



**GLOBAL ENVIRONMENT FACILITY  
(GEF)  
UNITED NATIONS DEVELOPMENT  
PROGRAMME (UNDP)**



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**TERMINAL EVALUATION REPORT**

for the Project –  
***“Complete HCFC Phase-Out in Uzbekistan through Promotion of  
zero ODS, low GWP, Energy Efficient Technologies”***

GEF Project ID: 9722 | UNDP PMIS: 6003



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## Acronyms and Abbreviations

CEIT	Countries with Economies in Transition
CIS	Commonwealth of Independent States
CFC	Chlorofluorocarbon
ESMP	Environment & Social Management Plan
EU	European Union
FSP	Full Sized Project
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GoU	Government of Uzbekistan
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbon
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan; also referred to as the Ministry of Ecology
HFC	Hydrofluorocarbon
M&E	Monitoring and Evaluation
MEA	Multilateral Environmental Agreement
MLF	Multilateral Fund for the Implementation of the Montreal Protocol UN Environment
MP	Montreal Protocol
MSP	Medium Sized Project
NGO	Non-Government Organisation
NIM	National Implementation Modality
NOU	National Ozone Unit
ODS	Ozone-depleting Substance
PIC	Prior Informed Consent
PIF	Project Identification Form
PIR	GEF Project Implementation Report
PMU	Project Management Unit
PPG	Project Preparation Grant
RAC	Refrigeration and Air Conditioning
RTA	Regional Technical Adviser
SDG	Sustainable Development Goals
SESP	Social and Environmental Screening Procedure
TE	Terminal Evaluation
ToR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-GEF	UNDP Global Environmental Finance Unit
UNDP-DIM	UNDP Direct Implementation Modality
UNDP POPP	UNDP Program & Operations Policies and Procedures
UNDP TRAC	UNDP Targets for Resource Assignment from the Core
UNEP	United Nations Environment Programme

## Acknowledgment

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## 1. Executive Summary

### Project Information Table

<b>Project Title</b>	<b>PIMS 6030 (MSP): “Complete HCFC Phase-Out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies”</b>		
<b>UNDP Project ID (PIMS #):</b>	6003	<b>PIF approval date:</b>	September 25, 2017
<b>GEF Project ID (PMIS #):</b>	9722	<b>CEO endorsement date / approval date:</b>	04 April 2019
<b>ATLAS Business Unit, Atlas Project ID, Atlas Output ID, Quantum Award ID:</b>	UZH10 (Uzbekistan) 00110414, 00111337, 00110414.3	<b>(ProDoc) signature date:</b>	Start date 3 May, 2019
<b>Country:</b>	Uzbekistan	<b>Date project manager hired:</b>	May 2019
<b>Region:</b>	Central Asia	<b>Inception workshop date:</b>	23-24 July 2019
<b>Focal Area:</b>	Chemicals and Waste	<b>Terminal review completion date:</b>	July 31, 2024
<b>GEF Focal Area Strategic Objective:</b>	GEF-6 CW2 – Programme 5	<b>Planned closing date:</b>	May 02, 2024
<b>Trust Fund [indicate GEF TF, LDCF, SCCF, NPIF]:</b>	GEF TF	<b>If revised, proposed op. closing date:</b>	November 02, 2024
<b>Executing Agency /Implementing Partner:</b>	UNDP Uzbekistan in partnership with the Ministry of Ecology, Environmental Protection, and Climate Change of the Republic of Uzbekistan		
<b>NGOs/CBOs involvement:</b>	The project partnered with numerous organizations including government entities, academia, NGOs, public organizations, and the private sector.		
<b>Private sector involvement:</b>	No private sector involvement as lead executing agency. Only in the capacity of UNDP Contractors for goods & service delivery.		

<b>Financial Information</b>		
<b>PDF/PPG</b>	<b>At approval (US\$)</b>	<b>At PDF/PPG completion (US\$)</b>
GEF PDF/PPG grants for project preparation	\$50,000	\$49,447.27
Co-financing for project preparation		
<b>Project</b>	<b>at CEO Endorsement (US\$)</b>	<b>At TE (US\$)</b>
[1] UNDP contribution:	\$50,000	\$62,067
[2] Government:	\$1,887,006	\$10,102,181.48
[3] Other multi-/ bi-laterals:		
[4] Private Sector:	\$4,711,654	\$4,062,421.56
[5] NGOs:		
[6] Total co-financing [1 + 2 + 3 + 4 + 5]:	\$ 6,648,660	\$14,226,670.40
[7] Total GEF funding:	\$1,998,040	\$1,724,842
[8] Total Project funding [6 + 7]	\$ 8,646,700	\$ 15,951,512.40 (as of 06.2024)

## Project Description

The “Complete HCFC Phase-Out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies” project (the Project) was built based on the experience and knowledge gained from the GEF-UNDP FSP regional project “Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region (the Regional project)” (2013-2018). The Regional project provided national capacity building and technical support to adopt a hydrochlorofluorocarbon (HCFC) phase-out strategy in Belarus, Tajikistan, Ukraine, and Uzbekistan<sup>1</sup>. The Regional project, along with its national components, progressed participating countries towards effective implementation of the Montreal Protocol (MP) obligations.

The Project’s overall objective is to ensure the protection of human health and the environment through the sound management of HCFCs and their zero-ODS and low GWP substitutes in Uzbekistan. In particular, the project strives to achieve environmental sustainability through:

- Enhancing national capacity to phase out HCFCs through strengthening the associated regulatory frameworks, providing solid capacity building, and re-tooling and infrastructure improvements in the country’s relevant sectors.
- Introducing the best available technologies (zero-ODS and low GWP) to substitute HCFCs.

The project aims to accelerate HCFC phase-out to achieve the 2020 compliance objectives and sustainably reduce the HCFC servicing tail. This includes:

- Understanding the implications of the Kigali Amendment to the Montreal Protocol (MP) and conducting a comprehensive ozone-depleting substance (ODS) alternatives survey.
- Facilitating the implementation of updated national legislation on the control of import/export and use of HCFCs, other ODS, and ODS alternatives.
- Improving the capacity of Customs to control ODS entering Uzbekistan.
- Demonstrating zero-ODS and low-global warming potential (GWP) energy-efficient cooling technologies in various sectors of the economy - both private and public.
- Completing upgrades and strengthening the servicing sector capacity, including providing tools and advanced refrigerant identifiers for various refrigerants currently in use.

The Project has also been discussing resource mobilization from International Financial Institutions and Bilateral Agencies, as well as local stakeholders, to increase financial investments in the Refrigeration and Air-Conditioning (RAC) sector. These comprehensive outreach activities aim to raise awareness of ozone-related issues among a wide variety of stakeholders and end users. Additionally, gender mainstreaming strategies have been also addressed across components of the Project to involve women in the RAC business.

## Evaluation Ratings Table

1. Monitoring & Evaluation (M&E)	Rating <sup>2</sup>
M&E design at entry	HS

<sup>1</sup> The regional project is a follow up to the medium-sized GEF-4 regional project “Preparing for HCFC Phase-out in CEITs” that was implemented by UNDP in 2008-2009 and helped to develop detailed survey data on HCFCs in CEITs and assisted with elaboration of outlines of HCFC phase-out strategies to meet the Montreal Protocol compliance targets.

<sup>2</sup> See Annex 7 for the rating details.

M&E Plan Implementation	S
<b>Overall Quality of M&amp;E</b>	<b>S</b>
<b>2. Implementing Agency (IA) Implementation &amp; Executing Agency (EA) Execution</b>	<b>Rating</b>
Quality of UNDP Implementation/Oversight	S
Quality of Implementing Partner Execution	S
<b>Overall Quality of Implementation/Execution</b>	<b>S</b>
<b>3. Assessment of Outcomes</b>	<b>Rating</b>
Relevance	HS
Effectiveness	S
Efficiency	S
<b>Overall Project Outcome Rating</b>	<b>S</b>
<b>4. Sustainability</b>	<b>Rating</b>
Financial sustainability	ML
Socio-political sustainability	L
Institutional framework and governance sustainability	L
Environmental sustainability	L
<b>Overall Likelihood of Sustainability</b>	<b>ML</b>

The rating scales used in the TE report are described in the below table.

<b>Ratings for Outcomes, Effectiveness, Efficiency, M&amp;E, Implementation/Oversight, Execution, Relevance</b>	<b>Sustainability ratings</b>
6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings 5 = Satisfactory (S): meets expectations and/or no or minor shortcomings 4 = Moderately Satisfactory (MS): more or less meets expectations and/or some shortcomings 3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or significant shortcomings 2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings 1 = Highly Unsatisfactory (HU): severe shortcomings Unable to Assess (U/A): available information does not allow an assessment	4 = Likely (L): negligible risks to sustainability 3 = Moderately Likely (ML): moderate risks to sustainability 2 = Moderately Unlikely (MU): significant risks to sustainability 1 = Unlikely (U): severe risks to sustainability Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability

### **Findings and Conclusions:**

The review of project outcomes indicates that the Project has delivered most of its end-of-project targets. While one outcome was delayed, the equipment installation was completed, and the operation began before the end of the TE. The Project management team employed adaptive management to provide flexibility in the project's approach, working with partners and related government institutions, and adapting to changing conditions. Flexibility and adaptation were particularly critical for this Project, as it had to adjust to government reorganizations and restrictions related to the Covid-19 pandemic. The project is a clear response to national needs and, with significant engagement and participation of stakeholders in project activities, demonstrated a positive national ownership strategy.



This is a successful project, and it has an optimistic perspective on sustaining its impact on ODS management in Uzbekistan in the foreseeable future.

1. **Relevance:** The Project is evaluated as highly relevant to the main objectives of the GEF Focal area and the environment and development priorities of Uzbekistan at the local, regional, and national levels. It provided necessary funding, guidance, and staff support to the Ministry of Ecology's unit on ozone depletion to comply with the MP obligations. The Project is highly relevant to Uzbekistan's context and aims to fulfill the country's obligations under the MP.
2. **Project Design:** The Project has been designed and built using the experience and knowledge gained from the GEF-UNDP FSP regional project "*Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region*" (2013-2018) which enhanced national capacity and provided technical support for the adoption of the HCFC phase-out strategy. It strengthens Uzbekistan's national capacity to control HCFC import and transit. It provided support for the capacity development of the Central Laboratory of Customs Committee to allow effective monitoring of HCFC imports.
3. **Project Implementation:** The Project implementation has been constrained by a range of challenges beyond the Project's control, such as the change in the political environment in Uzbekistan, the Covid-19 pandemic, and the war in Ukraine.
  - Challenges in the political environment were related to the reorganization of the State Committee of Environment to the Ministry of Environment which caused changes in responsible personnel and the need to reestablish the continuity in working relationships with the implementation partner.
  - Covid-19 pandemic has significantly impacted the overall project implementation by imposing travel restrictions, which hindered the organization and procurement of the RAC and special equipment. Moreover, Covid-19 impacted key economy sectors, resulting in slowdowns which caused uncertainty and delays in previously committed co-financing and investments from private industry to procure environmentally friendly and energy-efficient equipment.
  - The war in Ukraine and resulting sanctions have affected the trade regimes and routes, imposing additional financial burdens on the project and extending implementation timelines. This situation has led to increased technology prices and longer production and delivery times for equipment to final customers.
4. **Effectiveness.** The overall effectiveness of the Project was affected by Covid-19 pandemic, creating delays in the completion of the project objectives. Notwithstanding these challenges, the project managed to complete its activities and deliver outputs. Most components were successfully implemented, and the results met or exceeded expectations.
5. **Efficiency.** Despite most of the Project components being completed and/or exceeding expectations, the implementation challenges mentioned above have adversely affected the overall efficiency of the Project. The Project team, however, managed the challenges adequately and proactively.
6. **Progress to Impact.** The Project has enabled Uzbekistan to achieve most of its intended outputs. These achievements include the adoption of legal and regulatory acts on ODS management, increased availability of equipment for ODS detection and recycling, the implementation of training, and increased awareness among stakeholders, RAC professionals, and the general public. The Project has contributed to progress toward reducing environmental stress and improving the ecological status of Uzbekistan.
7. **Sustainability:** Overall, the project has achieved positive results in sustainability across financial, socio-political, institutional framework, governance, and environmental aspects.



The ODS management legislation, supported by the Project, has been effectively implemented and enforced by the Uzbekistan Government. This framework appears sustainable and likely to endure into the foreseeable future. Additionally, the ODS reclamation centers have been equipped with modern technology and provided with the necessary training for its effective use.

With these achievements and other potential opportunities in green energy development and climate change mitigation within the GEF focal area, there are promising prospects for sustaining and scaling up the project's accomplishments in the future. The implementation of project outcomes at socially significant facilities such as the Republican Research Center for Emergency Medicine in Jizzakh and the community refrigerator in the Kanlykol district of the Republic of Karakalpakstan offers hope that these examples of new technology will be financially supported and sustainable.

There is only a minor risk to the sustainability of the Project from environmental and political perspectives, as Uzbekistan has signed all amendments of MP (except the recent Kigali Amendment to MP<sup>3</sup>). The Project supported establishment of policy, regulation and technical capacity to phase out HCFC by 2030.

8. **Country ownership.** The Government of Uzbekistan has demonstrated robust ownership of the Project, as evidenced by significant progress implementation at the TE stage, during which time most of the project activities were completed. The project has effectively addressed critical national needs by enhancing the management of HCFC. It was designed based on a thorough review of previous GEF projects and included a response to several barriers, which have obstructed an effective reform of the RAC sector. Implementation has been inclusive and participatory, engaging stakeholders from the design of project activities through to their execution. The project partnered with numerous organizations including government entities, academia, NGOs, public organizations, and the private sector.
9. **Gender mainstreaming** has been integrated as a cross-cutting priority across all project components, with specific emphasis in Component 4. Indicator 4.1 highlights initiatives to engage female students in studying RAC within technical and vocational education institutions. Additionally, the Project has established partnerships to facilitate the involvement of women in small business related to RAC. These efforts emphasize the Project's commitment to promoting gender equality by creating educational and entrepreneurial opportunities in sectors traditionally dominated by men.

## Lessons learned

The following **lessons** were **learned** from the Project:

- The Ministry of Ecology, as a key partner of the Project, demonstrated effective **leadership and political will** in driving the achievement of the Project objectives and outcomes.
- The project has successfully navigated the challenges posed by the Covid-19 pandemic through effective planning and **proactive professionalism** from the Project Team.
- The **Tashkent Technical University** has demonstrated significant potential for the introduction and implementation of training programs (**sustaining knowledge base and practical applications**), **promoting gender mainstreaming by engaging young women**. The university can be recommended as a **key partner** for future projects.

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<sup>3</sup> Note that ratification of Kigali amendment was not included in the scope of this project.

- The establishment of RAC vocational training, equipped with necessary tools, and instruments in the Fergana, Bukhara, and Sirdarya regions at “Monomarkaz” (**Monocenter**) professional education centers under the **Ministry of Employment and Poverty Reduction** serves as a successful model for program development and implementation, recommended for implementing in future projects.
- Feedback from the RAC professionals during the mission interview, highlighted the potential benefits of including a short introductory course on small business management, marketing, and finances, within the RAC training program.
- It is advisable to allocate a larger portion of the budget for the RAC servicing equipment purchases compared to other budget items within the Project (more hardware elements).
- It is necessary to conduct training of personnel in the form of familiarization with best work practices.

**Recommendations Summary Table** provided as follows.

<b>Rec#</b>	<b>TE Recommendations</b>	<b>Entity Responsible</b>	<b>Time Frame</b>
<b>1</b>	<b>Presentation of the achievements of the project and the way forward</b>		
1.1	Participate in the UNDP regional workshop with a presentation of the project’s achievements and the way forward	UNDP Uzbekistan, UNDP Istanbul Regional Hub	2024-2027
<b>2</b>	<b>Adaptation and Scale-up of zero ODS, low GWP, energy-efficient technologies in Uzbekistan</b>		
2.1	Provide best practices demo projects to develop and replicate zero ODS, low GWP, and energy-efficient technologies in Uzbekistan	UNDP Uzbekistan	2024-2025
<b>3</b>	<b>Availability of the reports produced by the project</b>		
3.1	Ensure that technical reports produced by the project are made available to the public after the end of the project	UNDP Uzbekistan	November 2024
<b>4</b>	<b>Transfer and support of online information on RAC</b>		
4.1	Learning system for technicians ready and supported	UNDP Uzbekistan, the Ministry of Ecology	November 2024
4.2	Reporting system on the use of refrigerants on the national level	UNDP Uzbekistan, the Ministry of Ecology	November 2024
4.3	Transfer of Knowledge Materials to national partners.	UNDP Uzbekistan, the Ministry of Ecology	November 2024

## 2. Introduction

### **Purpose and objective of the TE**

This report presents findings of the Terminal Evaluation (TE) of the UNDP supported NIM (National Implementation Modality) and GEF- financed Project: “Complete HCFC Phase-Out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies”. This TE was conducted by an International Evaluator - Mr. Alexandre Chaikine and a National Expert - Ms. Nargiza Kholmatova.

The objective of this evaluation is to assess the achievement of project results and to draw lessons that can enhance the sustainability of Project benefits, thereby contributing to overall improvement of UNDP programming.

The TE is an independent review prepared in accordance with the GEF Evaluation Policy (GEF, May 2019), the Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects (UNDP, 2020), and the UNDP’s Evaluation Guidelines (UNDP, 2021). It reviews and evaluates the progress made toward achieving the expected Project outcomes, as well as the relevance, effectiveness, efficiency, and timeliness of project implementation. The evaluation also identifies issues requiring decisions and actions, and lessons learned about the project design, implementation, and management. The Terms of Reference for the Terminal Evaluation is provided in Annex 1 of this report.

### **Scope of the Evaluation**

This evaluation focuses on the assessment of all Project components, determining the relevance, effectiveness, efficiency, sustainability, and impact of the results obtained by the Project, between May 2019 and November 2024. It analyzes the components against the expected outcomes and achieved results as applicable to the design phase and implementation between May 2019 and November 2024, considering the project’s approach to addressing cross-cutting issues such as gender and human rights, poverty, environment, disaster risk reduction, mitigation and adaptation to climate change.

A broad range of target stakeholders and beneficiaries were interviewed, including government officials, customs officers, technical specialists on project pilot sites, RAC practitioners, teachers, and students.

The project has a national scope for the Republic of Uzbekistan and the project components have been carried out throughout all regions of Uzbekistan. This evaluation primarily focuses on activities related to the area with centers for recirculation and recovery centers (“Injiniring Klimat Kontrol” in Bukhara and “Texno Servis Bra” recycle and reclaim center in Takhiatash district, the Republic of Karakalpakstan), centers for education at the monocenters (“Ishga Marhamat” in Bukhara and “Ishga Marhamat” Monocenter in Gulistan city), and demo-projects (Jizzakh Branch of the Republican Research Center for Emergency Medicine and “Assel Lazzat” in the Kanlykol district of the Republic of Karakalpakstan).

### **Methodology**

The methodology employed in this evaluation aligns with the GEF Evaluation Policy (GEF, May 2019), the Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects (UNDP, 2020), and the UNDP’s Evaluation Guidelines (UNDP, 2021). It emphasizes a comprehensive analysis of the project grounded on evidence that supports the reported findings. This approach,

employed within the constraints of time and money, yielded data that helped answer the evaluation questions and achieved the evaluation purposes.

The tools used for collecting relevant data include:

- **Documentary review:** This encompassed all the documents listed in the ToR, supplemented by additional project documents to fill any information gaps. A full list of documents reviewed is detailed in Annex 4.
- **Interviews with stakeholders:** Semi-structured interviews provided the evaluation team with the candid insights from key stakeholders. This method also ensured a participatory approach, giving equal voice to all stakeholders and ensuring that different perspectives were evaluated to reach conclusions about the different processes undertaken by the project. The interviews were structured according to the evaluation questions matrix (Annex 6), addressing the five evaluation criteria were addressed in the interviews, without necessarily asking a question per criteria or directly mentioning these criteria.
- **Field Missions:** The evaluation conducted field missions to engage stakeholders in face-to-face consultations. These interactions involved semi-structured interviews based on the discussion points in a conversational form. The planning and execution of the field mission were closely coordinated with the Project Manager and the UNDP Country Office.

These tools provided important, evidence-based information that was carefully analyzed to draw conclusions, lessons learned, and findings throughout all stages of the project. Furthermore, they allowed for cross referencing from different perspectives: each issue was addressed through the lenses of project documentation, from the perspective of the government and stakeholders in the private sector and civil society. This approach ensures that the evaluation team had a well-rounded understanding and evidence base incorporating diverse actor perspectives, enabling robust conclusions regarding project management.

### **Data Collection & Analysis**

The evaluation includes quantitative and qualitative analyses of Project achievements as related to baseline conditions. It draws upon the conclusions and recommendations of the Project Implementation reports to provide advice on follow-up action needed to support project results.

