UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/93/39
30 November 2023

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-third Meeting
Montreal, 15-19 December 2023
Items 9(c) and (d) of the provisional agenda[1]

PROJECT PROPOSALS: ALBANIA

This document consists of the comments and recommendations of the Secretariat on the following project proposals:

Energy efficiency

- Additional activities to maintain energy efficiency for the servicing sector under decision 89/6(b) — UNIDO

Phase-down

- Kigali HFC implementation plan (stage I, first tranche) — UNIDO and UNEP

[1] UNEP/OzL.Pro/ExCom/93/1

ADDITIONAL ACTIVITIES TO MAINTAIN ENERGY EFFICIENCY IN THE SERVICING SECTOR

PROJECT DESCRIPTION

Background

1. On behalf of the Government of Albania, UNIDO, as the designated implementing agency, has submitted a request for funding for additional activities to introduce alternatives to HCFCs with zero or low global-warming potential (GWP) and to maintain energy efficiency in the refrigeration and air-conditioning (RAC) servicing sector, at the amount of US $100,000, plus agency support costs of US $7,000.[2] The activities and funds requested in the current proposal will be integrated into stage II of the HCFC phase-out management plan (HPMP). The submission includes a description of specific activities, targets, and performance indicators and an implementation plan for 2024 to 2026, in line with decisions 89/6 and 92/22.

2. An updated stage II HPMP Agreement between the Government of Albania and the Executive Committee has been submitted together with the project proposal as per decision 89/6(d) including the synchronization of the third and the final tranche with the tranches planned under stage I of the Kigali HFC implementation plan (KIP).

Report on HCFC consumption

3. The Government of Albania reported a consumption of 2.92 ODP tonnes of HCFC-22 in 2022, which is 85 per cent below the HCFC baseline for compliance. The 2018–2022 HCFC consumption is shown in table 1.

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

HCFC-22	2018	2019	2020	2021	2022	Baseline*
Metric tonnes	70.58	60.89	70.73	34.73	53.04	107.4
ODP tonnes	3.88	3.35	3.89	1.91	2.92	6.0

*Baseline included 0.46 mt HCFC-142b and 0.6 mt of HCFC-124.

4. The country's decreasing HCFC consumption since 2018 is attributed to the enforcement of the licensing system and activities conducted under the HPMP, particularly the promotion of HCFC alternatives and the recovery and reuse of refrigerants. The HCFC consumption increase in 2022 is because of the economic recovery from the global COVID-19 pandemic. The HCFC consumption in 2022 is well below the control targets in the Agreement and the maximum allowed limits under the Montreal Protocol, which ensures its compliance with the Montreal Protocol.

Country programme implementation report

5. The Government of Albania reported HCFC sector consumption data under the 2022 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

[2] As per the letter to UNIDO from the National Ozone Officer as the focal point of Albania for the Montreal Protocol on 22 September 2023.

Legal framework

6. The Ministry of Infrastructure and Energy (MIE) and the Energy Regulatory Authority (ERE) are the most significant institutions in setting policy and regulations in the Energy sector in Albania.

7. The MIE is responsible for developing policies and strategies in the energy sector and is responsible for developing and updating minimum energy performance standards (MEPS). The Agency of Energy Efficiency (AEE) is established under the MIE to improve energy efficiency in all sectors. The AEE undertakes a series of activities, including preparing and implementing legislation, developing and monitoring the National Energy Efficiency Action Plan; developing a database to monitor progress being made in improving energy efficiency; developing technical standards and regulations to improve the energy efficiency of products; setting minimum requirements for the energy performance of buildings, and organizing professional training on energy efficiency, issuing certificates to energy auditors and energy managers.

8. The Government has established MEPS and energy-efficiency labelling for RAC appliances. The MEPS and labelling system are mandatory and supported by Law No. 124/2015 On Energy Efficiency (amended) and Law No. 116/2016 on the Energy Performance of Buildings. The MEPS and labelling are updated regularly.

Additional activities for maintaining energy efficiency in the refrigeration and air-conditioning servicing sector

9. The project is designed to pilot the market acceptance of HFC-32 AC units and demonstrate the improved energy efficiency of such units.

10. Energy-efficiency improvements and the resulting emission reduction will be analyzed as part of the project and the results will be disseminated for further escalation of the replacement.

11. The following activities are proposed:

(a) Conducting a market survey for upgrading MEPS, collection data and developing an inventory of the AC sector; data analysis for updating the MEPS and labelling standards; developing specifications for HFC-32 AC units with high energy efficiency for piloting (US $13,000);

(b) Procuring 50 units of HFC-32 AC units with high energy efficiency and installing them in a public building (US $72,000);

(c) Disassembling the removed AC units, and recovering and recycling the refrigerants contained therein (US $15,000); and

(d) Developing a green procurement policy for future guidance in government procurement (US $6,000).

12. The project will be implemented within 18 months.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

13. The Secretariat reviewed the project proposal in light of relevant decisions of the Executive Committee, including decision 89/6 and decision 92/22. A summary of the discussion with the implementing agency is presented below.

14. The activities planned for demonstration had selected HFC-32 as the alternative technology. Noting that decision 89/6 allows the consideration of pilot projects designed for and targeted towards energy-efficient small-capacity refrigeration, air-conditioning and heat pump equipment using alternative low-GWP technologies to address challenges related to market acceptance, the Secretariat had consultations with the agency on whether the project falls within the guidelines of decision 89/6. Following these consultations, UNIDO after discussing with the country, agreed that R-290 would be the alternative technology selected for the pilot project.

15. Given the pilot nature of the project, the number of R-290-based AC units for demonstration was reduced to 20 units and a component for training technicians on the installation and servicing of the R-290 AC units was added to the project to ensure sustainability. The cost and activities were adjusted to optimize the use of funding. The revised activities and costs are presented as follows:

(a) Hiring a consultant to conduct a market survey to collect data and develop a comprehensive inventory of the RAC sector; data analysis for updating the MEPS and labelling standards; developing specifications for R-290 AC units for piloting (US $20,000);

(b) Awareness-raising activities to promote the introduction of R-290 technologies at a forum for 50 stakeholders (component manufacturers, government officers, national standard organizations officers, customs officers, environmental inspectors, importers, distributors, retail stores, members of refrigeration association, technicians) (US $20,000);

(c) Procuring 20 units of R-290-based AC equipment, and installing them in a public building for demonstration (US $39,000);

(d) Training of 20 technicians in the installation, maintenance and energy-efficient operation of R-290 units (US $10,000);

(e) Developing a green procurement policy to include the technical specifications of the RAC equipment to provide guidance for future purchases by the Government (US $6,000); and

(f) Refrigerant recovery and recycling from the replaced equipment before disposal, coordination with stakeholders for disposal (US $5,000).

