1. Project Data

Summary project data			
GEF project ID		593	
GEF Agency project ID		2353	
GEF Replenishment Phase		GEF-2	
Lead GEF Agency (include all for joint projects)		UNDP, UNEP	
Project name		Programme for Phasing Out Ozone Depleting Substances	
Country/Countries		Turkmenistan	
Region		ECA	
Focal area		Ozone Depleting Substances	
Operational Program or Strategic Priorities/Objectives		n/a	
Executing agencies involved		UNEP/UNOPS	
NGOs/CBOs involvement		Not involved.	
Private sector involvement		Beneficiaries of recovery and recycling and training subprojects.	
CEO Endorsement (FSP) /Approval date (MSP)		10/21/1998	
Effectiveness date / project start		2/12/1999	
Expected date of project completion (at start)		unknown	
Actual date of project completion		2005	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	0.12	0 according to Trustee
	Co-financing	0	0
GEF Project Grant		0.40	0.40
Co-financing	IA own	0	0
	Government	0.23	0.23
	Other multi- /bi-laterals	0	0
	Private sector	0	0
	NGOs/CSOs	0	0
Total GEF funding		0.52	0.40
Total Co-financing		0.23	0.23
Total project funding (GEF grant(s) + co-financing)		0.75	0.63
Terminal evaluation/review information			
TE completion date		March 2010	
TE submission date			
Author of TE		Dr. Tom Batchelor and Mr. Valery Smirnov	
TER completion date		February 2015	
TER prepared by		Shanna Edberg	
TER peer review by (if GEF EO review)		Dania Trespalacios	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	U	n/a*	n/a	MU
Sustainability of Outcomes	U	n/a*	n/a	U
M&E Design	n/a	n/a*	n/a	MU
M&E Implementation	MS	n/a*	n/a	U
Quality of Implementation	MS	n/a*	n/a	MU
Quality of Execution	MS	n/a*	n/a	U
Quality of the Terminal Evaluation Report	n/a	n/a	n/a	S

*The TE only gives ratings for individual sub-projects and not the project as a whole.

3. Project Objectives

3.1 Global Environmental Objectives of the project:

This project is part of the international effort to phase out ozone depleting substances, which damage the earth's ozone layer and increase the amount of ultraviolet radiation exposure from the sun. The Montreal Protocol, ratified by Turkmenistan in 1993, is the basis for phasing out ozone-depleting substances. While Turkmenistan does not produce ozone-depleting substances, it imports them from Russia. This project would allow Turkmenistan to transition to other materials and reduce demand for ozone-depleting substances before the production of such substances ends in Russia.

3.2 Development Objectives of the project:

The project consisted of the following three subprojects:

1. Institutional strengthening and capacity building – establishment of an ozone office and training for customs officers
2. Training of trainers for use of ODS-free refrigerants in maintenance and service
3. National program for recovery and recycling of ODS refrigerants, including monitoring of RMP activities

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

No changes were mentioned in the TE.

4. GEF EO 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 GEF Operational Strategy of 1995 defines the GEF's ozone depletion portfolio to "support activities to phase out ozone-depleting substances that are committed under the Montreal Protocol, with special emphasis on short-term commitments and enabling activities" (GEF/C.6/3, page 77). This project supports an economy in transition in meeting its Montreal Protocol obligations.

The project is also in line with Turkmenistan's priorities for meeting its treaty obligations. Turkmenistan's stated priorities for the phase-out of ozone depleting substances is: phase out the consumption of ozone-depleting substances, HCFCs, and methyl bromide; support the conversion of industry to ODS-free technology; develop the legal and regulatory framework to ensure phase-out; establish monitoring and licensing systems for imports and exports; and support scientific research on ozone layer depletion.