The evaluation was conducted in phases as follows:

Preparatory phase: We conducted a desk review of documents presented by the Project Management Unit (PMU) in UNDP Uzbekistan addressing a wide variety of factors including project design, implementation progress, monitoring, and review, as well as policies/ legislation/ regulations. This review was followed by the preparation of assessment questionnaires with a set of discussion points aiming at gathering information from chosen respondents about attitudes, preferences, and actual information, linked to the performance indicators in the evaluation matrix.

The questionnaires were tailor-made for key project stakeholders and beneficiaries who were selected for visits and face-to-face interviews during field visits or solicited via follow-up e-mail and/or internet communications.

Evaluation Criteria Matrix: An evaluation matrix (Annex 5) was constructed based on the evaluation scope presented in the TOR. The matrix is structured along the GEF evaluation criteria for TEs and includes principal evaluation questions. The matrix provided overall direction for the evaluation and was used as a basis for interviewing stakeholders and reviewing the project implementation reports.

Evaluation Field Missions: The evaluation field mission was conducted to perform face-to-face consultations with the stakeholders, using semi-structured interviews based on the discussion points in a conversational form. The preparation of the evaluation field mission was done in close coordination with the Project Manager and the UNDP Country Office.

To the extent possible, visits to relevant project sites to make direct observations of selected project outputs were also conducted during these evaluation missions. The interviews were planned before the mission to obtain a critical sample of stakeholders' views.

The interviews were conducted to solicit responses to predetermined questions designed to obtain in-depth information about the key informants' impressions and experiences. Triangulation of results, i.e., comparing information from different sources, such as documentation and interviews, or interviews on the same subject with different stakeholders, were used to corroborate or check the reliability of evidence.

The itinerary of the evaluation missions and the list of people interviewed during and after the evaluation missions are provided respectively in Annexes 2 and 3 of this report.

Assessment of Evidence: After the data collection phase, data analysis was conducted through a review of documents that were made available to the TE team by the UNDP Uzbekistan, as well as other documents obtained through web searches and contacts with relevant project stakeholders and beneficiaries. The list of reviewed documents is provided in Annex 4.

Evaluation Report: Following the above interview and data collection and review phases, we performed data analysis as the final phase of the evaluation. Data analysis involves organizing and classifying collected information, tabulating, summarizing, and comparing the results with other appropriate information to extract useful information that answers evaluation questions and fulfills the purposes of the evaluation.

The evaluation tasks include:

- Data collection and compilation was undertaken in cooperation with the management teams to complete background tables on project activities, outputs, and finances.
- Interviews conducted with project beneficiaries, participants, project management and partners during field studies, to assess results, implementation challenges, and lessons learned.
- Analysis of the project design and assumptions, implementation performance, and measurable results in comparison to the project management plans and results indicators and targets, and identification of any gaps between design and delivery.
- Field review and comparative analysis of information reflecting the conditions before and after the Project implementation, as available and applicable, to verify reported results on key project interventions at selected sites.

The evaluation provides recommendations for Project sustainability, replication, and upgrading. These suggestions can guide Project partners in leveraging the achievements made during the Project and assess the sustainability mechanism (exit strategy) of the remaining/ongoing/ or recently completed Project activities including, but not limited to:

1. **Enhancing institutional capacity** of state-responsible organizations (i.e.,) on continuation and implementation of the state programs and national strategy on complete phase-out of ODS

and other hazardous chemicals (e.g., HCFC, HFC, etc.) that require support beyond the original project closure date.

2. **RAC Technicians Skills** enhancement, and development of a country's technical capacity. Sustainability and continuation of the implementation of a technical education program for refrigeration and air conditioning (RAC) technicians by which the Project provided technical support and established an education center for strengthening and increasing of technical capacity and qualifications of RAC technicians of the country. This includes the implementation of a state program to prepare young students, with the focus on young women and girls, and on RAC education and activities post-project closure.
3. **Scale-up/ Replication of RAC technology:** Mobilization of co-financing from the public and private sectors to expand the scale of demonstration projects and improve the cost-effectiveness of GEF funds use. Increased/new potential and opportunity for scaling up and replication of the best RAC technologies and equipment piloted through demonstration projects by the Project in partnership with private/ public organizations beyond the project completion.
4. **Gender mainstreaming:** Conducting targeted awareness-raising activities aimed at women. The Project encouraged the enrollment of women into RAC activities.

**Ethics:**

Evaluators are held to the highest ethical standards and have signed a code of conduct upon acceptance of the assignment. The evaluation was conducted following the principles outlined in the United Nations Evaluation Group (UNEG) 'Ethical Guidelines for Evaluations'<sup>4</sup>.

**Limitations:**

TE team did not experience any limitations in conducting the evaluation.

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<sup>4</sup> Access at: <http://www.unevaluation.org/document/detail/100>

### 3. Project Description

#### **Project start and duration, including milestones in the project cycle.**

Planned/Actual Start Date: August 04, 2019 / May 03, 2019

Planned end date: May 03, 2024 (60 months duration).

Actual end date: November 02, 2024 (66 months duration)

LPAC meeting date May 31, 2018.

The GEF MSP approved the project for implementation on April 4, 2019, with a grant of \$1,998,040 (one million nine hundred, ninety-eight thousand and forty U.S. dollars), a matching contribution of \$ 6,598,660 (six million five hundred ninety-eight five thousand six hundred sixty U.S. dollars).

The Inception workshop was conducted on 23-24 July 2019.

The Project's overall objective is to ensure the protection of human health and the environment through sound management of HCFCs and their zero-ODS and low GWP substitutes in Uzbekistan. In particular, the project strives to achieve environmental sustainability through:

- Enhancing the national capacity to manage the phase-out of HCFCs, through the strengthening of associated regulatory frameworks, solid capacity building, and re-tooling/infrastructure improvements in the country in these related sectors.
- Introducing the best available technologies (zero-ODS and low GWP) as HCFC substitutes.

The Project is designed with provisions to mainstream environmental sustainability by introducing alternative and energy-efficient technologies in the RAC sector of Uzbekistan to phase out HCFC completely by 2020. The introduction of alternative zero-ODS, low-GWP, and, where technically feasible, energy-efficient technologies will support the country in a smooth transition to an environmentally sustainable economy. It will contribute to integrating the principles of sustainable natural resource use into policymaking, legislation, and institutions to ensure sustainable natural resource management for the benefit of current and future generations.

The project includes consideration of gender equality aspects of HCFCs management. This ensures the participation, representation, and buy-in of vulnerable workers and community populations in the project's implementation component, as well as the inclusion of both mainstream genders into related project activities.

#### **Development context: environmental, socio-economic, institutional, and policy factors relevant to the goal and scope of the project.**

The Covid-19 pandemic, an important socio-economic factor, affected the project scope and schedule. In this context, the project had to adapt and, with an adaptive management approach, redesign its implementation strategy, a situation that is reflected in the realization of some activities virtually or remotely. The economic effects of the pandemic limited access to companies to carry out pilot projects, and the resources available to both public and private actors limited the resources allocated to co-financing the project.

#### **Problems that the project sought to address.**

Hydrochlorofluorocarbons (HCFCs) are ozone-depleting chemicals, used in refrigerants, foam-blowing agents, solvents, fire extinguishers, and aerosols. The use of HCFCs is controlled by the MP. HCFCs also have high global warming potential (GWP).



Uzbekistan only uses HCFC-22 for comfort cooling and commercial and industrial cooling. Uzbekistan imports its entire requirement of HCFC, as they do not manufacture this refrigerant. The use of other HCFCs was discontinued through support from earlier projects.

The “**Complete HCFC Phase-Out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies**” project (the Current project, or the Project) has been built on the experience and knowledge gained from the GEF-UNDP FSP regional project “**Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region**” (2013-2018) which provided national capacity building and technical support to the adoption of the hydrochlorofluorocarbon (HCFC) phase-out strategy in Belarus, Tajikistan, Ukraine, and Uzbekistan<sup>5</sup>. The initial regional project with its national components strongly advanced the participating countries towards effective implementation of the MP obligations. This Project is the final project for achieving HCFC phase-out.

The overarching objective of the GEF-6 Chemicals and Waste Results Framework for Ozone Depleting Substances (ODS) is to promote the sound management of chemicals throughout their lifecycle to minimize adverse effects on the global environment and health of women, children, and men through the phase-out and reduction of ODS.

With the help of the Project, Uzbekistan has been able to comply with its MP commitment of achieving 99.5% HCFC phase-out by January 1, 2020, and further strengthen the capacity to phase out the HCFC service tail of 0.5% by 2030 or earlier. This includes:

- Understanding the implications of the Kigali Amendment to MP, conducting a comprehensive ozone-depleting substance (ODS) alternatives survey.
- Implementation facilitation of updated national legislation on the control of import/export and use of HCFCs, other ODS, and ODS alternatives.
- Improvement of Customs capacity on control of ODS entering Uzbekistan.
- Demonstration of zero-ODS and low-global warming potential (GWP) energy-efficient cooling technologies in private and public sectors of the economy.
- Completing the upgrading and strengthening of the servicing sector capacity including tools and advanced refrigerant identifiers of various refrigerants currently in use.

The project has also been discussing resource mobilization from International Financial Institutions, Bilateral Agencies, and local stakeholders to increase the investment in the Refrigeration and Air-Conditioning (RAC) sector and conduct comprehensive outreach activities to increase understanding of ozone-related issues with a wide cross-section of stakeholders and end users. Gender mainstreaming has also been addressed across various components to involve women in RAC issues.

The Project is well aligned with UNDP sustainable development goals: **SDG#5**. Gender equality, **SDG#8**. Good jobs and economic growth, **SDG#9**. Innovation and infrastructure, **SDG#12**. Responsible consumption, and **SDG#13**. Climate action.

The Project is well aligned with the obligations of Uzbekistan to the MP. It will help the country to meet its commitments of phasing out HCFCs within the accelerated schedule of the MP. The following part of the Decision XIX/6 of the Meeting of the Parties applies to Uzbekistan as the Article 2 Party of MP:

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<sup>5</sup> The regional project is a follow up to the medium-sized GEF-4 regional project “Preparing for HCFC Phase-out in CEITs” that was implemented by UNDP in 2008-2009 and helped to develop detailed survey data on HCFCs in CEITs and assisted with elaboration of outlines of HCFC phase-out strategies to meet the MP targets.

For Parties operating under Article 2 of the Protocol (Article 2 Parties) to have completed the accelerated phase-out of production and consumption (of HCFCs) in 2020, based on the following reduction steps: (a) by 2010 of 75%; (b) by 2015 of 90 %, and (c) by 2020 of 99.5% and full phase out in 2030.

The impact of the project on the phase-out of HCFCs in Uzbekistan is demonstrated in the tables below. The tables show the HCFC consumption during 2018-2022 reported to the Ozone Secretariat according to Article 7 of MP.

It follows from the tables, that with the assistance of the Project, Uzbekistan has achieved a 90% reduction in 2015 as compared to baseline. Uzbekistan’s baseline was calculated to be 74.7 ODP tons or approximately 1,358 tons of HCFC-22 (2003). Uzbekistan has been phasing out HCFCs from 2012 onwards due to continuous capacity-building support from the GEF and UNDP which produced this cumulative effect.

#### Reported consumption of HCFC in Uzbekistan in 2013-2021

HCFC	Consumption (ODP tons)							Baseline (ODP tons)
	2010	2011	2012	2013	2014	2015	2016	
Total for group CI (HCFC)	0.9	4.14	2.14	4.58	9.86	7.23	4.68	74.7

HCFC	Consumption (ODP tons) <sup>6</sup>							Baseline (ODP tons)
	2017	2018	2019	2020	2021	2022	2023	
Total for group CI (HCFC)	0.87	2.53	1.58	0	0.3	0.15	No Data available yet	74.7
Control limits <sup>7</sup>	7.5	7.5	7.5	0.4	0.4	0.4		

Uzbekistan is committed to promoting zero ODS low GWP energy efficient technologies to phase out HCFC-22. Until recently, the main barrier to achieving this phase-out has been a lack of commercially available cost-effective low GWP technologies alternative to HCFC-22. Hydrofluorocarbon (HFC) based technologies, which are zero ODS but high GWP, were introduced in Uzbekistan since they have been commercially available in the global market.

#### Description of the project’s Theory of Change.

The Project Document presents the Theory of Change, which is composed of two main goals:

- i.) Meet the MP commitments by phasing out HCFCs and ensuring sustainability.
- ii.) Introduce technologies using zero-ODS/low-GWP alternatives.

The activities set out in the project document sought to generate, through the developed pilots, impacts beyond the implementation period of the project, the successful demonstration leads the

<sup>6</sup>

[https://ozone.unep.org/countries/data?report\\_type=0&party%5B0%5D=221&period\\_start=2007&period\\_end=2021&output\\_type=odp-CO2e-tonnes&control\\_limits=1](https://ozone.unep.org/countries/data?report_type=0&party%5B0%5D=221&period_start=2007&period_end=2021&output_type=odp-CO2e-tonnes&control_limits=1)

<sup>7</sup> Control limits were set up as 48.6 tons in 2004-2009, 18.7 tons in 2010-2014, 7.5 tons in 2015-2019, and 0.4 tons in 2020-2022.

other actors to consider and incorporate into their operations the changes observed in the pilots with confidence in obtaining better results.

The long-term impact of the project was indicated as follows:

- Promote policies and programs aimed at achieving 99.5% HCFC phase-out by 2020.
- Uzbekistan contributes to Ozone Layer protection.
- Phase out consumption of high GWP refrigerants and reduce impact on the environment.

The project objectives were to reach the following results:

- Comprehensive national legislation implemented.
- Customs and enforcement officers' capacity strengthened.
- Reduction in consumption of HCFCs in assembly/manufacture of RAC equipment.
- Strengthened HCFC reuse system.
- Demonstration projects on HCFC replacement with zero-ODS/low-GWP alternatives implemented.
- Public Awareness activities continued with an emphasis on gender.

The TE team discussed the Theory of Change with the Project team and found it adequate, relevant, and not requiring refining or revision.

#### **Expected results.**

The Project consists of four components. Component 1 facilitates the implementation of national legislation and strengthens the capacity of customs and enforcement officers to control HCFC/ODS alternative imports. Component 2 completes the initial capacity-building efforts aimed at strengthening the HCFC reuse system. Component 2 also implements demonstration projects that replace HCFCs with zero-ODS/low-GWP alternatives. Component 3 deals with public awareness, and Component 4 addresses gender mainstreaming and project management, monitoring, and evaluation.

The high-level description of the expected results is provided in the previous section of the report. A detailed description of the expected results, outcomes, and end of the project targets (indicators) is provided in Section 4. Findings (Progress Towards Objective and Expected Outcomes).

#### **Total resources**

At the time of the approval of this project, the total financing reached \$8,646,700 US. The contribution provided by the GEF is \$1,998,040 US, while the contribution committed by the main actors, as co-financing of the project, reaches \$14,226,670.39 US as of 30 June 2024. Section 4. Finding, Project Finance, and Co-finance show the breakdown of the counterpart committed by each of the sources.

#### **Key partners involved in the project.**

UNDP Uzbekistan in partnership with the Ministry of Environment under the Government of the Republic of Uzbekistan is the executing agency/implementing partner.

The key project stakeholders and their functions are described below:

- a. **Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan:** The Ministry of Ecology is responsible for the implementation of the governmental control over environment protection, utilization and reproduction of natural resources; and of

integrated and coordinated inter-agency management of environment protection activities; development and implementation of the unified environment protection and resources saving policy; provision of support to ensure positive and improved status of environment, improving environment, Implementation of activities aimed at fulfillment of a number of multilateral environmental agreements (MEAs) such as the Vienna convention and the MP and governmental regulation over import/export of particular goods and commodities, including substances and products containing ODS.

- b. **Customs Committee of Uzbekistan:** Customs implements the unified Customs policy that is an integral part of the foreign and national policy of the Republic of Uzbekistan in this regard. The main objectives of the national customs policy are ensuring efficient Customs control over and regulating import operations implemented at the customs zone of the Republic of Uzbekistan, promoting the development of the national economy, and protecting domestic markets. The department has been a traditional Governmental partner in previous CFC phase-out programs and currently for the HCFC phase-out.
- c. **Ministry of Higher and Secondary Specialized Education:** The Ministry implements training of highly qualified professionals, who can think critically and creatively, and ensure and contribute to the scientific, technical, social economic, and cultural progress of the society. It ensures the development of sciences, techniques, and technologies through scientific research and creative activities by scientists and educational professionals as well as students and trainees. This corresponds to the project objectives and capacity building to achieve more effective control over HCFCs in the RAC sector.
- d. **Ministry of Employment and Labour Relations:** The Ministry is the main state institution responsible for labour, employment, and social protection policymaking in Uzbekistan. It is tasked with the development and regulation of the labour market and ensuring employment of the population, regulation of labour relations and labour protection, provision of social services for the population, and medical-social rehabilitation of persons with disabilities. The Ministry will support the project in the establishment of training centers and identification of the groups of potential trainees, including women, who have technical education backgrounds, to re-train and involve them in the RAC sector.
- e. **Ministry of Health:** The Ministry develops, forecasts, and implements programs in the health care system of the country in collaboration with interested ministries, state committees, and institutions and implements activities on the prevention of diseases, disability, provision of health care, and medical expertise. Considering that in the health sector, there are still facilities, which use HCFC-based air conditioning systems, and that can participate in the HCFC-free and low GWP technology demonstration components, the current partnership with the Ministry on the phase-out of HCFCs will be continued.
- f. **Ministry for Support of Mahalla and Older Generation<sup>8</sup>:** The Ministry contributes to the improvement of women's lives and the increase of their roles in the social-economic life of the country. The Ministry is one of the key project partners in mainstreaming gender-related policies in the RAC sector.
- g. **Private/Public sector HCFC users:** These sectors consume HCFC and are dependent on HCFC. They are the ones primarily impacted by the national HCFC phase-out, and their cooperation is essential for the project progress, specifically to the HCFC re-use, introduction of new ODS alternatives, and their management and demonstration of newer ODS-free technologies with

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<sup>8</sup> The former Ministry for Support Mahalla and Family which was dissolved in 2022.

low GWP features and optimized equipment performance for less frequent maintenance (less HCFC top-ups) and better energy efficiency gains.

## 4. Findings

### Project Design/Formulation

#### **Analysis of Results Framework: project logic and strategy, indicators**

From the perspective of the TE team, the Project was well designed, with clear, practicable, and feasible objectives and components within its timeframe. The Project design aligns with Uzbekistan's priorities in chemicals management, aiming to expedite the phase-out of HCFCs and introduce the best available technologies (zero-ODS and low GWP) as HCFC substitutes. The Results Framework was developed during the project initiation phase (2017-2018) and is documented in the approved GEF Project Identification Form (PIF). The project preparation activities include:

- Technical review of the consumption level of HCFC and other ODS.
- Gender and stakeholder analysis.
- identification of specific sites for the intervention.
- Integration with development plans, policies, budgets, and complementary projects.
- Completion of GEF focal area tracking tool: GEF-6 Chemicals and Waste tracking tool.
- Stakeholder consultations during technical review and partnership negotiation.

The project identification form and project preparation grant were approved in September 25, 2017. The output of the technical review has been used for the formulation of the UNDP-GEF project document, financial planning, and co-financing arrangements.

The part VI of Project Document presents a comprehensive results framework that includes outcomes, description of baseline, verifiable indicators, and targets. The results framework contains four Components which include eleven Outcomes.

**Component 1** is composed of three Outcomes: two (Outcome 1.1 and 1.2) on consumption surveys, legislation, and policy, and One (Outcome 1.3) on capacity building for enforcement of HCFC control.

**Component 2** consists of four Outcomes: two on strengthening the HCFC management equipment and training (Outcomes 2.1 and 2.4), and two on pilot project demonstration (Outcomes 2.2. and 2.3).

**Component 3** has two Outcomes for implementing activities to raise public awareness about MP and resource mobilization to increase the application of advanced technologies in the RAC sector.

**Component 4** has one Outcome on women's engagement in RAC-related business and one Outcome on Project monitoring and evaluation.

The Project components and outcomes are consistent with the Theory of Change, presented in the Project Document (see the Description of the project's Theory of Change in Section 3 above). The well-developed and robust Theory of Change includes a clear definition of the problem to be addressed and desired outcomes. The developed Theory of Change does not provide details for an analysis of barriers to and enablers for achieving outcomes, consideration of how to address barriers, and a plan for a withdrawal of the project. However, the initially identified risks, implementation barriers, and proposed mitigations were described in the Project Document, which clearly defines the problems to be addressed and the root causes. The Project withdrawal strategy

was discussed with the Project team and the discussion outcome is briefly presented in the Sustainability section of this report below.

The Project Outcomes cover broad areas including ODS legislation development, equipment procurement, training, demo projects of the new technologies, public awareness, and gender mainstreaming. The Outcomes are coherent with the general objective of the project to achieve compliance with the accelerated MP HCFC phase-out. The Project activities established are consistent for the achievement of the results, these activities were well defined and formulated with a clear relationship to the expected outputs and results. The proposed indicators have proven to be SMART (Specific, Measurable, Attributable, Relevant, Time-bound) for all Components and Outcomes during the project implementation.

