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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninety-third Meeting  
Montreal, 15-19 December 2023  
Item 9(c) of the provisional agenda<sup>1</sup>

**PROJECT PROPOSAL: LIBERIA**

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

Technical assistance

- Additional activities to maintain energy efficiency in the servicing sector under decision 89/6(b) Germany

<sup>1</sup> UNEP/OzL.Pro/ExCom/93/1

## PROJECT DESCRIPTION

### Background

1. Stage II of the HCFC phase-out management plan (HPMP) for Liberia was approved at the 90<sup>th</sup> meeting<sup>2</sup> of the Executive Committee at a total cost of US \$585,000, plus agency support costs for UNEP and for UNIDO, on the understanding that no more funding from the Multilateral Fund would be provided for the phase-out of HCFCs. The second tranche of the HPMP will be submitted in 2025.

2. On behalf of the Government of Liberia, the Government of Germany, as the designated implementing agency, has submitted a request for funding additional activities to strengthen energy efficiency in refrigeration and air-conditioning (RAC) servicing and to promote the use of energy-efficient refrigerants with low global-warming potential (GWP) in line with decisions 89/6 and 92/22, in the amount of US \$100,000, plus agency support costs of US \$13,000.<sup>3</sup> The submission contains a description of specific activities, targets, and performance indicators, and an implementation plan for 2024-2025.

### Report on HCFC consumption

3. The Government of Liberia reported consumption of 0.83 ODP tonnes of HCFCs in 2022, which is 84 per cent below the HCFC baseline for compliance and 51 per cent below the maximum allowable HCFC consumption level. The 2018-2022 HCFC consumption is shown in table 1.

**Table 1. HCFC consumption in Liberia (2018-2022 Article 7 data)**

HCFC-22	2018	2019	2020	2021	2022	Baseline
Metric tonnes (mt)	32.36	14.18	28.73	26.18	15.13	96.36
ODP tonnes	1.78	0.78	1.58	1.44	0.83	5.3

4. The reduction in HCFC imports can be attributed to the enforcement of regulations regarding the ozone-depleting substances (ODS), including the licensing and quota system, as well as training provided to customs officers and in the refrigeration servicing sector under the HPMP, the availability and use of alternative refrigerants in RAC units (e.g., HFC-134a and R-410A), and robust nationwide initiatives to raise awareness on the protection of the ozone layer. The political challenges occurring in 2019 and the COVID-19 pandemic have also disrupted regular economic activity in the country, resulting in additional reductions in HCFC imports.

### *Country programme implementation report*

5. The Government of Liberia reported its HCFC sector consumption data under the 2022 country programme implementation report, consistent with the data reported under Article 7 of the Montreal Protocol.

### Project description

6. The Government of Liberia is implementing its HPMP and making efforts to enhance energy efficiency during the phase-out of HCFCs and in preparation for HFC phase-down.

7. The proposal builds upon the successful implementation of the HPMP, coupled with the initiatives of the Southern African Development Community (SADC) to develop regional minimum energy

<sup>2</sup> Annex XIV of document UNEP/OzL.Pro/ExCom/90/40

<sup>3</sup> As per the letter of 3 April 2023 from the Environmental Protection Agency of Liberia to the Multilateral Fund Secretariat.

performance standards (MEPS). Since the country has no RAC equipment manufacturers, the Government has expressed the need to adjust the SADC MEPS<sup>4</sup> to the national circumstances.

8. The national Electricity Regulatory Commission and the Standards Authority are integral to adjusting the SADC MEPS to local circumstances. The National Ozone Unit (NOU) will work closely with the Standards Authority to establish the national technical committee to assess the SADC MEPS and their applicability. The NOU will join the technical committee in providing specific guidance to the Electricity Regulatory Commission and the Standards Authority on the country's commitments under the Montreal Protocol.

9. The Environmental Protection and Management Law of 2002, which gives the Environmental Protection Agency (EPA) jurisdiction in implementing and enforcing energy efficiency and conservation, will incorporate the regulations to include MEPS as a mandatory requirement for importing RAC equipment into the country. Henceforward, EPA will issue the necessary permits to import MEPS-compliant RAC equipment and maintain the registry of such equipment.