4.2 **Effectiveness**	Rating: **Moderately Unsatisfactory**

The project was divided into three subprojects, detailed below. According to the Project Document, "the main objective of this project is to assist Turkmenistan in the rapid phase-out of ODS consistent with international efforts in this direction. Other CEIT countries were asked by the Implementation Committee to phase out CFC's by the year 2000, and it is likely that this will also apply for Turkmenistan. The GEF proposal presented herewith would allow Turkmenistan to comply with such a requirement" (PD, page 6). While the project fulfilled most of its intended outputs (i.e. refrigeration technicians and customs officers were trained, recovery and recycling equipment was distributed, the National Ozone Unit was created, and new ozone legislation was introduced), the project's actual effectiveness at helping Turkmenistan fulfill its ozone commitments by the year 2000 was low. Turkmenistan did not fulfill its Montreal Protocol commitments in 2003 and 2004, and the consumption of ozone-depleting substances actually increased in that period.

As described below under M&E Design, the project design did not include comprehensive indicators, targets, or a log frame. Where indicators and targets are present, they are noted below. In the absence of indicators and targets, the project is rated on the delivery of outputs weighted by the amount of funding that each subproject received, as described below. Overall project effectiveness is rated

moderately unsatisfactory because each subproject had components missing and the recovery and recycling project, which took 35% of project funds, only reached 14% of its ODS target.

1. Institutional strengthening and capacity building – establishment of an ozone office and training for customs officers

The TE rates this subproject as moderately unsatisfactory. It received 39% of GEF project funding but did not complete all of expected outputs, such as failing to deliver ODS identification equipment or to comply with the Montreal Protocol's reporting requirements.

The project established a National Ozone Unit as an NGO under the supervision of the Ministry of Nature Protection. The Unit got off to a slow start due to "administrative errors in the UNEP training project document resulting in inaccuracies in the NOU financial record keeping," a lack of training provided to the Unit's personnel, language barriers, and frequent staff turnover at UNEP (TE, page 601). There were also some issues with record keeping by the National Ozone Unit. The Unit played a role in coordinating the other subprojects.

The National Ozone Unit drafted a legislation package with the help of a UNEP consultant, but the proposals were not approved by the Cabinet of Ministers legal department. According to the TE, "A decree was approved by the President in September 2001 that required the import and export of chemicals and fertilizers to be licensed, but no specific provisions were included regarding ODSs" (TE, page 601). This regulatory system was not effective, and Turkmenistan did not comply with phase-out benchmarks for 2003 and 2004. Import quotas were established in 2005. A new legislative package was drafted by the National Ozone Unit in 2009. As of the time of writing of the TE, this package is still being revised.

The project also implemented a train-the-trainer workshop for customs officials training and certifying 14 officers. Equipment to identify ozone depleting substances was delivered, but the National Ozone Unit had not yet distributed it to customs officials at the time of writing of the TE. Frequent turnover of customs officers left only a few trained officers on duty, increasing the risk of illegal trade in ozone-depleting substances. A phase two to train customs officials was planned but did not occur.

The National Ozone Unit conducted a public awareness program via a television program, mass media publications, organizing lectures at schools and colleges, and holding competitions for children. No indicators were developed to measure the program's impact.

One of the National Ozone Unit's duties is to collect and report data on ozone-depleting substances. Turkmenistan was in non-compliance with the Montreal Protocol's reporting requirements in July 2003 and July 2004. According to the TE, "the procedures for collection, verification and reporting of data on ODS consumption remain to be cumbersome and unreliable. It is likely that delays in reporting official consumption data will continue" (TE, page 604).

2. Training of trainers for use of ODS-free refrigerants in maintenance and service

The TE rates this subproject as moderately satisfactory. It received 26% of GEF funding and completed the training outputs, but did not procure modern servicing equipment.