<u>Updated Agreement</u>

16. In view of the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector, the third and the final tranche was moved from 2025 to 2026 to synchronize with the tranches planned under stage I of the KIP; hence, the Agreement between the Government of Albania and the Executive Committee has been updated. Specifically, Appendix 2-A has been revised and paragraph 17 has been added to indicate that the updated Agreement supersedes that reached at the 85th meeting, as contained in annex I to the present document. The full updated Agreement will be appended to the final report of the 93rd meeting.

RECOMMENDATION

17. The Fund Secretariat recommends blanket approval of the project for additional activities for the introduction of alternatives to HCFCs with low- or zero-global-warming-potential and for maintaining energy efficiency in the refrigeration servicing sector in Albania, and the corresponding 2024–2026 implementation plan, at the funding level shown in the table below, on the understanding that the Fund Secretariat has updated the Agreement between the Government of Albania and the Executive Committee for stage II of the HCFC phase-out management plan, as contained in annex I to the present document, specifically: Appendix 2-A, on the basis of the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector and moving the third and the final tranche from 2025 to 2026 to synchronize with the tranches planned under stage I of the Kigali HFC implantation plan, and paragraph 17 that has been added to indicate that the updated Agreement supersedes that reached at the 85th meeting.

	Project title	Project funding (US $)	Support costs (US $)	Implementing agency
(a)	Additional activities for the introduction of alternatives to HCFCs with low- or zero-global-warming-potential and for maintaining energy efficiency in the refrigeration servicing sector	100,000	4,497	UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Albania

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

(II) LATEST ARTICLE 7 DATA (Annex F)	Year: 2022	349.10 mt	816,384 CO_2-eq tonnes

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (CO_2-eq tonnes)									Year: 2022
Chemical	Aerosol	Foam	Firefighting	AC and refrigeration		Servicing	Solvent	Other	Total sector consumption
				Manufacturing					
				AC	Other				
HFC-32						8,998			8,998
HFC-134a						206,472			206,472
HFC-227ea	10,790								10,790
HFC-245fa			103						103
R-404A						418,105			418,105
R-407C						9,224			9,224
R-410-A						144,121			144,121
R-507A						2,271			2,271
R-417A						3,589			3,589
R-422B						12,830			12,830

(IV) AVERAGE 2020-2022 HFC CONSUMPTION IN SERVICING	330.98 mt	756,547 CO_2-eq tonnes

(V) CONSUMPTION DATA (CO_2-eq tonnes)			
Baseline: average 2020-2022 HFC consumption plus 65% of HCFC baseline	883,849	Starting point for sustained aggregate reductions	[n/a]*
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved	0	Remaining	[n/a]*

* For countries with 2020-2022 HFC consumption in servicing only and below 360mt.

(VI) ENDORSED BUSINESS PLAN		2023	2024	2025	Total
UNIDO	HFC phase-down (CO_2-eq tonnes)	0	0	0	0
	Funding (US $)	40,446	0	0	40,446
UNEP	HFC phase-down (CO_2-eq tonnes)	0	0	0	0
	Funding (US $)	18,306	0	0	18,306

(VII) PROJECT DATA			2023	2024	2025	2026	2027-2028	2029	2030	Total
Consumption (CO_2-eq tonnes)	Montreal Protocol limits		n/a	883,849	883,849	883,849	883,849	795,464	795,464	n/a
	Maximum allowable		n/a	883,849	883,849	883,849	883,849	795,464	795,464	n/a
Amounts requested in principle (US $)	UNIDO	Project costs	129,390	0	0	94,610	0	0	36,000	260,000
		Support costs	9,057	0	0	6,623	0	0	2,520	18,200
	UNEP	Project costs	50,000	0	0	50,000	0	0	0	100,000
		Support costs	6,500	0	0	6,500	0	0	0	13,000
Amounts recommended in principle (US $)	Total project costs		179,390	0	0	144,610	0	0	36,000	360,000
	Total support costs		15,557	0	0	13,123	0	0	2,520	31,200
	Total funds		194,947	0	0	157,733	0	0	38,520	391,200

(VIII) Request for approval of funding for the first tranche (2023)		
Implementing agency	**Funds recommended (US $)**	**Support costs (US $)**
UNIDO	129,390	9,057
UNEP	50,000	6,500
Total	**179,390**	**15,557**

Secretariat's recommendation:	Individual consideration – all technical and cost issues resolved

PROJECT DESCRIPTION

18. On behalf of the Government of Albania, UNIDO as the lead implementing agency has submitted a request for stage I of the KIP, at a total cost of US $391,200, consisting of US $260,000, plus agency support costs of US $18,200 for UNIDO and US $100,000, plus agency support costs of US $13,000 for UNEP, as originally submitted.[3]

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

20. The first tranche of stage I of the KIP being requested at this meeting amounts to US $194,947, consisting of US $129,390, plus agency support costs of US $9,057 for UNIDO and US $50,000, plus agency support costs of US $6,500 for UNEP, as originally submitted, for the period of January 2024 to December 2026.

Background

21. Albania has ratified all the amendments to the Montreal Protocol, including the Kigali Amendment on 18 January 2019. Albania has an HCFC consumption baseline of 6.00 ODP tonnes or 107.40 metric tonnes (mt) and is set to completely phase out consumption of HCFCs by 1 January 2030.[4]

Status of implementation of the HCFC phase-out management plan

22. Stage I of the HPMP for Albania was approved at the 64th meeting,[5] resulting in the phase-out of 2.10 ODP tonnes of HCFCs, at a total cost of US $315,000, plus agency support costs. Stage I was completed in December 2021.

