



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/90/29

26 May 2022

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninetieth Meeting
Montreal, 20-23 June 2022
Items 9(a) and (d) of the provisional agenda¹

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 II, first tranche) UNEP and UNIDO

¹ UNEP/OzL.Pro/ExCom/90/1.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Liberia

(I) PROJECT TITLE	AGENCY
HCFC phase-out plan (stage II)	UNEP (lead), UNIDO

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2020	1.58 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2021		
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Serviceing				
HCFC-22					1.44				1.44

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	5.30	Starting point for sustained aggregate reductions:	5.30
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	1.85	Remaining:	3.45

(V) BUSINESS PLAN		2022	2023	2024	Total
UNEP	ODS phase-out (ODP tonnes)	0.43	0	0	0.43
	Funding (US \$)	73,125	0	0	73,125
UNIDO	ODS phase-out (ODP tonnes)	0.67	0	0.84	1.51
	Funding (US \$)	92,595	0	98,244	190,839

(VI) PROJECT DATA		2022	2023-2024	2025	2026-2029	2030	Total	
Montreal Protocol consumption limits		3.45	3.45	1.72	1.72	0	n/a	
Maximum allowable consumption (ODP tonnes)		1.70	1.50	0.74	0.74	0	n/a	
Project costs requested in principle (US \$)	UNEP	Project costs	116,000	0	164,012	0	58,500	338,512
		Support costs	15,080	0	21,322	0	7,605	44,007
	UNIDO	Project costs	135,595	0	110,893	0	0	246,488
		Support costs	12,204	0	9,980	0	0	22,184
Total project costs requested in principle (US \$)		251,595	0	274,905	0	58,500	585,000	
Total support costs requested in principle (US \$)		27,284	0	31,302	0	7,605	66,191	
Total funds requested in principle (US \$)		278,879	0	306,207	0	66,105	651,191	

(VII) Request for approval of funding for the first tranche (2022)		
Implementing agency	Funds requested (US \$)	Support costs (US \$)
UNEP	116,000	15,080
UNIDO	135,595	12,204
Total	251,595	27,284

Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

Background

1. On behalf of the Government of Liberia, UNEP as the lead implementing agency has submitted a request for stage II of the HCFC phase-out management plan (HPMP), at a total cost of US \$651,191, consisting of US \$338,512, plus agency support costs of US \$44,007 for UNEP and US \$246,488, plus agency support costs of US \$22,184 for UNIDO, as originally submitted.² The implementation of stage II of the HPMP will phase out the remaining consumption of HCFCs by 2030.

2. The first tranche of stage II of the HPMP being requested at this meeting amounts to US \$253,809, consisting of US \$116,000, plus agency support costs of US \$15,080 for UNEP and US \$112,595, plus agency support costs of US \$10,134 for UNIDO, as originally submitted.

Status of implementation of stage I of the HPMP

3. Stage I of the HPMP for Liberia was originally approved at the 63rd meeting³ and revised at the 74th meeting⁴ to phase out 1.85 ODP tonnes of HCFCs used in the refrigeration and air-conditioning (RAC) servicing sector to meet the 35 per cent reduction from the baseline by 2020, at a total cost of US \$315,000, plus agency support costs. Stage I of the HPMP was completed in December 2021, as stipulated in the Agreement between the Government of Liberia and the Executive Committee.

HCFC consumption

4. The Government of Liberia reported under the country programme (CP) implementation report a consumption of 1.44 ODP tonnes of HCFC in 2021, which is almost 73 per cent below the HCFC baseline for compliance. The Article 7 data for 2021 has not been reported yet. The 2017-2021 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Liberia (2017-2021 Article 7 data)

HCFC-22	2017	2018	2019	2020	2021*	Baseline
Metric tonnes (mt)	42.10	32.40	14.20	28.65	26.14	95.45
ODP tonnes	2.31	1.78	0.78	1.53	1.44	5.30

* CP data

5. The reduction in HCFC imports can be attributed to the enforcement of ozone-depleting substances (ODS) regulations including the licensing and quota system, training activities in customs and the refrigeration servicing sector under the HPMP, the availability and use of alternative refrigerants in RAC units (e.g., HFC-134a and R-410A), as well as robust nationwide ozone-protection awareness initiatives. Challenges and political uncertainty in 2019 and the subsequent COVID-19 pandemic in 2020/2021 also disrupted regular economic activity in the country and resulted in additional reductions in HCFC imports.

