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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-ninth Meeting
Montreal, 7–11 December 2026
Item 9(c) of the provisional agenda[1]

PROJECT PROPOSAL: SIERRA LEONE

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, third tranche)	UNEP and UNIDO	Blanket approval

[1] UNEP/OzL.Pro/ExCom/99/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Sierra Leone

PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNEP (lead), UNIDO	87th	100% phase-out by 2030

ARTICLE 7 DATA (Annex C, Group I)	Year: 2025	0.25 ODP tonnes

COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2025
Substance	Aerosol	Foam	Firefighting	Refrigeration		Solvent	Total sector consumption
				Manufacturing	Servicing		
HCFC-22					0.25		0.25

CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	1.70	Starting point for sustained aggregate reductions:	1.67
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	1.67	Remaining:	0.00

ENDORSED BUSINESS PLAN		2026	2027	2028	Total
UNEP	ODS phase-out (ODP tonnes)	0.12	0.00	0.00	0.12
	Funding (US $)	79,100	0	0	79,100
UNIDO	ODS phase-out (ODP tonnes)	0.00	0.00	0.00	0.00
	Funding (US $)	0	0	0	0

PROJECT DATA			2021	2022	2023	2024	2025	2026	2027-2029	2030	Total
Consumption (ODP tonnes)	Montreal Protocol limits		1.10	1.10	1.10	1.10	0.55	0.55	0.55	0	n/a
	Maximum allowable		0.56	0.56	0.56	0.56	0.26	0.26	0.26	0	n/a
Amounts approved in principle (US $)	UNEP	Project costs	135,000	0	160,000	0	0	70,000	0	58,000	423,000
		Support costs	17,550	0	20,800	0	0	9,100	0	7,540	54,990
	UNIDO	Project costs	117,000	0	100,000	0	0	0	0	0	217,000
		Support costs	10,530	0	9,000	0	0	0	0	0	19,530
Funds approved by ExCom (US $)		Project costs	252,000	0	260,000	0	0				512,000
		Support costs	28,080	0	29,800	0	0				57,880
Total funds recommended for approval at this meeting (US $)		Project costs						70,000			70,000
		Support costs						9,100			9,100

Secretariat's recommendation:	Blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Sierra Leone, UNEP as the lead implementing agency has submitted a request for funding for the third tranche of stage II of the HCFC phase-out management plan (HPMP), in the amount of US $70,000, plus agency support costs of US $9,100, for UNEP only.[2] The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption for 2022 to 2025 and the third tranche implementation plan for 2027 to 2030.

Report on HCFC consumption

2. The Government of Sierra Leone reported a consumption of 0.25 ODP tonnes of HCFCs in 2025, which is 85 per cent below the country's HCFC baseline for compliance. The 2021–2025 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in 2021–2025 in Sierra Leone (Article 7 data)

HCFC-22	2021	2022	2023	2024	2025	Baseline
Metric tonnes (mt)	10.21	10.19	10.14	9.02	4.63	30.91
ODP tonnes	0.56	0.56	0.56	0.50	0.25	1.70

3. HCFC consumption in Sierra Leone was relatively stable from 2021 to 2024, with a steep decrease reported in 2025 (of 50 per cent), owing to the issuance of the 2025 quota in line with the maximum allowable consumption target in the country's Agreement with the Executive Committee. The remaining HCFC-22 consumption in Sierra Leone is in the refrigeration and air-conditioning (RAC) servicing sector. The declining HCFC-22 consumption, which has followed an accelerated phase-out schedule, can be attributed to increased awareness, technician training, and strengthened compliance and enforcement measures by the National Ozone Unit (NOU) and relevant government institutions, supported by the national RAC Association. In addition, low-global-warming-potential alternatives have been gradually introduced, including R-290 (propane) and R-600a (isobutane).

Country programme implementation report

4. The HCFC consumption data provided by the Government of Sierra Leone in its Country programme implementation (CP) report for 2025 is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification report

5. The verification report confirmed that the Government was implementing a licensing and quota system for HCFC imports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2022 to 2025 was correct (as shown in table 1 above). The verification report presented the 2025 consumption as 0.26 ODP tonnes, reflecting a rounding difference from the 0.25 ODP tonnes reported under Article 7. The verification concluded that the Government of Sierra Leone has enabling regulatory and institutional frameworks to effectively meet its commitments under the Montreal Protocol.