23. Stage II of the HPMP for Albania was approved at the 85th meeting[6] to reduce HCFC consumption by 67.50 per cent from the baseline by 2025, at a total cost of US $292,500, plus agency support costs. The second tranche of stage II was approved at the 91st meeting. Stage II of the HPMP will be completed by December 2027, as stipulated in the updated Agreement between the Government of Albania and the Executive Committee.

Status of implementation of HFC-related activities

24. At the 74th meeting, Albania received funding to conduct a survey on the use of alternatives to ozone-depleting substances (ODSs) (US $40,000), which was completed in June 2017. At the 80th meeting, Albania received funding to implement the enabling activities for HFC phase down (US $95,000), which were completed in June 2019. These activities assisted the country inter alia in ratifying the Kigali Amendment; updating its licensing system to include HFCs, HFC blends and HFC-based equipment; undertaking a desk review of the relevant regulations in relation to annual quota allocations for the import of HFCs and requirements and procedures for an HFC import licensing system; discussing harmonized tariff codes with customs; reporting HFC import data under Article 7 of the Montreal Protocol; undertaking a study and holding discussions with the Ministry of Infrastructure and Energy and Energy Efficiency Agency, General Directorate of Standardization, Ministry of Tourism and Environment and RAC technicians to prepare information on energy-efficiency and safety standards for low-GWP flammable

[3] As per the letter of 23 August 2023 from the Ministry of Ministry of Tourism and Environment of Albania to UNIDO.
[4] Except for those HCFCs allowed for a servicing tail between 2030 and 2040, where required, consistent with the provisions of the Montreal Protocol.
[5] Decision 64/26
[6] Decision 85/25

refrigerants; and preparing and submitting a new legal act on fluorinated greenhouse gases (F-gases) for the due legislative process.

Stage I of the Kigali HFC implementation plan

Policy, regulatory and institutional frameworks

25. The Ministry of Tourism and Environment is responsible for all matters related to the Montreal Protocol. The national ozone unit (NOU) has been established under the Ministry to implement activities at the operational level. The Ozone Commission, comprising all key stake holders, has been established to provide guidance on cross-sector issues in the implementation of the Montreal Protocol. A licensing and quota system has been operational since 2013 and has been extended to include HFCs, HFC blends and HFC-based equipment to ensure compliance. The General Customs Authority monitors the import of controlled substances including HFCs and equipment containing them. Albania has implemented mandatory reporting by importers and exporters and applied environmental taxes on the import of ODSs and ODS-containing equipment. Albania has established a ban on the import of HCFC-based equipment, effective in 2018.

26. In 2019, the revised ODS regulation was approved by Decision of the Council of Ministers No. 10 to be in full alignment with European Union (EU) legislation with respect to regulating the imports, use and trade of ODSs, updating ODS reporting requirements, and providing adequate training and certification for end users. It also added legal measures prohibiting discharge of ODSs, and improved labelling requirements for ODS imports. In January 2023, the law on F-gases was approved by the Council of Ministers (Decision No. 432). Three other legal acts, regarding refrigerant leakage control, ODS use and data reporting, and training and certification of technicians and end-users, have been revised and will be adopted by the end of 2023.

27. Albania ratified the Kigali Amendment in 2019. In 2021, the licensing system was extended to include HFCs, HFC blends and HFC-based equipment.

HFC consumption

28. Albania only imports HFCs for use mainly in the RAC servicing sector with small amounts used in the foam, fire-suppression, aerosol and solvent sectors. In 2022, Albania consumed 349.10 mt (816,384 CO_2-eq tonnes) of HFCs and HFC blends, mainly including R-404A (51.21 per cent of total HFC consumption in CO_2-equivalent tonnes), HFC-134a (25.29 per cent), R-410A (17.65 per cent), and other miscellaneous HFCs (5.84 per cent). Table 1 presents the country's HFC consumption as reported under Article 7 to the Ozone Secretariat.

Table 1. HFC consumption in Albania (2018–2022 Article 7 data)

HFC	GWP*	2018	2019	2020	2021	2022	Share in 2022 (%)	Baseline
mt								
HFC-32	675	5.88	6.17	11.46	15.87	13.33	3.82	13.55
HFC-125	3,500	0.00	0.00	0.00	3.98	0.00	0.00	1.33
HFC-134a	1,430	202.15	271.56	138.15	102.70	144.39	41.36	128.41
HFC-143a	4,470	0.00	0.00	0.00	1.64	0.00	0.00	0.55
HFC-152a	124	1.2	0.00	0.00	36.90	0.00	0.00	12.30
HFC-227ea	3,220	0.82	0.00	0.10	3.42	3.35	0.96	2.29
HFC-245fa	1,030	0.00	0.00	0.10	1.98	0.00	0.00	1.04
R-404A	3,921	78.28	116.83	94.31	91.04	106.62	30.54	97.32
R-407C	1,773	12.05	33.34	19.38	7.92	5.20	1.49	10.83
R-410A	2,087	123.90	87.42	50.52	42.86	69.04	19.78	54.14
R-417A	2,346	0.00	0.00	0.00	0.00	1.53	0.44	0.77

HFC	GWP*	2018	2019	2020	2021	2022	Share in 2022 (%)	Baseline
R-422B	2,525	0.00	0.00	0.50	2.83	5.08	1.46	2.80
R-507A	3,985	8.17	17.12	8.00	10.18	0.57	0.16	6.25
Total (mt)		432.44	532.44	322.52	321.31	349.10	100.00	330.98
CO_2-eq tonnes								
HFC-32	675	3,966	4,165	7,733	10,709	8,995	1.10	9,146
HFC-125	3,500	0	0	0	13,930	0	0.00	4,643
HFC-134a	1,430	289,069	388,331	197,552	146,864	206,472	25.29	183,629
HFC-143a	4,470	0	0	0	7,331	0	0.00	2,444
HFC-152a	124	149	0	0	4,576	0	0.00	1,525
HFC-227ea	3,220	2,640	0	332	11,025	10,790	1.32	7,382
HFC-245fa	1,030	0	0	104	2,039	0	0.00	714
R-404A	3,921	306,991	458,153	369,858	357,038	418,105	51.21	381,667
R-407C	1,773	21,371	59,140	34,370	14,040	9,224	1.13	19,211
R-410A	2,087	258,635	182,489	105,465	89,468	144,117	17.65	113,017
R-417A	2,346	0	0	0	0	3,589	0.44	1,196
R-422B	2,525	0	0	1,260	7,147	12,840	1.57	7,083
R-507A	3,985	32,565	68,223	31,868	40,547	2,252	0.28	24,889
Total (tCO_2-eq)		915,386	1,160,501	748,541	704,715	816,384	100	756,547

*Global-warming potential

29. The HFC consumption has been increasing since 2015, reached a peak in 2019 and then fluctuated in 2020 to 2022 due to the impact of the COVID-19 pandemic. In 2022, consumption was lower than in 2019 as the economy was still recovering. HFC consumption is expected to continue to grow in unconstrained market conditions.

