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执行蒙特利尔议定书
多边基金执行委员会
第九十七次会议
2025 年 12 月 1 日至 5 日，蒙特利尔
临时议程¹项目 9(c)

开发计划署2025年工作方案修正案

¹ UNEP/OzL.Pro/ExCom/97/1

基金秘书处的评论和建议

1. 开发计划署请求执行委员会为其 2025 年工作方案修正案核准经费 650,000 美元，外加机构支助费用 46,700 美元，如表 1 所列。提交的材料附于本文件之后。

表 1：开发计划署 2025 年工作方案修正案

国家	活动/项目	申请数额 (美元)	建议数额 (美元)
A1: 基加利氢氟碳化物执行计划项目编制			
巴林	编制基加利氢氟碳化物执行计划（第一阶段）	190,000	190,000
科威特	编制基加利氢氟碳化物执行计划（第一阶段）	220,000	220,000
	A1 小计	410,000	410,000
	机构支助费用	28,700	28,700
	A1 共计	438,700	438,700
A2: 编制废旧或无用受控物质库存国家清单以及收集、运输和处置此类物质的计划²			
安哥拉	编制废旧或无用受控物质库存国家清单和计划	90,000	90,000
黎巴嫩	编制废旧或无用受控物质库存国家清单和计划	90,000	90,000
	A2 小计	180,000	180,000
	机构支助费用	12,600	12,600
	A2 共计	192,600	192,600
A3: 编制氢氟碳化物消费量核查报告的技术援助			
古巴	基加利氢氟碳化物执行计划第一阶段核查报告	30,000	30,000
吉尔吉斯斯坦	基加利氢氟碳化物执行计划第一阶段核查报告	30,000	30,000
	A3 小计	60,000	60,000
	机构支助费用	5,400	5,400
	A3 共计	65,400	65,400
	A1、A2、A3 共计	650,000	650,000
	A1、A2、A3 的机构支助费用	46,700	46,700
	总计	696,700	696,700

A 部分：建议一揽子核准的活动

A1：基加利氢氟碳化物执行计划项目编制

项目说明

2. 开发计划署作为指定执行机构，为两个第 5 条国家提交了编制基加利氢氟碳化物执行计划第一阶段的申请。这两项申请见表 1 的 A1 部分。开发计划署作为巴林和科威特的指定执行机构，使用基加利氢氟碳化物执行计划项目编制的申请格式，说明了编制基加利氢氟碳化物执行计划第一阶段所需活动以及每项活动的相应费用。

秘书处的评论

3. 在审查这两项申请时，秘书处考虑了第 87/50 号决定所载的编制基加利执行计划的准则、拟议的项目编制活动及其与相关国家的扶持活动和其他氢氟碳化物相关项目的联系。

² 表内称为编制废旧或无用受控物质库存国家清单和计划。

4. 为巴林和科威特提交的材料均包含 2024 年氢氟碳化物及其混合物的消费量数据。项目编制活动包括：在全国范围内调查氢氟碳化物的消费量并收集数据；对氢氟碳化物及其替代品的使用情况作出行业分析；对制冷和空调维修行业进行需求评估，包括对易燃制冷剂使用、制冷剂回收、再利用和销毁的认证和培训，低全球升温潜能值的节能型制冷和空调设备试点；与利益攸关方协商和争取认可，并制定一个逐步削减氢氟碳化物的总体战略。

5. 关于过去三年（2022 年至 2024 年）的氢氟碳化物消费量数据，根据《蒙特利尔议定书》，巴林和科威特均属于第 5 条第 2 组国家。因此，氢氟碳化物消费量官方数据从 2024 年才提供。秘书处指出：这两个国家均已批准《基加利修正》；³ 政府已提供支持项目编制的认可函；且申请的资金符合第 87/50 号决定(c)段。

秘书处的建议

6. 秘书处建议按照表 1 的 A1 部分所示供资水平，一揽子核准巴林和科威特的基加利氢氟碳化物执行计划第一阶段项目编制。

A2：编制废旧或无用受控物质库存国家清单以及收集、运输和处置此类物质的计划

项目说明

7. 开发计划署作为指定执行机构，为两个国家提交了编制废旧或无用受控物质库存国家清单的申请，如表 1 的 A2 部分所示。

秘书处的评论

8. 秘书处在审查这两项申请时，考虑了第 91/66 号决定所载的编制废旧或无用受控物质库存国家清单准则、拟议为项目编制开展的活动以及这些活动如何与两国的淘汰/逐步减少计划（例如含氢氯氟烃淘汰计划或基加利氢氟碳化物执行计划）相联系。秘书处注意到，每项供资申请均符合第 91/66 号决定。

9. 开发计划署作为指定执行机构，使用提交项目提案的相关表格，说明了为安哥拉和黎巴嫩编制废旧或无用受控物质库存国家清单和计划所需开展的活动。

10. 两国供资申请中的活动包括审查现有数据；分析设备的报废率；利益攸关方讲习班和协商；审查国家废物管理条例；评估国家管理废物的能力；对管理和销毁的长期选项进行技术分析，包括财务可行性分析；制定沟通计划；利益攸关方对计划予以认可；建设相关利益攸关方的能力，提高认识，包括考虑性别平等问题；编制国家清单、行动计划和最后报告。

秘书处的建议

11. 秘书处建议按照表 1 的 A2 部分所示供资水平，一揽子核准为安哥拉和黎巴嫩编制废旧或无用受控物质库存国家清单以及收集、运输和处置此类物质的计划。

³ 《基加利修正》批准日期：巴林，2024 年 7 月 1 日；科威特，2024 年 11 月 4 日。

A3: 编制氢氟碳化物消费量核查报告的技术援助

项目说明

12. 执行委员会请相关双边和执行机构在其各自提交第九十七次会议的双边合作文件和工作方案修正案中，纳入为 8 个低消费量第 5 条国家的基加利氢氟碳化物执行计划第一阶段核查报告申请的供资，以核查其遵守基加利氢氟碳化物执行计划协定的情况（第 96/22 号决定(d)段）。⁴ 根据这一决定，开发计划署作为牵头执行机构，正在为古巴和吉尔吉斯斯坦的基加利氢氟碳化物执行计划第一阶段核查申请供资，如表 1 的 A3 部分所示。

秘书处的评论

13. 秘书处指出，供资申请符合第 96/22 号决定(b)段对核查规定的供资准则，并进一步指出，核查报告必须在寻求获得基加利氢氟碳化物执行计划下一次供资的执行委员会相关会议之前至少 10 周提交。

秘书处的建议

14. 秘书处建议按照表 1 的 A3 部分所示供资水平，一揽子核准为编制古巴和吉尔吉斯斯坦基加利氢氟碳化物执行计划第一阶段氢氟碳化物消费量核查报告提供技术援助，条件是必须在寻求获得基加利氢氟碳化物执行计划下一次供资的执行委员会相关会议之前至少 10 周提交核查报告。

⁴ 将向第九十七次会议提交的申请包括下列低消费量国家：阿尔巴尼亚、刚果、古巴、吉尔吉斯斯坦、马拉维、莫桑比克、北马其顿和土库曼斯坦。

**97th Meeting of the Executive Committee of the Multilateral Fund
for the Implementation of the Montreal Protocol**

(1-5 December 2025)

**UNDP
2025 WORK PROGRAMME AMENDMENT**

2025 WORK PROGRAMME AMENDMENT

I. EXECUTIVE SUMMARY

This document constitutes UNDP's 2025 Work Programme Amendment (WPA) and is being submitted for consideration by the Executive Committee (ExCom) at its 97th Meeting.

