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United Nations Development Programme

PROJECT DOCUMENT

Lebanon

Project Title: Kigali Implementation Plan (KIP)

Project Number: 01005060

Implementing Partner: United Nations Development Programme (UNDP)

Start Date: 01 November 2025 **End Date:** 31 December 2032 **PAC Meeting date:** 17 February 2025

Brief Description

Lebanon faces a complex convergence of environmental and economic challenges. The country must comply with its obligations under the Kigali Amendment to phase down hydrofluorocarbons (HFCs), potent greenhouse gases widely used in refrigeration and air conditioning (RAC) sectors. However, Lebanon's fragile economy, aging infrastructure, and limited technical capacity pose serious barriers to adopting low-global warming potential (GWP) alternatives. The existing high dependence on imported HFCs, limited training infrastructure, and high costs and safety concerns of alternatives add further constraints.

Expected Results: Stage I of Lebanon's Kigali HFC Implementation Plan (KIP) aims to reduce HFC consumption by 40% from its baseline by 2032, avoiding over 1 million tonnes CO_2-equivalent emissions. It will achieve this by:

- **Converting manufacturing** processes in commercial refrigeration and RAC sectors to low-GWP alternatives;
- **Strengthening national policies and enforcement** frameworks for HFC control;
- **Upgrading training centers and certifying technicians** to improve servicing practices and minimize emissions;
- **Conducting national awareness campaigns** and stakeholder engagement to ensure sustainable behavior change and market uptake of alternatives.

These integrated efforts will enable Lebanon to meet its Kigali targets while also improving energy efficiency and building long-term resilience in key cooling-dependent sectors.

Contributing Outcome (UNSDCF, CPD, RPD):

UNSDCF outcome 3: Strengthened stabilization and green recovery to reduce vulnerabilities and environmental risks (SDG indicator: 12.1.1. Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production)

CPD Outcome 3: Strengthened stabilization and green recovery to reduce vulnerabilities and environmental risks, including through enhanced competitiveness and business environment of sustainability-oriented MSMEs and high potential green productive sector values chains. CPD 3.1 (**IRRF Signature Solution 4, Output 4.1.2 –** Sustainable use of natural resources to enhance productivity and livelihoods).

CPD output indicator: Indicator 3.1.4. Yearly consumption of ozone depleting substances.

Output 1: Gen 2

Total resources required:		4,809,229 USD
Total resources allocated:		
	UNDP TRAC:	
	MLF MP:	4,809,229 USD
	Tranche 1:	1,869,792 USD
	Tranche 2:	2,453,757 USD
	Tranche 3:	485,680 USD
	In-Kind	
Unfunded:		

Agreed by:

UNDP	
Ms. Blerta Aliko Resident Representative	DocuSigned by: Blerta Aliko DB86602D22CA4B8...
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I. DEVELOPMENT CHALLENGE

Relevance to National and Global Priorities

Lebanon faces a critical development challenge at the intersection of environmental degradation, economic fragility, and social vulnerability. This project directly addresses this convergence by supporting Lebanon in meeting its legally binding international obligations under the Kigali Amendment to the Montreal Protocol, which mandates the phasedown of hydrofluorocarbons (HFCs). This effort is not merely an environmental compliance issue, but a strategic intervention aligned with Lebanon's Nationally Determined Contributions (NDCs), its National Cooling Plan, and the broader goals of the 2030 Agenda for Sustainable Development. Specifically, it contributes to SDG 13 (Climate Action) by mitigating potent greenhouse gases, SDG 12 (Responsible Consumption and Production) by promoting sustainable cooling technologies, and SDG 5 (Gender Equality) through its gender-sensitive design. Furthermore, by fostering a green recovery, the project supports national priorities for economic stabilization and reducing environmental risks, as outlined in the UNSDCF 2023-2027 and the UNDP Country Programme Document (CPD).

The magnitude of the problem and its socio-economic impact

The core development challenge is Lebanon's high dependence on high-GWP HFCs within its Refrigeration and Air Conditioning (RAC) sector, a dependency that exacerbates climate change while the country struggles with a severe socio-economic crisis.

- Environmental Impact: HFCs are potent greenhouse gases with a global warming potential hundreds to thousands of times greater than CO_2. Lebanon's baseline HFC consumption is 2,556,533 tCO_2-eq, a significant contributor to the country's GHG emissions. Without intervention, this consumption will continue to drive climate change, which threatens Lebanon with extreme weather events, sea-level rise, and increased strain on public health and infrastructure.
- Economic and Social Vulnerability: The RAC sector is critical for public health, food security, and economic activity, especially given Lebanon's hot Mediterranean climate where cooling constitutes approximately 32% of total electricity demand. However, the sector is ill-prepared for the HFC phasedown due to a combination of factors:
    - Economic Collapse: Lebanon is experiencing a profound economic depression, with a 20% decrease in GDP in 2020, hyperinflation, and a currency collapse. The cost of an average air conditioning unit is now equivalent to double the Lebanese minimum wage, making the purchase of new, efficient equipment a prohibitive financial burden for most households and businesses.
    - Fragile Infrastructure and Energy Deficit: The national electricity supply is significantly lower than demand, with a gap of over 1,500 MW between peak demand and generation. Inefficient, HFC-based cooling equipment places additional strain on this already failing system.
    - Dependence on Imports and Risk of Stranded Assets: Lebanon is entirely dependent on imported HFCs and cooling equipment. The 48 local manufacturing and assembly enterprises (1 large, 22 SMEs, 25 micro-enterprises) risk becoming uncompetitive and holding stranded assets if they cannot transition to internationally compliant, low-GWP technologies. This threatens an estimated 3,000 jobs in the servicing sector alone, exacerbating unemployment and poverty.

Differential impacts on population groups

The challenge disproportionately affects specific population groups, deepening existing inequalities:

- Low-Income Households: These groups are most affected by the high cost of cooling. They are often forced to rely on older, inefficient, and high-GWP equipment, leading to exorbitant energy costs or forgoing cooling altogether, which poses serious health risks during heatwaves. They are least able to absorb the upfront cost of transitioning to newer, more efficient technologies.

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- Micro, Small, and Medium Enterprises (MSMEs): The 47 MSMEs in the commercial refrigeration sector are particularly vulnerable. They lack the capital for the necessary technological conversion and safety upgrades to handle flammable low-GWP alternatives like hydrocarbons (R-290). Without support, they face exclusion from future markets and potential business failure.
- Women: The RAC sector is highly male dominated. The existing database of technicians does not even record the gender of workers, indicating a systemic lack of consideration for women's participation. Women are largely excluded from the economic opportunities presented by the growing green cooling sector, both as technicians and in decision-making roles within enterprises and institutions. Furthermore, as primary managers of household well-being, women bear a greater burden from the health and economic impacts of inefficient and expensive cooling.

Root, underlying and immediate causes of the challenge

A problem tree analysis, which feeds into the project's Theory of Change, identifies the following causal layers:

- **Root Causes**:
  - Historical Market Dependence: Decades of reliance on non-flammable, high-GWP refrigerants (e.g., R-410A, R-404A, HFC-134a) have created an entrenched technological pathway and supply chain that is resistant to change.
  - Systemic Institutional and Governance Gaps: While a regulatory framework exists, its enforcement is challenged by limited institutional capacity, high staff turnover (e.g., in customs), and a lack of continuous training, undermining sustained compliance.
  - Socio-Economic Gender Norms: Deep-seated cultural and educational barriers limit the entry of women into technical vocations like the RAC sector, perpetuating gender inequality.

- **Underlying causes (capacity limitations)**:
  - Technical and Vocational Deficit: The network of Lebanese Vocational Training Centers lacks modern equipment and updated curricula to train technicians in the safe handling of flammable low-GWP alternatives (A2L/A3 class). There is a critical shortage of master trainers, especially for Mobile Air Conditioning (MAC) and Domestic Refrigeration (DR).
  - Financial Barriers for Private Sector: The high incremental capital and operating costs of converting manufacturing lines and sourcing low-GWP components are prohibitive for MSMEs in Lebanon's current economic climate.
  - Limited Awareness and Market Incentives: End-users, policymakers, and equipment specifiers lack awareness of the lifecycle cost benefits and environmental imperative of low-GWP technologies. There is no market "pull" for alternatives due to safety concerns and higher upfront costs.