Country programme implementation report

30. The Government of Albania reported HFC sector consumption data in the 2022 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

HFC distribution by sector

31. In Albania, 99 per cent[7] of HFCs are used in the RAC servicing and local installation and assembly sector (55,738 CO_2-eq tonnes in 2022) with miscellaneous amounts (less than 1 per cent) used in the aerosol, fire-suppression and foam sectors. In the RAC servicing sector, 82.64 per cent of the refrigerants used are HFCs, 12.56 per cent are HCFC-22; and 4.8 per cent are low-GWP technologies (hydrocarbons, R-744, R-717 and HFO-1234yf).

32. In the RAC servicing sector, HFCs are mainly consumed for servicing in the commercial refrigeration subsector (32.19 per cent in mt and 45.82 per cent in CO_2-eq tonnes), followed by the mobile air-conditioning (MAC) subsector (28.01 per cent in mt and 17.37 per cent in CO_2-eq tonnes), the stationary air-conditioning (AC) subsector (domestic, commercial AC and chillers) (32.04 per cent in mt and 26.95 per cent in CO_2-eq tonnes), and other subsectors, as shown in table 2.

Table 2. Estimated HFC demand in RAC servicing sector (2022)*

Sector	HFC-134a	R-404A	R-507A	R-410A	R-407C	HFC-32	Total	Share (%)
GWP	1,430	3,922	3,985	2,188	1,774	675	2,306**	
mt								
Refrigeration subsectors								
Domestic refrigeration	4.06	0.00	0.00	0.00	0.00	0.00	4.06	1.04
Commercial refrigeration	32.30	92.60	0.93	0.00	0.00	0.00	125.83	32.19

[7] 2022 sector distribution data except for the firefighting and foam sectors, for which data were from 2021.

Sector	HFC-134a	R-404A	R-507A	R-410A	R-407C	HFC-32	Total	Share (%)
GWP	1,430	3,922	3,985	2,188	1,774	675	2,306**	
Industrial refrigeration	1.41	5.68	5.10	3.00	2.25	0.00	17.44	4.46
Transport refrigeration	2.74	6.06	0.03	0.00	0.00	0.00	8.84	2.26
Air-conditioning subsectors								
Domestic AC	0.00	0.00	0.00	30.81	8.32	4.14	43.26	11.07
Commercial AC and heat pump	0.08	0.00	0.00	38.02	1.87	4.46	44.43	11.36
Chillers	15.80	0.00	0.00	19.27	1.77	0.75	37.58	9.61
Mobile AC	109.50	0.00	0.00	0.00	0.00	0.00	109.50	28.01
Total (mt)	**165.88**	**104.34**	**6.06**	**91.09**	**14.21**	**9.35**	**390.93**	**100.00**
CO_2-eq tonnes								
Refrigeration subsectors								
Domestic refrigeration	5,803	0	0	0	0	0	5,803	0.64
Commercial refrigeration	46,189	363,136	3,694	0.00	0	0	413,019	45.82
Industrial refrigeration	2,009	22,283	20,324	6,563	3,991	0	55,169	6.12
Transport refrigeration	3,922	23,765	128	0	0	0	27,815	3.09
Air-conditioning subsectors								
Domestic AC	0	0	0	67,401	14,750	2,792	84,943	9.42
Commercial AC and heat pump	109	0	0	83,162	3,321	3,011	89,603	9.94
Chillers	22,587	0	0	42,142	3,140	508	68,376	7.59
Mobile AC	156,591	0	0	0	0	0	156,591	17.37
Total (CO_2-eq tonnes)	237,210	409,184	24,145	199,268	25,201	6,311	901,318	**100.00**

* Estimated during the survey for preparation of the KIP

**Weighted average GWP of all substances

Refrigeration and air-conditioning servicing sector

33. There are approximately 260 technicians and 145 workshops consuming HFCs in Albania. Under stages I and II of the HPMP all servicing technicians have received trained on various subjects. There are also eight vocational schools that provide training for RAC technicians.

Domestic, commercial, industrial and transport refrigeration servicing

34. The domestic refrigeration subsector is in the process of transitioning from HFC-134a to hydrocarbon (R-600a) technology. From 2019 to 2022, the number of R-600a-based refrigerators increased by 58 per cent while the number of HFC-134a-based refrigerators decreased by 28 per cent due to the recent significant decrease in the price of HC-600a. The ban on domestic refrigerators using HFCs with a GWP of more than 150 will be effective from 1 January 2024 as stipulated in the F-gas law. In view of the market transition and the growing servicing needs in the sector, focused training on the safe handling flammable refrigerants for technicians, including in the informal sector, would support the sector's transition to low-GWP technologies.

35. The commercial refrigeration subsector is the largest HFC consumer (45.8 per cent in CO_2-eq tonnes) among all the subsectors due to the higher refrigerant charge and the leakage rates. The main refrigerants used are mainly HFC-134a and R-404A, with a small amount of R-507A. The imports of R-404A-based equipment (mainly second-hand appliances from the EU) have been growing significantly over the last few years. The low-GWP technologies (R-600a and R-290) have started to be introduced to the market, and their numbers are steadily increasing. Medium-GWP blends such as R-448A and R-449A could be used as alternative technologies in the short to medium-term. The sector could benefit from technology demonstrations on low-GWP energy-efficient units and the training of technicians in leakage control and reduction.

