1. Project Data

Summary project data			
GEF project ID		3541	
GEF Agency project ID		105324	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNIDO	
Project name		TT-Pilot (GEF 4): Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer	
Country/Countries		Global: Russian Federation	
Region		ECA	
Focal area		Multifocal Area: CC and POPs	
Operational Program or Strategic Priorities/Objectives		ODS-SP1; CC-SP6	
Executing agencies involved		UNIDO HQ: lead executing agency until 2015; International Centre for Scientific and Technical Information (ICSTI): lead executing agency post-2015	
NGOs/CBOs involvement		International Centre for Scientific and Technical Information (ICSTI): lead executing agency post-2015; National Centre for Environmental Management and Cleaner Production for the Oil and Gas Industry: project partner/project steering committee member	
Private sector involvement		Project beneficiaries: POZIS; Orsk Refrigerator Plant; Biryusa; Polus; Vladipur; SEPO-ZEM; Pipe Insulation Plant; Shumerlya Plant of Purpose-built Vehicles; Krasnogorsky van plant; Tsentrtranstekhmash; Ariadna-Yug; Ostrov-Komplekt; Nord; UKO; Vercont Service; Dow Isolan	
CEO Endorsement (FSP) /Approval date (MSP)		December 8, 2010	
Effectiveness date / project start		January 26, 2011	
Expected date of project completion (at start)		December 31, 2015	
Actual date of project completion		December 31, 2018	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	.18	.18
	Co-financing		
GEF Project Grant		18	17.98
Co-financing	IA own	.35	.35
	Government	2.15	9.07
	Other multi- /bi-laterals		
	Private sector	37.5	36
	NGOs/CSOs		
Total GEF funding		18.18	18.16
Total Co-financing		40	45.42

Total project funding (GEF grant(s) + co-financing)	58.18	63.58[1]
Terminal evaluation/review information		
TE completion date	December 2018	
Author of TE	Independent Evaluation Division, Office of Evaluation and Internal Oversight, UNIDO	
TER completion date	December 19, 2019	
TER prepared by	Laura Nissley	
TER peer review by (if GEF IEO review)	Molly Sohn	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	HS	S	--	S
Sustainability of Outcomes		L	--	L
M&E Design		U	--	U
M&E Implementation		U	--	U
Quality of Implementation		S	--	MS
Quality of Execution		UA	--	MS
Quality of the Terminal Evaluation Report		--	UA[2]	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project had two global environmental objectives. The primary objective was "the direct phase-out [of] 600 Ozone Depletion Potential (ODP) tons of HCFCs in the foam and refrigeration manufacturing sectors in the Russian Federation (RF) allowing the country to meet the 2015 MP [Montreal Protocol] target." The direct Greenhouse Gas (GHG) emissions reduction resulting from the phase-out of HCFCs was expected to be approximately 15.6 Million Metric Tons (MMT) CO_2 (TE pg. viii).

The project also aimed to achieve an "indirect decrease of GHG emissions through reduced electricity consumption in the commercial and industrial refrigeration sectors on estimated 10 MMT CO_2 in 5 years" (PD pg. 47).

3.2 Development Objectives of the project:

The Development Objective of the project was "to introduce more energy efficient designs, through technology transfer, during the conversion of refrigeration and air conditioning manufacturing facilities" (PD pg. 47).

[1] The TE indicates that there was a lack of consistency in the financial data provided to the Evaluation Team (pg. x). The Project Draft Final Report notes a total project cost of $62.9 million, whereas the 2018 PIR indicates a total cost of $63.05 million. This TER calculates the total project financing using the data provided on pages x and 38 of the TE.

[2] The IA Evaluation Office Review does not provide an overall rating for the quality of the terminal evaluation report. However, IA Evaluation Office Review found all aspects of the report to be Highly Satisfactory, except for lessons learned and recommendations, which the Review found to be Moderately Satisfactory (pg. 2).

