Terminal Evaluation Review form, GEF Independent Evaluation Office, APR 2015

1. Project Data

GEF project ID		4124	
GEF Agency project ID		4095	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Implementation of Phase I of a Comprehensive PCB Management System	
Country/Countries		Jordan	
Region		Asia	
Focal area		POPs	
Operational Program or Strategic Priorities/Objectives		POPS-1 –Strengthening capacity for NIP (National Implementation Plan) Development POPS-2-Partnering in investments for NIP implementation	
Executing agencies involved		Ministry of Environment	
NGOs/CBOs involvement		None given	
Private sector involvement		Private sector industrial companies were involved in project	
CEO Endorsement (FSP) /Approval date (MSP)		December 9, 2010	
Effectiveness date / project start		January 01, 2011	
Expected date of project completion (at start)		December 2013	
Actual date of project completion		March 2016	
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	.05	.05
	Co-financing		
GEF Project Grant		.95	.812
Co-financing	IA own	.15	.15
	Government	.73	.11
	Other multi- /bi-laterals	NA	NA
	Private sector	NA	NA
	NGOs/CSOs	NA	NA
Total GEF funding		1	.86
Total Co-financing		2.18[1]	3.76
Total project funding (GEF grant(s) + co-financing)		3.13	4.57
TE completion date		August 2015	
Author of TE		James Lenoci	

[1] From project document p.1, TE notes that 3.16 in total co-financing was recorded in the inception report, compared to the 2.18 recorded in the project document. (TE p.10)

TER completion date	April 16 2016
TER prepared by	Mia Lu & Molly Watts
TER peer review by (if GEF IEO review)	Molly Watts

2. Summary of Project Ratings

Project Outcomes		Satisfactory	NR	S
Sustainability of Outcomes		Moderately Likely	NR	ML
M&E Design		Satisfactory	NR	S
M&E Implementation		Moderately Satisfactory	NR	MS
Quality of Implementation		Satisfactory	NR	MS
Quality of Execution		Satisfactory	NR	S
Quality of the Terminal Evaluation Report		-	NR	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project document lists the principal global environmental benefit of the project as "the mitigation or elimination of risks associated with the release of POPs into the environment and their subsequent global distribution with resultant ecological and human health impacts from exposure to these chemicals." (PD p.8)

3.2 Development Objectives of the project:

The overall development objective for the project is to develop "enhanced capacities for safer management of hazardous waste." (PD p.25) The project's focus was the implementation of a comprehensive PCBs (Polychlorinated biphenyls) management system in the Hashemite Kingdom of Jordan. This would be achieved through four project components (PD, pg 16-17):

The project's first component was regulatory and administrative strengthening for PCB management. As part of this component, PCB laws, regulations and guidelines would be upgraded to international standards, and continuous information dissemination is backstopped to enhance awareness on general and technical aspects associated with the risks presented by PCBS.

The project's second component focused on improving PCB inventory and technical capacity for Environmentally Sound Management (ESM) of PCB equipment and materials. Activities under this component would include improving basic PCB detection capacity, coordinating support and extended sampling and testing of oil transformers, providing financing for the development of an ESM system,

backstopping introduction of an ESM system with trainings, and identification and selection of PCB storage facilities with upgrade of their infrastructure.

The project's third component would be demonstration projects for testing ESM system and disposal of PCB containing equipment, targeting high priority PCB materials (PCB containing devices).

The project's fourth component would be monitoring, learning, adaptive feedback, outreach and evaluation.

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

According to the TE, the original project objective and the four components, as well as the strategic results framework remained unchanged throughout the implementation timeframe (TE, pg14).

4. GEF IEO assessment of Outcomes and Sustainability

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

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

Please justify ratings in the space below each box.

4.1 **Relevance**	Rating: Satisfactory

According to the TE, the project was directly aligned with Jordan's National Implementation Plan for Stockholm Convention on Persistent Organic Pollutants, specifically the implementation strategy regarding the production, import, export, use, identification, labelling, removal, storage, and disposal of PCBs and equipment containing PCBs (Annex A, Part II, Chemicals).

The project was also relevant with respect to the first two strategic programs (POPS-SPs) under the GEF-4 long-term objective of the POPS focal area, "*to reduce and eliminate production, use, and releases of POPS*":

- POPS-SP1, "*Strengthening capacity for NIP (National Implementation Plan) development and implementation*", and

- POPS-SP2, "*Partnering in investments for NIP implementation*". With respect to POPS-SP1, capacity building was an integral dimension of the project, represented in each of the four components. Successful partnerships were concluded with electric utilities and private sector companies in implementing the NIP; which is relevant with respect to POPS-SP2.

Therefore, the TE rated the project as Relevant (TE, pg23) and the TER rates relevance as Satisfactory.

