

1. Project Data

Summary project data			
GEF project ID		3931	
GEF Agency project ID		7356	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Small Hydro Power Development	
Country/Countries		Kyrgyz Republic	
Region		Central Asia	
Focal area		Climate Change Mitigation	
Operational Program or Strategic Priorities/Objectives		SP3 – To promote on-grid renewable energy	
Executing agencies involved		Ministry of Energy and Industry	
NGOs/CBOs involvement		None involved	
Private sector involvement		Involved as co-financer	
CEO Endorsement (FSP) /Approval date (MSP)		January 7 th , 2010	
Effectiveness date / project start		January 2010	
Expected date of project completion (at start)		December 2013	
Actual date of project completion		February 2016	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.05	-
	Co-financing	0.05	-
GEF Project Grant		0.95	0.79
Co-financing	IA own	0.1	0.15
	Government	0.8	0.1
	Other multi- /bi-laterals	0.48	1.06
	Private sector	20.0	0.01
	NGOs/CSOs	-	-
Total GEF funding		1.0	0.79
Total Co-financing		21.43	1.32
Total project funding		22.43	2.11

(GEF grant(s) + co-financing)		
Terminal evaluation/review information		
TE completion date	January 2016	
Author of TE	Jiří Zeman	
TER completion date	January 10, 2017	
TER prepared by	Spandana Battula	
TER peer review by (if GEF IEO review)	Molly Watts	

2. Summary of Project Ratings

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

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project's Global Environmental Objective was to develop small hydropower as an important mitigation option to reduce greenhouse gas emissions (PD pg 6).

3.2 Development Objectives of the project:

The project's Development Objective was to "assist the Government in addressing the barriers to significantly increase grid-connected small hydropower capacity" (PD pg 12). The project planned achieve its objective through five components (PD pgs 7-8):

Outcome 1: Streamlined and comprehensive market oriented energy policy and legal/regulatory framework for small hydropower;

Component 2: Capacity available within DSMP to evaluate the economic and financial viability of small hydropower projects and within the Ministry's RE Unit to monitor and enforce regulations related to SHP;

Component 3: Capacity available to assess hydrological resources, design, evaluate and implement projects, and provide maintenance and repair services;

Outcome 4: Full feasibility and technical design studies for 5 small hydropower sites followed by construction of power stations; and

Outcome 5: Outreach programme and dissemination of project experience/best practices/lessons learned for replication throughout the country.

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

There were no changes to the objectives, however a new component was added to develop micro-hydropower plants for rural medical centers as part of the One UN Programme (TE pg 26).

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
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The project is relevant to GEF's Strategic Programme of climate change, as well as Strategic Objective 3 to "promote investment in renewable energy technologies" and Strategic Objective 6 to "support enabling activities and capacity building" (TE pg 49).

The project is aligned to the country's development priorities such as the Presidential Decree of October 2008 on "specific measures of small and medium energy in Kyrgyz Republic" and "the Small and Medium KR Energy Development Program through 2012 (TE pg 49). The project is also relevant to the country's commitments to the UN Framework Convention on Climate Change and the Kyoto Protocol ratified on May 13, 2003 (TE pg 49).

4.2 Effectiveness	Rating: Unsatisfactory
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The TE rated the effectiveness of the project as Unsatisfactory because the project did not achieve important components, such as the development of Renewable Energy legislation that would attract small hydropower investment. The project also did not construct a small hydropower and thus, was unable to materialize greenhouse gas savings (TE pg 11). The project had five components corresponding to five objectives and during project implementation, a new component was added due to new co-financing given by the One-UN Programme. The component provided for developing renewable power for rural medical centers. The project was able to completely meet its targets in only two of these outcomes and failed to achieve its main objective of developing small hydropower plants. Thus, the TER also gives Unsatisfactory rating to project's effectiveness. The achievements for each of the objectives are:

Outcome 1: Streamlined and comprehensive market-oriented energy policy and legal/regulatory framework for small hydropower development:

Under this outcome, the project fully achieved one output, while the other three were only partially delivered. The main expected output was to finalize renewable energy policy and legal framework and give a report on streamlining of land tenure as well as water use rights. The TE reports that although the renewable energy law and policy amendments were approved, the legal framework had not been finalized. The land tenure and water use rights had been drafted and approved by the government in 2015 but the Parliament's approval was still pending (TE pgs 42-43). The outcome also planned to get approvals for guidelines for the introduction of competition in the award of sites/concessions and standard power purchase agreement to facilitate negotiations with small hydropower developers. Even though the project developed the guidelines and power purchase agreements and submitted to the Ministry of Energy, approvals were still pending (TE pg 43). In regard to obtaining licenses for construction, the project managed to exempt licensing for small hydropower projects from the renewable energy law, which helped to create an attractive investment environment for small hydropower developers (TE pgs 43 & 61).

