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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-fifth Meeting
Montreal, 4-8 December 2024
Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: LESOTHO

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

Phase-down

- | | | |
|---|----------------|--------------------------|
| • Kigali HFC implementation plan (stage I, first tranche) | UNEP and UNIDO | Individual consideration |
|---|----------------|--------------------------|

¹ UNEP/OzL.Pro/ExCom/95/1

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

Lesotho

PROJECT TITLE	AGENCY
Kigali HFC implementation plan (stage I)	UNEP (lead), UNIDO

LATEST ARTICLE 7 DATA (Annex F)	Year: 2023	11.57 mt	27,069 CO ₂ -eq tonnes
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SECTORAL HFC CONSUMPTION DATA (CO ₂ -eq tonnes) AND ACTIVITIES									
	Aerosol	Foam	Fire-fighting	AC and refrigeration				Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
Average of 2020-22 consumption							29,478		
Latest CP report (2023)							27,069		
KIP stage I activities as agreed (Y/N)							Y		

AVERAGE 2020-2022 HFC CONSUMPTION IN SERVICING	16.08 mt	29,478 CO ₂ -eq tonnes
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BASELINE CONSUMPTION DATA (CO ₂ -eq tonnes)	2020	2021	2022	Average 2020-2022
HFC annual consumption	51,406	26,230	10,797	29,478
HCFC baseline (65%)				73,744
HFC baseline				103,221

HFC CONSUMPTION ELIGIBLE FOR FUNDING	
Starting point for sustained aggregate reductions	n/a
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects (CO ₂ -eq tonnes)	n/a

PROJECT DATA AS AGREED			2024*	2025	2026	2027	2028	2029	Total
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits		103,221	103,221	103,221	103,221	103,221	92,899	n/a
	Maximum allowable		103,221	103,221	103,221	103,221	103,221	92,899	n/a
	Maximum allowable (%)		100	100	100	100	100	90	n/a
Amounts recommended in principle (US \$)	UNEP	Project costs	64,000	0	0	50,000	0	0	114,000
		Support costs	8,320	0	0	6,500	0	0	14,820
	UNIDO	Project costs	18,000	0	0	13,000	0	0	31,000
		Support costs	2,340	0	0	1,690	0	0	4,030
	Total project costs		82,000	0	0	63,000	0	0	145,000
	Total support costs		10,660	0	0	8,190	0	0	18,850
	Total funds		92,660	0	0	71,190	0	0	163,850

* Recommended for approval at the present meeting

Reduction from remaining consumption eligible for funding stage I in CO ₂ -eq tonnes	n/a
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Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

1. The present document contains the following sections:
 - I. Summary of the proposal as submitted
 - II. Background: Implementation status of the Lesotho's HCFC phase-out management plan and previous HFC-related projects
 - III. HFC consumption: Overview of the Lesotho's HFC consumption levels, trends, and sectoral uses
 - IV. Stage I of the Kigali HFC implementation plan, as submitted: Overarching strategy and plan of implementation for the first tranche
 - V. Secretariat's comments, including the agreed cost of activities
 - VI. Recommendation

I. Summary of the proposal as submitted

2. On behalf of the Government of Lesotho, UNEP as the lead implementing agency has submitted a request for stage I of the Kigali HFC implementation plan (KIP), at a total cost of US \$171,647, consisting of US \$117,100, plus agency support costs of US \$15,223 for UNEP and US \$34,800, plus agency support costs of US \$4,524 for UNIDO, as originally submitted.²

3. The implementation of stage I of the KIP will assist the Government of Lesotho in meeting the target of 10 per cent reduction from its HFC baseline consumption by 1 January 2029.

4. The first tranche of stage I of the KIP being requested at this meeting amounts to US \$98,311, consisting of US \$65,250, plus agency support costs of US \$8,483 for UNEP and US \$21,750, plus agency support costs of US \$2,828 for UNIDO, as originally submitted, for the period of January 2025 to December 2026.

II. Background

Status of implementation of the HCFC phase-out management plan

5. Table 1 presents information on the HPMP in Lesotho as of November 2024.

Table 1. HPMP implementation status for Lesotho

	Stage I	Stage II
Meetings when HPMP was approved/updated	64 th , 73 rd , 80 th	87 th , 93 rd
Reduction from baseline	35% by 2020	100% by 2030
Total project cost (US \$)	280,000	570,000
Date of completion (actual/planned)	31 December 2021	31 December 2031

² As per the letter of 9 August 2024 from Meteorological Services of Lesotho to the Secretariat.