36. Industrial refrigeration consumes 6.12 per cent of the HFCs in the country (in CO_2-eq tonnes). The largest consumption is R-507A used in large distributed systems. Other refrigerants used are HFC-134a, R-404A and R-407C. Industrial refrigeration units are usually maintained by dedicated service technicians

employed by the facilities where these units are installed. The use of low-GWP technology in the sector is very limited at this moment (only Tirana Beer Factory uses R-717 in its production process).

37. Transport refrigeration consumed 3.09 per cent of HFCs in 2022. The main refrigerant used is R-404A together with R-134a and R-507A. The stock of equipment in the sector has not changed very much except for refrigeration on fishing vessels using R-404A that has increased rapidly. The main challenge in this subsector is the lack of readily available low-GWP alternatives. The shift to the use of R-452A, R-448A and R-449A was considered a good first step.

Residential and commercial air-conditioning servicing

38. Residential AC equipment uses 9.42 per cent of total HFCs (in CO_2-eq tonnes). The sector has the largest number of appliances and is a fast-growing sector. The refrigerants used include R-410A and R-407C, while more recently HFC-32 is being introduced to replace HCFC-22. The training and certification of technicians would provide the skills needed to service the AC units with R-290, and an end-user programme would help with the introduction of R-290, its market adoption and end-user acceptance.

39. Commercial AC, heat pumps and chillers consume 17.53 per cent of HFCs in the country. The refrigerants used include R-410A and HFC-134a (mainly chillers), with a small amount of HFC-32 and R-407C. The population of both chillers and heat pumps has been growing over the years. Broader use of HFC-32, as well as the use of R-446A, R-447A could be a way forward for small and medium-sized chillers; and R-717 as a replacement for HFC-134a for large chillers. For heat pumps, broader use of HFC-32, R-446A, R-447A, or, ideally, R-290 would be good choices.

Mobile air-conditioning servicing

40. The MAC subsector consumes 17.37 per cent of HFCs in the country and is the second largest subsector in metric tonnes. There are approximately 670,000 vehicles according to 2022 data. Historically most MAC systems used CFC-12 which was replaced with R-134a. The sector has not been assisted under the HPMP. HFO-1234yf and R-744 are used to replace HFC-134a for cars and small vans, and HFC-152a and R-744 could be used for larger vehicles and buses. The challenge for the sector is the import of second-hand vehicles with faulty, high-leakage AC. The introduction of HFO-1234yf will also depend on the European Union's per- and polyfluoroalkyl substances (PFAS) regulations.

Local installation and assembly

41. Consumption in the assembly and local installation subsector has been included in the servicing sector in the CP data reporting. The types of equipment assembled include centralized commercial refrigeration systems and refrigeration equipment in road vehicles. In 2022, 170 units of centralized commercial refrigeration based on HFC-134a and 679 units based on R-404A were assembled; and 18 units of refrigeration equipment in road vehicles based on HFC-134a and 42 based on R-404A were assembled. All together, this represents the use of 16.36 mt of refrigerants (55,738 CO_2-eq tonnes of HFCs/blends).

Firefighting aerosol and foam sector

42. During the survey conducted for the preparation of stage I of the KIP, small uses were identified in the fire-suppression (HFC-125), aerosol (HFC-227ea) and extruded polystyrene foam (HFC-143a, HFC-152a, and HFC-245fa) sectors. There is not sufficient information about these sectors to plan activities in stage I. Therefore, it was decided that a survey should be conducted to collect detailed data in order to plan further activities to address these sectors.

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

Overarching strategy

43. The Government of Albania is proposing three stages for KIP implementation. Stage I is proposed to achieve 10 per cent reduction in HFC consumption from the baseline by 2029 following the Montreal Protocol schedule for HFC phase-down, to be implemented simultaneously with the HPMP. Stage II is expected to cover a period of ten years (from 2030 to 2039), and stage III is expected to cover a period of six years until 2045.

44. The implementation of stage I of the KIP will utilize the infrastructure established under the HPMP and will take into consideration lessons learned from the implementation of the HPMP, market conditions and readiness when planning activities. The Government will harmonize the activities for HCFC phase-out and HFC phase-down where possible to maximize impact.

45. The strategies for HFC reduction in stage I of the KIP will include reducing the effect of shifting from HCFCs to high-GWP HFCs (R-404A and R-410A) during HCFC phase-out, while simultaneously controlling the growth of HFC consumption. The priority areas to be addressed include the reduction of high-GWP substances in commercial refrigeration, stationary AC and MAC.

Established HFC baseline and proposed reduction

46. The Government of Albania reported its Article 7 data for 2020–2022. By adding 65 per cent of the HCFC baseline (in CO_2-eq tonnes) to the average HFC consumption in 2020–2022, the established HFC baseline is 883,849 CO_2-eq tonnes, as shown in table 3.

Table 3. Established HFC baseline for Albania (CO_2-eq tonnes)

Baseline calculation	**2020**	**2021**	**2022**
HFC annual consumption	748,541	704,715	816,384
HFC average consumption 2020-2022			756,547
HCFC baseline (65%)			127,302
HFC baseline			**883,849**

Proposed activities

47. The following activities are planned for stage I of the KIP:

(a) Implementing by-laws for leakage control and data reporting by establishing a central electronic database for reporting by all entities, and by including HFCs in the mandatory certification of technicians; completing the updates of the licensing and quota system for HFCs and implementing bans on HFC-based equipment (UNIDO) (US $33,000);

(b) Establishing a register for technicians and servicing companies; developing the codes of practice and standards on the safe management of low-GWP refrigerants; improving import records kept by customs (UNIDO) (US $21,000);

(c) Targeted awareness-raising activities for female end users and servicing workshop owners on low-GWP alternative technologies, codes of practice and standards on the flammability and toxicity of alternatives, and on improving the energy-efficiency of RAC equipment (UNIDO) (US $12,000);

(d) Training 50 customs clearing agents at border posts in the identification of HFCs and HFC-based equipment, regulations, the prevention of illegal trade, the labelling of refrigerant cylinders, harmonized system (HS) codes for HFCs, blends and equipment; conducting three awareness-raising workshops for importers and distributors on safety issues associated with the handling, storing and repackaging of refrigerants (UNEP) (US $30,000);