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

There were no changes to the global environmental objectives, development objectives, or activities during implementation.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 **Relevance**	Rating: **Satisfactory**

The TE assesses project relevance to be **Highly Satisfactory**. This TER, which uses a different scale, provides a rating of **Satisfactory**. The project's objectives are consistent with GEF-4 Strategic Program 1: *Phasing out of hydrochlorofluorocarbons (HCFCs) and Strengthening of Capacities and Institutions*, under the Ozone Depletion Focal Area. Additionally, the TE notes that two of the project's components (Component 3- Phase out of HCFC consumption in the key consuming sectors of foam and refrigeration, and Component 6- Technology transfer) are directly relevant to GEF-4 *Strategic Program on Technology Transfer and Climate Change* (TE pg. 19).

The project's objectives and activities are also consistent with the Russian Federation's obligations as a signatory to the Montreal Protocol, which calls for a step-by-step phasing out of the consumption of HCFCs by 2030. Under the Montreal Protocol, the Russian Federation was obligated to meet its 2015 target of a 90% reduction in HCFCs consumption (TE pg. 17). Additionally, the project's activities are in line with the Russian Federation's commitments to minimize climate impact under the Kyoto Protocol (TE pg. 18).

4.2 **Effectiveness**	Rating: **Satisfactory**

The TE assesses project effectiveness as **Satisfactory**, and this TER concurs. The project was designed to directly phase out hydrochlorofluorocarbons (HCFCs) in the foam and refrigeration manufacturing sectors in the Russian Federation, as well introduce more energy efficient designs during the conversion

of refrigeration and air conditioning manufacturing facilities. The project was complex, containing seven technical components and 30 outputs, all contributing toward 27 expected outcomes. The TE indicates that the project's objectives and outcomes were achieved by project end, as well as the majority of outputs (pg. ix). Notably, the project directly phased out 822.6 ODP tons of chlorofluorocarbons (CFCs) and HCFC; only 530.6 ODP tons were from HCFC however, below the target of 600 (TE pg.25). The TE did confirm that the project's secondary objective of introducing more energy efficient designs was achieved. The TE could not confirm the direct GHG emissions reduction from the phasing out of HCFCs and the indirect reduction from reduced electricity consumption (TE pgs. 26-27).

A summary of the project's achievements, by component, is provided below:

- **Component 1: Building institutional capacity**
  Expected outcomes under this component included: (1) accelerated HCFC phase out and reduction of HCFC consumption, (2) understanding of the level of residual demand for HCFCs, (3) good communication between and coordination of cross-functional stakeholders, (4) improved awareness of environmental policies and associated HCFC phase out legislation amongst users and stakeholders, and (5): improved understanding and performance of customs officers. By project end, a legal framework was established for the monitoring and control of the import, export, and use of HCFCs and hydrofluorocarbons (HFCs) in the Russian Federation. Additionally, a procedure for calculating the annual ozone depleting substances (ODS) production was established. The project also improved awareness of environmental policies and legislation through the development of websites, online training materials, and professional training courses. Custom officers were also trained in tools and methods for detecting ODS. Outputs which were not achieved under this component included establishing a national database of ODS and developing an agreed stakeholder needs framework (TE pgs. 20-21; 80).

- **Component 2: HFC and HCFC life cycle performance analysis**
  Expected outcomes under this component included: (1) implementation of a sustainable phase out strategy for different HCFC consuming subsectors, and (2) capacity to adapt to developing phase out scenarios, international climate agreements, and technology developments. By project end, an analysis of HFC and HCFC life cycles were undertaken and several analytical reports were produced for the following sectors: commercial refrigeration equipment, AC in cars and public transport, industrial refrigeration equipment, sandwich panel producers, household refrigerator producers, and aerosol propellent. These recommendations contributed to climate policy discussions (TE pg. 21; 80). Additionally, climate impact benchmark data was collected and analyzed, and a report was prepared and submitted to the Ministry of Natural Resources and Environment (MNRE) and the Ministry of Industry and Trade (MIT) (TE pg. 81).

