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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-seventh Meeting
Montreal, 1–5 December 2025
Items 9(c) and (d) of the provisional agenda¹

PROJECT PROPOSALS: GUINEA-BISSAU

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

Energy efficiency

- | | | |
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| • Additional activities to maintain energy efficiency in the refrigeration servicing sector (decision 89/6(b)) | UNEP | Blanket approval |
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Phase-down

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

¹ UNEP/OzL.Pro/ExCom/97/1

ADDITIONAL ACTIVITIES TO MAINTAIN ENERGY EFFICIENCY IN THE REFRIGERATION SERVICING SECTOR (DECISION 89/6(b))

PROJECT DESCRIPTION

1. Stage II of HCFC phase-out management plan (HPMP) for Guinea-Bissau was approved at the 95th meeting² to completely phase out HCFC consumption by 2030 in three tranches, in the amount of US \$520,000, plus agency support costs for UNEP and UNIDO. As per the Agreement between the Government of Guinea-Bissau and the Executive Committee, the second tranche of the HPMP is scheduled to be submitted to the first meeting of 2027.

2. On behalf of the Government of Guinea-Bissau, UNEP, as the lead implementing agency, has submitted a request for funding additional activities to strengthen energy efficiency in the refrigeration and air-conditioning (RAC) servicing sector and promote the use of energy-efficient refrigerants with low global-warming potential (GWP) in line with decisions 89/6(b) and 92/22,³ in the amount of US \$100,000, plus agency support costs of US \$13,000.⁴ The submission includes a description of proposed activities, targets, and an implementation plan from January 2026 to December 2027. On 2 November 2025, UNEP submitted the verification report on HCFC consumption for 2019 to 2024.⁵

Report on HCFC consumption

3. The Government of Guinea-Bissau reported a consumption of 0.61 ODP tonnes of HCFC-22 in 2024, which is 78.4 percent below the country's HCFC baseline for compliance. The 2020-2024 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Guinea-Bissau (2020-2024 Article 7 data)

HCFC-22	2020	2021	2022	2023	2024	Baseline
Metric tonnes (mt)	20	15	14	12	11	51
ODP tonnes	1.10	0.83	0.77	0.66	0.61	2.83

4. The only HCFC consumed in the country is HCFC-22 used in the RAC servicing sector. Consumption over the past five years has been decreasing due to the implementation of activities under the HPMP, including the import/export licensing and quota system, the training of customs officers, training of RAC technicians in good servicing practices, and the introduction of alternatives to HCFCs in RAC applications, such as those based on HFCs and low-GWP refrigerants.

Country programme implementation report

5. The Government of Guinea-Bissau reported HCFC sector consumption data under the 2024 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

² Decision 95/50 and document UNEP/OzL.Pro/ExCom/95/56

³ Decision 92/22 allows for the submission of requests for activities referred to in decision 89/6(b) separately from HPMP tranche requests, including a revised Agreement between the Government of the Article 5 country concerned and the Executive Committee, on the understanding that those activities were integrated into the ongoing tranche implementation plans.

⁴ As per the letter of 17 September 2025 from the Ministry of the Environment, Biodiversity and Climate Change of Guinea-Bissau to the Secretariat.

⁵ Funding for verification was approved at the 88th meeting, when there were no remaining tranches in Guinea-Bissau's stage I of the HPMP. Due to a misunderstanding, the report was not submitted with the request for the first tranche of stage II at the 95th meeting.

Verification of HCFC consumption

6. The verification report confirmed that the Government of Guinea-Bissau was implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2019 to 2024 was correct (consumption for 2020 to 2024 is shown in table 1 above). The verification concluded that the quantities of HCFCs imported and declared to the customs were lower than the quotas allocated each year to importers/distributors, which reflects the country's adherence to the annual licensing and quota allocation system for HCFC imports.

7. The report noted that the licensing, permit and quota system was reliable and ensured compliance with the Montreal Protocol. The monitoring system set up by the national ozone unit (NOU) works well and allows for good control of the allocated quotas. Recommendations include: implementation of the one recommendation from the previous verification report that has not yet been followed, i.e., requiring vocational training centres to be suitably equipped to enable learners to familiarise themselves with new technologies before entering the professional path; as well as intensifying the information and awareness campaigns on the harmful effects of HCFC-22; continued training related to the national and subregional legislation on ozone-depleting substances (ODSs) provided to importers and distributors; strengthening the capacity of customs officers responsible for the implementation of national and subregional regulations on the import and distribution of ODSs; and providing customs officers with high-performance identifiers to test and analyze all refrigerants imported into the country. UNEP indicated that those recommendations would be implemented either under stage II of the HPMP or stage I of the Kigali HFC implementation plan.

Project description

8. Guinea-Bissau has been making efforts to enhance energy efficiency while sustaining the phase-out of HCFCs achieved so far in the refrigeration, air-conditioning and heat-pump (RACHP) sector.⁶ The country ratified the Kigali Amendment on 22 October 2018.

9. Guinea-Bissau currently has no binding regulations for enforcing energy-efficiency standards for RAC appliances. While the country has endorsed the West African Economic and Monetary Union common energy policy and the Economic Community of West African States (ECOWAS) regional frameworks on renewable energy, biofuels, and energy efficiency, existing national provisions lack detailed enforcement mechanisms and compliance systems. The country is also part of UNEP's Country Savings Assessment (CSA) under the United for Efficiency initiative. The CSA provides the evidence base for energy reforms, demonstrating that the introduction of minimum energy performance standards (MEPS), product labelling, market monitoring, verification, and financial incentives yield significant energy, environmental, financial, and societal benefits. As a member of ECOWAS, Guinea-Bissau benefits from a harmonized regional approach that provides policy guidance and institutional coordination, while the development, adoption, and enforcement of MEPS remain the responsibility of national authorities.

10. The project for additional activities related to energy efficiency has been designed to promote the use of energy-efficient alternative technologies based on low-GWP refrigerants and the development of MEPS and an energy labelling system for RAC equipment by supporting coordination between the involved agencies and building the capacity of stakeholders. Activities include linking the country's energy-efficiency policymakers and other relevant stakeholders to the project. The description and proposed cost breakdown of activities to maintain energy efficiency in the sector are presented in table 2.

⁶ Stage II of the HPMP for Guinea-Bissau includes an end-user project, submitted pursuant to decision 92/36(g), to promote a new technology, such as hydrocarbons, to reduce costs and increase the energy efficiency of RAC systems, thus preventing users from reverting to the use of more expensive HCFCs. The country is required to report on the energy-efficiency gains achieved through the implementation of this project.

Table 2. Activities, expected outputs and funding requested for the project to maintain energy efficiency for the servicing sector in Guinea-Bissau (as submitted)