Consistent with UNDP's Business Plan for 2025–2027, this document includes only non-investment and proposals submissions, detailed in section II:

- Submission of Institutional Strengthening Extensions
- Preparation funding requests for HPMP development
- Preparation of national inventories of banks of waste-controlled substances and national action plan under decision 91/66
- Preparation of Stage I Kigali Implementation Plans (KIP).
- Other requests for non-investment projects including HCFC and HFC Verification Reports

Project documentation such as tranche requests under multi-year agreements (MYA), investment and demonstration project proposals and other individual proposals are not included in this document and are submitted separately as per normal practice.

Annex I includes Preparation funding requests.

II. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME)

The tables below summarize the funding requests for non-investment activities and proposals submitted to the 97th ExCom Meeting as part of UNDP's Work Programme Amendment for 2025:

Preparation of national inventories of banks of waste-controlled substances and national action plan

UNDP is submitting the following funding requests for the preparation of national inventories of banks of waste-controlled substances and national action plan.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Angola	PRP	Preparatory funding for inventories of bans of used/unwanted controlled substances	24	90,000	6,300	96,300
Lebanon	PRP	Preparatory funding for inventories of bans of used/unwanted controlled substances	24	90,000	6,300	96,300
Total (2 requests)				180,000	12,600	192,600

Preparation funding requests for Stage I Kigali Implementation Plans (KIP).

UNDP is submitting the following funding requests for the preparation of the Stage I KIP to the 97th ExCom meeting.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Bahrain	PRP	PRP for HFC phase-down plan	18	190,000	13,300	203,300
Kuwait	PRP	PRP for HFC phase-down plan	18	220,000	15,400	235,400
Total (2 requests)				410,000	28,700	438,700

Other requests for non-investment projects

UNDP is requesting the ExCom to approve the funding for the verification of HFC consumption¹ at its 97th meeting.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Cuba	TAS	HFC Report Verification	12	30,000	2,700	32,700

¹ As per decision 96/22

Kyrgyzstan	TAS	HFC Report	Verification	12	30,000	2,700	32,700
Total (4 requests)					60,000	5,400	65,400

III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME)

The table below summarizes the funding requests for non-investment activities and proposals submitted to the 97th ExCom Meeting as part of UNDP's Work Programme for 2025:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Angola	PRP	Preparatory funding for inventories of banks of used/unwanted controlled substances	24	90,000	6,300	96,300
Lebanon	PRP	Preparatory funding for inventories of banks of used/unwanted controlled substances	24	90,000	6,300	96,300
Bahrain	PRP	PRP for HFC phase-down plan	18	190,000	13,300	203,300
Kuwait	PRP	PRP for HFC phase-down plan	18	220,000	15,400	235,400
Cuba	TAS	HFC Verification Report	12	30,000	2,700	32,700
Kyrgyzstan	TAS	HFC Verification Report	12	30,000	2,700	32,700
Total (4 requests)				650,000	46,700	696,700

Notes:

- a. All amounts in are in US dollars.
- b. Special reports due (delays, balances, status reports, etc.) as well as other projects not part of the WPA will be submitted separately.

ANNEX I

Preparation funding requests

Part I: Project information

Project title:	Preparation of national inventories of banks of used or unwanted controlled substances
Country:	Angola
Lead implementing agency:	UNDP
Meeting where request is being submitted	97th
Implementation period	January 2026 – December 2027
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 months	
Funding requested:	
Agency	Funding requested (US \$)
UNDP	90,000

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: UNDP received the official request from the Government of Angola after the completion and submission of the Business Plan.		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction.

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes.
The Government of the Republic of Angola is requesting funding for the preparation of the national inventories of banks of used or unwanted controlled substances. The project complies with the criteria established by Decision 91/66. ODS/HFC banks are defined as the ‘total amount of substances contained in existing equipment, chemical stockpiles, foams and other products not yet released to the atmosphere’ (IPCC/TEAP, 2005).

Thus, ODS/HFC can either be quantified in an aggregated manner such as bulk/cylinder (stockpiles) or estimated via ODS/HFC-containing equipment.

A sound understanding of ODS/HFC banks at the country level is the basis for any action and policy decisions in the field of ODS/HFC bank management. The following activities will be undertaken:

- Assess the general need for action in the field of ODS/HFC bank management.
- Design appropriate collection, storage and management systems.
- Assess the potential environmental benefits to the ozone layer and the climate.
- Decide whether to export ODSs and HFCs or to find a local/regional destruction solution, including the further economic viability study to install or develop a destruction facility.
- Design optimal capacities for destruction technology in case of local destruction options.
- Assess long-term availability of ODS and HFC to guarantee economic viability of a destruction plant.
- Design and propose the appropriate policy measures to contain, manage and final disposal of the calculated substance banks.

Key elements of responsible ODS/HFC management:

- Promote onsite recycling.
- Use of reusable cylinders.
- Provide incentives for best practices
- Ensure accessible collection points for refrigerants or waste appliances.
- Access reclamation and destruction facilities.
- Building a quality infrastructure based on informed decision-making.
- Develop an old appliance scrapping and management centers to recover refrigerants contained and sound management of wastes

The case of Angola has the following unique features:

