1. Project Data

. I Toject Data					
	Su	mmary project data			
GEF project ID		2785			
GEF Agency project ID		PIMS 3527			
GEF Replenishment Phase		GEF-4	GEF-4		
Lead GEF Agency (inc	lude all for joint projects)	UNDP			
Project name		Capacity Building for PCB Elimi	nation in Ghana		
Country/Countries		Ghana			
Region		West Africa			
Focal area		Chemicals and Waste (POPs)			
Operational Program Priorities/Objectives	or Strategic	Reduction in the exposure to P	Reduction in the exposure to POPs of humans and wildlife.		
Executing agencies in	volved	Ghana Environmental Protection	on Agency		
NGOs/CBOs involven	nent	NA			
Private sector involve	ement	NA			
CEO Endorsement (FS	SP) /Approval date (MSP)	December 2008	December 2008		
Effectiveness date / p	Effectiveness date / project start		March 2009		
Expected date of pro	ject completion (at start)	December 31, 2013	December 31, 2013		
Actual date of projec	t completion	July 31th, 2015			
		Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)		
Project Preparation	GEF funding	0.35	.35		
Grant	Co-financing	0.135	NA		
GEF Project Grant		2.95	2.95		
	IA own	0.2	0.2		
	Government	0.7	0.7		
Co-financing	Other multi- /bi-laterals	0	0		
	Private sector	2.67	2.67		
	NGOs/CSOs	0	0		
Total GEF funding		3.3	3.3		
Total Co-financing		3.70	3.57*		
Total project funding (GEF grant(s) + co-financing)		7.00	6.87*		
	Terminal ev	valuation/review informatio	n		
TE completion date		December 2015			
Author of TE		Samuel F. Banda , Maxwell M. Nkoya, and Isaac B. Kudu			
TER completion date		March 20, 2016			
TER prepared by		Caroline Laroche			
TER peer review by (if GEF EO review)		Molly watts			
TER peer review by (i	f GEF EO review)	Molly watts			

^{*} Excluding PPG funding, the disbursement of which was not specified in the TE

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	S	S		S
Sustainability of Outcomes		ML		ML
M&E Design		NR		S
M&E Implementation		MU		S
Quality of Implementation		NR		MS
Quality of Execution		NR		MS
Quality of the Terminal Evaluation Report				MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

Ghana has, as part of its obligations under the Stockholm Convention, developed a National Implementation Plan (NIP) on POPs (Persistent Organic Pollutants), including information on the PCBs (Polychlorinated biphenyls) and status of PCB management in the country (PD p.4). PCBs have never been manufactured in Ghana, but they have been legally imported in significant quantities in transformers and capacitors. This project aims to "protect human health and the environmental quality by avoiding human and environmental exposure of PCB oil and PCB-contaminated oil, particularly from industrially-sized equipment.

3.2 Development Objectives of the project:

More specifically, the project objective is "to enhance the capacity for the safe management of PCB oil and PCB-containing equipment at all stages of the PCB management cycle" (PD p.22). To do so, the project focuses on the following four outcomes:

- 1. Strengthening of the legal framework, administrative and technical preparedness for sound PCB management; [5]
- 2. Infrastructure for environmentally sound management of PCBs developed and in place;
- 3. Environmentally sound replacement and disposal of PCB waste and equipment, and
- 4. Monitoring, learning, adaptive feedback, outreach, and evaluation. [5]

(TE p.7)

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

Some of the project objectives under Outcome 2 have been realigned after the mid-term evaluation. In particular, changes were made so that "the project was no longer expected to

establish dechlorination units for its future use since there was no interest both from the private sector and the government to manage these units." (TE p.8)

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
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The TE rates relevance as satisfactory due to its high importance to Ghana in the context of the Stockholm Convention, and to the GEF under its POPs focal area. For the same reasons, this TER also rates relevance as satisfactory.