Activity	Performance indicators	Cost (US \$)
Institutional coordination and establishment of MEPS		
<i>Coordination mechanism:</i> Set up a national coordination platform bringing together key ministries and stakeholders (e.g. the Ministry of Energy, the Ministry of Trade and Industry; the Directorate-General of Customs); and hold regular coordination meetings to align roles, share information, and oversee progress in the implementation of MEPS and the labelling scheme	National stakeholders' coordination meetings	15,000
<i>MEPS and labelling system development:</i> Recruit an international consultant or firm to conduct a technical analysis and propose MEPS and labelling criteria based on the CSA; and define minimum energy performance levels for domestic and commercial refrigeration and domestic air-conditioning appliances and design a labelling system to inform consumers and promote new technologies	MEPS and labelling system developed	20,000
<i>Policy and regulatory framework:</i> Facilitate joint work sessions among relevant ministries and institutions to draft or update laws, regulations, and standards for MEPS and labelling in the RAC sector; and prepare technical guidelines to support the enforcement of these new requirements	Draft and update of the policy and regulatory framework	10,000
<i>Experience sharing and study tours:</i> Organize a study tour or experience-sharing visit for national stakeholders (NOU, the Ministry of Energy, the Standards Institute, the Customs and the Ministry of Trade) to an African country with successful MEPS implementation; and prepare a report on best practices and lessons learned from regional experiences, tailored to inform the design and implementation of Guinea-Bissau's national MEPS and labelling framework	One study tour and one report	15,000
Subtotal		60,000
Capacity-building		
<i>Customs workshop:</i> Update training materials and conduct two workshops for 40 customs and enforcements officers on the monitoring of RACHP equipment imports, with focus on energy efficiency, MEPS, and the labelling system	Two workshops (20 participants each)	8,000
<i>Technical expert workshop:</i> Conduct two information sessions for 50 technical experts (e.g., importers, designers, developers) on low-GWP and energy-efficient technologies	Two workshop (25 participants each)	8,000
Subtotal		16,000
Community awareness and outreach programmes		
<i>Awareness campaigns:</i> Conduct nationwide outreach activities to inform importers, distributors, technicians, and consumers about the benefits of energy-efficient and low-GWP RAC equipment; and to highlight its environmental, economic, and social advantages, such as lower electricity use, reduced costs, and contribution to climate goals under the Montreal Protocol	Two awareness campaigns	8,000
<i>Communication tools:</i> Develop communication materials to promote MEPS, labelling, and energy-efficient technologies; and disseminate content through social media, local TV, radio, and community events to reach diverse audiences across urban and rural areas	Two videos; two infographics; five banners and three digital contents; 50 brochures	10,000

Activity	Performance indicators	Cost (US \$)
<i>Educational workshops:</i> Organize interactive workshops and community events to demonstrate energy-efficient RAC technologies and explain how to interpret energy labels; and engage technicians, educators, and consumers in hands-on sessions to encourage adoption of efficient low-GWP appliances	Two workshop sessions (50 participants)	6,000
Subtotal		24,000
Total		100,000

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

11. The Secretariat has reviewed the project proposal in line with decisions 89/6(b) and 92/22 and sought additional information from UNEP on different elements of the project.

12. The Secretariat enquired about the expected date for the enforcement of the MEPS and labelling system. UNEP explained that the system would be established and made mandatory as part of the regulatory framework being developed under the activities of this project. The enforcement provisions, including compliance monitoring and market surveillance mechanisms, will be defined during the formulation of the related policies and regulations, with implementation expected to begin once the framework is adopted.

13. UNEP confirmed that there were no other activities being implemented with non-Multilateral Fund funding sources that could overlap with the activities planned under this project.

14. The Secretariat also requested information on the expected implementation date for the mandatory certification system for RAC servicing technicians. UNEP explained that the system was being developed under the HPMP and was expected to be completed by the end 2027.

15. The Secretariat noted that the proposed activities were in line with subparagraphs (b)(iii) and (v) of decision 89/6. All activities, performance indicators, and costs were agreed as submitted, as shown in table 2 above.

Gender policy implementation

16. Guinea-Bissau has encouraged women to participate in all HPMP-related training programmes, consultation and advisory activities, capacity-building, workshops and other activities, and has committed to collecting disaggregated data for inclusion in future reporting. UNEP confirmed that gender mainstreaming actions to be taken during the implementation of the HPMP will also be applied to the current proposal, which is part of the HPMP.

Updated Agreement

17. In view of the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector and the accordingly revised funding schedule, the Agreement between the Government of Guinea-Bissau 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 95th meeting by decision 95/50, as contained in annex I to the present document. The updated Agreement will be appended to the final report of the 97th meeting.

Conclusion

18. The project has been submitted in accordance with decisions 89/6(b) and 92/22 and includes activities to promote the use of energy-efficient and low-GWP refrigerant-based alternative technologies, as well as the development of MEPS and the energy labelling system for RAC equipment by supporting coordination between the involved agencies and building the capacity of stakeholders. The project will contribute to the overall objectives of the HPMP and help the country sustain the achieved reductions of HCFC consumption while adopting more energy-efficient RAC technologies.

RECOMMENDATION

19. The Fund Secretariat recommends blanket approval of the project for additional activities to maintain energy efficiency in the refrigeration and air-conditioning servicing sector in Guinea-Bissau, and the corresponding 2026-2027 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 Guinea-Bissau and the Executive Committee, as contained in annex I to the present document, specifically Appendix 2-A, to reflect the revised funding level owing to the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector; and paragraph 17, which has been added to indicate that the updated Agreement supersedes that reached at the 95th meeting by decision 95/50.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	Additional activities for the introduction of alternatives to HCFCs with low global-warming potential and for maintaining energy efficiency in the refrigeration servicing sector	100,000	13,000	UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Guinea-Bissau

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

LATEST ARTICLE 7 DATA (Annex F)	Year: 2024	224.00 mt	568,512 CO ₂ -eq tonnes
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SECTORAL HFC CONSUMPTION DATA (CO ₂ -eq tonnes) AND ACTIVITIES									
	Aerosol	Foam	Fire-fighting	Air-conditioning and refrigeration				Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
Latest CP report (2024)							568,512		
KIP stage I activities as agreed (Y/N)							Y		

AVERAGE 2020–2022 HFC CONSUMPTION IN SERVICING	266.33 mt	662,389 CO ₂ -eq tonnes
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BASELINE CONSUMPTION DATA (CO ₂ -eq tonnes)	2020	2021	2022	Average 2020-2022
HFC annual consumption	743,866	633,559	609,742	662,389
HCFC baseline (65%)				60,002
HFC baseline				722,391

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

PROJECT DATA AS AGREED		2025*	2026	2027	2028	2029	Total
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits	722,391	722,391	722,391	722,391	650,152	n/a
	Maximum allowable	722,391	722,391	722,391	722,391	596,150	n/a
	Reduction from baseline (%)	freeze	freeze	freeze	freeze	17.48	n/a
Amounts recommended in principle (US \$)	UNEP	Project costs	129,500	0	120,500	0	250,000
		Support costs	16,835	0	15,665	0	32,500
	UNIDO	Project costs	38,000	0	102,000	0	140,000
		Support costs	4,940	0	13,260	0	18,200
	Total project costs		167,500	0	222,500	0	390,000
	Total support costs		21,775	0	28,925	0	50,700
	Total funds		189,275	0	251,425	0	440,700

* Recommended for approval at the present meeting

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

20. The present document contains the following sections:

- I. Summary of the proposal as submitted
- II. Background: Status of implementation of the HCFC phase-out management plan and previous HFC-related activities
- III. HFC consumption overview: HFC consumption levels, trends, and consumption by sector
- IV. Stage I of the Kigali HFC implementation plan, as submitted: Regulatory framework, phase-down strategy, total stage cost, and implementation plan for the first tranche
- V. Secretariat's comments, including the agreed cost of activities
- VI. Recommendation

I. Summary of the proposal as submitted

21. On behalf of the Government of Guinea-Bissau, 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 \$367,250, consisting of US \$225,000, plus agency support costs of US \$29,250, for UNEP and US \$100,000, plus agency support costs of US \$13,000, for UNIDO, as originally submitted.¹

22. The implementation of stage I of the KIP will assist the Government of Guinea-Bissau in meeting the target of 15 per cent reduction from its HFC baseline consumption by 1 January 2029.

23. The first tranche of stage I of the KIP being requested at this meeting amounts to US \$169,500, consisting of US \$118,000, plus agency support costs of US \$15,340, for UNEP and US \$32,000, plus agency support costs of US \$4,160, for UNIDO, as originally submitted, for the period of January 2026 to December 2027.