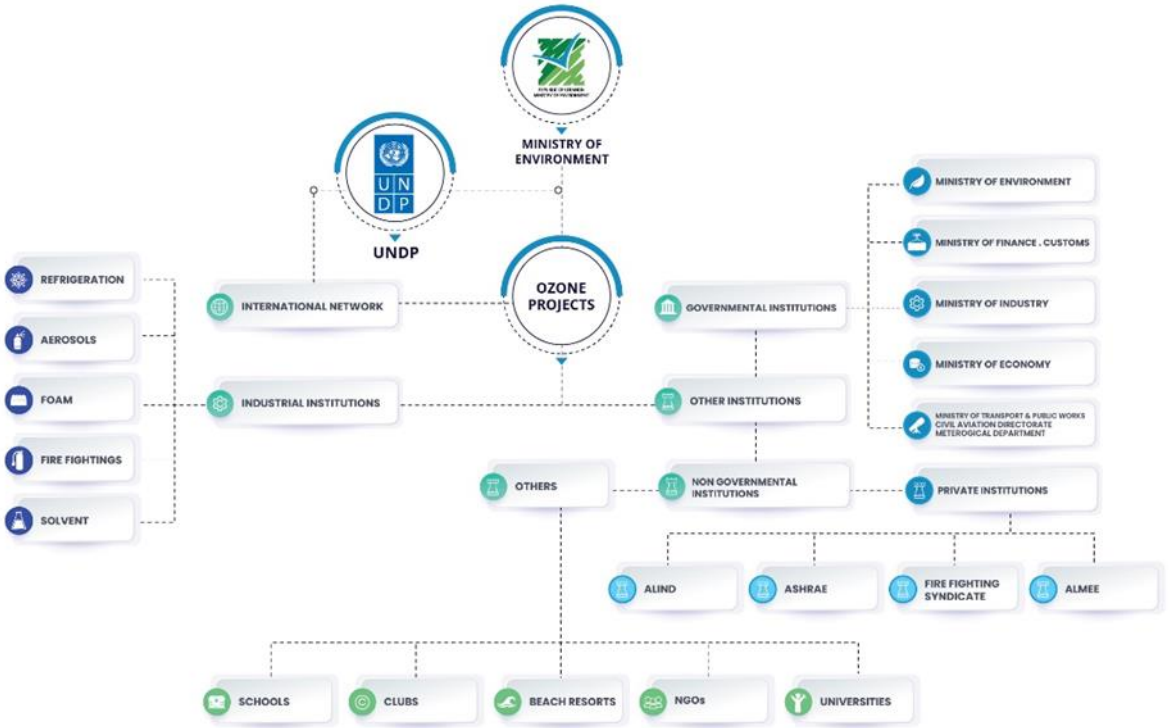
- **Immediate causes**:
  - High HFC Consumption: Unabated use of high-GWP refrigerants in key sub-sectors: R-410A in Room ACs, HFC-134a in MAC and Domestic Refrigeration, and R-404A/R-507A in Commercial Refrigeration.
  - Widespread Leakage and Venting: Poor servicing practices and a lack of proper recovery/recycling equipment among an estimated 658 servicing workshops lead to direct emissions of HFCs into the atmosphere.
  - Insufficient Policy Enforcement: While a licensing and quota system is in place, the capacity to prevent illegal trade and enforce upcoming sectoral bans (e.g., on HFC-134a in domestic refrigerators by 2027) requires strengthening.

In summary, the development challenge is a self-reinforcing cycle: Lebanon's economic fragility prevents investment in new technologies, which perpetuates reliance on high-GWP HFCs, worsening the climate crisis and straining the energy sector, which in turn deepens poverty and inequality by making essential cooling services unaffordable and excluding vulnerable groups from green economic opportunities. This project is therefore critically important for poverty reduction and addressing inequality, as it directly targets the capacity limitations and financial barriers that prevent a

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just and sustainable transition, ensuring that Lebanon's compliance with the Kigali Amendment also fosters economic resilience, job creation, and social inclusion.

The organigram below illustrates the coordination framework of the National Ozone Network in Lebanon under KIP, linking the Ministry of Environment, UNDP, and key governmental, industrial, and non-governmental partners to implement Montreal Protocol activities across priority sectors.



OZONE PROJECTS
NATIONAL NETWORK LEBANON

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II. STRATEGY

Theory of Change and Approach

The project's strategy is built upon a detailed Theory of Change (ToC) that addresses the root, underlying, and immediate causes of Lebanon's HFC dependency through a multi-pronged, integrated approach. The overarching logic is:

If we simultaneously transform the manufacturing base, build a skilled and inclusive servicing sector, strengthen national enforcement, and raise market awareness, **then** Lebanon will achieve a sustainable and accelerated HFC phasedown. This is because the strategy creates a self-reinforcing ecosystem where the supply of low-GWP technologies is met with skilled installation/maintenance, robust regulatory oversight, and growing market demand. Therefore, Lebanon will exceed its Kigali target, reducing HFC consumption from its baseline by 1,022,613 tCO_2-eq by 2032, while simultaneously fostering green economic recovery, enhancing energy security, and building climate resilience.

This strategy is operationalized through four interconnected activities:

- **Activity 1**: Manufacturing sector converted to produce low-GWP equipment.
- **Activity 2**: Servicing sector capacitated to safely handle and maintain low-GWP technologies.
- **Activity 3**: National policy, regulatory, and enforcement frameworks strengthened.
- **Activity 4**: Gender-sensitive awareness and outreach on alternatives disseminated.

Rationale and evidence-based approach

The selected portfolio approach is grounded in lessons learned from Lebanon's own HPMP implementation and global best practices, ensuring cost-efficiency and impact.

- Building on Established Infrastructure: The strategy leverages the institutional framework of the National Ozone Unit (NOU), and the partnerships built over 30 years of Montreal Protocol implementation. This avoids duplication and ensures ownership; a key success factor identified in past evaluations.
- Targeted Investment in Enterprises: Following ExCom Decision 95/86, the project provides tailored financial support (ICC/IOC) to 48 enterprises, recognizing the different needs of a large manufacturer (e.g., Lematic), SMEs, and micro-enterprises. The use of an "umbrella project" for 25 micro-enterprises is a direct lesson from HPMP, simplifying access for the smallest players who are most vulnerable but critical for market transformation. Evidence from Southeast Asia shows that such targeted conversions create a "roll-out effect," gradually reducing future servicing demand for high-GWP gases.
- Systemic Capacity Building: The decision to upgrade Vocational Training Centers with modern trainer kits (for MAC, DR, and RAC) and certify 300 technicians addresses a critical capacity gap. This is informed by the lesson that technology transfer fails without a parallel investment in human capital. The focus on safety protocols for flammable refrigerants (A2L/A3) is based on successful models in Europe and other Article 5 countries.
- Strengthening the Enabling Environment: The project reinforces the existing HFC licensing and quota system, a proven tool from the HCFC phase-out. It includes continuous training for customs officers—addressing the lesson of high staff turnover—and provides advanced refrigerant identifiers to curb illegal trade. The planned sectoral bans (e.g., on HFC-134a in domestic refrigerators by 2029) are preceded by Strategic Environmental and Social Assessments (SESA), ensuring they are evidence-based and mitigate adverse economic impacts.

Integration of gender and digital considerations

- **Gender Mainstreaming**: The project proactively addresses the stark gender gap in the RAC sector.
    - Action: A Gender Action Plan will be developed, and the project will mandate the collection of sex-disaggregated data, target female participation in technical trainings, and run awareness campaigns that challenge stereotypes.
    - Rationale: This aligns with the MLF Gender Policy and UNDP's Social and Environmental Standards. It ensures that women benefit from new green job opportunities and that their perspectives are included in the sector's transition, contributing to SDG 5.

- **Digital Solutions**: The project will leverage digital tools to enhance efficiency and impact.

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- Action: This includes the potential use of digital platforms for technician certification records, online training modules, and the use of digital refrigerant identifiers by customs. The project will seek synergies with other initiatives to promote digital monitoring of equipment performance.
- Rationale: Digital tools improve the transparency, monitoring, and long-term sustainability of project outcomes, a best practice highlighted in UNDP's guidelines on embedding digital in project design.

Contribution to UNSDCF/ CPD outcomes

This project directly contributes to UNSDCF/CPD Outcome 3: "Strengthened stabilization and green recovery to reduce vulnerabilities and environmental risks." The project's ToC is a precise operationalization of this higher-level outcome:

- By converting industries and creating green jobs, it contributes to economic stabilization.
- By promoting energy-efficient alternatives and reducing GHG emissions, it directly reduces environmental risks and builds climate resilience.
- By targeting MSMEs and building inclusive capacity, it reduces vulnerabilities within key economic sectors and for marginalized groups.

Key assumptions and risks

The ToC is predicated on several key assumptions, which are actively managed through the project's risk mitigation strategies (as per the Risk Register).

Assumption Category	Key Assumption	Evidence and mitigation
External Context	The economic and political situation in Lebanon stabilizes sufficiently to allow for project implementation and private sector co-investment.	Evidence: The project design is flexible, with staggered tranches. Mitigation: Close monitoring, remote support mechanisms, and strong partnerships with local chambers of commerce.
Market & Behavioural	The market will accept flammable (A2L/A3) low-GWP alternatives, and technicians will adopt new safety practices.	Evidence: Successful adoption of R-290 and HFC-32 in Southeast Asia. Mitigation: Intensive training, safety protocols, awareness campaigns, and demonstration projects to build confidence.
Stakeholder & Gender	MSMEs and female technicians will participate actively in project activities.	Evidence: Lessons from HPMP show targeted support is effective. Mitigation: Tailored financial models, gender-sensitive recruitment, and outreach to ensure inclusion.
Institutional	Government partners (MoE, Customs) will maintain commitment and provide necessary oversight.	Evidence: 30-year history of successful collaboration under the Montreal Protocol. Mitigation: The NOU is a dedicated and experienced entity; the project includes capacity-building and resource support for partners.
Design and Implementation	The technology choices (R-290, HFC-32) remain commercially viable and supported by a global supply chain.	Evidence: These are internationally recognized and widely adopted alternatives. Mitigation: Continuous market assessment and flexibility for reallocation of funds if needed, as per the Agreement with the MLF.

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By addressing the development challenge through this evidence-based, integrated, and assumption-aware strategy, the project is strategically positioned to deliver transformative and sustainable change, positioning Lebanon as a leader in the accelerated transition to climate-friendly cooling.