Ghana signed the Stockholm Convention on 23 May 2001 and became a Party on 30 May 2003. As a Party to the Stockholm Convention, PCBs elimination was a highly important and relevant topic for the Government of Ghana. In addition to its relevance to meeting its obligations under the convention, the project was relevant to Ghana in that it aimed to protect the environment, human health in general as well as vulnerable groups affected by the adverse effects of PCBs and other POPs.

This project was relevant under the GEF-4 Chemicals and Waste (POPs) focal area, and more specifically "under POPs Operational Programme 14, supporting outcomes such as strengthening institutional and human resource capacity and management of POPs stockpiles in an environmentally sound manner. The project falls under eligible activities under Capacity Building, particularly sections 13 a. and c. of the Operational Programme" (PD p.32).

4.2 Effectiveness	Rating: Satisfactory
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The TE rates effectiveness as satisfactory, with all three outcomes, and three programmatic outcomes rated as satisfactory. This TER also rates project effectiveness to have been satisfactory.

Below, we look at the project's accomplishments under each of the three project programmatic outcomes.

Outcome 1: Strengthening of the legal framework, administrative and technical preparedness for sound PCB management

This outcome had two main components: (i) the development of a new national bill covering PCBs, and (ii) administrative and technical preparedness for sound management of PCBs. A draft bill has been developed, but at the time the Terminal Evaluation was written, it was still waiting for Cabinet approval. At the point when this TER was prepared, no online evidence could be found that the bill had been passed. The second component of this outcome was more effective: administrative systems for the management of PCBs related to enforcement and inspection activities have been developed and implemented as part of the project. Very importantly, "the major holders of transformers (Volta River Authority, Ghana Grid Company and Electricity Company Ghana) have developed and implemented systems for prevention of reintroduction of PCBs, detection and management potential PCBs containing electrical equipment" (TE p.32). In addition, the project undertook a large training exercise for customs officers, and conducted workshops with all major PCB holders. Overall, despite the draft Bill not having yet been officially implemented, we consider this outcome to have been satisfactorily achieved.

Outcome 2: Infrastructure for environmentally sound management of PCBs developed and in place

The project delivered all planned outputs under this component. Provincial collection points for PCBs were created and a central storage site was refurbished. This site was later decommissioned after all PCBs waste was shipped out of the country. Given the project's perfect record on this component, this outcome is considered to have been highly satisfactory.

Outcome 3: Environmentally sound replacement and disposal of PCB waste and equipment

As part of this outcome, a Five Year National PCBs Phase-Out and Management Plan was developed and published. The three electricity companies now have mainstreamed PCBS management into their operations and comply with good disposal practices. PCB containing transformers have been phased out, and a testing system in in place to ensure new transformers do not contain PCBs. All PCB waste has been disposed of. All indicators for this outcome have been met, and this should also be considered to be a highly satisfactory outcome.

Overall Assessment

All project activities have been satisfactorily completed, except for the draft PCB will, which still awaits parliamentary approval. An overall rating of satisfactory is assigned as the project meaningfully and effectively enhanced the capacity for the safe management of PCB oil and PCB-containing equipment at all stages of the PCB management cycle. This capacity may be even further enhanced once the draft Bill is passed.

4.3 Efficiency	Rating: Satisfactory
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The TE rates efficiency as satisfactory due to its cost-effectiveness and good management. This TER also rates it as satisfactory.

The TE claims the project has been cost-effective "especially with regards to aspects related to delivery of key outcomes, including but not limited to the final disposal of PCBs waste with other hazardous waste, preparation and publication of PCBs awareness materials, the PCBs national communication strategy". The final project costs were indeed very close to the initial expected costs. However, the TE does not provide any additional evidence to support the claim of cost effectiveness.

While the project ran for 18 months longer than expected due to delays and a poorly considered timeline in the project design, the TE claims the project was still very efficiently delivered.