It started with a two year delay due to administrative, financial, and procurement delays. Five training centers and a certification system were established, and the UNEP manual "Good Practices in Refrigeration" was translated to Turkmen. A train-the-trainers workshop was held with 25 participants with hands-on demonstrations. 16 out of the 25 participants earned certification as future trainers. After this initial workshop, 17 training sessions were held for 380 servicing technicians and students, covering "the majority of servicing personnel working in registered servicing companies" (TE, page 617). The Polytechnic Institute incorporated parts of the training into its curricula. However, the subproject did not include procuring modern servicing equipment and tools. The National Ozone Unit developed a proposal for mandatory licensing of servicing technicians, but the proposal was rejected.

3. National program for recovery and recycling of ODS refrigerants, including monitoring of RMP activities

The TE rates this subproject as moderately satisfactory. It received 35% of project funding but only reached 14% of the target of recovered and recycled CFCs.

The subproject procured and delivered 3 sets of recovery and recycling machines, 31 refrigerant recovery machines, and 31 servicing kits, including spare parts. The National Ozone Unit held three workshops with hands-on training for the equipment. Two refrigerant recycling centers were established. According to the TE, "The R&R program was not very successful. The total quantity of CFC-12 recovered for the 32 months duration is equivalent to 910 kg ODP per year which is much lower than the target of the project of 6.53 ODP tonnes. It appears that R&R programme has not contributed noticeably in the ODS phase out in Turkmenistan" (TE, page 628). There is also no legislation incentivizing or mandating recovery and recycling operations.

4.3 **Efficiency**	Rating: **Unsatisfactory**

According to the TE, the institutional strengthening subproject was not cost-effective: "The GEF project was formulated for the duration of 3 years with the objective to assist the country in rapid phase-out of ODSs consistent with international efforts in the implementation of requirements of the Montreal Protocol and to achieve the zero CFC consumption by January 2003. Instead, the 2003 CFC consumption went up above the pre-project 1999 consumption and even increased further in 2004 exceeding 1999 consumption by a factor of three" (TE, page 606). The institutional strengthening subproject also faced several delays, although it is not clear how long the delays lasted: "The establishment of the NOU was delayed by administrative errors in the UNEP training project document resulting in inaccuracies in the NOU financial record keeping. No introductory training was provided to the NOU personnel. The NOU learning curve was very steep. The situation was exacerbated by the frequent rotation in the CEIT desk in UNEP Paris office and language barriers" (TE, page 601).

For the training subproject, the TE determined cost-effectiveness by the cost per trainee, which was $267. This was lower than the average for similar programs ($290 per trainee). The training subproject was delayed by 2 years. There is no way to determine how the subproject contributed to a reduction in ODS consumption.

The recovery and recycling subproject had a minor delay of 3 months. The subproject's cost-effectiveness was assessed at $140.02/kg ODP, about eight times the target of $17.02/kg ODP. The TE lists further efficiency indicators for recovery and recycling: "The efficiency of R&R operations can also be assessed by calculating the percentage of recovered and reused refrigerants to the total ODS consumption in the refrigeration servicing sector. The quantity of recovered CFC-12 during 32 months in 2000 to 2002 constituted about 3% of the consumption in the refrigeration servicing sector within the same period. The targeted recovered CFCs represented about 25% of the 1996 CFC consumption in refrigeration servicing sector. Another efficiency indicator, the annual quantities of recovered and recycled ODS per each recovery and recycling machine are calculated to be about 30.2 kg and 71 kg of ODS per machine per year respectively. The calculated value of avoided imports of new ODS refrigerants is $12,115 for 32 months based on the local price of $5.0/kg of CFC-12" (TE, page 629).

4.4 **Sustainability**	Rating: **Unlikely**

Financial: **Moderately unlikely**; the government does not plan to provide funding to the National Ozone Unit, but the Multilateral Fund for the Implementation of the Montreal Protocol pledged funding for institutional strengthening beyond 2010. As of the time of writing of the TE, the timeframe and parameters for funding are under discussion within the Executive Committee. For the training subproject, there is no government financing to continue training after project closure. Regarding the recovery and recycling subproject, the TE states that recovery and recycling operations are not profitable for several reasons, such as low prices for CFC-12, low availability and high prices for spare parts, and leakage and contamination of refrigerants. Therefore recovery and recycling operations are not financially sustainable.