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III. RESULTS AND PARTNERSHIPS (1.5 - 5 PAGES RECOMMENDED)

Expected Results

The project's interventions are direct operational translations of the Theory of Change, designed to create a synergistic effect across the HFC value chain. The planned work is detailed below, explaining why these interventions are best suited to achieve the intended, attributable change.

- **Result 1: Manufacturing Sector Transformed through Enterprise Conversion**. Reduction of HFC consumption from the country's baseline by 1,022,613 tCO_2-eq by 2032, exceeding the 30% Kigali target through accelerated sectoral transformation. Also, conversion of 48 enterprises (1 RAC manufacturer, 22 SMEs, and 25 micro-enterprises) to low-GWP alternatives, eliminating over 345,000 tCO_2-eq.
    - **Planned interventions**: Financial and technical support for the conversion of 48 enterprises—specifically, one (1) large RAC manufacturer (Lematic) to HFC-32, and 22 SMEs and 25 micro-enterprises in commercial refrigeration to R-290 (hydrocarbon).
    - **Rationale & Link to ToC**: This intervention directly attacks the immediate cause of high HFC consumption at the production source. By providing Incremental Capital Costs (ICC) and Operating Costs (IOC), the project overcomes the primary barrier for MSMEs in Lebanon's economic crisis. This creates a sustainable supply of low-GWP equipment in the local market, generating a "roll-out" effect that reduces future demand for high-GWP refrigerants in the servicing sector. The choice of HFC-32 and R-290 is based on their commercial viability, lower GWP, and proven success in other Article 5 countries.
    - **Attributable Change**: The direct, attributable change will be the elimination of **345,504.92 tCO_2-eq** of HFCs from the manufacturing sector and the market presence of locally produced, Kigali-compliant cooling products.
- **Result 2: Servicing Sector Capacitated for a Safe and Sustainable Transition.** Training of 300 technicians (women and men) across RAC, MAC, and domestic refrigeration sectors in safe handling, installation, and servicing of low-GWP technologies. Upgraded equipment and curricula in vocational centers, with gender-sensitive training approaches and outreach measures applied, supporting long-term market readiness.
    - **Planned interventions**: Upgrade **Vocational Training Centers** with modern trainer kits for MAC and Domestic Refrigeration; train and certify **300 technicians** (including both women and men) in good practices, leak reduction, and safe handling of flammable refrigerants; equip model service shops with recovery/recycling/recharging (RRR) units and specialized tools.
    - **Rationale & Link to ToC**: This addresses the underlying cause of technical capacity limitations. Simply introducing new technologies without a skilled workforce to install and maintain them would lead to safety hazards, poor performance, and market rejection. This intervention ensures that the supply of new low-GWP equipment is met with qualified demand for its servicing, a critical link in the ToC pathway.
    - **Attributable Change**: A measurable increase in the number of certified technicians competent in low-GWP technologies, a reduction in refrigerant venting rates, and the establishment of a self-sustaining and gender-inclusive training ecosystem within national TVET institutions.
- **Result 3: National Enforcement and Policy Frameworks Strengthened.** Strengthened national HFC licensing, quota, and enforcement systems, including technical training for customs officers and new bans on HFC-134a in domestic refrigeration.
    - **Planned interventions**: Strengthen the HFC licensing and quota system; conduct continuous training for customs officers (including on new bans); deliver multi-refrigerant identifiers to customs; develop and enact a ban on HFC-134a in domestic refrigeration by 2029, preceded by a Strategic Environmental and Social Assessment (SESA).
    - **Rationale & Link to ToC**: This tackles the root cause of weak institutional enforcement. A strong regulatory backbone is essential to prevent illegal trade, create a level playing field, and accelerate market uptake of alternatives. The SESA ensures that bans are socially and economically sound, mitigating risks to vulnerable groups.

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  - **Attributable Change**: Sustained national HFC consumption within Kigali-mandated limits, effective interception of illegal shipments at borders, and the creation of a predictable policy environment that incentivizes investment in alternatives.

- **Result 4: Gender-Sensitive Awareness and Market Demand Stimulated.** Gender-sensitive awareness campaigns and public outreach targeting end-users, importers, and policymakers.
  - **Planned interventions**: Conduct at least three (3) national awareness campaigns for end-users on the benefits of low-GWP technologies; hold ten (10) technical workshops for engineers, technicians, and policymakers; ensure all communication and training materials are gender-sensitive and promote women's participation in the RAC sector.
  - **Rationale & Link to ToC**: This addresses the underlying causes of limited awareness and gender exclusion. Creating informed demand is crucial for the sustainability of Results 1 and 2. A gender-sensitive approach ensures that the project's benefits are equitably distributed and contributes to transforming the sector's culture.
  - **Attributable Change**: Increased public and professional awareness of low-GWP alternatives, a measurable rise in the enrollment and participation of women in RAC training programs, and a documented shift in purchaser preferences towards climate-friendly cooling.

These results directly contribute to the CPD Outcome 3 (Strengthened stabilization and green recovery) and the UNDP Strategic Plan Output 1.3 (Solutions for sustainable management of natural resources, chemicals and waste). The specific, measurable indicators for these results are captured in the project's Results Framework and will be monitored regularly.

Resource required to achieve the Expected Results

To deliver the outputs along the change pathway, the following key resources are required

- **Financial resources**: The total project budget is US $4,809,229 from the Multilateral Fund, disbursed in three tranches. This includes:
  - Investment Costs (ICC/IOC): $1.8M for the conversion of the 48 enterprises.
  - Technical assistance& capacity building: $2.0M for training centres, technician training, tooling, and awareness campaigns.
  - Policy & Enforcement support: $0.2M for studies, customs training, and equipment.
- **Human Resources**:
  - Project Management Unit (PMU): A dedicated Project Manager, Project Coordinator, Project Associate (admin/finance), Communication Assistant, and Driver, cost-shared with other ozone related project, to manage day-to-day implementation.
  - UNDP Country Office Staff: Significant time from the Green and Inclusive Development team for quality assurance, financial oversight, and reporting. Senior management and operations team.
  - Consultants & Experts: International and national consultants for technical design, training of trainers, gender mainstreaming, and monitoring.
- **Partnerships & Co-financing:** In-kind contributions from the Government of Lebanon (through the Ministry of Environment and partner ministries) and in-kind co-financing/contribution from participating enterprises.
- **Equipment & Goods:** Procurement of manufacturing conversion components, RAC trainer kits, refrigerant identifiers, recovery/recycling machines, and servicing tools.

Partnerships

The project’s success is contingent on a network of partners, each playing a critical role aligned with the ToC.

- Ministry of Environment / National Ozone Unit (NOU): The lead government counterpart. The NOU provides oversight, policy guidance, and is responsible for the long-term sustainability of the HFC phase-down. Assumption: The NOU maintains its institutional capacity and political mandate to enforce regulations.
- UNDP: The Implementing Agency, responsible for financial management, procurement, technical assistance, and ensuring compliance with UNDP social and environmental standards and MLF policies. UNDP provides the execution capacity and global technical networks that the project relies upon.

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- Manufacturers and MSMEs: The private sector drivers of technology change. Their active participation and co-investment are critical for the market transformation. Assumption: Enterprises have the operational stability and willingness to undergo conversion despite the economic climate.
- Directorate General of Vocational and Technical Education (DGVTE) & TVET Institutions: The custodians of long-term capacity building. Their partnership ensures that updated curricula and training capacities are institutionalized within the national education system beyond the project's life.
- Customs Authorities: The frontline enforcers of the regulatory framework. Their collaboration is essential to control imports and prevent illegal trade. Assumption: Customs authorities prioritize HFC control and facilitate officer participation in training.
- Other Governmental and non-governmental bodies: There are several Government and Semi-Government bodies that would need to participate in project implementation under this project, which includes institutions responsible for import-export of chemicals, Customs authorities, environment monitoring bodies (NGOs), Ministry of Industry, Industrial Research Institute (IRI) and international cooperation authorities. Their roles would be defined under specific project components. They would also be engaged at various points during project initiation, implementation monitoring and other specific project activities.

These partnerships are critical to the ToC, as successful implementation depends on national enforcement, private-sector uptake of alternatives, and strong institutional coordination.

Risks and assumptions

The project's risk register (Annex 3) details a comprehensive list of risks. The key risks and mitigation strategies are:

Risk	Mitigation
Political Instability and Security Deterioration	Staggered activity timeline, remote support mechanisms, security protocols.
Low market acceptance of flammable alternatives	Intensive safety training, awareness campaigns demonstrating successful global use, and stringent certification standards.
Economic Crisis Deters MSME Participation	Tailored support, phased participation, and highlighting the long-term cost-saving and market-access benefits.
Gender participation remains low	Gender Action Plan, targeted outreach, monitoring indicators
Delays in procurement	Advance procurement planning, UNDP DIM procedures

Stakeholder Engagement

The project would involve close coordination amongst Government, regulatory bodies and the implementing agency (UNDP). The project stakeholder engagement and coordination is the foundation for systematic and sustainable HFC Phase down. The roles and responsibilities of each stakeholder and how they would participate in the "network" for project implementation has been detailed in section on "partnerships" earlier.