4.2 **Effectiveness**	Rating: Satisfactory

The TE rates overall quality of project outcomes as satisfactory, and this TER agrees with that rating. The overall outcomes of the project are satisfactory, according to the main components that achieved their expected results (TE, pg 22-23); therefore, TER also rated the effectiveness section as satisfactory.

Project's achievements under each component are detailed below:

The TE rated achievement of the project's first component as satisfactory. Under the project's first component, -regulatory and administrative strengthening for PCB management-the project has facilitated drafting and prime ministerial endorsement of the Instruction on PCB Management under Article 4/D of Environmental Law 56/2006 ("PCBs regulation). A training manual on handling PCBs was developed in English and Arabic and distributed to stakeholders. The project also sponsored workshops on management of PCBs and socialization of PCBs regulation.

Component 2: Improving PCB inventory and technical capacity for Environmentally Sound Management (ESM) of PCB equipment and materials.

The TE rated achievement of Component 2: Improving PCB inventory and technical capacity for Environmentally Sound Management (ESM) of PCB equipment and materials, as satisfactory. More than 14,000 transformers have been inventoried and tested for PCBs. This is the majority of units in the country. The results of the equipment inventory and PCBs testing are recorded on the PCBs database. The project has facilitated transboundary shipment and disposal/destruction of equipment and wastes containing PCBs. By the end of the project, the vast majority of discovered equipment and wastes containing PCBs will have been disposed. However, at the time of the terminal evaluation, there was no PCB accumulation or storage facilities ready, so the result for this target were moderately unsatisfactory.

Component 3: Demonstration projects for testing ESM system and disposal of PCB containing equipment

The TE rated achievement of Component 3 as satisfactory. Through the demonstration project, the majority of electrical equipment transformers and capacitors containing PCBs were disposed of or destroyed by project closure, through transboundary shipments of units to Europe. Two shipments, the first of 47 tons of PCB-containing wastes, and the second, planned at the time of the TE to contain 57.3 tons of drained dielectic oil, were made by the project.

The project's final component was monitoring, learning, adaptive feedback, outreach and evaluation, which was rated moderately satisfactory. This component is covered in the M&E implementation section below.

4.3 **Efficiency**	Rating: Satisfactory

The TE rated Efficiency as Satisfactory and the TER agrees with the rating. The GEF funding addressed the key barriers with respect to environmentally sound management of PCBs in the country; Co-financing contributions from electric utilities and private sector industrial companies exceeded the pledged amounts and were well integrated into the project activities. The project was also cost-effective, satisfactorily achieving the intended outcomes within the allocated budget. The duration of the implementation has extended more than 2 years longer than the 3-year approved timeframe. The additional time for implementation seems more attributed to an under-estimation of the time required rather than inefficient implementation (TE, pg24).

4.4 **Sustainability**	Rating: Moderately Likely

According to the TE, the sustainability of the project is moderately likely, and the TER agrees with the rating. More details as follow (TE, pg27):

- Financial risks sustainability: Likely
    - The co-financing contributions from the electric utilities and private sector industrial companies has demonstrated that these organizations are committed and capable of funding the technical requirements associated with safe management of PCBs. Considering that most of the discovered PCB-containing equipment and oils will be disposed by the end of the project, there seem to be a relatively low risk that considerable financial resources will be required to manage residual PCBs in the country.
- Socio-Economic risks sustainability: Likely

    - Risks to local communities, e.g., as a result of an accident or fire of PCB-containing equipment, have been significantly reduced due to the identification and disposal of most of the PCB equipment and oils in the country.
- Institutional Framework and Government Risks sustainability: Moderately Likely
    - The project made substantive contributions to the regulatory framework for safe PCBs management, by facilitating the development and eventual endorsement of the regulation on PCBs management. This enhances the sustainability of project outcomes, with respect to institutional framework.
    - However, the increased intensity of the armed conflicts in neighboring countries, including in Syria and Iraq, and the resultant influx of refugees into Jordan is a significant burden to the Government of Jordan. The sustainability of the project outcomes is partly affected by this situation because the government needs to prioritize funding.
- Environmental Risks sustainability: Likely
    - There was a finite stock of electrical equipment containing PCBs in the country, and the majority of these will be disposed/destroyed by the end of the project. The endorsed regulation on PCBs management creates a regulatory framework that reduces the likelihood of activities that might pose a threat to the sustainability of project outcomes.

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?

For the government's co-finance, only USD 107,000 has been realized through June 2015, compared to USD 650,000 committed at project inception (TE, pg25). However, the overall outcome was met and wasn't negatively affected lack of materialization of government cofinancing. This is mainly due to the fact that other sources of co-financing, including from electric utilities and private sector industrial companies, materialized, increasing cofinancing from USD 2.18 mn at project proposal to USD 3.76 mn at project completion. The TE notes that project cofinancing "has demonstrated a high level of ownership for management of PCB-containing wastes." (TE p.30)

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?