- **Component 3: Phase out of HCFC consumption in the consuming sectors of Foam and Refrigeration**
  Expected outcomes under this component included: (1) HCFC consumption within Montreal Protocol phase out obligations, (2) clear understanding of the technical capacity to phase out

within each sector, (3) phase out of 600 ODP tons HCFC, and (4) reduction of direct and indirect GHG emissions through HCFC phase out and improved energy efficiency of replacement technology. By project end, 12 HCFC consumers and 2 producers of equipment had converted to HCFC-free alternatives. Additionally, 6 analytical papers supporting conversion per target sector were developed, as well as a report on cross-cutting issues (TE pg. 81). By project end, the Russian Federation had decreased HCFCs consumption by 530.6 ODP tons. Additionally, project beneficiaries improved energy efficiency in the production of polyurethane insulation components and the adoption of premixed ODS-free polyol systems. A pilot CO_2 refrigerant-based facility was also established (TE pgs. 81-82; 22).

- **Component 4: Development of ODS destruction facility and supporting recovery network**
  Expected outcomes under this component included: (1) technical and commercial understanding of the feasibility of operating ODS destruction facilities, (2) strategy for the provision of ODS destruction across the Russian Federation, (3) reduction of ODS banks, (4) consistent monitoring, inspection, and verification procedures applied across the Russian Federation, (5) annual destruction of CFC-1,163 and CFC-1,294.5 MT, equivalent to 157.5 ODP tons, and (6) the total impact is equal to 1,062,009 t CO_se. By project end, the first Russian Federation ODS-containing products destruction plant was operational, although it is unclear from the TE how much CFC was destroyed. The TE does note that a practical guide on the management and destruction of ODS was prepared. Additionally, laws were enacted to oblige producers and importers to pay environmental fines or organize a corporate collection and disposal system. Inspectors were trained on ODS basics, legislation, and smuggling detection (TE pgs 22-23; 82-83). The TE does note, however, that a commercial sustainability model for ODS destruction was not developed by project end (pg. ix).

- **Component 5: Stimulating market growth for EE refrigeration and air conditioning equipment**
  Expected outcomes under this component included: (1) increased market share of more energy efficient refrigeration and air conditioning equipment, (2) reduction in GHG emissions from refrigeration and air-conditioning systems of 10 MMT CO_2 after 5 years, (3) greater consumer and user awareness and increased demand for energy efficient technology, (4) improved knowledge of energy efficient design, installation, and operating practice across industry. By project end, manufacturers and producers had switched to new equipment with high energy efficiency design. A marketing campaign with demonstration projects, as well as training, feasibility studies, and study tours were undertaken. The TE notes however, that there was no evidence provided of GHG reductions. Additionally, the TE found no evidence of published information on policy measures and barrier removal approaches, nor of any studies or methodologies for conducting market assessments (TE pg. 83).

- **Component 6: Technology transfer**
  Expected outcomes under this component included: (1) technology transfer of non-HFC alternatives to HCFC applications, (2) higher efficiency RAC systems in use across the Russian

Federation, (3) increased private sector energy efficient design capacity, and (4) increased use of high efficiency manufacturing equipment. By project end, technology transfer took place at a polyurethane PU systems house, a refrigeration and air-conditioning equipment producer, and a hotel heat and refrigeration supply system. Additionally, a working model of a CO_2 refrigerating unit for a retail food store was organized. Demo projects improving the energy efficiency of manufactured equipment for medical devices and domestic and commercial refrigerators were also developed and endorsed by the MNRE. Lastly, a training certification center was created to transfer technologies across the Russian Federation (TE pg. 24). The TE does note that there was no evidence that higher efficiency RAC systems were in use across the Federation by project end (TE pg. 84).