- Target Groups: RAC technicians, MSMEs owners/ managers, importers, vocational schools, and manufacturers. Engagement will occur through consultations, surveys, training sessions, direct participation in conversion projects and communication materials. A specific strategy will be implemented to identify and encourage the participation of women in all capacity-building activities.
- Potentially Affected Groups: Technicians handling flammable refrigerants and vulnerable populations using outdated equipment. These groups will be informed about project activities through their employers (for workers) and public awareness campaigns (for consumers). All project information and stakeholder engagement activities will publicly reference UNDP's Social and Environmental Compliance Unit (SECU) and the Stakeholder Response Mechanism (SRM) as accessible channels to raise concerns.
- The project is expected to be implemented with minimum disruption to business continuity and livelihood of different industry stakeholders. Through funding support and proper timeframe, systematic project

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implementation process and technology transfer, the project is expected to achieve HFC phase down targets with minimum cost to industry and consumer.

South-South and Triangular Cooperation (SSC/TrC)

The project will utilize South-South and Triangular Cooperation (SSC/TrC) to support the effective implementation of Lebanon's Kigali HFC Implementation Plan (KIP) by promoting exchange of experiences with other Article 5 countries implementing the Montreal Protocol. Through participation in regional networks of Ozone Officers and engagement with countries that have successfully adopted low-GWP alternatives, Lebanon will benefit from shared technical knowledge on technology conversion, safety standards, and servicing sector practices. The project will also contribute lessons learned from Lebanon's manufacturing and servicing interventions, fostering replication and sustained compliance with HFC phase-down obligations under the Kigali Amendment.

Digital Solutions

The project will seek synergies and collaborate with other relevant projects funded by the Multilateral Fund and other source, to promote the use of digital tools and technologies to support improved maintenance and monitoring of refrigeration and air-conditioning equipment.

The project will also leverage digital tools to enhance efficiency and impact:

- **Digital Training Aids**: Development of e-learning modules and mobile applications for technicians on good practices and safety.
- **Digital Monitoring**: Exploring the use of digital platforms for tracking technician certification and equipment performance.
- **Digital Monitoring**: Exploring the use of digital platforms for tracking technician certification and equipment performance.

Knowledge

The project will achieve its objectives through strong collaboration with government institutions, non-governmental organizations, industry actors, and end-user groups. Central to its strategy is the provision of technical assistance to support the transition from ozone-depleting substances (ODS) and high-global warming potential (GWP) refrigerants to low-GWP alternatives in Lebanon's manufacturing and servicing sectors. This includes targeted support for technology transfer in the air-conditioning sector.

To build national capacity and ensure sustainability, the project will expand Lebanon's vocational training infrastructure by establishing Refrigeration and Air Conditioning (RAC) training center. These centers will play a critical role in training technicians and vocational students in the safe use, installation, and servicing of low-GWP technologies.

In parallel, the project will provide targeted support to servicing technicians through structured capacity-building activities, equipping them with the tools and skills needed to safely handle and maintain new equipment. These efforts are designed to enable a smooth, long-term transition away from high-GWP HFCs, in line with Lebanon's obligations under the Kigali Amendment and the broader objectives of the Montreal Protocol.

The project will generate and disseminate knowledge products to ensure visibility and learning, including:

- **Case Studies**: Documenting the conversion processes of Lematic and the MSME umbrella project.
- **Technical Guidelines**: On the safe handling of R-290 and HFC-32 in Arabic, tailored to the Lebanese context.
- **Policy Briefs**: On the outcomes of the SESA for sectoral bans.
- **Visibility**: Knowledge products will be disseminated through UNDP networks, regional workshops, and national media to maximize their reach and benefit.

Sustainability and Scaling Up

Sustainability is embedded in the project design through:

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- **National Systems**: The project works through and strengthens the NOU, the national TVET system (Integration of RAC servicing into national TVET systems), and the customs authority, ensuring national ownership and continuity.
- **Legal & Institutional Frameworks**: The reinforcement of the HFC licensing and quota systems and the enactment of sectoral bans create a permanent regulatory environment for the phase-down.
- **Private Sector Ownership**: Co-financing from enterprises fosters a sense of ownership and ensures their commitment to maintaining the new technologies.
- **Capacity Development**: The training of a new generation of technicians and the upgrading of training centers create a self-sustaining cycle of skills development.
- **Gender action planning and inclusive monitoring** of all activities. Progress will be monitored via a results framework and ToC-aligned logframe indicators to ensure long-term impact.
- **Scalability**: The experiences and models developed in Stage I will directly inform the design of KIP Stage II, which will address larger enterprises and more complex sub-sectors, ensuring a continuous and scaled-up effort towards the 2045 targets.

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IV. PROJECT MANAGEMENT (1/2 PAGES - 2 PAGES RECOMMENDED)

Cost Efficiency and Effectiveness

The project uses a portfolio management approach to improve cost effectiveness and efficiency through synergies with other Montreal Protocol interventions. It is implemented by UNDP in close partnership with the Ministry of Environment through the National Ozone Unit (NOU), which has been leading the implementation of Lebanon's Montreal Protocol commitments since 1998. The NOU also manages the Institutional Strengthening Project and HPMP Stage III, providing an experienced platform to implement Stage I of the Kigali HFC Implementation Plan (KIP).

Human and technical resources are shared across Montreal Protocol projects, enabling streamlined operations, harmonized stakeholder engagement, and joint use of national regulatory tools such as the digitized HFC licensing and quota system. This model reduces overhead and facilitates cost-effective delivery of training, conversion, and policy-related activities.

The current project builds on the same institutional framework that successfully delivered the National Phase-out Management Plan (NPMP) for CFCs and multiple stages of the HPMP. Lessons learned—such as the need for regular customs training due to officer rotation, and the benefits of engaging micro and small enterprises through umbrella conversion projects—have been integrated into the design of KIP Stage I. These measures help reduce costs while maximizing impact.

The project also promotes joint operations with related UNDP initiatives, including the Green and Inclusive Development (GID) programme, by coordinating awareness campaigns, procurement, and training efforts. This approach leverages existing partnerships and infrastructure to deliver maximum results with available resources, in line with good practices observed in Lebanon and other Article 5 countries.

Project Management

The project will be managed directly by UNDP under the Direct Implementation Modality (DIM), in accordance with UNDP's rules and procedures. UNDP will serve as the Implementing Agency and will be responsible for the execution and oversight of all activities under Stage I of the Kigali HFC Implementation Plan (KIP), including procurement, recruitment, financial management, monitoring and evaluation, and reporting.

The project will be operationalized in Beirut, within the Ministry of Environment (MoE), through theNational Ozone Unit (NOU), which will provide technical guidance and host the Project Management Unit (PMU). Based on the MLF-approved budget for KIP Stage I, a dedicated project manager, project coordinator, project associate, project communication assistant and project driver (cost-shared with other ozone related projects as per the portfolio approach) will be serving under the KIP to manage the incremental workload and specific sectoral interventions in the MAC and domestic refrigeration sectors.

To ensure synergy and avoid duplication, the project will maintain close collaboration with other Montreal Protocol-related interventions, including the Institutional Strengthening Project and GID-supported activities. Joint planning and coordination meetings will be regularly convened to align efforts, share resources, and reinforce the impact of sectoral policies and training programs.

UNDP will manage all financial transactions, contracting, and procurement activities in full compliance with UNDP's POPP (Programme and Operations Policies and Procedures) for DIM projects. Project expenditures will be monitored through UNDP's financial management systems, and financial and operational audits will be conducted through regular internal or external mechanisms.

The audit of DIM projects is made through the regular external (UN Board of Auditors) or internal audits (audits managed by UNDP's Office of Audit and Investigations).

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The UNDP country office will provide the following support services, covered by Direct Project Cost (DPC), for the activities of the programme/project; the DPC will be collected based on the UPL:

i. Payments, disbursements and other financial transactions
ii. Recruitments of personnel, and consultants
iii. Procurement of services and equipment, including disposal
iv. Organization of training activities, conferences, and workshops, including fellowships
v. Travel including visa requests, ticketing, and travel arrangements
vi. Shipment, customs clearance, vehicle registration, and accreditation
vii. Security management service and Malicious Acts Insurance Policy
viii. Access to Quantum for project managers and other staff, Payroll management services and Medical Clearance Services for all staff

In addition, UNDP will provide general oversight and management services, risk management, and technical backstopping through its Country Office, Regional Bureau and Headquarter, ensuring quality assurance and alignment with Montreal Protocol obligations. The General Management Support Services (GMS) fee received by UNDP in relation to the project is managed centrally at BPPS-HQ and is not part of the project budget. The support cost rate approved by the donor is 7% for this project. In Quantum, the Burdening Rate in the Award Budget is at 7% by selecting Montreal Protocol Trust Fund 7% option. GMS at the internal distribution rate approved effective January 2016 covering management support rendered by Lebanon CO will be credited to its Cost Centre income account based on delivery. GMS distribution modality must be set up as per Table 1 by the CO.

MP projects - GMS distribution modality

Office	Distribution by Office	Fund Code	Budget Department
County Office	37.10%	11300	Lebanon CO's
Regional Bureau	7.40%	11300	15401
Central Services	25.60%	11000	10801
Prog Bureau (BPPS)	0.90%	11300	29001
MP Unit	29.00%	63042	08401
Total	**100%**		

UNDP will also ensure visibility for the Ministry of Environment and the Multilateral Fund throughout project implementation, in accordance with UNDP branding guidelines.

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V. RESULTS FRAMEWORK

Intended Outcome as stated in the UNSDCF/Country Programme Results and Resource Framework: Outcome 3: Strengthened stabilization and green recovery to reduce vulnerabilities and environmental risks, including through enhanced competitiveness and business environment of sustainability-oriented MSMEs and high potential green productive sector values chains.

