

THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: April 23, 1998

TO: See Distribution Below

FROM: Lars O. Vidasus, GEF Executive Coordinator 

EXTENSION: 34188

SUBJECT: PDF Block A Request - Uruguay: Montevideo Landfill Methane Recovery Demonstration Project

Please find attached a PDF Block A Request for Uruguay: Montevideo Landfill Methane Recovery Demonstration Project. We would appreciate your comments by April 30, 1998. Thank you.

Distribution:

R. Asenjo, UNDP (New York) (Fax: 212-906-6998)
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Ken King, GEF Secretariat (fax 23240)
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PDF Block A

PART I - ELIGIBILITY	
1. Project name: Montevideo Landfill Methane Recovery Demonstration Project	2. GEF Implementing Agency: World Bank
3. Country or countries in which the project is being implemented: Oriental Republic of Uruguay	4. Country eligibility: Uruguay ratified the Framework Convention on Climate Change on July 22, 1994. <i>August 18</i> <i>GEF project 2 1994</i>
5. GEF focal area(s), and/or cross-cutting issues: Climate Change	6. Operational program/Short-term measure: Short-term mitigation project <i>mission</i>
<p>7. Project linkage to national priorities, action plans, and programs</p> <p>In 1995, the Ministry of Housing, Land Management, and Environment (MVOTMA) carried out a sectoral analysis of solid waste management in Uruguay, which concluded with a commitment to evaluate, strengthen, and improve solid waste management. Completion of this study was assisted by UNDP, the World Health Organization, and the Federal Republic of Germany. A four-year, \$3 million national program to improve solid waste management evolved out of the analysis, which the MVOTMA is presently executing. In 1996, the Inter-institutional National Commission on Solid Waste Management was created to implement a national policy related to waste management, including the establishment of a Master Plan for Management and Investment in the Solid Waste Sector in Uruguay. Execution of the Plan will be carried out over a period of ten years, directed by MVOTMA.</p> <p>In 1997, in compliance with its commitments as a signatory to the Framework Convention on Climate Change, Uruguay completed a national greenhouse gas inventory (Inventario Nacional de Gases de Efecto Invernadero) in 1997 Overseen by MVOTMA, the inventory identified carbon dioxide (CO₂) and methane (CH₄) as the principal sources of greenhouse gas emissions in Uruguay. On a sectoral level, the inventory identified improved municipal solid waste management as an area where reductions in greenhouse gas emissions might be attained at a relatively low cost; in particular, the inventory pointed out that greater Montevideo is the source of nearly 60 percent of methane emissions from municipal solid wastes.</p> <p>The proposed project would build upon activities already underway in Uruguay to strengthen municipal solid waste management and capture an indigenous energy source which could be utilized in place of oil imports. In addition, the project would also address the global environmental objective of capturing potent methane emissions from Montevideo's principal landfill and reduce CO₂ emissions from fossil fuels burned for energy generation. Such activities, identified in Uruguay's first National Report (1997) to the Conference of the Parties of the Framework Convention on Climate Change (FCCC) are in line with the country's commitments made under the FCCC.</p>	
<p>8. GEF national operational focal point and date of country endorsement:</p> <p>Luis Santos Director of Environment Ministry of Housing, Land Planning, and Environment Montevideo Uruguay TEL: (59-82) 917-0752 FAX: (59-82) 916-1895</p> <p>Date of Country Endorsement: April 22, 1998</p>	

9. Project rationale and objectives:

Nearly 50% of Uruguay's 3,000,000 inhabitants reside in the metropolitan area of Montevideo. One result of this population concentration is high localization of municipal solid wastes and demand for electricity by industries and households.

The project aims to demonstrate self-sustaining modern waste management of municipal solid waste through maximum collection of generated methane, thereby reducing greenhouse gas emissions and creating a revenue stream to cover capital costs and operational costs. The pilot project would demonstrate the feasibility of developing indigenous landfill gas in Montevideo as an energy source, utilizing an otherwise constant emission of methane into the atmosphere and partially substituting a renewable energy source for imported fossil fuels for electricity generation in Montevideo. The optimal use of landfill gas entails connection with large energy suppliers, either through supplying gas to power plants for production of electricity for direct delivery to the grid. In either case, the final destination of such generated energy is expected to be within the municipal area of Montevideo. The final use of the gas would be dependent on local conditions, to be assessed during project preparation.

10. Expected outcomes:

Project outcomes, including the Baseline Scenario described in Section 7, include improved solid waste management and a pilot project to demonstrate collection of landfill gas from already disposed waste and collection of landfill gas from new wastes from one landfill in the municipal area of Montevideo. Utilization of the landfill gas would result in a revenue stream, which would cover operational costs, thereby creating a technical, environmentally sound, and financially acceptable solution for the municipality of Montevideo and/or private sector entities managing solid wastes for the municipality. In addition, the project would result in savings in foreign exchange used to import fossil fuels for electricity generation.

11. Planned activities to achieve outcomes:

Activities under the PDF Block A

- A. Assessment of methane resource.
- B. Evaluation of technical requirements
- C. Study to compare technical performance and cost-recovery aspects with other countries where landfill methane has been developed for energy purposes.
- D. Preparation of a project document suitable for GEF financing, including objectives, performance indicators, technical description of physical components, cost estimates, economic and financial aspects, implementation timetable, preliminary social and environmental assessment, and institutional framework.