CP implementation report

6. The Government of Liberia reported HCFC sector consumption data under the 2020 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

² As per the letter of 10 March 2022 from the Environmental Protection Agency of Liberia to the Secretariat.

³ Decision 63/36, document UNEP/OzL.Pro/ExCom/63/60.

⁴ Decision 74/23, document UNEP/OzL.Pro/ExCom/74/56.

Status of progress and disbursement

Legal framework

7. The Government of Liberia continues to enforce the 2012 ODS regulations to control the import and export of ODS and ODS-based equipment. The national ozone unit (NOU) works closely with customs authorities on implementing the licensing system for HCFCs. An inspection team was established to conduct random inspections of ODS importers' warehouses and shops. The mandatory registration of importers, including an annual report of their imports, is in place. Standards for the safe handling of refrigerants based on the ISO 5149⁵ standard were developed by the Standards Board at the Ministry of Commerce and Industry. Liberia ratified the Kigali Amendment on 12 July 2020, and a draft of the ODS regulations including import controls of HCFC-based equipment and regulations for the implementation of the Kigali Amendment has been prepared for approval by the Policy Council of the Environmental Protection Agency (EPA).

Verification report

8. At the 85th meeting, the Executive Committee decided *inter alia* that the recommendations included in the verification report would be addressed during the implementation of the third and final tranche of stage I and stage II of the HPMP, and that the actions implemented towards that end would be included in the progress report of stage I of the HPMP to be submitted as part of the request for stage II of the HPMP for Liberia (decision 85/35(b)(ii)).

9. The verification report noted *inter alia* that the system of licences, quotas, and permits for the import and export of ODS is effective; a well-coordinated institutional framework has been laid out to track and monitor the ODS import process; and paperwork, records and data at the NOU and customs office are maintained at satisfactory standards. Furthermore, penalties arising from infringements of any provisions of the ODS law are sanctioned.

10. A set of recommendations to strengthen coordination among the NOU, the Department of Customs, and the Foreign Trade Department are already in place. Furthermore, the verifier recommended that the NOU requests data from customs on ODS imports on a quarterly basis, and that the NOU submits to customs the list of registered ODS importers and their quotas on a yearly basis. Other recommendations included strengthening the capacities of customs officers at the border through additional training on the application of ODS regulations; equipping the Customs Department with efficient refrigerant identifiers; delivering posters to the customs checkpoints depicting the new harmonized system (HS) customs codes for refrigerants and carrying out awareness raising among the country's main stakeholders at the national level. UNEP confirmed that those recommendations are in the process of being addressed, and they would be contemplated as part of the implementation of stage II of the HPMP.

Refrigeration servicing sector

11. The main activities carried out included:

- (a) A total of 325 customs and enforcement officers were trained in HCFC import controls and monitoring requirements; one multi-refrigerant identifier was purchased and accessible for controlling suspicious consignments; an electronic registry for Montreal Protocol controlled substances, equipment to issue import licenses, and monitoring processes are being set up and are expected to be operational by end of 2022;

⁵ Specifies the requirements for the safety of persons and property, provides guidance for the protection of the environment, and establishes procedures for the operation, maintenance, and repair of refrigerating systems and the recovery of refrigerants.