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: Output 3.1. Natural resources protected and managed to enhance sustainable productivity and livelihoods. Indicator 3.1.4.: Yearly consumption of ozone depleting substances.

Applicable Output(s) from the UNDP Strategic Plan: Output 4.1.2 – Sustainable use of natural resources to enhance productivity and livelihoods.

Project title and Quantum Project Number: Kigali Implementation Plan (KIP) – Stage I Project ID 01005060; Award ID: 1484408

EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS (targets are cumulative)								DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	
Output 1 *Phase down HFCs in line with Montreal Protocol control measures. Control of HFCs imports/ Consumption*	***1.1*** CO_2-eq tonnes of HFCs phased down	*Yearly imports consumption of ODS (NOU, Customs, Ministry of Trade, Importers)*	2,556,533 tonnes of CO2 equivalent	2020-2022	0.0% *Freeze* 2,556,533	0.0% *Freeze* 2,556,533	10.0% 2,300,880	10.0% 2,300,880	15.0% 2,173,053	15.0% 2,173,053	27.0% 1,866,269	40.0% 1,533,920	▪ Quantitative (Surveys) ▪ Stakeholder Consultation ▪ Verification of HFC Phase down ▪ Data from Customs and Ministry of Industry
	1.2 Number of RAC and commercial refrigeration enterprises converted to low-GWP manufacturing technologies	*Enterprise conversion contracts, procurement/installation records*	0	2024	0	15	30	41	48	0	0	The cumulative final number: 48	▪ Collection method: Document review of enterprise-level deliverables ▪ Risks: Supply Chain

[1] *It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.*

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EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS (targets are cumulative)								DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	
													disruptions delay equipment delivery ▪ Assumptions: Enterprises maintain commitment despite economic volatility.
	1.3 Number of Certified Technicians (gender disaggregated) competent in low-GWP Technologies	*TVET center training databases*	0	2024	0	0	0	75	150	225	300	The cumulative final number: 300	▪ Data collection: collection of participant data through training registry ▪ Risk: Low participation of women due to social norms or logistical barriers. Migration of trained technicians reduces national capacity. ▪ Assumption: Training partners cooperate with UNDP data collection requirements.
	1.4 Number of kits for training support	*Delivery/installation reports*	0	2024	0	4	14	24	34	38	0	The cumulative final	▪ Data collection: Review of installed equipment and

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EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS (targets are cumulative)								DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	
												number: 38	updated curricula ▪ Risk: Infrastructure constraints at centers ▪ Assumption: TVET institutions adopt and maintain the new equipment
	1.5 Number of trainers (gender-disaggregated) trained for MAC servicing and domestic refrigerator servicing		0	2024	0	2	6	21	36	52	67	The cumulative final number: 75 (including 8 in 2032)	▪ Data collection: collection of participant data through training registry ▪ Risk: Low participation of women due to social norms or logistical barriers. Migration of trained technicians reduces national capacity. ▪ Assumption: Training partners cooperate with UNDP data collection requirements.
	1.6 Number of customs officers trained	*Customs training attendance sheets*	0	2024	0	45	0	0	0	0	0	The cumulative final	▪ Data collection: post-training follow-ups

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EXPECTED OUTPUTS	OUTPUT INDICATORS[1]	DATA SOURCE	BASELINE		TARGETS (targets are cumulative)								DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	
												number:45	▪ Risk: High staff turnover at customs limits retention of trained officers ▪ Assumption: Customs Directorate remains supportive and cooperative.
	1.7 Number of awareness campaigns and technical workshops conducted using gender-sensitive communication and achieving increased public demand for low-GWP technologies	*Campaign reports/media analytics/social media reach statistics*	0	2024	0	2	3	4	5	6	7	The cumulative final number: 8 (including 1 in 2032)	▪ Data collection: monitoring of media engagement and outreach metrics ▪ Risk: target audience are not interested due to competing priorities ▪ Assumption: Stakeholders are reachable via chosen communication channels

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VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Along with each request for tranche	Based on specific guidance from the Executive Committee and in consultation with the implementation agency, actions will be taken by the PMU for strengthening the project implementation	UNDP With the assistance of MOE	Internal
	Independent Performance Verification Report of achievement of national consumption targets				Approximately USD 10,000 for each PVR
Monitor and Manage Risk	Project partner coordination and cooperation risks	Bi-yearly (if need be quarterly)	Close monitoring using project management team. Refer to risk log	UNDP MOE	Internal
	Policy and regulations development risk	Annually			
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	Annually	Relevant lessons are captured by the project team and used to inform management decisions through annual reporting/annual board meetings	UNDP MOE	Internal
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project. Noting that the QA is provided by the E&E programme who performs regular (at least quarterly) reviews of the projects.	Every two years	Areas of strength and weakness will be required by project management and will be used to inform decisions to improve project performance	UNDP	Internal
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	Annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	UNDP MOE	Internal

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Project Report	A progress report will be submitted to the project board and key government focal points, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk along with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)	The progress report will be reviewed based on the comments received from the MP bodies and UNDP management as well as the Government national focal points	UNDP Ozone Project	Internal
Project Review (Project Board)	The project board will hold regular project review to assess the performance of the project and review the multi-year work plan to ensure realistic budgeting and activities over the life of the project. The project board shall hold an end of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences	Annually	Any Quality concerns or slower than expected progress shall be discussed by the project board and management actions agreed to address the issues identified	UNDP	Internal

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VII. MULTI-YEAR WORK PLAN

The below budget is in line with the DOA received for the 1st tranche. The full project budget amounts to 4,809,229 USD until end of 2032.

OUTPUT 1		**RESPONSIBLE PARTY**	**Funding Source**	**Planned Budget (USD)**				
PLANNED TASKS (Activities)	**Sub-tasks**			**Budget Description**	**Total Budget**	**2025**	**2026**	**2027**
Taks 1 *Kigali HFC implementation plan (stage I, first tranche) (conversion of SMEs and micro-SMEs (commercial refrigeration)* *LEB/KIP/96/INV/107*	*15 SMEs CR companies converted*	UNDP	MLF	71400-Contractual Services Individual	50,000.00	-	25,000.00	25,000.00
	14 Micro Enterprises CR companies converted			72100-Contractual Services Companies	1,050,192.00	-	439,403.00	610,789.00
				Subtotal task 1	**1,100,192.00**	**-**	**464,403.00**	**635,789.00**
Task 2 *Kigali HFC implementation plan (stage I, first tranche)* *LEB/KIP/96/INV/108*	*Ban HFC-134a FOR Domestic Refrigerators (DR)*	UNDP	MLF	71300-Local Consultant	16,000.00	8,000.00	4,000.00	4,000.00
	Multi-refrigerant Identifiers purchased			71400-Contractual Services Individual	72,000.00	-	32,000.00	40,000.00
	Improvement of RAC Training Centers: *- MAC Trainer Kits* *- Domestic Refrigeration Trainer Kits*			71600 - Travel	10,000.00	-	5,000.00	5,000.00
				72100- Contractual Services Companies	170,000.00	-	160,000.00	10,000.00
				72200 - Equipment and furniture	1,000.00	-	1,000.00	-
	Controlled Substance Imports Risk Profile Manual Developed			72300 – Materials & Goods	56,500.00	-	56,000.00	500.00
	Custom and National Officers Capacities Built			72400 – Communication & Audio – visual Equip.	8,000.00	-	5,000.00	3,000.00
	Importers and Companies trained			72500 - Supplies	1,000.00	500.00	500.00	-
	Awareness Campaigns geared towards general end-users			72800 – IT Equipment	1,700.00	-	700.00	1,000.00
	Technical workshops on alternatives in MAC, DR and RAC Sectors			73400 – Rental and Maintenance of Other Equipment	1,050.00	-	500.00	550.00
				74200 - Audio Visual&Print Prod Costs	10,000.00	10,000.00	-	-
				75700 - Learning Cost	10,000.00	-	5,000.00	5,000.00
				Subtotal task 2	**357,250.00**	**18,500.00**	**269,700.00**	**69,050.00**

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OUTPUT 1		RESPONSIBLE PARTY	Funding Source	Planned Budget (USD)				
PLANNED TASKS (Activities)	**Sub-tasks**			**Budget Description**	**Total Budget**	**2025**	**2026**	**2027**
Task 3 *Kigali HFC implementation plan (stage I, first tranche) (AC manufacturing - Lematic Industries)* *LEB/KIP/96/INV/109*	*Room AC Company Converted*	UNDP	MLF	72100 -Contractual Services Companies	355,850.00	-	355,850.00	-
				Subtotal task 4	**355,850.00**	**-**	**355,850.00**	**-**
Task 4 *Kigali HFC implementation plan (stage I, first tranche) (PMU)* *LEB/KIP/96/INV/110*	*Day-to-day management of the project activities*	UNDP	MLF	71400-Contractual Services Individual	40,000.00	-	20,000.00	20,000.00
	Monitoring of activities			71600-travel	7,000.00	-	5,000.00	2,000.00
	Provision of financial, administrative and logistic services			72400 – Communication & Audio – visual Equip.	2,500.00	-	2,500.00	-
				64397 - DPC	7,000.00	1,000.00	3,000.00	3,000.00
				Subtotal task 4	**56,500.00**	**1,000.00**	**30,500.00**	**25,000.00**
Total Output 1					**1,869,792.00**	**19,500.00**	**1,120,453.00**	**729,839.00**