Through the implementation of pilots to show the success stories and the subsequent scaling up at the country level, the project would generate socio-economic and environmental improvements, enhance employment opportunities, and improve the health impact on workers linked to the sectors of intervention of this project. Changes to the regulatory framework will allow the creation of jobs associated with the management of ODS. Project Component 4 is specifically focused on gender equality and women's empowerment via the engagement of women in RAC-related business. It is defined with gender-responsive indicators and targets.

### **Assumptions and Risks**

After analyzing the challenges that the project faced during its implementation phase, the TE team determined that the risks identified during the design phase were well analyzed in the context in which the project proposal was developed.

The Project document identified five risks associated with the following aspects: financial; organizational; market barriers; health, safety, and environment; and gender mainstreaming. These risks were mitigated through communication with stakeholders and prompt changes in the potential beneficiaries if needed, cooperation with the implementation partner to address office needs, conducting the market analysis, research and training on health, safety, and environment, inclusion of the Gender data assistant in the project team. All risks were assessed as Low. The Project Inception report (August 2019) confirmed the risk assessment, noting no changes or reductions in the initially identified risks.

During implementation, the project updated risks and mitigation measures in the Project Implementation Reports. Risk management is the responsibility of the project manager of UNDP Country Office, and should be monitored and evaluated on a quarterly and annual basis.

At the project submission, the risk associated with the introduction of zero-ODP and low-GWP alternatives was rated as **Low**, which later was re-rated as **Moderate**. These substances are toxic, flammable, and/or with high pressure, and may potentially result in adverse emergencies. Proper training in the handling of such refrigerants substantially mitigates the noted risks.

There is a risk of generation of HCFC waste from the demonstration projects on replacement of outdated equipment that use HCFC-22 with zero-ODP and low-GWP alternatives. This risk was rated as **Low**. To mitigate this risk, the unrecyclable ODS will be collected and stored at the equipped facility pending a decision on ODS destruction.

At the Project submission, the external factors appeared to be not particularly relevant to the Project risk identification, however, the Covid-19 pandemic significantly affected the



implementation of the Project (see the discussion in the Project implementation section below). War in Ukraine that started in February 2022 complicated the supply chains, leading to an increase of the equipment cost.

In conclusion, although the assumptions and risks identified in the Results Framework of the Project were consistent with the reality of application at the time of design, they were increased by unidentifiable factors at the design stage such as Covid-19 and the war in Ukraine. TE team confirms that the assumptions and risks were logical and robust, and adequate risk management helped to determine activities and planned outputs.

### **Lessons from other relevant projects incorporated into project design**

The Project was designed based on the experience and knowledge gained from the GEF-UNDP FSP regional project “Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region (the Regional project)” (2013-2018). The Regional project is a follow-up to the medium-sized GEF-4 regional project “Preparing for HCFC Phase-out in CEITs” which was implemented by UNDP in 2008-2009 and helped to develop detailed survey data on HCFCs in CEITs and assisted with elaboration of outlines of HCFC phase-out strategies to meet the Montreal Protocol compliance targets.

The Regional project provided national capacity building and technical support for adopting a hydrochlorofluorocarbon (HCFC) phase-out strategy in Belarus, Tajikistan, Ukraine, and Uzbekistan. The regional project, along with its national components, advanced participating countries towards effective implementation of the Montreal Protocol (MP) obligations.

Several specific recommendations made in the TE of the Regional project have been accounted for in the development of the Project as it relates to:

- Development of ODS standards.
- Improvement of project indicators, scheduling, procurement procedures, and ongoing operational monitoring on provided co-financing for the projects.
- Promotion of ODS-related train-the-trainers programs.
- Supply of refillable refrigerant containers.
- Analysis of economic benefits from good practices in refrigeration servicing for inclusion in public outreach programs.
- Sharing experience with the use of CO2 as a refrigerant in the region.

### **Planned stakeholder participation**

The Stakeholder Engagement plan was presented in the Project Document, and it properly identified interactions roles, responsibilities of the stakeholders, and partnership arrangements. Stakeholders were consulted in the Project design phase, and their views and needs were incorporated into the project document. The main stakeholders and beneficiaries of the Project included the Ministry of Ecology and the Customs Committee in terms of government institutions, and RAC equipment servicing companies that committed to implementation of the pilot projects.

During the interviews with the Project Management and stakeholders, it was noted that the project design process incorporated suggestions and consulted with those who could affect the outcomes and contribute resources or knowledge in the RAC management area.

One particular example of the partners' perspective taken into account during the project design was a discussion with the Ministry of Environment about the scope of ODS waste management and potential development of the obsolete ODS storage site and ODS waste destruction equipment.

Based on the findings of the Regional project and taking into account the relatively small volumes of the ODS waste reportedly accumulated and generated, it was decided not to proceed with inclusion of ODS waste management in the scope of the current project, but develop a tracking tool to better evaluate the ODS waste volumes in Uzbekistan. Another example of the stakeholder's perspective inclusion in the project design, based on the feedback received from the Ministry of Employment and Labour Relations, was the decision to focus on Monocenters for training of the RAC professionals.

### **Linkages between project and other interventions within the sector**

The project complements the regional project "Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region" (2013-2018), which included HCFC management in Uzbekistan.

Currently, there are several projects related to this project as follows:

- Ministry of Energy of the Republic of Uzbekistan and World Bank joint project "Clean Energy for Buildings" aims to enhance energy efficiency in public buildings and establish a conducive framework for clean energy investments within the buildings sector (Project duration: 2023-2028)
- Joint project of the Ministry of Economy and Finance of the Republic of Uzbekistan and UNDP "Sustainable Rural Development" (Component B) financed by the Islamic Development Bank and OPEC Fund for International Development promotes green technologies - recently procured Propane Split-System for selected rural healthcare facilities. The project is designed to provide priority support to rural households through improved access to basic economic and agricultural infrastructure and related services. The main results will be achieved through investments in climate-resistant rural infrastructure using modern, energy-efficient, and resource-saving technologies (project duration June 2022-December 2025)
- Joint project of the Ministry of Construction, Housing and Communal Services of the Republic of Uzbekistan, UNDP, and GEF "Market Transformation for Sustainable Rural Housing in Uzbekistan" includes capacity development on advantages of applications of zero-ODP, low-GWP, and energy-efficient refrigeration technologies in cooling/heating of houses (duration of the project: April 2017- October 2024);
- UNDP project "Towards Green Recovery in Uzbekistan" supporting the demonstration project "Installation of energy efficient and ozone-friendly technologies with low global warming potential refrigeration system in cold-room for storage of dairy products" (duration of the project: January 2021 – May 2022), implemented under the current project.

### **Gender responsiveness of project design**

The project design prioritizes women's participation in training and capacity-building activities through key interventions: awareness-raising, multi-stakeholder participation, and direct engagement of female students to study RAC at technical and vocational education institutions. Additionally, partnerships with organizations to involve women in RAC-related small businesses, promoting gender-inclusive integration.

Strategic engagement with the Ministry of Higher and Secondary Specialized Education, the State Committee for Family and Women (former Women's Committee), and Tashkent State Technical University has been established to involve women into RAC activities and office management.

The project concept and activities were reviewed by a UNDP gender focal point at the design stage. Additionally, the national project partner, the State Committee for Family and Women (former

Women`s Committee) was consulted. A Gender Data Assistant was recruited on a full-time basis to support the Project Manager in implementing relevant thematic project activities. The gender expertise was deemed adequate, as no gaps were identified by the TE team.

A comprehensive survey on women`s role in RAC sector and Ozone Layer Protection was conducted, and a Road Map on gender mainstreaming in RAC sector was developed. Close partnerships with women`s organizations were established to promote women`s involvement in RAC sector small business.

The project was assigned a GEN2 Marker, and a separate sub-component on gender mainstreaming was included. The GEN2 Marker appears to be realistic and backed by the findings of the gender analysis. The TE team notes that gender considerations were integrated into the project`s design, including a gender analysis specific to the project`s context for advancing gender equality and women`s empowerment. A gender action plan was created for delivering of gender activities, complete with indicators, targets, budget, timeframe, and responsible parties. The project aligns well with national policies and strategies on gender equality. The gender issues are integrated into the project`s strategy, rationale, and theory of change, including the way gender equality and women`s empowerment advance the project`s environmental outcomes.

TE Team recognizes that achieving gender equality remains a major challenge in Central Asia. We acknowledge the project`s successful gender mainstreaming efforts and did not identify any substantial gaps in this area.

As stated in the PIR 2023, the project was granted a **gender quality award within the UNDP system**.

### **Social and Environmental Safeguard**

The project`s overall objective is to ensure protection of human health and the environment through sound management of HCFCs and their zero-ODS and low GWP substitutes in Uzbekistan. At the project submission, the risk associated with the introduction of zero-ODP and low-GWP alternative was rated as Low and later requalified as **Moderate**. These substances are toxic, flammable, and/or with high pressure, and may potentially result in adverse emergency situations. Proper training in the handling of such refrigerants substantially mitigates the noted risks.

There is a risk of generation of HCFC waste from the demonstration projects on replacement of outdated equipment that use HCFC-22 with zero-ODP and low-GWP alternatives. This risk was rated as **Low**. To mitigate this risk, the unrecyclable ODS will be collected and stored at the equipped facility pending decision on ODS destruction.

### **Project Implementation**

#### **Adaptive Management**

The Results Framework did not change substantially during the Project implementation. The adopted management structure was setup and implemented according to the arrangements presented in the Project Document, together with description of responsibilities and reporting lines. The decision-making process was conducted according to the arrangements.

The project utilized adaptative management with the support of Ministry of Ecology, Environment Protection and Climate Change of Uzbekistan and other national partners. Changes were

documented and presented during the Project Board meetings, with formal approval and signatures included in the Project report.

The Covid-19 pandemic and sanctions worldwide had a negative impact on wellbeing and financial sustainability of the project partner organizations, increased prices and longer delivery time of equipment purchased under the project activities. Nevertheless, the project has been working on set targets and the following can be highlighted:

- the legislation and regulatory support has been provided to ensure HCFC phase-out by 2030 – adopted Resolution of Cabinet of Ministers that included National program on complete HCFC phase-out
- Seven demonstration projects have been implemented (five demo projects on the replacement of HCFC-based technologies and two new ozone-friendly, energy efficient with low GWP equipment in the frame of resource mobilization activities).
- Nationwide HCFC reuse system is established which includes 3 Reclaim and 9 Recycle centers.
- An online learning system for capacity development of RAC technicians has been launched and operationalized.
- Online reporting system [www.reporting.03.uz](http://www.reporting.03.uz) is expanded to include more than 150 RAC private and public companies.
- Gender mainstreaming has been successfully conducted within project activities by supporting four startup woman led companies, three scholarship for RAC students in bachelor degree as well as promoting women’s empowerment as a role-model in public awareness campaigns with successful women in the RAC sector.

Adjustments and corrective actions during the project implementation were based on the feedback that was provided by the regular monitoring activities conducted by the project team and recorded in the respective Annual Project Reviews. Most corrective actions included modifications of annual work plans for subsequent periods. The project changes were articulated in writing and then considered and approved by the Project Board. One example of adaptive management is the decision to extend the Project by six months to offset the delays caused by the Covid-19 pandemic.

### **Actual stakeholder participation and partnership arrangements**

The project developed and utilized essential partnerships with wide range of stakeholders, including relevant government institutions, regional authorities, industries, public and local authorities, NGOs, and other relevant regional projects. This was achieved through enhanced networking. The stakeholder engagement plan is presented as Annex F to the Project Document.

Key stakeholders identified at the inception of the Project components were involved in the project implementation according to their expected roles. These included the Atmosphere department at the Ministry of Environment, the national customs authority, the academy, the RAC professionals, as well as relevant private sector companies from the RAC manufacturing and servicing sectors.

The Project Steering Committee included the UNDP Deputy Resident Representative as a Chairperson, the Deputy Minister of Ecology, Environment Protection and Climate Change of the Republic of Uzbekistan.

The local and national government stakeholders supported the project’s objectives and played an active role in project decision-making, facilitating efficient and effective project implementation. Examples of this support and participation were documented in the project reports and highlighted during the TE field mission through direct conversations with the local and national authorities. In

particular, the Hakim of the Kanlykol district (Republic of Karakalpakstan) attended the opening ceremony for the RAC demonstration project, expressing strong support for and appreciation for the project's involvement.

The stakeholder involvement and public awareness contributed to the progress toward the achievement of project objectives. There were no limitations to stakeholder awareness of project outcomes or to stakeholder participation in project activities.

Gender mainstreaming was addressed across various components to involve women in the RAC business. The women's groups, NGOs, and civil society organizations were adequately consulted and involved in project design.

Many project outcomes have specific gender indicators as the end of the project targets. For example, Outcome 1.3 states that at least, 30% of the trainees who will be trained to improve their knowledge of the use of electronic systems for declaring ODS/ODS alternatives import/export will be women. This is an understanding of the TE Team that the project did not provide for women-only sessions and this is something that may be explored in future projects.

The project was designed to increase employment and prominence of women engaged in the RAC sector via studying the current barriers, and potential for a shift in the status quo, and establishing partnerships with women's support organizations at state and regional levels and those institutions promoting women's role to mainstream gender and expand the reach. Most of the project performance indicators

Systematic and appropriate efforts were made to include women's groups in the RAC training, awareness campaign, and other project activities as applicable. The State Committee for family and women is one of the main project partners in gender mainstreaming, jointly plans and organizes events to enhance women's role in Ozone layer protection and RAC sector. The State Committee for family and women is a member of the Project Board.

### **Project Finance and Co-finance**

Based on the review of available documents and interviews with the project team and stakeholders, it appears that the established financial controls allowed the project management to make informed decisions regarding the budget and enabled the timely flow of funds and the payment of satisfactory project deliverables. The TE Team found the current financial controls for the project generally sufficient but recommends the timely collection of co-financing data and effective remedial actions by the implementing partners for future UNDP projects. There were no audits conducted for this Project. The TE team did not go into detail on the expenses. As explained in the section on Project results below, contracts and deliverables within those contracts related to completed tasks and monies spent. The fact there were no financial audits conducted during the project's lifetime also does not make it possible for the TE team to confirm or disprove the application of due diligence in the management of funds.

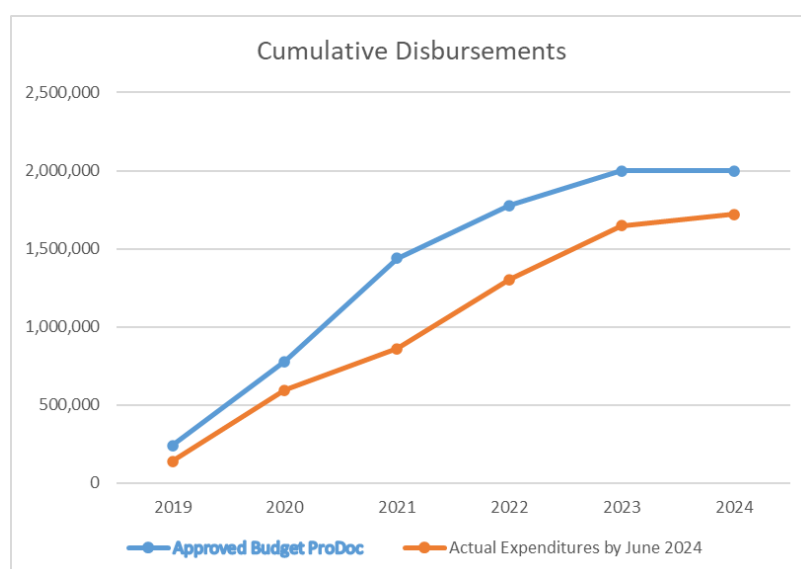
The tables below summarize the funds committed for the project (as of the project inception) and the actual implementation of the GEF grant. They also provide an overview of co-financing acquired up to the terminal evaluation of the project. It follows from the tables that the total co-financing originally promised by the project beneficiaries was achieved and exceeded at the end of the project.

The materialized co-financing both in grants and in-kind provided for the delivery of the project outcomes and improved its sustainability. The sustainability of the zero-ODS technology demonstration sub-projects in the institutions of the public sector needs further support.

The cumulative disbursements in the Figure below show a typical S-type curve for the planned disbursements and a more uniform curve for actual disbursements. The variance in expenditures can be seen as starting in the year 2020 of the project which one can assume was connected to COVID-19 pandemic. The total cumulative actual disbursement is lagging in 2021-2023 compared to the planned disbursement but reaching the level of planned value in 2024. The actual co-financing substantially exceeded the planned level (more than twice). The share of the GEF grant represents less than 12% of the total project cost (total project cost= GEF grant +cofinancing).

The project components supported by external funders were well integrated into the overall project. Co-financing had a profound effect on project outcomes and/or sustainability. There is evidence of additional, leveraged resources that have been committed as a result of the project from other donors, such as governments and the private sector.

### Project cumulative disbursements as of 30 June 2024 (GEF grant)



### Planned and actual disbursement of the GEF grant by project components (as of 30 June 2024)

Project Component	Budget (US\$)	Expenditures (US\$)	Spent
Outcome 1	224,100	195,355	87%
Outcome 2	1,041,050	900,949	87%
Outcome 3	283,300	235,613	83%
Outcome 4	267,950	225,074	84%
Project Management	181,640	163,332	90%
Total	1,998,040	1,724,842	86%

### GEF Financing of the Project - Planned and Actual Expenditure (as of 30 June 2024)

Project Component	2019		2020		2021		2022		2023		2024*		Total	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Outcome 1	25,050	33963	61,750	55,028	81,750	33,117	25,250	26,373	30,300	41,083	-	5,788	224,100	195,353
Outcome 2	67,500	21,933	330,700	318,159	417,950	83,207	183,700	296,617	41,200	161,426	-	19,605	1,041,050	900,949
Outcome 3	58,350	28,748	58,450	33,097	59,700	41,346	53,200	49,324	53,600	74,018	-	9,079	278,782	225,074
Outcome 4	55,050	29,107	51,500	26,960	63,300	75,945	40,050	38,412	58,050	34,258	-	20,391	262,348	235,613
Project management	33,640	24,414	37,000	21,383	37,000	32,701	37,000	33,006	37,000	35,068	-	16,760	181,640	163,332
<b>Total</b>	<b>239,590</b>	<b>138,188</b>	<b>539,400</b>	<b>454,629</b>	<b>659,700</b>	<b>266,317</b>	<b>339,200</b>	<b>443,734</b>	<b>220,150</b>	<b>345,853</b>	<b>-</b>	<b>71,623</b>	<b>1,987,921</b>	<b>1,720,324</b>
Totals (with Undepreciated Fixed Assets)	<b>239,590</b>	<b>141,960</b>	<b>39,400</b>	<b>454,629</b>	<b>659,700</b>	<b>266,318</b>	<b>339,200</b>	<b>444,459</b>	<b>220,150</b>	<b>345,853</b>	<b>-</b>	<b>71,623</b>	<b>1,998,040</b>	<b>1,724,842</b>

### Co-Financing Table

Co-financing (type/source)	UNDP financing (US\$)		Government (US\$)		NGO-Public Sector		Academy Institution		Private Sector (US\$)		Total (US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	50,000	62,067									50,000	62,067
Loans/Concessions												
In-kind support			1,887,006	10,102,181					4,711,654	4,062,421	6,598,660	14,164,603
Other												
<b>Totals</b>	<b>50,000</b>	<b>62,067</b>	<b>1,887,006</b>	<b>10,102,181</b>					<b>4,711,654</b>	<b>4,062,421</b>	<b>6,648,660</b>	<b>14,226,670</b>



### Confirmed Sources of Co-Financing at TE Stage

Sources of Co- Financing	Name of Co- financier	Type of Co- financing	Investment Mobilized	Amount (US\$)
<b>Donor Agency</b>	UNDP	Grant	Recurrent expenditure**	62,067.36
<b>Government</b>	Ministry of Ecology	In-Kind	Investment mobilized	1,543,547
<b>Government</b>	State Customs Committee	In-Kind	Recurrent expenditure	101,446.45
<b>Government</b>	Ministry of Higher and Secondary Specialized Education	In-Kind	Recurrent expenditure	8,443.15
<b>Government</b>	Ministry of Employment and Labour Relations	In-Kind	Recurrent expenditure	48,219.25
<b>Government</b>	Ministry of Health	In-Kind	Recurrent expenditure	8,399,086.09
<b>Government</b>	Mahalla and Family Support Ministry	In-Kind	Recurrent expenditure	1,439.54
<b>Private Sector</b>	Private Enterprise "Techno Servis Bra", Karakalpakstan Private Enterprise "Fergana Konstantin", Fergana region Private Firm "Ohu", Namangan region LLC "Injiniring Klimat Kontrol", Bukhara region LLC "Shomur Techno", Ferghana region LLC "Jizzax Elektron Servis", Jizzakh region IP "Gabbasov Galim Anvarovich", Navoiy region Private Enterprise "Fayz Nur Baraka", Surkhandarya region IP "Alimova Saidaxon Sabirjonovna", Tashkent city IP "Karshibayeva Iroda Nuraliyevna", Sirdarya region Production Cooperative "Valley Fruits" Farmer "Seit Sharwa"	In-Kind	Investment mobilized	1,762,253.46
<b>Private Sector</b>	PE «Xladomontaj», Andijan region JSC "Yo`Irefrans", Sirdarya region LLC "Xolod Sistem Servis", Tashkent region LLC "O'ZPROMHOLODMONTAJ", Tashkent city "Bek Adolat Temir" LLC, Tashkent city LLC JV "UZ Donj Ju Paint Co" Andijan region LLC "Zamin Madad Tayyorlov Savdo", Bukhara region LLC "Sovitish va Konditsionerlash", Fergana region LLC "Xiva Maishiy Texnika", Khorezm region Family Enterprise "Al`batros servis"	In-Kind	Recurrent expenditure	2,300,168.09
<b>Total Co-Financing as of 06.2024</b>				<b>14,226,670.39</b>

\*\*Recurrent expenditures can generally be understood as routine budgetary expenditures that fund the year-to-year core operations of the entity (they are often referred to as 'running costs' – they do not result in the creation or acquisition of fixed assets). They would include wages, salaries, and supplements for core staff; purchases of goods and services required for core operations; and/or depreciation expenses. Some of the typical government co-financing we have previously included (such as routine budgetary expenses for Ministry of Environment operations) will no longer meet this new definition of investment mobilized for these specific countries.

