GEF EO Terminal Evaluation Review Form

1. PROJECT DATA				
			Review date:	10/6/08
GEF Project ID:	784		at endorsement (Million US$)	at completion (Million US$)
IA/EA Project ID:	PO63463	**GEF financing:**	$6.27	$6.27
Project Name:	Methane Gas Capture and Use at a Landfill – Demonstration Project	IA/EA own:		
Country:	Mexico	Government:		
		Other*:		
		Total Cofinancing	$6.58	$5.8
Operational Program:	OP 6	**Total Project Cost:**	$12.85	$12.07
IA	IBRD	Dates		
Partners involved:	BANOBRAS; SIMEPRODE; SEDESOL; Bioelectrica	Effectiveness/ Prodoc Signature (i.e. date project began)		5/31/02
		Closing Date	Proposed: 6/30/06	Actual: 6/30/06
Prepared by: Josh Brann	Reviewed by: Neeraj Negi	Duration between effectiveness date and original closing (in months): 47	Duration between effectiveness date and actual closing (in months): 47	Difference between original and actual closing (in months): 0 (note – the original expected effectiveness date was 4 months before the actual effectiveness date)
Author of TE:	Walter Vergara; Seraphine Marie Haeussling	TE completion date: April 26, 2007	TE submission date to GEF EO: April 2008	Difference between TE completion and submission date (in months): 12 months

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

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2. SUMMARY OF PROJECT RATINGS AND KEY FINDINGS

Please refer to document GEF Office of Evaluation Guidelines for terminal evaluation reviews for further definitions of the ratings.

Performance Dimension	Last PIR	IA Terminal Evaluation	IA Evaluation Office evaluations or reviews	GEF EO
2.1a Project outcomes	HS	S	S	S
2.1b Sustainability of Outcomes	**N/A**	Negligible to Low (Risk to Development Outcome)	Negligible to Low (Risk to Development Outcome)	L
2.1c Monitoring and evaluation	S	NA	Substantial	S
2.1d Quality of implementation and Execution	**NA**	**NA**	**NA**	HS
2.1e Quality of the evaluation report	**N/A**	**N/A**	S	S

2.2 Should the terminal evaluation report for this project be considered a good practice? Why?

No. The TE does a good job of describing the project achievements, and provides accurate ratings with sufficient evidence. However, there are some shortcomings with regard to the TE's documentation of the project's financial aspects. As described by the TE, "on Project Cost and Financing…a breakdown of values are off by a factor of 2 from the total project cost and financing. Moreover, the actual project cost is shown equal to the project appraisal cost, which is not the case." The financial details included in the terminal evaluation only describe the GEF financing and do not provide details on co-financing.

2.3 Are there any evaluation findings that require follow-up, such as corruption, reallocation of GEF funds, mismanagement, etc.?

None.

3. PROJECT OBJECTIVES

3.1 Project Objectives

a. What were the Global Environmental Objectives of the project? Were there any changes during implementation?

The project appraisal document does not specify a global environment objective beyond the project development objective: "The proposed project seeks to demonstrate a proven technology for landfill gas capture and use and reduce barriers to development of future [landfill gas] projects. The proposed GEF project would build upon an existing Government and Bank-supported program to modernize solid waste management in small- and medium-sized cities (Ln. 3752-ME). The GEF Alternative would complement and build upon activities implemented under this baseline program, and provide financial and technical assistance for: i) introduction of a cost-effective, demonstrated technology to collect and utilize [landfill gas]; ii) demonstrate an institutional structure that includes private sector participation under which [landfill gas] projects can be implemented; iii) development of federal and municipal capacity for [landfill gas] collection and use programs and project implementation; and iv) design of a replication strategy for comparable cities in Mexico and dissemination of lessons from the Mexican experience to other interested parties regionally."

According to the terminal evaluation there were no formal changes to objective during project implementation. There were some minor changes to project components that did not require board approval for the changes.

b. What were the Development Objectives of the project? Were there any changes during implementation?

Same as above. Also according to the project appraisal document, "The project was intended to result in immediate reductions in GHG emissions and to serve as a model for the internalization of GHG control measures in [solid waste management] programs."

According to the terminal evaluation there were no formal changes to objective during project implementation. There were some minor changes to project components that did not require board approval for the changes.