10. This project proposal is being submitted for activities listed in subparagraphs (ii), (iii) and (v) of decision 89/6(b). Its objectives are to sustain the HCFC phase-out, promote energy-efficient and low-GWP alternatives in RAC equipment, build relevant officers' capacity to adopt and implement MEPS, and incorporate energy-efficiency considerations in the RAC training manuals. These activities will help the country to move towards efficient and timely completion of total HCFC phase-out.

11. The activities to maintain energy efficiency in the servicing sector comprise three lines of actions:
- (a) Improve the coordination and collaboration between stakeholders, the relevant energy authorities and the NOU, and create a regulatory framework for issuing the MEPS<sup>5</sup> mandatory requirements for importing RAC equipment into the country, including the design of a monitoring, reporting, and verification (MRV) system;
  - (b) Conduct awareness and outreach programmes to promote the introduction of MEPS and labelling systems; and
  - (c) Update the training curriculum and materials to reinforce components related to good practices and energy efficiency in RAC servicing.<sup>6</sup>

### Implementation plan

12. As submitted, the project is expected to be completed within 18 months of approval, with the following activities to be implemented between January 2024 and June 2025:

- (a) Surveying the types of RAC equipment entering the country and their energy-efficiency rating, to be carried out by a local consultant hired to review customs data; and organization of visits to large importers of RAC equipment, including the second-hand market (US \$5,000);

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<sup>4</sup> Currently, the SADC MEPS only cover air-conditioning units with capacity under 16kW, while the country is willing to also include in their scope other types of equipment, such as multi-split units.

<sup>5</sup> The planned MEPS will regulate domestic refrigerators and freezer units in line with regulation IEC 62552-2015, as well as single-split air conditioners and multi-split systems with capacity rated at 65kW or less.

<sup>6</sup> While the support for training institutes is an important component for the adoption of MEPS in Liberia, the inclusion of this activity will depend on the time and effort required for its implementation. The Government is considering giving priority to MEPS development and if there are funds remaining, will consider actions directed at building the capacity of training institutes and developing new training curricula for energy efficiency.

- (b) Assessment and adjustment of the regionally developed SADC MEPS by the Standards Authority in close coordination with the Electricity Regulatory Commission (US \$3,000);
- (c) Consultation meetings and workshops held for relevant stakeholders<sup>7</sup> to discuss their needs, agree on the MEPS' contents and associated labelling for RAC equipment, and develop implementation modalities (US \$10,000);
- (d) A two-day training held for 15 officers from the Standards Authority, Electricity Regulatory Commission, Customs Department, the NOU, and other organizations, to build capacity in effectively updating and managing MEPS rates based on market data analysis (US \$20,000);
- (e) Drafting of regulations for mandating MEPS and the associated labelling system for the formal approval of the Cabinet (US \$8,500);
- (f) Design and development of an MRV system according to the Customs framework and available resources<sup>8</sup> (US \$8,500);
- (g) Provision of technical support and guidance to national consultants by an international MEPS expert on designing the data collection survey and developing, drafting, and finalising the MEPS regulations, including procedures for their application and monitoring, based on the best regional and international practices (US \$15,000);
- (h) Awareness raising to promote the MEPS and labelling systems among RAC equipment importers and retailers, building contractors, installation and servicing workshops, end users, and general consumers (US \$8,000); and
- (i) Technical support for two RAC training institutes to revise their curriculum and training materials to reinforce components related to good practices and energy efficiency in RAC servicing (US \$22,000).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

13. The Secretariat sought additional information from the Government of Germany on the overall benefit of the project for the country once it had completed its HPMP and phased out HCFCs; whether the country had an energy-efficiency compliance infrastructure in place to support the project; how the proposed activities would contribute to the adoption of low-GWP alternatives; and whether there were measures in place to ensure the sustained implementation of the labelling system as a mandatory programme.