(e) Providing four gas identifiers for customs officers and environmental inspectors to enable the identification of HFCs, HFC blends and alternatives (UNIDO) (US $18,000);

(f) Sending two trainers to train overseas in the safe handling of refrigerants, and conducting 10 training sessions at home to train 150 technicians in eight vocational schools focusing on new low-GWP technologies, safety standards, leakage detection and control, energy efficiency, and refrigerant recovery, recycling and reclamation (RRR) in commercial refrigeration, AC and MAC subsectors (UNEP) (US $70,000);

(g) Providing 10 sets of tools to support RRR (e.g., recycling machine, charging station, manifold, three cylinders) for servicing workshops (UNIDO) (US $12,000);

(h) Assessment and modification of three vocational training schools to facilitate the training with flammable refrigerant (UNIDO) (US $45,000);

(i) Providing tools and equipment for three public and two private training centres (e.g., brazing kits, leakage detectors, charging stations for hydrocarbons, recovery machines, contamination test kits, etc.) for handling low-GWP technologies (UNIDO) (US $79,535);

(j) Implementing a demonstration project to replace R-404A with R-744 technology in a supermarket in the commercial refrigeration subsector (activities include project planning and design; purchasing a new R-744 unit; installation, commission, operation and maintenance of the new unit in coordination with the training of technicians; disposal of the old equipment; awareness-raising campaign and information dissemination among end users on the demonstration project; coordination with CO_2 refrigerant suppliers to meet future refrigerant need for servicing) (UNIDO, US $15,000); and

(k) Conducting two studies, one in the aerosol, solvent, firefighting and foam sectors and their subsectors, and another in the RAC assembly subsector, aiming to better understand the subsectors and explore options to phase out HFCs (UNIDO) (US $9,465).

Project implementation, coordination and monitoring

48. The coordination, monitoring and reporting of activities under stage I of the KIP will be combined with stage II of the HPMP. The NOU will collaborate with other departments of the Government to ensure synergies and optimize climate benefits. The total cost of this component amounts to US $15,000 with the following cost breakdown: US $6,000 for a national expert, US $6,000 for travel, US $2,000 for meetings, and US $1,000 for miscellaneous expenses.

Gender policy implementation

49. The Government, UNIDO and UNEP are fully aware of the gender policy of the Multilateral Fund and committed to implementing it and their own gender policies. Gender mainstreaming will be taken into consideration in the implementation of all KIP activities. Under stage II of the HPMP, various activities have been implemented to promote gender equality including the recruitment of female trainees and technicians in the RAC servicing sector; the provision of incentives for female trainees and technicians to

develop their careers; and awareness, training and awards to advocate the importance of gender-responsive actions. In stage I of the KIP, activities have been planned to address gender equality and women's empowerment across various areas of implementation.

Total cost of stage I of the Kigali HFC implementation plan

50. The budget for stage I has been established at US $360,000. The cost of activities in the refrigeration servicing sector have been established in line with decision 92/37.

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

51. The Government of Albania proposes to implement the KIP in four stages, with stage I synchronized with the implementation of the HPMP. The Government plans to harmonize activities for HCFC phase-out and HFC phase-down where possible to maximize impact. The schedule of HFC phase-down and HCFC phase-out commitments is presented in annex II and the way in which stage I KIP activities are coordinated with those being carried out in stage II of the HPMP is presented in annex III to the present document.

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

52. The first funding tranche of stage I of the KIP in the total amount of US $179,390 will be implemented between January 2024 and December 2026 and will include the following activities:

(a) Implementing by-laws for leakage control and data reporting by establishing a central electronic database for reporting by all entities, and by including HFCs in the mandatory certification of technicians; completing the updates of the licensing and quota system for HFCs; implementing bans on HFC-based equipment; collecting data on RAC servicing workshops and technicians (UNIDO) (US $22,000);

(b) Continuing to develop codes of practice and standards on handling low-GWP technologies; improving import record-keeping by customs officers; and conducting awareness-raising campaigns on HFCs and low-GWP technologies for women (UNIDO) (US $21,000);

(c) Training 30 customs officers and environmental inspectors and organizing information and awareness-raising workshops for importers and distributors (UNEP) (US $20,000);

(d) Training 90 technicians focusing on new low-GWP technologies, safety standards, leakage detection and control, energy efficiency, and refrigerant recovery, recycling and reclamation in commercial refrigeration, AC and MAC subsectors (UNEP) (US $30,000);

(e) Implementing refrigerant recovery and recycling activities; providing additional refrigerant identifiers for customs officers; and providing tools and equipment to support training centres and refrigerant RRR (e.g., brazing kits, leakage detectors, charging stations for hydrocarbons, recovery machines, contamination test kits, etc.) (UNIDO) (US $78,890); and

(f) Project coordination and monitoring at the total cost of US $7,500 for UNIDO with the following breakdown: US $3,000 for staff and consultant; US $3,000 for travel; US $1,500 for meetings and miscellaneous expenses.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

53. The Secretariat reviewed stage I of the KIP for Albania in light of the existing policies and guidelines of the Multilateral Fund, including decision 92/37,[8] stage II of the HPMP, and the 2023–2025 business plan of the Multilateral Fund.

Policy, regulatory and institutional frameworks

HFC licensing and quota system

54. Decision 87/50(g) requests the bilateral and implementing agencies, when submitting stage I of the KIPs, to include confirmation that the country has an established and enforceable national system of licensing and quotas for monitoring HFC imports/exports in place, consistent with decision 63/17. Accordingly, the Government of Albania has established a licensing system and quota system for HFCs, blends and equipment containing them, endorsed by the Decisions of Council of Ministers (DCM No. 865) and the Law on F-Gases to be effective from January 2024. The NOU is working to introduce HS code for HFCs and blends into the customs monitoring system. The law will be implemented by enforcing a labelling system. The labels will contain information on, inter alia, the type of F-gases and their GWP value.

Technical and cost-related issues

55. The Secretariat noted that small quantities of consumption were reported in the firefighting, aerosol and foam sectors. UNIDO clarified that the data were collected from customs, but no use of these chemicals had been identified in the manufacturing sector. It was therefore planned to conduct a survey during stage I of the KIP to collect detailed data in order to plan further activities to address these sectors. The Secretariat considers that the survey for data collection should be part of the project preparation process. UNIDO agreed to use the funding balance from project preparation for the survey, and to use the US $9,465 initially earmarked for the survey for the technology demonstration project instead.