Status of implementation of previous HFC-related activities

6. Table 2 presents an overview of activities implemented in Lesotho in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

Table 2. Previously approved HFC-related activities in Lesotho

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
74 th	Survey of ODS alternatives	UNEP	40,000	August 2017
80 th	Enabling activities for HFC phase-down	UNEP/Italy	94,532	December 2019

III. HFC consumption overviewHFC consumption levels

7. Lesotho only imports HFCs for use in the refrigeration, air-conditioning (AC) and mobile air-conditioning (MAC) servicing sector. The most consumed substances in 2023 were R-404A (43.8 per cent of total HFC consumption in CO₂-equivalent (CO₂-eq) tonnes), HFC-134a (28.6 per cent), R-410A (18.6 per cent), and other HFCs (9.1 per cent). Table 3 presents the country's HFC consumption as reported to the Ozone Secretariat under Article 7 of the Montreal Protocol.

Table 3. HFC consumption in Lesotho (2019–2023 Article 7 data)

HFC	GWP	2019	2020	2021	2022	2023
Metric tonnes (mt)						
HFC-134a	1,430	6.55	13.9	9.77	7.55	5.41
R-404A	3,922	2.00	2.52	1.69	0.00	3.02
R-407A	2,107	0.23	0.00	0.03	0.00	0.24
R-410A	2,088	2.78	10.37	2.15	0.00	2.41
R-507A	3,985	0.17	0.00	0.27	0.00	0.49
Total (mt)		11.72	26.79	13.91	7.55	11.57
CO₂-eq tonnes						
HFC-134a	1,430	9,359	19,873	13,971	10,797	7,736
R-404A	3,922	7,837	9,894	6,612	0	11,843
R-407A	2,107	476	0	71	0	506
R-410A	2,088	5,811	21,639	4,488	0	5,031
R-507A	3,985	681	0	1,088	0	1,953
Total (CO₂-eq tonnes)		24,165	51,406	26,230	10,797	27,069

Established HFC baseline

8. The Government of Lesotho reported the Article 7 data for 2020-2022. The country's HFC consumption baseline was established at 103,221 CO₂-eq tonnes by adding 65 per cent of its HCFC baseline (expressed in CO₂-eq tonnes) to its average HFC consumption in 2020-2022, as shown in table 4.

Table 4. HFC baseline calculation for Lesotho (CO₂-eq tonnes)

Baseline calculation components	2020	2021	2022
HFC annual consumption	51,406	26,230	10,797
HFC average consumption in 2020-2022			29,478
HCFC baseline (65%)			73,744
HFC baseline			103,221

Country programme implementation report

9. The sectoral HFC consumption data provided by the Government of Lesotho in its country programme (CP) implementation report for 2023 is consistent with the data reported under Article 7 of the Montreal Protocol.

10. The data reported to the Ozone Secretariat under Article 7 for 2022 does not include the consumption of HFC blends namely, R-404A, R-410A and R-507A, that were correctly reported in the CP implementation report (i.e. consumption of 12.47 mt) for that year. The Government will revise its data under Article 7 to include these blends and submit it to the Ozone Secretariat for consideration by the Implementation Committee at a future meeting.

HFC consumption trends

11. Lesotho's overall HFC consumption showed a steady trend from 2019 to 2023, except for 2020, when there was an increase due to a rise in servicing demand by technicians during that year. Consumption then decreased from 2021 onwards due to an overall decline in servicing demand for HFCs.

HFC consumption by sector

12. HFCs are mainly consumed for servicing in commercial refrigeration (52.2 per cent in mt and 52.9 per cent in CO₂-eq tonnes), followed by residential air-conditioning (20.1 per cent in mt and 22.9 per cent in CO₂-eq tonnes), domestic refrigeration (12.4 per cent in mt and 9.7 per cent in CO₂-eq tonnes), and other subsectors, as shown in tables 5 and 6.