Sociopolitical: **Unlikely**; according to the TE, "the role and importance of the Ministry of Nature Protection has been growing in recent years" as the country has democratized (TE, page 606). However, the TE also reported problems with government commitment: "the NOU have been given a mandate to coordinate the Government's activities to meet its commitments under the MP, but this mandate was limited. It appears that there was not enough high-level support for this process that caused delays in Phase II of training of customs officers, inconsistencies in ODS consumption data, and delays in the reporting to UNEP DTIE and DGEF" (TE, page 606). A Refrigeration Association, which would partner with the National Ozone Unit in awareness raising and training, was not established. There is no government commitment to continue training efforts. For the recovery and recycling subproject, the government provided "monitoring and other support" to the subproject, but that was discontinued after closure (TE, page 629). There was no enforcement of the requirement to report on quantities of recovered and recycled ODS.

Institutional: **Moderately unlikely**; in 2008, the government ratified the remaining amendments to the Montreal Protocol. There is frequent turnover of customs officers, so fewer trained officers remain on duty. In addition, the National Ozone Unit did not distribute the ODS-detection equipment so there is a lack of technology to prevent imports of ozone-depleting substances. However, the customs headquarters established new training facilities and told the National Ozone Unit that a new training effort would begin in 2010. For the training subproject, the Polytechnic Institute incorporated parts of the training into its curricula. For the recovery and recycling subproject, a large number of trained and qualified refrigeration servicing personnel have left the country looking for better opportunities and have been replaced with unqualified entrepreneurs. Without legislation requiring qualification or legislation mandating recovery and recycling of ozone-depleting refrigerants, this situation will deteriorate.

Environmental: **Moderately likely**; in 2008, CFC-12 was available for $5 to $7 per kg. According to the TE, "this relatively low price suggested that the supply of CFC-12 has been met by allowable imports" (TE, page 607). CFC-based refrigeration equipment is still widely available, and the state of the economy will likely result in continued demand for CFCs for the next few years. CFCs were banned in 2010, and the combination of continued demand and a lack of trained customs officers raises the risk for illegal trade in CFCs.

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?

The government cofinancing paid for office space, telephone use, office furniture, and travel for the institutional strengthening subproject and National Ozone Unit. This cofinancing materialized as expected. There was no other cofinancing in the project.

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?

All three subprojects were delayed to some extent. It is not clear how long the delays for the institutional strengthening subproject lasted. According to the TE, "The establishment of the NOU was delayed by administrative errors in the UNEP training project document resulting in inaccuracies in the NOU financial record keeping. No introductory training was provided to the NOU personnel. The NOU learning curve was very steep. The situation was exacerbated by the frequent rotation in the CEIT desk in UNEP Paris office and language barriers" (TE, page 601).

The training subproject was delayed by two years: "From the outset, there were administrative delays associated with financial arrangements proposed by UNEP to proceed with the sub-project. Two separate sources of funding were involved creating confusion, and accounting and reporting problems

for the NOU, UNEP and local UNDP office. As a result, the overall delay in the start of the programme was about two years against the schedule determined in the RMP" (TE, page 617). There were also procurement delays.

The recovery and recycling subproject was delayed by 3 months. According to the TE, "The impact of this delay could be assessed as a lost opportunity of recovering and reusing a quarter of the annual quantity recovered in 2002-2002. The missed quantity of recovered ODS would be about 227 kg of CFC-12. It is clear that three months delay was not critical for the sustainability of project outcomes. The R&R activities had a very little impact on the reduction in ODS consumption" (TE, 633).

