

## Terminal Evaluation Review form, GEF Evaluation Office, APR 2014

### 1. Project Data

Summary project data			
GEF project ID		769	
GEF Agency project ID		n/a	
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		Kazakhstan	
Region		ECA	
Focal area		Ozone Depleting Substances	
Operational Program or Strategic Priorities/Objectives		n/a	
Executing agencies involved		National Environmental Center for Sustainable Development	
NGOs/CBOs involvement		Not involved.	
Private sector involvement		Dozens of beneficiary companies received equipment and training.	
CEO Endorsement (FSP) /Approval date (MSP)		7/5/2001	
Effectiveness date / project start		4/8/1999	
Expected date of project completion (at start)		Unknown	
Actual date of project completion		11/11/2001	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.17	0.19
	Co-financing	0	0
GEF Project Grant		5.43	5.31
Co-financing	IA own	0	0
	Government	unknown	0.11
	Other multi- /bi-laterals	0	0
	Private sector	unknown	0.64
	NGOs/CSOs	0	0
Total GEF funding		5.60	5.50
Total Co-financing		0.75	0.75
Total project funding (GEF grant(s) + co-financing)		6.35	6.25
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	S	n/a*	n/a	MU
Sustainability of Outcomes	ML	n/a*	n/a	MU
M&E Design	n/a	n/a*	n/a	U
M&E Implementation	n/a	n/a*	n/a	U
Quality of Implementation	n/a	n/a*	n/a	U
Quality of Execution	n/a	n/a*	n/a	MS
Quality of the Terminal Evaluation Report	n/a	n/a	n/a	MS

\*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 Kazakhstan in 1998, is the basis for phasing out ozone-depleting substances. While Kazakhstan does not produce ozone-depleting substances, it imports them from Russia. This project would allow Kazakhstan 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 six subprojects:

1. Institutional Strengthening and training of trainers for use of ODS-free refrigerants including training of custom officers
2. National programme for recovery and recycling of ODS refrigerants
3. Elimination of the use of CFCs at 14 manufacturers of rigid polyurethane foam enterprises
4. Elimination of the use of CFCs at 25 manufacturers of flexible foam enterprises
5. Replacement of CFC-113 in the cleaning of oxygen manufacturing equipment at Pavlodar
6. National halon management scheme programme

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

No changes were noted 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.

<b>4.1 Relevance</b>	Rating: <b>Satisfactory</b>
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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 Kazakhstan’s priorities for meeting its treaty obligations. Kazakhstan’s strategic action plan for the phase-out of ozone depleting substances is: phase out CFCs, halons, HCFCs, and methyl bromide; comply with European Union schedules for phasing out ozone-depleting substances; support Kazakhstan’s industry in adopting new technologies; and implement laws and regulations regarding the phase-out of ozone-depleting substances.

<b>4.2 Effectiveness</b>	Rating: <b>Moderately Unsatisfactory</b>
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This project was divided into six subprojects, detailed below. According to the Project Document, the project objective is “to ensure the fulfilment of obligations of the Republic of Kazakhstan to protect the ozone layer as a Party to the Vienna Convention and to the Montreal Protocol” (PD, page 1). The TE states that the project intended to phase out 679 ODP-tons, and 83% of this target was reached. However, Kazakhstan has not ratified the amendments to the Montreal Protocol, and the country was out of compliance with the Protocol from 2004-2007.

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 the 28% of GEF project funding that went to beneficiary companies resulted in most of the companies going bankrupt, stopping production, or reverting to the use of ozone-depleting substances, thus providing a low return on GEF funds. The other subprojects were incomplete to varying degrees.

1. Institutional Strengthening and training of trainers for use of ODS-free refrigerants including training of custom officers

This subproject was rated satisfactory by the TE. It received 20% of GEF project funding and has completed most of its objectives, except for the adoption of legislation and the verifying of ODS reports.

The project established a National Ozone Unit. The Unit developed and submitted legislation to regulate the import and export of ozone-depleting substances, regulate emissions, restrict certain repair and servicing activities, and ban certain ozone-depleting substances. However, “the legislation has been approved by the government too slowly to fully support the reduction and phase out activities” (TE, page 318). Neither the Copenhagen nor the Beijing Amendments to the Montreal Protocol have been ratified by Kazakhstan, although legislation currently in place on methyl bromide and HCFCs makes up for part of this gap. Companies are required to report on their use of ozone-depleting substances, but these reports are not verified. Permitting requirements were recently dropped due to the economic crisis. The National Ozone Unit prepared legislation to ratify the Copenhagen and Beijing Amendments, implement quotas for HCFCs, and reporting requirements for imports and exports of ozone-depleting substances, but this legislation has not been adopted.