II. Background

Status of implementation of the HCFC phase-out management plan

24. Table 1 presents information on the HCFC phase-out management plan (HPMP) in Guinea -Bissau as of October 2025.

Table 1. HPMP implementation status for Guinea-Bissau

	Stage I	Stage II
Meetings when HPMP was approved/updated	65 th / 71 st	95 th
Reduction from baseline	35% by 2020	100% by 2030
Total stage cost (US \$)	280,000	520,000
Date of completion (actual/planned)	1 December 2021	31 December 2031

Status of implementation of previous HFC-related activities

25. Table 2 presents an overview of activities implemented in Guinea-Bissau in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

Table 2. Previously approved HFC-related activities in Guinea-Bissau

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
75 th	Survey of ODS alternatives	UNEP	40,000	August 2017
81 st	Enabling activities for HFC phase-down	UNEP	70,803	December 2022

¹ As per the letter of 11 August 2025 from the Ministry of the Environment, Biodiversity and Climate Action of Guinea-Bissau to the Secretariat.

III. HFC consumption overview

HFC consumption levels

26. Guinea-Bissau only imports HFCs for use in the refrigeration and air-conditioning (RAC) servicing sector. The most consumed substances in 2024 were R-404A (64.2 per cent of total HFC consumption in CO₂-equivalent (CO₂-eq) tonnes), HFC-134a (21.6 per cent), R-407C (13.1 per cent), and R-407A (1.1 per cent). Table 3 presents HFC consumption data reported under Article 7 of the Montreal Protocol.

Table 3. HFC consumption (2020–2024 Article 7 data) and baseline in Guinea-Bissau

HFC	GWP	2020	2021	2022	2023	2024
Metric tonnes (mt)						
HFC-134a	1,430	110.00	95.00	92.00	89.00	86.00
R-404A	3,921.6	112.00	100.00	97.00	95.00	93.00
R-407A	2,107	11.00	8.00	6.00	4.00	3.00
R-407C	1,773.85	70.00	50.00	48.00	46.00	42.00
Total (mt)		303.00	253.00	243.00	234.00	224.00
CO₂-eq tonnes						
HFC-134a	1,430	157,300	135,850	131,560	127,270	122,980
R-404A	3,921.6	439,219	392,160	380,395	372,552	364,709
R-407A	2,107	23,177	16,856	12,642	8,428	6,321
R-407C	1,773.85	124,170	88,693	85,145	81,597	74,502
Total (CO₂-eq tonnes)		743,866	633,559	609,742	589,847	568,512
HFC baseline calculation (CO₂-eq tonnes)						
HFC average consumption in 2020–2022					662,389	
HCFC baseline (65%)					60,002	
HFC baseline					722,391	

Country programme implementation report

27. The sectoral HFC consumption data provided by the Government of Guinea-Bissau in its country programme (CP) implementation report for 2024 is consistent with the data reported under Article 7 of the Montreal Protocol.

HFC consumption trends

28. The consumption of all HFCs in the country decreased by approximately 26.0 per cent, expressed in mt, or 23.6 percent in CO₂-eq tonnes, over the 2020–2024 period. The HFC licensing system has been in place since 2021, and quota requirements for HFC imports were introduced on 1 January 2024. Before the control measure of the freeze at the HFC baseline level in 2024, the HFC consumption in Guinea-Bissau had already been decreasing: in 2023, it was at 81.6 per cent of the baseline. In 2024, it was at 78.7 per cent of the baseline, and in 2025, the import quota was set at 75.4 per cent of the baseline.

29. Guinea-Bissau is a high-ambient-temperature (HAT) country, electrification rate of around 35 per cent. RAC equipment is estimated to account for about 60 per cent of total household energy consumption.

HFC consumption by sector

30. HFCs are mainly consumed for servicing in the commercial refrigeration (45.7 per cent in mt and 53.9 per cent in CO₂-eq tonnes), industrial refrigeration (15.4 per cent in mt and 17.9 per cent in CO₂-eq tonnes), fisheries (10.4 per cent in mt and 7.4 per cent in CO₂-eq tonnes) and other subsectors, as shown in tables 4 and 5 below.²

² The difference between CP data (224 mt) and survey data (187.22 mt) is attributed to different approaches to data collection: customs records (top-down) versus survey of a selected sample of end users and statistical data, including broad estimates of annual serviced units and leakage rates, and stockpiling (bottom-up).

Table 4. HFC consumption in Guinea-Bissau in the RAC servicing subsectors in mt (2024)

Sector	HFC-134a	R-404A	R-407A	R-407C	Total	Share of total (%)
Refrigeration subsectors						
Domestic	9.14	0	0	0	9.14	4.9
Commercial	30.96	54.51	0	0	85.47	45.7
Industrial	11.00	17.80	0	0	28.80	15.4
Fisheries	11.89	1.53	6.00	0	19.42	10.4
Transport	0	4.81	0	0	4.81	2.6
Air-conditioning subsectors						
Residential	0	0	0	14.04	14.04	7.5
Commercial	0	0	0	17.86	17.86	9.5
Mobile	7.69	0	0	0	7.69	4.1
Total (mt)	70.68	78.65	6.00	31.90	187.22	100

Table 5. HFC consumption in RAC servicing subsectors in CO₂-eq tonnes (2024)

Sector	HFC-134a	R-404A	R-407A	R-407C	Total	Share of total (%)
Refrigeration subsectors						
Domestic	13,073	0	0	0	13,073	2.7
Commercial	44,273	213,761	0	0	258,033	53.9
Industrial	15,730	69,804	0	0	85,534	17.9
Fisheries	17,003	6,000	12,642	0	35,645	7.4
Transport	0	18,863	0	0	18,863	3.9
Air-conditioning subsectors						
Residential	0	0	0	24,905	24,905	5.2
Commercial	0	0	0	31,674	31,674	6.6
Mobile	10,991	0	0	0	10,991	2.3
Total (CO₂-eq t)	101,069	308,428	12,642	56,579	478,718	100

Refrigeration and air-conditioning servicing sector

31. There are about 670 technicians (including 23 women) and 95 workshops consuming HFCs in the country. The formal workshops, located in the capital, service predominantly medium-sized RAC installations, while informal workshops specialize mainly in domestic and small commercial refrigeration appliances and mobile air-conditioning (MAC) for small vehicles. Information collected on the types and number of tools and equipment available in the workshops indicates that the workshops are poorly equipped.

32. The country's three RAC training centres, all located in the capital city of Bissau, award state-recognized certificates to technicians upon completion of training. The mandatory certification system is being established within the framework of stage II of the HPMP. In the 2023-2024 academic year, a total of 285 students, including 21 women, were enrolled in the training centres. Under stage II of the HPMP, tools and equipment will be provided to create two specialized centres for training on the safe handling of hydrocarbons (HCs), and the training manual will be updated.

Domestic, commercial, industrial, fisheries, and transport refrigeration servicing

33. Domestic refrigeration consists of domestic refrigerators and freezers, commercial refrigeration consists of small centralized systems and condensing units, industrial refrigeration consists of cold rooms, and transport refrigeration consists of vans, trucks and trailers. Fisheries servicing consists of refrigerated containers and ice factories. Fishery plants and ice factories employ their own refrigeration technicians for on-site maintenance.

34. HC-based equipment is not yet widespread. R-600a-based residential refrigerators/freezers and R-290-based commercial and medical refrigeration represent about 7 per cent of equipment used in the country, and HC imports are minimal. Based on information from importers, R-600a is used in domestic refrigeration (most commonly by informal workshops), and a very small quantity of R-290, imported from within the West African subregion, is used for medical laboratory equipment. The use of low-GWP alternatives has so far been limited mainly to domestic refrigeration.

Residential and commercial air-conditioning servicing

35. Residential air-conditioning (AC) consists of split systems and commercial AC consists of packaged rooftop units.

Mobile air-conditioning servicing

36. The MAC systems are installed in cars, small vans, large vehicles, and buses. There is a very small use of HFO-1234yf in the MAC sector and the refrigerant is imported by only one enterprise.