Overall Environmental Objectives	Project Development Objectives	Project Components	Any other (specify)
		According to the TE, "In order to guarantee an adequate amount of gas and to avoid shutting down ne of the generators, 88 additional wells were installed. The additional cost of $0.27 m was absorbed by the lower cost for the construction of the plant." In addition, "High daytime temperatures forced the addition of heat removal	

		equipment to avoid loss of performance." Also, workshops held to develop a replication strategy identified the need for feasibility studies for the capture and use of LFG. Thus, "The project's capacity building and dissemination components were subsequently restructured to provide funding for the feasibility studies."	

If yes, tick applicable reasons for the change in objectives				
Original objectives not sufficiently articulated	**Exogenous conditions changed, causing a change in objectives**	**Project was restructured because original objectives were over ambitious**	**Project was restructured because of lack of progress**	**Any other (specify)**
				Unknown technical conditions required adjustments to the technical design and outputs.

4. GEF EVALUATION OFFICE ASSESSMENT OF OUTCOMES AND SUSTAINABILITY

4.1.1 Outcomes (Relevance can receive either a satisfactory rating or a unsatisfactory rating. For effectiveness and cost efficiency a six point scale 6= HS to 1 = HU will be used)

a. Relevance	**Rating: S**
A.1. What is the relevance of the project outcomes/results to:	
(i) the national sustainable development agenda and development needs and challenges?	
According to the TE, "The Country Assistance Strategy (CAS) (at the time of project approval) identified three core themes for World Bank Group Assistance to Mexico: social sustainability, removing obstacles to sustainable growth, and effective public governance. Within this broad framework, the Bank Strategy for Infrastructure mentioned support for renewable energy and municipal development plans as priorities for action. The Solid Waste Sector was noted as one of the key sectors that needed attention in order to improve service delivery. The CAS also included, as part of the environmental agenda, promotion of institutional development, decentralization of environmental management, improved cost recovery of environmental services and "win-win" investment opportunities where global environmental benefits and national economic benefits could be generated through an integrated and mainstreamed approach to development priorities."	
(ii) the national environmental framework, agenda and priorities?	
On the whole the project was developed to support the national priorities for expansion of GHG reducing energy sources.	
(iii) the achievement of the GEF strategies and mandate?	
According to the TE, "The project was consistent with both the GEF guidance (June 1997) for Operational Program Number 6 (Renewable Energy) and with the GEF Operational Strategy (February 1996) for short- term projects in the climate change focal area. Under the OP 6.0 the objectives are to (a) remove the barriers to the use of commercial or near-commercial renewable energy technologies (RETs), and (b) reduce any additional implementation costs for RETs that result from lack of practical experience, initial low volume markets, or from the dispersed nature of applications, such that economically profitable "win-win" transactions and activities increase the deployment of RETs. The project was in line with the GEF Operational Programs because it was: i) technically, environmentally and socially sustainable, ii) a national priority and country driven; iii) cost effective, capturing and substituting for GHG at an anticipated cost of about $4.99 per ton of carbon8; and iv) a programmatic approach to remove barriers (technical, financial, regulatory, social, political, and legal) to renewable energy technology that was expected to lay the foundation for cost-effective	

replication over the medium and long-term."

(iv) the implementation of the global conventions the GEF supports (countries obligations and responsibilities towards the convention as well as the achievement of the conventions objectives)

As described by the TE, "The project was fully consistent and prepared pursuant to guidance from the United Nations Framework Convention on Climate Change (UNFCCC). Specifically, the GEF resources were utilized to finance part of the incremental costs associated with reductions in GHG emissions."

A2. Did the project promote of International (Regional and / or Global) Cooperation and Partnership[1]

The executing agency held two international conferences on Land-fill gas involving 189 participants from other Latin American countries. They also set up a website and entered into an agreement "with the Latin American Institute for Educative Communication, in 2003, to conduct teleconferences on topics related to municipal and urban services with special emphasis on solid waste and opportunities for the capture and use of LFG."

The project fit within a government strategy calling for "i) strengthening of regulations and institutions at the federal and local levels conducive to more effective practices and incentives; ii) extension of services to medium and small size localities and promotion of private sector participation; iii) harmonization of [solid waste management] efforts that aimed at controlling the release of GHG (emissions of landfill methane); and iv) promotion of recycling."