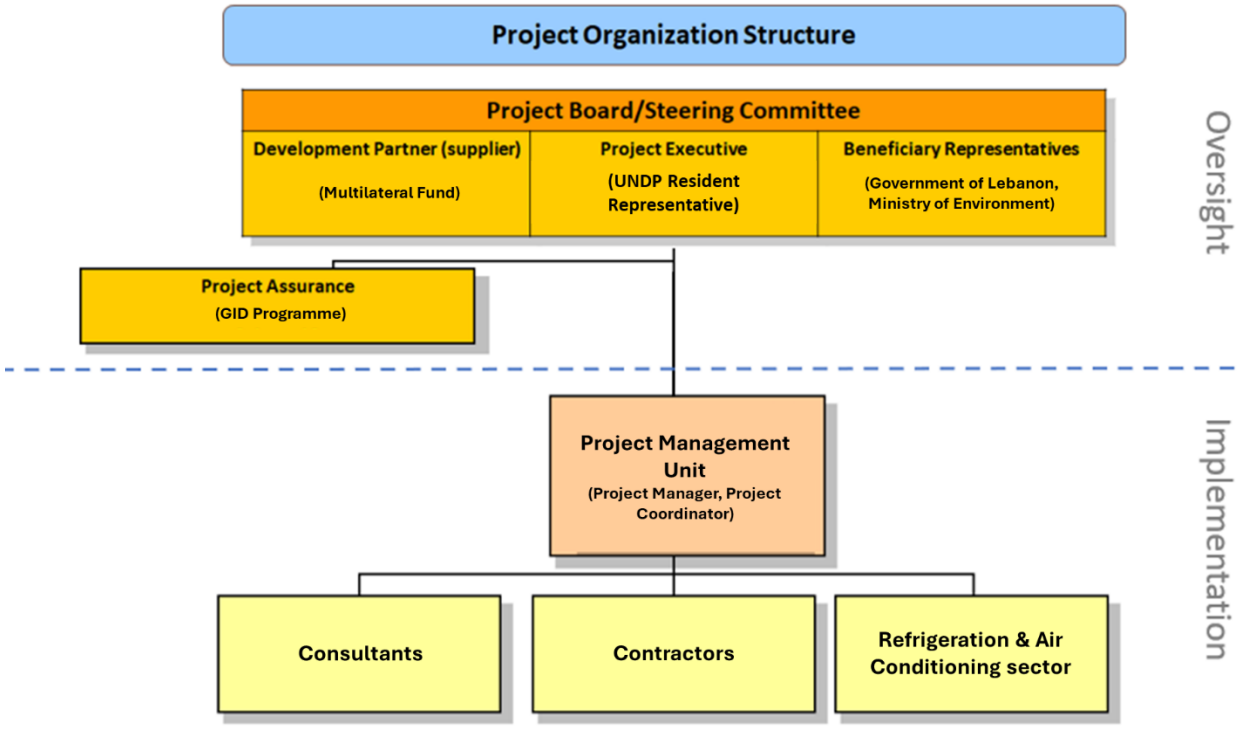
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VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The project will be managed in accordance with standard UNDP procedures as Direct Implementation (DIM) modality, in close collaboration with the Government of Lebanon through its UNDP managed Ozone Project team established at the Ministry of Environment. The UNDP Ozone Project team is partially supported by this project and other ozone related projects implemented by UNDP with financial assistance from the Multilateral Fund and other sources of funds.

UNDP will be working closely with the MoE; the UNDP Country Office will be responsible for overseeing project budgets and expenditures, recruiting and contracting consultant services, procuring equipment, and project evaluation and reporting, result-based project monitoring, and organizing audits (as per OAI guidelines) to ensure the proper use of the funds. Financial transactions, auditing and reporting will be carried out in compliance with UNDP procedures for national execution.

The project management team will be comprised of existing project staff. The UNDP Ozone Project team will manage the day-to-day implementation and visibility of the project, under the overall supervision and direction of the Green and Inclusive Development Programme.



Roles and responsibilities:

1- Implementing Partner: The Implementing Partner for this project is UNDP.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document, along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

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The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization, and the certificate of expenditures.

UNDP is accountable for the implementation of this project. This includes overseeing project execution to ensure that the project is being carried out in accordance with UNDP policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings.

A strict firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and project execution undertaken by UNDP.

2- <u>Project Board:</u>

Responsibilities:

- ✓ Consensus decision making:
  - The project board provides overall overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
  - Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
  - The project board is responsible for making management decisions by consensus.
  - In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.
  - In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.
- ✓ Oversee project execution:
  - Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
  - Address any high-level project issues as raised by the project manager and project assurance;
  - Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS;
  - Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.

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- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

✓ Risk Management:

- Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
- Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project.
- Address project-level grievances.

✓ Coordination:

- Ensure coordination between various donor and government-funded projects and programmes.
- Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board:

1. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: **UNDP Senior management represented by the Resident Representative.**

2. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is/are: **The Ministry of Environment represented by the National Focal Point.**

3. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: ***MLF.***

3- <u>Project Assurance:</u>

Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

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A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are: *are the Deputy Resident Representative, Environment Programme Manager and Associate.*

4- Project Management – Execution of the Project:

The Project Manager (PM) is the most senior representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels, and risk registers.

The PMU will have responsibility for, among others: (i) managing and executing the project, (ii) contracting consultants and trainers (iii) assisting in institutional arrangements by designating the relevant focal points in the different institutions and informing the ToRs for consultants, (iv) aligning project activities with national priorities and international agreements through providing input from previous assessments to the recruited consultants, (v) reviewing and validating deliverables, as well as replicating deliverables such as trainings to a wider audience, (vi) coordinating the management of financial resources and procurement, (vii) reporting on the application of resources and results achieved, (viii) preparing management reports to the MLF and UNDP, (ix) promoting inter-institutional linkages, and (x) monitoring and evaluation, and disseminating project results. A Project Coordinator will be assisting in the coordination of the PMU.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative. The primary PMU representative attending board meetings is the Project Manager.

The administrative and technical assistance to the Project Manager will be provided by a team (including but not limited to a project coordinator, communication assistant, project admin/finance asociate and a driver), which will be based at the Ministry, to ensure proper coordination with the focal point. The Project is fully embedded within the governance systems of Lebanon and, as such, directly supports its structures, functions, and strategic commitments. In this context, the project will implement its activities using the existing institutional, legal and administrative structures. Project activities related to cooperation, training, and information sharing will aim to use already established, legitimate participatory bodies, as well as existing training and cooperation platforms.

5- Project target groups and industries benefiting from the financial and technical support:

While the project target groups include RAC technicians, MSMEs owners/ managers, importers, vocational schools, and manufacturers, the 47 MSMEs and 1 large enterprise identified through the national survey in the project preparation phase will benefit from a direct technical and financial assistance to reduce their HFCs emissions, enabling Lebanon to comply with the phase-out targets. The complete list of selected companies/beneficiaries is presented in Annex 9.

The modality for the provision of the technical and financial assistance to the industries is developed in the below section:

a- Background/summary of the intervention and of the case:

The Kigali Implementation Plan (KIP) Stage I Project was approved by the Executive Committee of the Multilateral Fund (MLF) at its 96th Meeting in May 2025, with a total budget of USD 4,809,229. The first tranche of USD 1,869,792 is scheduled for implementation between 2025 and 2027. Through the approval of the project

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by the MLF, Lebanon has committed to an accelerated HFC phase-down schedule, targeting a 40% reduction by 2032, ahead of the Kigali Amendment timeline. This urgency necessitates timely execution to meet compliance milestones and ensure uninterrupted disbursement and reporting to the MLF, noting that the project is implemented by UNDP under the Direct Inplementation Modality (DIM) as explained in the current project document.

b- Direct Contracting under procurement procedures:
Since the preparation of the project proposal, the Country Office and the Regional Technical Team have consulted with relevant UNDP policy focal points—including BMS/Procurement, the Partnership Bureau, and the Support Desk—to determine the optimal approach for engaging selected industries (private sector).

Three modalities were identified:
1) Low Value Grants,
2) Performance-Based Payment Agreements, and
3) Procurement through Direct Contracting.

The UNDP Country Office recommends proceeding with Direct Contracting, which aligns with the Increased Delegation of Procurement Authority (IDPA) thresholds. A detailed and transparent strategy will be developed before initiating the process, ensuring compliance with UNDP rules and regulations, maximizing value for money, and mitigating potential risks.

It is further recommended to utilize Performance-Based Payment Agreements and engage beneficiaries as Responsible Parties. For each activity and supplier, a Terms of Reference (ToR) must be developed, clearly specifying deliverables, with no advance payments permitted.

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IX. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date). All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by [name of entity] ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

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X. RISK MANAGEMENT

UNDP (DIM)

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)

2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the project funds are used to provide support to individuals or entities associated with terrorism , that the recipients of any amounts provided by UNDP hereunder do not appear on the United Nations Security Council Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Consolidated Sanctions List can be accessed via https://www.un.org/securitycouncil/content/un-sc-consolidated-list. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse ("SEA") and sexual harassment ("SH") allegations in accordance with its regulations, rules, policies and procedures.

6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor, and sub-recipient:

    a. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
        i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
        ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.