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

Institutional, policy and regulatory framework

37. The National Ozone Unit (NOU), operating under the Ministry of the Environment, Biodiversity and Climate Action (MAB) of Guinea-Bissau, is the entity accountable for managing and implementing activities related to the Montreal Protocol, as well as ensuring the country's compliance with its obligations under the Agreements with the Executive Committee.

38. The National Ozone Committee is an inter-ministerial body that provides advice to the NOU. It comprises key stakeholders involved in phase-out activities, including the representatives of relevant Ministries, public institutions such as the Customs office, the private sector (chambers of commerce, industry and agriculture), RAC associations, and resource persons.

39. The control over substances and equipment entering the country is the responsibility of the Directorate-General of Customs, which operates within the Ministry of Economy and Finance and oversees the application of legislation related to customs and the collection of customs duties and taxes at the time of import; verifies that importers have licenses and respect quotas; controls refrigerant quality; and seizes illegal imports.

40. Additional stakeholders expected to be involved in the KIP include *inter alia* the Ministry of Trade and Industry, the National Bureau of Statistics, the Association of Refrigeration Technicians and Engineers, the Association of Women Refrigeration Technicians of Guinea-Bissau, training centres, importers, RAC technicians, and end users.

41. Guinea-Bissau has in place licensing (since 2013 for HCFCs and since 2021 for HFCs) and quota (since 2013 for HCFCs and since 2024 for HFCs) systems that ensure that imports of controlled substances are within the legal framework and in alignment with the goals set in the Montreal Protocol, the Kigali Amendment, and the country's Agreements with the Executive Committee.

42. The most important decrees and legal acts related to protecting the ozone layer adopted over the last 25 years include Order No. 5/GSERNEI/03 of 29 December 2003 on the control of imports and distribution of HCFCs, and Environmental Law No. 1/2011 of 2 March 2011, which provides the legal framework for the environment and defines control mechanisms for the placing on the market, use and elimination of chemicals, including measures to control any type of environmental pollution. In 2021, the legal and regulatory framework was adjusted for the implementation of the Kigali Amendment. Legal

provisions for licensing and reporting on the import and distribution of HFCs are set in the Inter-ministerial Order on the Regulation of Ozone-depleting Substances (ODSs) and HFCs No. 03/PN03/2021.

43. Guinea-Bissau is a member of both the West African Economic and Monetary Union (UEMOA) and the Economic Community of West African States (ECOWAS). National legislation is supported by subregional regulations, such as the UEMOA Community Regulation No. 04/2005/CM/UEMOA of 4 July 2005 on the harmonization of regulations on the import, placing on the market, use and re-export of ODSs and equipment containing them, and UEMOA Regulation No. 09/05-UEAC143-CM-13 of 9 February 2005, regulating special import permits and possession of ODSs.

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

Overarching strategy

44. The overarching strategy to reduce 80 per cent HFC consumption by 2045 will be achieved by a combination of different measures to decrease the need for HFCs in the RAC servicing sector, such as: (i) provision of trainings to RAC technicians to improve good servicing practices and reduce leakage, and promoting refrigerant recovery and recycling; (ii) strengthening and implementation of policies and regulations for HFC reduction, including economic measures (import quotas and licenses) and control mechanisms (ban on equipment imports), as well as training of customs and enforcement officers; (iii) promotion of low-GWP alternatives, together with the introduction of codes and standards on the safe handling of flammable refrigerants; and (iv) engaging all relevant stakeholders and encouraging them to better integrate HFC phase-down into their business plans while taking into consideration the participation of women in all KIP activities.

45. In stage I of the KIP, Guinea-Bissau proposes to achieve a more ambitious goal of reducing HFC consumption by 15 per cent of the HFC baseline through setting import quotas below the baseline, planning additional supply-reduction measures such as import bans, and promoting the shift to low-GWP refrigerants among stakeholders.

Proposed reductions

46. HFC consumption from 2025 to 2029 is projected to grow at an estimated annual rate of 7.0 per cent. At this rate, consumption in 2028 would exceed Montreal Protocol targets in absence of intervention. Stage I of the KIP proposes to control the growth of HFC consumption to achieve a 15 per cent reduction from the baseline. This will result in a reduction of HFC consumption by 108,359 CO₂-eq tonnes from the freeze levels. Table 6 presents the Montreal Protocol limits, HFC consumption forecast and the proposed reductions for the period 2025 to 2029.

Table 6. HFC consumption forecast under the unconstrained scenario, Montreal Protocol limits, and proposed HFC reductions under stage I (CO₂-eq tonnes)

	2025	2026	2027	2028	2029
HFC consumption forecast at an annual growth rate of 7.0 %*	608,308	650,889	696,451	745,203	797,367
Montreal Protocol HFC consumption limits	722,391	722,391	722,391	722,391	650,152
HFC consumption levels proposed under the KIP	722,391	722,391	722,391	722,391	614,032
Proposed reductions from the HFC consumption baseline (%)	0	0	0	0	15

* Calculated based on projected economic growth of 5.1 per cent per year (according to the International Monetary Fund) and population growth of 2.2 per cent per year (according to the World Bank). While the phase-out of HCFC-22 until 2030 generally also contributes to an increase in HFC consumption, since the consumption of HCFC-22 in Guinea-Bissau in 2024 was only 11 mt, this effect, spread over the six-year period leading up to 2030, can be considered minor.

Proposed activities

47. Activities in the servicing sector proposed for implementation under stage I and in the first tranche and their cost breakdown are presented in table 7.

Table 7. Servicing sector activities and their cost in stage I and the first tranche of the KIP for Guinea-Bissau (as submitted)

Activity	Agency	Cost (US \$)	
		Stage I	1 st tranche
Component 1: Strengthening of the legal and regulatory framework to support HFC phase-down 1.1. Expanding and improving the licensing and quota system (US \$6,000) 1.2. Introduction and implementation of bans on import and restrictions on installation of HFC-based equipment and ban of import of controlled substances in non-refillable cylinders by 1 January 2029 (US \$18,000) 1.3. Introduction and implementation of further legal and regulatory framework for the HFC phase-down (US \$13,000) 1.4. Establishment and maintenance of a database of servicing workshops and technicians (US \$15,000) 1.5. Two workshops on improving data reporting (US \$4,000) 1.6. Preparation and dissemination of a guide on legislation related to ODSs and HFCs (US \$10,000) 1.7. Establishment and maintenance of a website with relevant legislation, explanations and forms for each group of stakeholders (US \$10,000) 1.8. Development of standards and protocols on the use of flammable and/or toxic substances in RAC equipment (US \$48,000) 1.9. Targeted awareness-raising campaigns on HFCs and low-GWP technologies (US \$9,000)	UNEP	133,000	71,000
Component 2: Capacity-building of RAC technicians 2.1. Training of 240 RAC technicians on good servicing practices (US \$36,000) 2.2. Awareness-raising campaigns for informal RAC technicians on flammable and/or toxic refrigerants (US \$4,000) 2.3. Updating the curricula of 3 vocational schools to include recycling and recovery, safety procedures for handling flammable refrigerants, and maintaining the performance of equipment using low-GWP alternative technology (US \$6,000)	UNEP	46,000	23,000
Component 3: Capacity-building of the customs and trade officers 3.1. Training for 160 customs and trade officers on the control and identification of HFCs and HFC-based equipment, pertinent import laws and regulations, licensing and quota system, prevention of illegal trade through risk profiling and correct labelling of refrigerant cylinders, use of customs codes, and monitoring and reporting of data (US \$24,000) 3.2. Preparation and dissemination of posters and other information material with the main rules and regulations on imports (US \$2,000)	UNEP	26,000	14,000
Component 4: Strengthening of technical capacities for refrigeration management 4.1. Strengthening the capacity for servicing MAC equipment includes development of a curriculum and training manual for MAC servicing (US \$6,000); delivery of 3 MAC simulators (US \$20,000) and 3 sets of MAC tools and equipment ³ (US \$36,000); and training for MAC servicing instructors (US \$6,000)	UNIDO	100,000	32,000

³ Refrigerant recovery machines, fully automated AC recovery, recycling, and recharging unit, manifold gauge sets, vacuum pumps, charging scales, leak detectors, set of hoses, adapters, and valves, and safety gear.

