1. Project Data

	Summary project data				
GEF project ID		3571			
GEF Agency project ID		GFARM08002			
GEF Replenishment Phase		GEF-4			
Lead GEF Agency (inc	lude all for joint projects)	UNIDO			
		Technical Assistance for Enviro	nmentally Sustainable Management of		
Project name		PCBs and Other POPs Waste in	the Republic of Armenia		
Country/Countries		Armenia			
Region		ECA			
Focal area		POPs			
Operational Program	or Strategic		POPS-1: Strengthening capacity for NIP development and		
Priorities/Objectives		implementation			
Executing agencies in	volved		d the Hazardous Substances and		
LACCULING AGENCIES IN	voiveu		Waste Management Department, both of the Ministry of Nature Protection of the Republic of Armenia		
		-	Health and Healthy Environment, and		
NGOs/CBOs involven	nent		y Centre (provided co-financing and		
			participated in awareness raising activities)		
Private sector involve	ement	Co-financing came from an uns	Co-financing came from an unspecified source		
	SP) /Approval date (MSP)	October 7, 2008			
Effectiveness date / p	project start	November 28, 2008			
Expected date of pro	ject completion (at start)	August 2010			
Actual date of projec	t completion	May 31, 2012			
		Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)		
Project Preparation	GEF funding	25,000	25,000		
Grant	Co-financing	75,000	30,000		
GEF Project Grant		805,000	805,000		
	IA/EA own	45,000	45,000		
Co-financing	Government	290,000	336,500		
	Other*	1,513,460	1,415,000		
Total GEF funding		830,000	830,000		
Total Co-financing		1,923,460	1,826,500		
Total project funding		2,753,460	2,656,500		
(GEF grant(s) + co-financing)					
	Terminal e	valuation/review informatio	n		
TE completion date		August 2012			
TE submission date		11/25/2013			
Author of TE		Dr. Ivan Holoubek			
TER completion date		February 5, 2014			
TER prepared by		Shanna Edberg			
TER peer review by (if GEF EO review)		Joshua Schneck			

^{*}Includes contributions mobilized for the project from other multilateral agencies, bilateral development, cooperation agencies, NGOs, the private sector, and beneficiaries.

2. Summary of Project Ratings

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

^{*} Note, M&E Design rating is average of M&E Design and M&E funding as funding for M&E is incorporated into M&E design ratings of GEF EO and other IAs.

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The global environmental objective of this project is to assist Armenia with fulfilling its obligations under the Stockholm Convention, ratified in 2003. Armenia's National Implementation Plan, endorsed by the government in 2005, identified a large amount of POPs in the country, especially polychlorinated biphenyls (PCBs) and pesticides. According to the terminal evaluation report, "the management and elimination of these stocks were ranked as a top priority" (TE, 10). But there are several barriers to accomplishing POPs reductions, including the lack of an enabling regulatory environment, financial barriers, weak monitoring capacity, weak institutional capacity, and limited awareness and information about POPs. Hence the project's overall objective is to support Armenia's efforts to implement the Stockholm Convention and minimize POPs by "strengthening the institutions, regulations and enforcement and to enhance the capacities for the sound management of POPs at national and local levels" (TE, 10).

3.2 Development Objectives of the project:

The project had four overarching components, as given in the project document for CEO Approval:

- 1. Enabling Armenian institutions to manage POPs
 - a. Develop a monitoring network and an information management and reporting system
 - b. Develop and analyze databases on POPs
 - c. Prepare an inventory of POPs-contaminated equipment and train state inspectors on identification and notification
 - d. Establish committees, expert working groups, information exchanges, and awareness raising on POPs
 - e. Strengthen existing POPs laboratories with training, collaborations, and monitoring
 - f. Explore avenues to involve the private sector in POPs management
- 2. Capacity building of the Armenian government to fulfill its Stockholm Convention obligations
 - a. Review and evaluation existing legislation to define needs for enabling policy