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 reported problems with government commitment and country ownership: "the NOU have been given a mandate to coordinate the Government's activities to meet its commitments under the MP, but this mandate was limited. It appears that there was not enough high-level support for this process that caused delays in Phase II of training of customs officers, inconsistencies in ODS consumption data, and delays in the reporting to UNEP DTIE and DGEF" (TE, page 606). Lack of continued financial support to the project's efforts, such as funding the National Ozone Unit and training for refrigeration technicians, as well as a failure to pass key legislation are hindering the project's sustainability.

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: **Moderately Unsatisfactory**

The Project Document only contains three sentences regarding project M&E: "Project monitoring will be performed by UNEP/UNDP and the cost for it is included in the budgets that are indicated in Annex-1… A system for monitoring (with periodic evaluation) of the quantity and quality of the CFCs recovered and recycled under this project, to ensure its success" (PD, page 9 and 13). The individual subprojects did not contain baselines, performance indicators, or log frames, although the overall project contains a few very general indicators such as "availability of suitable methods to reduce ODS consumption" (PD, page 12). M&E is not specifically mentioned in the project budget, and the midterm evaluation reported a lack of results-based management and accountability frameworks as well as a lack of performance indicators.

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

Multiple problems were reported for M&E implementation. For one, Turkmenistan was in non-compliance with the Montreal Protocol's reporting requirements in July 2003 and July 2004. According to the TE, "the procedures for collection, verification and reporting of data on ODS consumption remain to be cumbersome and unreliable. It is likely that delays in reporting official consumption data will continue" (TE, page 604). There is no evidence that UNEP recognized or dealt with this issue. In addition, there was a "failure to identify problems with the timely introduction of the quota system in Turkmenistan that resulted in non-compliance with the benchmarks established by the Parties" (TE, page 608). Monitoring of the recovery and recycling subproject only took place for one year.

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 Unsatisfactory**

The TE noted some problems with project design. For example, there was no risk analysis. In addition, for a variety of reasons, the project design "grossly overestimated" the target for recovered refrigerant (TE, page 628). Also, "the project design is not sufficiently flexible to tackle new emerging issues associated with other than CFC controlled substances such as methyl bromide and MDI" (TE, page 610). There was also a duplication of effort in the various training components of the project, which could have been solved by closer cooperation between UNEP and UNDP. Not enough recovery and recycling kits were procured to maximize the effect of the R&R training.

Regarding project supervision, the TE states that "UNEP and UNDP have not provided Turkmenistan with the needed support to assist the country with compliance" (TE, page 611). The PIRs recognized that the licensing and quota regulations were either unapproved or were not functioning, but did not take action to assist the National Ozone Unit with these issues. The TE reports that the National Ozone Unit was satisfied with UNDP's supervision.