## Monitoring and Evaluation

- **M&E design at entry:**

- o **Was the M&E plan well-conceived, practical and sufficient at the point of CEO Endorsement? Was it articulated sufficiently to monitor results and track progress toward achieving objectives?**

Monitoring and evaluation (M&E) plan with corresponding budget were developed during the design phase of the project. The plans list M&E activities and the designated parties with their responsibilities and corresponding timeframes. All M&E plans have the standard components typical to the projects of this size and complexity. Budget was provided in the Project Documents for the Inception workshop, Audit<sup>9</sup>, and Terminal Evaluation. The costs of a regular monitoring (i.e., the project teams' staff time and UNDP staff and travel expenses) were not included as per the GEF rules for project implementation.

- o **Did the M&E plan include a baseline, SMART indicators and data analysis systems, and evaluation studies at specific times to assess results?**

The M&E plan includes a baseline, SMART indicators and data analysis systems, and regular monitoring to assess results.

- o **Were baseline conditions, methodology, logistics, time frames, and roles and responsibilities well-articulated?**

The baseline conditions, methodology, logistics, time frames, and roles and responsibilities were well-articulated.

- o **Did the M&E plan specify how the project will keep the GEF OFP informed and, where applicable and feasible, involved, while respecting the independent nature of the TE process?**

The GEF OFP was not involved in the TE process, however, the TE team was assured that GEF OFP has been kept informed about the TE.

The M&E Plan at the project entry is rated **Highly Satisfactory (HS)**.

- **M&E implementation:**

- o **Was data on specified indicators, and relevant GEF Tracking Tools/Core Indicators gathered in a systematic manner?**

Data on specified indicators and relevant GEF Tracking Tools/Core Indicators were gathered in a systematic manner.

- o **Value and effectiveness of the monitoring reports and evidence that these were discussed with stakeholders and project staff.**

The Project Board (Project Steering Committee or PSC) was established, and the first meeting was conducted in July 2019 at the project Inception workshop. Other Project Board meetings were conducted in January 2020, December 2020, August 2021, October 2021, November 2021, June 2022, September 2023, and December 2023. Numerous meetings with stakeholders, partners and beneficiaries were held to monitor the performance of the project implementation and to track progress of individual components.

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<sup>9</sup> The audit was not conducted as it didn't meet the criteria for selection of NIM projects for the audit.

The Inception workshop was held in July 2019. Project Implementation Reports were issued in September 2020, September 2021, and September 2023. The Annual work plans for 2020, 2021, 2022 and 2023 were developed and agreed to by UNDP Uzbekistan.

**o Extent to which the GEF OFP was kept informed of M&E activities; and extent to which the Project Team used inclusive, innovative, and participatory monitoring systems.**

The TE team was assured that GEF OFP has been kept informed about the M&E activities.

**o Extent to which information provided by the M&E system was used to improve and adapt project performance.**

The Project activities were described in the respective results frameworks and related work plans and budgets. The TE team reviewed the available Annual work plans and Project Implementation Reports and evaluated the identification of implementation challenges and follow-up actions undertaken by the project implementing team.

The implementation of the Monitoring and Evaluation Plan generally appears adequate for the project's performance. As the TE work progressed, most of the requested information became duly available via direct communication with the project management team and at the meetings during the TE mission.

**o Whether the M&E system included proper training for parties responsible for M&E activities to ensure that data will continue to be collected and used after project closure.**

The TE Team was not made aware of inclusion in the M&E system training for parties responsible for M&E activities to ensure that data will continue to be collected and used after project closure. However, the proper government authorities, whose training was part of the project scope, are dealing with the collection of technical data such as HCFC phasing out, import of ODS, HCFC recycling, and disposition. These data will be collected and processed after the project closure.

**o How were the perspectives of women and men involved and affected by the project monitored and assessed? How were relevant groups (including women, indigenous peoples, children, elderly, disabled, and poor) involved with the project, and the impact on them monitored?**

Gender mainstreaming has been specifically addressed in the project component (Indicator 4.1 Engagement of women students to study RAC in the technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business). The component outcome was monitored and evaluated as the other Project outcomes.

**o Was there adequate monitoring of environmental and social risks as identified through the UNDP SESP and in line with any safeguards management plan's M&E section?**

The adequate monitoring of environmental and social risks was identified in line with the UNDP SESP.

**o Whether the projects' Theory of Change was reviewed and refined during implementation.**

The TE Team understands that the project's Theory of Change was reviewed but left unchanged during implementation.

**O Whether PIR self-evaluation ratings were consistent with MTR and TE findings. If not, were these discrepancies identified by the Project Board and addressed?**

Following the recent project implementation review report completed in 2023, the overall project implementation is rated as "Satisfactory". There were no MTR conducted and the TE findings confirms the conclusion of PIR.

The TE Team found the current financial controls for the project generally sufficient.

Monitoring and Evaluation implementation is rated **Satisfactory (S)**.

The overall quality of the Monitoring & Evaluation system for the entire project is rated **Satisfactory (S)**.

<b>Monitoring &amp; Evaluation (M&amp;E)</b>	<b>Rating</b>
M&E design at entry	HS
M&E Plan Implementation	S
Overall Quality of M&E	S

## UNDP implementation/oversight and Implementing Partner execution and overall assessment of implementation/oversight and execution

### UNDP (Implementing Agency) implementation/oversight

The general legal framework for implementation of the project is the Standard Basic Assistance Agreement between the Government of Uzbekistan and UNDP. Specifically, the project was designed for the National Implementation Modality (NIM) with the UNDP CO support according to valid UNDP policy<sup>10</sup>. In line with the agreement between UNDP and the Government<sup>11</sup>, the UNDP CO may provide, at the request of the designated institution, the following support services for the activities of the project:

- (a) Services related to recruitment of project personnel;
- (b) Services related to procurement;
- (c) Services related to finance;

The Implementing Partner is responsible and accountable for managing this project, including monitoring and evaluation of project interventions, achieving project outcomes, and effective use of UNDP resources.

The UNDP CO also provided a quality assurance function for the project to ensure the required quality of the project deliverables and adherence to the UN SDGs and UNDP strategic priorities. In addition, UNDP also rendered services of a Regional Technical Advisor (RTA) in the UNDP Istanbul Regional Hub (IRH) who provided technical advisory to the project. The RTA support was provided mainly through remote oversight of the project, supervisory missions to the country and project sites, and technical quality assurance for inputs into project reports including the project implementation review reports (PIR).

There was a change of the RTA in the last year of the project implementation due to the departure of the original RTA from UNDP IRH in September 2023 and the UNDP management decided to assign the technical backstopping to another IRH-based RTA.

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<sup>10</sup> UNDP Programme and Operations Policies and Procedures: UNDP Support Services to National Implementation (NIM), 2015

<sup>11</sup> Standard Letter of Agreement between UNDP and the Government for the provision of support services, Annex 7 to the Project Document

- **The extent to which UNDP delivered effectively on activities related to project identification, concept preparation, appraisal, preparation of detailed proposal, approval and start-up, oversight, supervision, completion, and evaluation.**

TE Team identified effective delivery of the Project management activities by UNDP, including project identification, concept preparation, appraisal, preparation of detailed proposal, approval and start-up, oversight, supervision, completion, and evaluation. The Project annual reports and Project implementation reviews noted to be fair and outlined in the UNDP SESP.

The Project has successfully overcome the challenges of the Covid-19 pandemic through the effective and proactive professionalism of the Project Team. This demonstrates a high quality of risk management and responsiveness to significant implementation problems, and adequate oversight of the management of environmental and social risks.

Based on the abovementioned the UNDP implementation/oversight is rated as **Satisfactory (S)**.

#### **UNDP Implementing Partner Execution**

- **Extent to which the Implementing Partner effectively managed and administered the project's day-to-day activities under the overall oversight and supervision of UNDP.**

UNDP Uzbekistan in partnership with the Ministry of Ecology is the Executing Agency/Implementing Partner of the Project. There were no substantial shortcomings in the UNDP and Ministry of Ecology quality of implementation/execution. There was adequate oversight of the management of environmental and social risks, as identified through the Project documents.

The Quality of Implementing Partner Execution was assessed primarily during the evaluation mission and via communication with the project management team. The partnership with the Ministry of Ecology was a key factor in the Project's success. Not only the Ministry of Ecology provided regulatory support and endorsement to the Project, but they also took a leading role in public outreach, education, development of relevant by-laws, and other Project activities on a regular basis. The Ministry of Ecology chaired the Board meetings, reviewed, and approved project implementation reports, and provided advice and guidance as required.

Based on the abovementioned the UNDP implementing Partner execution is rated as **Satisfactory (S)**.

The Overall Quality of Implementation/Oversight and Execution is rated **Satisfactory (S)**.

<b>UNDP Implementation/Oversight &amp; Implementing Partner Execution</b>	<b>Rating</b>
Quality of UNDP Implementation/Oversight	S
Quality of Implementing Partner Execution	S
Overall quality of Implementation/Oversight and Execution	S

#### **Risk Management, including Social and Environmental Safeguards**

As stated in the Project Document, the project is explicitly designed to mainstream environmental sustainability objectives by introducing alternative and energy-efficient technologies in the RAC sector of Uzbekistan and completing the HCFC phase-out by 2030. The introduction of alternative zero-ODS, low-GWP, and, where technically feasible, energy-efficient technologies will support the country in a smooth transition to an environmentally sustainable economy. It will contribute to integrating the principles of sustainable natural resource use into policymaking, legislation, and

institutions to ensure sustainable natural resource management for the benefit of current and future generations.

The Project Implementation Review reports include a discussion on the new risks or changes to existing risks reported on the annual basis. The TE team confirmed that the project's risk register was properly maintained during implementation and the Project Board kept informed of new risks, changes, or escalations. These risks were also documented in the annual PIRs.

Project implementation was impacted by the risks, notably, the change in government which led to shifts in high-level authorities within partner institutions of the project. The project management addressed this challenge by working with middle management, to ensure continued commitment to the project's activities established within the framework of the project.

The Covid-19 pandemic was an important factor during the second half of the project's implementation period. This factor, which was not identifiable at the time of project design, greatly increased the level of probability and significance of previously identified risks. The state and federal governments had to focus their resources on responding to the pandemic, while private companies had their activities restricted by the sanitary measures established by the health authorities. Finally, the project team had limited the possibilities of travel and the carrying out the face-to-face activities.

As stated in the Project Implementation Review report for 2023, implementation after February 2022 continued to be exposed to such externalities like the military conflict in Ukraine - political and economic impacts at global and regional/national levels such as problems with supply chains related to RAC related equipment, export/import operations, increasing pressure of the climate change impacts on food security (cold chain), public, commercial and residential building sectors that are customers of RAC equipment and services provided by the public and private companies.

These risks are reflected in the UNDP system and the Project Manager continues monitoring all the risks indicated in Risk Log and considers responsive actions at the extent possible to manage/minimize their potential threats, including through practicing the adaptive management approach, in consultation with the government and regional technical specialists.

## Project Results and Impacts

### Progress Towards Objective and Expected Outcomes

#### Relevance

##### **Alignment with national priorities**

Uzbekistan acceded to the Vienna Convention in 1993, to the MP in 1993. It also adopted London and Copenhagen Amendment in 1998, and ratified the Montreal and Beijing Amendments in 2006, assumed all relevant obligations of the MP. The Project objectives align fully with national development priorities and commitments related to ODS management and addressing climate change risks.

The Project's contribution to the global reduction of ODS and GHG emissions, input to the overall socio-economic development, and implementation of innovations in Uzbekistan demonstrates the high extent to which the Project is appropriately responsive to political, legal, socioeconomic, and institutional changes in the country.

The Uzbekistan Development Strategy 2022 – 2026<sup>12</sup> emphasizes the need for enhanced human development. The project's gender mainstreaming component fully aligned with the national strategy to support women and ensure their active participation in society through education and professional development of women in the RAC sector.

**Alignment with GEF and UNDP strategic priorities:**

This project contributes positively to the following **Sustainable Development Goals (SDGs)**, as indicated in the Project's Theory of Change:

- **SDG#5. Gender Equality** – Target: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- **SDG#8. Good Jobs and Economic Growth** – Target: Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including through a focus on high-value added and labor-intensive sectors.
- **SDG#9. Innovation and Infrastructure** – Target: Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
- **SDG#12. Responsible consumption and production** - Target: Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, following agreed international frameworks, and significantly reduce their release to air, water, and soil to minimize their adverse impacts on human health and the environment.
- **SDG#13. Climate Action** – Target: Integrate climate change measures into national policies, strategies, and planning.

The project aligns well with UNDP priorities in Uzbekistan. It supports the country outcome included in the UNDAF/Country Programme Document: UNDAF OUTCOME: By 2020, the rural population will benefit from sustainable management of natural resources and resilience to disasters and climate change.

**Stakeholder engagement:**

The Project design and implementation benefited from strong stakeholder engagement, resulting in effective partnerships with numerous organizations in Uzbekistan. These partnerships brought valuable skills, knowledge, and value to the implementation of specific activities funded by the project. TE team observed that by following good practices and outcomes from previous ODS management projects, the UNDP team and its partners formulated the project scope according to the needs and interests of relevant stakeholder groups. The Project design and implementation were informed by the needs and interests of relevant groups of stakeholders through a continuous consultation program.

**Relevance to and complementarity with other initiatives**

The Project was designed based on a thorough review of lessons learned from previous projects related to the reform of the RAC sector. It has been implemented through a participative approach that engaged stakeholders all the way from the design of project activities to their implementation.

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<sup>12</sup> <https://uzembassy.kz/upload/userfiles/files/Development%20Strategy%20of%20Uzbekistan.pdf>



Several recommendations made in the TE of the Regional project have been accounted for in the development of the Project as it relates to:

- a. ODS standards;
- b. Improving the project indicators scheduling, procurement procedures, and ongoing operational monitoring on provided co-financing for the projects;
- c. Promotion of ODS-related train-the-trainers programs;
- d. Supply of refillable refrigerant containers;
- e. Conducting an analysis of the economic benefits of good practices in refrigeration servicing for inclusion in public outreach programs;
- f. Sharing experience with the use of CO<sub>2</sub> as a refrigerant in the region.

In particular, the TE for the regional HCFC project stated:

*The experience gathered with the establishment of the PIU in Uzbekistan provides further evidence that the PIU composition requires a careful consideration at the project design. Instead of a single national project manager, the national Project Steering Committee decided to recruit several experts with expertise in differentiated areas such as investment/demonstration projects, monitoring & evaluation as well as in public relations & outreach. Such division of responsibilities allowed the national Project Manager to concentrate fully on the project management and coordination function while enabled use of a specific expertise for development and practical implementation of innovative activities and production of cutting-edge results such as the on-line monitoring of ODS consumption, development of interactive games and the photo contest on ozone layer protection.*

*The example of the photo contest, namely that it had expanded from the national component to reach world-wide proportions is an illustration of importance of assistance by the regional component that allocated additional funds and opened communication channels that were not available at the national level. This case also suggests that additional capacity on public outreach and external communication should be considered for any future regional project, at least on a part time basis. Such capacity will also help with translation of the technical language related to the Montreal Protocol into communications easily understandable by the general public and will thus make a notable contribution to the public awareness facet of the project.*

In conclusion, the project is highly relevant to Uzbekistan. It has fostered strong collaborations with stakeholders and partners, and it contributed to a good national ownership of the project, which, in turn, will contribute to the long-term sustainability of project achievements.

Based on the above, the relevance of the project is rated “**Highly Satisfactory**” (HS) both for the recipient country, as well as for the implementation and donor agencies.

### **Effectiveness**

The Project results framework includes outcomes, a description of baseline, verifiable indicators, and targets. The results framework contains four Components which include eleven Outcomes.

- Component 1 is composed of three Outcomes: two (Outcome 1.1 and 1.2) on consumption survey, legislation, and policy. One (Outcome 1.3) on capacity building for enforcement of HCFC control.
- Component 2 consisted of four Outcomes: two on strengthening the HCFC management equipment and training (Outcomes 2.1 and 2.4) and two on pilot project demonstration (Outcomes 2.2. and 2.3).

- Component 3 has two Outcomes for implementing activities on raising public awareness of MP (Outcome 3.1) and resource mobilization to increase the application of advanced technologies in the RAC sector (Outcome 3.2).
- Component 4 has one Outcome on women's engagement in RAC-related business and one Outcome on Project monitoring and evaluation.

This section of the TE report individually assesses the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements. The factors that affected the delivery of outputs are also identified.

**Component 1: National legislation and capacity building of customs and enforcement officers on control of HCFC and ODS alternatives import/export.**

OUTCOME	END OF PROJECT TARGETS	ACHIEVEMENT
1.1: ODS Alternative survey to determine their consumption	The national survey of consumption of HFCs and other alternative cooling agents (natural cooling agents) and their uses undertaken for the government to consider the impact of the Kigali Amendment on the phase-out of HFCs.	<p><b>Completed</b></p> <p>National Survey of Consumption of ODS alternatives (HFCs and other alternative cooling agents, including natural refrigerants), was conducted by the project in 2019 to collect data on national refrigerant use in Uzbekistan during 2011-2018 period.</p> <p>Rates of usage of various refrigerant types by sectors of the economy were identified in 2020.</p> <p>HFC consumption baseline for Kigali Amendment ratification by Uzbekistan has been calculated and confirmed by the Ministry of Ecology.</p> <p>Analysis of the socio-economic impact of ratification of the Kigali Amendment by the country has been conducted for further use in making decisions on ratification by the government.</p>
1.2: National legislation on HCFC and ODS alternatives phase out and import/export control upgraded, through adaptation of advanced legislation experience from EU and other countries.	At least 3 proposals to upgrade legislation are prepared and provided to the National Partners for consideration and are accepted.	<p><b>Completed</b></p> <p>With the support of the project, the resolution of the Cabinet of Ministers of the Republic of Uzbekistan (#126 dd 9.03.2021) on the “National Program on Complete ODS phase-out” and its roadmap was adopted. The following project proposals were accepted by the Government:</p> <ol style="list-style-type: none"> <li>1. Establishment of the National Refrigeration and Air Conditioning (RAC) Association.</li> <li>2. Review of socio-economic impacts of the Kigali Amendment ratification - completed by the project and submitted to the Ministry of Ecology for further consideration and elaboration.</li> <li>3. Regular capacity development of customs and enforcement officers on more efficient control of HCFCs and their alternatives during import/export activities.</li> <li>4. Technology transition from ozone-depleting substances (ODS) based to ozone-friendly and low-GWP technologies.</li> <li>5. Gender mainstreaming in the RAC sector of Uzbekistan.</li> <li>6. Public awareness raising on the protection of the Ozone Layer.</li> </ol> <p>The changes to the national legislation are proposed in case of ratification of the Kigali Amendment.</p>

OUTCOME	END OF PROJECT TARGETS	ACHIEVEMENT
1.3: Capacity of specialists of the State Customs Committee strengthened to control import/export of ODS/ODS alternatives and equipment containing them.	<p>Central Customs Laboratory provided with, at least, ten (10) samples of 5 types of refrigerants<sup>13</sup> standards for calibrating their gas chromatographs and updating software.</p> <ul style="list-style-type: none"> <li>- At least 50 importers and environmental inspectors, including, at least, 30% women, trained, and improved their knowledge on the use of a newly introduced electronic systems of declaring ODS/ODS alternatives import/export;</li> <li>- Customs Department gradually improves information exchange and interaction with counterparts in other countries in the region, and Customs Committee equipped with new instruments and tools;</li> <li>- Extended capacity of the State Customs Committee of centralized storage of seized smuggled ODS/ODS alternatives available</li> </ul>	<p><b>Completed.</b></p> <p>Specialists of the State Customs Committee and the Ministry of Ecology participated in the practical study tour to Istanbul Customs Laboratory (Turkey) to exchange experience and study best international practices on controlling import/export of ozone depleting substances (ODS), their alternatives and equipment containing ODS (December 2019). In addition, established a centralized storage to ensure security of confiscated ODS/ODS alternatives at the State Customs Committee premises; required equipment and machinery handed over and repair works were conducted at the storage (December 2021).</p> <p>In addition to two trainings during previous reporting periods (for 202 participants including 12 women), training(s) for importers as well as environmental and enforcement officers project conducted an online meeting with 49 participants (14 women) as introduced new customs automatic system (in addition to two existing system) for declaration of ODS/ODS alternatives import/export operations is being synchronized and the relevant regulations are being agreed with all parties (May 2023).</p> <p>By the support of the project and in cooperation with UNODC, the State Customs Committee laboratory developed documents and received national level ISO 17025 certification in August 2021. In addition, the State Customs Committee laboratory has been assigned as a "Regional Customs Laboratory" of the World Customs Organization in November 2021 that improves information exchange and interaction with counterparts in Central Asia and it opens new opportunity to train enforcement officers from the Central Asian countries.</p> <p>Established centralized storage under the State Customs Committee is fully operational: illegal import of ODS (October 2021) in the amount of 45 tons are being re-exported.</p>

**Component 2: Strengthening the HCFC re-use system; implementation of demonstration projects on HCFC replacement.**

OUTCOME	END OF PROJECT TARGETS	ACHIEVEMENT
2.1: HCFC re-use system strengthened.	Established six (6) new (4 recycling and 2 reclaim) and upgraded six (6) operating (5 recycling and 1 reclaim) centers, with at least 3,000 kg HCFCs recycled and 1,000 kg	<p><b>Completed and exceeded</b></p> <p>Established six (6) new (4 recycling and 2 reclaim) and upgraded six (6) operating (5 recycling and 1 reclaim) centers to ensure a nationwide HCFC reuse system and its effective operation. In addition, necessary consumables (filters) for one hundred (100) RAC public and private enterprises were procured. To ensure the sustainability of reclaim and recycle</p>

<sup>13</sup> Currently, the State Customs Committee is using experience gained during the study tour to Istanbul Central Laboratory (December 2019) and does not need sample standards of refrigerants for the gas chromatograph calibration. However, if internationally recognized sample standards would be needed/required for ISO 17025, the project may resume procurement of those standards.