[2] As per the letter of 3 September 2026 from the Ministry of Environment and Climate Change of Sierra Leone to the Secretariat.

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

6. Since the previous tranche report, Sierra Leone has formally established an enforceable HCFC quota system under the Protection of the Ozone Layer and Substances Covered in the Montreal Protocol Regulations, 2025. Annual import quotas are approved by the competent national authorities, while the NOU, in collaboration with customs, monitors quota utilization and imports. The electronic control and authorization of HCFC imports and related equipment (ESCAS) has been operational since January 2025, following the integration of previously separate environmental digital platforms under a unified system. A ban on HCFC-based RAC equipment came into effect on 1 January 2025. A green procurement policy was developed, with 20 government officers (including 7 women) trained on energy-efficient and low-GWP RAC procurement.

7. During the tranche, five capacity-building workshops were held to train 96 customs and other law enforcement officers (including 34 women) on the control and monitoring of HCFC trade. Three border dialogue meetings were held with neighbouring countries, with 54 participants (including 19 women), providing a platform for customs and enforcement authorities to exchange information and experiences and improve cooperation in controlling the movement of HCFCs and related RAC equipment across borders. Three random compliance inspections were conducted at ports of entry, servicing workshops, warehouses and other storage facilities to assess adherence to the equipment import restrictions, technical standards and refrigerant-management requirements.

Refrigeration servicing sector

8. During the tranche, a total of 1,000 technicians (including 150 women) were certified and registered, supported by an online database which was developed to facilitate verification of certification status and to connect end users with qualified technicians. Furthermore, 460 technicians (including 85 women) were trained through 15 workshops, including two workshops exclusively for women, using the new UNEP-supported curriculum for the safe servicing of equipment using flammable refrigerants. The training covered safe installation, servicing, refrigerant recovery and charging, leak detection, brazing and electrical safety. A national sensitization campaign on the certification process was conducted reaching approximately 180 stakeholders (including 55 women) to increase awareness among RAC technicians of the certification requirements, while capacity-building was undertaken for stakeholders involved in the certification process. These activities are intended to improve technician competence and encourage end users to engage qualified service providers.

9. National standards for the safe management and handling of flammable refrigerants were developed, alongside updates to the RAC technicians' code of practice for the safe installation, servicing, recovery and handling of low-GWP refrigerants, and 2,000 copies of the revised standards and code of practice were printed and distributed to relevant stakeholders. Three workshops on the RAC code of practice reached 120 participants (including 35 women) and the RAC Association further supported the operationalization of the code, including monitoring compliance and the application of penalties for violations.

10. A needs assessment was completed and 30 tool kits for flammable refrigerants were provided to RAC technicians to strengthen safe servicing practices. Procurement of refrigerant recovery and recycling equipment for four national technical institutions and five portable refrigerant identifiers for the customs department and other beneficiaries has been undertaken. Partial deliveries were completed in September 2026, and the remaining deliveries are expected by December 2026.

Activities to maintain energy efficiency

11. Regarding the additional activities related to energy efficiency, the Economic Community of West African States (ECOWAS) regional minimum energy performance standards (MEPS) were adapted to Sierra Leone's national circumstances and adopted in 2025. The MEPS and associated energy labelling requirements entered into force on 1 May 2026, becoming mandatory for RAC appliances covered by the framework, and coordination with relevant government and private-sector stakeholders was initiated.

12. Capacity-building and awareness-raising activities were implemented reaching 100 brokers, importers, wholesalers and distributors (including 35 women) regarding MEPS, energy-efficiency requirements and appliance labelling. Additionally, 120 RAC practitioners and trainers (including 25 women) were trained and sensitized on energy-efficient installation, servicing and maintenance practices. Two stakeholder coordination meetings engaged 50 participants (including 18 women) from government, national standards, environmental and private-sector institutions, while three workshops trained 60 customs and enforcement officers (including 18 women) on MEPS, appliance labelling and enforcement.

13. Energy-efficiency competencies were also mainstreamed into the national RAC technician certification process, providing a stronger basis for assessing technicians' knowledge of energy-efficient installation, refrigerant charging, maintenance, leak prevention and system performance. An awareness-raising video on energy efficiency, which also highlights women in the RAC sector, is under preparation.