- **Component 7: Feasibility study to determine the best and most integrated strategy for dealing with HCFC production closure**
  Expected outcomes under this component included: (1) stakeholder facilitation to agree on a production closure strategy, and (2) reduction of 1840 metric tons of HCFCs closed. By project end, a phase out of HCFCs production at chemical enterprises report was developed and submitted to stakeholders. The government has prohibited the production of ODS and products containing ODS, and the TE did find evidence that HCFC production at one of the enterprises, Khimprom, has ceased. However, the TE did not find evidence that 1840 metric tons of HCFC had been reduced (TE pg. 25; 84).

4.3 **Efficiency**	Rating: **Moderately Satisfactory**

The TE assesses project efficiency as **Satisfactory**, which this TER downgrades to **Moderately Satisfactory**. The original project end date was December 31, 2015. The TE notes that 99.13% of GEF funding had been spent by this date, however the project end date was delayed three years until December 31, 2018. The first no-cost extension until July 2017 was granted to allow the project to finish activities, specifically purchasing equipment for the recovery and destruction of ODS and installing it at the beneficiary enterprises (TE pg. 27). The second no-cost extension until December 2018 was granted in order to undertake the TE. The delay in executing the TE was due to the retirement and replacement of the project manager at UNIDO (TE pg. 28). Turnover in the project manager position appears to have been a chronic problem during implementation, affecting the efficiency of the project. The TE indicates this turnover affected institutional memory and engagement with stakeholders and partners, especially since the beneficiary enterprises were not kept up to date on management changes (pg. 32).

An additional complication was the distinction between the implementing agency and executing agency. UNIDO headquarters played both roles until 2015, when an execution agreement was signed with the International Centre for Scientific and Technical Information (ICSTI) (TE pg. 33). It is unclear why the separation of implementing and executing roles and responsibilities was delayed so far into the project's implementation.

The TE does note that the main expected results were achieved within the original schedule and budget, and that "the perception from the beneficiaries is that the activities developed by the Project were timely and useful" (pg. 28). It should also be noted however that $.17 million was available to be returned to the GEF, indicating that the project did not utilize all funding (TE pg. 29).

4.4 **Sustainability**	Rating: Likely

The TE assesses sustainability of project outcomes as **Likely**, and this TER concurs.

Financial Resources

The TE assesses the sustainability of financial resources to be **Likely,** which this TER downgrades to **Moderately Likely**. As co-financers of the project, it is unlikely that the beneficiary enterprises will revert away from their conversion to ODS-free technologies. However, the TE notes that it is unclear if the companies will have the capacity to meet the demands of the market and consumers (pg. 30). Additionally, the project was envisioned to have a second phase to ensure the recovery of ODS. The TE indicates that Phase II is compromised due to GEF policy constraints in financing projects in the Russian Federation, which could affect the sustainability of project results (pg. 31). Regionally, however, the main features of the project have been scaled up in the GEF project, "Regional Demonstration Project for Coordinated Management of ODS and POPs Disposal in Armenia, Belarus, Ukraine, and Kazakhstan" (TE pg. 32).

Sociopolitical

The TE assesses sociopolitical sustainability to be **Likely**, and this TER concurs. The TE notes that the participating enterprises are committed in their conversion to ODS-free technology. The TE does not indicate any political risks to sustainability.

Institutional Frameworks and Governance

The TE assesses the sustainability of institutional frameworks and governance to be **Moderately Likely**, and this TER concurs. The government enacted a new legal framework establishing obligations to phase out ODS and trained police officers and customs agents to enforce the new framework. The TE notes however, that the number of agents trained (20) is not significant given the size of the Russian Federation. Additionally, the Foam Union that was established under the project was no longer operational by project end (TE pg. 30).

Environmental

This TER assesses environmental sustainability to be **Likely**, and this TER concurs. The project successfully converted enterprises to ODS-free technology which will continue to produce significant

environmental benefits over time. These benefits will be compounded by the new, energy-efficient equipment and technologies provided to the enterprises under the project (TE pg. 30).