For delays, two electric utilities companies, Jordan Electric Power Co (JEPCO) and Irbid District Electricity Co (IDECO), have committed to construct an interim storage facility. IDECO has made significant progress with the construction, however, contractor problems have resulted in delays. On the other hand, JEPCO didn't start as plan in the schedule (no explanation in TE), but JEPCO representatives indicated to the TE evaluator that "they hope to start in the coming months and be ready with the facility by the end of the year: (TE, pg iii).

Also, the duration of the implementation has extended more than 2 years longer than the 3-year approved timeframe. The additional time for implementation seems more attributed to an under-estimation of the time required rather than inefficient implementation (TE, pg24).

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 has been generally satisfactory. Firstly, project design was closely aligned with the National Implementation Plan for Stockholm Convention on Persistent Organic Pollutants. The national implementation modality also enhanced country ownership, as high-level and technical staff members within the Ministry of Environment were actively involved in the project. Participation by representatives of electric utilities and private sector industrial companies was also high throughout the implementation phase (TE, pg25). Country ownership is somewhat diminished by the relatively low level of Government co-financing: only USD 107,000 has been realized through June 2015, compared to USD 650,000 committed at project inception.

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: Satisfactory

According to the TE, at the design and planning phase, the Monitoring and evaluation was integrated into the project as the fourth component. The M&E plan included in the project document was prepared according to the standard GEF template. The allocated USD 40,000 M&E budget, roughly 4.2% of the total GEF grant, included costs for international consultants for the midterm review and terminal evaluation, at USD 20,000 each, for a medium size project. The other activities in the M&E plan were carried out by project management or UNDP staff, so there were no additional costs added (TE, pg 18).

Indicators for each outcome were clearly laid out in the Project Document and were used to measure the project's achievements through the M&E activities. Indicators were Specific, Measurable, Achievable, Relevant and Timebound (SMART). For example, there are 3 indicators to measure the achievement of outcome two, and one of them was "POPs phased out from use (tons and cost per ton compound)" (PD, pg25).

Based on the overall structure of the design and reasonable level of budget planned on implementing the M&E evaluation, the TER agrees with the TE in ranking the M&E design at entry as Satisfactory.

6.2 **M&E Implementation**	Rating: Moderately Satisfactory

M&E Implementation is rated as moderately satisfactory in the TE, and this TER agrees with that rating. The project board has only convened twice in more than four years of implementation, thus limiting the effectiveness of adaptive management. Positively, the terminal evaluation was completed in August 2015, about 7 months before the extended closure of the project (March 2016). This allows sufficient time to implement recommendations included in the terminal evaluation report.

There are positives on the M&E implementation as follows, according to the TE (TE, pg18):

- PIR reports contained feedback from key stakeholders and provided detailed summaries of project performance;
- Regular monitoring reports have been prepared, documenting completed field activities;
- Some adjustments were made following recommendations made in the midterm review;
- GEF tracking tool for POPS projects was completed, and included quantitative support to progress toward project performance indicators;

However, there are also shortcomings in the M&E implementation, such as:

- The project board has only convened twice in more than four years of implementation;

- Follow up to mid-term review recommendations has been incomplete, including the issue of the interim storage facilities;

Therefore, based on positive and negative evidences on the M&E implementation, TER ranks the section as Moderately Satisfactory.

7. Assessment of project implementation and execution

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

Please justify ratings in the space below each box.

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

UNDP is the implementing agency for this project. The quality of implementation is rated as Moderately Satisfactory, which is downgraded from TE's rating of satisfactory.

According to the TE, there is much positive evidence on the quality of implementation on the part of UNDP; especially UNDP's extensive experience in Jordan and their favorable standing with the Government has been a strong comparative advantage (TE, pg19):

- Staff members have been actively involved in the project, providing management guidance, procurement services, and financial accounting.
- The regional technical advisor (RTA) has been involved since the design phase, and has provided regular support to the project management team.

However, there are also some weakness in the implementation:

- The project board has only convened twice in the 4+ years of project implementation. Ideally, the low frequency of project board meetings should have been picked up through the regular interaction with the Ministry and the project management team.
- Risk management and follow up to recommendations made at the midterm review were not sufficiently controlled. For example, slow progress with respect to interim storage facilities was highlighted in the midterm review.

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

The project executing agency was Jordan's Ministry of Environment. The TE rates quality of Execution by the Ministry of Environment as Satisfactory, and this TER agrees with that rating. This rating is based on the following evidence (TE, pg18):

- There has been proactive involvement by high-level Ministry of Environment officials, including the Director of the Hazardous Substances and Waste Management Directorate.
- Overall country ownership has been satisfactory, as evidenced, for instance, by the fact that the regulation on PCBs management has not only been drafted but also endorsed by the Prime Minister in 2014. This process required concerted advocacy by Ministry officials.
- The project management unit consists of qualified and dedicated professionals.