- Angola is a developing country with ODS/HFC consumption and no ODS/HFC destruction facilities in place.
- If export for destruction is identified as the most cost-effective disposal option, the plan should contain an indication that national legislation and policies that were consistent with the requirements of the relevant conventions, particularly in relation to the transboundary movement of those wastes (Basel Convention).
- If the local destruction of ODS/HFC waste is found to be viable in Angola, the feasibility of importing ODS/HFC wastes from neighboring South West African countries will be explored. The risks and barriers (economic, legal, Basel and Rotterdam conventions stipulations, etc.) for such interventions will be identified and means for mitigation will be formulated.
- The opportunity to leverage market-based finance mechanisms will be explored for the conversion of environmental services of avoided ODS/HFC emissions into carbon assets. Methodology and standards and the critical issues (technical, regulatory and financial risks) will be discussed.
- This proposal will be focusing on inventory and a study for the management of banks, including the potential development of a streamlined business model would define stakeholder roles from waste collection to destruction, securing private sector commitment through partnerships and incentives to ensure efficient, compliant, and economically viable ODS/HFC management.
- The main challenge in Angola is related to setting up the logistic framework and cost-effective infrastructure for transport, storage and destruction of ODS/HFC.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency		
Activity	Description	Agency
Data collection	Development of the initial bank inventory to encompass all in-service equipment, including predictive analysis to estimate the rate at which it reaches end-of-life (EOL), while accounting for national capacity to maintain the equipment and revise the initial EOL management plan accordingly.	UNDP
Stakeholder consultations	Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures: • Harmonization with national waste management regulation to accommodate EOL ODS/HFCs. • Capacity to manage waste import/export in accordance with international practice (Basel Convention) as required. • Fiscal measures that would operationally support sustained capture and consolidation.	UNDP
Others, specify. Evaluation and determination of the optimal disposal strategy based on cost-effectiveness.	Decide on export for destruction or the local destruction of ODS/HFC wastes. In each case analyze technical, regulatory and financial risks and barriers.	UNDP
Preparation of inventory report/national plan	Delivery of inventory report and national plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction.	UNDP
Communication and outreach plan preparation and development of awareness-raising activities	Strategic engagement and capacity-building of relevant stakeholders and target groups to enhance awareness on ODS/HFC banks, end-of-life (EOL) management, and disposal practices.	UNDP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Data collection and analysis	35,000	UNDP
Stakeholder consultations	10,000	UNDP
Analysis and definition of the most cost-effective disposal option	10,000	UNDP
Preparation of inventory report/national plan	25,000	UNDP
Communication and outreach plan preparation and development of awareness-raising activities	10,000	UNDP
TOTAL	90,000	

4. How will the Multilateral Fund gender policy be considered during project preparation?

To achieve meaningful and sustainable development outcomes, it is essential to integrate gender considerations into every phase of the project cycle. This begins with gender-responsive assessments during project formulation, which should include:

- Ensuring gender balance within assessment teams
- Incorporating questions that explore the distinct vulnerabilities, capacities, roles, and responsibilities of women and men
- Consulting both male and female beneficiaries, as well as stakeholders engaged in gender equality and women's empowerment

In order to avoid overlooking gender dimensions during the design of the project, the following activities will be undertaken:

- Integrate gender-specific language and indicators into project design
- Allocate sufficient financial resources to support gender mainstreaming and, where appropriate, affirmative action
- Reflect on women's and men's participation and benefits in both quantitative and qualitative terms across all reporting cycles—quarterly, annual, and beyond

Therefore, it is vital to:

- Highlight not only women's vulnerabilities and needs, but also their skills, capacities, and agency as drivers of change
- Showcase success stories and testimonies from individual women or women's groups
- Present macro-level data on women's contributions to GDP and the positive correlation between women's education and household welfare

By embedding these practices into project design and execution, development initiatives can more effectively promote gender equity and unlock the full potential of all beneficiaries.

Part I: Project information

Project title:	Preparation of national inventory and Guidelines for banks of controlled substances
Country:	Lebanon
Lead implementing agency:	UNDP
Meeting where request is being submitted	97th ExCom
Implementation period	1 Jan 2026 – 31 Dec 2027
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24 months	
Funding requested:	
Agency	Funding requested (US \$)*
UNDP	\$90,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: UNDP's business plan for 2024-2027 was submitted within the 95th ExCom deadline, UNDP received the request from Government of Lebanon after this deadline.		

- A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction.**

1. Brief overview of the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., Guidelines associated with HPMP and/or the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes.
The Government of Lebanon seeks funding for the preparation of a national inventory of banks of used or unwanted controlled substances and the development of a national plan for their collection, transport, and disposal, including recycling, reclamation, and cost-effective destruction. This is in line with the criteria established by Decision 91/66 of the ExCom. ODS banks are defined as the total volume of controlled substances contained in existing equipment, stockpiles, foams, and products not yet released to the atmosphere (IPCC/TEAP, 2005). They can be quantified either through bulk stock estimates or by calculating the amounts embedded in equipment and products in use.

The primary objective is to support the development of national guidelines and strategies for the systematic capture, retention, and treatment (including recycling, reclamation, and destruction) of unwanted or banked substances, and is directly linked to ongoing and planned activities under Lebanon's HPMP and KIP Stage I.

Additionally, it applies an approach that prioritizes the capture and retention of EOL controlled substances in the HVAC-R sector and on initially focusing on capture and retain End of Life (EOL) ODS/HFCs at source and managing it in the first instance within the refrigeration servicing sector through build on its existing capacity and capability.

The methodology for implementing this proposal is structured around a systematic sequence of steps. It begins with the establishment of a country-specific baseline relevant to the above objectives, followed by comprehensive data collection and analysis to develop a detailed inventory of banked controlled substances currently in use, along with estimates of the annual quantities reaching end-of-life (EOL) in accessible form.

This process will also integrate linkages with other Multilateral Fund (MLF) programs—including Kigali Implementation Plans (KIPs)—as well as with national programs and policy initiatives on waste management and the promotion of circular economy principles. The following elaborate on each of these steps.

Methodology and Approach

Step 1: Establishing Baseline for EOL Inventories

This step will involve desk research and targeted surveys to establish a comprehensive baseline. It will include:

- Review of data from prior HPMP projects and KIP stage I.
- Assessment of the current policy and regulatory framework on controlled substances and hazardous waste.
- Mapping of existing business structures, infrastructure, and institutional capacity, particularly in the HVAC-R and waste sectors.
- Identification of key stakeholders, initial awareness-raising, and issue scoping.

Step 2: National Inventory Development

This step will involve detailed data collection and analysis to:

- Quantify banked controlled substances in use.
- Estimate the annual generation of accessible EOL substances.
- Identify any existing stockpiles.

A hybrid methodology will be applied, combining:

- Bottom-up (equipment-based data collection), and
- Top-down (chemical import/distribution data) approaches.

The main output of this step will be the National Inventory Report, which will include an analysis of:

- Information gaps,
- Regulatory and policy limitations,
- Financial and infrastructure needs, and

- Human resource capacity constraints.

Step 3: Development of National Guidelines for EOL Management

This step will focus on drafting and validating a National Guidance Document for the environmentally sound management and disposal of EOL controlled substances. It will include:

- A national strategy for operationalizing EOL substance management.
- Guidelines to fill policy and regulatory gaps and recommend improvements to the institutional framework.
- Assessment of the infrastructure and financial resources required for collection, storage, recovery, and destruction—supported by indicative cost estimates.