	<p>reclaimed;</p> <ul style="list-style-type: none"> <li>- At least 100 public and private enterprises of the RAC sector benefited from project interventions in terms of servicing tool supplies.</li> </ul>	<p>centers, the project supported the development business plans of 8 Recycle and 3 Reclaim centers.</p> <ul style="list-style-type: none"> <li>- To date, within HCFCs reclaim and recycle centers as well as 154 project partner RAC companies, 6,405 kg of HCFCs have been recycled and 1,356 kg of HCFCs have been reclaimed – the recycled and reclaimed refrigerants are channeled back into the country's economy.</li> <li>- Procured spare parts for 99 public/private RAC enterprises received and using spare parts (filters for recovery machine).</li> <li>- 46 technicians (3 women) of 11 Reclaim and Recycle centers and two demonstration projects are trained on the use of recycle/reclaim and refrigerant charging equipment and shared experience on the production of ozone-friendly, low-GWP, and energy-efficient technologies during the workshops organized in Fergana, Takhiyatash and Khiva cities in (May 2021 and May 2022);</li> </ul> <p>During the next reporting period, a supply of servicing tools/equipment for 50 public and private enterprises will be conducted.</p>
<p>2.2: Zero-ODS, low-GWP, and energy-efficient refrigerant technologies, including natural refrigerants, demonstrated</p>	<p>At least, five (5) demonstration projects implemented in public facilities/commercial applications/ training centers.</p> <ul style="list-style-type: none"> <li>- Awareness raising campaign on benefits of new technologies, supported to broaden project's positive impacts and exploration of scale-up opportunities in partnership with other-than-GEF funding sources organized</li> </ul>	<p><b>Completed and Exceeded</b></p> <p>A) In total five demonstration projects are being implemented: one in public facilities, four in commercial applications. This includes:</p> <ul style="list-style-type: none"> <li>- Demonstration project with LLC "Khiva Maishiy Texnika" on "Replacement of small-scale production commercial refrigeration line using HCFCs to zero-ODS and low-GWP technology on natural refrigerants – propane (R290).</li> <li>- A demonstration project with Family Enterprise "Albatros Service" has been launched.</li> <li>- Demonstration project with Jizzakh branch of the Republican Research Center for Emergency Medicine on the replacement of HCFC-based air-conditioning system with ozone-friendly, low GWP, and energy-efficient technology implemented.</li> <li>- Demonstration project with "Bek Adolat Temir" LLC (Tashkent city) on "Replacement of refrigeration system in cold-room using HCFCs (R22) to energy-efficient and ozone-friendly technologies with low global warming potential".</li> <li>- Demonstration project to replace HCFC-based refrigeration system with ozone-friendly, energy-efficient, and low-GWP technology in the Kanlykol district of the Republic of Karakalpakstan.</li> <li>- Two more projects completed within Component 3.</li> </ul> <p>B) Awareness-raising campaigns held on the benefits of new technologies, supported to broaden the project's positive impacts and exploration of scale-up opportunities in partnership with other-than-GEF funding sources:</p> <ul style="list-style-type: none"> <li>- Cumulatively since the beginning of the project 21 events (17 in the previous reporting period plus 4 within this reporting period), and four (4) meetings (537 participants: including 80 women) were organized during July 2022-June 2023.</li> </ul>
<p>2.3: Pilot</p>	<p>At least one (1) facility</p>	<p><b>Completed</b></p>

<p>performance monitoring project for reduction of HCFC leakage at large facilities</p>	<p>equipped with HCFC based equipment performance monitoring system and used with regular reporting on results established for further awareness raising and scale-up of this initiative.</p> <ul style="list-style-type: none"> <li>- New approach generates replication interest in the industry</li> </ul>	<p>Project Board approved the piloting project at LLC JV "UZ Dong Ju Paint Co" (Andijan city, Andijan region). Partnership agreement ("Contribution of parties") on the pilot of performance monitoring equipment at LLC JV "UZ Dong Ju Paint Co" developed, and HCFC performance monitoring system procured. The equipment is installed and connected to the chiller of the company and is constantly monitored (energy consumption and overall operation. The project is planning to analyze collected one-year data during the next reporting period.</p> <ul style="list-style-type: none"> <li>- The new approach generated interest in the industry and one of the project partner "Holod System Service" LLC started the promotion of similar equipment for monitoring of the RAC system in 2022.</li> </ul> <p>Published knowledge products on new approaches for controlling refrigerant leakage and monitoring the operation of the refrigeration system</p>
<p>2.4: RAC sector technicians regularly improve their knowledge</p>	<ul style="list-style-type: none"> <li>- At least, three (3) vocational training centers established and equipped in the regions of Uzbekistan.</li> <li>- At least, 300 technicians trained and skills upgraded on low GWP technologies with online and 200 with onsite training programmes.</li> <li>- Training stands, heat pumps and RAC equipment for natural refrigerants identified and procured;</li> </ul>	<p><b>Completed</b></p> <p>Three (3) RAC vocational training centers were established and provided with equipment, tools, and instruments, including training stands for students for a better understanding of full refrigeration cycle of natural refrigerants in the Fergana, Bukhara and Sirdarya regions of Uzbekistan at "Monomarkaz" (Monocenter) professional education centers under the Ministry of Employment and Poverty Reduction; nine (9) training stands were installed and have been used for training purposes.</p> <ul style="list-style-type: none"> <li>- Updated with case studies training modules were developed for (1) training of trainers and (2) advanced training of trainers in Russian and Uzbek languages. To date, 213 trainees (2 women) successfully completed trainings in three regions (Fergana, Sirdarya and Bukhara) at RAC training centers under Monomarkaz professional (vocational) education center under the Ministry of Employment and Poverty reduction: 143 participants in basic trainings (1 woman) and 70 participants in advanced training (1 woman).</li> <li>- To ensure regular capacity development of trainers of RAC training centers and as per UNDP CO monitoring recommendations, Training of Trainers was conducted for 6 trainers (one woman) of RAC training centers at Bukhara region "Monomarkaz" - professional (vocational) education centers in March 2022. The trainers of the professional vocational centers are training unemployed (basic training) and technicians of RAC companies (advanced training).</li> <li>- As per requests of technicians countrywide, the Russian version of the online learning system <a href="http://www.e-learning.o3.uz">www.e-learning.o3.uz</a> has been developed and launched in August 2022.</li> <li>- Total of 395 technicians (85 women) trained through the launched website (<a href="http://www.e-learning.o3.uz">www.e-learning.o3.uz</a>) and their skills are upgraded on best practices in refrigeration (RAC), including ozone-friendly and energy-efficient technology with low GWP. In total 342 participants (11 women) participated in onsite/offline trainings. RAC trainings throughout all regions of Uzbekistan on green technologies and the use of ozone-friendly refrigerants in the maintenance of refrigeration equipment.</li> </ul>

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### Component 3. Outreach and Resource Mobilization

OUTCOME	END OF PROJECT TARGETS	ACHIEVEMENT
3.1: Awareness of the public and consumers about ozone related issues increased	<p>- At least 20 information materials were developed, and 2 studies were launched on learning from outreach activities in other regions and applying best practices in Uzbekistan</p> <p>- 7 awareness raising and 3 networking activities implemented.</p>	<p><b>Completed and Exceeded</b></p> <p>Total 334 information materials are developed</p> <p>One study on learning from outreach activities in other regions and application the best practices in Uzbekistan was conducted online (June 2023).</p> <p>In total 15 awareness-raising activities were conducted.</p> <p>A network was built between the Ministry of Ecology, the State Customs Committee, and project international certification expert Mr. Jonas Reklaitis to assess the potential of the Central Customs Laboratory for meeting the requirements of the international standards ISO / IEC 17025 for the analysis of refrigerants that deplete the ozone layer</p> <p>Network built with UNECE -joint case study developed on potential for improving energy efficiency in the refrigeration and air conditioning sector in Uzbekistan (2021-2022);</p> <p>Networking with national and international partners (HEAT Invention GmbH, Ministry of transportation, Customs Committee, Uzstandart, Uzeltexsanoat, Ministry of Ecology) on National Cooling Action Plan aiming at improving energy efficiency and reducing greenhouse emissions (July 2022)</p> <p>Networking with Tashkent State Technical University to successfully implement education grant contest among women students in technical faculty and hold award ceremonies at World Ozone Day event (Sept.2022) Report uploaded #23, p1-2);</p> <p>Networking with representatives from the Legislative Chamber of Oliy Majlis, the Ecological Party of Uzbekistan and the Ministry of Ecology on measures implemented in Uzbekistan, within the framework of the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol. (Sept.2022);</p> <p>- Networking with RAC technicians and specialists via capacity-building trainings in all 14 regions of Uzbekistan, 342 participants including 11 women.</p> <p>-Networking meeting held with the occasion of Environment Day at Ministry of Ecology where Europe and Central Asia Montreal Protocol Award for Customs and Enforcement Officers (5th edition) medals and certificates awarded and also representatives from UNDP, Customs Committee, GIZ, GGGI, and UNECE were introduced to the concept of newly re-structured Ministry of Ecology.</p>
3.2: Resource mobilization to increase the application of advanced technologies in the RAC sector	<p>- A comprehensive resource mobilization strategy developed and presented with at least 1 donor engaged in technical assistance and/or provided loan to</p>	<p><b>Completed</b></p> <p>- A comprehensive resource mobilization strategy for RAC sector has been developed by the project with a potential list of donors regionally and globally based which can support a low-carbon technological transition in Uzbekistan.</p> <p>One organization is engaged with the new financial mechanisms (public sector funding sources): Jizzakh Regional</p>



ensured.	<p>increase the application of advanced technologies in the RAC sector;</p> <ul style="list-style-type: none"> <li>- Awareness raising campaign in the RAC industry organized to establish partnerships between the industry and the financial mechanisms;</li> <li>- At least, 2 enterprises engage with the new financial mechanisms (bilateral, international, or private sector funding sources) during the project duration</li> </ul>	<p>State Administration (Khakimiyat) allocated 1 billion UZS (about USD 89,206 – UNORE May 2022) for implementation of advanced RAC technology (energy-efficient, ozone-friendly and low-GWP) in Jizzakh branch of the Republican Research Center for Emergency Medicine showcasing that the Government/local authorities can allocate funds upon request for renovation of air-conditioning system in public buildings.</p> <p>In addition, the second (2) organization is engaged with the new financial mechanisms (private sector funding sources with international grant contributions): Agricultural Cooperative “Valley Fruits” allocated 16.3 billion UZS (about USD 1,454,190 – UNORE December 2022) including GIZ contribution of USD 430,000 for implementation of fruits processing equipment.</p> <p>The last mechanism that was tested within implementation of ozone-friendly, energy efficient technology with low GWP in farming enterprise "Seit Sharwa" (Takhtakupir district, Karakalpakstan) by support of UNDP project “Towards Green Recovery in Uzbekistan” for the total amount of \$76,058: \$44,710 contributed by the farming enterprise, the rest (\$31,348) by the project.</p> <p>In addition, the following funding are attracted:</p> <ul style="list-style-type: none"> <li>(i) to strengthen the institutional capacity of the state - USD 12,000 by UNODC to support the initiative of the State Customs Committee for ISO 17025 certification (2021) for customs laboratory to enable the application of internationally recognized methodology for ODS/ODS alternatives analysis (2021).</li> <li>(ii) USD 7,500 allocated by UNECE for a case study on potential for improving energy efficiency in the refrigeration and air conditioning sector in Uzbekistan (2021-2022) to showcase potential of energy saving in RAC sector of Uzbekistan.</li> <li>(iii) Acted as a liaison in the allocation of funds: USD 96,800 from the UNDP Regional project “Enhancing access to climate finance in the ECIS region” and USD 6,855 from the UNDP project “Towards Green Recovery in Uzbekistan” for the development of National Cooling Action Plan for Uzbekistan which is in line with developed comprehensive resource mobilization strategy for RAC sector (2021). This will increase the ambition level in the NDC documentation and highlight importance of low GWP transition in sustainable cooling concepts to the economy of the country.</li> </ul>
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#### Component 4. Gender Mainstreaming and Monitoring & Evaluation

OUTCOME	END OF PROJECT TARGETS	ACHIEVEMENT
4.1: Women’s role in the RAC sector strengthened and visible	<ul style="list-style-type: none"> <li>- At least one (1) comprehensive survey was conducted, and its results are available,</li> <li>- A road map on women’s involvement in the RAC sector developed.</li> </ul>	<p><b>Completed</b></p> <p>An online survey to identify barriers to gender aspects was conducted and roadmaps for use at national and project levels were developed. Based on the national level roadmap, gender mainstreaming to the RAC sector was added as an activity to the adopted Resolution of the Cabinet of Ministries of the Republic of Uzbekistan</p>

	<p>- At least two (2) partnership agreements signed and eight (8) joint activities with partners conducted.</p>	<p>(#126 dd 9.03.2021) on “National program on Complete ODS phase-out”.</p> <p>National program on Complete ODS phase-out serves as a foundation for partnership and collaboration for twelve (12) ministries/ agencies, association and public organizations.</p> <p>Following the National Program objectives, startup contest regulation (agreement) for gender mainstreaming in the RAC sector between UNDP, Ministry of Ecology and Mahalla(community), and Family Support Ministry (June 2021) was developed.</p> <p>The two end-project targets related to the comprehensive survey and its results; and road map on women`s involvement in the RAC sector achieved in the previous reporting periods.</p> <p>To date, in total twenty (20) partnership agreements have been signed.</p> <p>To date, in total eight (8) joint activities have been conducted.</p> <p>The training was conducted on the capacity development of women and girls in the RAC sector between October 2022 and March 2023. In total, 11 women out of 342 participants took part in training and successfully received their certificates</p> <p>At the project level of the Road Map on gender mainstreaming in the RAC sector, a study tour and experience exchange event are proposed to be organized between the project`s women partners and foreign women technicians in the RAC sector. The necessary documentation for these activities is currently being developed.</p>
<p>4.2: Project monitoring and evaluation</p>	<p>- Regular monitoring and evaluation of the project activities and results conducted and presented during Project Board meetings, which are organized twice a year and serve as guidance to the project`s implementation plan;</p> <p>- By the end of the project, a terminal evaluation (TE) has been conducted, and its results and lessons learned have been made available to all relevant parties.</p> <p>- KM products prepared throughout the project implementation on its achievements to inform a wider audience in the country and in regional and international meetings;</p>	<p><b>Ongoing</b></p> <p>- Fourteen (14) monitoring visits to nine (9) regions of Uzbekistan were organized (May 2019- June 2021) and relevant results were presented during PB meetings for decision if and when needed.</p> <p>- The project conducted monitoring activities of seventy (70) projects partner public/private companies in eleven (11) regions (Republic of Karakalpakstan, Tashkent city, and Siydarya, Jizzakh, Samarkand, Kashkaryana, Surkhandarya, Bukhara, Navoiy, Khoresm and Tashkent regions) of Uzbekistan during October 2021 - June 2022.</p> <p>Monitoring new partner RAC companies to transfer supplied instruments and tools for their permanent use. Terminal Evaluation and its results and lessons learned will be made available to all relevant parties.</p>

The remaining tasks that need to be completed before project closure are as follows.



No	Plans for the next 6 months
<b>Component 1</b>	
1	Organization an online training for customs officers on the proper use of refrigerant identifiers
2	Organization of training of the State Customs Committee officers on ISO at a qualified international laboratory/center
<b>Component 2</b>	
3	Implementation of 6 <sup>th</sup> demo project
4	Engagement of a company /institution for the development of Social and Environmental Screening Procedure (SESP) on Demo Projects (RLA/IC)
5	Participation in networking and experience exchange meetings with foreign counterparts including from the CEIT region
<b>Component 3</b>	
6	Organization of public events devoted to the International Day for the Preservation of the Ozone Layer (at least 30% women)
7	Launch one study on learning from outreach activities in other regions and apply best practices in Uzbekistan (CEIT or other regional or bilateral meetings)
8	Information tour for journalists from different media channels
9	Summer school for the representatives of the State Customs Committee and the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection
<b>Component 4</b>	
10	Assessment of refrigerant collection by RAC companies via <a href="http://www.report.o3.uz">www.report.o3.uz</a>
11	Evaluation of RAC/public and private enterprises, reclaim/recycle centers, and transfer of granted instruments and tools
12	Business training for RAC enterprises including four gender mainstreaming companies for further advancing business in RAC sector.

**The extent to which the project contributed to the country programme outcomes and outputs, the SDGs, the UNDP Strategic Plan, GEF strategic priorities, and national development priorities; and factors that contributed to the achieving or not achieving intended outcomes and outputs.**

The Project objectives are fully in line with the national development priorities and commitments as it relates to ODS management and addressing climate change risks. The Project's contribution to the global reduction of ODS and GHG emissions, input to the overall socio-economic development, and implementation of innovations in Uzbekistan demonstrates the high extent to which the Project is appropriately responsive to political, legal, socioeconomic, and institutional changes in the country. This project will positively contribute to the Sustainable Development Goals (SDGs), as indicated in the Project's Theory of Change.

The project is well aligned with UNDP priorities in Uzbekistan. This project contributed to the country outcome included in the UNDAF/Country Programme Document: UNDAF OUTCOME #6: rural population benefit from sustainable management of natural resources and resilience to disasters and climate change.

This project will be linked to the following output of the UNDP Strategic Plan: SP Outcome 5: Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change.

The main factors contributing to the intended outcomes were positive working relationships between stakeholders and partnership with the Ministry of Environment which acts as an enforcement authority.

- **Areas in which the project had the greatest and fewest achievements, and the contributing factors.**

The greatest and fewest achievements are indicated in the tables above. Most of the outcomes were completed and exceeded. The main factors contributing to the intended outcomes were positive working relationships between stakeholders and partnership with the Ministry of Environment which acts as an enforcement authority.

- **Constraining factors, such as socio-economic, political, and environmental risks; cultural and religious festivals, etc., and how they were overcome.**

TE Team did not find any constraining factors such as socio-economic, political, and environmental risks; or cultural and religious festivals, that substantially affected the Project performance.

- **Any alternative strategies that would have been more effective in achieving the project's objectives.**

TE Team did not find any alternative strategy that would have been more effective in achieving the project's objectives.

- **Gender**

- **The extent to which the project contributed to gender equality, the empowerment of women, and a human rights-based approach and the extent to which a gender-responsive and human rights-based approach was incorporated in the design and implementation of the intervention.**

Gender mainstreaming has been specifically addressed in the project component (Indicator 4.1 Engagement of women students to study RAC in the technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business). The Project has strategically engaged the Mahalla and Family Support Ministry and enhanced partnership between Tashkent Technical University and Monocenters to involve women into RAC activities, such as managing small business, consult clients, receive and record orders, maintain contact details, and office management.

