareness and outreach campaign

10. All major stakeholders such as customs officers, commerce inspectors, and other enforcement officers have received training regarding policies and their role in the ODS regulation enforcement process. Information dissemination targeting importers, small enterprises, industrial end-users and consumers has been carried out.

Project implementation and monitoring

11. The NOU, with the assistance of a national refrigeration expert, has ensured that all planned activities of the HPMP are properly coordinated and managed according to schedule. Implementation monitoring and periodic progress reporting on HPMP activities were undertaken in collaboration with major stakeholders, including the Ministry of Commerce and Industry, the Ministry of Finance (Customs and Excise); the German International Agency for Technical Affairs (GIZ), the Environmental Protection Agency (EPA) and the Liberian Refrigeration Union.

Level of fund disbursement

12. As of March 2015, of the US \$157,500 so far approved, US \$139,500 had been disbursed (over 88 per cent of the total funding approved). The balance of US \$18,000 will be disbursed in 2015.

Implementation plan for the second tranche of the HPMP

13. During the second funding tranche of the HPMP, the Government of Liberia will implement the following activities:

- (a) *Legal framework (US \$23,000)*: A minimum of three customs training sessions will be conducted targeting 45 customs officers. Five refrigerant identifiers will be distributed to the customs department, including at least one identifier suitable for identifying blends;
- (b) *Technical assistance and training for the refrigeration servicing sector (US \$56,000)*: Equipment including an air-conditioning unit and a commercial refrigeration unit will be procured for hands-on training; 160 technicians will be trained in good refrigeration practices and additional recovery units (number to be determined) will be procured with partial contribution from the beneficiaries. The NOU will also assist the Liberian Refrigeration Union in formalizing a technicians' certification scheme;

- (c) *Demonstration for reducing use of HCFCs (US \$28,000)*: Demonstrations on the use of HCFC alternatives will be targeted to include fisheries, cooling in office buildings and hotels, and refrigeration and air-conditioning in local hospitals;
- (d) *Awareness and outreach campaign (US \$9,000)*: One stakeholder workshop will be held to discuss completed and remaining activities of the HPMP; and the awareness strategy will be further implemented using several media channels; and
- (e) *Monitoring and coordination (US \$10,000)*: The NOU with the assistance of the Government of Germany will continue coordinating and monitoring the implementation of the HPMP.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

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

Legal framework

14. 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 and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol. The HCFC import quota for 2015 has been established at 86 mt (4.73 ODP tonnes). For subsequent years, the annual quota will be based on the levels allowed under the Montreal Protocol.

15. The HCFC import licensing system is operated by an inter-agency committee comprising the Liberia Revenue Authority (Bureau of Customs and Excise), the Ministry of Commerce and Industry, the Ministry of Justice and the EPA. All imports are approved and licensed by the EPA. Importers are requested to apply for quotas in December of each year and import licenses are valid for a year starting on 1 January of the next year.

Refrigeration servicing sector

16. In discussing additional tasks being done or planned with training institutes and the customs department to ensure continued, self-sustaining training, the Government of Germany indicated that the NOU, in collaboration with the Bureau of Customs and Excise, prepared a curriculum for training of customs officers in the identification and detection of ODS. In the absence of a customs training school, the EPA continues to provide updates and carry out training for newly employed customs personnel. The NOU also cooperated in the development of the updated refrigeration curriculum for the Monrovia Vocational Training School, the only institute currently offering training in refrigeration.

17. With regard to alternative technologies to HCFCs present in Liberia, the Government of Germany indicated that the most commonly found alternatives are HFCs, while the alternatives being promoted by the HPMP (e.g., R-600a and R-290) are available on a small scale. The Government is currently considering placing a ban on HCFC-based equipment, and the EPA is in consultation with stakeholders to determine the date of said ban and acceptable alternatives to be used.