The National Ozone Unit also undertook awareness raising efforts, including two years of workshops, contests, an Ozone Day, brochures, essays, posters, and other products with ozone protection information. These efforts were covered by the mass media.

This subproject also covered the training of refrigeration technicians. A total number of 3,365 personnel were trained in 51 sessions covering both theory and practice, including a train-the-trainers program. This exceeded the target in the project document, but only covers 60% of Kazakhstan’s refrigeration technicians. A good practices manual was published. Training has continued after the project finished, but with fewer technicians each year (12 or 13 per year since 2006). There was an attempt to form a Refrigeration Association, but it failed due to company rivalries.

The project also trained customs personnel. 61 customs officers were trained and provided with equipment for identifying ozone depleting substances. This met the project document’s target for customs training.

The government of Kazakhstan submitted annual reports to the Ozone Secretariat as required. 564 ODP-tons were eliminated, not meeting the target of 679 ODP-tons. Kazakhstan did not comply with the Montreal Protocol in from 2004-2007 due to consumption of CFCs and methyl bromide. According to the TE, “The funding by the GEF for institutional strengthening has not resulted in an institutional structure that is fully responsive to the requirements of the Montreal Protocol” (TE, page 321). This is attributed to delays in implementing relevant legislation.

## 2. National programme for recovery and recycling of ODS refrigerants

This subproject was rated moderately satisfactory by the TE. It received 49% of the GEF funding but not all objectives were completed, such as reporting on recovered and recycled ODS.

The project provided 695 recovery machines, 50 manual pumps and 59 recovery and recycling machines. Workshops were implemented to train beneficiary companies in use of the equipment.

Beneficiary companies were required to report on the amount of recovered and recycled ozone-depleting substances, but only 30% did so and no legislation was put into place to make it a requirement for all companies. Due to a lack of reporting, there is no information on the amount of recovered and recycled ozone-depleting substances. While some companies reported that the equipment was valuable as it saved them from having to buy CFCs, others stated that there was little incentive to recover and recycle ozone-depleting substances due to a lack of legislation banning and fining emissions.

Refrigeration Identification Machines were also distributed to customs offices. However, the machines were reportedly impractical and gave false positives. If a sample was confiscated, there was no accredited laboratory to determine its type.

### 3. Elimination of the use of CFCs at 14 manufacturers of rigid polyurethane foam enterprises

This subproject was rated moderately satisfactory by the TE. It received 21% of the project's funding and resulted in four out of ten of the companies going bankrupt and some of the remaining companies returning to ODS use.

The manufacturers were supplied with alternate equipment. After the project's end, four of the companies went bankrupt. Some (the TE does not state how many) of the remaining companies returned to using HCFCs in their production lines.

### 4. Elimination of the use of CFCs at 25 manufacturers of flexible foam enterprises

This subproject was rated satisfactory by the TE. It received 5% of GEF project funding and resulted in most of the beneficiary companies going bankrupt.

Production equipment was installed to replace the use of CFCs in six companies (the other intended beneficiaries in the project design had already gone bankrupt prior to project start). The TE reported that most of the beneficiary companies went bankrupt after the project was completed due to competition with cheap imports.

### 5. Replacement of CFC-113 in the cleaning of oxygen manufacturing equipment at Pavlodar

This subproject was rated unsatisfactory by the TE. It received 2% of project funding, but training was not completed and the new equipment has not been used by the beneficiary company.

The equipment to replace CFCs was installed, but has not been used due to the shutdown of the facility for other alterations. Also, the equipment provided by the project was neither tested nor certified. Certification is "a large financial challenge" for the company; the fee is twice the subproject budget (TE, page 357). No training was carried out as envisioned in project design. According to the TE, "this equipment may never be put into operation" unless additional funds are put into certification (TE, page 357).

### 6. National halon management scheme programme

This subproject was rated unsatisfactory by the TE. It received 3% of GEF funding but was substantially incomplete.