Table 5. HFC consumption in Lesotho by sector in mt (average 2020-2022)

Sector		HFC-134a	R-404A	R-407A	R-410A	R-507A	Total	Share of total (%)
Refrigeration and AC servicing								
Refrigeration subsectors								
Domestic		2.00	0.00	0.00	0.00	0.00	2.00	12.4
Commercial	Stand-alone units	3.50	0.90	0.00	0.00	0.07	4.47	27.8
	Condenser units	2.80	0.03	0.00	0.00	0.02	2.85	17.7
	Centralized systems	0.67	0.41	0.00	0.00	0.00	1.08	6.7
Air-conditioning subsectors								
Residential		0.00	0.00	0.00	3.23	0.00	3.23	20.1
Commercial		0.00	0.00	0.01	0.94	0.00	0.95	5.9
Mobile		1.44	0.05	0.00	0.00	0.00	1.50	9.3
Total		10.41	1.40	0.01	4.17	0.09	16.08	100

Table 6. HFC consumption in Lesotho by sector in CO₂-eq tonnes (average 2020-2022)

Sector		HFC-134a	R-404A	R-407A	R-410A	R-507A	Total	Share of total (%)
Refrigeration and AC servicing								
Refrigeration subsectors								
Domestic		2,860	0	0	0	0	2,860	9.7
Commercial	Stand-alone units	5,005	3,529	0	0	279	8,813	29.9
	Condenser units	4,004	135	0	0	80	4,219	14.3
	Centralized systems	951	1,623	0	0	0	2,574	8.7
Air-conditioning subsectors								
Residential		0	0	0	6,743	0	6,743	22.9
Commercial		0	0	24	1,962	0	1,986	6.7
Mobile		2,066	203	0	0	0	2,269	7.7

Sector	HFC-134a	R-404A	R-407A	R-410A	R-507A	Total	Share of total (%)
Total	14,880	5,502	24	8,709	363	29,478	100

Note: Due to fluctuations in HFC consumption in different years and to give an overall picture of Lesotho's HFC consumption, the average HFC consumption in 2020-2022 is presented in tables 5 and 6. There is a minor difference due to rounding-off differences while calculating CO₂-eq tonnes.

Refrigeration and air-conditioning servicing sector

13. There are approximately 60 technicians consuming HFCs in Lesotho to maintain various types of HFC-based equipment. This includes domestic, commercial, and transport refrigeration equipment, as well as residential and commercial air conditioners and mobile air conditioners.

Domestic, commercial, and transport refrigeration servicing

14. Commercial refrigeration accounts for over 50 per cent of total HFC use in CO₂-eq tonnes. Of this, self-contained commercial refrigeration equipment consumes about 30 per cent of HFCs. This includes refrigerators, chest freezers, and portable cooling systems (water dispensers) for homes, offices, restaurants, and supermarkets.

15. There are 600 large condensing systems and stand-alone units installed in commercial buildings, forming the next largest sector consuming HFCs. HC-based refrigerants such as R-600a and R-290 are consumed in small quantities, though their consumption is increasing.

16. Lesotho uses refrigerated cargo trucks. There are 36 registered and operating trucks that primarily use R-404A and HFC-134a, with consumption mainly for maintenance. This subsector does not employ low-global-warming-potential (GWP) alternatives. The details of the estimates of use of HFCs in this application is not available.

Residential and commercial air-conditioning servicing

17. The residential AC sector primarily consists of single split units used in residential structures and households. It accounts for about 23 per cent of total HFC use, with R-410A being the main refrigerant. This consumption is expected to grow to meet the increasing demand for residential AC units.

18. The commercial AC industry uses comparatively less HFCs (about 7 per cent). R-410A and R-407A are the main refrigerants used in these applications, primarily for servicing AC chillers, centralized systems, multi-split, ducted split, and rooftop units. These systems are commonly found in large office buildings, airports, malls, hospitals, large hotels, and supermarkets.

Mobile air-conditioning servicing

19. MAC systems are found in automobiles, sport utility vehicles, commercial trucks, and buses. This equipment primarily uses HFC-134a as a refrigerant.

IV. Stage I of the Kigali HFC implementation plan as submitted

Institutional, policy and regulatory framework

20. Lesotho's key legal instrument is the Environment Act of 2008, which establishes the regulatory framework for protecting and conserving the environment. Among other provisions, the Act mandates the Minister responsible for the environment to issue guidelines and institute programmes for eliminating substances that deplete the stratospheric ozone layer. Under this mandate, and in line with the Vienna

Convention and its Montreal Protocol, the Ministry of Environment and Forestry initiated the enactment of the Ozone-Depleting Substances and non-Ozone-Depleting Substances Regulations in 2024, commonly referred to as the “ODS and Non-ODS Regulations 2024”. Initially, these regulations empowered all state organs concerned with ODS and HFCs, namely the Department of Environment (DOE), the national ozone unit (NOU), the customs authority, and the police, to legally execute their respective mandates.