Project implementation and monitoring

14. The NOU, with UNEP support, has been monitoring activities, reporting on progress, and working with stakeholders to phase out HCFCs. Of the US $10,000 approved for project monitoring activities under the second tranche, US $6,000 was disbursed for monitoring the implementation, follow-up missions and progress tracking, and US $4,000 for specialized technical support.

Level of fund disbursement

15. As of October 2026, of the US $512,000 approved so far under stage II, US $436,265 had been disbursed (US $295,000 for UNEP and US $141,265 for UNIDO), as shown in table 2. The balance of US $75,735 will be disbursed in 2027.

Table 2. Financial report of stage II of the HPMP for Sierra Leone (US $)

Agency	First tranche		Second tranche		Total		
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed	Balance
UNEP	135,000	135,000	160,000	160,000	295,000	295,000	0
UNIDO	117,000	92,734	100,000	48,531	217,000	141,265	75,735
Total	**252,000**	**227,734**	**260,000**	**208,531**	**512,000**	**436,265**	75,735
Disbursement rate (%)	**90**		**80**		**85**		

Implementation plan for the third tranche of stage II of the HCFC phase-out management plan

16. The following activities will be implemented between January 2027 and December 2030:

(a) *Strengthening ODS regulatory enforcement and compliance*: Fully operationalize the existing online HCFC licensing and quota system (ESCAS) to complete integration with customs data, provide refresher training for system users and introduce periodic checks of actual imports against issued licences and allocated quotas; introduce a risk-based approach for screening of 30 high-risk or selected HCFC import transactions; establish a mechanism

for reporting, investigating and following up on suspected illegal HCFC trade and review and strengthen penalty enforcement procedures; facilitate two cross-border information-sharing activities on suspicious shipments and emerging patterns of illegal HCFC trade; conduct two targeted post-clearance verifications of HCFC imports in collaboration with customs and other enforcement authorities; and hold four training workshops for a total of 80 customs and enforcement focal points at priority border posts on the identification of HCFCs and HCFC-based RAC equipment; (UNEP) (US $20,000);

(b) *Compliance with RAC standards related to HCFC phase-out and HCFC alternatives:* Conduct two market-surveillance exercises to assess compliance of HCFC-related imports with technical standards and regulatory requirements; conduct two inter-agency coordination meetings on the implementation and enforcement of RAC standards; develop and disseminate a practical compliance guide and deliver three workshops targeting 120 participants (including 40 women) for importers, customs officers, technicians and end users on requirements applicable to ozone-friendly, low-GWP RAC equipment (UNEP) (US $20,000);

(c) *RAC technician certification system*: Expand the existing mandatory certification system to reach additional RAC technicians and regions, including refresher training and strengthened practical competency assessment; develop an integrated national electronic registry consolidating technician qualifications, certification status, training history and trainer credentials, building on the existing certification database; develop competency-based assessment tools for servicing technicians involving HCFCs and safe practices for low-GWP alternatives; train and assess 30 master trainers and instructors (including 7 women) on the safe handling, installation, servicing and recovery of equipment using R-290, R-600a and other low-GWP alternatives to HCFCs; conduct practical training and certification of 150 RAC technicians (including 20 women), with emphasis on good servicing practices, refrigerant recovery and the safe handling of flammable refrigerants; build the capacity of institutions involved in technician assessment and certification; develop targeted measures to increase the participation and certification of women in the RAC servicing sector (UNEP) (US $20,000);

(d) *Sustainable refrigerant recovery and recycling*: Complete the delivery and distribution of refrigerant recovery and recycling equipment, and five refrigerant identifiers procured under the previous tranche, and complete the overseas training and certification of at least 10 trainers in the safe handling of flammable refrigerants and servicing of equipment using R-290 (UNIDO) (funds from previous tranches);

(e) *Activities to maintain energy efficiency*: Continue activities including outreach videos and infographics; conduct a survey on consumer behavior related to purchasing RAC appliances; organize public-awareness and educational campaigns for consumers and development of communication tools such as websites, brochures, media reports, television and radio broadcasts (UNIDO) (funds from previous tranches); and

(f) *Project monitoring*: (UNEP) (US $10,000) Project monitoring, reporting and support, covering consultants and technical support (US $4,000), stakeholder consultation meetings (US $3,500), and monitoring and field visits (US $2,500).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption and verification

17. The Secretariat noted a discrepancy between the HCFC-22 consumption of 0.26 ODP tonnes reported for 2025 in the tranche submission and the verification report, and the 0.25 ODP tonnes reported under Article 7 of the Montreal Protocol. UNEP clarified that the difference of 0.01 ODP tonnes was due to rounding in the conversion from metric tonnes to ODP tonnes and confirmed that the underlying consumption data were correct and consistent. The CP data have since been revised in the Multilateral Fund portal to reflect 0.25 ODP tonnes, to align with the Article 7 data.