Activity	Agency	Cost (US \$)	
		Stage I	1 st tranche
4.2. Upgrading 2 training centres for the safe use of flammable refrigerants includes facility assessment, safety inspections and modification plans (US \$8,000); and delivery of safety modification equipment ⁴ (US \$24,000)			
Component 5: Coordination, monitoring and evaluation	UNEP	20,000	10,000
Subtotal for UNEP		225,000	118,000
Subtotal for UNIDO		100,000	32,000
Total		325,000	150,000

Project implementation, coordination and monitoring

48. The NOU will be carrying out the tasks of programme coordination and management of the KIP, including the financial and substantive elements of the implementation, and will follow the same structure as the HPMP. A budget of US \$20,000 is proposed for a locally recruited consultant (US \$10,000), travel (US \$4,000), meetings (US \$4,000) and other costs (US \$2,000).

Total cost of stage I of the Kigali HFC implementation plan

49. The budget for stage I has been proposed at US \$325,000. The costs of activities in the refrigeration servicing sector have been proposed in line with decision 92/37.

Implementation plan for the first tranche

50. The first funding tranche of stage I of the KIP was submitted in the total amount of US \$150,000, as shown in table 7 above, to be implemented between January 2026 and December 2027. Detailed information on the activities to be implemented under the first tranche, including adjustments and level of funds agreed are presented in paragraph 57 and table 8 below.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

Overarching strategy

51. In line with decision 92/44, the Government of Guinea-Bissau has expressed strong commitment to supporting reductions in HFC consumption in advance of the Montreal Protocol targets.⁵ The HCFC component of Guinea-Bissau's baseline amounts to 60,002 in CO₂-eq tonnes, representing 8.3 per cent of the total baseline. Average HFC consumption in baseline years (2020–2022) was 662,389 CO₂-eq tonnes, and import quotas were issued at 568,512 CO₂-eq tonnes (21 per cent below baseline and 14 per cent below average 2020–2022 HFC consumption) for 2024 and at 544,619 CO₂-eq tonnes (25 per cent below baseline and 18 per cent below average 2020–2022 HFC consumption) for 2025. In light of those consumption patterns, the Secretariat enquired whether the country could commit to a 17.48 per cent reduction from its baseline, corresponding to a 10 per cent reduction from average HFC consumption in baseline years. Subsequently, Guinea-Bissau opted to increase their commitment from the initially proposed 15 to 17.48 per cent reduction from the baseline and revised the proposal accordingly to adjust activities for the additional US \$65,000 in line with decision 92/37(b)(ii).

⁴ Indicative list includes smoke detectors, alarms, flame control systems, hoses, fire extinguishers and others, installation of ventilation ducts, fire resistant glass, emergency doors, and other installations, etc. The final list will be developed after the assessment.

⁵ As per the letter of 17 September 2025 from the Ministry of the Environment, Biodiversity and Climate Action of Guinea-Bissau to the Secretariat.

Institutional, policy and regulatory framework

HFC licensing and quota system

52. In line with decision 87/50(g), UNEP has confirmed that Guinea-Bissau has an established and enforceable system of licensing and quotas for monitoring HFC imports/exports in place. The overall import quota for HFCs for 2025 was determined at 213 mt or 544,619 CO₂-eq tonnes (75.4 percent of the baseline) and distributed among nine importers.

Technical and cost-related issues

53. To accommodate the budget increase of US \$65,000, UNEP and UNIDO submitted a revised proposal. The revised cost allocation and explanation of changes are presented in table 8 below.

54. The Secretariat sought more information on the proposed demonstration project in the commercial refrigeration subsector which would assess and showcase the effective replacement of HFC-based systems by monobloc units in food preservation and refrigerated storage by replacing the existing R-404A-based systems with single closed R-290-based systems of under 20 kW capacity. UNIDO explained that since the commercial refrigeration subsector was the largest HFC user in Guinea-Bissau, it could benefit from showcasing the advantages of units with high energy efficiency and low GWP, raising awareness of equipment operators (end users) and servicing enterprises on technologies alternative to high-GWP HFCs, and consequently diminishing demand for such refrigerants. UNIDO further noted that prices for R-290-based systems were higher than for those based on R-404A, with the former ranging from approximately US \$2,000 to US \$10,000, while the latter can cost up to US \$12,000. Despite the higher price, the replicability of R-290-based technology would be ensured by lower refrigerant charge and more energy-efficient operation of R-290-based monoblocs, which would in turn lead to reduced operating costs. Project costs are lower than those of other projects in the West African subregion that had previously been approved by the Executive Committee. UNIDO added that, as other countries in the subregion were implementing similar activities, the potential for savings stemming from coordinated procurement and freight could be explored.

Table 8. Activities and their costs in stage I and first tranche of the KIP for Guinea-Bissau (as agreed)

Activity	Agency	Original (US \$)	Revised (US \$)
<i>Strengthening of legal and regulatory framework for HFC phase-down:</i> Slight budget increase to include minor adjustments to individual activities presented in table 7	UNEP	133,000	139,000
<i>Capacity-building of RAC technicians:</i> Budget increase to raise the training target from 240 to 320 RAC technicians and to include minor adjustments to individual activities presented in table 7	UNEP	46,000	54,000
<i>Capacity-building of customs and trade officers:</i> Budget increase to increase the training target from 160 to 200 officers	UNEP	26,000	32,000
<i>Strengthening of the technical capacities for refrigeration management:</i> No changes	UNIDO	100,000	100,000
<i>Facilitating the introduction of low-GWP technologies:</i> Demonstration project in the commercial refrigeration subsector includes preparation of the study on the demonstration project (US \$4,000); project organization (US \$2,000); procurement, delivery and installation of two R-290 units (US \$25,000); collection of replaced units and delivery to a collection location for recovery of refrigerants and proper disposal (US \$2,000); training on the installation and servicing of R-290 units (US \$3,000); an awareness-raising campaign (US \$2,000); and workshops for operators of commercial refrigeration equipment (US \$2,000)	UNIDO	0	40,000

Activity	Agency	Original (US \$)	Revised (US \$)
<i>Coordination, monitoring and evaluation:</i> Slight budget increase for a locally recruited consultant, travel, meetings, and other costs	UNEP	20,000	25,000
Subtotal for UNEP		225,000	250,000
Subtotal for UNIDO		100,000	140,000
Total		325,000	390,000

Total project cost

55. At the total cost of US \$390,000, stage I of the KIP for Guinea-Bissau will result in a reduction of 126,241 CO₂-eq tonnes from the country's HFC consumption eligible for funding.