Outcome 2: Capacity available within governmental authorities to evaluate the economic and financial viability of small hydropower projects and within the Ministry's Renewable Energy Unit to monitor and enforce regulations related to small hydropower:

This outcome delivered on four out of six outputs. The main aim was to conduct a capacity development program by evaluating five project sites and training 10 specialists. The project succeeded in evaluating 12 potential small hydropower project sites and held three trainings for 15 specialists from the Ministry of Energy and Directorate for Small and Medium-Scale Power Generation Projects (DSMP). The project also developed a training module and economic analysis software of small hydropower plants, and a standard financial evaluation methodology for calculating renewable energy sources (TE pg 62). However, the project was unable to achieve the output on developing guarantee and risk mitigation instruments (TE pg 44).

Outcome 3: Capacity available to assess hydrological resources, design, evaluate and implement projects, and provide maintenance and repair services:

Under this outcome, three outputs reached their targets while one was partially achieved. The project's main task was to build capacity for technical assessment and it succeeded in training 250 people from the Ministry of Energy, Ministry of Economic Development, DSMP and organized a study tour to Czech Republic for decision-makers, businesses and civil society members. It also trained 38 experts in operation and management for maintenance and repair services (TE pg 45). The project developed a methodology for small hydropower plant assessment and applied in three sites. For the output on developing capacity within DSMP to design and implement projects, it trained 10 experts in small hydropower development, however, it did not give training for the construction phase of the projects (TE pgs 45 & 63). Overall, this outcome was successful in achieving its targets.

Outcome 4: Full feasibility and technical design studies for 5 small hydropower sites followed by construction of power stations:

The TE rated two of the three outputs as unsatisfactory. Under this outcome, the project planned to develop five feasibility studies, technical design studies and construct two small hydro power plants. The project developed only three feasibility studies, project design documentation and one environmental impact assessment. Importantly, the project failed to construct any small hydropower plants. The TE mentions that construction of one small hydropower on Beles River was started but had not been completed (TE pg 48).

Outcome 5: Outreach programme and dissemination of project experience/best practices/lessons learned for replication throughout the country:

This outcome fully achieved targets for three outputs, while one was only partially met. The project did well in formulating an outreach program by publishing booklets and manuals on development of small hydropower plants in Kyrgyzstan and distributed to scientific and technical libraries, universities and designers. It also developed brochures on impact of small and micro-hydropower plants and published articles in informational bulletins (TE pgs 46, 64 & 65). The project also succeeded in training 250 experts to monitor and document project experience (TE pg 48). The project created a website on the latest developments in renewable energy, however, “as of January 2016, the website is not operational due to hacker’s attack” (TE pg 46).

Component 6: The component focused on building micro-hydro power plants in rural First Aid Stations, however, the TE does not report of specific progress towards results for this component. (TE pg 34).

4.3 Efficiency	Rating: Unsatisfactory
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The TE gave an Unsatisfactory rating to the project’s efficiency as it failed to meet its development objective of “addressing the barriers to significantly increase grid-connected small hydropower capacity” (TE pg 49). The TE also reports that there were delays in project start because of violent political protests in April 2010 which affected the effective start of the project. In addition, “frequent changes on the top governmental level also translated into frequent changes in the structure of governmental institutions responsible for SHP development, and the staffing of these institutions” (TE pg 31). As a result, “foreign investors who originally confirmed their interest to invest into SHP development left the country” (TE pg 31). Due to these external factors affecting implementation, the project was given a two-year extension, but even the six-year duration was critically short and the project was unable to deliver on expected results (TE pg 54).

4.4 Sustainability	Rating: Moderately Likely
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The TE gave a Moderately Likely rating to sustainability of the project and states that the “project was designed so that its results will be sustained even after project termination” (TE pg 51). It notes that although the project did not achieve its targets, it managed to deliver legal documents and strengthened local capacity to develop small hydropower projects. For example, “SHP industry experts and local

lawyers gained during project implementation sufficient capacity to finalize the SHP legislation so that it would attract actual investment in SHP” (TE pg 51). The TER assesses on the criteria of financial resources, sociopolitical, institutional framework and governance, and environmental sustainability and gives a Moderately Likely rating.

Financial Resources: The TE notes that the financial risks are very low as “there will be no additional need for grant financing in order to sustain project results” (TE pg 51). The TE gave a Likely rating and the TER gives the same.

Sociopolitical: The project faced numerous political issues such as the 2010 political protests and subsequent changes in the administration. The Ministry of Energy got abolished at the end of 2015 (TE pg 31). But the project saw growing commitment to support the project, for example, the small hydropower regulations were adopted by the government in 2015 (TE pg 51). Hence, sociopolitical sustainability seems to be Moderately Likely.