18. Regarding the recommendation of the previous verification report to strengthen the capacity of trainers at technical institutions and centres of excellence, UNEP reported that eight newly recruited trainers had been enrolled in the train-the-trainer programme under the previous tranche. In addition, the overseas specialized training and certification of at least 10 trainers are to be completed in 2027, in cooperation with UNIDO, to address capacity gaps arising from staff turnover and ensure the continued availability of qualified trainers. The delay was attributed to difficulties in identifying a suitable overseas certification institution and completing the necessary logistical arrangements. Zimbabwe had been selected for the specialized training, taking into account its established RAC technician certification scheme, which had been demonstrated at a regional network meeting in Ethiopia in August 2026[3] and was considered a useful model for other countries. At least 10 trainers have already been identified, and preparations for their training were underway.

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

19. The Government of Sierra Leone has issued HCFC import quotas for 2026 at 4.64 mt (0.255 ODP tonnes), which is lower than the Montreal Protocol control targets and in accordance with the maximum allowable consumption under the country's Agreement with the Executive Committee.

Refrigeration servicing sector

20. The Secretariat requested an update on the delivery and installation of equipment procured under the second tranche to strengthen practical training and refrigerant-management capacity at five national technical institutions. UNIDO provided a list of the equipment[4] and explained that partial deliveries had been made in September 2026 following delays in customs clearance, with final delivery and handover expected in December 2026. Delivery of five portable refrigerant identifiers, intended for customs and two centres of excellence to identify refrigerants and support monitoring of controlled substances, was also delayed owing to global production delays, and is expected by December 2026. Training of beneficiaries on their use will take place following delivery.

21. The Secretariat further noted that no dedicated reclamation units were explicitly identified in the procurement list provided and sought clarification on the establishment of the reclamation capacity at the national technical institutions that had been originally planned. UNIDO clarified that, following consultations with the NOU and taking into account the findings of the feasibility study, the remaining

[3] UNEP OzonAction,"African Ozone Officers Strengthen Cooperation on Montreal Protocol and Climate-Friendly Cooling", 29 September 2026.

[4] Including five identifiers, eight recovery units, 240 refrigerant cylinders, 16 vacuum pumps, manifold gauge sets, filter sets, leak detectors and associated servicing tools and accessories.

budget, and practical considerations regarding the viability of establishing reclamation centres in the country, it had been agreed to focus on recovery and recycling through the established centres of excellence. UNIDO indicated that the remaining funds would be reallocated to the training of 10 master trainers in the RAC sector, in addition to the 20 already planned.

Technician certification

22. The Secretariat also sought clarification on the implementation of the mandatory RAC technician certification system, including the eligibility requirements, responsible institutions and the proposed national electronic registry. UNEP clarified that the certification system, established under the Environmental Protection Agency (EPA) Act, 2022 and the ODS Regulations, 2025, became mandatory on 1 May 2026. Technicians without formal RAC training are required to have at least five years of relevant practical experience, while those with formal training must have at least one year of experience to qualify for the competency assessment. A certification body comprising representatives of the EPA, the Ministry of Technical and Higher Education, Technical and Vocational Education and Training institutions and the RAC association oversees competency assessments and certification, with the EPA responsible for compliance. UNEP further explained that the proposed national electronic registry would maintain records of technicians' qualifications, certification status and renewals, facilitate verification of credentials and strengthen monitoring and enforcement of certification requirements.

Activities to maintain energy efficiency in the refrigeration servicing sector

23. UNIDO reported that the outreach and impact-assessment activities under this component remain outstanding, with the allocation of US $30,000 carried forward to the third-tranche implementation period. Terms of reference for the outreach materials have been shared with the NOU for comments, while the consumer survey and communication tools are under development. The planned outputs comprise five videos, five infographics, a consumer-behaviour survey and awareness kit. These activities are expected to complement the work targeting importers and technicians by helping consumers make informed purchasing decisions and encouraging demand for energy-efficient RAC equipment using low-GWP refrigerants.