56. Stage I of the KIP will be implemented in two tranches.

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

57. In light of the budget revisions described above, funding distribution for the first tranche of stage I has been revised accordingly for a total of US \$167,500, plus agency support costs. The agreed plan of action includes the following activities:

- (a) *Strengthening of the legal and regulatory framework to support HFC phase-down* (UNEP): Expanding and improving the licensing and quota system (US \$4,000); introduction and implementation of bans on the import and restrictions on the installation of HFC-based equipment and of a ban on the import of controlled substances in non-refillable cylinders (US \$10,000); introduction and implementation of further legal and regulatory framework for the HFC phase-down (US \$9,000); establishment and maintenance of a database of servicing workshops and technicians (US \$10,000); organization of one workshop on improving data-reporting practices (US \$3,000); preparation and dissemination of a guide on legislation related to ODSs and HFCs (US \$8,000); establishment and maintenance of a website with relevant legislation, explanations and forms for each group of stakeholders (US \$5,000); development of standards and protocols on the safe use of flammable and/or toxic substances in RAC equipment (US \$20,000); and targeted awareness-raising campaigns on HFCs and low-GWP technologies (US \$4,000) (total of US \$73,000);
- (b) *Capacity-building of RAC technicians* (UNEP): Training for 160 RAC technicians on good servicing practices (US \$21,000); awareness-raising campaigns for informal RAC technicians on flammable and/or toxic refrigerants (US \$3,000); updating the curricula of three vocational schools to include refrigerant recycling and recovery, safety procedures for handling flammable refrigerants, and maintaining the performance of equipment using low-GWP alternative technologies (US \$3,000) (total of US \$27,000);
- (c) *Capacity-building of customs and trade officers* (UNEP): Training of 100 customs and trade officers on the control and identification of HFCs and HFC-based equipment, pertinent laws and regulations on their imports, licensing and quota system, prevention of illegal trade through risk profiling and proper labelling of refrigerant cylinders, use of customs codes, and the monitoring and reporting of data (US \$15,000); and preparation and dissemination of posters and other information material on import rules and regulations (US \$2,000) (total of US \$17,000);
- (d) *Strengthening of technical capacity for refrigeration management* (UNIDO): Upgrading two training centres for the safe use of flammable refrigerants, including facility

assessment, safety inspections and modification plans (US \$8,000), and the delivery of safety modification equipment (US \$24,000) (total of US \$32,000);

- (e) *Facilitating the introduction of low-GWP technologies* (UNIDO): Demonstration project in the commercial refrigeration subsector, including preparation of the study on the demonstration project (US \$4,000) and organization of the demonstration project (US \$2,000) (total of US \$6,000); and
- (f) *Project monitoring* (UNEP): Locally recruited consultants (US \$6,000), travel (US \$2,500), meetings (US \$2,500) and other costs (US \$1,500) (total of US \$12,500).

Exemption for high-ambient temperature parties

58. Guinea-Bissau is one of the countries operating under the HAT exemption in line with decision XXVIII/2 of the Parties. The Secretariat referred to decision 95/86(q), which states that “amounts of Annex F substances that were subject to the HAT exemption were not eligible for funding under the Multilateral Fund while they were exempted for that party,” and UNEP accordingly notified the country. As per the Ozone Secretariat website, Guinea-Bissau withdrew their request for the exemption on 12 September 2025.

Co-financing

59. The NOU will collaborate with implementing agencies throughout the KIP implementation period to explore additional funding opportunities and incentives, which might involve:

- (a) Using investment grants strategically to speed up the replacement of high-GWP equipment with more environmentally friendly and energy-efficient technology;
- (b) Partnering with educational institutions funded by national budgets and industry associations to enhance training and certification possibilities; and
- (c) Tapping into the global funding facilities focused on social and climate concerns to support various initiatives, such as promoting gender equity, advancing green cooling strategies, boosting energy efficiency, and fostering public-private collaborations in updating and improving the refrigerant management system.

60. The demonstration project in the commercial refrigeration subsector envisages that the end user will provide the necessary infrastructure and civil works, representing 25 per cent of total replacement cost.

2025–2027 business plan of the Multilateral Fund

61. UNEP and UNIDO are requesting US \$390,000, plus agency support costs, for the implementation of stage I of the KIP for Guinea-Bissau. The total value of US \$440,700, including agency support costs, requested for the period of 2025–2027, is US \$187,344 above the amount in the business plan.

Gender policy implementation

62. In line with decisions 84/92(d), 90/48(c) and 92/40(b), the Government of Guinea-Bissau has incorporated the Multilateral Fund gender mainstreaming policy into the preparation and formulation of stage I of the KIP. Building on the achievements of the HPMP, efforts will be made under the KIP to involve female technicians, customs and trade officers, and other stakeholders in awareness-raising activities and training workshops. Disaggregated data will be collected to measure participation of women in the sector. In July 2025, with NOU’s support, the Association of Women Refrigeration Technicians of Guinea-Bissau was established, bringing together all 20 female technicians in the country with the goal of positively impacting their employability. The KIP further includes a campaign on energy efficiency, codes of practice

and standards on flammability and toxicity of low-GWP alternatives that was designed for female servicing technicians, importers, trainers and end users. Non-budgeted activities will also be implemented *inter alia* by ensuring that all training and information materials address both men and women, that female RAC technicians are encouraged to use the services of centres of excellence, and that recruitment of project personnel and composition of project boards and steering committees is balanced.

Sustainability of the HFC phase-down and assessment of risks

63. Some potential risks to the sustainability of KIP's results in Guinea-Bissau include political instability, insufficient legislative or regulatory capacity, inadequate national project management or financial capacity, stakeholders not attaching sufficient importance or not committed to KIP activities, factors external to the project, higher than expected HFC consumption growth leading to earlier and larger HFC consumption reductions being required than can be achieved, import control and enforcement mechanisms unable to respond to additional challenges associated with HFC phase-down, proliferation of high-GWP technologies, lack of modern servicing capacity for HFC- and low-GWP-based equipment, limited availability, acceptance and affordability of low-GWP alternatives, and slow introduction of alternative technologies to the market.

64. Those risks are unlikely to impede the successful implementation of the KIP, as activities have been designed to mitigate them, including the certification scheme to be adopted and managed by public institutions, development of national standards on the use of flammable refrigerants, and continued capacity building for customs and enforcement officers in collaboration with the Customs Department and the NOU.

65. The Government of Guinea-Bissau aims to achieve synergy between the HCFC phase-out and HFC phase-down processes in a sustainable manner *inter alia* by improving RAC servicing practices, reducing leaks, and encouraging the introduction of non-ODS alternatives and low-GWP refrigerants. The extension of the curricula of vocational training institutes and establishing specialized segments of training centres to organize training on HCs will also contribute to the long-term sustainability of HCFC phase-out and HFC phase-down. The country will promote refrigeration reclamation services in collaboration with the RAC associations to ensure sustainability.

66. Several activities proposed under stage I of the KIP will serve to monitor the sustainability of the proposed HFC reductions, including regulatory, control and enforcement measures (expanding and improving the licensing and quota system, introduction and implementation of the ban on imports of HFC-based equipment, and further legal and regulatory measures to support the HFC phase-down) and regular monitoring of the RAC sector and other stakeholders (collecting information on RAC servicing workshops and technicians, including the informal sector, and improving the data reporting). Other activities are planned to reduce the demand for HFCs (such as targeted awareness-raising campaigns on HFCs and low-GWP technologies).

Impact on the climate

67. The activities proposed, including strengthening of the legal and regulatory framework to support HFC phase-down, improved data reporting, capacity-building of RAC technicians through training on good servicing practices and awareness campaigns for the informal sector, updating the curricula of vocational schools, capacity-building of the customs and trade officers, demonstration project in the commercial refrigeration subsector, strengthening of technical capacities for refrigeration management in the MAC sector and upgrading training centres for the safe use of flammable refrigerants, indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. A calculation of the impact on the climate of the activities in the KIP indicates that by 2029, Guinea-Bissau will have reduced its emissions by approximately 126,241 CO₂-eq tonnes of HFCs, 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

68. A draft Agreement between the Government of Guinea-Bissau and the Executive Committee for stage I of the KIP is contained in annex II to the present document.

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

69. Annex III summarizes the simultaneous implementation of activities under the HPMP and the KIP. Stage I of the KIP will focus on the introduction and application of regulations, codes of practice and standards for the safe handling of flammable and/or toxic refrigerants, as well as awareness-raising campaigns related to the safe use of HCs. On the other hand, stage II of the HPMP addresses strengthening of the customs' capacity through provision of refrigerant identifiers, information sharing among importers and distributors, and customs coordination initiatives in the region. It further covers establishing and equipping new training centres for RAC technicians, developing appropriate training modules on the safe handling of HCs, providing related training to informal technicians, and equipping servicing workshops. While training activities included in the KIP emphasize new low-GWP technologies, safety standards, and energy efficiency, the main focus of numerous training activities included in stage II of the HPMP is preparing technicians for certification.