Implementation and Institutional Arrangements

The project will be implemented over a 24-month period under the leadership of the National Ozone Unit, with technical inputs from national consultants. The project team will be supported by the UNDP Country Office and the UNDP Regional Hub, ensuring both technical backstopping and coordination with related regional initiatives. Monitoring, reporting, and evaluation will follow established MLF and UNDP procedures, ensuring full accountability and alignment with agreed milestones.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency.

Activity	Description	Agency
Data collection	• Collect inventory data to support the selected methodology for estimating banks of controlled substances, applying a hybrid approach that combines bottom-up (equipment-based) and top-down (chemicals-based) methods, drawing on reported consumption data where relevant. • Identify the age profile of equipment and products in use—through surveys and experience-based references—along with their typical service life, in order to estimate the annual generation rate of end-of-life (EOL) controlled substances. • Collect data on the refrigeration servicing sector, focusing on existing recovery and recycling practices, infrastructure, and performance, to assess current capacity and identify gaps for improvement.	UNDP

Analysis of data collected	• Undertake validation procedures to ensure accuracy and reliability of the collected inventory data. • Finalize the bank inventory and EOL datasets, providing realistic estimates of waste streams available for management. • Prioritize application sub-sectors and controlled substances (ODS/HFCs) based on inventory results, considering volume, accessibility, and environmental impact of emissions. • Evaluate challenges and risks associated with the proposed Guidelines and their implementation. • Review and analyse national approaches currently applied for collection and management of EOL controlled substances. • Identify policy, regulatory, and financial measures needed to enable effective EOL management. • Assess near- and long-term options for treatment, reclamation, and destruction, including an analysis of their financial feasibility. • Prepare indicative cost estimates for key measures to be incorporated into the national action plan. • Evaluate business models and financing options to support a sustainable EOL management system, including potential use of carbon crediting schemes and other incentive mechanisms.	UNDP
Preparation of inventory report/national plan	• Finalize the National Inventory Report, including preparation for dissemination, printing, and presentation to stakeholders. • Prepare and finalize the proposed National Guidelines, incorporating stakeholder feedback and providing an analysis of anticipated implementation challenges and risks.	UNDP

Stakeholder consultation	• Identify key stakeholders and their interests as part of the baseline assessment. • Prepare a stakeholder consultation and outreach plan to guide engagement throughout the project. • Conduct awareness-raising activities, consultations, and outreach with stakeholders and the public at each stage of implementation to: • Ensure inclusive input and acceptance, • Secure commitment and participation of relevant partners, • Facilitate accurate data collection, and • Support the development of robust and widely endorsed Guidelines.	UNDP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Data collection	25,000	UNDP
Analysis of data collected	20,000	UNDP
Preparation of Inventory Report and Guidelines	25,000	UNDP
Stakeholder consultation	15,000	UNDP
Others (miscellaneous, including translations, printing, etc.)	5,000	UNDP
TOTAL	90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The project will follow the relevant Policies set by ExCom and will be complemented by UNDP's Gender-related Policy. This will include adoption of mandatory requirements and performance indicators consistent with ExCom decision 92/40 and ExCom document 92/51 applicable to projects submitted at ExCom 94 and thereafter. Gender considerations and actions on gender mainstreaming will be assessed during the development of the national inventory and guidelines. The following actions are expected to be carried out: i) consideration of the need and collection of gender-disaggregated data; ii) consultations with gender experts in the development of the action plan, and iii) application of gender related indicators linked to gender-sensitive/responsive activities in the Guidelines-EOL.		

Part I: Project information

Project title:	Preparation of the Kigali HFC Phase Down Plan	
Country:	Bahrain	
Lead implementing agency:	UNDP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Cooperating agency (2):	(select)	Click or tap here to enter text.
Cooperating agency (3):	(select)	Click or tap here to enter text.
Implementation period for stage I of the KIP:	January 2026 – June 2027	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the KIP (please specify): 18 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNDP	Overarching	190,000
(select)	(select)	Click or tap here to enter text.
(select)	(select)	Click or tap here to enter text.
(select)	(select)	Click or tap here to enter text.

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

B. Information required for PRP funding request for the overarching strategy of the KIP

5. Montreal Protocol compliance target to be met in ☐ stage I of the KIP			
Phase-out commitment (%)	10%	Year of commitment	2032
☐ Servicing only		☐ Manufacturing only	☒ Servicing and manufacturing
6. Brief background/description/information on approved relevant projects and multi-year agreements as follows: - The current progress in implementation of any funded HFC-related project (enabling activities or stand-alone HFC investment projects) - The current progress in ongoing HCFC phase-out management plan (HPMPs) - Consideration of integrating HFC phase-down activities with HPMP activities taking into account previously approved HFC-related projects, if this information is available.			
Click or tap here to enter text.			
1) The current progress in implementation of any funded HFC-related project (enabling activities or stand-alone HFC investment projects) (a) The Enabling Activities (EA) project for Bahrain was approved at the 81st Meeting of the Executive Committee in June 2018, with funding of US \$150,000 and UNEP as the implementing agency. The national executing body was the Supreme Council for Environment (SCE). Initially scheduled for completion in December 2019, the project was extended until December 2021 due to delays, including those caused by the COVID-19 pandemic. The overall objective was to facilitate early ratification of the Kigali Amendment and strengthen national capacity for HFC phase-down. (b) Under the first component, Bahrain advanced the legal and policy framework required for Kigali ratification. After extensive consultations and reviews, new Ozone By-laws were officially enacted in July 2020 (Ministerial Orders No. 1 and 2 of 2020), regulating the management of refrigerants, RAC			

units, and licensing fees. These by-laws provide a comprehensive legal foundation for compliance with the Kigali Amendment. A series of consultations, seminars, and awareness campaigns were conducted, including social media and virtual events, reaching over 500 stakeholders from government, private sector, and technical institutions.

- (c) The second component focused on a national survey and market analysis. Questionnaires were distributed to more than 120 companies across refrigeration, firefighting, food processing, cold storage, and transport sectors. Using this data, the SCE developed a simulation model to forecast refrigerant consumption trends up to 2030. Alongside data collection, capacity building and training activities raised awareness of the new by-laws, strengthened compliance readiness, and informed stakeholders of future Kigali obligations.
- (d) The third component upgraded Bahrain's national registry and e-licensing system to include HFCs and HFC-based equipment. A comprehensive database system was developed and piloted with 30 stakeholders, ensuring improved tracking of imports/exports and preparation for a full electronic licensing and quota system once the Kigali Amendment is ratified. Internal training for system users was completed, positioning the SCE to operationalize the system nationwide.