The project was consistent with the Country Assistance Strategy (CAS) as well. According to the TE, "The Country Assistance Strategy (CAS) (at the time of project approval) identified three core themes for World Bank Group Assistance to Mexico: social sustainability, removing obstacles to sustainable growth, and effective public governance. Within this broad framework, the Bank Strategy for Infrastructure mentioned support for renewable energy and municipal development plans as priorities for action. The Solid Waste Sector was noted as one of the key sectors that needed attention in order to improve service delivery. The CAS also included, as part of the environmental agenda, promotion of institutional development, decentralization of environmental management, improved cost recovery of environmental services and "win-win" investment opportunities where global environmental benefits and national economic benefits could be generated through an integrated and mainstreamed approach to development priorities."

Finally, the project is consistent with and prepared with guidance from the UNFCCC.

b. Effectiveness **Rating: S**

As measured by the outcome and impact indicators outlined in the project document, the achievement of the project's objectives was substantial. The components dealing with demonstration and capacity building on LFG plants reached a high level of achievement, while the components dealing with the regulatory framework, and the level of replication achieved, reached lower levels of achievement.

The project had five components, with the fifth component being the management of the project.

As summarized by the TE, "Demonstrating a cost-effective technology for LFG capture and use was highly achieved, with the successful construction and excellent performance of the 7MW plant fueled with methane" collected from the landfill site. "Demonstrating an institutional structure for the implementation of LFG projects, including private sector participation," was highly achieved. The Public Private Partnership institutional structure proved feasible, effective and efficient, and the goals of the partnership in running and managing the LFG plant have been successful. More than 80% of GEF investments were for the component on LFG plant design and construction. "Strengthening the UMS's regulatory policy and social frameworks for the introduction of LFG capture and use in Mexico was modestly achieved. A modification of the Law on the use of the Renewable Energies to include LFG as a formal renewable energy is not yet approved. This continues to be a barrier for facilitating the process of approval of LFG projects." "Designing a dissemination strategy to share lessons learned through project implementation with relevant stakeholders in Mexico and Latin America was highly achieved." According to the TE, the demand for information dissemination was very high from outside sources, which resulted in an increased rate and volume of disseminated information regarding the LFG experience. The strategy to encourage replication has been modestly successful. At least four additional feasibility studies were conducted. However, as described by the TE, "the high turn over of staff with each new [municipal] administration makes the commitment to LFG by municipalities very difficult to achieve."

[1] Please consider for regional and global project only

c. Efficiency (cost-effectiveness)	Rating: HS

According to the TE, "This project has demonstrated:
• a proven, cost-effective technology for LFG capture and use that results in reduction of GHG and serves as a model for the internalization of GHG control measures in SWM programs;
• an institutional structure for implementation of LFG projects, including private sector participation;
• clean energy generation at affordable, low cost."

According to the TE, "the plant operates above design performance indicators." And, "The plant which is the first LFG facility in Latin America has been built without delays and started operation in September 2003."

Some aspects of the project were more costly than anticipated, but others were less costly, and on the whole the project exceeded its objectives within the anticipated cost. In particular, 70% of the emissions anticipated to be captured over 20 years have been captured within the first three years of operation. Thus, in terms of emissions captured, the project is much more efficient than anticipated.

There were some delays that resulted in reaching the point of energy generation at a later point in time than anticipated, but considering the better-than-expected performance of the plant, this cannot be considered to have reduced the efficiency of greenhouse gas capture.

The internal rate of return has been lower than expected due to unanticipated operating costs, but this does not reduce the efficiency of the GEF investment in terms of greenhouse gases avoided, and does not threaten the financial sustainability of the project outcomes.

d. To what extent did the project result in trade offs between environment and development priorities / issues (not to be rated)

The project resulted in a demonstration of the potential synergies between environment and development priorities. In this case GHG emissions were reduced, while a new source of energy and jobs was developed.