- (b) Four trainers from two RAC training institutions attended certified courses in refrigeration and the safe handling of refrigerants in South Africa;⁶ those trainers subsequently trained a total of 420 technicians in best practices in the servicing and repair of RAC systems as well as the safe handling of refrigerants; a scholarship programme was implemented and provided financial assistance to 40 of the best-performing students (including nine women) in covering the course fees; the Monrovia Vocational Training Centre included ozone layer depletion, and the safe handling and application of hydrocarbons (HCs) in its training curriculum in 2016, and approximately 100 students graduated with the new module; a revised Code of Good Servicing Practices was issued⁷;
- (c) The two RAC training institutions received equipment and tools (e.g., one R-410A-based air conditioner, refrigerant charging stations, digital vacuum pumps, manifold gauges, hand tools, clamp-on meters, torque wrench and swaging tool sets) to conduct hands-on training for technicians; six selected RAC servicing workshops each received a recovery and recycling set, two cylinders of compressed nitrogen gas, and two tool kits for promoting good practices; an experience on the use of R-290-based-air conditioners in office buildings was carried out through the conversion⁸ of 16 split units formerly using HCFC-22; and
- (d) An awareness-raising programme on ozone layer protection was implemented through several media channels; awareness material was developed and three one-day workshops were held with main stakeholders to discuss implemented HPMP activities and future courses of action.

Level of fund disbursement

12. As of 1 February 2022, of the US \$315,000 approved for stage I of the HPMP, US \$289,907 had been disbursed. It is expected that the remaining US \$25,093 from the third tranche will be disbursed by 31 May 2022.

Stage II of the HPMP

Remaining consumption eligible for funding

13. After deducting 1.85 ODP tonnes of HCFCs associated with stage I of the HPMP, the remaining consumption eligible for funding for complete phase-out in stage II amounts to 3.45 ODP tonnes of HCFC-22.

Sector distribution of HCFCs

14. There are approximately 830 technicians and 50 workshops in the servicing sector, consuming HCFC-22 to service domestic fridges and cold rooms, as shown in Table 2. HCFC-22 represents 45 per cent of the refrigerants used in the servicing sector, followed by R-410A (19 per cent), HFC-134A (15 per cent), R-404A (13 per cent), R-600A (8 per cent) and others (1 per cent).

⁶ Partially financed by the Green Cooling Initiative, financed by the Government of Germany outside the Multilateral Fund.

⁷ It includes refrigerant recovery, recycling and reclamation, leak testing, safety requirements, record keeping and documentation, handling and storage of refrigerants, and disposal of refrigerants and equipment.

⁸ The country is aware that retrofitting or drop-ins with HCAs or other natural refrigerants is not recommended or encouraged and that all responsibility and liability will lie with the country and this experience is not proposed to be continued in stage II.

Table 2. Estimate of demand for HCFC-22 in the RAC servicing sector in Liberia

Sector/Applications	Equipment inventory (a)	Average charge (kg) (b)	HCFC bank (mt) (c)=(a)*(b)	Estimated bank refilled during servicing (%) (d)	Annual need for servicing (mt) (e)=(c)*(d)
Domestic air-conditioning	295,900	1.5	443.85	2	8.88
Commercial	27,510	7.0	192.57	10	19.26
Transport	196	10	1.96	30	0.59
Total					28.73

Phase-out strategy in stage II of the HPMP

15. Stage II of the HPMP will focus on strengthening the HCFC licensing and quota system enforcement, and on controlling the increase of HFCs demand by promoting the transition to low global-warming-potential (GWP) technologies in the RAC sector, implementing legal instruments related to the safe use of new technologies, further strengthening the capacity of the servicing sector, and establishing a certification scheme for technicians.

Proposed activities in stage II of the HPMP

16. Stage II proposes the following activities:

- (a) *Strengthening the enforcement of ODS phase-out policies and regulations:* Banning the import of HCFC-based equipment as of 1 January 2024; adopting the 2022 HS customs codes in coordination with the Economic Community of West African States and updating the customs training manual; training 15 trainers and 250 customs officers and other law enforcement officers in revised ODS regulations, the revised HS customs codes, and monitoring and control imports of HCFCs and HCFC-based equipment; purchasing of four portable refrigerant identifiers and spare parts (printing paper, filters, spare batteries, spare charger); and facilitating three border dialogues with representatives from neighbouring countries to exchange information on HCFC potential illegal trade (UNEP) (US \$103,112);
- (b) *Establishment of a mandatory certification scheme and training of RAC technicians:*⁹ Hiring an expert to facilitate the establishment of a comprehensive competency-based certification programme for handling HCFCs/HCFC alternatives, and developing a business model for its sustainability; conducting a stakeholders’ workshop for approximately 20 participants to present certification programme rules and processes for feedback; certifying at least 200 RAC technicians; recruiting a national expert to revise and recommend changes in the technicians’ national codes of practice and the refrigeration technicians’ training curricula to include the safe handling of low-GWP alternatives; conducting 10 training workshops for 200 technicians on installing, servicing and maintaining equipment based on low-GWP alternatives; carrying out three targeted awareness workshops for a total of 60 end-users about the need to transit away from HCFCs and the introduction of new technologies such as the natural refrigerants; and three training workshops for 60 members of the Liberian Refrigeration Union on the administration of the certification scheme, codes of conduct and the supervision of the use of the tools and equipment distributed (UNEP) (US \$110,000);
- (c) *Strengthening the existing national technical standards and promoting green procurement in the RAC sector:* Hiring a consultant to revise the existing technical standards in the RAC servicing sector to incorporate energy efficiency and safety considerations related to the