2) The current progress in ongoing HCFC phase-out management plan (HPMPs)

Stage I of the HPMP for Bahrain was completed in December 2021. Stage II of the HPMP (2021-2025) was approved at the 88th meeting of the Executive Committee (ExCom). It aims to reduce HCFC consumption by 73.5 per cent of the country's baseline in the amount of US \$732,449, consisting of US\$ 384,000, plus agency support costs of US \$49,920 for UNEP and US \$278,999, plus agency support costs of US \$19,530 for UNIDO. Below is a summary of the progress of the HPMP Stage II:

(a) Legal framework

- Law 54/2014 was enacted to implement the Unified Regulation of the Gulf Cooperation Council (GCC) for controlling the import, export, trade, storage, and disposal of ozone-depleting substances (ODS), including HCFCs. This law mandates the Supreme Council for Environment (SCE) to issue relevant bylaws.
- An operational licensing and quota system has been established and extended voluntarily to include HFCs. An e-licensing platform was developed to streamline import controls and data collection. While quotas are not yet applied to HFCs, the system enables monitoring.
- Bahrain ratified the Kigali Amendment on 1 July 2024
- Effective 1 January 2020, the country prohibited the import of HCFC-based central cooling systems, along with used refrigeration and air-conditioning (RAC) equipment and non-refillable refrigerant cylinders, to prevent the continued use of outdated and inefficient technologies. This was followed by a ban on the import of HCFC-141b in pure form as of 1 January 2021, further limiting access to high-ODP substances. Starting 1 January 2025, the import and use of HCFC-141b contained in pre-blended polyols is prohibited, as well as the import and manufacture of HCFC-22-based air-conditioning equipment.
- The Government has secured written commitments from relevant industrial stakeholders to cease the use of HCFC-22 by the 2025 deadline.
- The Government of Bahrain has adopted international safety standards governing the use of flammable and toxic refrigerants. Complementing this, several national technical measures have been developed to strengthen safety, accountability, and data collection in the refrigeration and air-conditioning (RAC) sector. These include the establishment of standards for refillable refrigerant cylinders, along with labelling requirements for the proper identification of cylinders used for refilling and refrigerant reclamation. Additionally, codes of practice have been introduced to regulate the safe handling and disposal of refrigerant cylinders, and a registration and record-keeping system has been implemented to monitor HCFC use within the servicing sector. To enhance technician competence and ensure quality service delivery, mandatory certification procedures have been established for both refrigeration technicians and servicing enterprises.

(b) Foam manufacturing sector

- Stage II of the HPMP aims to phase out 135.93 metric tonnes of HCFC-141b contained in imported pre-blended polyols in Bahrain's foam sector. With total approved funding of US \$116,999, the project supports the conversion of two polyurethane (PU) insulation foam enterprises and two spray foam enterprises to low-global warming potential (GWP) alternatives, alongside technical support to

35 additional spray foam enterprises. Methyl formate has been identified as the preferred alternative technology, as the ban on the import and use of HCFC-141b contained in pre-blended polyols entered into force as of 1 January 2025. (c) Refrigeration servicing sector Under Stage II of the HPMP, Bahrain strengthened its refrigeration servicing sector through regulatory updates, capacity building, and stakeholder engagement. Key achievements included upgrading the e-licensing and monitoring system, revising national legislation and training curricula to address flammable and low-GWP refrigerants, and certifying 80 RAC technicians. Over 800 stakeholders—including customs officers, enforcement personnel, technicians, importers, and government officials—received training or participated in awareness activities. A registry for large RAC systems was established, tools and equipment were distributed to training institutions and certified technicians, and information materials were disseminated to promote HCFC phase-out and the adoption of alternative technologies. 3) Consideration of integrating HFC phase-down activities with HPMP activities taking into account previously approved HFC-related projects, if this information is available. There is no HFC-related investment projects that have been approved to date.				
7. Overview of current HFC consumption in metric tonnes by substance (last three years)				
Substance/blend	Sector	2022	2023	2024
HFC-32	RAC servicing			0.555
HFC-134a	RAC servicing			354.023329
HFC-152a	Manufacturing-Foam XPS			38.25
HFC-227ea	Fire fighting			13.79225
HFC-236fa	Fire fighting			0.144
R404A	RAC servicing			51.56775
R407A	RAC servicing			3.46
R407C	Manufacturing-AC & RAC servicing			55.865
R410A	Manufacturing-AC & RAC servicing			465.5945
R417A	RAC servicing			0.113
R450A	RAC servicing			0.113
R453A	RAC servicing			0.0226
R507A	RAC servicing			1.706
8. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)				
1) Sector/sub-sectors using HFCs in Bahrain - In the residential air-conditioning sector, R410A is the dominant refrigerant, accounting for nearly 466 MT or 47% of total HFC consumption in 2024. Domestic manufacturer also uses R410A and R407C in its residential systems. - In mobile AC sector, HFC-134a remains a significant refrigerant (354 MT, 36% of HFC use), with limited adoption of HFOs, often in newer models. - In domestic refrigeration sector, R600a is gaining ground as a replacement for HFCs. - R407C (56 MT, 6%) and R404A (52 MT, 5%) are used in commercial RAC applications, while HFC-32 and hydrocarbons (R600a, R290) represent only negligible shares in the current market. - In the commercial refrigeration sector, R404A dominates with an average of 87% share, followed by HFC-134a (~9%).				

- In the industrial refrigeration sector, HFC-134a holds the largest share (43%), with R404A at 28% and ammonia at 25%, reflecting a gradual penetration of natural refrigerants.
- The foam sector is represented by the use of HFC-152a (38 MT, 4% of HFC total), mainly in XPS manufacturing.
- In the firefighting sector, HFC-227ea is the dominant ODS alternative (13.8 MT, ~1% of HFC total), though its contribution to overall refrigerant consumption remains small.

2) Projection of HFCs growth in Bahrain

Looking forward, continued economic growth, population increase, and rising demand for cooling in Bahrain's high ambient temperature (HAT) conditions are expected to drive further increases in refrigerant consumption, especially in the residential and commercial AC subsectors. The growing hospitality and retail sector and ongoing construction/cold-chain investments will raise AC hours and refrigeration loads. Bahrain's growing cold-chain market also indicates expanding temperature-controlled logistics that typically rely on HFC-based systems unless nudged toward naturals. Vehicle stock continues to expand (~742k registered vehicles in 2022), refrigerant demand (HFC-134a) and associated emissions will grow with the fleet. Transition to low-GWP A2L refrigerants (e.g., HFO-1234yf) will require safety training and service upgrades.

Without Kigali-related interventions, demand for R410A and R407C in split units and packaged AC systems will rise steeply through 2030, as the RAC stock expands. Commercial/industrial refrigeration demand is also expected to grow, driven by retail, cold chain, and food service expansion. Although natural refrigerants are steadily gaining ground, their uptake is still constrained by safety concerns, cost, and the readiness of servicing infrastructure. This indicates that, in the absence of targeted policy and technical measures, HFC consumption will remain on a growth trajectory.