The intention of the project was to develop a halon management program. Hardware was delivered for halon collection, recovery, and recycling, but some of the necessary hardware was not evident at a facilities tour. Only 20% of the amount of targeted halon was collected. There was no legislation requiring halon recovery. Information collection stopped in 2006, so there is minimal data on the effectiveness of the management program. The two specialists that were trained in halon recovery and recycling resigned and were not replaced. The TE reported a complete lack of information on efforts (if any) to replace halon, designate critical use applications, or raise awareness and guide stakeholders. All in all, there does not seem to be a halon management program in place.

4.3 Efficiency	Rating: <b>Moderately Unsatisfactory</b>
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For the institutional strengthening subproject, the TE states that the National Ozone Unit is “a relatively small team that can operate efficiently in this project to leverage resources to address ODS phase out activities” (TE, page 314). The institutional strengthening subproject was extended by one year due to a delay in adopting legislation and identifying training organizations. The TE does not mention the cost per trainee.

For the recovery and recycling subproject, there was no way to verify the cost-effectiveness of CFC removal because not all of the recipient companies submitted information on the amount of recovered and recycled ozone-depleting substances. The recovery and recycling subproject took two years longer to complete than intended.

For the third subproject on rigid foam manufacturers, four of the beneficiary companies went bankrupt after project completion, and an unknown number of companies reverted to the use of HCFCs. The TE estimates the cost-effectiveness to be between \$9.87 and \$10.96 ODP-kg for the companies that did not go bankrupt.

For the fourth subproject on flexible foam manufacturers, most of the beneficiary companies went bankrupt after project completion. There is not enough information to determine cost-effectiveness.

The fifth subproject on oxygen manufacturing had a planned cost-effectiveness of \$17.82 ODP-kg per year, which is 20% above average for similar projects. However, this does not take into account the certification costs for the equipment and the fact that the equipment has not and may never be put into operation.

The halon subproject had a cost-effectiveness of \$7.48 ODP-kg per year, which is five times the “threshold of acceptance” of the Multilateral Fund for the Implementation of the Montreal Protocol for halon subprojects (TE, page 369). Therefore this subproject was not efficient since only 20% of the target halon was removed. Many of the tasks in this subproject were delayed by 3-6 months.

4.4 Sustainability	Rating: <b>Moderately Unlikely</b>
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*Financial: **Moderately likely***; the National Ozone Unit is funded through international donors and commercial and government contracts. It is not reliant on project funds and therefore will continue to coordinate ozone protection efforts in Kazakhstan after project closure. The recovery and recycling program is financially sustainable, as the recovered CFCs pay for the cost of their recovery. However, companies reported that spare parts for the recovery and recycling equipment were not available for purchase. The third subproject on rigid foam manufacturing resulted in some of the companies going bankrupt after the project's end, although since the bankrupt companies will no longer emit ozone-depleting substances this does not threaten sustainability. Other companies reverted to using HCFCs due to the lower cost, showing that the subproject was not sustainable. The fourth subproject on flexible foam manufacturing also resulted in several companies going bankrupt. However, this could be seen as a sustainable outcome because the bankrupt companies will no longer be emitting ozone-depleting substances. The project on oxygen manufacture was also not financially sustainable, since the project did not take into account the cost of certifying the equipment provided. As a result, the equipment is uncertified and will not be put into use. The certification costs twice the subproject budget, so there is a risk that it will not be completed. In addition, even if the equipment is certified, there was no training in its use. The TE reports that the halon subproject is dependent on project funds, as training and reporting stopped when the project closed.

*Sociopolitical: **Moderately unlikely***; the government has not fully accepted its commitments under the Montreal Protocol. Amendments to the Montreal Protocol were not ratified, and legislation has been approved slowly and with gaps. There is no Refrigeration Association in Kazakhstan to assist with ozone activities and involve the private sector. However, the TE reports that there is a strong framework for coordination between government agencies and the National Ozone Unit is strongly supported by the government. The TE reported that companies were not putting in as much effort into recovery and recycling as they would have several years ago, due to the reduced quantities of CFCs being emitted. For the subproject on rigid foam manufacturing, wherein some of the companies reverted back to using HCFCs, the companies were clearly not committed to ozone reduction and the government was not committed to enforcing the terms of the project, which stated that the HCFC equipment had to be disposed. For the subproject on oxygen manufacture, wherein the new machinery was never put into production, the TE states that the Kazakhstan government did not view the operation as their responsibility. Rather, they saw it as a commercial problem for the company and were therefore not committed to solving it. The TE reports that the halon subproject suffered from a lack of cooperation and engagement between the agencies responsible.