As a result, the TER agrees with the TE and rates the quality of the Execution Agency as Satisfactory.

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.

In addition to testing dielectric oil, the project team sampled and analyzed 14 soil samples and 43 water samples, to assess possible environmental impacts associated with the handling of PCB containing equipment. Each of the analyzed soil and water samples tested negative for PCBs; indicating that the environmental impacts, at least at the facilities where the inventoried electrical equipment is located are negligible. The removal of the PCB containing equipment and oils from the network is reducing the likelihood of future impacts, due to accidents, fires, or other inadvertent releases (TE, pg29).

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.

There was not much information provided on the socio-economic change in the TE; however, people shall be more aware of the fact that their health condition is closely related to the water and soil, which have been polluted by PCB, since NGOs were invited to participate in project sponsored workshops and committee meetings and would convey the knowledge to people on the ground (TE, pg 12).

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 local government endorsed the regulation on PCB management under Artical 4/D of environmental Law 56/2006 (more details in Outcome 1) (TE, pg 20), which was a significant achievement of the project (TE, pg since the government regulation was very limited beforehand (TE, pg 7).

b) Governance

The Governance ability on environmental issues have been improved. As a good example, the regulation on PCBs management has not only been drafted but also endorsed by the Prime Minister in 2014 (TE, pg18).

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.

According to the TE, the removal and safe disposal of equipment containing PCBs reduces the potential adverse impacts to local communities from an inadvertent accident, such as fire (TE, pg25)

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.

According to the TE, the scope of the project and involved stakeholders were limited, so there was not mainstreamed or replicated somewhere else yet (TE, pg 25).

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.

Lessons learnt are as below, according to the TE (TE, pg35):

- The 3-year implementation timeframe indicated in the project document was insufficient.
- Travel costs at 5% were insufficient under the project's implementation modality. According to GEF policy, travel costs accounted for the maximum allowable 5% of total project cost in the indicative budget outlined in the project document. However, the implementation modality, with the project management unit staff providing field supervision, required more intense travel than this 5% limit.
- Some of the misgivings regarding certain policies and procedures, including honorarium to members of the PAC for participating in meetings, reimbursement for travel related costs, might have been averted if there was more explanation provided at the inception phase of the project.

9.2 Briefly describe the recommendations given in the terminal evaluation.

There were 12 recommendations in the TE for this project (TE, pg 34).

Recommendation No. 1: A re-evaluation and advocacy campaign for interim storage requirements should be made as soon as possible, and adaptive solutions implemented before the end of the project.

Recommendation No. 2: The project should sponsor a practical training workshop, preferably involving field modules, on implementation and enforcement of the PCBs regulation.

Recommendation No. 3: The project team should assist waste generators and government agencies in the process of preparing, reviewing, and managing annual reports on PCB wastes.

Recommendation No. 4: A representative number of transformers containing Midel® oil should be tested for PCBs by gas chromatography analysis, to verify that the assumption that this type of dielectric oil is not cross-contamination with PCBs.

Recommendation No. 5: Before finalizing the contract for the second transboundary shipment of PCB wastes, further outreach should be made to the private industry sector, including the steel plants, to search for additional PCB-containing electrical equipment.

Recommendation No. 6: The PCBs database should be further developed, so that it could be a more useful tool in support of the implementation of the PCBs regulation.

Recommendation No. 7: The project team should prepare a sustainability plan.

Recommendation No. 8: The project team should support the Ministry of Environment in preparing and submitting the online national report (PCBs section) to the Stockholm Convention.

Recommendation No. 9: The final tally of cofinancing contributions should be recorded at the end of the project.

Recommendation No. 10: Budget permitting, the project should sponsor a study tour for the key governmental and private sector stakeholders, to exchange information on how PCB-containing wastes are managed in another country.

Recommendation No. 11: The PCBs regulation should be mainstreamed across the relevant national regulatory framework, e.g., with respect to used oil management, waste landfilling, waste electronic and electrical equipment management, protection of soil resources, protection of water resources, occupational safety and health concerns, etc.

Recommendation No. 12: An assessment should be made of potentially at-risk areas, including scrap yards, waste disposal sites, inland fisheries, etc.

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)

To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The report contains a detailed assessment of relevant outcomes and impacts of the project.	**S**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is internally consistent, and ratings are well substantiated.	**S**
To what extent does the report properly assess project sustainability and/or project exit strategy?	The report contains a detailed assessment of the project's sustainability across the four dimensions, as well as the project's replication approach.	**S**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Lessons learned and recommendations are comprehensive.	**S**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report contains total costs and actual co-financing, as well as costs per component.	**S**
Assess the quality of the report's evaluation of project M&E systems:	The evaluation of the project's M&E systems is adequate	**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).