7.2 **Quality of Project Execution**	Rating: **Unsatisfactory**

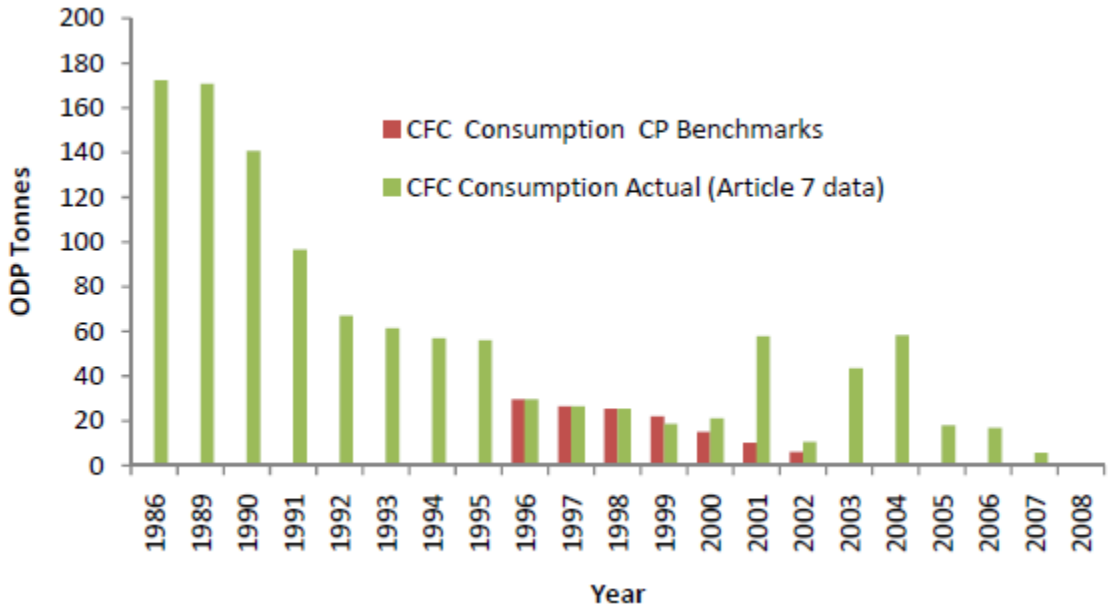
According to the TE, “there were no supervisory missions organized by UNEP DTIE to Turkmenistan from 1999 to 2004. The face-to-face meetings took place at the end of the project” (TE, page 611). In addition, “there was a frequent rotation of UNEP project officers during implementation of IS and Training projects in CEITs. The consequence of this was weak coordination between UNEP departments (UNON, DTIE, EOU) and also inadequate liaison and communication with the NOUs causing late delivery of planned activities and some confusion about payments. It was also at this time that there were insufficient resources for follow-up and country visits to know what was going on in the project during its long delay in start-up” (TE, page 612). UNEP did not provide introductory training to the National Ozone Unit and there were administrative errors in UNEP’s training document, resulting in delays and inaccurate record-keeping. UNEP relied on half-yearly reports by the National Ozone Unit to supervise the training project, which was not an effective modality according to the TE.

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.

Turkmenistan reduced its consumption of ozone-depleting substances by 85% in 2007 (TE, page 605). From the TE:



The recovery and recycling subproject recovered a total of 910 kg ODP per year (TE, page 628).

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.

No socioeconomic changes were reported in the TE.

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

The project implemented a train-the-trainer workshop for customs officials training and certifying 14 officers. Equipment to identify ozone depleting substances was delivered). Five training centers and a certification system were established for refrigeration practices, and the UNEP manual “Good Practices in Refrigeration” was translated to Turkmen. A train-the-trainers workshop was held with 25 participants with hands-on demonstrations. 16 out of the 25 participants earned certification as future trainers. After this initial workshop, 17 training

sessions were held for 380 servicing technicians and students, covering “the majority of servicing personnel working in registered servicing companies” (TE, page 617). The Polytechnic Institute incorporated parts of the training into its curricula. However, the subproject did not include procuring modern servicing equipment and tools.

The recovery and recycling subproject procured and delivered 3 sets of recovery and recycling machines, 31 refrigerant recovery machines, and 31 servicing kits, including spare parts (TE, page 627). The National Ozone Unit held three workshops with hands-on training for the equipment. Two refrigerant recycling centers were established, however, recovery and recycling operations are not financially sustainable.

b) Governance

The project established a National Ozone Unit as a nonprofit and non-governmental organization under the supervision of the Ministry of Nature Protection (TE, page 601). A decree was approved by the President in September 2001 that required the import and export of chemicals and fertilizers to be licensed, but theTE reports that this regulatory system was not effective,. Import quotas for ozone-depleting substances were established in 2005. A new legislative package was drafted by the National Ozone Unit in 2009. As of the time of writing of the TE, this package is still being revised.

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.

No unintended impacts were reported in the TE.

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 project’s approach was replicated in several Eurasian countries as part of the GEF’s ozone-depleting substances program. Other than applying similar project designs to each country, no scaling up or mainstreaming was mentioned in the TE. There is minimal evidence for market change: an increase in the price of CFC-12 from $4-$5/kg in 2004 to $5-$7/kg in 2008, which the TE considers insignificant (TE, page 628).