*Institutional: **Moderately unlikely***; there are several gaps in Kazakhstan's ozone legislation, such as a lack of reporting requirements, a lack of quotas and bans for certain ozone-depleting substances, and a lack of incentives for recovery and recycling. The requirement for companies to be registered to handle ozone-depleting substances was suspended. 60% of the refrigeration technicians in Kazakhstan were trained. While training is still on offer, fewer technicians attend every year and it is unlikely that this gap

will be closed. Customs officers were trained and provided with detection equipment, but the equipment did not work as well as intended. Only 1.5% of the customs officials in Kazakhstan were trained and provided with equipment. The subproject on halon is not sustainable as the halon management plan was not developed as planned.

*Environmental: Moderately unlikely;* the TE reports several environmental risks to the project. For one, inexpensive CFCs are still available on the black market for \$5/kg. The lack of trained customs officials and functional detection equipment increases the risk of illegal trade. There is no incentive for refrigeration technicians to continue their training, or for clients to hire trained technicians. There was no provision for the destruction of ozone-depleting substances in the project design, so there is a risk that unwanted ozone-depleting substances will be emitted due to leakage or a lack of storage instead of being destroyed. The TE states that “there is a strong possibility that installed halon has been released” due to a lack of legal requirements and penalties as well as the cost of transport and collection (TE, page 370).

## 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?

In addition to the listed government cofinancing for the institutional strengthening subproject, there was also a substantial but unrecorded amount of in-kind cofinancing, including working hours and office space. According to the TE, the government cofinancing demonstrates that the National Ozone Unit is sustainable because it is funded from multiple sources and is not depend on project financing. There was no cofinancing for the recovery and recycling subproject. The TE does not adequately explain the cofinancing situation for the third subproject on rigid foam manufacturers. The fourth subproject on flexible foam manufacturers was not cofinanced. The TE states that as a result of this, the companies did not feel a personal stake in the project. The fifth subproject on oxygen manufacturing had “some undocumented in-kind cofinancing” (TE, page 363). However, the TE also states that “co-finance would have increased Kaustic’s ownership and commitment to the equipment” (TE, page 363). The halon subproject did not have any cofinancing.

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?

The institutional strengthening subproject was extended by one year due to a delay in adopting legislation and identifying training organizations. The delay in itself did not hurt sustainability, but it pointed to a larger problem: a lack of comprehensive ozone legislation in Kazakhstan. The recovery and recycling subproject took two years longer to complete than intended, but the TE does not explain why and it did not appear to harm outcomes or sustainability. Minor delays in the halon subproject were also



not harmful in and of themselves; the incomplete project outcomes were due to a lack of a halon management strategy.

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:

Country ownership is mixed for this project. Kazakhstan has not ratified the amendments to the Montreal Protocol. There are several gaps in ozone legislation that threaten the project’s sustainability, and “the government does not appear to be committed to implementing legislation in a timely manner... The absence of legislation can lead to poor management of ODS refrigerants in the future and increased emissions” (TE, page 316). There is, however, strong political support for the National Ozone Unit. The lack of comprehensive legislation meant that the private sector was not incentivized to recover and recycle ozone-depleting substances or to stop the use of HCFCs in foam production.

## 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.

<b>6.1 M&amp;E Design at entry</b>	Rating: <b>Unsatisfactory</b>
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The Project Document is vague on project M&E. There is no log frame or timing regarding M&E duties. Responsibility for monitoring was designated to the Kazakhstan government. The midterm review noted an absence of performance indicators or a results-based management and accountability framework in the project design. According to the TE, “Risk Analysis was also not a part of project design...SMART indicators and data analysis systems were not used. A baseline, performance indicators and reporting system for these indicators was not part of the design” (TE, page 325). M&E is not mentioned in the project budget.

<b>6.2 M&amp;E Implementation</b>	Rating: <b>Unsatisfactory</b>
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For the institutional strengthening subproject, the TE reports that some risk analysis was done but was not followed up when implementation was deemed to be at risk. The National Ozone Unit was not trained in monitoring and evaluation, and “there was no evidence of adaptive risk management by UNEP” (TE, page 325). According to the TE, “there was no evidence that the National Ozone Unit fully implemented [the monitoring] plan” for the recovery and recycling subproject. For the third subproject

on rigid foam manufacturers, there was a clear failure in monitoring. There was no independent assessment of project implementation, and UNDP and the National Ozone Unit did not inspect the companies' premises to confirm that the old HCFC-based equipment had been destroyed per the project agreement. This allowed the companies to revert to HCFC-based production. The TE reports good monitoring practices for the flexible foam subproject, but no monitoring was present for the oxygen manufacture subproject. M&E for the halon subproject was only "partially implemented" and many of the monitoring tasks were not completed (TE, page 378).