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

Overall, actual co-financing ($45.42 million) exceeded expected co-financing ($40 million) by approximately $5.42 million.[3] The government contributed $6.92 million more than expected, with a total contribution of $9.07 million. Co-financing from the project beneficiaries came in slightly lower than expected, with a total contribution of approximately $36 million. UNIDO's contribution came in as expected, at $.35 million (TE pg. 38). The bulk of co-financing went toward the phasing out of HCFC ($30 million), the development of the ODS destruction facility ($6.27 million), and technology transfer ($6.3 million) (TE pg. 85).

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

As noted in the efficiency section, the project completion date was delayed three years, from December 31, 2015 to December 21, 2018. The first no-cost extension was to allow the project to complete its activities, and the second extension allowed for the TE (TE pg. ix). Key factors for the delays in implementation included turnover in the project manager position, as well as the switch from UNIDO as the executing agency to ICSTI. This change affected engagement with stakeholders and beneficiaries, however the TE did not find that it affected the achievement of the project's outcomes or sustainability (TE pg. 32).

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The TE indicates that government engagement in the project was high, particularly the engagement of the Ministry of Natural Resources and Environment (MNRE), the Ministry of Economic Development and the Ministry of Energy (TE pg. 18). MNRE was the designated national leading agency and the focal point for the implementation of the Montreal Protocol, as well as actively involved in the project steering committee (TE pg. 7). The TE also notes that country ownership was crucial to the creation and enforcement of the new legal framework (TE pg. 18).

[3] The financial data provided to the TE was inconsistent, so the following co-financing information should be considered an approximation (TE pg. x).

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 **M&E Design at entry**	Rating: **Unsatisfactory**

Taken together, the TE assesses M&E design and implementation to be **Unsatisfactory**. This TER, which provides separate ratings, provides a rating of **Unsatisfactory** for M&E design at entry. As the TE indicates, the final Project Document does not include a logical framework outlining the project's expected outputs, outcomes, and objectives. A further weakness in the project's design was the lack of indicators to measure progress toward the achievement of the project's outcomes and objectives (TE pg. 40). The Project Document does include a comprehensive list of M&E activities, responsible parties, and a timeframe for implementing these activities (PD pg. 107). However, without a logical framework, the M&E plan was inherently flawed. Lastly, the TE indicates that a budget of $.41 million was included for M&E, however this TER was unable to confirm the budget (TE pg. 34).

6.2 **M&E Implementation**	Rating: **Unsatisfactory**

This TER provides a rating of **Unsatisfactory** for M&E implementation. It does appear that a results framework was developed by the time of the Midterm Review (this TER did not have access to Project Implementation Reports prior to 2013). The logic of the framework is difficult to trace however, given that some of the results are not hierarchical, and at times, overlap with other results. For example, Outcome 3.3: *Phase out of 600 ODP tons of HCFC* is the same as the project's global environmental objective. Similarly, the TE notes that some of the outputs listed under Component 6: Technology transfer are also covered under components 3 and 4 (TE pg. xii). It does appear that indicators were developed and reported on in the Project Implementation Reports (PIRs), however they are of mixed quality. For example, an indicator under Outcome 1.1 reads: *Institutional capacity built to support the acceleration of HCFC phase out and reduction of HFC consumption*. If anything, this is a result rather than an indicator, and it is not SMART (specific, measurable, achievable, realistic, and timely).

The TE does note that Project Implementation Reports were timely and accurately submitted to the GEF (pg. 34). However, the TE specifically notes that an M&E system did not exist, and M&E results were not communicated to project stakeholders (pg. 41).