4.4 Sustainability	Rating: Moderately Likely
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The TE rates sustainability as moderately likely but does not provide a clear rationale behind this score. This TER rates sustainability as moderately likely due to the risk of the draft PCBs Bill not getting approved.

Financial Risks – Sustainability Likely

The TE contains no evidence that the Government of Ghana has committed further funds for PCB-related activities, or that other projects are planned in this area. Financing will most likely depend on the passing of the PCBs Bill. However, the project accomplishments were very time-bound and fully independent of future continuation of activities. There appears to be no real financial risks to the continuation of project outcomes.

Socio-Political Risks – Sustainability Moderately Likely

The main risk to sustainability is the lack of approval of the PCBs Bill. The Bill is now awaiting parliamentary approval, but if it is not approved, some of the planned structure for PCBs management could never see the light. As a result, socio-political sustainability is rated as moderately likely.

Institutional Risks – Sustainability Likely

All participating institutions, including EPA-Ghana, the Ghana Atomic Energy Agency and the Ministry of the Environment, have been extremely supportive of the project and will pursue their efforts towards managing PCBs more safely. At project end, the Ghana Atomic Energy Commission had "mainstreamed PCBs into both the analytical services they provide and also into the main research areas for undergraduate and post graduates" (TE p.46), and several ministries had "incorporated PCBs and other POPs into their annual plans and routine operations" (TE p.46). The three electricity companies had "incorporated PCBs/POPs issues in their weekly Safety, Health and Environmental Talks" (TE p.46). Changes made in participating institutions were set up to be long lasting, and there are no institutional risks to their continuation.

Environmental Risks – Sustainability Likely

No environmental risks pose threats to the continuation 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?

Almost all of the expected co-financing expected was received, and made up about half the project funds. The cofinancing was essential to project accomplishing its deliverables.

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 project ran for 18 months longer than expected due to implementation delays and a poorly considered timeline in the project document. This did not affect project outcomes.

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:

According to the TE, country ownership for the project was very high. This is reflected in representation of all the key stakeholders in the Project Steering Committee (PSC). The PSC used to be chaired by the senior officer from the Ministry of Environment, Science and Technology. The electricity companies, such as Electricity Company of Ghana (ECG), Volta River Authority (VRA) and Ghana Grid Company Limited (GRIDCo), showed commitment to the extent of allocating funds in their budgets as either co-financing or in-kind support to the project. The government of Ghana showed commitment by fulfilling its pledges as a co-financier and in its unrelenting provision of support via EPA-Ghana, Ghana Atomic Energy agency, Ministries of Environment, Justice among others. (TE p.45)

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

The TE does not rate M&E design at entry. This TER rates M&E Design at entry as satisfactory as it featured the standard required elements of a good M&E framework.

The project document features a clear M&E plan (PD pp.36-37) with a clear timeline for M&E activities, responsibility and budget. The Project Document also presents a strong project logframe (PD p.41) with an adequate set of indicators largely respecting SMART criteria. The logframe was simple and clear, facilitating monitoring throughout the project. The MTR criticized the logframe for having too long a list of indicators, "preventing a greater focus on few important performance indicators and providing critical monitoring information to project managers" (MTR p.38). This TER assesses this as a minor issue and rates M&E design as satisfactory.

6.2 M&E Implementation	Rating: Satisfactory
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The TE rates M&E as Moderately Unsatisfactory, albeit without a strong justification for this score. This TER instead rates M&E implementation as satisfactory based on the evidence presented in the TE, according to which M&E activities were conducted as planned and used for adaptive management.

All M&E activities appear to have taken place as planned. Quarterly monitoring reports were produced, as well as the required PIRs. "Feedback provided by both the External and Internal M&E formed part of the Agenda for the PSC's Quarterly meetings. The Minutes indicate that the M&E reports were used to review project deliverables and to re-align delayed activities and to re-assign resources to resource intensive objectives within the realms of the project design" (TE p.28).