- b. Develop and amend laws, standards, technical guidelines, risk reduction measures, and a national action plan for POPs disposal
- 3. Involve stakeholders and civil society
 - a. Develop and disseminate an information campaign and training modules
 - b. Establish a network of scientists for information exchange, conduct safety training for people exposed to POPs, and create presentations for decision makers on POPs issues
 - c. Prepare material for the media and general public, and organize public meetings and presentations
- 4. Improve capacity on POPs management and disposal
 - a. Identify capacity for safe POPs management and identify measures to upgrade storage sites
 - b. Review and select technologies for POPs disposal
 - c. Perform a sampling study of POPs media in a nationally accredited analytical lab
- 3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

Yes. One change was mentioned in the TE: due to a decision by the government of Armenia, the project would create a new nationally-accredited POPs laboratory rather than strengthening existing labs.

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	4.1 Relevance	Rating: Satisfactory
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The project is consistent with GEF strategies under POPS-1: Strengthening capacity for National Implementation Plan development and implementation. It supports Armenia's National Implementation Plan and follows many of the directives of the Stockholm Convention, including undertaking exchange of information; promoting awareness, education, and training; undertaking research, development, monitoring, and cooperation; strengthening capacity to implement Convention obligations; and collecting comparable and reliable monitoring data.

The project is also consistent with Armenia's national priorities. It follows and supports Armenia's National Implementation Plan and the country's priorities for POPs management. The priorities to be

tackled by the project include establishing a POPs Central Analytical Laboratory, replacing PCB-contaminated equipment, collecting data, developing long-term POPs monitoring, enhancing coordination and information exchange, and disposing and minimizing POPs release into the environment.

4.2 Effectiveness	Rating: Moderately Satisfactory
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Most project activities were completed satisfactorily by project closure, with some exceptions.

For the capacity building of scientists and other personnel who handle POPs, the project provided training, workshops, and courses to 68 enterprises. In addition, more than 20 scientific papers were published on POPs as part of the project, and the results were presented at international conferences and hearings. Several books and articles were purchased in order to provide more information to specialists.

For institutional capacity building, the project created several new systems for monitoring and managing POPs and disseminated guidelines on how to use the systems. An Information Management and Reporting system was put into place and a monitoring network was developed, although "the design of the national POPs monitoring network is missing" (TE, 63). A National Register on Wastes and a new agency on waste and emissions management were created, although other new registers and data banks remained in progress at the time of writing of the terminal evaluation. The inventory of POPscontaining devices is still ongoing, and there was a problem with the labelling of POPs containers: the adhesive stickers did not stay on.

At the time of writing of the terminal evaluation report, there were some problems with the creation of the national POPs laboratory. The laboratory is too small for its needs, is not yet fully functional for large amounts of POPs sampling, and its status as either public or private is unknown. This means that the status of its staff and samples is also uncertain. Lastly, it is "not ready for accreditation" and needs additional financial support (TE, 87). However, to the lab's credit it has successfully begun an ongoing sampling campaign for national POPs sources.

Regarding the regulatory environment for POPs management, the project made significant progress. A legally binding document on PCB guidance was produced by the Ministry of Nature Protection and the Ministry of Energy and Natural Resources, and new legislation was enacted to address the management of obsolete pesticides. A national action plan for the final disposal of POPs was under development at the time of writing of the terminal evaluation report. Several other regulatory documents were published, including a Law on Chemicals. Training, workshops, information materials, and a web site were all created to serve policymakers and other personnel, and an inter-ministerial Committee on POPs was formed.

All in all, the project completed nearly all of its objectives and improved POPs management in Armenia. Effectiveness is rated as Moderately Satisfactory due to the problems with the national POPs laboratory,

the few incomplete components, and the lack of information regarding the component to obtain new technologies for POPs disposal.