Tranche distribution

56. The funding tranches under the KIP were originally planned in 2023 and 2026, while the funding tranches in stage II of the HPMP were planned in 2020, 2022 and 2025. In order to synchronize the tranches under the two multi-year agreements to reduce the administrative cost and workload associated with tranche submissions and noting that 10 per cent of the funding would need to be planned for the last year in which a target is set in the Agreement, the funding tranches under the KIP were adjusted to 2023, 2026 and 2030. The number of tranches under both multi-year agreements remains unchanged. Since US $48,890 of the funding for the first tranche will be used for purchasing equipment and tools, the first tranche was agreed at US $179,390 (49.8 per cent of the total funding).

Impact on the climate

57. The activities proposed, including strengthening the regulatory framework, training technicians in good refrigeration servicing practices and the safe handling of flammable refrigerants, providing tools and equipment for training and refrigerant RRR, and promoting low-GWP alternatives indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. A preliminary calculation of the impact on the climate of the activities in the KIP indicates that Albania will achieve an annual emission reduction of 88,385 CO_2-eq tonnes of HFCs when the final

[8] Level and modalities of funding for HFC phase-down in the refrigeration servicing sector.

target in stage I of the KIP is achieved, calculated based on the difference between the HFC baseline and the final target set in stage I.

Sustainability of the HFC phase-down and assessment of risks

58. As part of KIP preparation, the potential risks have been analyzed and measures to mitigate these risks have been considered when developing activities and plans under stage I to ensure the successful implementation of the KIP and the sustainability of the results achieved.

59. The Government commits to enforcing the licensing and quota system to ensure that the import of HFCs will stay below the maximum allowable targets set in the Agreement with the Executive Committee to mitigate the risk of non-compliance attributed to HFC growth due to economic recovery from the COVID-19 pandemic. The training of customs officers and awareness-raising activities targeting importers will support the control of HFCs.

60. The slow introduction of low-GWP alternative technologies into the market and the proliferation of high-GWP technologies are identified as risks to HFC control. The Government has planned to include importers and distributors in training and awareness-raising activities under the KIP to encourage them to acquire low-GWP alternatives and to increase their supplies to the market. Raising the awareness of end-users on the benefits of shifting to new technologies will help create a demand for low-GWP technologies and further support the HFC phase-down in the servicing sector.

Co-financing

61. Stage I of the KIP includes technology demonstration activities in the commercial refrigeration subsector. The beneficiary end users are required to contribute to the project through co-financing. The Government will continue to explore opportunities for co-financing during the implementation of the KIP.

2023–2025 business plan of the Multilateral Fund

62. UNIDO and UNEP are requesting US $360,000, plus agency support costs, for the implementation of stage I of the KIP for Albania. The total value of US $194,947, including agency support costs, requested for the period of 2023–2025, is US $136,195 above the amount in the business plan.

Draft Agreement

63. A draft Agreement between the Government of Albania 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.

64. If the Executive Committee so wishes, the funds for stage I of the KIP for Albania 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.

RECOMMENDATION

65. The Executive Committee may wish to consider:

(a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Albania for the period 2023–2030 to reduce HFC consumption by 10 per cent of the country's baseline in 2029, in the amount of US $391,200, consisting of US $260,000, plus agency support costs of US $18,200 for UNIDO, and US $100,000, plus agency support costs of

US $13,000 for UNEP, as reflected in the schedule contained in annex II of the present document;

(b) Noting that upon completion of the end-user project included in stage I of the KIP, UNIDO will submit a final report on the implementation of the 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 Albania, and the corresponding tranche implementation plan, in the amount of US $194,947, consisting of US $129,390, plus agency support costs of US $9,057 for UNIDO, and US $50,000, plus agency support costs of US $6,500 for UNEP; and

(d) Requesting the Government of Albania, UNIDO, UNEP and the Secretariat to finalize the draft Agreement between the Government of Albania 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

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF ALBANIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN

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

17. This updated Agreement supersedes the Agreement reached between the Government of the Republic of Albania and the Executive Committee at the 85th Executive Committee meeting.

APPENDIX 2-A: THE TARGETS, AND FUNDING*

Row	Particulars	2020	2021	2022	2023	2024	2025	2026**	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	3.90	3.90	3.90	3.90	3.90	1.95	**1.95**	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	3.90	3.90	3.90	3.90	3.90	1.95	**1.95**	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	88,000	0	81,250	**100,000**	0	**0**	35,250	**304,500**
2.2	Support costs for Lead IA (US $)	7,920	0	7,313	**4,497**	0	**0**	**1,585**	**21,315**
2.3	Cooperating IA (UNEP) agreed funding (US $)	39,500	0	39,500	**0**	0	**0**	9,000	88,000
2.4	Support costs for Cooperating IA (US $)	5,135	0	5,135	**0**	0	**0**	1,170	11,440
3.1	Total agreed funding (US $)	127,500	0	120,750	**100,000**	0	**0**	44,250	**392,500**
3.2	Total support costs (US $)	13,055	0	12,448	**4,497**	0	**0**	**2,755**	**32,755**
3.3	Total agreed costs (US $)	140,555	0	133,198	**104,497**	0	**0**	**47,005**	**425,255**
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								1.95
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								1.80
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								1.95
4.2.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)								0.00
4.2.2	Phase-out of HCFC-124 to be achieved in the previous stage (ODP tonnes)								0.01
4.2.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)								0.00
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)								0.00
4.3.2	Phase-out of HCFC-142b to be achieved in the previous stage (ODP tonnes)								0.29
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)								0.00

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

****** **Stage II of the HPMP has established targets up to 2025 as originally approved at the 85th meeting. The Agreement has been revised at the current meeting to include the funding requested for additional activities for maintaining energy efficiency in the servicing sector and to move the last tranche originally planned for 2025 to 2026 to synchronize with the tranches under the KIP.**

Annex II

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 ALBANIA

Kigali HFC implementation plan (stage I)