21. The ODS and Non-ODS Regulations 2024 incorporate the control of the import and consumption of HFCs through the licensing and quota system, enabling the control and monitoring of HFC imports.

22. The NOU under the Lesotho Meteorological Services is mandated to coordinate all the activities related to the control and phase-out or phase-down of substances that affect the ozone layer and the environment. This unit, along with the other institutions such as customs authorities, would work on implementing various projects and regulatory measures for HFCs.

Phase-down strategy for stage I of the Kigali HFC implementation plan

Overarching strategy

23. HFC consumption is expected to grow due to the anticipated increase in various HFC-consuming applications. Stage I of the KIP projects that HFC consumption will increase from 27,069 CO₂-eq tonnes in 2023 to 40,645 CO₂-eq tonnes in 2029. The Government of Lesotho proposes to achieve HFC consumption reductions through a combination of measures, including strengthening the regulatory framework to reduce the import and consumption of HFCs, strengthening the safe handling of refrigerants through training and capacity-building in the service sector, improving customs capacity for monitoring and controlling HFCs, and promoting the adoption of low-GWP alternative technologies in various applications. Through this approach, the Government aims to reduce the demand of HFCs for servicing and sustain these reductions in future stages of the HPMP.

Proposed reductions

24. The following table presents the Montreal Protocol limits, estimated growth, and proposed HFC consumption targets under stage I of the KIP for Lesotho.

Table 7. HFC consumption forecast under unconstrained scenario, Montreal Protocol limits and proposed HFC reductions under stage I (CO₂-eq tonnes)

	2023*	2024	2025	2026	2027	2028	2029
HFC consumption forecast (annual growth rate of 5.5 per cent**)	27,069	31,099	32,809	34,614	36,518	38,526	40,645
Montreal Protocol HFC consumption limits	n/a	103,221	103,221	103,221	103,221	103,221	92,899
Proposed HFC consumption under the KIP	n/a	103,221	103,221	103,221	103,221	103,221	92,899
Proposed reduction in HFC consumption from baseline (%)	n/a	0	0	0	0	0	10

* As per Article 7 data

** Growth is estimated based on industry inputs.

25. The table above shows that HFC consumption is expected to continue increasing due to the demand of HFC-based equipment between 2024 and 2029. The activities proposed under stage I of the KIP would not only help the country control and monitor HFC consumption through a strong licensing and quota system but also facilitate the faster adoption of alternatives.

Proposed activities

26. The different elements of the KIP for Lesotho with their cost breakdown are presented below:

- (a) *Establishment of a regulatory framework*: Sensitize different stakeholders (e.g., importers of refrigerants, service technicians) on new HFC regulations and the licensing and quota system covering 10 districts; conduct consultative meetings with target stakeholders to support the enforcement of the HFC licensing and quota system; conduct awareness programmes on green initiatives to support greater market penetration and adoption of HFC-free alternatives (UNEP) (US \$30,000);
- (b) *Enforcement of HFC controls*: Develop the training manual, update the existing training curriculum and conduct six training workshops for customs officers and enforcement authorities with HFC-related Harmonized Systems (HS) codes and controls; conduct two training workshops for law enforcement officers and customs clearing agents on the implementation requirements of the HFC licensing and quota system and related monitoring and reporting; procurement of HFC identifiers and tools for training on CO₂- and ammonia-based refrigeration systems (UNEP) (US \$30,000);
- (c) *Capacity-building of technicians and enforcement officers*: Conduct two train-the-trainer workshops for technicians and customs officers to enhance their understanding of new technologies; provide equipment support for the establishment of a CO₂ training programme at a local training centre and conduct two train-the-trainer workshops on CO₂- and ammonia-based technologies; conduct six training workshops, three for customs officers, technicians, and law enforcement units, and three for technicians, on HFC regulations and HS codes; provide training to the Technical Vocational Department (TVD) to strengthen their refrigeration curriculum by including CO₂ and ammonia technologies (UNEP) (US \$41,550);
- (d) *Gender mainstreaming*: Providing training support to train a female trainer and role model presentation throughout the activities (UNEP) (US \$3,707); and
- (e) *Air-conditioning demonstration project with low-GWP technologies*: Procurement of 40 R-290-based residential and commercial AC units for a technology demonstration project in selected health sector facilities and ministries; conduct awareness programmes targeting different end users (UNIDO) (US \$34,800).