The Project was largely able to achieve what it was intended to deliver. The review of project outcomes indicates that the Project has delivered most of its end-of-project targets. The Project management team used adaptive management extensively to provide flexibility in the project's approach by working with partners and related government institutions and adapting to changing conditions. Flexibility and adaptation were particularly critical for this project. As discussed in other parts of this report, the project is a clear response to national needs, and, with a significant engagement/participation of stakeholders in project activities, the Project demonstrated good national ownership.

The summary table for the Project's effectiveness is presented as follows. The overall rating of the Project's effectiveness is **Satisfactory (S)**.

COMPONENT	STATUS	RATING
<b>Component 1:</b> National legislation and capacity building of customs and enforcement officers on control of HCFC and ODS alternatives import/export.	Completed for all Outcomes, with no shortcomings	S
<b>Component 2:</b> Strengthening the HCFC reuse system; implementation of demonstration projects on HCFC replacement.	Completed for all and exceeded for some Outcomes, with no shortcomings	HS
<b>Component 3:</b> Outreach and Resource Mobilization.	Completed for all and exceeded for some Outcomes, with no shortcomings	HS
<b>Component 4:</b> Gender Mainstreaming and Monitoring & Evaluation	Completed and ongoing for Monitoring & Evaluation	S

Overall Project Effectiveness		S
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**Efficiency**

**• Resource allocation and cost-effectiveness.**

o Comparison of the project cost and time versus output/outcomes equation to that of similar projects. The Project’s cost and time can be loosely compared with those of Uzbekistan’s national component of the previously completed Regional project “Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region” (2013-2018) and “Complete HCFC Phase-Out in Tajikistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies” project (2018-2022). The Regional project was originally planned for 3 years (later extended for another 2 years) and included the GEF grant for Uzbekistan’s national component of approximately \$1.1 million US and realized co-financing of approximately \$3.8 million US. The scope of the regional project was similar to the Project in terms of the variety of its outcomes, but smaller in scale of the equipment procurement, training, and regulatory support. It appears that the Project’s cost is comparable to Uzbekistan’s national component of the previously completed regional project, considering that the Regional project did not have an awareness program and gender mainstreaming components.

The “Complete HCFC Phase-Out in Tajikistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies” project has a similar list of components and outcomes, but the HCFC reuse system and implementation of demonstration projects on HCFC replacement, and training was realized on a smaller scale compared to this project. Tajikistan’s project included the GEF grant of approximately \$1.24 million US and realized co-financing of approximately \$6.65 million US. It appears that the Project’s cost is comparable to Tajikistan’s project cost with a similar scope.

**o Costs of not providing resources for integrating gender equality and human rights (e.g. enhanced benefits that could have been achieved for modest investment).**

The Project has allocated resources for integrating gender equality and human rights through Component 4, Gender mainstreaming component (Indicator 4.1 Engagement of women students to study RAC in the technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business). The cost of this component accounts for approximately 30% of total budget including GEF grant, co-financing in-grant and in-kind contributions.

**o Provision of adequate resources for integrating gender equality and human rights in the project as an investment in short-term, medium-term, and long-term benefits.**

TE views the resources allocated for integrating gender equality and human rights in the Project as an investment with both short-term and medium-term benefits. In the immediate sense, this investment resulted in the training and certification of 70 women in the RAC sector, with two of them successfully securing employment in service companies. Furthermore, their participation in startup contests led to the establishment of new businesses within the RAC sector.

In the medium-term benefits are anticipated to include the development and implementation of a specialized curriculum for a 2-month training course aimed at attracting more women to become refrigeration technicians through vocational schools. As these trained women continue to contribute to the RAC sector through their employment and entrepreneurial endeavors, they not only achieve economic independence but also serve as role models and advocates for gender equality within their communities. This dual approach not only enhances individual opportunities but also fosters broader socio-economic development and promotes gender inclusivity in traditionally male-dominated sectors.

**o Extent to which the allocation of resources to targeted groups takes into account the need to prioritize those most marginalized.**

In Uzbekistan, while the education gap between males and females is small, traditional gender roles and norms persist, limiting women's access to resources and technical training needed for economic advancement. The allocation of resources in the RAC sector the Project effectively prioritized marginalized women: 171 women trained and received certificates, 6 secured employment in service companies. This success highlights the importance of inclusive projects that prioritize marginalized groups and can serve as a model for future projects.

**• Project management and timeliness:**

**o Extent to which the project management structure as outlined in the project document was efficient in generating the expected results.**

Even though it is always difficult to analyze the cost-benefit of projects that bring innovations and regulatory changes, the review of all management elements of the project confirm that the implementation of the project was an efficient operation that created a good value for the money spent. The prudent approach to engage project funds was translated into good value for money and the use of adaptive management allowed for the identification and implementation of activities that were responsive to the immediate needs of stakeholders, and the need to achieve expected results.

The Project has been efficiently implemented. The review of the management and partnership arrangements revealed that the project demonstrated significant collaboration with all key stakeholders with a highly involved participative approach through the Project Board meetings, as well as informal communications among partners. The project implementation team allocated project resources proactively and cautiously.

**o Extent to which project funds and activities were delivered on time.**

Due to the changes in the Project scope caused by Covid-19 pandemic, certain activities of Component 2 were postponed, and different arrangements were made for the delivery of the demo project equipment.

**o Extent to which M&E systems ensured effective and efficient project management.**

The review revealed that the project management team used adaptive management to secure project deliverables while maintaining adherence to the overall project design. Adaptive management have been used regularly to adapt to a constantly changing environment; particularly to adapt to several key changes/events including working with the new Government of Uzbekistan, implementing activities throughout the Covid-19 pandemic, and its recent implications. The project implementation team demonstrated its ability to adapt to a changing environment.

The project's efficiency was a result of well-managed day-to-day activities. Using a participative approach and transparent communication, project activities were implemented with a significant stakeholder's engagement and clear management procedures. The positive relationship between UNDP, the implementation team, and stakeholders contributed to efficient implementation.

The overall rating of the Project efficiency is **Satisfactory (S)**. The overall rating of the Project outcome is **Satisfactory (S)**.

## Overall Project Outcome

Assessment of Outcomes	Ratings
Relevance	HS
Effectiveness	S
Efficiency	S
Overall Project Outcome Rating	S

### **Sustainability: Financial, socio-political, institutional framework and governance, environmental, overall likelihood of sustainability**

#### Institutional framework and governance:

#### **o Do the legal frameworks, policies, governance structures, and processes pose any threat to the continuation of project benefits?**

The TE Team did not find any threats from legal frameworks, policies, governance structures, and processes to the continuation of project benefits.

#### **o How has the project developed appropriate institutional capacity (systems, structures, staff, expertise, etc.) that will be self-sufficient after the project closure date?**

The ODS management legislation, supported by the Project, has been implemented and enforced in Uzbekistan by the Government. It appears to be sustainable and will likely last for the foreseeable future.

#### **o How has the project identified and involved champions (i.e. individuals in government and civil society) who can promote the sustainability of project outcomes?**

Several enthusiastic representatives from the government and civil society, who can promote the sustainability of project outcomes, have been identified during the project planning phase and involved in the project implementation. These individuals participated in the previously completed regional project and were also engaged through the personal and professional networks of the Project manager and Technical coordinator.

#### **o Has the project achieved stakeholders' (including government stakeholders') consensus regarding courses of action on project activities after the project's closure date?**

The project achieved stakeholders' consensus regarding courses of action on project activities after the project's closure date. The informal interviews with the stakeholders during the TE mission confirmed the same.

#### **o Does the project leadership have the ability to respond to future institutional and governance changes (i.e. foreseeable changes to local or national political leadership)? Can the project strategies effectively be incorporated/mainstreamed into future planning?**

Based on the observations made during the TE mission, it appears that the project leadership has the ability to respond to future institutional and governance changes. Project strategies can be effectively incorporated/mainstreamed into future planning. However, it must be noted that financial support of the new demo-projects is limited and the project strategy may need an additional funding in the future.

#### **o Is the institutional change conducive to systematically addressing gender equality and human rights concerns?**

The institutional changes introduced by the Project are generally gender-neutral, except for the women's education and professional training in the RAC sector. Gender equality has been

specifically addressed in the project component (Indicator 4.1 Engagement of women students to study RAC in the technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business).

Rating of institutional framework and governance sustainability: **Likely (L)**.

Financial sustainability:

**o What additional factors are needed to create an enabling environment for continued financing?**

The sustainability of the activities and practices of HCFC management in the RAC sector appears to be solid in Uzbekistan. The HCFC reclamation centers received modern equipment and have been provided with the necessary training to use it. The sustainability of the zero-ODS technology demonstration sub-projects in the institutions of public sector needs further support. The demo projects were only recently completed. After the project end and with no external funding available, the governmental financial resources allocated to the RAC sector may be limited.

**o Has there been the establishment of financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (i.e. from the public and private sectors, income generating activities, and market transformations to promote the project's objectives)?**

The Project documents and interviews with the key stakeholders and beneficiaries demonstrate to a certain degree ability to sustain the progress in implementation of zero ODS, low GWP, energy-efficient technologies in Uzbekistan without external financing.

The financial sustainability is rated as **Moderately Likely (ML)**.

Socio-Political sustainability:

**o What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?**

There is only a minor risk to sustainability from the socio-political perspective. Uzbekistan has signed all amendments to the Montreal Protocol except the Kigali Amendment and has expressed its strong commitment to the HCFC phase-out schedules.

**o Is there sufficient public/ stakeholder awareness in support of the long-term objectives of the project?**

Component 3 of the Project specifically addresses public awareness activities. Numerous activities were conducted (see Section on effectiveness) to ensure public support of the Ozone layer protection.

**o Are lessons learned being documented by the Project Team continually?**

TE Team did not find records proving that the Project Team documents lessons learned continually. The Project Implementation Reports, however, include a discussion on lessons learned.

**o Are the project's successful aspects being transferred to appropriate parties, potential future beneficiaries, and others who could learn from the project and potentially replicate and/or scale it in the future?**

The ODS reclamation centers received modern equipment and have been provided the necessary training to use it. All technical specifications and estimation documents developed by the Project will be transferred to potential beneficiary organizations.

An online reporting system for capacity development has been launched and operationalized, and it will be transferred to the Ministry of Ecology. Additionally, an e-learning platform on RAC has been developed and will also be transferred to the Ministry of Ecology.

**o Indicate whether the gender results achieved are short-term or long term.**

The gender results achieved by the project, specifically through initiatives like the "Best Women Startup" competition, scholarships for female students in the RAC sector, and training programs, are viewed as both short-term and medium-term successes.

In the short-term, immediate impacts include the completion of training programs by women in the RAC sector and the establishment of startup businesses. These activities directly empower women by enhancing their skills and providing them with tools and resources to enter and thrive in traditionally male-dominated fields.

Medium-term impacts are anticipated as these trained women continue to contribute to the RAC sector workforce and business community. By securing employment and launching their own businesses, these women not only achieve economic independence but also serve as role models and advocates for gender equality within their communities. Their continued participation and success in the sector can potentially inspire more women to pursue similar opportunities in the future, thereby fostering sustainable gender inclusion and empowerment.

There is only a minor risk to sustainability from the socio-political perspective. Uzbekistan has signed all amendments of the Montreal Protocol except the Kigali Amendment and has expressed its strong commitment to the HCFC phase-out schedules.

Rating of socio-political sustainability is **Likely (L)**.

**Environmental sustainability:**

The TE team did not find any environmental factors that could substantially undermine the future flow of project environmental benefits. There is a minor risk to the sustainability of the Project from the environmental and political perspectives since Uzbekistan has signed all amendments of MP except the Kigali Amendment and has expressed its strong commitment to the HCFC phase-out schedules. There still is a moderate risk of environmental hazard associated with the disposition of obsolete ODS and management of toxic, flammable or high-pressure substances that may potentially result in adverse emergency situations. Proper training in the handling of such refrigerants substantially mitigates the noted risks.

The TE team did not find any current routine activities in the project area that pose a threat to the sustainability of project outcomes.

Rating of environmental sustainability is **Likely (L)**

The overall Project sustainability is rated as **Moderately Likely (ML)**.

Sustainability	Rating
Financial resources	ML
Socio-political	L
Institutional framework and governance	L



Environmental	L
Overall Likelihood of Sustainability	ML

### Country ownership

- **Did the project concept have its origin within the national sectoral and development plans?**

Uzbekistan’s National Development Strategy, along with the principles of industrialism and innovation, highlights the principle of prevention or reduction of vulnerability of future sustainable development as a first step. The Project’s contribution to the global reduction of ODS and GHG emissions, input to the overall socioeconomic development and implementation of innovations clearly demonstrates the high extent to which the Project is appropriately responsive to political, legal, socioeconomic, and institutional changes in the country.

- **Have outcomes (or potential outcomes) from the project have been incorporated into the national sectoral and development plans?**

The TE team did not find any direct evidence of incorporating project outcomes into the national sectoral and development plans.

- **Are relevant country representatives (e.g., governmental officials, civil society, etc.) actively involved in project identification, planning and/or implementation?**

The Ministry of Environment is the implementing partner of the project and plays a very important role in coordinating activities with state entities and other institutions. With the incorporation of these actors in the Project Board, the integration of actors in decision-making and approval of strategies for ODS management issues was achieved.

The Government agencies participated through coordination with the Project Board in the planning of consultancies, procurement of equipment, public awareness campaigns, and in the development of pilot projects.

The Project Board was composed of a broad representation of stakeholders involved in HCFC management, including government representatives, development partners, NGOs and academia, and the private sector. The Board provided a platform for key stakeholders to meet, debate, adjust, and decide the way forward on technical aspects of the implementation. This involved participation of stakeholders has been critical and is a positive sign of good ownership despite challenges occurring during the implementation stage.

**It is expected that this involved country ownership will contribute to the long-term sustainability of project achievements.**

- **Has the recipient government maintained financial commitment to the project?**

The Government of Uzbekistan maintained their financial commitments to the Project by providing co-financing in grants and in-kind as planned.

- **Has the government approved policies and/or modified regulatory frameworks in line with the project’s objectives?**

The Ministry of Environment provided regulatory support and endorsement to the Project. They also took a leading role in public outreach, education, implementation of MP, development of relevant by-laws, and other Project activities regularly.

The project has addressed key national needs to improve the management of HCFC. It was designed based on a thorough review of lessons learned from previous projects related to the reform of the RAC sector. It has been implemented through a participative approach that engaged stakeholders all the way from the design of project activities to their implementation.



## **Gender equality and women's empowerment**

- **Discuss how effective the project was in contributing to gender equality and women's empowerment.**

Gender mainstreaming has been systematically incorporated as a priority across all project components, with Component 4 specifically dedicated to gender mainstreaming. Indicator 4.1 highlights initiatives to engage female students in studying RAC within technical and vocational education institutions. Additionally, the Project has established partnerships to facilitate the involvement of women in small businesses related to RAC. These efforts emphasize the Project's commitment to promoting gender equality by creating educational and entrepreneurial opportunities in sectors traditionally dominated by men.

The project initiated the "Best Women Startup" competition targeting women in the RAC sector across Fergana, Gulistan, Bukhara, and Tashkent cities. Prior to the startup contest, over 70 women and girls successfully completed RAC and business planning trainings facilitated by the Project. Out of 45 applicants, four women were selected as winners. The Project provided these winners with the necessary instruments and tools to kickstart their RAC sector businesses in the mentioned cities.

The Project has awarded 3 scholarships to female students pursuing bachelor's degrees in the RAC sector. Additionally, to date, two women have successfully completed trainings: one of them has completed basic training, while the other has completed advanced level training at RAC training centers in three regions (Fergana, Sirdarya, and Bukhara) under the Monomarkaz professional education center. Subsequently, they were employed in relevant roles within the sector.

The Project has strategically engaged the Ministry for Mahalla and Family Support and enhanced its partnership with the Tashkent Technical University to involve women in RAC activities, such as managing small businesses, consulting clients, receiving and recording orders, maintaining contact details, and office management. TE Team does not have any comparable data to further discuss the effectiveness of the outcome, though it appears delivering short-term and medium-term results.

- **Describe how gender results advanced or contributed to the project's environment, climate and/or resilience outcomes.**

Professional involvement of women in the RAC sector generally contributed to the project's climate risk-related outcomes.

- **Indicate whether the gender results achieved are short-term or long-term.**

The gender results achieved by the project, specifically through initiatives like the "Best Women Startup" competition, scholarships for female students in the RAC sector, and training programs, are viewed as both short-term and medium-term successes.

In the short-term, immediate impacts include the completion of training programs by women in the RAC sector and the establishment of startup businesses. These activities directly empower women by enhancing their skills and providing them with tools and resources to enter and thrive in traditionally male-dominated fields.

Medium-term impacts are anticipated as these trained women continue to contribute to the RAC sector workforce and business community. By securing employment and launching their own businesses, these women not only achieve economic independence but also serve as role models and advocates for gender equality within their communities. Their continued participation and success in the sector can potentially inspire more women to pursue similar opportunities in the future, thereby fostering sustainable gender inclusion and empowerment.

- **Is there any potential negative impact on gender equality and women's empowerment? If so, what can be done to mitigate this?**

TE Team has not identified any potential negative impact on gender equality and women's empowerment

• **Indicate which of the following results areas the project contributed to (indicate as many results areas as applicable and describe the specific results that were attributed to the project):**

- Contributing to closing gender gaps in access to and control over educational resources;
- Targeting socio-economic benefits and services for women.

#### **Cross-cutting Issues**

• **Whether project outcomes have contributed to better preparations to cope with disasters or mitigate risk, and/or addressed climate change mitigation and adaptation, as relevant**

The Project is well aligned with UNDP sustainable development goals: **SDG#5**. Gender equality, **SDG#8**. Good jobs and economic growth, **SDG#9**. Innovation and infrastructure, **SDG#12**. Responsible consumption, and **SDG#13**. Climate action. Reducing GHG emissions by introducing the best available technologies (zero-ODS and low GWP) to substitute HCFCs, directly addresses climate change mitigation.

• **The extent to which poor, Indigenous, persons with disabilities, women, and other disadvantaged or marginalized groups benefited from the project.**

The Project has provided resources for integrating gender equality and human rights. Gender mainstreaming has been specifically addressed in the project component (Indicator 4.1 Engagement of women students to study RAC in the technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business).

• **Poverty-environment nexus: how the environmental conservation activities of the project contributed to poverty reduction and sustaining livelihoods**

The Project positively affects income generation and job creation, improves general natural resource management arrangements, improves policy frameworks for resource allocation and distribution, and promotes regeneration of natural resources for long-term sustainability.

• **The extent to which the project contributed to a human rights-based approach**

The Project's overall objective is to ensure protection of human health and the environment through sound management of HCFCs and their zero-ODS and low GWP substitutes in Uzbekistan. In particular, the project strives to achieve environmental sustainability through:

- Enhancing the national capacity to phase out HCFCs through strengthening of associated regulatory frameworks, solid capacity building, and re-tooling/infrastructure improvements in the country's relevant sectors.
- Introducing the best available technologies (zero-ODS and low GWP) to substitute HCFCs.

#### **GEF Additionality**

• **Are the outcomes related to the incremental reasoning?**

o **Are there quality quantitative and verifiable data demonstrating the incremental environmental benefits?**

With the help of the Project, Uzbekistan has been able to comply with its MP commitment of achieving 99.5% HCFC phase-out by January 1, 2020, and further strengthen the capacity to phase out the HCFC service tail of 0.5% by 2030 or earlier. This is the most direct, quantitative, and verifiable data demonstrating the incremental environmental benefits associated with this Project.

**o Do self-evaluations provide evidence of the outcomes achieved in creating a more supportive environment as envisaged at the endorsement stage?**

Demonstration of the incremental environmental benefits – sequential reduction of the HCFC emissions to the prescribed level and complete phase-out. The outcome has been achieved by creating a more supportive environment as envisioned at the endorsement stage.

**• Can the outcomes be attributed to the GEF contribution as originally anticipated?**

**o Do monitoring and evaluation documents provide evidence of the causality between the rationale for GEF involvement and the incremental environmental and other benefits directly associated with the GEF-supported project?**

The monitoring and evaluation documents provide evidence of the causality between the rationale for GEF involvement, and the incremental environmental and other benefits directly associated with the GEF-supported project since the ultimate objective of the Project is to ensure the protection of human health and the environment through sound management of HCFCs and their zero-ODS and low GWP substitutes in Uzbekistan has been achieved.

**• Are the outcomes sustainable?**

**o Is there evidence that project outcomes, both environmental and otherwise, are likely to be sustained beyond the project end?**

The outcomes appear sustainable and will last beyond the project's end. Please see the Sustainability section for the discussion on evidence that the Project outcomes will be sustained beyond the project end.

**o If broader impact was anticipated, is there evidence at the completion stage that such a broadening is beginning to occur, or actions towards the broadening have been taken?**

The broader impact of the Project has not been anticipated.

The table below describes how the Project fits within the areas of GEF's additionality.