9. Description of information that needs to be gathered during project preparation. Explain how this data will be gathered

Information needed	Description	Agency
Data on HFC consumption in manufacturing/servicing sector	Data will be obtained through questionnaires, site visits, interviews with relevant stakeholders	UNDP
HFC sectoral consumption information	Data will be obtained through questionnaires, site visits, interviews with relevant stakeholders	UNDP
Analysis of types of equipmentt using HFCs	Data will be obtained through national surveys, import/export records, and consultations with key stakeholders including customs authorities, equipment importers, and servicing companies.	UNDP
New information on ODS regulations	This will be updated based on information obtained from NOU.	UNDP

10. Activities to be undertaken for project preparation and funding (decision 87/xx(b))

Activity	Indicative funding (US \$)	Agency
Collect sectoral-level data on downstream uses of HFCs (bottom-up, equipment-based data collection)	30,000	UNDP
Assessment of country-level needs, including trainings and certification in use of flammable refrigerants, enhancing training programs on recovery, recycling and destruction, piloting alternative low-GWP and energy-efficient solutions in various sectors etc.	25,000	UNDP
Consolidate and analyse sector/sub-sector consumption data to develop HFC phase-down strategy	100,000	UNDP

Conduct gender assessment, stakeholder engagement, and risk analysis	10,000	UNDP
Validate the consolidated overarching strategy through consultations and missions	25,000	UNDP
TOTAL	190,000	
11. How will activities related to preparing the KIP be linked to the current stages of the HPMP being implemented in the country? (OPTIONAL)		
The National Ozone Unit (NOU) is well-positioned to lead an integrated approach in linking the current stage of HPMP to the preparation of the KIP, given its coordinating role in both HPMP and KIP implementation. The KIP will build on this institutional continuity, aiming to optimize planning, maximize resource use, and avoid duplication of efforts. Potential linkages between previously implemented HPMP activities—particularly in the servicing sector—and proposed KIP actions will be explored during the KIP PRP. Synergies will be explored in enhancing technician training on the safe handling of low-GWP alternatives, updating safety codes, strengthening enforcement capacity etc.		
12. How will the Multilateral Fund gender policy be considered during project preparation?		
During the preparation of the KIP, gender considerations will be mainstreamed in line with the Multilateral Fund's Gender Policy. Disaggregated data on gender participation in trainings, workshops, and stakeholder consultations will be collected and analysed to ensure equal opportunities for women and men. Special attention will be given to capturing the role of women in the refrigeration and air-conditioning servicing sector, as well as in decision-making and policy-related functions. Where possible, targeted outreach will be conducted to encourage women's participation in capacity-building activities and consultations. The analysis of this data will inform the design of training programmes, awareness campaigns, and policy recommendations, with the aim of promoting gender balance and ensuring that women and men can equally benefit from, and contribute to, the implementation of the Kigali Amendment in Bahrain.		

C. Information required for PRP funding request for investment projects/sector plans as part of or in advance of the KIP

1. Agency:	(select)
2. Sector:	(select)
3. HFC consumption in item #2 reported under country programme data?	☐ Yes , please specify reported amount and year: ☐ No
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes , please provide support letter ☐ No
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	☐ Yes ☐ No
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	
7. Information on sector consumption (specify previous year HFC consumption)	
Substance	Consumption (metric tonnes)
(select)	
(select)	
(select)	

8. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2019	2020	2021	
9. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
Click or tap here to enter text.					
Click or tap here to enter text.					
Click or tap here to enter text.					
Click or tap here to enter text.					
Click or tap here to enter text.					
Click or tap here to enter text.					
TOTAL					

Part I: Project information

Project title:	Preparation of the Kigali HFC Phase Down Plan	
Country:	Kuwait	
Lead implementing agency:	UNDP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Cooperating agency (2):	(select)	Click or tap here to enter text.
Cooperating agency (3):	(select)	Click or tap here to enter text.
Implementation period for stage I of the KIP:	January 2026 – June 2027	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the KIP (please specify): 18 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNDP	Overarching	220,000
(select)	(select)	Click or tap here to enter text.
(select)	(select)	Click or tap here to enter text.
(select)	(select)	Click or tap here to enter text.

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

D. Information required for PRP funding request for the overarching strategy of the KIP

13. Montreal Protocol compliance target to be met in ☒ stage I of the KIP			
Phase-out commitment (%)	10%	Year of commitment	2032
☐ Servicing only		☐ Manufacturing only	☒ Servicing and manufacturing
14. Brief background/description/information on approved relevant projects and multi-year agreements as follows: - The current progress in implementation of any funded HFC-related project (enabling activities or stand-alone HFC investment projects) - The current progress in ongoing HCFC phase-out management plan (HPMPs) - Consideration of integrating HFC phase-down activities with HPMP activities taking into account previously approved HFC-related projects, if this information is available.			
Click or tap here to enter text.			
1) The current progress in implementation of any funded HFC-related project (enabling activities or stand-alone HFC investment projects) The Enabling Activities Project for Kuwait was approved during the 81st meeting of the Executive Committee and completed in December 2021. The project has achieved the following results: (a) Legislative & Institutional Framework: - EPA Law #42 was revised to include provisions for HFC phase-down. - Draft Kigali Amendment ratification law was prepared and submitted. - Established a National Ozone Depleting Substances Executive Committee (Oct 2020). - Translated key documents into Arabic to support national-level consultations.			

- (b) Stakeholder Engagement & Awareness:
 - Conducted 5 stakeholder consultation seminars, involving over 100 participants.
 - Engagement included high-level government bodies, industry players, and academia.
 - Developed and disseminated fact sheets, briefing notes, and awareness materials.
 - Strengthened collaboration with energy policymakers to integrate energy efficiency.
- (c) Capacity Building:
 - Conducted 5 workshops and training programs, reaching over 700 participants.
 - Focus on technicians, enforcement officers, customs officials, manufacturers, and importers.
 - Training included safe handling of low-GWP and flammable alternatives, regulatory changes, and Kigali compliance strategies.
- (d) Technical & Market Analysis:
 - Nationwide market survey conducted using over 500 questionnaires.
 - Data analysis included historical HFC use, market trends, and economic implications of alternatives.
 - Developed a simulation model for HFC consumption forecasting and planning.
- (e) Policy & Regulatory Updates:
 - Reviewed and updated the national licensing system for HFCs and equipment.
 - HS codes for HFCs were updated in coordination with customs.
 - A national database and registry system for HFC imports/exports was developed.
 - Strengthened customs control systems to ensure proper reporting and oversight.

Through the implementation of the Enabling Activities project, several challenges were identified that could potentially be addressed through the KIP. These include the need for a robust and accurate on-line data collection and verification system for HFC consumption to ensure sustained and reliable reporting under Article 7 obligations. Further capacity building is needed—especially for customs officers, RAC technicians, and enforcement agencies—to address safe handling of low-GWP and flammable alternatives. Technical concerns related to the performance, cost, and safety of alternatives under high ambient temperature (HAT) conditions also emerged as a barrier to technology uptake, which will require demonstration activities and market readiness support.