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
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This project was implemented by the UNDP and UNITAR. The TE does not rate project implementation. This TER rates it as moderately satisfactory due to weaknesses with the project design and some gaps and confusion related to project oversight.

According to the TE, the project design was highly satisfactory. Indeed, "the project document was also found to be comprehensive, coherent, clearly constructed with outcomes and impacts clearly outlined in line with GEF requirements" (TE p.20). While this is true, the TE also criticizes the project design for the proposed project timeline not having being adequately considered and having resulted in project delays (TE p.44). Project design can therefore be rated as moderately satisfactory.

Project implementation went overall well, but there were some issues related to UNDP's financial management. Fund disbursement to UNITAR was very slow, and at times created delays in project implementation. Implementation responsibilities were allegedly confused between UNITR, the UNDP Country Office and the UNDP Istanbul Regional Hub. According to the TE, the UNDP Country Office was mostly involved in project monitoring, but should have been more actively involved in the project's financial management. On the other hand, the technical assistance provided by UNITAR was assessed to have been "very satisfactory and timely" (TE p.31). Overall, the oversight, project management and technical assistance delivered were moderately satisfactory.

7.2 Quality of Project Execution	Rating: Moderately Satisfactory
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The TE has not rated the quality of project execution. This TER rates quality of project execution by the Ghana Environmental Protection Agency (EPA) as moderately satisfactory because of the adaptive management demonstrated by the agency. However, there were some weaknesses in the human resources assigned to the project.

The TE praises the Ghana EPA for the adaptive management it displayed throughout the project. Indeed, according to the TE, "a number of adaptive management actions were implemented by the project as a result of realities encountered during the implementation process. Examples of this include the provision of PCBs temporary collection/storage sites. Upon realising significant environmental and human health risks associated with having multiple provincial sites (remotely located with inadequate security) the project design was adapted to establishing a one temporary central storage site in Tema. The result was the establishment of one secure site which was also close to the seaport" (TE p.27).

The Ghana EPA is under staffed, and this affected the project. According to the TE, the project management would have been more effective if there had been sufficient resources at the EPA: "If a project Assistant was employed the day-to-day running of the project would have been more effective that was experienced" (TE p.12).

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 had a very direct, immediate and observable impact: Ghana is now free of pure PCBs and of highly contaminated PCB oil and equipment. Ghana has exported toxic POPs pesticides, which would otherwise have stayed stored for several more years representing a potential hazard, for destruction. It has and has also disposed-off the now-banned CFCs and contaminated refrigerants. Additionally, after the ban on Methyl bromide entered into force in 2015 as per the Montreal Protocol, the country was able to export for destruction two remaining cylinders of Methyl Bromide. All these measures reduced threats to the environment in Ghana and associated Global Environmental Benefits. (PD p.25)

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 socio-economic change was recorded as part of this 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

Capacity building on PCBs was an important aspect of this project. Capacity building activities focused on training staff and officials to use the new infrastructure developed as part of the project (for example, the new storage facility) as well as to build a better analytical capacity for PCBs analysis. As a result, Ghana's technical preparedness to deal with PCBs is much higher.

b) Governance

A draft PCBS Bill is awaiting parliamentary approval. Upon approval, this might change the way PCBs are disposed of in Ghana. In the meanwhile, several government agencies have changed the way they operate based on the project activities.

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 impact was recorded as part of this 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.

This is not relevant to the context of this project.