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 **Quality of Project Implementation**	Rating: **Moderately Satisfactory**

The implementing agency for the project was the United Nation Industrial Development Organization (UNIDO). The TE finds UNIDO's performance as the implementing agency to be **Satisfactory**. This TER downgrades the quality of project implementation to **Moderately Satisfactory**. The TE indicates that the UNIDO Centre for International Industrial Cooperation in the Russian Federation (CIIC) was the project's overall political, administrative, and logistical coordinator in charge of all local support, including networking with stakeholders and beneficiaries (pg. 7). The inception workshop, held within two months of project start-up, was timely and established the Project Steering Committee, which was active until 2015 (TE pg. 7; 37). Overall, beneficiary enterprises and other project partners reported that cooperation with UNIDO had been "excellent" (TE pg. 43).

Weaknesses in project implementation included the design and the procurement system. The TE notes that the project design was "very innovative, multifocal and forward thinking" (pg. 15). However, the design did not include a results framework to measure progress toward the achievement of outcomes and objectives. Additionally, the TE indicates that some beneficiaries complained about the complexity of UNIDO's procurement system, which caused delays in project implementation (pg. 51).

7.2 **Quality of Project Execution**	Rating: **Moderately Satisfactory**

The TE does not directly evaluate the quality of project execution, however it does provide a rating of **Satisfactory** for project coordination and management. This TER downgrades the quality of project execution to **Moderately Satisfactory**. UNIDO HQ in Vienna was the executing agency for the project from its effectiveness date until 2015. In 2015, the GEF decided to separate the implementation and execution functions of the project, and the International Centre for Scientific and Technical Information (ICSTI) became the new executing agency (TE pg. 8). As such, ICSTI took over the management and administration of the activities of the project (TE pg. 10). The TE indicates that the beneficiaries perceived the first project manager at UNIDO headquarters to be the most effective, as he was the most familiar with the national institutional and political context (TE pg. 33). The project cycled through three

project managers at UNIDO headquarters, which the TE found caused delays and affected institutional memory and engagement with stakeholders and partners (pg. 32). UNIDO also limited ICSTI's procurement ability to $.04 million, which significantly limited their decision-making and execution of contracts (TE pg. 33). Lastly, an M&E system was not established during the life of the project, and M&E data was not communicated to project stakeholders (TE pg. 41).

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

> By project end, 822.6 ODP tons of chlorofluorocarbons (CFCs) and HCFC were phased out (TE pg. 25). The Project Draft Final Report indicated that the energy efficiency of the targeted systems improved by approximately 20-28%, however the TE was unable to confirm this (TE pg. 31). The TE was also unable to confirm the amount of GHG reductions (pg. 83).

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

> The TE does not indicate any socioeconomic changes that occurred by project end.

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. "Capacities" include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. "Governance" refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

> a) Capacities

By project end, beneficiary enterprises had converted to ODS-free technology, increasing the energy efficiency of their systems (TE pg. 31). Additionally, a ODS destruction bank was operational and 20 enforcement officials were trained on ODS basics, legislation, and smuggling detected (TE pg. 23). Additionally, a training certification center was created to transfer technologies across the Russian Federation (TE pg. 24). Awareness raising activities on environmental policies and legislation were also undertaken (such as the website) (TE pg. 20).

b) Governance

By project end, a legal and regulatory framework was established for the monitoring and control of the import, export, and use of HCFCs and hydrofluorocarbons (HFCs) in the Russian Federation (TE pg. 20).

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The TE does not indicate any unintended impacts.

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

The TE indicates that the main features of the project (legal framework, inter-institutional work and cooperation, introduction of new technology, and capacity building) have been scaled up to the regional GEF project, “Regional Demonstration Project for Coordinated Management of ODS and POPs Disposal in Armenia, Belarus, Ukraine, and Kazakhstan” (TE pg. 32).

The TE also notes that several activities were replicated in other regions and countries, such as

- Meeting of the contact representatives of the Russian Federation, Belarus, Kazakhstan, to consider Armenia, Kyrgyzstan, and Tajikistan joining the Customs Union, and the Eurasian Economic Commission coordinating national efforts to comply with the Montreal Protocol obligations
- Discussion of the Customs Union’s regulation on the circulation of ODS and the possible expansion of the Customs Union to include Armenia and Kyrgyzstan
- Annual meeting of the Regional Ozone Network for Europe & Central Asia, and
- Multiple experience and knowledge exchange events between Project experts and Turkmenistan colleagues (TE pg. 32).