2) The current progress in ongoing HCFC phase-out management plan (HPMPs)

Stage I of the HPMP for Kuwait was completed on 30 June 2022, in line with the extension approved by the Executive Committee in decision 88/71(b)(i).

Stage II of the HPMP for Kuwait was approved at the 88th meeting of the Executive Committee in November 2021, for the period from 2021 to 2025 to reduce HCFC consumption by 67.5 per cent of the country's baseline, in the amount of US \$2,816,612, consisting of US \$ 1,952,800, plus agency support costs of US \$ 224,808 for UNEP, and US\$597,200, plus agency support costs of US \$41,804 for UNIDO. Below is a summary of the progress of the HPMP Stage II during the first Tranche:

- (a) Legal framework
 - During the first tranche of Stage II, Kuwait took major steps to strengthen its regulatory framework for HCFC phase-out. The country adopted the 2022 Harmonized System (HS) codes with sub-digits to ensure better identification of controlled substances and reinforced licensing and import control through enhanced coordination with the Customs Department. A national committee, comprising the Environment Public Authority (EPA), Customs, Firefighting Department, Authority of Industry, and other key agencies, was established to streamline processes, avoid duplication, and strengthen enforcement. Awareness-raising consultations with industry and relevant authorities emphasized compliance with licensing and quota requirements under the Montreal Protocol.
 - A training-of-trainers programme in 2022 prepared eight national trainers, while 22 subsequent sessions trained 541 customs officers, including nearly 100 women, on Kuwait's Montreal Protocol obligations, monitoring of HCFC imports, and measures to prevent illegal trade. The NOU also maintained regular communication with customs brokers and importers to share regulatory updates, with a dedicated workshop for brokers planned for late 2024. Kuwait ratified the Kigali Amendment in November 2024, further committing to the phasedown of HFCs.
- (b) Refrigeration servicing sector

- A mandatory qualification and certification framework for RAC technicians was adopted in 2022, supported by a database of registered servicing workshops under the manpower public authority. In 2023, Kuwait established a reclamation centre, equipped with reclaim and recovery machines and operated under a business model developed by UNEP. Work is underway to develop policies and bylaws to guide its sustainable operation, with a consultation workshop planned in late 2024 to build on lessons from Bahrain's experience.
- The national education and training system was also updated. The College of Technological Studies revised its curriculum to include good practices in refrigerant handling and servicing, with UNEP's training package serving as the basis for wider updates across vocational institutions. More than 370 RAC technicians and trainers have been trained to date, and additional workshops are planned in late 2024 for teachers, instructors, and assessors to operationalize the national certification scheme. UNEP will also support the review of Recognition of Prior Learning criteria to strengthen technician certification.
- Kuwait expanded partnerships with ASHRAE Kuwait, the Kuwait Institute for Scientific Research, and industry stakeholders to advance low-GWP alternatives, improve leak management, and develop updated standards and codes, including for district cooling. Public outreach through social media, university lectures, and World Ozone Day events helped raise awareness and consolidate support for sustainable, climate-friendly RAC practices.

- 3) Consideration of integrating HFC phase-down activities with HPMP activities taking into account previously approved HFC-related projects, if this information is available.

There is no HFC-related investment projects that have been approved to date.

Through the implementation of the Enabling Activities project, several potential synergies and challenges were identified. Capacity building for the refrigeration and air-conditioning (RAC) servicing sector, already underway under the HPMP, provides a natural foundation for expanded technician training on the safe handling of low-GWP alternatives. However, the Kigali Amendment introduces a new level of complexity, as the full-scale introduction of flammable refrigerants in Kuwait—given its high ambient conditions—will require additional institutional preparation. This includes not only expanding technician training to national scale, but also updating safety codes, developing new standards, strengthening enforcement capacity, and introducing flammability risk management measures.

15. Overview of current HFC consumption in metric tonnes by substance (last three years)

Substance/blend	Sector	2022	2023	2024
HFC-32	RAC servicing			4.845
HFC-125	Fire Fighting			0.01
HFC-134a	RAC servicing			789.688
HFC-143a	RAC servicing			0.1
HFC-152a	Manufacturing-Foam XPS			170.487
HFC-227ea	Fire Fighting			10.873
R-404A	RAC servicing			140.359
R-407C	Manufacturing-AC and RAC servicing			711.061
R-410A	Manufacturing-AC and RAC servicing			503.142
R-452A	RAC servicing			0.271

16. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)

[Click or tap here to enter text.](#)

Kuwait is in the midst of a transition from HCFCs to HFCs and low-GWP alternatives, but with significant variations between subsectors:

1. In the **manufacturing sector**, domestic manufacturers currently use R407C and R410A for residential/commercial ACs, and R134A and R407C are used for industrial air-conditioning systems (air-cooled water chillers etc.).
2. In the **XPS foam sector**, domestic manufacturers have transitioned to CO₂-based technology, with three XPS foam enterprises receiving funding under HPMP Stage I to support the conversion. In these systems, CO₂ is used as the primary blowing agent, while HFC-152a is applied as a secondary blowing agent. Dimethyl ether (DME) and HFOs are also used in combination with CO₂-based technologies. In the PU foam sector, manufacturers have transitioned to pentane, also with support provided under HPMP Stage I.
3. In the RAC servicing sector, for **refrigeration sub-sector**, domestic appliances are expected to transition almost entirely to hydrocarbons, with approximately 90% of units using R600a and the remaining 10% using R290. In the commercial refrigeration segment, HFC-134a continues to dominate with a 70% share, while the use of R404A is projected to decline to below 15%. Industrial refrigeration shows increasing uptake of ammonia (around 30%), alongside continued use of HFC-134a and R404A. In the **air-conditioning sub-sector**, HFCs remain the primary substitutes for HCFCs. Domestic systems are largely shifting toward R410A (80%) with some use of R407C (20%). HFC-32 is used in nominal quantities. In commercial air-conditioning, chillers primarily rely on HFC-134a (70%), while HFOs are emerging with a 2 share, and the rest is split between R407C and R410A. In **mobile air-conditioning** systems, R-134a is the predominant refrigerant, while R-1234yf is also used in newer vehicle models.
4. In **firefighting**, R-227ea (FM-200) is the dominant alternative to ODS, but it represents only a minimal share of total HFC consumption in the country.