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.

There are no lessons learned for the Turkmenistan project, but the TE states several lessons from the overall ozone-depleting substances program:

Funding bodies should be much clearer on their expectations of governments to continue funding and staffing of work on ODS after the project finished. Governments should use the funds to enhance institutional capacity and to put in place justification for continued funding while the project is underway and the environmental benefits are becoming evident.

The success of the National Ozone Units depended on the qualifications and ability of the staff to undertake the work, and in having sufficient funds available for the work. Out-sourcing activities by the government is a modern approach which has been shown to operate so far in these projects, and might open up opportunities for other governments to consider the same as centralized budgets come under more pressure for reductions.

It is important that the National Ozone Units are staffed by some well qualified and senior people that can gain access to key government officials in order to ensure that programs and legislation on the phase out of ODS are progressed in a timely and effective manner.

Governments could consider establishing a centralized unit staffed by specialists that are knowledgeable in engaging with international funding organizations in environmental projects.

UNEP must improve delivery of finance to ensure that there are no gaps in time between projects.

Communications should be between UNEP and the National Ozone Units in the local language, which means that UNEP will need to employ staff with sufficient language skills to be able communicate effectively with project staff many countries, depending on the project.

Project and task managers must pay more attention to the M&E elements that are developed in the Project Document to ensure that appropriate baseline and performance indicators are carefully checked and are present from the beginning for the project.

Review the work that was undertaken in the past and design new projects that avoid the pitfalls of past projects.

Financial appraisals should be part of the risk assessment for deciding on which enterprises to fund within a sector.

Investment projects should be based on a realistic assessment of the baseline data as a basis for determining the extent of the funding that is required to promote the transition to ODS-free technology.

For refrigeration training, training programs need to be short (two days maximum, preferably one day); focused mainly on the practical aspects and alternatives and less on the theory; be delivered by or in collaboration with a Refrigeration Association so the training becomes self-funding; UNEP/UNDP need to ensure equipment is available before the training starts; and the government needs to have enabling legislation in place that ensures R&R activities are undertaken and enforced.

9.2 Briefly describe the recommendations given in the terminal evaluation.

There are no recommendations for the Turkmenistan project, but the TE states several recommendations from the overall ozone-depleting substances program:

Countries should improve the implementation of legislation, policies and standards on all aspects of ozone layer protection.

Countries' existing efforts to prevent illegal trade need to be further strengthened.

Countries need to take further action to manage and bank halon.

UNEP/UNDP should consider further investment and capacity development to assist countries with economies in transition to address the remaining threats to the ozone layer.

UNEP/UNDP should learn from the positive private sector engagement in the reduction of Ozone Layer Depletion focal area and incorporate similar approaches into its efforts to engage the private sector in other focal areas.

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 EO 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 TE is detailed in its assessment of outcomes and impacts. It would have been helpful to have an overall description of the project rather than just the assessments of the individual subprojects.	**S**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The ratings only cover sub-projects and not the project as a whole. The report is repetitive, which made it difficult to discern which outcomes and outputs were original and which were a restatement from a previous section. It was not always clear which changes were a part of the project and which were independent or driven by different forces.	**MS**
To what extent does the report properly assess project sustainability and/or project exit strategy?	The sustainability of the entire project as a whole was not discussed, but the assessment of the sustainability of each individual subproject was adequate. Sustainability ratings were not always well-supported.	**MS**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The TE does not contain lessons and recommendations related to the Turkmenistan project. However, it does have lessons and recommendations pertaining to the entire ozone-depleting substances program. These lessons are detailed, comprehensive, and result from project experiences.	**S**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The TE includes project costs and cofinancing. It lists the funding for each subproject, but not per-activity.	**MS**
Assess the quality of the report's evaluation of project M&E systems:	Adequate evaluation of project M&E, although it would have been helpful to have an overall evaluation of project M&E rather than an evaluation of the individual subprojects' M&E.	**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).