4.1.2 Results / Impacts[2] (Describe Impacts) (please fill in annex 1 – results scoresheet and annex 2 – focal area impacts (against GEF Strategic Priority indicators, where appropriate and possible)

4.2 Likelihood of sustainability. Using the following sustainability criteria, include an assessment of **risks** to sustainability of project outcomes and impacts based on the information presented in the TE. Use a four point scale (4= Likely (no or negligible risk); 3= Moderately Likely (low risk); 2= Moderately Unlikely (substantial risks) to 1= Unlikely (High risk)). The ratings should be given taking into account both the probability of a risk materializing and the anticipated magnitude of its effect on the continuance of project benefits.

a. Financial resources	Rating: L

The plant is operating at or above the expected level of financial returns, due to high energy prices. Thus the financial sustainability is not at risk. Plans are underway for expansion of the plant, and Mexico is developing a carbon finance mechanism, which will enable potential replication in other sites. The actual internal rate of return (IRR) is lower than originally anticipated due to some unforeseen operating costs, but the IRR and net present value (NPV) are still within the range that there is not risk to financial sustainability.

The TE notes that in some countries with lower energy prices such projects might not be economically feasible, but it does not discuss whether the price of energy in Mexico is potentially variable in the future. It also does not discuss the length of the contracts with the municipality, but does note that the payments from the municipality have been 100% on-time, which was one initially identified risk factor.

As described by the TE, "Technical, financial, economic or environmental aspects do not involve any risks to the sustainability of the LFG demonstrating plant."

b. Socio political	Rating: L

[2] Please consider direct and indirect global environmental results; any unexpected results; local development benefits (including results relevant to communities, gender issues, indigenous peoples, NGOs and CBOs)

There are no anticipated socio-political risks to sustainability of the project outcomes. The municipality involved has demonstrated a commitment to continue purchasing electricity from the plant.

c. Institutional framework and governance **Rating: L**

There is little to no risk that the institutional framework of the project results will not be sustainable. However, until there is further clarity on the national policy framework for landfill gas energy generation plants, the potential for replication of the project will face uncertainties.

d. Environmental **Rating: L**

The environmental benefits of the project are expected to remain as long as the plant remains operational. Once the gas has been burned for electricity generation, there is no risk of the environmental benefit being lost, as this represents the permanent removal from the atmosphere of the amount of gas burned.

As described by the TE, "Technical, financial, economic or environmental aspects do not involve any risks to the sustainability of the LFG demonstrating plant."

e. Technological **Rating: L**

There were some technological challenges that the project faced, which had to do with the quality of gas extracted, which was lower than anticipated before project implementation. However, the technological hurdles were overcome with little additional cost. Over time the technology used for landfill gas energy generation in this particular plant will become replaced by newer and better technology, but this is completely in-line with project expectations and the financial and economic analyses conducted in relation to the project.

In addition, according to the TE, "The project can be credited with having built public and private sector capacity to promote and manage LFG projects in Mexico thus strengthening the sustainability of this project and promoting the development of future projects."

As described by the TE, "Technical, financial, economic or environmental aspects do not involve any risks to the sustainability of the LFG demonstrating plant."

4.3 Catalytic role[3]

a. INCENTIVES: To what extent have the project activities provide incentives (socio-economic / market based) to catalyze changes in stakeholders

The project was predicated on the concept of public-private partnership, which was only feasible with a certain level of financial return. GEF funding through the World Bank helped eliminate barriers by securing financing for a portion of the project. The demonstration of cost-effectiveness of the production of energy from Land-fill gas also served as an incentive to the government and other municipalities to continue developing this type of project.

b. INSTITUTIONAL CHANGE: To what extent have the project activities changed institutional behaviors

The project was not necessarily intended to change institutional behaviors, but to demonstrate the feasibility of this type of project. The institutions directly involved in the project have developed additional capacity around the production of land-fill gas energy. The project had to undertake extensive negotiations with the Federal Electricity Commission regarding the production and provision of land-fill gas energy, the need for which may now be obviated for subsequent similar projects. In addition, the project demonstrated the public-private institutional structure for this type of project.

c. POLICY CHANGE: To what extent have project activities led to policy changes (and implementation of policy)?

According to the TE, The progress to modify the Law on the use of Renewable Energies to include LFG as a formal 'renewable energy' has been slow. The key reason for the slow progress of the LFG legislation is the gridlock experienced in the Mexican Congress during the last few years." The TE also notes that the project did strengthen

[3] Please review the 'Catalytic Role of GEF: How is it measured and evaluated – A conceptual framework' prior to addressing this section.