Project implementation, coordination and monitoring

27. Project implementation under the KIP would be monitored by the NOU, with support from technical consultants and experts for specific activities. The project monitoring budget amounts to US \$11,843 for UNEP, and this includes staff and consultants (US \$3,000), monitoring, office suppliers, and utilities (US \$1,770) and travel and other activities (US \$7,073).

Gender policy implementation

28. The Government of Lesotho and UNEP are fully committed to implementing the Multilateral Fund's operational policy on gender mainstreaming. The Government recognizes the challenge of limited participation of women in different activities relating to the Montreal Protocol and proposes steps to encourage and enhance women's involvement in KIP activities. Under the proposed plan for stage I, resources have been allocated for gender mainstreaming initiatives and the training of a female trainer. Additionally, the Government would undertake awareness and outreach activities during KIP and HPMP implementation, which is expected to increase women's participation over time. Gender-disaggregated data

will be collected during project implementation. The Government would monitor the impact of these different initiatives and make adjustments to maximize women's participation.

Coordination of activities in the servicing sector under HCFC phase-out and HFC phase-down plans

29. Stage II of the HPMP includes a capacity component for the certification of technicians and training workshops on best practices. The KIP will focus on upgrading the RAC curriculum in local institutions to ensure it is well established. Additionally, the KIP will promote the use of CO₂ and ammonia in the commercial sector and demonstrate low-GWP technologies in the AC sector. All steps would be taken to ensure that training and technical support activities under the KIP complement those under the HPMP.

Total cost of stage I of the Kigali HFC implementation plan

30. The budget for stage I has been proposed at US \$151,900. The proposed activities and cost of stage I of the KIP are summarized in table 8.

Table 8. Proposed cost of activities to be implemented in stage I of the KIP for Lesotho (US \$)

Particular	Implementing agency	Cost (US \$)
Establishment of a regulatory framework	UNEP	30,000
Enforcement of HFC controls	UNEP	30,000
Capacity-building of technicians and enforcement officers	UNEP	41,550
Gender mainstreaming	UNEP	3,707
AC demonstration project with low-GWP technologies	UNIDO	34,800
Project implementation, coordination and monitoring	UNEP	11,843
Total		151,900

Implementation of the first tranche of stage I of the Kigali HFC implementation plan

31. The first funding tranche of stage I of the KIP, in the total amount of US \$87,000, will be implemented between January 2025 and December 2026 and will include the following activities:

- (a) *Establishment of a regulatory framework*: Sensitize national stakeholders on the licensing and quota system, as well as other regulations relating to HFCs, and the operational aspects of enforcing these regulations (UNEP) (US \$25,000);
- (b) *Enforcement of HFC controls*: Develop the training manual and update the training curriculum for customs officers and technicians on HFC regulations, including the quota system and other monitoring and reporting aspects; conduct two training workshops for law enforcement authorities (UNEP) (US \$10,000);
- (c) *Capacity-building of technicians and enforcement officers*: Procurement of training tools and establishment of a CO₂-related training programme at a local training centre and conduct one train-the-trainer programme on ammonia- and CO₂-based technology; conduct two train-the-trainer workshops for technicians and customs authorities on HFC monitoring and control, including the quota system, and new alternative technologies; conduct three training programmes for technicians and law enforcement authorities on HFC-related HS codes, enforcement of rules and regulations, and monitoring and reporting; provide training to the technical vocational department (TVD) to monitor and enforce the curriculum (UNEP) (US \$29,550);
- (d) *Gender mainstreaming*: Training programme for women technicians (UNEP) (US \$700);

- (e) *Air-conditioning demonstration project with low-GWP technologies:* Procurement and installation of about 32 R-290-based residential and commercial AC units at selected locations and awareness-raising and outreach campaign for end users on the adoption and operations of these units (UNIDO) (US \$21,750); and
- (f) Project coordination and monitoring: No activities or budget are planned for this component in the first tranche.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

Overarching strategy

32. The submission of stage I of the KIP for Lesotho covers a range of activities to assist the country in controlling and monitoring its HFC consumption. However, the Secretariat noted that the requested funding levels were higher than those approved under decision 92/37 for countries committing to meet the 10 per cent Montreal Protocol HFC reduction target.