⁹ To be established under a certifying committee joined by the EPA, the Standards Board of Liberia and the Certification Board of the Bureau of Vocational and Technical Education as of 1 December 2023.

use of low-GWP technologies as of 1 January 2025; conducting a stakeholders' workshop for approximately 20 participants to present the revised standards for feedback; conducting two capacity-building workshops for a total of 30 standards officers, environmental inspectors and other relevant stakeholders on the enforcement of the technical standards in the RAC sector; conducting two capacity-building training workshops for 40 procurement officers, from the public and private sector, to promote the procurement of environmentally friendly technologies; including RAC equipment standards in the requirements of quotes and bids conducted by government offices¹⁰ as of 1 January 2025; implementing two sensitization workshops for main stakeholders on the revised standards and green procurement; developing awareness materials (i.e., posters to be distributed to enforcement officers, RAC technicians and importers) and executing six random inspections at borders, importers' warehouses and other storage facilities to enhance compliance with the technical standards. (UNEP) (US \$70,400); and

- (d) *Strengthening the centres of excellence*: Providing equipment (refrigerant identifiers, portable refrigerant recovery units and cylinders for refrigerant recovery, vacuum pumps, charging station for HCs) and tool kits¹¹ to three centres for handling alternative refrigerants for training and making equipment accessible to RAC technicians on demand; establishing a refrigerant recovery and reuse scheme including the development of a business model for the operation of one reclamation centre for multiple refrigerants, drafting terms of reference for conducting a local competitive selection process to determine the host of the reclamation centre, and acquiring the necessary equipment¹² to set up the reclamation centre; promoting the uptake of low-GWP alternatives in the air-conditioning servicing sub-sector through the procurement of six R-290-based split units for training purposes, and a train-the-trainers programme for natural-refrigerant-based equipment for five trainers, who will be able to conduct the national training in good practices and disseminate the knowledge to other technicians under the certification scheme (UNIDO) (US \$246,488).

Project monitoring

17. The system established under stage I of the HPMP will continue into stage II, where the NOU with the assistance of a national refrigeration expert will ensure that all planned activities of the HPMP are properly coordinated and managed according to schedule. Implementation monitoring and periodic progress reporting on HPMP activities will be undertaken in collaboration with major country stakeholders, including the Liberian Refrigeration Union. The cost of those activities for UNEP amounts to US \$55,000 and includes hiring national consultants (US \$30,000); and project monitoring and follow-up activities with the support of the Liberian Refrigeration Union (US \$25,000).

Gender policy implementation

18. The gender policy of the HPMP is derived from the Government's commitment to equality for all citizens as enshrined in the Constitution of the Republic of Liberia and the Human Rights instruments to which the Government is a Party. In line with decision 84/92(d),¹³ in addition to UNEP and UNIDO gender

¹⁰ In coordination with the General Services Agency, which is the authority on public procurement.

¹¹ Manifold gauges and standard hoses (HCFCs, HCs, HFCs, CO₂ and ammonia), portable leak detectors for HCs and CO₂, brazing unit, compression fitting tool, piercing pliers and tube cutters, multi-meters and safety-related servicing tools.