Sub-sectors	Substances	Alternatives
Domestic Refrigeration	R600a, R290	
Commercial and Industrial Refrigeration	HFC-134a, R404A, Ammonia	Ammonia
Mobile Air-conditioning	HFC-134a	HFO
Domestic Air-conditioning	R410A, R407C	HFC-32, R290
Commercial Air-conditioning	HFC-134a, HFOs, R407C and R410A	HFOs
XPS foam	HFC-152a (as co-blowing agent for CO ₂)	
Fire Fighting	R227ea	

5. The preliminary analysis of the HFCs use in Kuwait confirms a **continued increase in HFC consumption**, largely driven by the HCFC phase-out under HPMP Stage II. The market has introduced high-GWP HFCs such as R410A and R407C as substitutes. These alternatives are costly—partly due to inverter-based equipment pricing—but also less energy-efficient under Kuwait's high ambient temperature (HAT) conditions.
6. Several barriers to transitioning away from high-GWP HFCs were identified. These include the limited availability and higher costs of suitable alternatives for HAT conditions, which could increase equipment prices and limit consumer acceptance. There is also insufficient awareness and preparedness in the servicing sector, particularly regarding safety requirements for flammable refrigerants, and reluctance from equipment importers to introduce alternatives before stronger market acceptance and regulatory backing.

Projection of HFC Growth in Kuwait

Kuwait's future refrigerant consumption is expected to increase significantly, driven by robust economic growth, rising population, and rapidly expanding cooling demand. With high ambient temperatures (HAT) and one of the world's highest per capita electricity consumptions, the air-conditioning (AC) sector is the largest driver of

refrigerant use and is projected to remain the dominant contributor to HFC demand over the next decade. Current trends suggest that domestic AC will continue to rely heavily on R410A, with some share of R407C, while commercial AC will see growing use of chillers based on HFC-134a and the gradual introduction of HFOs. Without targeted interventions, the stock of HFC-based cooling equipment is projected to grow steadily through 2030.

At the same time, the mobile air-conditioning (MAC) sector poses an additional challenge: Kuwait has one of the world's highest rates of per capita car ownership, with 521 passenger cars per 1,000 people in 2023. Given that R-134a remains the dominant refrigerant in this sub-sector, refrigerant demand from vehicles is expected to rise steadily with the expanding vehicle fleet. This trend underscores the near-term difficulty of transitioning away from HFCs in the MAC sector, particularly as the alternative refrigerant R-1234yf is classified as slightly flammable (A2L) and raises additional safety and performance concerns under Kuwait's high ambient temperature conditions.

In the refrigeration sector, the transition away from HCFC-22 has already introduced HFC-134a and R404A in commercial and industrial systems. While domestic refrigeration shifted almost entirely to low-GWP hydrocarbons (R600a and R290), industrial refrigeration shows more promise for transition, with ammonia already capturing about 30% of the market. However, demand for cold storage and logistics is expected to rise with Kuwait's economic diversification and food security goals, potentially driving up the use of HFC-based systems unless accelerated measures are introduced to promote natural refrigerants.

Other applications, such as fire suppression and foam, contribute a smaller share of total HFC consumption but are projected to grow steadily in line with construction sector expansion and increased demand for safety systems in industrial facilities. R227ea (FM200) currently dominates the fire protection market, though its share of total HFC consumption remains low.

Overall, without intervention, Kuwait's HFC consumption is projected to continue increasing in all sectors post-2025, with the steepest growth in residential, commercial/industrial and mobile air-conditioning. This trend reflects both the growing stock of equipment and the high leakage rates under HAT conditions. The introduction of a national roadmap, reinforced licensing and quota systems, and accelerated capacity building for technicians are critical to phase down HFCs. Piloting low-GWP alternatives—particularly in the AC sector—will be essential to bend the curve of projected growth and ensure that Kuwait can comply with the Kigali Amendment freeze starting in 2028.

17. Description of information that needs to be gathered during project preparation. Explain how this data will be gathered

Information needed	Description	Agency
Data on HFC consumption in manufacturing/servicing sector	Data will be obtained through questionnaires, site visits, interviews with relevant stakeholders	UNDP
HFC sectoral consumption information	Data will be obtained through questionnaires, site visits, interviews with relevant stakeholders	UNDP
Analysis of types of equipmentt using HFCs	Data will be obtained through national surveys, import/export records, and consultations with key stakeholders including customs authorities, equipment importers, and servicing companies.	UNDP
New information on ODS regulations	This will be updated based on information obtained from NOU.	UNDP

18. Activities to be undertaken for project preparation and funding (decision 87/xx(b))

Activity	Indicative funding (US \$)	Agency
Collect sector-level data on downstream uses of HFCs (bottom-up, equipment-based data collection)	40,000	UNDP
Assessment of country level needs, including trainings and certification in use of flammable refrigerants, enhancing training	35,000	UNDP

programs on recovery, recycling and destruction, piloting alternative low-GWP and energy-efficient solutions in various sectors etc.		
Consolidate and analyse sector/sub-sector consumption data to develop HFC phase-down strategy	100,000	UNDP
Conduct gender assessment, stakeholder engagement, and risk analysis	10,000	UNDP
Validate the consolidated overarching strategy through consultations and missions.	35,000	UNDP
TOTAL	220,000	
19. How will activities related to preparing the KIP be linked to the current stages of the HPMP being implemented in the country? (OPTIONAL)		
The National Ozone Unit (NOU) under EPA is well-positioned to lead an integrated approach in linking the current stage of HPMP to the preparation of the KIP, given its coordinating role in both HPMP and KIP implementation. The KIP will build on this institutional continuity, aiming to optimize planning, maximize resource use, and avoid duplication of efforts. Potential linkages between previously implemented HPMP activities—particularly in the servicing sector—and proposed KIP actions will be explored during the KIP PRP. Synergies will be explored in enhancing technician training on the safe handling of low-GWP alternatives, updating safety codes, strengthening enforcement capacity etc.		
20. How will the Multilateral Fund gender policy be considered during project preparation?		
During the preparation of the KIP, gender considerations will be mainstreamed in line with the Multilateral Fund's Gender Policy. Disaggregated data on gender participation in trainings, workshops, and stakeholder consultations will be collected and analyzed to ensure equal opportunities for women and men. Special attention will be given to capturing the role of women in the refrigeration and air-conditioning servicing sector, as well as in decision-making and policy-related functions. Where possible, targeted outreach will be conducted to encourage women's participation in capacity-building activities and consultations. The analysis of this data will inform the design of training programmes, awareness campaigns, and policy recommendations, with the aim of promoting gender balance and ensuring that women and men can equally benefit from, and contribute to, the implementation of the Kigali Amendment in Kuwait.		

E. Information required for PRP funding request for investment projects/sector plans as part of or in advance of the KIP

10. Agency:	(select)
11. Sector:	(select)
12. HFC consumption in item #2 reported under country programme data?	☐ Yes, please specify reported amount and year: ☐ No
13. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes, please provide support letter ☐ No
14. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be	☐ Yes ☐ No

deducted from the country's starting point, once established?					
15. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))					
16. Information on sector consumption (specify previous year HFC consumption)					
Substance		Consumption (metric tonnes)			
(select)					
(select)					
(select)					
17. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2019	2020	2021	
18. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
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TOTAL					