14. The Government of Germany confirmed that the project built upon HPMP activities, including the ban on HCFC-based equipment imports effective as of 1 January 2024. The proposed outreach and awareness activities and the collaboration among the Customs Department, Energy and Standards Authorities, the NOU, and other stakeholders will ensure that the labelling programme on MEPS and low-GWP refrigerants will allow controlling the type of equipment entering the country in replacement of

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<sup>7</sup> Including representatives of government authorities (departments of energy, environment, customs, and trade), industry, importers, academic and research institutions, and non-governmental organizations.

<sup>8</sup> The Government of Liberia has yet to adopt the electronic "Customs Single Window" system for authorizing imports, and it faces overall constraints of limited resources, especially regarding border posts that are not electronically connected.

the HCFC-based appliances. Furthermore, the MEPS might also be a way to regulate the second-hand equipment market, which is currently working indiscriminately.

15. In response to the Secretariat's enquiry about potentially banning equipment imports older than 10 years, the Government of Germany responded that understanding the type of equipment entering the market was a prerequisite to exploring various regulatory options. The Government of Liberia considers that the country's economic situation, with 64 per cent of the population living in poverty, poses a challenge, particularly regarding restrictions on second-hand RAC equipment. Given that a significant proportion of the population cannot afford new RAC equipment, banning the imports of all second-hand appliances is not feasible. It is therefore essential to adopt an approach that balances energy-efficiency goals with the socio-economic realities of the population.

16. Regarding the MRV system, the Government of Germany pointed out that it would be helpful to the NOU if more accurate data were collected on all types of equipment entering the country, providing a more detailed inventory for developing appropriate interventions in the servicing sector in the future. However, since the country has yet to adopt the electronic "Customs Single Window" system, the project will incorporate the design and plan for a mechanism to implement the MRV of the equipment imported under MEPS. The permit process for importing RAC equipment would likely be the most suitable method to implement the requirements of an MRV system.

17. The Secretariat held discussions with the Government of Germany on the budget and expected results of the proposed activities, including the content of information and training materials, as well as planned approaches and specific activities to inform and influence consumers' decisions. After discussion, the Government of Germany, on behalf of the country, proposed to withdraw the activities to support the training institutions<sup>9</sup> and to allocate more funding to coordination meetings to discuss and adjust MEPS and raise awareness, with corresponding rationalization of related budget items. Table 2 presents the revised activities and agreed funding.

**Table 2. Agreed funding for activities to maintain energy efficiency in the servicing sector for Liberia**

Activity	Sub-activity description	Budget (US \$)
Drafting of the regulatory framework	Carrying out a survey of imports of new and second-hand equipment by a national expert	5,000
	Assessment and adjustment of regionally developed MEPS to national circumstances	3,000
	Organization of at least three consultation workshops for 15 participants and of five small meetings for relevant stakeholders to discuss MEPS, associated labelling requirements, and modalities for their implementation	17,000
	Organization of a two-day training for 15 officers from <i>inter alia</i> the Standards Authority, the Electricity Regulatory Commission, the Customs Department, and the NOU, to build capacity in effectively updating and managing MEPS rates based on market data analysis	20,000
	Drafting of regulations for mandating MEPS and the associated labelling system for the formal approval of the Cabinet	10,000
	Designing and development of an appropriate MRV system	17,000
	Provision of technical support and guidance on MEPS and related regulations by an international expert	15,000
	<i>Subtotal</i>	<i>87,000</i>
Awareness raising and outreach	Building awareness and advertising through news publications on the adoption of MEPS, development of informative posters for distribution at local RAC equipment outlets, and organization of two outreach seminars for the private sector and government officers on	13,000

<sup>9</sup> Liberia decided to include the support to the RAC training institutions as part of its KIP proposal.

Activity	Sub-activity description	Budget (US \$)
	MEPS provisions and the benefits of energy-efficient RAC equipment	
	<i>Subtotal</i>	<i>13,000</i>
	<b>TOTAL</b>	<b>100,000</b>

### Gender policy implementation

18. In accordance with decisions 84/92(d) and 90/48(c), the Government of Liberia, with assistance from the Government of Germany, will incorporate gender mainstreaming into the implementation of project activities and report on specific indicators developed for the project.