¹² One reclamation unit for multiple refrigerants (non-flammable), a refrigerant identifier, 20 cylinders for 100 lbs and 50 cylinders for 30 lbs; a 1,000-lb storage tank for unintended mixtures, scale for storage tank; ten recovery units and hoses to facilitate the supply of recovered refrigerant.

¹³ Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.

mainstreaming policies, stage II will consider gender equality and women's empowerment, including within the project management team, among consultants, in all training activities and when it comes to including participation in consultation workshops. The NOU will seek input from stakeholders on how to incorporate gender-specific indicators in the planning, implementation, and reporting processes of each component.

Total cost of stage II of the HPMP

19. The total cost of stage II of the HPMP for Liberia has been estimated at US \$585,000 (plus agency support costs), as originally submitted, for achieving a 67.5 per cent reduction from its HCFC baseline consumption by 2025 and 100 per cent by 2030. The proposed activities and cost breakdown are summarized in paragraphs 16 to 17 above.

Activities planned for the first tranche of stage II

20. The first funding tranche of stage II of the HPMP in the total amount of US \$228,595 will be implemented between July 2022 and June 2025 and will include the following activities:

- (a) *Strengthening the enforcement of ODS phase-out policies and regulations:* Banning the import of HCFC-based equipment as of 1 January 2024; adopting the 2022 HS customs codes in coordination with the Economic Community of West African States and updating the customs training manual; training 15 Customs trainers in the revised ODS regulations, the revised HS customs codes, and the monitoring and control of imports of HCFCs and HCFC-based equipment; and facilitating one border dialogue with representatives from neighbouring countries to exchange information on potential illegal trade in HCFCs (UNEP) (US \$15,000);
- (b) *Establishment of a mandatory certification scheme and training of RAC technicians:* Hiring an expert to facilitate the establishment of a comprehensive competency-based certification programme for handling HCFCs/HCFC alternatives, and developing a business model for its sustainability; conducting a stakeholders' workshop for approximately 20 participants to present certification programme rules and processes for feedback; recruiting a national expert to revise and recommend changes in the technicians' national codes of practice and the refrigeration technicians' training curricula to include the safe handling of low-GWP alternatives; conducting five technician training workshops to train 100 technicians in installing, servicing and maintaining equipment based on low-GWP alternatives; carrying out one targeted awareness workshop for approximately 20 end-users about the need to transit away from HCFCs and the introduction of new technologies such as the natural refrigerants; and two training workshops for 40 members of the Liberian Refrigeration Union on the administration of the certification scheme, codes of conduct and the supervision of the use of the tools and equipment distributed; (UNEP) (US \$66,000);
- (c) *Strengthening the existing national technical standards and promoting green procurement in the RAC sector:* Hiring a consultant to revise the existing technical standards in the RAC servicing sector to incorporate energy efficiency and safety considerations related to the use of low-GWP technologies as of 1 January 2025; and conducting a stakeholders' workshop for approximately 20 participants to present the revised standards for feedback (UNEP) (US \$15,000);
- (d) *Strengthening the centres of excellence:* Providing equipment (refrigerant identifiers, refrigerant recovery units, cylinders for refrigerant recovery and vacuum pumps) and tool kits for training in handling alternative refrigerants, and making equipment accessible to

RAC technicians on demand; developing a business model for the operation of one reclamation centre for multiple refrigerants, and drafting terms of reference to conduct a local competitive selection process to determine the host of the reclamation centre; promoting the uptake of low-GWP alternatives in the air-conditioning servicing sub-sector through the procurement of one R-290-based split unit for training purposes and a train-the-trainers programme for natural-refrigerant-based equipment for five trainers, who will be able to conduct the national training on good practices and disseminate the knowledge to other technicians under the certification scheme (UNIDO) (US \$112,595); and

- (e) *Project monitoring* (UNEP) (US \$20,000): Hiring national consultants (US \$10,000); project monitoring and follow-up activities with the support of the Liberian Refrigeration Union (US \$10,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

21. The Secretariat reviewed stage II of the HPMP in light of stage I, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decision 74/50), and the 2022-2024 business plan of the Multilateral Fund.