4.3 Efficiency	Rating: Moderately Satisfactory
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The project was completed within the specified budget, but took two years longer to finish than planned due to complications involving procurement. The terminal evaluation report states that the procedures for procurement had to be repeated "several times" until successful (TE, 56). Because of the delay in procuring NATO-supplied lab equipment, laboratory work on the national POPs sampling campaign could not begin on time. In the meantime, while procurement was still being resolved, the government decided to create a new national POPs laboratory rather than strengthening the existing labs. These factors resulted in the project's extension. Perhaps due to this initial delay, some of the lab's requested infrastructure was still in the procurement process at the time of writing of the terminal evaluation report.. The procurement of GEF- and UNIDO-supplied equipment was handled by UNIDO, but other procurement (including some of the lab equipment) was handled by the co-financiers. Neither the PIRs nor the terminal evaluation report give an explanation for the problems and it is not clear where the fault lies.

Other than the problems with lab equipment procurement, there don't appear to be any major flaws in the financial management of the project.

4.4 Sustainability	Rating: Moderately Likely
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The terminal evaluation report briefly analyzes sustainability but does not provide a rating.

The report implies that financial risks remain moderate. It states that while "the financial sustainability of the project is still to be accomplished" there is the expectation that the private sector will join in the POPs disposal efforts. However, there is no evidence or indication that the private sector is committed to getting involved. In fact, the report later recommends increasing the involvement of the private sector in the project's goals. In addition, the financial stability of the national POPs laboratory also appears to be at risk, and the project states that it needs additional support.

Socio-political risk is moderately low. The terminal evaluation report states that "the commitments of the stakeholders were high" but this assertion is unsupported with regard to long-term sustainability (TE, 11). Government support is necessary for the new national POPs laboratory to survive, but it is unknown whether the needed monetary and institutional support is forthcoming.

For the institutional framework and governance metric, sustainability is likely. The project's multiple efforts in improving institutional capacity resulted in a large number of people trained, and information on POPs was generated and disseminated to scientists, policymakers, and the public. In addition, the framework of laws and regulations was changed so as to be more proactive toward POPs management

and disposal. The creation of the monitoring and reporting networks and databases will also contribute to institutional sustainability.

There do not appear to be any environmental risks for the project's outcomes. Overall sustainability is rated as moderately likely, because the impressive gains in institutional capacity and awareness are moderated by the financial risks.

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?

Actual co-financing was lower than what was reported at CEO approval. Oddly, the terminal evaluation report's executive summary states that "co-financing to the project is slightly above the expectations," which is clearly incorrect based on the financing tables (TE, 13).

Co-financing came from around ten different sources and went toward a variety of project outputs. For example, \$200,000 came from the Swiss government to prepare the Pollutants Release and Transfer Register, while NATO provided money for training. So co-financing played an integral part in completing the project's multiple objectives. The decreased amount of actual co-financing did not seem to have a detrimental effect on the project's outcomes.

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?

Project implementation was delayed due to lengthy procurement processes. Additional delays were caused by problems in other, interrelated projects that affected this project. Fortunately, these issues did not hamper the overall project effectiveness.

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 high for this project, which is a positive sign for its sustainability. This was shown by the government's rapid and broad updates of policy and legislation on POPs management, as well as the creation of new agencies and ministerial groupings to deal with the issue of POPs. However, the terminal evaluation report reiterates several times the need for continuing government support, especially regarding the national POPs laboratory, whose status must be clarified and finances provided. The work that has gone into updating Armenia's capacity will only make a difference if the country is willing to follow through and continue the work of monitoring and management.

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 Satisfactory
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The Project Results Framework of the CEO approval document includes neither a baseline nor targets for the project indicators, but the M&E outputs are specified within a timeframe and the responsibilities are allocated. While the targets provided in the Pro Doc are not as specific as they should be (for example, no specified targets for # of trainings held; modules developed, etc.) nor baselines specified, the M&E plan is comprehensive in its coverage out project outputs. A dedicated budget is set forth in the pro doc. M&E design is therefore rated as Moderately Satisfactory.