18. On the issue of retrofits of HCFC-based equipment to flammable alternatives, the Government of Germany clarified that when working with HC refrigerants, it has been made very clear by the trainers in Liberia that it is a conversion process (including change of compressor, electrical parts, and other components) and not a simple retrofit. The trainers have been provided with comprehensive training and all information on international standards and practices required for converting an HCFC-based unit into

an HC-based unit. The priority for the Government of Liberia is to create the conditions for safe handling of flammable refrigerants. A pilot project to convert window units and split air-conditioning units in the NOU building will take place with the participation of the Government of Germany, the vocational training institute and the refrigeration union. This pilot project will serve to collect data to develop the code of practice according to the Liberian conditions. The pilot and the code will be based on the “guidelines for the safe use of HC refrigerants” developed by GIZ Proklima, which follows European standards for the use of HC refrigerants. Once the code of practice is developed, trained technicians with a certificate on handling HC refrigerants would be able to undertake conversions when the conditions related to availability and cost of alternatives are favourable. Technicians must inform the NOU about any possible conversion in advance.

19. Certificates awarded to technicians who successfully complete the technician training course clearly include a disclaimer stating that the technician has been provided with all the necessary know-how for safe handling of HC refrigerants. However, all responsibility lies solely with the holder of the certificate when it comes to implementing these safety standards in the field. In this way neither the Government of Liberia, nor the project are responsible for any instances of malpractice on the part of technicians. A recognized certification scheme has not been fully developed in Liberia yet. The EPA is currently working with the refrigeration union to establish a workable and credible scheme that will help formalize the refrigeration and air-conditioning sector.

Revision to the HPMP Agreement

20. In approving the HPMP the Executive Committee requested the Secretariat, once the baseline data were known, to *inter alia* update Appendix 2-A (“The targets, and funding”) to the Agreement with 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 (decision 63/36(d)). Based on the established HCFC baseline (5.3 ODP tonnes, calculated using actual consumption of 5.0 ODP tonnes and 5.5 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol), the relevant paragraph of the Agreement has been updated, and a new paragraph 16 has been added to indicate that the updated Agreement supersedes that reached at the 63rd meeting, as shown in Annex I to the present document. The established baseline will not affect the funding approved for Liberia. The full revised Agreement will be appended to the final report of the 74th meeting.

Conclusion

21. The Secretariat acknowledges with appreciation the efforts made by the Government of Liberia in implementing stage I of the HPMP and in timely submitting the progress report and request for the second tranche, despite the recent Ebola crisis. The Secretariat also noted that the Government of Liberia has established an HCFC import licensing and quota system that is operational and will enable HCFC consumption reductions in line with the Montreal Protocol’s phase-out schedule. The NOU has strengthened the vocational training institute and the customs department to achieve the training targets and to be in conditions to provide future training. Through the HPMP, the Government has also encouraged the introduction of low-GWP alternatives in the refrigeration and air-conditioning sector and provided training to technicians with emphasis on the safe handling of flammable refrigerants. Further work on establishing technician certification and on setting adequate conditions for the introduction of alternative refrigerants will continue under stage I. The level of fund disbursement is also over 88 percent of the total funding so far approved.

RECOMMENDATION

22. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan (HPMP) for Liberia;
- (b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Liberia and the Executive Committee, based on the established HCFC baseline for compliance, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 63rd 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 5.3 ODP tonnes, calculated using actual consumption of 5.0 ODP tonnes and 5.5 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol.

23. The Fund Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Liberia, and the corresponding 2015-2019 tranche implementation plan, at the funding level shown in the table below, on the understanding that if Liberia were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in refrigeration and air-conditioning equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols:

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, second tranche)	126,000	16,380	Germany

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF LIBERIA 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 Liberia (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 **3.45** ODP tonnes prior to 1 January 2020 in compliance with Montreal Protocol schedules.

16. The updated Agreement supersedes the Agreement reached between the Government of Liberia and the Executive Committee at the 63rd meeting of the Executive Committee.

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	5.3

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013-2014	2015-2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	5.3	4.77	3.45	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	5.3	4.77	3.45	n/a
2.1	Lead IA Germany agreed funding(US \$)	157,500			126,000	31,500	315,000
2.2	Support costs for Lead IA(US \$)	20,475			16,380	4,095	40,950
3.1	Total agreed funding (US \$)	157,500			126,000	31,500	315,000
3.2	Total support cost (US \$)	20,475			16,380	4,095	40,950
3.3	Total agreed costs (US \$)	177,975			142,380	35,595	355,950
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)						1.85
4.1.2	Phase-out of to be achieved in previously approved projects (ODP tonnes)						0.00
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						3.45