HCFC phase-out

22. The Secretariat discussed the phase-out targets for 2022 to 2030 keeping in mind the low levels of HCFC-22 consumption reported from 2017 to 2021, and the 2022 HCFC quota issued for 1.70 ODP tonnes (68 per cent reduction from the baseline). Subsequently, UNEP indicated that the Government of Liberia agreed to revise the phase-out schedule with the accelerated reduction steps of 68 per cent by 2022, 72 per cent by 2023, 86 per cent by 2025 and 100 per cent by 2030;

Overarching strategy

23. In addition to meeting the accelerated HCFC consumption reductions, the Government of Liberia proposes to maintain a maximum annual consumption of HCFC in the period from 2030 to 2040 consistent with Article 5, paragraph 8 ter(e)(i) of the Montreal Protocol.¹⁴ The Government further commits to continue establishing strict criteria within its licensing system to monitor the levels of import and the uses of HCFCs during that period to ensure that they are limited to the conditions set by the Montreal Protocol.

24. In line with decision 86/51, to allow for consideration of the final tranche of its HPMP, the Government of Liberia agreed to submit a detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption complies with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the 2030-2040 period, and the expected annual HCFC consumption in Liberia for the 2030-2040 period.

¹⁴ HCFC consumption may exceed zero in any year so long as the sum of its calculated levels of consumption over the ten-year period from 1 January 2030 to 1 January 2040, divided by ten, does not exceed 2.5 per cent of the HCFC baseline.

Technical and cost-related issues

25. Regarding enforcement of the mandatory certification scheme to be established by 1 December 2023, UNEP reported that the NOU would recruit an expert to assess the effectiveness of the certification scheme, and the Liberian Refrigeration Union will ensure that only certified technicians are performing activities in the RAC servicing sector through regular monitoring. The certifying authority will be the EPA in collaboration with the Standards Board of Liberia and the Technical Vocational Education and Training Certification Board. The RAC technicians will be paying a fee for the certification process to assure its sustainability.

26. In the discussions with UNIDO on the tentative list of tools and equipment for the three centres of excellence, the initial first tranche allocation was not sufficient to cover the cost of providing tools to the three centres. As a result, redistribution of the first and second tranche allocations for more cost-effective implementation was required. The redistribution includes an increase of US \$23,000 for the first tranche and a corresponding reduction in the second tranche. With the remaining budget of US \$27,000 proposed for acquiring tools and equipment in the second tranche, UNIDO and the NOU will conduct a needs assessment of the servicing technician sector and submit a proposal aimed at supporting the technicians and the Liberian Refrigeration Union with manuals, tools, and equipment.

27. Given that members of two RAC training institutions have already attended a certified refrigeration course including the safe handling of refrigerants, in South Africa, the Secretariat enquired why UNIDO proposed an additional train-the-trainer activity. UNIDO responded that three out of four of those trainers had been given the opportunity to go for further studies abroad, and it was not sure whether they would return to their jobs in the country. UNIDO added that to mitigate the risk of repeating that situation in the future, the project team would sign an after-training service agreement with trainees, ensuring that they serve within the RAC sector in the country for an agreed period post-training. Furthermore, UNIDO confirmed that the Government of Liberia was aware of decisions 72/17 and 73/34, and no retrofitting activities were planned to promote the uptake of low-GWP alternatives in the air-conditioning servicing sub-sector.

28. Regarding establishing a recovery and reuse scheme, UNIDO will support Liberia in developing the business model as part of the first tranche implementation plan. Based on the findings and the recommendations of that model, the implementation of the scheme in one selected centre will take place during the second tranche. If the study concludes that the reclamation station is not feasible, other activities will be proposed in the submission for the second tranche.

Sustainability of the activities proposed under stage II

29. UNEP reported that to ensure the sustainability of the customs training beyond the HPMP timeline, a module on ODS controls has already been integrated in the regular training for new customs officers and it will be updated with issues such as the Kigali Amendment. The customs training manual has already been amended and includes new issues.