Institutional, policy and regulatory framework

HFC licensing and quota system

33. In line with decision 87/50(g), UNEP has confirmed that Lesotho has an established and enforceable system of licensing and quotas for monitoring HFC imports/exports in place.

34. Regarding the implementation of the HFC licensing and quota system, UNEP explained that the ODS regulations, including the licensing and quota system, were approved and gazetted in February 2024. The quotas will be issued in CO₂-eq tonnes for the following year and would be allocated based on reported consumption from previous years, with a buffer of 5 per cent for emergencies. The NOU, in collaboration with customs and other enforcement authorities would monitor and control the implementation of the HFC quota system.

35. Regarding regulations to prohibit the import of HFC-based products, UNEP explained that the Government of Lesotho is considering implementing relevant controls and possibly prohibiting the import of HFC-134a-based domestic refrigerators, R-410A-based residential air conditioners, and high-GWP refrigerant-based commercial refrigeration equipment. Although specific dates have not yet been decided, the Government would continue to consult national stakeholders and take necessary steps to implement the relevant regulations. UNEP agreed to submit an update on the status of the development and implementation of these regulations along with the request for the second tranche of stage I of the KIP.

Technical and cost-related issues

36. Regarding the technical training for customs and enforcement officers on new technologies, UNEP emphasized the urgent need to improve the capacity of technicians, law enforcement, and customs officers to understand new low-GWP technologies, including the technical aspects of their operations. Therefore, training will be provided to the TVD units to update their training curriculum to include CO₂ and ammonia technologies for conducting ongoing training programmes during stage I of the KIP.

37. UNEP explained that the demonstration project is mainly for promoting low-GWP technologies in air-conditioning applications. UNEP, in coordination with UNIDO, will submit a final report on the implementation of this project, including the HFC phase-out and energy efficiency gains achieved, in line with decision 92/36(g).

38. The Secretariat discussed with UNEP the total funding levels exceeding those approved under decision 92/37 for countries committing to meet the 10 per cent Montreal Protocol HFC reduction target. Since decision 92/37 also allows for additional funding of up to 20 per cent for countries committing to reduce consumption by 10 per cent of the average HFC consumption in the baseline years, the Secretariat enquired whether the Government of Lesotho had expressed interest in this reduction, noting also that the starting point for sustained reductions in HCFC consumption was adjusted at the 80th meeting to 1.54 ODP tonnes while the HFC baseline consumption maintained at 3.5 ODP tonnes. UNEP, in consultation with the Government, confirmed the country's commitment to meet the 10 per cent Montreal Protocol HFC reduction target and accordingly submitted a revised proposal. The revised cost for stage I of the KIP is presented in table 9.

Table 9. Agreed cost of activities to be implemented during stage I of the KIP in Lesotho (US \$)

Particular	Implementing agency	Original cost (US \$)	Revised cost (US \$)
Establishment of a regulatory framework	UNEP	30,000	21,000
Enforcement of HFC controls	UNEP	30,000	20,000
Capacity-building of technicians and enforcement officers (about 44 personnel trained)	UNEP	41,550	58,000
Gender mainstreaming	UNEP	3,707	4,000
AC demonstration project with low-GWP technologies	UNIDO	34,800	31,000
Project implementation, coordination and monitoring	UNEP	11,843	11,000
Total		151,900	145,000

Project management unit

39. Funding for the project management unit (PMU) was agreed at US \$11,000 (US \$3,660 for staff and consultants, US \$3,673 for travel, and US \$3,667 for meetings and other activities) calculated at 7.6 per cent of the project costs.

Total project cost

40. At the total cost of US \$145,000, stage I of the KIP for Lesotho will result in a reduction of 10,322 CO₂-eq tonnes from the country's HFC consumption.

41. Stage I of the KIP will be implemented in two tranches. The schedule of HFC phase-down and HCFC phase-out commitments and of the KIP and HPMP tranches, and the activities of stage II of the HPMP and stage I of the KIP are presented in annex I and annex II, respectively, to the present document.