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b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.

c. Each responsible party, subcontractor and sub-recipient (each a "sub-party" and together "sub-parties") acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the sub-parties, and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.
   (a) In the implementation of the activities under this Project Document, each sub-party shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").
   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, each sub-party, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. SH may occur in the workplace or in connection with work. While typically involving a pattern of conduct, SH may take the form of a single incident. In assessing the reasonableness of expectations or perceptions, the perspective of the person who is the target of the conduct shall be considered.

d. In the performance of the activities under this Project Document, each sub-party shall (with respect to its own activities), and shall require from its sub-parties (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, sub-parties will and will require that their respective sub-parties will take all appropriate measures to:
   (i) Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;
   (ii) Offer employees and associated personnel training on prevention and response to SH and SEA, where sub-parties have not put in place its own training regarding the prevention of SH and SEA, sub-parties may use the training material available at UNDP;
   (iii) Report and monitor allegations of SH and SEA of which any of the sub-parties have been informed or have otherwise become aware, and status thereof;
   (iv) Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
   (v) Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. Each sub-party shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any

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laws applicable to it. Following the investigation, the relevant sub-party shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

e. Each sub-party shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the relevant sub-party to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

f. Each responsible party, subcontractor and sub-recipient will ensure that any project activities undertaken by them will be implemented in a manner consistent with the UNDP Social and Environmental Standards and shall ensure that any incidents or issues of non-compliance shall be reported to UNDP in accordance with UNDP Social and Environmental Standards.

g. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud, corruption or other financial irregularities, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption, anti-fraud and anti money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.

h. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices (b) UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy; and (c) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org .

i. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.

j. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud, corruption other financial irregularities with due confidentiality.
Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

k. *Option 3:* UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud corruption or other financial irregularities, or otherwise paid other than in accordance with the terms and conditions of the

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Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement.

Where such funds have not been refunded to UNDP, the responsible party, subcontractor or sub-recipient agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to such responsible party, subcontractor or sub-recipient for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud, corruption or other financial irregularities, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

l. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.

m. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

n. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, mutatis mutandis, in all its sub-contracts or sub-agreements entered into further to this Project Document.

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XI. ANNEXES

1. **Project Quality Assurance Report: Completed in Quantum+.**
2. **Social and Environmental Screening: Completed in Quantum+**
3. **Consideration of the Multilateral Fund Gender Policy in HPMP preparation- Gender Assessment, Findings and Action Plan.**
4. **Risk Analysis.**
5. **Capacity Assessment: N/A**
6. **Project Board Terms of Reference and TORs of key implementing partners (including Partner Capacity Assessment Tool (PCAT) and HACT Micro Assessment): refer to management arrangement section.**
7. **On-Granting Provisions Applicable to the Implementing Partner: N/A**
8. **Agreement between the government of Lebanon 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: 2025–2032)**
9. **List of Beneficiaries.**
10. **KIP Stage I – History and Proposed Interventions.**

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ANNEX III – CONSIDERATION OF THE MULTILATERAL FUND GENDER POLICY IN KIP PREPARATION-

GENDER ASSESSMENT, FINDINGS AND ACTION PLAN

1. Lebanon has shown a long-standing commitment to the advancement of gender equality through the establishment of the National Commission for Lebanese Women (NCLW) in 1998 that aims at supporting women's right in public institutions. With the guidance from NCLW the country has adopted the National Strategy for Women in Lebanon (2011-2021), aiming at achieving gender equality across all sectors[2]. These frameworks provide a foundation for integrating gender equality into all sectors, including environmental and climate-related programmes such as the implementation of the Montreal Protocol.

2. Under Stage I of the Kigali Amendment Implementation Plan (KIP-I), the gender mainstreaming aspect is embedded to ensure an inclusive and sustainable approach that will see equal benefits accrue to both women and men from opportunities within the manufacturing, servicing, and policy aspects of the programme.

3. The KIP-I focuses on two main sectors: manufacturing (commercial refrigeration and air conditioning) and servicing (RAC, MAC, and domestic refrigeration). These have traditionally been male dominated, especially at the technical and operational levels. While the participation of women in managerial and administrative functions within the Ministry of Environment and the National Ozone Unit has increased, participation in technical training, servicing workshops, and manufacturing facilities remains low.

4. The DGVTE-managed vocational training ecosystem is vital for developing the next generation of technicians. However, current enrolment data lacks gender disaggregation, thus making tracking of women's participation or identification of their specific barriers difficult. KIP-I has an opportunity to address these gaps through enhanced data systems, gender-responsive capacity building, and partnership with the NCLW and technical schools in order to foster women's inclusion in RAC and MAC fields.

Table 28 Gender mainstreaming checklist for KIP-I

Project component	Question	Answer		
		Yes	No	Partially
Project preparation	Does the project concept include consideration of (a) the different situations of women and men, and (b) the impacts the project will have on these different societal groups?	X		
	Does the project explicitly address one or more of the identified gender issues/ genders-differentiated project impacts? Please	X		

[2] https://www.devex.com/organizations/national-commission-for-lebanese-women-nclw-126582

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Project component	Question	Answer		
		Yes	No	Partially
	describe how, and if not provide an explanation.			
	Explanation: KIP-I acknowledges that the RAC/MAC servicing and manufacturing sectors are male-dominated and calls upon measures for women's participation, with the development of systems for inclusive capacity building. It also emphasizes other commitments, such as encouraging women's participation in technician trainings, engaging with NCLW (when needed), and undertaking sex-disaggregated data collection to reduce barriers for women in technical fields.			
Data and statistics	Where applicable, does the project require the collection of sex-disaggregated data and qualitative information to analyze and track gender issues?	X		
	Explanation: The plan is to enhance the data systems within DGVTE and the training centers to record and report gender participation in RAC/MAC programs.			
Results framework	Are outcomes, outputs and activities designed to meet the different needs and priorities of women and men?			X
	Does the results framework include gender responsive indicators, targets and baseline data to monitor gender equality results?			X
	Explanation: Gender equality is recognized and connected with capacity building, although not all outputs have indicators specifying gender to date. Some indicators are implicit, for instance, participation in trainings; however, the gender targets and baselines will be added during implementation.			
Budget	Has the budget taken into account allocations for the proposed gender activities (e.g., capacity building activities for female technicians)?	X		
	Explanation: Gender-related activities comprise inclusive training, awareness campaigns, and consultations within an overall capacity-building and outreach context.			
Stakeholders and participation	Are women/gender-focused Ministries, groups, associations or gender units in partner organizations consulted/included in the project?			X
	Does the project ensure that both women and men can provide inputs, access and participate in project activities (e.g., through outreach / invitations of female technicians to participate in capacity building activities)?	X		

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Project component	Question	Answer		
		Yes	No	Partially
	Explanation: The plan refers to consultation with NCLW and the women's organizations, though formal mechanisms for engagement are not yet outlined. Training centers and awareness campaigns will actively encourage participation from women technicians and engineers, including targeted outreach and female-only sessions when necessary.			
Gender capacities	Has a gender expert been recruited or does the project staff have gender knowledge and have gender related tasks incorporated in their job descriptions?			X
	Will project staff and stakeholders be sensitized to gender (e.g., through completion of UN Women online training courses)?	X		
	Explanation: The PMU has gender tasks embedded in its mandate, and a gender specialist from the Green and Inclusive Development Programme will be supporting the project.			
Implementation arrangement	Is there gender-balanced recruitment of project personnel and gender balanced representation in project boards and steering committees?	X		
	Explanation: The project fosters gender balance in decision-making processes.			
Monitoring and evaluation	Does the monitoring and evaluation of the project require specific reporting on gender issues and progress made to address these (quantitatively and qualitatively)?	X		
	Explanation: Monitoring under KIP-I also involves tracking of sex-disaggregated data, with periodic reporting on gender outcomes in training, participation, and institutional engagement			

5. The specific gender activities to be undertaken under KIP-I are presented below:
   - *i. Encourage and promote women's participation in RAC, MAC & Domestic refrigeration technician training programmes where relevant and provide women-only sessions.*
   - *ii. Incorporate modules on gender sensitivity and inclusiveness in all technical training curricula and trainer-of-trainers activities under KIP-I.*
   - *iii. Work with the DGVTE and training centres to collect and report sex-disaggregated data on student enrolment, completion, and employment outcomes.*
   - *iv. Interviews and meetings with women in the field (female technicians, trainers and others) to tackle under-representation and unequal treatment of women in the field by ensuring financial benefits, equal pay, safety in workplaces, and development of a systematic plan for addressing gender equality and women's empowerment.*
   - *v. Development of tracking tools to measure progress achieved in all sectors (female participation figures, sex-disaggregated data etc…).*
   - *vi. Sensitization of project staff on gender issues, completion relevant UN training courses.*
   - *vii. Increase the number and visibility of women participating in technical training within the RAC*

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and MAC servicing sectors.