Implementation plan for the third tranche of stage II of the HCFC phase-out management plan

24. The Secretariat noted that the online licensing and quota system and mandatory RAC technician certification programme were already operational, and sought clarification on the additional activities proposed under the third tranche to avoid duplication and overlapping. UNEP explained that ESCAS consolidation under a unified platform for the management and monitoring of ODS and HFC imports is being complemented with the electronic issuance of HCFC import authorizations and the automated reconciliation with customs clearance records. These will be fully functioning during the third tranche, thereby strengthening coordination between the NOU and customs, and improving the monitoring of HCFC imports against issued authorizations and allocated quotas. Activities related to technician certification would expand coverage to additional technicians and regions and strengthen practical competencies. The proposed national electronic registry would maintain records of technicians' qualifications, certification status and training history, and facilitate verification and monitoring, rather than establishing a parallel certification system.

25. The Secretariat noted that some of the activities planned for the third tranche, as submitted, refer to both HCFCs and HFCs. The Secretariat requested clarification. UNEP explained that, although certain activities involve common logistical and institutional arrangements, and technical competencies relevant to both HCFCs and HFCs, the HPMP-supported activities would focus on HCFC import controls, servicing practices, compliance requirements and phase-out measures, while remaining distinct from interventions under the Kigali HFC implementation plan (KIP). The agencies would coordinate implementation and maintain separate activity records and reporting under the HPMP and KIP to ensure synergies and

complementarity, avoid duplication of funding and enable the respective contributions of the two plans to be clearly identified.

Gender policy implementation

26. In line with decisions 84/92 and 90/48, the Government of Sierra Leone has incorporated the policies of the Multilateral Fund into the implementation of the HPMP. During the implementation of the second tranche, the NOU reported that 35 per cent of participants in the training for customs officers, 17 per cent of participants in technician training activities, and 15 per cent of the technicians certified were women. The progress report also provided disaggregated data for each of the other reported activities. Efforts were made to promote equal access to training and capacity-building opportunities, and particular attention was given to reducing barriers to women's participation in the RAC profession through specialized training and certification offered at no cost, enabling them to strengthen their technical skills and improve their employment opportunities in installation, servicing, maintenance and refrigerant management. The provision of basic toolkits and safety gear to women trained as technicians further supports their ability to participate effectively in the sector. Participation and completion data are monitored and disaggregated to track progress and facilitate reporting.

Sustainability of the HCFC phase-out and assessment of risks

27. The sustainability of the HCFC phase-out in Sierra Leone is supported by the operational licensing and quota system, strengthened regulatory enforcement, institutionalized capacity-building of law enforcement officers and technicians, and the integration of good servicing practices, safe handling of alternative refrigerants and energy-efficiency considerations into national training and certification technician programmes. Continued support to training institutions, trainers and MEPS-related activities is expected to sustain technical capacity and promote the adoption of energy-efficient, low-GWP technologies.

28. The key risks include procurement delays, limited availability of technical expertise, and attrition of qualified trainers. These risks will be mitigated through continuing training and certification of trainers, continued institutional support and coordination among stakeholders.

Conclusion

29. The Government of Sierra Leone was in compliance with the maximum allowable HCFC consumption levels specified in its Agreement with the Executive Committee during the verification period, 2022–2025 and the reported disbursement rate for the second tranche was 80 per cent. Significant progress has been achieved in strengthening import controls, training customs and enforcement officers, enhancing technician training and certification, developing technical standards and incorporating energy-efficiency considerations into training curricula and servicing practices. Completion of outstanding equipment deliveries, trainer certification and completion of the remaining activities to support energy-efficiency will further support the sustained phase-out of HCFCs.

RECOMMENDATION

30. The Fund Secretariat recommends that the Executive Committee note the progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan (HPMP) for Sierra Leone and further recommends blanket approval of the third tranche of stage II of the HPMP and the corresponding 2027–2030 tranche implementation plan for Sierra Leone at the funding levels shown in the table below.

	Project title	Project funding (US $)	Support costs (US $)	Implementing agency
(a)	HCFC phase-out management plan (stage II, third tranche)	70,000	9,100	UNEP