Implementation plan for the first tranche of the Kigali HFC implementation plan

42. Based on the revised funding for stage I of the KIP, the first funding tranche of stage I has been revised to US \$82,000 (US \$64,000 for UNEP and US \$18,000 for UNIDO) and will include the following breakdown:

- (a) Establishment of a regulatory framework: same activities as per the original plan (UNEP) (US \$16,000);
- (b) Enforcement of HFC controls: same activities as per the original plan. A total of 10 law enforcement authorities would be trained (UNEP) (US \$8,000);
- (c) Capacity-building of technicians and enforcement officers: same activities as per the original plan. A total of 24 participants would participate in the train-the-trainer workshops for technicians and customs authorities on HFC monitoring and control; and 10 participants would participate in the training to the TVD (UNEP) (US \$33,000);

- (d) Gender mainstreaming: same activities as per the original plan (UNEP) (US \$1,000);
- (e) Air-conditioning demonstration project with low-GWP technologies: same activities as per the original plan with approximately 25 R-290-based residential and commercial AC units to be procured (UNIDO) (US \$18,000); and
- (f) Project management and monitoring (UNEP) (US \$6,000) that includes staff and consultants (US \$2,000), travel (US \$2,000) and meetings and other activities (US \$2,000).

Co-financing

43. The Government of Lesotho will provide in-kind contributions, including staff availability and facilities such as office space, for the implementation of the KIP. Additionally, the Government may secure additional funding to support the implementation of activities under the KIP.

2024-2026 business plan of the Multilateral Fund

44. UNEP and UNIDO are requesting US \$145,000, plus agency support costs, for the implementation of stage I of the KIP for Lesotho. The total value of US \$92,660, including agency support costs, requested for the period of 2024–2026, is US \$28,589 above the amount in the business plan.

Sustainability of the HFC phase-down and assessment of risks

45. The Government of Lesotho, through the NOU, plans to implement various capacity-building and enforcement measures to facilitate the phase-down of HFCs, the adoption of alternatives, and the control and monitoring of HFCs. Sensitization programmes on HFC controls, including the use of correct HS codes and data reporting, are expected to strengthen the control and monitoring of HFCs. Training programmes would strengthen the capacity of technicians and enforcement authorities in handling low-GWP refrigerants. Additionally, the demonstration project is expected to facilitate the promotion of RAC equipment based on low-GWP alternatives. It should also be noted that the HCFC component constitutes 71 per cent of the HFC baseline. Thus, the implementation of KIP activities is expected to contribute to the sustainable reduction of HFC consumption.

Impact on the climate

46. The activities proposed, including training and capacity-building of different stakeholders on low-GWP alternatives, demonstration activities of low-GWP alternatives, and capacity-building of enforcement authorities on controlling and monitoring HFCs, indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. While the Secretariat is not able to provide an estimate of the avoided emissions from the implementation of the KIP at the present meeting, by 2029 Lesotho will have reduced its annual HFC emissions by approximately 10,322 CO₂-eq tonnes, calculated as the difference between the HFC baseline for compliance and the 2029 target, assuming that all consumed HFCs would eventually have been emitted.

Draft Agreement

47. A draft Agreement between the Government of Lesotho and the Executive Committee for stage I of the KIP has not been prepared as the Agreement template is still under consideration by the Executive Committee.

48. If the Executive Committee so wishes, the funds for stage I of the KIP for Lesotho could be approved in principle, and funds for the first tranche could be approved on the understanding that the Agreement would be prepared and presented at a future meeting, before the submission of the second tranche, and once the Agreement template has been approved.

VI. Recommendation

49. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Lesotho for the period 2024-2029 to reduce HFC consumption by 10 per cent of the country's baseline by 2029, in the amount of US \$163,850, consisting of US \$114,000, plus agency support costs of US \$14,820, for UNEP and US \$31,000, plus agency support costs of US \$4,030, for UNIDO, as reflected in the schedule contained in annex I to the present document;
- (b) Noting that upon completion of the end-user demonstration project included in stage I of the KIP, UNEP, in coordination with UNIDO, would submit a final report on the implementation of this project, including the HFC phase-out and energy efficiency gains achieved, in line with decision 92/36(g);
- (c) Approving the first tranche of stage I of the KIP for Lesotho and the corresponding tranche implementation plan, in the amount of US \$92,660, consisting of US \$64,000, plus agency support costs of US \$8,320, for UNEP and US \$18,000, plus agency support costs of US \$2,340, for UNIDO; and
- (d) Requesting the Government of Lesotho, UNEP, UNIDO and the Secretariat to finalize the draft Agreement between the Government of Lesotho and the Executive Committee for the reduction in consumption of HFCs, including the information contained in the annex referred to in subparagraph (a) above, and to submit it to a future meeting once the KIP Agreement template has been approved by the Executive Committee.