Mexico's regulatory policy and social frameworks for the introduction of land-fill gas capture and use.

d. CATALYTIC FINANCING: To what extent did the project led to sustained follow-on financing from Government and / or other donors? (this is different than co-financing)

As described in the section on financial sustainability, the project is designed to be financially self-sustaining based on the expected rate of return. The successful demonstration and project replication strategy also led to an increased likelihood of the financing of similar projects in other municipalities.

e. PROJECT CHAMPIONS: To what extent have changes (listed above) been catalyzed by particular individuals or institutions (without which the project would not have achieved results)?

According to the TE, all of the institutions involved in the execution of the project contributed substantially to the project's success. No individuals were identified as having a particularly significant impact.

4.4 Assessment of processes and factors affecting attainment of project outcomes and sustainability.

a. Co-financing. To what extent was the reported cofinancing (or proposed cofinancing) essential to 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 it did, then in what ways and through what causal linkages?

The co-financing was received in the expected levels necessary to meet the actual total project costs. The TE indicates that the total actual project cost was $0.64 million less than originally anticipated, and thus the level of co-financing was this amount less than originally planned.

b. 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 it did, then in what ways and through what causal linkages?

There were multiple factors which led to some delays in the project implementation. According to the TE, these factors were three-fold –

- a long negotiation process with the energy regulatory commission / federal electricity commission, labor unions and municipalities. This was apparently a result of the novelty of the approach of the project in Mexico. This caused a 6 month delay in the provision of electricity, which resulted in additional costs to the strategic partner.
- The selection of the consortium took longer than anticipated. According to the TE, the results of the bidding process were challenged by the second lowest bidder, but the challenge was found to be without merit. As a result the project did not become effective until one year after board approval.
- The feasibility study estimate resulted in initial overestimation of gas, and therefore additional wells had to be installed to result in sufficient generation of gas. The additional cost of this aspect was compensated for by the lower than expected costs of the construction of the plant.

c. 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.

In numerous places the TE comments on the positive overall level of country-ownership. For example, "The government demonstrated a strong commitment to the project. The project received strong support from the local and federal governments as demonstrated by the inclusion of the project among the administration's strategic priorities. At the beginning of the project Mexico's Secretary of Energy directly confirmed to SIMEPRODE [a decentralized public organization of the State of Nuevo Leon, a state company with its own property and legal entity] the priority afforded to this on the business model for independent generation at a time of electricity shortages."

The project had a high initial level of country-drivenness. As described by the TE, "As a consequence of the Baseline Project, the UMS wished to expand its approach to SWM in small- and medium-sized cities by integrating management of LFG as one of the required elements for sanitary landfills. It also wished to expand technical and financial assistance to committed municipalities so that they might build their capacity to handle this new aspect of SWM effectively. In that context the GEF, project was intended to demonstrate the application of the technology and institutional framework necessary for the operation of methane "capture and use" plant" in Mexico."

The one negative aspect is the slow pace of development of the Law on the Use of Renewable Energies at the national level. According to the TE, "The key reason for the slow progress of the LFG legislation is the gridlock experienced in the Mexican Congress during the last few years."

4.5 Assessment of the project's monitoring and evaluation system based on the information in the TE

a. M&E design at Entry **Rating (six point scale): 5**

The project's M&E system appears to have been consistent with World Bank and GEF standards. Annex 1 of the PAD is a logframe project summary, which includes outcome indicators for each component of the project. The logframe also specifies the M&E reporting requirements. The PAD does not specify the budget for the M&E elements of the project, but execution of M&E was to be included in the project management component. The PAD also describes the process and timeframe for a mid-term evaluation of the project.

According to the TE, "Realistic and tangible (and where possible quantitative) indicators were defined at appraisal for the project for all its objectives. All the indicators turned out to be both appropriate and useful to the process for assessing the progress towards achieving the project's objectives."

b. M&E plan Implementation **Rating (six point scale): 5**

From the information available in the TE, it appears the M&E plan was implemented as envisioned, and functioned effectively, allowing for minor adjustments to project implementation over time.