VI. Recommendation

70. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Guinea-Bissau for the period 2025–2029 to reduce HFC consumption by 10 per cent of the country's average HFC consumption in the baseline years (i.e., 17.48 per cent of the country's baseline), in the amount of US \$440,700, consisting of US \$250,000, plus agency support costs of US \$32,500, for UNEP and US \$140,000, plus agency support costs of US \$18,200, for UNIDO;
- (b) Noting:
 - (i) Strong commitment of the Government of Guinea-Bissau to support reductions in HFC consumption in advance of the Montreal Protocol targets;
 - (ii) 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 this project, including the HFC phase-out and energy-efficiency gains achieved, in line with decision 92/36(g);
 - (iii) That the Government of Guinea-Bissau will put in place a ban on the import and restrictions on the installation of HFC-based equipment and a ban on the import of controlled substances in non-refillable cylinders by 1 January 2029;
- (c) Approving the draft Agreement between the Government of Guinea-Bissau and the Executive Committee for the reduction in consumption of HFCs in accordance with stage I of the KIP, contained in annex II to the present document; and
- (d) Approving the first tranche of stage I of the KIP for Guinea-Bissau and the corresponding tranche implementation plan, in the amount of US \$189,275, consisting of US \$129,500, plus agency support costs of US \$16,835, for UNEP and US \$38,000, plus agency support costs of US \$4,940, for UNIDO.

Annex I

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

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

17. This updated Agreement supersedes the Agreement reached between the Government of Guinea-Bissau and the Executive Committee at the 95th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	1.84	0.92	0.92	0.92	0.92	0.92	0	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	1.84	0.92	0.92	0.92	0.92	0.92	0	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)	126,500	100,000	0	121,500	0	0	52,000	400,000
2.2	Support costs for Lead IA (US \$)	16,445	13,000	0	15,795	0	0	6,760	52,000
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	150,000	0	0	70,000	0	0	0	220,000
2.4	Support costs for Cooperating IA (US \$)	13,500	0	0	6,300	0	0	0	19,800
3.1	Total agreed funding (US \$)	276,500	100,000	0	191,500	0	0	52,000	620,000
3.2	Total support costs (US \$)	29,945	13,000	0	22,095	0	0	6,760	71,800
3.3	Total agreed costs (US \$)	306,445	113,000	0	213,595	0	0	58,760	691,800
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								1.84
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								0.99
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								0.0

Annex II

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF GUINEA-BISSAU AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROFLUOROCARBONS IN ACCORDANCE WITH STAGE I OF THE KIGALI HFC IMPLEMENTATION PLAN (Period: 2025–2029)

Purpose

1. This Agreement represents the understanding of the Government of Guinea-Bissau (“the Country”) and the Executive Committee with respect to the reduction of controlled use of Annex F substances set out in Appendix 1-A (“The Substances”) to a sustained level of 596,150 CO₂-equivalent (CO₂-eq) tonnes by 1 January 2029 in compliance with the Montreal Protocol schedule and the terms of this Agreement.
2. The Country agrees to meet the annual consumption limits of Annex F substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for Annex F substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of Annex F substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for Annex F substances specified in Appendix 1-A.
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with stage I of the Kigali HFC implementation plan (“the Plan”) as approved. In accordance with subparagraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of Annex F substances set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding, in accordance with the Funding Approval Schedule, when the Country satisfies the following conditions at least 10 weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted a Tranche Implementation Report in accordance with Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each previous calendar year; that it had achieved a significant level of implementation of

activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted a Tranche Implementation Plan in accordance with Appendix 4-A covering each calendar year until and including the year for which the Funding Approval Schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all approved funds, according to the evolving circumstances, to achieve the smoothest reduction of consumption and phase-down of Annex F substances specified in Appendix 1-A, in accordance with the following considerations:

- (a) Reallocations categorized as major changes must be documented in advance, either in a Tranche Implementation Plan as foreseen in subparagraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted 10 weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes that would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to the individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
 - (v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact on the climate, and any differences in CO₂-eq tonnes to be phased down if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would accordingly decrease the overall funding level under this Agreement;
- (b) Reallocations not categorized as major changes may be incorporated into the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report; and
- (c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of activities in the refrigeration servicing sector included in the Plan, in particular that the Country may use the flexibility available under this Agreement to address specific needs that might arise during project implementation.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNEP has agreed to be the lead implementing agency (the “Lead IA”) and UNIDO has agreed to be the cooperating implementing agency (the “Cooperating IA”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and/or Cooperating IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring coordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to the independent verification as per subparagraph 5(b). The Cooperating IA will support the Lead IA by implementing the Plan under the overall coordination of the Lead IA. The roles of the Lead IA and Cooperating IA are contained in Appendix 6-A and Appendix 6-B, respectively. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

Non-compliance with the Targets in the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of Annex F substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each CO₂-eq kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

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

1(d) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

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

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substances	Starting point for aggregate reductions in consumption (CO ₂ -eq tonnes)
HFCs	n/a

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars		2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances	%	freeze	freeze	freeze	freeze	10	n/a
		CO ₂ -eq tonnes	722,391	722,391	722,391	722,391	650,152	n/a
1.2	Maximum allowable total consumption of Annex F substances	Reduction in %	0.0	0.0	0.0	0.0	17.48	n/a
		CO ₂ -eq tonnes	722,391	722,391	722,391	722,391	596,150	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)		129,500	0	120,500	0	0	250,000
2.2	Support costs for Lead IA (US \$)		16,835	0	15,665	0	0	32,500
2.3	Cooperating IA (UNIDO) agreed funding (US \$)		38,000	0	102,000	0	0	140,000
2.4	Support costs for Cooperating IA (US \$)		4,940	0	13,260	0	0	18,200
3.1	Total agreed funding (US \$)		167,500	0	222,500	0	0	390,000
3.2	Total support costs (US \$)		21,775	0	28,925	0	0	50,700
3.3	Total agreed costs (US \$)		189,275	0	251,425	0	0	440,700

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

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

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

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

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase-down of Annex F substances, how the different activities contribute to it, and how they relate to each other, including, where applicable, activities related to energy efficiency approved in

the context of HFC phase-down pursuant to decision 91/65. The report should include the amount of Annex F substances consumption reduced as a direct result of the implementation of activities, by substance, the alternative technology used and the related phase in of alternatives, to allow the Secretariat to inform the Executive Committee on the resulting change in climate relevant emissions. The report should also include quantitative information on the activities implemented and further highlight the successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, use of flexibility for the reallocation of funds during implementation of a tranche as provided for in paragraph 7 of this Agreement, or other changes;

- (b) An independent verification report on the Plan's results and the consumption of Annex F substances, as per subparagraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification of consumption data must be provided with each tranche request, covering all relevant years for which a verification report has not yet been acknowledged by the Committee, as specified in subparagraph 5(a) of the Agreement;
- (c) A written description of the activities to be undertaken during the period covered by the requested tranche including quantitative information, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the Plan will be provided by calendar year. The description should include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall Plan. This description of future activities can be submitted as a part of the same document as the narrative report under subparagraph 1(a) above; and
- (d) An Executive Summary of about five paragraphs, summarizing the information contained in subparagraphs 1(a) to 1(c) above.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The national ozone unit, under the Ministry of the Environment, Biodiversity and Climate Action (MAB), is responsible for monitoring the progress of implementation of activities in the Plan.
2. The monitoring will be conducted during the implementation of the Plan to ensure its efficient and effective implementation; overall project coordination; stakeholder engagement and coordination; smooth implementation of activities planned under various tranches; delivery of training and other expected outcomes; and facilitation of the HFC consumption verification undertaken by the Lead IA.
3. The MAB will be responsible for the sustainability of consumption reduction targets achieved through the Agreement.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's Plan;