Institutional framework and governance: The TE notes that there were no draft proposals in place or approvals for amendments proposed to the renewable energy legislation and there was no guarantee as to “how effectively the legislation will be improved in a future” (TE pg 52). However, the project managed to create a policy dialogue forum to facilitate discussions on RE regulation amendments with the government. The project also built capacity of local experts to develop the legislation on renewable energy. Thus, the TER gives a Moderately Likely rating.

Environmental: The project has not managed to construct the small hydropower plants which would have helped in reducing the greenhouse gases (TE pg 56). Also, the environmental regulations did not “sufficiently protect the wild life in rivers from impact of SHP operation (minimum water flow in the river, bypass for migrating fishes, strainers protecting fishes to flow into the turbine)” (TE pg 52). Thus, the TER gives a Moderately Unlikely rating to environmental sustainability.

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project’s outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The project has significant difference between planned and actual co-financing. During the project preparation, the private sector had promised to co-finance around \$20 Million USD (CEO endorsement pg 3) but, due to the political events in 2010 the “investors who originally confirmed their interest to invest into SHP development left the country” (TE pg 31). However, the project gained additional co-financing from the One-UN program for \$498,936 to promote mini hydro-power plants in rural first-aid stations (TE pg 38).

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 TE reports that there was delay of a year in project start because of violent protests and political instability in Kyrgyzstan that occurred in 2010. The project was extended for two-year after the mid-term review. The political instability continued to be a factor for frequent changes in the administration during the project implementation, and due to this, the implementing partner was changed from XXX to XXX (TE pg 31).

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The project was given support and was aligned with the country's priorities but, after the 2010 political events, "support and country ownership did not fully and effectively materialize at the beginning of project implementation" (TE pg 50). As mentioned earlier, the political instability caused changes in the administration. The DSMP which was the original implementing partner, lost its power and the Ministry of Energy and Industry became the partner. At the end of 2015 after elections, the Ministry of Energy was abolished and all the energy related duties were transferred to the Ministry of Economy under a new department (TE pg 31). However, the TE notes that the project liaised with government "to effectively strengthen the policy dialogue with the government and thus the country ownership as well" (TE pg 50). For example, in 2015 the government "adopted additional pieces of legislation supporting SHP construction, the amendments to Water and Land Code, and related amendments to the Law on natural monopolies, on state statistics and few others" (TE pg 50).

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
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The TE rated the M&E design at entry Highly Satisfactory. The project includes an M&E plan with a Log Frame, inception workshop and report, mid-term review, quarterly reports, annual project reports and terminal evaluation. The plan designates responsible parties for M&E activities and allocates a budget with timeframe. The project followed standard UNDP M&E procedures and the total estimated cost of M&E activities was budgeted at \$50,000 (PD pg 27, TE pg 33) The results framework included key indicators and targets for each output, however, the TE states that some of these were repetitive and

could have been reduced to simplify the Log Frame matrix (TE pg 14). It also notes that a “large number of project indicators might be even counterproductive”. For example, the indicator for Outcome 1 (“legal framework finalized and approved”) was the most critical, but the use of 23 indicators downplayed the relative importance of the critical ones (TE pg 15). Also, there were several changes recommended to the targets by the inception report and MTE (TE pg 23). Thus, considering the moderately designed indicators but overall completeness of the M&E plan, the TER gives a Satisfactory rating.

6.2 M&E Implementation	Rating: Moderately Satisfactory
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The TE gave the project’s M&E implementation a Moderately Satisfactory rating and this TER finds the rating to be appropriate. The project was regularly reviewed by the Project Board during 2010-2014, and annual work plans, annual progress reviews and quarterly reports were developed and submitted to the Project Board for approval. The mid-term evaluation was conducted at the end of second year of the project implementation.

In regard to adaptive management, the MTE proposed changes to the Log Frame, which were approved by the Project Board. However, the recommendation to use international consultants to develop legal and regulatory initiatives was not implemented as no international consultant was contracted (TE pgs 34-35).

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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UNDP was the project’s implementing agency and the TE rated the quality of implementation as Moderately Satisfactory. The TE reports that the UNDP “gained a specific position and played a unique role in facilitating and supporting RE policy dialogue in the country. UNDP was the only international entity active in supporting development of the RE legislation” (TE pg 14). However due to numerous indicators per components, the Project Board and UNDP country office were “overwhelmed by details and large number of indicators, and did not focus on the key project component” (TE 15 & 40). The project did manage to support amendments to laws and regulations which were partly approved (TE pg

40). Considering the moderate success of project implementation, the TER gives a Moderately Satisfactory rating.