As described by the TE, "The system for monitoring and evaluating project performance was implemented as described in the PAD and resulted in keeping implementation on track and in identifying and resolving critical issues affecting the achievement of desired outputs and outcomes. As per the design of the system, the indicators identified in the Project Design Summary (Annex 1 of the PAD) were reported on by the Project Implementation Agencies, were discussed by regular supervision missions, and were the focus of the assessments conducted as part of the Mid-Term Review and the final evaluations done at the end of the project."

In addition, "Reports were delivered on time and in a satisfactory manner to the Bank through the financial intermediary, Banobras. For each sub-activity specific reports were defined and delivered by the implementing agencies."

b.1 Was sufficient funding provided for M&E in the budget included in the project document?

The specific level of funding for M&E was not broken out in the project document beyond the level of the project management component. However, the level of funding appears to have been fully sufficient, since the M&E system was implemented and functioned as envisioned.

b.2a Was sufficient and timely funding provided for M&E during project implementation?

Based on information available in the TE and other sources, this does not appear to have been a problem.

b.2b To what extent did the project monitoring system provided real time feed back? Was the information that was provided used effectively? What factors affected the use of information provided by the project monitoring system?

According to the TE, "The monitoring and evaluation component included reporting requirements by the implementing agencies on a frequent basis to the project team. This entailed the development of a Design and Construction Summary report, quarterly operational summary reports, workshop participant list, distribution list for dissemination materials, and dissemination and training reports. The reports were delivered on time and in a satisfactory manner to the Bank through the financial intermediary, Banobras. For each sub-activity specific reports were defined and delivered by the implementing agencies."

The TE also states, "During project implementation the evolution of indicators served to monitor project progress, allocate resources, and take corrective measures."

b.3 Can the project M&E system (or an aspect of the project M&E system) be considered a good practice? If so, explain why.

Yes. The M&E system met the standards of the World Bank and the GEF, and appears to have functioned as

envisioned. There was nothing exceptional or notable about the M&E system, but it effectively served it's purpose. It could serve as a good example of a functioning project M&E system.

4.6 Assessment of Quality of Implementation and Execution

a. Overall Quality of Implementation and Execution (on a six point scale): 6

b. Overall Quality of Implementation – for IA (on a six point scale): 6

Briefly describe and assess performance on issues such as quality of the project design, focus on results, adequacy of supervision inputs and processes, quality of risk management, candor and realism in supervision reporting, and suitability of the chosen executing agencies for project execution.

The project was well-designed and highly relevant for the context and country priorities. The TE concludes, "The project was well identified and responsive to both Bank CAS and UMS priorities, and the UNFCCC. It was well prepared, took into consideration lessons learned from other GEF projects, and appraised in line with GEF guidelines."

The level of supervision also appears to have been very good, and at the level necessary to ensure project success. The TE also notes, "The Bank team kept a pro-active relation with the project. It carried out an average of two supervision missions per year, did desk review of procurement and project reports, and resolved project implementation issues proactively. It also reported progress and evaluation of project implementation and objectives in a comprehensive and realistic Aide-Memoirs, PSRs, and ISRs."

Considering the success of the project, there is no reason to doubt the description in the TE. A review of the PSRs and Aide-memoirs indicates that they were completed in a timely and realistic way.

The selection of the project executing organizations was also highly satisfactory, and the capacity of these organizations to achieve the outcomes was an important contributing factor to the success of the project.

c. Quality of Execution – for Executing Agencies[4] (rating on a 6 point scale): 6

Briefly describe and assess performance on issues such as focus on results, adequacy of management inputs and processes, quality of risk management, and candor and realism in reporting by the executive agency.

The quality of execution was at a high level, which allowed the project to achieve its objectives in the anticipated timeframe. Multiple organizations were involved with various roles – the implementation arrangements consisted of a Public Private partnership, setting up a cogeneration company. As described by the TE, "The responsibilities between the public landfill operator SIMEPRODE and the private strategic partner "Bioelectrica" were clearly defined: Bioelectrica designed and constructed the plant, and is responsible for its operation and maintenance. SIMEPRODE is responsible for the overall administrative implementation of the demonstration project via an agreement with Bioelectrica. Metrorrey, the water and sewerage state company (Aguas y Drenaje), the Public Child and Family Assistance Entity (DIF) and the Government of the State of Nuevo Leon act as energy consumers and invest a nominal amount each."