9. Lessons and recommendations

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

The TE proposes the following key lessons:

- 1. <u>Outcome 1:</u> The PCBs Bill has taken close to five years. This was due to the fact that development and enactment of laws is a long and bureaucratic process. Future project should consider developing Statutory Instrument(s), which are quicker and do not need parliamentary approval. Further, the decision and policy makers should be engaged early on from the very beginning of the project implementation.
- 2. <u>Outcome 3</u>: Provision of an External Monitoring and Evaluation services by an external person is more objective and effective than use of an internal Monitoring and Evaluation which in most cases is subjective and lacks independence and objectivity.
- 3. Project Management-Executing Agency: Due to the novelty of the project management arrangement (agency execution by UNITAR), it was not always easy to determine the respective roles of the Country Office, of UNITAR and of the UNDP Regional technical team, particularly as regards the responsibility in terms of delivery and technical oversight. This was compounded by an important turnover of personnel in the first years of implementation and became an issue during the first part of the project. A solution was found in 2013 to simplify the structure, as part of adaptive management. This experience should be built upon in defining future project's management arrangements, which will benefit from clearly defined roles and responsibilities in this regard.

- 4. <u>Project Management Implementing Agency:</u> Effective Secretariat services for project management are more effective where there are sufficient human resources. Ghana EPA (which served a project secretariat) was over stretched due to limited staff. If a project Assistant was employed the day-to-day running of the project would have been more effective than was experienced.
- 5. <u>Replicable aspects:</u> South to South Cooperation should be encouraged in all future projects. Lessons learnt from the study tour of Zambia's PCBs management and elimination program was useful to PSC. The PSC used the lessons learned to modify some activities to ensure effective and efficient utilization of resources such as use of central PCBs temporary storage site as opposed to multiple temporally storage sites.

(TE p.12)

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE presents the following recommendations:

- Outcome 1, Legal Framework: Future projects should consider developing Statutory Instrument(s) which provide a quicker, deeper subject coverage, and do not require parliamentary approval. This will also avoid the risk of POPs being overshadowed by more prominent issues like Electronic Waste as may be the case with the current Bill in Ghana.
- <u>Project Management, Implementing Agency:</u> To ensure effective project management at Secretariat level, employing a Project Assistant should be considered a norm.
- Project Management Executing Agency: To ensure optimal benefits are derived from UNDP
 Country Office's comparative advantage, future projects should consider finding an
 optimised definition of responsibilities between UNDP Country Office, Execution agency
 (UNITAR or other) and the UNDP technical team (Montreal Protocol and Chemicals Unit in
 this case). Project Design: Future projects should clearly define responsibilities and
 accountabilities between UNDP Country Office and UNDP Istanbul Regional Hub for Europe
 and the CIS.
- Monitoring and Evaluation: The Subcommittee on Education and Awareness Creation was an internal component of the PSC, therefore was not independent in its M&E functions. To this effect it recommended that to avoid subjectivity and to ensure independence of the M&E only external persons/institutions should be contracted to undertake Monitoring and Evaluation.
- <u>PCBs elimination Sustainability:</u> To ensure sustainability especially on PCBs awareness, the
 initiatives such as the In-house Training Program and Safety Talks by ECG, VRA, GRIDCo as
 well as the incorporation of PCBs into the Technicians curriculum at Tema College should all
 be formalised and documented.



• Replicable Aspects: Future projects should consider the utilization of South to South Cooperation as a norm. This will facilitate both capacity building and promotion of regional solutions to common environmental challenges."

(TE p.13)

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 report contains an assessment of relevant outcomes and impacts. However, logframe indicators are not specifically reported against, and it is unclear what the outcome ratings are based on.	MS
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is internally consistent, but evidence lacks to support some of the outcome ratings. The required ratings are not always well substantiated, and several are missing.	MU
To what extent does the report properly assess project sustainability and/or project exit strategy?	Project sustainability is not properly addressed, and the report fails to provide details on the project's exit strategy.	U
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned appear relevant, supported by the rest of the report, and comprehensive.	S
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report includes overall project costs and co-financing, but those are not disaggregated per activity.	MS
Assess the quality of the report's evaluation of project M&E systems:	The report describes M&E implementation well, but fails to assess M&E design at entry.	MS
Overall TE Rating		MS

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

No additional sources were used in the preparation of this TER.