Row	Particulars	2023	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex F substances (CO_2-eq tonnes)	n/a	883,849	883,849	883,849	883,849	883,849	795,464	795,464	n/a
1.2	Maximum allowable total consumption of Annex F substances (CO_2-eq tonnes)	n/a	883,849	883,849	883,849	883,849	883,849	795,464	795,464	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	129,390	0	0	94,610	0	0	0	36,000	260,000
2.2	Support costs for Lead IA (US $)	9,057	0	0	6,623	0	0	0	2,520	18,200
2.3	Cooperating IA (UNEP) agreed funding (US $)	50,000	0	0	50,000	0	0	0	0	100,000
2.4	Support costs for Cooperating IA (US $)	6,500	0	0	6,500	0	0	0	0	13,000
3.1	Total agreed funding (US $)	179,390	0	0	144,610	0	0	0	36,000	360,000
3.2	Total support costs (US $)	15,557	0	0	13,123	0	0	0	2,520	31,200
3.3	Total agreed costs (US $)	194,947	0	0	157,733	0	0	0	38,520	391,200

HCFC phase-out management plan (stages II)

Row	Particulars	2020	2021	2022	2023	2024	2025	2026*	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	3.90	3.90	3.90	3.90	3.90	1.95	1.95	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	3.90	3.90	3.90	3.90	3.90	1.95	1.95	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	88,000	0	81,250	100,000	0	0	35,250	304,500
2.2	Support costs for Lead IA (US $)	7,920	0	7,313	7,000	0	0	2,468	24,701
2.3	Cooperating IA (UNEP) agreed funding (US $)	39,500	0	39,500	0	0	0	9,000	88,000
2.4	Support costs for Cooperating IA (US $)	5,135	0	5,135	0	0	0	1,170	11,440
3.1	Total agreed funding (US $)	127,500	0	120,750	100,000	0	0	44,250	392,500
3.2	Total support costs (US $)	13,055	0	12,448	7,000	0	0	3,638	36,141
3.3	Total agreed costs (US $)	140,555	0	133,198	107,000	0	0	47,888	428,641

*Stage II of the HPMP has established targets up to 2025 as originally approved at the 85th meeting. The Agreement has been revised at the current meeting to include the funding requested for additional activities for maintaining energy efficiency in the servicing sector and to move the last tranche originally planned for 2025 to 2026 to synchronize with the tranches under the KIP.

Annex III

IMPLEMENTATION OF BOTH THE HCFC PHASE-OUT MANAGEMENT PLAN (HPMP) AND THE KIGALI HFC IMPLEMENTATION PLAN (KIP) IN ALBANIA

	HPMP – stage II		KIP – stage I		Combined cost for HPMP+KIP (US $)
Category of activity	**Activity**	**Cost (US $)**	**Activity**	**Cost (US $)**	
Strengthening the regulatory framework	Policies and regulations, enforcing the licensing and quota system, labelling of cylinders, ban on imports of HCFC-based equipment; mandatory certification of technicians; adjusting the regulatory framework to include HFCs, introduce health and safety codes for the adoption of toxic and flammable alternative refrigerants to HCFCs	51,500	Implementing by-laws for leakage control and data reporting by establishing a central electronic database for reporting by all entities, and by including HFCs in the mandatory certification of technicians; completing the update of the licensing and quota system for HFCs and implementing bans on HFC-based equipment	33,000	84,500
			Establishing a register for technicians and servicing companies; development of the codes of practice and standards on the safe management of low-GWP refrigerants; improving the import records kept by customs	21,000	21,000
			Targeted awareness-raising activities for female end users and servicing workshop owners on low-GWP alternative technologies, codes of practice and standards on the flammability and toxicity of alternatives, and improving the energy efficiency of RAC equipment	12,000	12,000
Capacity building for customs officers	Updating the training materials, training 100 customs officers and environmental inspectors in the prevention of illegal trade and the mislabelling of refrigerant cylinders, and monitoring and reporting of ODS data (UNEP) (US $18,000);	18,000	Training 50 customs clearing agents at border posts in the identification of HFCs and HFC-based equipment, Regulations, prevention of illegal trade, labelling of refrigerant cylinders, harmonized system (HS) codes for HFCs, blends and equipment; conducting three awareness-raising workshops for importers and distributors on safety issues associated with the handling, storing and repackaging of refrigerants	30,000	48,000
			Providing four gas identifiers for customs officers and environmental inspectors to enable the identification of HFCs, HFC blends and alternatives	18,000	18,000

	HPMP – stage II		KIP – stage I		Combined cost for HPMP+KIP (US $)
Category of activity	**Activity**	**Cost (US $)**	**Activity**	**Cost (US $)**	
Capacity building of RAC technicians	Updating the training curriculum; training trainers and 200 technicians in good servicing practices, leakage control, RRR, safe handling of flammable and toxic refrigerants in general	70,000	Training of two trainers in the safe handling refrigerants overseas, and conducting ten training sessions to train 150 technicians in eight vocational schools focusing on new low-GWP technologies, safety standards, leakage detection and control, energy efficiency, and refrigerant recovery, recycling and reclamation in commercial refrigeration, AC, and MAC subsectors	70,000	140,000
Refrigerant RRR	Designing and implementing a refrigerant RRR programme; awareness-raising activities; training 140 technicians in RRR; special training for female participation in RRR activities (UNIDO) (US $57,000)	57,000	Provision of an additional 10 sets of tools to support refrigerant RRR	12,000	69,000
Facilitating the introduction of low-GWO technologies and promoting not-in-kind technologies	A feasibility study to assess non-conventional cooling options for the building sector; an analysis of the potential to utilize renewable energy, legal barriers, environmental benefits, energy saving; and the financial planning for implementing feasible options (UNIDO) (US $46,000	46,000	A demonstration project to replace R-404A with R-744 technology in a supermarket in the commercial refrigeration subsector	24,465	70,465
Strengthening technical capacity for refrigerant management			Upgrading the vocational schools to accommodate training for handling flammable refrigerants	45,000	45,000
			Providing tools and equipment to three public and two private training centres for handling low-GWP technologies	79,535	79,535
Project monitoring and reporting	Project management, coordination, monitoring and reporting	50,000	Project management, coordination, monitoring and reporting	15,000	65,000
	Total	292,500		360,000	652,500