30. Regarding the technician training programme, the NOU, in collaboration with the Monrovia Vocational Training Center, facilitated the review of the RAC training curriculum to include updated issues of ozone layer depletion, safe handling of HCFC alternatives including HCs. The curriculum has been and will continue to be updated as relevant and is currently being used for training purposes. To mitigate the risk of certified trainers leaving their jobs before training other trainers, an after-training service agreement with certified trainers will be required to ensure that they serve within the RAC sector in the country for an agreed period post-training.

31. UNEP confirmed that the Ministry of Education and Vocational Training includes the centres of excellence in its budget; therefore, salaries, operational costs, and equipment maintenance are funded. Furthermore, a public awareness campaign would be developed to promote the services of the centres of excellence and in turn generate revenues contributing to their sustainability.

32. All these activities will contribute to the sustainable phase-out of HCFCs beyond the completion of the HPMP.

Total project cost

33. The total cost for stage II of the HPMP amounts to US \$585,000, based on decision 74/50(c)(xii) on the eligible funding level for a low-volume-consuming country.

34. Initially, UNEP had proposed a third and final tranche of US \$52,000. However, the Secretariat requested UNEP to revise the third tranche according to decision 62/17 on the last funding tranche of the HPMP. Considering the redistribution of tranche allocations for UNEP and the corresponding change for UNIDO, as described in paragraph 26, the funding requested for the first, second and third tranches was adjusted as shown in Table 3.

Table 3. Original and revised tranche distribution (US \$)

Implementing agency		First tranche	Second tranche	Third tranche	Total
UNEP	As submitted	116,000	170,512	52,000	338,512
	Revised	116,000	164,012	58,500	338,512
UNIDO	As submitted	112,595	133,893	0	246,488
	Revised	135,595	110,893	0	246,488

Impact on the climate

35. The activities proposed in the servicing sector, which include better containment of refrigerants through training and the provision of equipment, will reduce the amount of HCFC-22 used for RAC servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in savings of approximately 1.8 CO₂-equivalent tonnes. A calculation of the impact on the climate was provided in the HPMP. The activities planned by Liberia, including its efforts to promote low-GWP alternatives, as well as refrigerant recovery and reuse, indicate that the implementation of the HPMP will reduce the emission of refrigerants into the atmosphere, resulting in climate benefits.

Co-financing

36. The Government of Liberia through the EPA will provide in-kind support by providing personnel and logistics as needed.

2022-2024 Draft business plan of the Multilateral Fund

37. UNEP and UNIDO are requesting US \$651,191, plus agency support costs, for the implementation of stage II of the HPMP for Liberia. The total requested value of US \$278,879, including agency support costs for the period of 2022–2024, is US \$14,915 above the amount in the business plan (US \$263,964).

Draft Agreement

38. A draft Agreement between the Government of Liberia and the Executive Committee for stage II of the HPMP is contained in Annex I to the present document.

RECOMMENDATION

39. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage II of the HCFC phase-out management plan (HPMP) for Liberia for the period from 2022 to 2030 for the complete phase-out of HCFC consumption, in the amount of US \$651,191, consisting of US \$338,512, plus agency support costs of US \$44,007 for UNEP and US \$246,488, plus agency support costs of US \$22,184 for UNIDO, on the understanding that no more funding from the Multilateral Fund would be provided for the phase-out of HCFCs;
- (b) Noting the commitment of the Government of Liberia:
 - (i) To reduce HCFC consumption by 68 per cent of the country's baseline by 2022, 72 per cent by 2023, 86 per cent by 2025 and to phase out HCFCs completely by 1 January 2030, and that HCFC would not be imported after that date, except for that allowed for a servicing tail between 2030 and 2040 where required, consistent with the provisions of the Montreal Protocol;
 - (ii) To set up an online HCFC licensing and quota system by 1 January 2023;
 - (iii) To establish a mandatory certification scheme for refrigeration and air-conditioning technicians as of 1 December 2023; and
 - (iv) To ban the import of HCFC-based equipment by 1 January 2024;
- (c) Deducting 3.45 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;
- (d) Approving the draft Agreement between the Government of Liberia and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage II of the HPMP, contained in Annex I to the present document;
- (e) That, to allow for consideration of the final tranche of its HPMP, the Government of Liberia should submit:
 - (i) A detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption was in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the 2030-2040 period;
 - (ii) The expected annual HCFC consumption in Liberia for the 2030-2040 period; and
- (f) Approving the first tranche of stage II of the HPMP for Liberia, and the corresponding tranche implementation plan, in the amount of US \$278,879, consisting of US \$116,000, plus agency support costs of US \$15,080 for UNEP, and US \$135,595, plus agency support costs of US \$12,204 for UNIDO.