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ANNEX IV - RISK ANALYSIS

PROJECT RISK REGISTER

Project Title: HFCs Phase-Down: Kigali Implementation Plan (Stage I) for Lebanon	**Project Number:** 01005060	**Date: 01 November 2025**

#	Event	Caused by	Impact(s)	Risk Category and Sub-category (*including Risk Appetite)*	Impact, Likelihood & Risk Level *(See Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(Individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
1	Disruption of supply chains and project logistics	Armed conflict in the region	Delay in project activities and increased costs for logistics, security and transport, damage to infrastructure	**8. SAFETY AND SECURITY (8.1 Armed conflict) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **4 – Extensive** Risk level: **SUBSTANTIAL (equates to a risk appetite of OPEN)**	From: 01-Nov-25 To: 31-Dec-32	Project Manager	Risk Treatment: A granular timeline for project activities with checkpoints for monitoring progress will be developed. Continuously monitor geopolitical developments and security risks in the country. Treatment Owner: Project Manager
2	Reproduce discriminations against women	Women may not be able to fully participate in decision making related to the Project	Women may not benefit from capacity building activities due to potential existing discriminations. MLF and UNDP Gender Policies and Guidelines may not be fulfilled.	**1. SOCIAL AND ENVIRONMENTAL (1.2. Gender equality and women's empowerment) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **2 - Intermediate** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 01-Nov-25 To: 31-Dec-32	Project Manager	The project has been designed with consideration of the UNDP Gender Policy and MLF's Operational Gender Mainstreaming Guidelines. The project was screened against Gender Checklist provided by the MLF Risk Treatment: The development of a Gender Action Plan. Treatment Owner: Project Manager

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#	Event	Caused by	Impact(s)	Risk Category and Sub-category (*including Risk Appetite)*	Impact, Likelihood & Risk Level *(See Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(Individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
3	Workers at partner facilities may be exposed to adverse working conditions in contravention with national labour standards or principles and standards of ILO fundamental conventions	Employees at these facilities may be exposed to worker discrimination, be denied freedom of association and collective bargaining and occupational health and safety risks. While less likely, use of child and forced labour may also exist at the facilities.	Employees and communities are avoided to benefit from capacity building activities due to existing discriminations.	**1. SOCIAL AND ENVIRONMENTAL (1.10. Labour and working conditions) - UNDP Risk Appetite: CAUTIOUS** **1. SOCIAL AND ENVIRONMENTAL (1.3. Grievances (Accountability to stakeholders)) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **1 - Moderately likely** Impact: **2 - Extensive** Risk level: **MODERATE (equates to a risk appetite of MINIMAL)**	From: 01-Nov-25 To: 31-Dec-32	Project Manager	Risk Treatment: • Continuous monitoring of beneficiary companies in relation to their adherence of Labour Laws throughout project lifecycle. • Application of Best Practices and the development of Occupational Health and Safety Plan, the later, if needed at company level to improve their practices. • For Project suppliers, UNDP will only engage with supplier that are not listed on the Consolidated United Nations Security Council Sanctions List, the UNDP vendor sanctions list or the UN Global Marketplace list. • The project will also not engage with companies that employ child labour in their operations and supply chains. Treatment Owner: Project Manager
4	Adverse economic impacts to industries and their workers livelihoods.	Due to banning of imports or restricting the use of certain chemicals used as inputs in the refrigeration equipment manufacturing sector targeted	MSMEs may experience technical and economic challenges in finding affordable alternatives, and hence have income/revenue affected.	**1. SOCIAL AND ENVIRONMENTAL (1.1. Human rights) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **1 - Low likelihood** Impact: **4 - Extensive** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 01-Nov-25 To: 31-Dec-32	Project Manager	This risk is being mitigated by Project Design as the Component 1 is providing direct financial support (CAPEX=ICC and OPEX = IOC) to mitigate the financial impact of the MP implementation by mitigating the financial burden for the enterprises participating in the project. In addition, proper Social and Environmental Strategic Assessment (SESA or equivalent) will be developed by the Project to assess impacts of the banning of the HFCs as proposed under the Project activities/targets. Treatment Owner: Project Manager

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#	Event	Caused by	Impact(s)	Risk Category and Sub-category (*including Risk Appetite)*	Impact, Likelihood & Risk Level *(See Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(Individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
5	Adverse adoption and/or non-acceptance of low-GWP alternative technologies to HFCs in targeted sectors	Market Uncertainty related to import-dependent profile of Lebanon, allied to higher introduction costs of alternative technologies, lack of public awareness and/or issues related to end-of-life of technologies.	Low adoption or non-adoption of low-GWP alternatives. Migration of high GWP-HFCs leading to adverse impacts to the Kigali Amendment's compliance targets.	**3. OPERATIONAL (3.6. Transition and exit strategy) - UNDP Risk Appetite: EXPLORATORY TO OPEN**	Likelihood: **3 - Moderately likely** Impact: **3 - Extensive** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 01-Nov-25 To: 31-Dec-32	Project Manager	Risk Treatment: • Government of Lebanon will establish channels to discuss and monitor importers and key suppliers to secure stable, long-term supply agreements. • Servicing Sector Plan of the project will scale up Trainings to technicians and professionals to minimize potential disruptions in the technologies. • Manufacturing Sector Plan of the project will technical assistance and capacity building to engineers and personnel on how to adopt new technology. • To encourage the adoption of low-GWP alternatives, the Government of Lebanon is exploring financial incentives and tax breaks for businesses that make the switch. This action will have the potential to reduce the financial burden on businesses but also promote sustainable choices. • The project will deliver a strong awareness raising component to sensitize and capacitated targeted audience on the benefits of low-GWP alternatives and the dangers of HFCs. • Public awareness campaigns and educational initiatives will inform consumers and businesses about the importance of this transition. Treatment Owner: Project Manager

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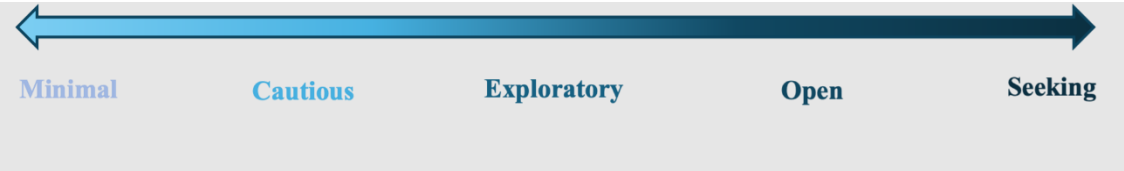
TERM RISK CATEGORIES AND SUB-CATEGORIES

1. Social and Environmental	2. Financial	3. Operational	4. Organizational	5. Reputational	6. Regulatory	7. Strategic	8. Safety and Security
1.1. Human rights Gender equality and women's empowerment 1.2. Grievances (Accountability to stakeholders) 1.3. Biodiversity conservation and sustainable natural resource management 1.5. Climate change and disaster risks 1.6. Community health, safety and security 1.7. Cultural heritage 1.8. Displacement and resettlement 1.9. Indigenous peoples 1.10. Labour and working conditions. 1.11. Pollution prevention and resource efficiency 1.12. Stakeholder engagement 1.13. Sexual exploitation and abuse	2.1. Cost recovery 2.2. Value for money 2.3. Corruption and fraud 2.4. Fluctuation in credit rate, market, currency 2.5. Delivery 2.6. Budget availability and cash flow	3.1. Responsiveness to audit and evaluations (Delays in the conduct of and implementation of recommendations) 3.2. Leadership and management 3.3. Flexibility and opportunity management 3.4. Reporting and communication 3.5. Partners' engagement 3.6. Transition and exit strategy. 3.7. Occupational safety, health and well-being 3.8. Capacities of the partners	4.1. Governance 4.2. Execution capacity 4.3. Implementation arrangements 4.4 Accountability 4.5. Monitoring and oversight 4.6 Knowledge management 4.7 Human Resources 4.8. Internal control 4.9. Procurement	5.1. Public opinion and media 5.2. Engagement with private sector partnership 5.3. Code of conduct and ethics 5.4. Communications 5.5. Stakeholder management	6.1. Changes in the regulatory framework within the country of operation 6.2. Changes in the international regulatory framework affecting the whole organization. 6.3. Deviation from UNDP internal rules and regulations	7.1. Alignment with UNDP strategic priorities 7.2. UN system coordination and reform 7.3. Stakeholder relations and partnerships 7.4. Competition 7.5. Government commitment 7.6. Change/turnover in government 7.7 Alignment with national priorities 7.8 Innovating, piloting, experimenting.	8.1. Armed conflict 8.2. Political instability 8.3. Terrorism 8.4. Crime 8.5. Civil unrest 8.6. Natural hazards 8.7. Manmade hazards 8.8. Cyber security and threats

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ALIGNING THE RISK APPETITE TO RISK SIGNIFICANCE IN THE RISK MATRIX

Risk Appetite scale:



Minimal risk appetite: Areas where UNDP will apply a strong control environment to reduce or minimize the likelihood that a risk will occur and/or reduce the impact of any risk.

Cautious risk appetite: Areas where UNDP seeks low-risk delivery options and will pilot innovation only in a controlled environment.

Exploratory risk appetite: Areas where UNDP strikes a balance between the potential upside benefits and downside risks of a decision and explores new solutions and options for delivery.

Open risk appetite: Areas where UNDP has determined that the potential upside benefits outweigh the risks and will take informed risks. All potential options are considered.

Seeking risk appetite: Areas where UNDP takes risks by working with new ideas and approaches, looking for innovation and recognizing that failures are an opportunity for learning and improving.

Risk Matrix:

Impact						
	5	Exploratory	Open	Open	Seek	Seek
	4	Cautious	Exploratory	Open	Open	Seek
	3	Cautious	Exploratory	Exploratory	Exploratory	Open
	2	Minimal	Minimal	Cautious	Exploratory	Exploratory
	1	Minimal	Minimal	Cautious	Cautious	Cautious
		1	2	3	4	5
		Likelihood				

Risk Level
HIGH
SUBSTANTIAL
MODERATE
LOW