<b>GEF's Additionality</b>	<b>Description</b>	<b>Project Features</b>
Specific Environmental Additionality	The GEF provides a wide range of value-added interventions/services to achieve Global Environmental Benefits (e.g. CO2 reduction, Reduction/avoidance of emission of POPs).	The Project has contributed to progress toward reducing environmental stress and improving the ecological status of Uzbekistan. Reducing GHG emissions and phasing out ODS contributes to global efforts to protect the ozone layer of our planet and mitigate climate change risk.
Legal/Regulatory Additionality	The GEF helps stakeholders transformational change to environment-sustainable legal /regulatory forms.	The Project facilitates the implementation of national legislation and strengthens the capacity of customs and enforcement officers to control HCFC/ODS alternative import/export.
Institutional Additionality/Governance additionality	The GEF provides support to the existing institution to transform into efficient / sustainable environment manner.	The Project provides support to the existing Governmental institutions to transform into efficient/ sustainable environment manner via access to training and knowledge dissemination.
Financial Additionality	The GEF provides an incremental cost which is associated with transforming a project with national/local benefits into one with global environmental benefits.	Reducing GHG emissions and phasing out ODS contributes to global efforts to protect the ozone layer of our planet and mitigate climate change risk.
Socio-Economic Additionality	The GEF helps society improve their livelihood and social benefits through GEF activities.	Through the implementation of pilots to show the success stories and the subsequent scaling up at the country level the project would generate socio-economic and

GEF's Additionality	Description	Project Features
		environmental improvements, improve employment, and improve the health impact of workers linked to the sectors of intervention of this project. Changes to the regulatory framework will allow the generation of jobs associated with the management of ODS.
Innovation Additionality	The GEF provides efficient/sustainable technology and knowledge to overcome the existing social norm/barrier/practice for making a bankable project.	Demonstration of new technology including zero-ODS and low-global warming potential (GWP) energy-efficient cooling technologies in various sectors of the economy.

### Catalytic/Replication Effect

The Initial and Current Projects contributed substantially to the capacity development of ODS management in Uzbekistan. Training, awareness, new equipment, and demo projects were co-financed by various stakeholders, government organizations and private sector. The co-financing acceded direct contribution from GEF which served as a catalyst in ODS management progress. Consultations on Kigali Amendment to MP were launched with the governmental stakeholders to eventually ensure its ratification. The progress in updating proves that the project outcome contributes to regulatory development that become **widely accepted and legally required**.

The catalytic role of the Project may also be associated with the promotion of zero ODS, low GWP, Energy Efficient Technologies, and the development and implementation of this innovation in Uzbekistan and neighboring countries. The Project helped with a study on ODS alternatives including natural refrigerants and HFCs. Implementation of the natural cooling demonstration projects can be replicated, as its results are useful in convincing other countries to follow such approaches. This proves that the project outcomes also catalyze the public goods through **successful demonstration of new technologies and approaches, information dissemination, and training**.

The Project lessons learned, exit strategy, as well as scalability or replication of project outcomes, are discussed in the next section. The assessment of knowledge management, lessons, best practices and sharing to inform new GEF project/programme design and scale up/replication are briefly discussed in the next section. The Project lessons and experience, as recommended by the TE team, will be shared with UNDP staff at the UNDP regional workshop with a presentation of the achievements of the Project and the way forward in 2024-2025.

The TE team did not find any project achievements that are contingent on specific local context or enabling environment factors.

### Progress to Impact

The Project has enabled Uzbekistan to achieve most of its intended outputs in ODS management. The compliance with MP in phasing out the HCFC is directly linked to Project outcomes. The Project facilitated the adoption of legal and regulatory acts on ODS management, the improved supply of equipment for ODS detection and recycling, as well as training and increased awareness among its stakeholders, RAC professionals, and the general public. All of this contributed to progress toward reducing environmental stress and improving the ecological status of Uzbekistan. The project has demonstrated the following results, which have direct causal links to the Project outcomes:

1. Promoted policies and programs aimed at achieving 99.5% HCFC phase-out by 2020 and

- remaining servicing tail by 2030 or earlier.
2. Accelerated Uzbekistan's contribution to the global efforts for the Ozone Layer protection.
  3. Demonstrated new approaches to reduce the introduction of high-GWP technologies in the process of HCFC phase-out and reduce negative impacts on the global environment.
  4. Solidified national capacity to introduce and safely manage HCFC-free and more energy-efficient RAC technologies, and further strengthen RAC business operations in various economic sectors, with promotion of women's participation in such economic activities.

The direct impact of the project is that Uzbekistan complies with the MP obligations related to HCFC for 2018 - 2021 and eventually accelerate the phase-out earlier than MP requirements.

The direct changes, introduced by the Project in ODS management in Uzbekistan are taking place immediately at the country level. The medium-term impacts related to capacity development and the introduction of new technologies will have long-lasting effects in the professional circles of the RAC industry, will improve of Customs capacity on import control of ODS. The compliance with MP obligations will likely be permanent for Uzbekistan since the HCFC phase-out process demonstrated good results and scaling up of the pilot projects appears feasible condition to financial resources availability.

The TE team did not find any substantial unintended impacts of the Project.

The financial sustainability of the implementation of the new technologies in the RAC sector is the main barrier that may prevent further progress towards long-term impact.

The Project encouraged enrollment of women into RAC-related technical and vocational education by awarding three scholarships to female students in bachelor's degree program in the RAC sector.

## 5. Main Findings, Conclusions, Recommendations & Lessons Learned

### Main Findings

The review of project outcomes indicates that the Project has delivered most of its end-of-project targets. The risks identified at the project design phase did not adversely affect the project implementation. However, the Covid-19 Pandemic, an unexpected risk, led to the delay of some of the activities, particularly face-to-face workshops, which were not feasible due to government-imposed restrictions. This restriction limited the development of the pilot projects and affected the achievement of the established objectives.

The Project carried out a specific, complete, and comprehensive Gender Analysis and Action Plan, which focused on access to education in RAC management. The specific Component included activities raising awareness, targeted specifically at women. The Project actively promoted the enrollment of women into RAC-related technical and vocational education through introduction of scholarships for more than 7 women.

In a cross-cutting manner, activities related to strengthening national policies and institutional capacities for the sound management of ODS were addressed by Components 1-3. By bringing investments in the RAC sector, the project has generated a positive economic impact, reduced the risk of ODS emission into the atmosphere, and built capacity through pilot projects. These efforts collectively enhance the living conditions of populations, including vulnerable groups, such as the underprivileged, women and marginalized groups, major workers in the formal industry and the informal RAC sector, surrounding communities, and globally.

One outcome was delayed but the equipment installation was completed before the end of the TE. The Project management team used adaptive management to provide flexibility in the project's approach working with partners and related government institutions and adapting to changing conditions. Flexibility and adaptation were particularly critical for this Project since it had to adjust to government reorganizations and restrictions related to Covid-19 pandemic. The project has effectively addressed national needs and, with a significant stakeholder engagement in project activities, demonstrated a positive national ownership strategy.

### Conclusions

This is a successful project and at the time of TE, it has reached most of its objectives, completed or exceeded most of its expected outcomes, and has an optimistic perspective to sustain its impact on ODS management in Uzbekistan in the foreseeable future.

1. **Relevance:** The Project is evaluated as relevant to the main objectives of the GEF Focal area and the environment and development priorities of Uzbekistan at the local, regional, and national levels. It provided necessary funding, guidance, and staff support to the Ministry of Environment to comply with the MP obligations. The Project is highly relevant to Uzbekistan's context and its aim to fulfill the country's obligations under the MP.
2. **Project Design:** The Project has been designed and built using the experience and knowledge gained from the GEF-UNDP FSP regional project "*Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region*" (2013-2018) which enhanced national

capacity and provided technical support to the adoption of the HCFC phase-out strategy. It strengthens Uzbekistan's national capacity to control HCFC import and transit, improve licensing systems, and introduce HCFC monitoring. It provided support in capacity development in the State Customs Service to allow effective monitoring of HCFC imports and end-use.

3. **Project Implementation:** The Project implementation has been constrained by a range of challenges beyond the Project's control, such as the change in the geo-political environment in Uzbekistan and the Covid-19 pandemic.
  - The Covid-19 pandemic has impacted the overall project implementation and travel restrictions, which put limitations on the organization and procurement of the RAC and special equipment. Covid-19 impacted key economy sectors resulting in a slowdown, which caused an uncertainty and delay in previously committed co-financing and investments from private industry to procure environmentally friendly and energy-efficient equipment.
4. **Effectiveness.** The overall effectiveness of the Project was affected by the Covid-19 pandemic, creating delays in the completion of the project objectives. Notwithstanding the challenges, there has been a significant level of completion of project activities and outputs. Most of the components were completed and the results have exceeded expectations. The demonstration of energy-efficient refrigerant technologies with zero ODS and low GWP has been completed before the end of TE.
5. **Efficiency.** With most of the Project components completed and/or exceeding expectations, the implementation challenges mentioned above have adversely affected the overall efficiency of the Project. The Project team, however, managed the challenges adequately and proactively.
6. **Progress to Impact.** The Project has enabled Uzbekistan to achieve most of its intended outputs. These included the adoption of legal and regulatory acts on ODS management, the increase in the supply of equipment for ODS detection and recycling, the implementation of training, and increased awareness among its stakeholders, RAC professionals, and the general public. The Project has contributed to progress toward reducing environmental stress and improving the ecological status of Uzbekistan.
7. **Sustainability:** Overall, the project had registered good results in sustainability, regarding financial, socio-political, institutional framework and governance, and environmental aspects. The ODS management legislation, supported by the Project, has been implemented and enforced in Uzbekistan by the Government. It appears to be sustainable and will likely last for the foreseeable future. The ODS reclamation centers received modern equipment and have been provided the necessary training to use it.

With these and other potential opportunities in green energy development and climate change mitigation of the GEF focal area, there may be opportunities to sustain and scale up the project achievements in the future. The implementation of the project outcomes at socially important objects such as the Republican Research Center for Emergency Medicine in Jizzakh and the community refrigerator in the Kanlykol district of the Republic of Karakalpakstan offers hope that these examples of new technology will be financially supported and sustainable.

There is only a minor risk to the sustainability of the Project from the environmental and political perspectives as Uzbekistan has signed all amendments of the MP except the recent Kigali Amendment. This Amendment was developed to reduce environmental impacts from the substitution of ODS by ODS-free substances to mitigate global warming.



8. **Country ownership.** The Government of Uzbekistan has demonstrated strong ownership of the Project. This could be seen from the progress in implementation at the TE stage, at which time most of the project activities were completed. The project has addressed key national needs to improve the management of HCFC. It was designed based on a thorough review of previous GEF projects and included a response to several barriers, which have obstructed an effective reform of the RAC sector. It has been implemented through a participative approach engaging stakeholders all the way from the design of project activities to their implementation. The project partnered with numerous organizations including government entities, academia, NGOs, public organizations, and the private sector.
9. **Gender mainstreaming** has been specifically addressed in the project component (Indicator 4.1 Engagement of female students to study RAC in technical and vocational education institutions and partnerships with organizations to involve women in RAC-related small business).

### Recommendations and Lessons Learned

New recommendations are based on the review of project documents, interviews with key informants, and analysis of the information collected for this evaluation and are related to:

- Exploring potential partnership on green finance and GEF climate change mitigation focal area;
- Presentation of the Project achievements at the regional UNDP workshop;
- Plan to develop and replicate zero ODS, low GWP, energy-efficient technologies in Uzbekistan;
- Ensuring the availability of the Project documents and improvement of project controls.

### Recommendations: Summary Table

Rec#	TE Recommendations	Entity Responsible	Time Frame
<b>1</b>	<b>Presentation of the achievements of the project and the way forward</b>		
1.1	Participate in the UNDP regional workshop with a presentation on the project's achievements and the way forward	UNDP Uzbekistan, UNDP Istanbul Regional Hub	2024-2027
<b>2</b>	<b>Adaptation and Scale-up of zero ODS, low GWP, energy-efficient technologies in Uzbekistan</b>		
2.1	Provide best practices demo projects to develop and replicate zero ODS, low GWP, and energy-efficient technologies in Uzbekistan	UNDP Uzbekistan	2024-2025
<b>3</b>	<b>Availability of the reports produced by the project</b>		
3.1	Ensure that technical reports produced by the project are made available to the public after the end of the project	UNDP Uzbekistan	November 2024
<b>4</b>	<b>Transfer and support of online information on RAC</b>		
4.1	Learning system for technicians ready and supported	UNDP Uzbekistan, the Ministry of Ecology	November 2024
4.2	Reporting system on the use of refrigerants on the national level	UNDP Uzbekistan, the Ministry of Ecology	November 2024



4.3	Transfer of Knowledge Materials to national partners.	UNDP Uzbekistan, the Ministry of Ecology	November 2024
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The following **lessons** were **learned** from the Project:

- The Ministry of Ecology, as a partner of the Project, ensured due **leadership and political will** directed towards the completion of the Project objectives and outcomes.
- The project has successfully overcome the challenges of the Covid-19 pandemic through effective implementation of planning and **proactive professionalism** on the part of the Project Team.
- The **Tashkent Technical University** has demonstrated great potential for the introduction and implementation of training programs (**sustaining a knowledge base and applied practice**), **enthusing interests amongst young women** (gender mainstreaming), and can be recommended for other projects as a **key partner**.
- The RAC vocational training that was established and provided with equipment, tools, and instruments in the Fergana, Bukhara, and Sirdarya regions of Uzbekistan at “Monomarkaz” (**Monocenter**) professional education centers under the **Ministry of Employment and Poverty Reduction** can be recommended for other projects as a successful example of the training program development and implementation.
- As proposed by the RAC professional during the mission interview, the RAC training program may benefit from the inclusion of a short introductory course on small business management, marketing, finances, etc.
- It is necessary to increase the budget for the purchase of equipment in comparison with other budget items for the Project (**more hardware elements**).
- It is necessary to conduct training of personnel in the form of familiarization with **real work practices**.

## ANNEXES

Annex 1. TE Terms of reference

Annex 2. Mission Itinerary including field visits (approved at TE Inception Phase)

Annex 3. List of persons interviewed

Annex 4. List of documents reviewed

Annex 5. Evaluation question matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)

Annex 6. Questionnaire

Annex 7. TE Rating scales

Annex 8. Signed evaluation consultant Agreement and UNEG Code of Conduct form

Annex 9. Signed TE Report clearance form

Annex 10. Annexed in a separate file: TE Audit Trail

Annex 11. Annexed in a separate file: relevant terminal GEF Core Indicators and Tracking Tools

Annex 12. Annexed in a separate file: Confirmed Sources of Co-financing table

Annex 13. Annexed in a separate file: Management Response Table

## Annex 1. Terminal Evaluation: Terms of Reference

## Annex 2. Mission Itinerary including field visits (approved at TE Inception Phase)

### TENTATIVE MISSION AGENDA

of Mr. Alexandre Chaikine, International Terminal Evaluation Consultant, to Uzbekistan for evaluation of the joint project of the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan, UNDP and GEF "Complete HCFC Phase-out in Uzbekistan through Promotion of Zero-ODS Low-GWP Energy-Efficient Technologies"

Time	Action/Meeting	Venue	Responsible
<b>Monday 10, June</b>			
09:10 – 09:30	<b>Briefing with Anas Fayyad Qarman, UNDP RR a.i.</b>	UNDP country office	Project Manager, UNDP
09:30 – 10:00	<b>Meeting with UNDP ECA cluster and SPIU</b>	UNDP country office	Project Manager, UNDP
10:30 – 11:30	<b>Meeting with Mr. Jusipbek Kazbekov, Deputy Minister/ National Project Coordinator, Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan (Ministry of Ecology)</b> Discussion of joint project implementation and future opportunities	7A, Bunyodkor Ave., Chilanzar district, Tashkent	Project Manager, Ministry of Ecology
11:30 – 12:30	<b>Meeting with the representatives of Central Laboratory of Customs Committee under the Ministry of Economy and Finance of the Republic of Uzbekistan</b> Joint project activities with the Central Laboratory of Customs Committee	3, Islam Karimov street, Tashkent	Project Manager, UNDP
14:00 – 15:00	<b>Meeting with Tashkent State Technical University (TSTU) representatives</b> Familiarization with TSTU activities on gender mainstreaming and trainings	2, Universitet street, Tashkent city	Project Manager, UNDP
19:20 – 23:26	<b>Travel from Tashkent city to Bukhara city by train (Afrosiyob)</b>		Project Manager, UNDP
<b>Tuesday 11, June</b>			
09:00 – 10:00	<b>LLC "Injiningir Klimat Kontrol" (recycle center) in Bukhara city:</b> Meeting with the representatives of LLC "Injiningir Klimat Kontrol", familiarization with the recycle center's activities within joint project activities	5/1, Navoi street, Bukhara city	Project Manager, UNDP
10:30 – 12:00	<b>"Ishga Marhamat" Monocenter in Bukhara city:</b> Meeting with the representatives of "Ishga Marhamat" Monocenter, discussion of joint project activities	13, Piridastgir street, Bukhara city	Project Manager, UNDP
16:31 – 20:21	<b>Travel from Bukhara city to Djizzak city by train (Sharq)</b>		
<b>Wednesday 12, June</b>			
09:00 – 10:00	<b>Jizzakh Branch of the Republican Research Center for Emergency Medicine (RRCM)</b>	1, Shifokor street, Djizzak city	Project Manager, UNDP

Time	Action/Meeting	Venue	Responsible
	Meeting with the representatives of RRCEM, familiarization with joint demonstration project on replacement of ODS-based air-conditioning system to centralized energy efficient, ozone-friendly equipment with low-GWP		
10:00 – 11:30	<b>Travel from Djizzak city to Gulistan city by project car</b>		Project Manager, UNDP
11:00 – 13:00	<b>“Ishga Marhamat” Monocenter in Gulistan city:</b> Meeting with the representatives of “Ishga Marhamat” Monocenter, discussion of joint project activities	49, Xondamir street, Gulistan city	Project Manager, UNDP
14:30 – 17:00	<b>Travel from Gulistan city to Tashkent city by project car</b>		Project Manager, UNDP
<b>Thursday 13, June</b>			
07:15 – 08:55	<b>Travel from Tashkent city to Nukus city by air</b>		Project Manager, UNDP
10:00 – 11:00	<b>Travel from Nukus city to Kanlykol district by bus/minibus</b>		Project Manager, UNDP
11:00 – 13:00	<b>PE “Assel Lazzat”</b> Launching ceremony of a new demonstration project to replace HCFC-based refrigeration system with ozone-friendly, energy-efficient and low-GWP technology in the Kanlykol district of the Republic of Karakalpakstan;	Bekopir, Kanlykol district, Republic of Karakalpakstan	Project Manager, UNDP
15:00 – 16:00	<b>Travel from Kanlykol district to Nukus city by bus/minibus</b> Familiarization with the demonstration project – opening ceremony of renewed site.		Project Manager, UNDP
16:00 – 16:30	<b>Travel from Nukus city to Takhiatash district by car</b>		Project Manager, UNDP
16:30 – 17:30	<b>PE “Texno Servis Bra”:</b> Meeting with the representatives of PE «Texno Servis Bra» - Recycle and reclaim Center established within joint project	26, Ernestov street, Takhiatash district, The Republic of Karakalpakstan	Project Manager, UNDP
17:30 – 18:00	<b>Travel from Takhiatash district to Nukus city by car</b>		Project Manager, UNDP
22:30 – 23:50	<b>Travel from Nukus city to Tashkent city by air</b>		Project Manager, UNDP
<b>Friday 14, June</b>			
09:00 – 13:00	<b>Working at UNDP Country Office</b>	UNDP Country office	Project Manager, UNDP
15:00 – 16:00	<b>Debriefing with Anas Fayyad Qarman, UNDP RR a.i.</b>	UNDP country office	Project Manager, UNDP

### Annex 3. List of Persons Interviewed (Implemented)

**Note:** Semi-structured interviews, focus-group discussions, and field visits were conducted by the Evaluation Team Members – *Mr. Alexandre Chaikine*, Team Leader/International Consultant, and *Ms. Nargiza Kholmatova*, Team Member/National Consultant.