## 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: <b>Unsatisfactory</b>
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Project design contained several flaws. For one, the costs of certifying the equipment provided in the fifth subproject on oxygen manufacture were not taken into account. For this reason, the equipment remains uncertified and unused. Another oversight in project design was the lack of market research to determine whether the beneficiary companies were viable in the near future. This could have prevented spending project funds on companies that would soon go bankrupt. In addition, there was no provision for the destruction of ozone-depleting substances in project design. This is a threat to sustainability, as explained above. For the halon subproject, the TE states that "the quality of the initial Project 376 Document is questionable as it fails to include a requirement for reporting on the results of the M&E, key stakeholders are omitted, and there was no practical path or budget for some of the outcomes needed in the project e.g. critical uses" (TE, pages 376-377).

Regarding project supervision, the National Ozone Unit stated that they "appreciated this supervision and support" from UNEP and "were satisfied with the financial assistance and advice on the budget" (TE, pages 327-328). The TE reported that there was a lack of information on the level of supervision from UNDP on the recovery and recycling subproject. UNDP did not make a site visit to the third subproject on rigid foam manufacturing, but its supervision of the fourth subproject on flexible foam manufacturing was satisfactory according to the TE. For the fifth subproject on oxygen manufacturing, the TE reports that the beneficiary company voiced its concerns to UNDP several times regarding the lack of funds for certifying the equipment provided, but there was no action taken in response. UNOPS stated in the Certificate of Completion that the company was "on its own" and that an "insular attitude" pervaded

the supervision of this subproject (TE, page 363). For the final subproject on halons, the TE reports that there was “very little if any supervision and support by UNDP or its representatives” (TE, page 376). The halon subproject suffered from poor financial planning, such as a lack of funding for M&E, training, publications, quality testing, and developing a halon management plan. However, it is not clear where the fault lies for this.

<b>7.2 Quality of Project Execution</b>	Rating: <b>Moderately Satisfactory</b>
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The National Ozone Unit within the National Environmental Center for Sustainable Development was in charge of project execution. Overall there were no significant problems with the conduct of the National Ozone Unit. The Unit submitted legislation, conducted an awareness program, trained refrigeration technicians and customs officials, and helped coordinate the other subprojects. Procurement for the subprojects involving the private sector was carried out adequately by UNDP, except for the halon subproject where some of the equipment may not have been delivered.

## **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.

The project eliminated 564 ODP-tons from Kazakhstan (TE, page 321).

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 identified in the project.

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 covered the training of refrigeration technicians. A total number of 3,365 personnel were trained in 51 sessions covering both theory and practice, including a train-the-trainers program. A good practices manual was published (TE, page 320). The project also trained customs personnel. 61 customs officers were trained and provided with equipment for identifying ozone depleting substances (TE, page 321). Refrigeration Identification Machines were also distributed to customs offices, although these machines proved impractical.(TE, page 336).. The project provided 695 recovery machines, 50 manual pumps and 59 recovery and recycling machines to companies for recovery and recycling (TE, page 334). Workshops were implemented to train beneficiary companies in use of the equipment.

14 rigid foam manufacturers were supplied with alternate equipment to replace the use of HCFCs. (TE, pages 341-342). Production equipment was installed to replace the use of CFCs in six flexible foam companies. Hardware was delivered for halon collection, recovery, and recycling, but some of the necessary hardware was not evident at a facilities tour (TE, pages 366-368).

b) Governance

The project established a National Ozone Unit. The Unit developed and submitted legislation to regulate the import and export of ozone-depleting substances, regulate emissions, restrict certain repair and servicing activities, and ban certain ozone-depleting substances (TE, pages 317-318).

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 project.

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.

## **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 Kazakhstan 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 Kazakhstan 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. Information on UNDP and UNEP's conduct was somewhat lacking as were explanations for some delays.	MS
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.	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 Lithuania 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
<b>Overall TE Rating</b>		<b>MS</b>

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