As noted in the TE, the project received strong support from the local and federal governments. The National Bank for Civil Works and Public Services (BANOBRAS) functioned well as the financial intermediary for the GEF grant. Also according to the TE, "Bioeléctrica, the private strategic partner for the LFG demonstration plant, conducted in a satisfactory way the construction process, the O&M of the plant, and the process to obtain permits and agreements for the operation of the plant and the supply of electricity to users; SIMEPRODE succeeded in selecting the private strategic partner through an ICB, and it has had a satisfactory performance in supervising the construction and operation of the LFG plant, and in processing documentation for environmental and operation permits; SEDESOL carried out successfully the capacity and dissemination programs, and issued project progress reports in a timely and satisfactory manner."

5. LESSONS AND RECOMMENDATIONS

Assess the project lessons and recommendations as described in the TE

[4] Executing Agencies for this section would mean those agencies that are executing the project in the field. For any given project this will exclude Executing Agencies that are implementing the project under expanded opportunities – for projects approved under the expanded opportunities procedure the respective executing agency will be treated as an implementing agency.

a. Briefly describe the key lessons, good practice or approaches mentioned in the terminal evaluation report that could have application for other GEF projects
The TE includes multiple useful, well-summarized lessons. Some lessons apply particularly to the context of Mexico, but could be usefully applied to replication activities. Other lessons are broadly applicable to GEF projects in other countries as well: - Adaptation of foreign technology to local conditions needs to be taken into account in the initial economic evaluation of a project. - Due to current LFG legislation, additional time is needed to process the corresponding permits and/or contracts. - Future projects should seek more certainty on the amount of available gas in order to avoid additional cost once the plant is set up. - The administration periods of municipal authorities in charge of SWM are relatively short (three years). This makes the learning process on LFG management at times difficult. For that reason capacity building program is essential to sustain municipal buy in. - In the context of changing governments, the private sector involvement helped ensure that the plant management would be consistent and uninterrupted. - The energy price charged by the CFE is relatively high in the regional context (twice as high compared to Colombia). This had a considerable impact on the project's financial indicators. However, in countries with lower energy prices the LFG to power option might not be financially feasible. - In future many uncertainties while planning and setting up a LFG facility can be overcome with the perspective of a long-term and reliable revenue generated from emission reductions. The availability of emission reductions revenues provides an investor with more certainty on his investment and also bears the possibility of addressing social and environmental programs with part of the revenues. The option of carbon finance as a financing tool needs to be further disseminated.
b. Briefly describe the recommendations given in the terminal evaluation
No additional recommendations beyond those implied through lessons learned.

6. QUALITY OF THE TERMINAL EVALUATION REPORT

6.1 Comments on the summary of project ratings and terminal evaluation findings based on other information sources such as GEF EO field visits, other evaluations, etc.
No additional sources available.

Provide a number rating 1-6 to each criteria based on: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, and Highly Unsatisfactory = 1. Please refer to document GEF Office of Evaluation Guidelines for terminal evaluations review for further definitions of the ratings. Please briefly explain each rating.

6.2 Quality of the terminal evaluation report	**Ratings**
a. To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	6
b. To what extent the report is internally consistent, the evidence is complete/convincing and the IA ratings have been substantiated? Are there any major evidence gaps?	5
c. To what extent does the report properly assess project sustainability and /or a project exit strategy?	5
d. To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	6
e. Does the report include the actual project costs (total and per activity) and actual co-financing used? **The terminal evaluation report does not provide information on utilization of cofinancing**	3

for project activities.	
f. Assess the quality of the reports evaluation of project M&E systems?	5

7. SOURCES OF INFORMATION FOR THE PRERATATION OF THE TERMINAL EVALUTION REVIEW REPORT EXCLUDING PIRs, TERMINAL EVALUATIONS, PAD.

World Bank, Implementation Completion Report for "Methane Gas Capture and Use At A Landfill – Demonstration Project," January 30, 2007

World Bank, Operations Evaluation Department, ICR Review, "Methane Gas Capture And Use At A Landfill – Demonstration Project," April 26, 2007

World Bank, Project Appraisal Document, "Methane Gas Capture And Use At A Landfill – Demonstration Project," April 6, 2001

World Bank, Project Status Report, "Methane Gas Capture And Use At A Landfill – Demonstration Project," 2003

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