#	DATE/TIME	INTERVIEWEE / STAKEHOLDER	TE TEAM MEMBERS
1	30 May 2024  <u>Communication Mode:</u> <b>E-mail</b> Conférence call	<b>United Nations Development Programme</b> (UNDP), Istanbul Regional Hub Charlotte De Bruyne, Regional Technical Advisor, UNDP Istanbul Regional Hub Yeliz Oymen, UNDP Montreal Protocol Unit Programme Associate, UNDP Istanbul Regional Hub	Mr. Alexandre Chaikine, Team Leader/ International Consultant
2	10 June 2024 /  <u>Meeting Mode:</u> <b>In-Person</b> at UNDP Project Office  <u>Meeting Structure:</u> <b>Semi-Structured</b> Interview	<b>United Nations Development Programme</b> (UNDP) Project Team. UNDP/GEF “Complete HCFC Phase-out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies” Isroiljon Khasanov, Programme Analyst (Climate Change/Energy) Mukhammadjon Tursunov, Project Manager Elmurod Nazarov, Project Manager	Mr. Alexandre Chaikine, Team Leader/ International Consultant
3	10 June 2024 /  <u>Meeting Mode:</u> <b>In-Person</b> at UNDP Project Office <u>Meeting Structure:</u> <b>Semi-Structured</b> Interview	<b>The Ministry of Ecology</b> Jahangir Talipov, head of the international department	Mr. Alexandre Chaikine, Team Leader/ International Consultant  <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
4	10 June 2024 /  <u>Meeting Mode:</u> <b>In-Person</b> at UNDP <u>Meeting Structure:</u> <b>Semi-Structured</b> Interview	Meeting with the representatives of the <b>Central Laboratory of Customs Committee</b> under the Ministry of Economy and Finance of the Republic of Uzbekistan Mr. Otabek Khasanov, head of the department Mr. Bakhrom Daudov, head of the expert center of the laboratory Mr. Ravshan Ruziev, head of the custom center laboratory	Mr. Alexandre Chaikine, Team Leader/ International Consultant  <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
5	10 June 2024 /  <u>Meeting Mode:</u> <b>In-Person</b> <u>Meeting Structure:</u> <b>Focus Group Discussions (FGD)</b> with young female student and young female teacher.	Meeting with <b>Tashkent State Technical University</b> (TSTU) representatives Mr. Kurdatilla Karimov, Head of the RAC department.	Mr. Alexandre Chaikine, Team Leader/ International Consultant  <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
6	11 June 2024 /  <u>Meeting Mode:</u> <b>In-Person</b> at <u>Meeting Structure:</u>	LLC "Injiniring Klimat Kontrol" (recycle center) in Bukhara city: Meeting with the representatives of LLC "Injiniring Klimat Kontrol", familiarization with the recycle center's activities within	Mr. Alexandre Chaikine, Team Leader/ International Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov,

#	DATE/TIME	INTERVIEWEE / STAKEHOLDER	TE TEAM MEMBERS
	<b>Semi-Structured Interview</b>	joint project activities	Project Manager (UNDP)
7	11 June 2024  <u>Meeting Mode:</u> <b>In-Person</b> at the office of the company, <u>Meeting Structure:</u> <b>Semi-Structured Interview / Site Visit</b>	“Ishga Marhamat” Monocenter in Bukhara city: Meeting with the representatives of “Ishga Marhamat” Monocenter, discussion of joint project activities	Mr. Alexandre Chaikine, Team Leader/ International Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
8	12 June 2024  <u>Meeting Mode:</u> <b>In-Person</b> at the <u>Meeting Structure:</u> <b>Semi-Structured Interview / Site Visit</b>	Jizzakh Branch of the Republican Research Center for Emergency Medicine (RRCEM) Meeting with the representatives of RRCEM, familiarization with joint demonstration project on replacement of ODS-based air-conditioning system to centralized energy efficient, ozone-friendly equipment with low-GWP	Mr. Alexandre Chaikine, Team Leader/ International Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
9	12 June 2022 /  <u>Meeting Mode:</u> <b>In-Person,</b> <u>Meeting Structure:</u> <b>Semi-Structured Interview</b>	“Ishga Marhamat” Monocenter in Gulistan city: Meeting with the representatives of “Ishga Marhamat” Monocenter, discussion of joint project activities	Mr. Alexandre Chaikine, Team Leader/ International Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
10	13 June 2022 /  <u>Meeting Mode:</u> <b>In-Person</b> <u>Meeting Structure:</u> <b>Semi-Structured Interview</b>	PE “Assel Lazzat” Launching ceremony of a new demonstration project to replace HCFC-based refrigeration system with ozone-friendly, energy-efficient and low-GWP technology in the Kanlykol district of the Republic of Karakalpakstan	Mr. Alexandre Chaikine, Team Leader/ International Consultant, and Ms. Nargiza Kholmatova, Team Member/National Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)
11	13 June 2022 /  <u>Meeting Mode:</u> <b>In-Person</b> at the Office of the Customs Service Agency <u>Meeting Structure:</u> <b>Semi-Structured Interview</b>	PE “Texno Servis Bra”: Meeting with the representatives of PE «Texno Servis Bra» - Recycle and reclaim Center.	Mr. Alexandre Chaikine, Team Leader/ International Consultant, and Ms. Nargiza Kholmatova, Team Member/National Consultant <u>Accompanied by:</u> Mukhammadjon Tursunov, Project Manager (UNDP)

## Annex 4. List of Documents Reviewed

ITEM	
1	Project Identification Form (PIF)
2	UNDP Initiation Plan
3	Final UNDP-GEF Project Document with all annexes
4	CEO Endorsement Request
5	UNDP Social and Environmental Screening Procedure (SESP) and associated management plans (if any)
6	Inception Workshop Report
7	All Project Implementation Reports (PIRs)
8	Progress reports (quarterly, semi-annual or annual, with associated workplans and financial reports)
9	Oversight mission reports
10	Minutes of Project Board Meetings and of other meetings (i.e., Project Appraisal Committee meetings)
11	GEF Tracking Tools
12	GEF/LDCF/SCCF Core Indicators (from PIF, CEO Endorsement) for GEF-6 and GEF-7 projects only
13	Financial data, including actual expenditures by project outcome, including management costs, and including documentation of any significant budget revisions
14	Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures
15	Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.)
16	Sample of project communications materials
17	Summary list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants
18	List of contracts and procurement items over ~US\$5,000 (i.e. organizations or companies contracted for project outputs, etc.)
19	List of related projects/initiatives contributing to project objectives approved/started after GEF project approval (i.e., any leveraged or “catalytic” results)
20	UNDP Country Programme Document (CPD)
21	List/map of project sites, highlighting suggested visits
22	Project deliverables that provide documentary evidence of achievement
23	Terminal Evaluation of UNDP -GEF Project: "Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region" 2018
24	Mid Term Review of UNDP -GEF Project: “Initial Implementation of Accelerated HCFC Phase Out in the CEIT Region” 2016



## Annex 5. Evaluation Question Matrix

Evaluation Questions	Indicators	Sources	Data Collection Method
<b>Evaluation Criteria: Relevance</b>			
<b>How does the project relate to the main objectives of the GEF Focal area, and the environment and development priorities at the local, regional, and national levels?</b>			
Does the project's objective align with the priorities of the local government and local communities?	Level of coherence between project objectives and stated priorities of local stakeholders	Local stakeholders Document review of development strategies, policies, etc.	Local-level field visit interviews Desk review
Does the project's objective fit within the national environment and development priorities? Who are the main beneficiaries of the project and how does the project address their development needs?	Level of coherence between project objectives and national policy priorities and strategies, as stated in official documents	National policy documents.	Desk review National level interviews
Did the project concept originate from local or national stakeholders, and/or were relevant stakeholders sufficiently involved in project development?	Level of involvement of local and national stakeholders in project origination and development (number of meetings held, project development processes incorporating stakeholder input, etc.)	Project staff Local and national stakeholders Project documents	Field visit interviews Desk review
Does the project objective fit GEF's strategic priorities?	Level of coherence between project objective and GEF strategic priorities (including alignment of relevant focal area indicators)	GEF strategic priority documents for the period when the project was approved Current GEF strategic priority documents	Desk review
Was the project linked with and in line with UNDP priorities and strategies for the country?	Level of coherence between project objective and design with UNDAF, UNDP	UNDP strategic priority documents	Desk review
Does the project's objective support the implementation of the MP?	Linkages between project objective and elements of the MP, such as key articles and programs of work	National ODC Management Strategy and Action Plan	Desk review
<b>Evaluation Criteria: Efficiency</b>			
<b>Was the project implemented efficiently, in line with international and national norms and standards?</b>			
Is the project cost-effective? Has the project or programme been implemented within the original timeframe and budget? Have there been any outside factors (e.g. political instability) affecting implementation effectiveness?	Quality and adequacy of financial management procedures (in line with UNDP, UNOPS, and national policies, legislation, and procedures) Financial delivery rate vs. expected rate Management costs as a percentage of total costs	Project documents Project staff	Desk review Interviews with project staff
Are expenditures in line with international standards and norms? Has there been over-expenditure or under-expenditure on the project?	Cost of project inputs and outputs relative to norms and standards for donor projects in the country or region	Project documents Project staff	Desk review Interviews with project staff
Is the project implementation approach efficient for delivering the planned project results?	Adequacy of implementation structure and mechanisms for coordination and communication Planned and actual level of human resources available	Project documents National and local stakeholders Project staff	Desk review Interviews with project staff Interviews with national and local stakeholders

Evaluation Questions	Indicators	Sources	Data Collection Method
	Extent and quality of engagement with relevant partners/partnerships Quality and adequacy of project monitoring mechanisms (oversight bodies' input, quality and timeliness of reporting, etc.)		
Is the project implementation delayed? If so, has that affected cost-effectiveness? Have UNDP and its partners taken prompt actions to solve implementation issues, if any?	Project milestones in time Planned results affected by delays Required project adaptive management measures related to delays	Project documents Project staff	Desk review Interviews with project staff
What is the contribution of cash and in-kind co-financing to project implementation?	Level of cash and in-kind co-financing relative to expected level	Project documents Project staff	Desk review Interviews with project staff
To what extent is the project leveraging additional resources?	Amount of resources leveraged relative to project budget	Project documents Project staff	Desk review Interviews with project staff
<b>Evaluation Criteria: Effectiveness - To what extent have the expected outcomes and objectives of the project been achieved?</b>			
Are the project objectives likely to be met? To what extent are they likely to be met?	Level of progress toward project indicator targets relative to the expected level at the current point of implementation	Project documents Project staff Project stakeholders	Field visit interviews Desk review
What are the key factors contributing to project success or underachievement?	Level of documentation of and preparation for project risks, assumptions, and impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
What are the key risks and barriers that remain to achieve the project objective?	Presence, assessment of, and preparation for expected risks, assumptions, and impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are the key assumptions and impact drivers relevant to the achievement of global environmental benefits likely to be met?	Actions undertaken to address key assumptions and target impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
<b>Evaluation Criteria: Results To what extent are the project results achieved?</b>			
Have the planned outputs been produced? Have they contributed to the project outcomes and objectives? What were the unintended results (+ or -) of the project?	Level of project implementation progress relative to the expected level at the current stage of implementation Existence of logical linkages between project outputs and outcomes/impacts	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are the anticipated outcomes likely to be achieved? Are the outcomes likely to contribute to the achievement of the project objective?	The existence of logical linkages between project outcomes and impacts	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are impact-level results likely to be achieved? Are they likely to be at the scale sufficient to be considered global environmental benefits?	Environmental indicators Level of progress through the project's Theory of Change	Project documents Project staff Project stakeholders	Field visit interviews Desk review
<b>Evaluation Criteria: Sustainability To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results?</b>			
To what extent are project results likely to be dependent on continued financial support? What is the likelihood that any required financial resources will be available to sustain the project results once the GEF assistance ends?	Financial requirements for maintenance of project benefits Level of expected financial resources available to support maintenance of project benefits Potential for additional financial	Project documents Project staff Project stakeholders	Field visit interviews Desk review

<b>Evaluation Questions</b>	<b>Indicators</b>	<b>Sources</b>	<b>Data Collection Method</b>
	resources to support maintenance of project benefits		
Do relevant stakeholders have or are likely to achieve an adequate level of “ownership” of results, to have the interest in ensuring that project benefits are maintained?	Level of initiative and engagement of relevant stakeholders in project activities and results	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?	Level of technical capacity of relevant stakeholders relative to level required to sustain project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
To what extent are the project results dependent on socio- political factors?	Existence of socio- political risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
To what extent are the project results dependent on issues relating to institutional frameworks and governance?	Existence of institutional and governance risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are there any environmental risks that can undermine the future flow of project impacts and global environmental benefits?	Existence of environmental risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Does/did the project have an exit strategy? How does UNDP propose to exit from projects that have run for several years? To what extent does the exit strategy take into account: - support from national authorities - available budgets) - skills and expertise needed) - environmental sustainability)	Level of progress toward establishing the project exit strategy Results of various factors consideration	Project documents Project staff Project stakeholders	Desk review Interviews with project staff and stakeholders
What actions have been taken to scale up the project pilot initiatives? Has the government taken on these initiatives? Have donors stepped in to scale up initiatives?	Level of progress toward establishing the project pilot initiatives	Project documents Project staff Project stakeholders	Desk review Interviews with project staff and stakeholders
<b>Gender equality and women’s empowerment</b>			
<b>How did the project contribute to gender equality and women’s empowerment?</b>			
How did the project contribute to gender equality and women’s empowerment?	Level of progress of gender action plan and gender indicators in results framework	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
In what ways did the project’s gender results advance or contribute to the project’s outcomes?	Existence of logical linkages between gender results and project outcomes and impacts	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
To what extent was the UNDP initiative designed to appropriately incorporate in each outcome area contributions to the attainment of gender equality? To what extent did UNDP support positive changes in terms of gender equality and were there any unintended effects?  In what ways UNDP supported implementing and other partners to transform their policies, programmes, and services to advance gender equality and women empowerment	Level of initiative towards the attainment of gender equality in project activities	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
<b>Cross-cutting and UNDP Mainstreaming Issues</b>			
How were effects on local populations considered in project design and implementation?	Positive or negative effects of the project on local populations.	Project document, progress reports, monitoring reports	Desk review, interviews, field visits
<b>Covid-19 specific question: To what extent the pandemic Covid-19 impacted/ influenced the timely and quality implementation and achievement of the project activities/ results.</b>			

<b>Evaluation Questions</b>	<b>Indicators</b>	<b>Sources</b>	<b>Data Collection Method</b>
How were Covid-19 effects on project implementation considered?	Positive or negative effects of the Covid-19 on project.	Project document, progress reports, monitoring reports	Desk review, interviews, field visits
<b><i>Impact: Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status?</i></b>			
How were the effects on project implementation considered?	Positive or negative effects of the project outcomes on the environment	Project documents, progress reports, monitoring reports	Desk review, interviews, field visits
Which (if any) are still missing gaps between the project outcomes and realization of the expected impacts? Are the necessary conditions in place for enabling scaling up of outcomes into impacts?	Level of initiative and engagement of relevant stakeholders in project activities and results Documented commitments to scale up the project's outcomes	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
Are government agencies encouraged/enabled to facilitate wider adoption of the project results? Have senior and influential government officials endorsed the project's innovative approaches and champion the development of a more enabling policies, mechanisms and strategies for wider adoption?	Level of initiative and engagement of relevant stakeholders in project activities and results Documented commitments to support adoption of the project's results	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
<b><i>Evaluation Criteria: Monitoring &amp; Evaluation</i></b>			
What mechanisms does UNDP have in place to monitor implementation? Are these effective?	Project monitoring Indicators in place and are effective and feasible for reporting on progress	Project documents, progress reports, monitoring reports	Desk review, interviews, field visits

## Annex 6. Questionnaire

### **Questionnaire**

This questionnaire serves as an informal aid in prompting discussion during the interviews and has been supplemented with additional questions.

#### **Project Formulation**

1. Did you observe any problems or gaps in the project design or approach that affected project implementation?
2. Was there adequate participation of stakeholders and beneficiaries in the project formulation? (How were you involved?)
3. Has the project strategy – technical support/training, development, and piloting, been effective? How could it have been improved?
4. Does the project's objective align with the priorities of the local government and local communities?
5. Does the project's objective fit within the national environment and development priorities? Who are the main beneficiaries of the project and how does the project address their development needs?

#### **Project Implementation**

6. How effective and efficient was the Project Structure in facilitating project coordination, communications, and implementation at national, regional, and local levels? Would you have changed anything in hindsight?
7. Has annual work planning and budgeting been effective? Have actual disbursements been in line with annual budgets, work plans, and schedules? Were there any delays in administrative processes?
8. Have the project management bodies and partners been sufficiently active in guiding and responding to issues? (examples?)
9. Have the project monitoring Indicators been effective and feasible for reporting on progress? Have they provided reliable measures of change?
10. What have been the major challenges or issues in implementing the project? Are there lessons for the design of future projects?
11. What are the characteristics of development in the project pilot sites? What features have affected agreement or non-agreement?

#### **Project Results**

12. What aspects of the project have been most successful, and which are least successful? Are there specific measures that have affected the potential for replication?
13. Can you identify the Key Factors that have affected the project results – either positive or negative?
14. What has been the most apparent change in ODS management that you have seen from the project? What gaps remain in capacity development?
15. What is the most important learning or skill, if any, that you have acquired from the project training or demonstrations? Any post-training data?
16. Are there any expected results that have not been completely achieved or are not fully satisfactory?

#### **Sustainability**

17. Do you think that the use of project results will be continued after the project closes? Why? Why not?
18. Are there any exit strategies for the project? What actions could be considered to enhance sustainability? How will lessons be shared within Uzbekistan and with other countries?

19. Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?
20. To what extent are the project results dependent on socio-political factors, issues relating to institutional frameworks and governance, and environmental issues?

#### **Impact**

21. Should any further changes in government policy or regulations be considered to assist in mainstreaming incentives into the ODS management strategy?
22. Are there any specific examples of alternatives that could provide models for replication?
23. Is there any empirical evidence of project impact on government ODS management budget allocations?
24. Are government agencies encouraged/enabled to facilitate wider adoption of the project results?
25. Have senior and influential government officials endorsed the project's innovative approaches and championed the development of more enabling policies, mechanisms, and strategies for wider adoption?

#### **Gender equality and women's empowerment**

26. How did the project contribute to gender equality and women's empowerment?
27. To what extent was the UNDP initiative designed to appropriately incorporate in each outcome area contributions to the attainment of gender equality? To what extent did UNDP support positive changes in terms of gender equality and were there any unintended effects?
28. Did the project implementation have an impact on other partners to transform their policies, programs, and services to advance gender equality and women's empowerment?
29. In what ways has UNDP supported other partners to transform their policies, programs, and services to advance gender equality and women's empowerment?
30. What was the extent to which the intervention objectives were adjusted to attend to the different problems and needs of women and men?

#### **Cross-cutting and UNDP Mainstreaming Issues**

31. How were effects on local populations considered in project design and implementation?
32. How were Covid-19 effects on project implementation considered?

## Annex 7. Terminal Evaluation: Rating scales

The project **M&E and Implementation/Oversight and Execution** are rated for each individual component (outcome) as follows:

**6 = Highly satisfactory (HS).** The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**5 = Satisfactory (S).** The project had minor shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**4 = Moderately satisfactory (MS).** The project had moderate shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**3 = Moderately unsatisfactory (MU).** The project had significant shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**2 = Unsatisfactory (U).** The project had major shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**1 = Highly unsatisfactory (HU).** The project had severe shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

**Unable to Assess (UA).** The available information does not allow an assessment of the level of outcome achievements.

The project **Relevance, Effectiveness, and Efficiency** are rated for each individual component (outcome) as follows:

**6 = Highly satisfactory (HS).** Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings

**5 = Satisfactory (S).** Level of outcomes achieved was as expected and/or there were no or minor shortcomings

**4 = Moderately satisfactory (MS).** Level of outcomes achieved more or less as expected and/or there were moderate shortcomings

**3 = Moderately unsatisfactory (MU).** Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings

**2 = Unsatisfactory (U).** Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.

**1 = Highly unsatisfactory (HU).** Only a negligible level of outcomes achieved and/or there were severe shortcomings

**Unable to Assess (UA).** The available information does not allow an assessment of the level of outcome achievements

**Sustainability** is rated according to the following scale:

**Likely (L)** negligible risks to sustainability, with key outcomes expected to continue into the foreseeable future. There is little or no risks to sustainability.

**Moderately Likely (ML)** moderate risks, but expectations that at least some outcomes will be sustained. There are moderate risks to sustainability.

**Moderately Unlikely (MU)** substantial risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on. There are significant risks to sustainability.

**Unlikely (UL)** severe risk that project outcomes as well as key outputs will not be sustained. There are severe risks to sustainability.

**Unable to Assess (UA):** Unable to assess the expected incidence and magnitude of risks to sustainability.

The calculation of the overall project outcome rating is based on the ratings for relevance, effectiveness, and efficiency, of which relevance and effectiveness are critical.



## Annex 8. Signed UNEG Code of Conduct form

### Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated and did not carry out the project's Mid-Term Review.

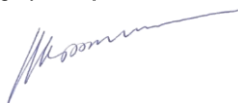
### Evaluation Consultant Agreement Form:

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed in Calgary on **April 16, 2024**

Signature:



Names: Alexandre Chaikine

Signed in Tashkent on **June 8, 2024**

Signature:



Nargiza Kholmatova

Annex 9. Signed TE Report Clearance form

**TE Report Clearance Form**

**Terminal Evaluation Report for 6003 ID Project “Complete HCFC Phase-Out in Uzbekistan through Promotion of zero ODS, low GWP, Energy Efficient Technologies” Reviewed and Cleared By:**

**Commissioning Unit (M&E Focal Point)**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Regional Technical Advisor (Nature, Climate and Energy)**

Name: Charlotte De Bruyne

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Annex 10. Annexed in a separate file: TE Audit Trail

Annex 11. Annexed in a separate file: relevant terminal GEF Core Indicators and Tracking Tools

Annex 12. Annexed in a separate file: Confirmed Sources of Co-financing table

Annex 13. Annexed in a separate file: Management Response Table