Annex I

DRAFT 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

Purpose

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 zero ODP tonnes by 1 January 2030 in compliance with Montreal Protocol schedule.
2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in row 4.1.3 (remaining consumption eligible for funding).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with the stage II of the HCFC phase-out management plan (HPMP) approved (“the Plan”). In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding in accordance with the Funding Approval Schedule when the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;

- (c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A (“Format of Tranche 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; and
- (d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

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 Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

- (a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in sub-paragraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes which would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
- (b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report; and
- (c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

Considerations for the refrigeration servicing sector

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector included in the Plan, 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 relevant bilateral and/or implementing agencies would take into consideration relevant decisions on the refrigeration servicing sector during the implementation of the Plan.

Bilateral and implementing agencies

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. UNEP has agreed to be the lead implementing agency (the “Lead IA”) and UNIDO has agreed to be the cooperating implementing agency (the “Cooperating IA”) 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 IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). The Cooperating IA will support the Lead IA by implementing the Plan under the overall co-ordination of the Lead IA. The roles of the Lead IA and Cooperating IA 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 IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

Non-compliance with the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding 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 decisions 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 and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

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.

16. This Agreement may be modified or terminated only by mutual written agreement of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	5.30

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	3.45	1.72	1.72	0.00	n/a	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	1.70	1.50	0.74	0.74	0.00	n/a	
2.1	Lead IA (UNEP) agreed funding (US \$)	116,000	0	164,012	0	58,500	338,512	
2.2	Support costs for Lead IA (US \$)	15,080	0	21,322	0	7,605	44,007	
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	135,595	0	110,893	0	0	246,488	
2.4	Support costs for Cooperating IA (US \$)	12,204	0	9,980	0	0	22,184	
3.1	Total agreed funding (US \$)	251,595	0	274,905	0	58,500	585,000	
3.2	Total support costs (US \$)	27,284	0	31,302	0	7,605	66,191	
3.3	Total agreed costs (US \$)	278,879	0	306,207	0	66,105	651,191	
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

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

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

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include the amount of ODS phased out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes;
- (b) An independent verification report of the Plan results and the consumption of the Substances, 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 during the period covered by the requested tranche, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;
- (d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database; and
- (e) An Executive Summary of about five paragraphs, summarizing the information of the above sub paragraphs 1(a) to 1(d).

2. In the event that in a particular year two stages of the HPMP are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:

- (a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and
- (b) If the stages under implementation have different HCFC consumption targets under Appendix 2-A of each Agreement in a particular year, the lower HCFC consumption target will be used as reference for compliance with these Agreements and will be the basis for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The national ozone unit will submit annual progress reports of status of implementation of the Plan to the Lead IA. The monitoring of development of the Plan and verification of the achievement of the performance targets, specified in the Plan, will be assigned to an independent local company or to independent local consultants by the Lead IA.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;
 - (b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
 - (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche 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 Tranche Implementation Plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;
 - (e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee, and should include the activities implemented by the Cooperating IA;
 - (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual tranche implementation reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HCFC consumption targets had been met;
 - (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
 - (h) Carrying out required supervision missions;

- (i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;
- (j) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;
- (k) 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 and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of the Lead IA and the Cooperating IA;
- (l) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (m) Providing assistance with policy, management and technical support when required;
- (n) Reaching consensus with the Cooperating IA on any planning, co-ordination and reporting arrangements required to facilitate the implementation of the Plan; and
- (o) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCY

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the Plan, including at least the following:

- (a) Providing assistance for policy development when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities;
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A; and
- (d) Reaching consensus with the Lead IA on any planning, co-ordination and reporting arrangements required to facilitate the implementation of the Plan.

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, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years.

2. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the HPMP being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors that lead to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.