6.2 M&E Implementation	Rating: Satisfactory
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Implementation of M&E systems went smoothly, and project management adapted to changing circumstances when necessary. The terminal evaluation report notes "very frequent and effective communication" between the agencies, and all of the requested reports were filed on time to UNIDO (TE, 59). Several missions were undertaken "to assure timely implementation and the attainment of the results" (TE, 59). No problems or issues were reported. A mid-term evaluation was conducted according to plan. None of the M&E reports make it clear if project finances were effectively monitored throughout the project, but co-financing was assessed at the midterm evaluation. Financing tables were included in the final PIR and terminal evaluation report, although per-activity costs were not reported in either document.

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: Satisfactory

Project design was highly satisfactory in creating a multifaceted set of solutions to raise capacity for POPs management in Armenia.

The only apparent issue with project implementation was the procurement delay, which was managed by UNIDO. This led to an extension of the entire project and a failure to finish procurement for the national POPs laboratory by the project's end. However, this does not seem to have significantly harmed the project. Other than this issue, UNIDO supervision was satisfactory. UNIDO's supervision was valuable for providing training for the project teams, recruiting experts when necessary, and providing timely and adaptive project management.

There were no problems associated with project execution. Most of the project's objectives were accomplished successfully and on time, and the rest (with the possible exception of the national POPs laboratory) continued to make progress at the time of writing of the terminal evaluation report. The lessons section of the terminal evaluation report attributes the project's success to effectively focusing on the weaknesses and gaps of the current POPs management structure, the government's environmental commitment, stakeholder involvement, and effective channeling of resources.

8. Lessons and recommendations

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

The lessons learned are vague and for the most part involve using the project as a good example of various characteristics; for instance, stating that the project was a good example of the "effective use of various financial supports" or "an example of suitable methodological approaches" (TE, 88). The terminal evaluation report also states the importance of sustained government commitment as well as stakeholder involvement.

8.2 Briefly describe the recommendations given in the terminal evaluation.

For the recommendations specifically related to the project's outputs, the terminal evaluation report repeats the necessity of finding better adhesive stickers for labelling POPs containers. It also recommends that the national inventory of POPs be updated on an ongoing basis for new POPs sources. Finally, the report recommends greater private sector involvement, especially in POPs disposal, and the support of the Armenian government to the national POPs laboratory.

The terminal evaluation report also recommends that the project's inventory of Armenia's POPs be used to develop a greater inventory of "pollution sources, legal and illegal waste disposal sites and contaminated sites" and use it to create a mechanism to address past environmental damage, similar to the United States Superfund program (TE, 88).

9. 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?	Most of the outcomes are described and supported sufficiently, but poor writing and bad grammar often made the results difficult to interpret. Two of the project's intended outputs are not adequately described: the public awareness campaigns and the selection of new technologies.	MS
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is poorly written and organized, and much of the writing was difficult to understand. The report contains a strange error, stating twice that co-financing was above expectations when that was clearly not the case according to the tables presented.	ми
To what extent does the report properly assess project sustainability and/or project exit strategy?	Sustainability is briefly analyzed in the report, but a rating is not provided. More information on the lack of financial sustainability would have been helpful, and there was no discussion of socio-political sustainability.	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Both the lessons learned and recommendations are extremely vague, with few concrete or applicable suggestions. They express fairly obvious sentiments like increasing private sector involvement and governmental support for POPs management.	ми
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report describes some of the co-financing in detail, but does not give information on per-activity costs or on what the GEF grant was used for. The source of private sector co-financing was not specified.	MS
Assess the quality of the report's evaluation of project M&E systems:	The evaluation of project M&E was brief but adequate. UNIDO's independent evaluation group rated M&E implementation as MS, but the reasons for having a rating of less than Satisfactory are unclear, since no problems or issues were indicated in the terminal evaluation report.	S
Overall TE Rating		MS

TE Quality = (.3*(4+3)) + (.1*(4+3+4+5)) = 3.7 = MS

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

Project PIRs, TE, and CEO approval document were used for this review. UNIDO's independent evaluation group's review was also consulted.