### Updated Agreement

19. In view of the addition of the Government of Germany as a cooperating implementing agency, the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector, and the accordingly revised funding schedule, the Agreement between the Government of Liberia and the Executive Committee for stage II of the HPMP has been updated. Specifically, Appendix 2-A has been revised, paragraphs 9 and 10 have been modified, and paragraph 17 has been added to indicate that the updated Agreement supersedes that reached at the 90<sup>th</sup> meeting, as contained in annex I to the present document. The updated Agreement will also be appended to the final report of the 93<sup>rd</sup> meeting.

### Conclusion

20. The proposed project being submitted under decision 89/6(b) builds upon a previous regional MEPS development project, with complementary activities to make MEPS mandatory for importing RAC equipment and to introduce a suitable monitoring system for tracking and verifying compliance with the MEPS. The project will also build a framework for considering actions related to energy efficiency in supporting activities for the uptake of low-GWP energy-efficient technologies and in regulating the second-hand equipment market.

### RECOMMENDATION

21. The Fund Secretariat recommends blanket approval of the project for additional activities for the introduction of alternatives to HCFCs with low or zero global-warming potential and for maintaining energy efficiency in the refrigeration servicing sector in Liberia, and the corresponding 2024-2025 implementation plan, at the funding level shown in the table below, on the understanding that the Fund Secretariat has updated the Agreement between the Government of Liberia and the Executive Committee for stage II of the HCFC phase-out management plan, as contained in annex I to the present document, specifically: Appendix 2-A, based on the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector, paragraphs 9 and 10, based on the addition of the Government of Germany as a cooperating implementing agency, and paragraph 17 that has been added to indicate that the updated Agreement supersedes that reached at the 90<sup>th</sup> meeting.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	Additional activities for the introduction of alternatives to HCFCs with low or zero global-warming potential and for maintaining energy efficiency in the refrigeration servicing sector	100,000	13,000	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 IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN**

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

9. [...] UNEP has agreed to be the lead implementing agency (the “Lead IA”) and UNIDO **and the Government of Germany have** agreed to be the cooperating implementing **agencies** (the “Cooperating IAs”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and/or Cooperating IAs taking part in this Agreement.

10. [...] The Cooperating IAs will support the Lead IA by implementing the Plan under the overall coordination of the Lead IA. The roles of the Lead IA and Cooperating IAs are contained in Appendix 6-A and Appendix 6-B, respectively. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IAs with the fees set out in rows 2.2, 2.4, **and 2.6** of Appendix 2-A.

17. **This updated Agreement supersedes the Agreement reached between the Government of Liberia and the Executive Committee at the 90<sup>th</sup> meeting of the Executive Committee.**

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

Row	Particulars	2022	2023	2024	2025	2026-2029	2030	Total	
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	3.45	<b>3.45</b>	<b>3.45</b>	1.72	1.72	0.00	n/a	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	1.70	<b>1.50</b>	<b>1.50</b>	0.74	0.74	0.00	n/a	
2.1	Lead IA (UNEP) agreed funding (US \$)	116,000	<b>0</b>	<b>0</b>	164,012	0	58,500	338,512	
2.2	Support costs for Lead IA (US \$)	15,080	<b>0</b>	<b>0</b>	21,322	0	7,605	44,007	
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	135,595	<b>0</b>	<b>0</b>	110,893	0	0	246,488	
2.4	Support costs for Cooperating IA (US \$)	12,204	<b>0</b>	<b>0</b>	9,980	0	0	22,184	
<b>2.5</b>	<b>Cooperating IA (Germany) agreed funding (US \$)</b>	<b>0</b>	<b>100,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,000</b>	
<b>2.6</b>	<b>Support costs for Cooperating IA (US \$)</b>	<b>0</b>	<b>13,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,000</b>	
3.1	Total agreed funding (US \$)	251,595	<b>100,000</b>	<b>0</b>	274,905	0	58,500	<b>685,000</b>	
3.2	Total support costs (US \$)	27,284	<b>13,000</b>	<b>0</b>	31,302	0	7,605	<b>79,191</b>	
3.3	Total agreed costs (US \$)	278,879	<b>113,000</b>	<b>0</b>	306,207	0	66,105	<b>764,191</b>	
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								3.45
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								1.85
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								0

\*Date of completion of stage I as per stage I Agreement: 31 December 2021