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

The TE provides the following key lessons learned (pg. xii):

The scope of the Project is very wide and its approach complex – 7 components with 27 outcomes and 30 outputs. Component 6 on Technology Transfer is stand-alone although some of its outputs were also covered by components 3 and 4. The implementation of wide scope project benefit from streamlined project outcomes and outputs.

The design of a Project that is forward looking and with multi-focal areas may have higher investment costs (ex. equipment) but generates potential future savings. By avoiding interim technology companies may incur in higher initial investment costs (ex. equipment), however these may be offset by operational expenses savings, such as energy costs, reduction of environmental fees related to ODS use and CO2 emissions, and simultaneously generate greater benefits to the environment.

The Project was anchored on strong cooperation between the private sector and the RF's Government. Building trust and confidence with the stakeholders and respecting confidentiality are essential requirements for the success of any project.

Lack and inconsistency of the information provided to the ET and the limitations of the evaluation demonstrate the need to improve the M&E design and implementation and the requirements on the handover of projects among PMs. The institutional memory, data and knowledge of the project should be preserved throughout its implementation regardless of the management changes.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE provides the following recommendations (pg. xi):

UNIDO

UNIDO PM changes should be avoided to the extent possible, even more in case of large and complex projects like this one. For situations of unavoidable change of PM, then specific requirements and procedures should be followed for the systematic handover of projects among PMs (including data and knowledge transfer).

M&E should be made a management priority - appropriate training of the Project management team in Results-based Management and outcome-oriented reporting should be required, and PMs should share M&E tools and documents with the national counterpart to improve ownership and increase monitoring of progress and results in the field; PMs should also share M&E tools and documents with the national counterpart to improve ownership and increase monitoring of progress and results in the field.

PMs should take into consideration, in the design/inception phase, that more time and resources would be needed for planning and implementing procedures for interactions with Federal Service of RF when it relates to tax exemption, or any other uncommon procedure, as this require specific expertise.

UNIDO should explore the potential of further involving UNIDO CIIC in RF, namely with regards to communication of the new execution arrangements to partners and stakeholders during and after completion of the Execution Agreement.

ICSTI

For the national follow-up of this project, or similar future projects, ICSTI engagement with project partners and stakeholders should be improved in terms of communication and reporting.

MNRE

Effective liaison of MNRE with the project execution agency and engagement with the PM throughout all phases of the project implementation should be further promoted. In particular facilitate institutional coordination and administrative procedures.

GEF

GEF should continue to improve the format of the CEO endorsement in order to accommodate useful tools for project implementation, including the logframe in the project document.

A more active role should be played with regard to M&E ensuring that sufficient resources are allocated to it and that all the M&E activities are timely and accurately undertaken.

GEF should consider financing a Phase II of the project to ensure long-term sustainability of the project results.

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF IEO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The report adequately assesses the outcomes, objectives, and impacts of the project. The report was limited by a weak project document that did not clearly define a logical framework. The report did provide a helpful Theory of Change to better understand the project.	**S**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is internally consistent, and rating are substantiated. Some evidence of environmental changes is missing; however, this was due to poor reporting on behalf of the project rather than a defect of the TE.	**S**
To what extent does the report properly assess project sustainability and/or project exit strategy?	The report adequately addresses project sustainability.	**S**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned and recommendations are consistent with the evidence and are comprehensive.	**S**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The reports include project costs and co-financing; however, the financial data is inconsistent throughout the report. The report does note this is because they received inconsistent data from the project.	**MS**
Assess the quality of the report's evaluation of project M&E systems:	The report provides a comprehensive evaluation of the project's M&E system.	**S**
Overall TE Rating		**S**

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).