7.2 Quality of Project Execution	Rating: Moderately Unsatisfactory
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The TE rated the quality of project execution as Moderately Unsatisfactory. Originally, the Ministry of Energy was the executing agency while the DSMP was an implementing partner. However, due to multiple institutional changes, the DSMP effectively lost its authority and the Ministry of Energy became the project implementing partner (TE pg 31). The project team was very small consisting of Project Coordinator and Project Assistant but in 2014 the UNDP replaced the coordinator because of “significant underperformance” (TE pg 40). For expertise requirement, the project hired short-term local consultants and one international expert on carbon crediting (TE pg 39). However, the TE notes that there was a need for “hands-on international experience in RE (renewable energy) legislation” (TE pg 40). Also, the Project Manager was hired on short-term basis for three months, but such short contracting “does not support effective delivery of project results” (TE pg 40). The TE also reports that by end of 2015, the government abolished the Ministry of Energy and all energy related activities were transferred to the Ministry of Economy (TE pg 31). Taking into account the instability and frequent changes to the executing entity and team, the TER gives a Moderately Unsatisfactory rating to the quality of project execution.

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 did not achieve construction of small hydropower plants and hence, no greenhouse gas savings were delivered. Thus, there were no environmental changes (TE pg 53).

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 are reported.

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 built capacity of relevant stakeholders by publishing and disseminating manuals and guidelines on developing small hydropower plants. As per the TE, “the main success of the project was that it created a platform for RE/SHP policy dialogue among the government, including top political leaders (active involvement of vice-premier and ministers) and governmental agencies (ministries, energy regulator), SHP representatives (RE Association, SHP association) and relevant NGOs active in the field of renewable energy. This platform demonstrated already an ability to work independently from the project towards a joint objective and the government seems to understand already SHP as a viable option to address power deficit” (TE pg 52).

b) Governance: The project drafted several regulations and amendments to law on renewable energy development. Through the policy dialogue platform, it “facilitated SHP regulations development and discussion of SHP stakeholders with the government” (TE pg 53).

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.

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.

Proposals for changes to legislation on small hydropower projects were submitted but no actual approval was given.

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 key lessons described are (TE pgs 56-59):

- a) It is important to provide sufficient incentives and guarantees for small hydropower investments, and specify feed-in tariff at a fixed level over a support period;
- b) For projects that include policy and legislation development, four years' duration is too short. Six-years is more realistic to get approvals and start implementation;
- c) An in-depth analysis and international experience is needed for good practices in renewable energy legislation;
- d) The 2010 political events delayed the project implementation, thus, "proper timing multiple subsequent projects in one focal area/project subject in order to eliminate the limits of one-off projects, and maximize the locally developed capacity" (TE pg 58);
- e) The project should have an international advisor on board, and the team should have knowledge in English language. The TE notes that in "policy oriented projects, critical are communication skills and personality of the project manager, and ability to facilitate effective discussions with governmental and industry stakeholders" (TE pg 58);
- f) As the standard UNDP/GEF support is short-term project-based, the support "cannot directly utilize the capacity developed within the project team after the project termination" and hence, a better strategy would be to "implement multiple subsequent projects in one particular field (such as RE)" (TE pg 58);
- g) Large number of project indicators can be counterproductive and thus, the number of indicators and targets should be reduced and the Log Frame simplified;
- h) The Project Board should have focused on key outcomes with renewable energy legislation as a priority.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The recommendations are (TE pg 60):

- a) Project partners should work with law makers and initiate renewable energy law amendments that would include capacity limitation of new small hydropower plants eligible for feed-in tariff, time bound policy target, and specification of the feed-in tariff at a fixed/guaranteed level;
- b) Small hydropower and renewable energy legislation should be developed along with regulatory reforms for the whole power sector;
- c) As the renewable energy sector is complex, the project should have an international expert on the team in a form of long-term advisor;
- d) The project should hire on-board experts with English knowledge skills;

- e) The project should design the time-frame in a realistic manner especially when it includes legislation development and approvals;
- f) UNDP should develop and implement “multiple subsequent projects in one focal area/project subject in order to eliminate the limits of one-off projects, and maximize the locally developed capacity” (TE pg 60); and
- g) The project should limit outcomes and Log Frame indicators and targets.

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 IEO 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 relevant outcomes and impacts but more information is needed and results towards targets is lacking.	MS
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report's ratings are well explained and consistent with the evidence given. The TER agreed with most ratings of the TE.	S
To what extent does the report properly assess project sustainability and/or project exit strategy?	The report needed more details on project sustainability especially in regard to financial risks involved. The TE mentions follow-up project by the World Bank.	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned are adequate and supported by evidence.	S
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report includes project costs per activity as well as co-financing used.	S
Assess the quality of the report's evaluation of project M&E systems:	The TE examined both the design and implementation of the M&E systems but the information is quite brief and general.	MS
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).

No other additional sources were used.