Annex I

SCHEDULE OF HFC PHASE-DOWN AND HCFC PHASE-OUT COMMITMENTS AND FUNDING TRANCHES UNDER THE KIGALI HFC IMPLEMENTATION PLAN AND THE HCFC PHASE-OUT MANAGEMENT PLAN FOR LESOTHO

Kigali HFC implementation plan (stage I)

Row	Particulars	2024	2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances (CO ₂ -eq tonnes)	103,221	103,221	103,221	103,221	103,221	92,899	n/a
1.2	Maximum allowable total consumption of Annex F substances (CO ₂ -eq tonnes)	103,221	103,221	103,221	103,221	103,221	92,899	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)	64,000	0	0	50,000	0	0	114,000
2.2	Support costs for Lead IA (US \$)	8,320	0	0	6,500	0	0	14,820
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	18,000	0	0	13,000	0	0	31,000
2.4	Support costs for Cooperating IA (US \$)	2,340	0	0	1,690	0	0	4,030
3.1	Total agreed funding (US \$)	82,000	0	0	63,000	0	0	145,000
3.2	Total support costs (US \$)	10,660	0	0	8,190	0	0	18,850
3.3	Total agreed costs (US \$)	92,660	0	0	71,190	0	0	163,850

HCFC phase-out management plan from 2024 to 2030 (stage II)

Row	Particulars	2024	2025-2026	2027	2028-2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	2.28	1.14	1.14	1.14	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	1.00	0.50	0.50	0.50	0.00	n/a
2.1	Lead IA (Germany) agreed funding (US \$)	162,400	0	91,200	0	47,500	301,100
2.2	Support costs for Lead IA (US \$)	20,545	0	11,538	0	6,009	38,092
3.1	Total agreed funding (US \$)	162,400	0	91,200	0	47,500	301,100
3.2	Total support costs (US \$)	20,545	0	11,538	0	6,009	38,092
3.3	Total agreed costs (US \$)	182,945	0	102,738	0	53,509	339,192

Annex II

**SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN
AND THE KIGALI HFC IMPLEMENTATION PLAN IN LESOTHO**

Category of activity	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Policies and regulations			HFC regulations, including licensing and quota system, training of enforcement officers; green initiative programmes; procurement of HFCs gas identifier; develop training manual and upgrade curriculum for customs and technicians on HFCs and alternatives	41,000	41,000
	Review and adapting of regional minimum energy performance standards (MEPS) and labelling	45,000			45,000
	Capacity building for regulations including customs training for about 200 officers and procurement of identifiers	61,000			61,000
	Review existing product registry system with Revenue Service Lesotho to incorporate product registry system	30,000			30,000
Training and technical assistance	Development of a training module on MEPS and training of 30 trainers	25,000			25,000
	Technical assistance and training for about 360 RAC technicians	240,000	Training of trainers for technicians and customs; equipment support for CO ₂ and ammonia; training of customs, technicians, and enforcement units on use of HFC HS codes and regulations enforcement; training of TVD	58,000	298,000
	Technical assistance for gender mainstreaming	10,000	Gender mainstreaming support through training and awareness and outreach	4,000	14,000
Recovery and recycling	Recovery and recycling including technical assistance	36,000			36,000

	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
Category of activity	Activity	Cost (US \$)	Activity	Cost (US \$)	
Demonstration/ incentive scheme	Incentive scheme for adoption of low-GWP technology	58,000			58,000
			Technology demonstration for low-GWP refrigerant-based air conditioners; awareness raising campaigns for end users	31,000	31,000
Awareness and information outreach	Awareness and information outreach	15,000			15,000
Coordination and monitoring	Coordination and monitoring	50,000	Coordination and monitoring	11,000	61,000
Total		570,000		145,000	715,000
Percentage of total (%)		79.7		20.3	100