- (b) Assisting the Country in the preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
- (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan, consistent with Appendix 4-A;
- (d) Ensuring that the experiences and progress are reflected in the updates to the overall Plan and in the future Tranche Implementation Plans, consistent with subparagraph 1(c) of Appendix 4-A;
- (e) Fulfilling the reporting requirements of the Tranche Implementation Reports and Plans and of the overall Plan as specified in Appendix 4-A for submission to the Executive Committee including the activities implemented by the Cooperating IA;
- (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual Tranche Implementation Reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HFC consumption targets had been met;
- (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
- (h) Carrying out the required supervision missions;
- (i) Ensuring the presence of an operating mechanism to allow for an effective and transparent implementation of the Tranche Implementation Plan and accurate data reporting;
- (j) Coordinating the activities of the Cooperating IA and ensuring the appropriate sequence of activities;
- (k) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of the Lead IA and each Cooperating IA;
- (l) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (m) Providing assistance with the policy, management and technical support when required;
- (n) Reaching consensus with the Cooperating IA on any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan; and
- (o) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

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

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCIES

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

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

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY WITH THE TARGETS IN THE AGREEMENT

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$7.00 per CO₂-eq tonne of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the Target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years. Where the Country has failed to comply with the Agreement due to illegal trade, the reduction in funding would not be applied if the illegally traded controlled substances are seized and subsequently confiscated, destroyed, exported, or returned to the country of origin.

Annex III

SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN AND THE KIGALI HFC IMPLEMENTATION PLAN IN GUINEA-BISSAU

Activities under the HPMP (stage II)	Cost (US \$)	Activities under the KIP (stage I)	Cost (US \$)	Combined cost (US \$)
<i>I. Legal and regulatory framework</i>				
Introduction of a ban on the import and installation of HCFC-22-based equipment by 1 January 2029	0	Introduction and implementation of (1) a ban on the import of equipment based on high-GWP HFCs, (2) restrictions on the installation of said equipment, and (3) a ban on the import of controlled substances in non-refillable cylinder	18,000	18,000
		Preparatory measures to prevent venting, improve record-keeping, and mandate HFC recovery and leakage checks for larger equipment	13,000	13,000
		Development of technical standards and protocols on the use of flammable and/or toxic substances in RAC equipment	48,000	48,000
<i>II. Capacity-building for customs and updates to the licensing and quota system</i>				
		Update of the system of issuance of import licenses and quotas in CO ₂ -eq tonnes	7,000	180,000
Updates to the customs training manual	100,000	Preparation and dissemination of posters and other material listing rules and regulations on ODS and HFC imports, related equipment, and customs codes	2,000	
Training of 500 customs and enforcement officers in the control and identification of HCFCs and HCFC-based equipment, related laws and regulations, and use of refrigerant identifiers; and procurement of 2 refrigerant identifiers		Training of 200 customs officers, clearing agents and trade officials on HFC control, laws and regulations, licensing and quota system, prevention of illegal trade, risk profiling, cylinder labeling, customs codes, and data monitoring and reporting	30,000	
Organization of 2 workshops for registered importers, main end users, and other stakeholders on refrigerant safety and procedures for issuing import licenses and annual quotas		Organization of 2 workshops for importers, customs and Government stakeholders on HFC reporting obligations and procedures; and ongoing monitoring to ensure compliance	21,000	
Organization of collaboration meeting with customs officers from other countries in the region to discuss potential revisions to low-GWP refrigerant tariffs, illegal trade, mislabelling, misdeclaration, and harmonization of national regulations, including bans on both new and used HCFC-based equipment		Development and dissemination of a detailed legislation guide for ODSs and HFCs and organization of 2 seminars for stakeholders; creation and maintenance of a website presenting and clarifying HFC-related legislation and containing reporting forms for involved stakeholders	20,000	

Activities under the HPMP (stage II)	Cost (US \$)	Activities under the KIP (stage I)	Cost (US \$)	Combined cost (US \$)
III. Capacity-building for the RAC servicing sector				
<i>Training materials:</i> Updates to the technician training manual, <i>inter alia</i> to include the principles of working with HFC- and HC-based equipment	185,000	<i>Training materials:</i> Updates to the curricula of vocational schools to include refrigerant recycling and recovery, the safe handling of flammable refrigerants, and maintaining the performance of equipment using low-GWP technologies	6,000	283,000
<i>Development of a certification scheme</i> for technicians				
<i>Training</i> of 500 technicians on good servicing practices		<i>Training</i> of 320 RAC technicians on new low-GWP technologies, safety standards, leakage control and energy efficiency	42,000	
<i>Certification</i> of 350 RAC technicians				
<i>Awareness building:</i> Campaign to encourage female students to choose careers in RAC		<i>Awareness building:</i> Campaigns for end users, SMEs and RAC sector industries on the economic and environmental benefits of energy-efficient alternatives with low GWP; for female servicing technicians, importers, and end users on energy efficiency, codes of practice, and standards for flammable and/or toxic refrigerants; and for informal RAC technicians to raise awareness and address safety concerns regarding flammable and/or toxic refrigerants	18,000	
Creation of 2 specialized centres at vocational training institutes dedicated to the safe handling of HCs, complete with training equipment and tools; development of a standard training programme; and training provided to 200 technicians on the safe handling of HCs, good practices and maintenance of HC-based equipment		Upgrading two existing training facilities including facility assessment, safety inspections and modification of training rooms to bring them up to international standards <i>inter alia</i> by installing smoke detectors, alarms, flame control systems, hoses, extinguishers, ventilation ducts, fire-resistant glass, and emergency doors	32,000	
Establishment of a refrigerant reclamation facility, including equipment provision and installation; and training of 100 RAC technicians on refrigerant recovery and reclamation				
IV. Capacity-building for the MAC servicing sectors				
		Development and dissemination of a curriculum and training manual for MAC servicing technicians	6,000	68,000
		Freight clearance and procurement of basic MAC training simulators configured for both HFC-134a and HFO-1234yf	20,000	
		Procurement of MAC tools and equipment, including recovery machines and a recovery, recycling, and recharging training unit	36,000	
		Training of MAC servicing instructors	6,000	

Activities under the HPMP (stage II)	Cost (US \$)	Activities under the KIP (stage I)	Cost (US \$)	Combined cost (US \$)
V. Demonstration projects at end users				
Development of a leakage control guide and implementation of at least one “zero leaks” demonstration project at a large end user to diagnose and repair highly emissive systems, reduce leaks to zero and establish a preventive maintenance protocol, covering <i>inter alia</i> use of logbooks, energy efficiency and consumption, and dissemination of the guide and project results to end users across the sector	190,000	Demonstration project in the commercial refrigeration subsector to replace R-404A-based systems in food preservation and refrigerated storage by energy-efficient monoblock units charged with R-290: Preparatory study undertaken in coordination with stakeholders and suppliers; purchase, delivery and installation of two (2) low-charge R-290-based units; collection of replaced units for refrigerant recovery and proper disposal; training on the installation and servicing of R-290 units; awareness-raising campaign about the project; and related workshops for commercial refrigeration operators (with the beneficiary co-funding infrastructure and civil works)	40,000	250,000
Pilot demonstration project to replace a RAC system based on HCFC-22 with a low-GWP refrigerant (e.g., HC) at a selected large end user (e.g., dairy plant, hypermarket or hotel) to reduce costs and improve energy efficiency, in collaboration with a vocational school; and dissemination of results to other end users	20,000			
VI. Project coordination and monitoring				
Staff and consultants, domestic travel, meetings and workshops	25,000	Locally recruited consultants, travel, meetings, and other costs	25,000	50,000
Total	520,000		390,000	910,000
Percentage of total (%)	57		43	100