Likely activities under the Mid-Sized Grant

- A. Remediation of one existing disposal site.
- B. Establishment of one pilot modern waste management site for enhanced degradation of easily biodegradable waste.
- C. Collection of landfill gas.
- D. Either: (i) generation of electricity at site by use of gas engines with direct delivery to the grid or (ii) sale to private companies for energy generation off-site (to be determined by PDF-financed assessments).

The expected cost of the Mid-Sized Project is US\$750,000. The successful outcome of the Mid-Sized Project may lead to a full-sized project associated with a potential IBRD loan addressing coastal zone, pollution and fisheries management and municipal development (including solid waste management); project identification is expected to begin in FY98.

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12. Stakeholders involved in project: The main stakeholders are MVOTMA, private power utility companies, private solid waste companies, technical research institutes in Uruguay, non-governmental organizations, and customers of electricity and solid waste services. roles?

PART II - INFORMATION ON BLOCK A PDF ACTIVITIES

13. Activities to be financed by the PDF: The PDF A resources will be utilized to finance three types of analysis which will be synthesized and incorporated into the Mid-Sized Grant proposal.

(a) Technical feasibility study of methane capture from a Montevideo landfill and its use as an energy source for electricity generation, including an environmental assessment of the proposed project.

(b) Social and economic assessment which will indicate relevant benefits and costs of the project. The assessment will include stakeholder consultations; impacts of the proposed project on existing waste management services and related economic activities; options and strategies for

(c) Institutional assessment and administrative arrangements which will allow the project to proceed. This will include: identification of options and strategies; financial assessment of relevant institutions; and capacity for long-term economic and financial sustainability.

PDF Block A resources are incremental to the four-year, \$3 million national program to improve solid waste management discussed in Section 7. In relation to project preparation activities oriented towards the Mid-Sized Project, the Government of Uruguay is allocating US\$16,850 to cover preparation activities oriented towards improved landfill management to facilitate methane recovery.

14. Expected outputs and completion dates:

(a) Detailed technical feasibility study (August 30, 1998)

(b) Social and economic assessment, including economic, environmental, and social risks (August 30, 1998)

(c) Proposal of institutional arrangements for the elaboration and execution of the pilot project (September 30, 1998)

(d) Mid-sized grant project proposal, taking into consideration the above-mentioned analysis and evaluations (October 30, 1998)

15. Other possible contributors/donors and amounts:

The Government of Uruguay, through MVOTMA, will contribute technical staff, equipment, technical studies and background materials, support staff, logistical and administrative support for the project. The estimated national contribution for project preparation activities is US\$16,850.

16. Total budget and information on how costs will be met (including the Block A grant):

Activities	PDF	MVOTMA	Total
1. Data Collection and Site Visits			
1.1 Collection of data for evaluations	1,450		1,450
1.2 Technical assistance for data collection	1,500	1,000	2,500
2. Evaluations			
2.1 Technical feasibility study	4,000	1,750	5,750
2.2 Institutional and administrative options	750	2,750	3,500
2.3 Socio-economic analysis	2,950	1,000	3,950
2.4 Technical assistance	3,000	1,500	4,500
3. Public Participation			
3.1 Workshops with community reps.	2,200	1,100	3,300
3.2 Public meetings	650	1,300	1,950
3.3 Public awareness & info. dissem.	1,900	1,000	2,900
4. Project Preparation			
4.1 Technical assistance	4,700	2,000	6,700
4.2 Planning workshop	800	450	1,250
5. Administration/Logistics			
5.1 Project administration		2,400	2,400
5.2 Logistical support	900	600	1,500
Total	24,800	16,850	41,650

PART III - INFORMATION ON THE APPLICANT INSTITUTION

<p>17. Name: Ministry of Housing, Land Management, and Environment (MVOTMA)</p>	<p>18. Date of establishment, membership, and leadership: The Ministry of Housing, Land Management, and Environment was created by legal decree on June 8, 1990. The National Office on Environment was created by legal decree on October 10, 1990, and operates under the direction of the Minister of Housing, Land Management, and Environment.</p>
<p>19. Mandate/terms of reference: With regard to the environment, the mandate of the MVOTMA is to formulate, execute, supervise and evaluate national actions relating to the environment; coordinate national and international activities; and enforce public and private sector compliance with environmental regulations. Uruguay's commitments as a signatory to the FCCC are overseen by MVOTMA.</p>	<p>20. Sources of revenue: Government revenue and donors.</p>

21. Recent activities/programs, in particular those relevant to the GEF:

In July 1994, the Government of Uruguay ratified the FCCC. Despite the fact that Uruguay was excluded from Annexes 1 and 2 of the FCCC, the Government of Uruguay is conscious of the need and the responsibility that it bears in the national and international arena to contribute, through cost-effective means, to reduce net emissions of greenhouse gases.

In March 1997, in compliance with its commitments as a signatory to the FCCC, Uruguay completed a national greenhouse gas inventory (Inventario Nacional de Gases de Efecto Invernadero) in 1997. Overseen by MVOTMA, the inventory identified, on a sectoral and subsectoral level the principal sources of greenhouse gas emissions in Uruguay and identified CO₂ and CH₄ as leading greenhouse gases emitted.

In October 1997, MVOTMA issued the first National Report to the Conference of the Parties of the FCCC, describing actions with the Government of Uruguay has undertaken to fulfill its commitments under the FCCC. Such actions include programs oriented at reducing carbon emissions (e.g., energy sector: studies to reduce carbon dioxide emissions, with technical assistance from the Argonne National Laboratory; agriculture/forestry sector: identification of options to reduce methane emissions related to cattle production and improve efficiency of wood usage, undertaken in part with assistance from the University of Edinburgh; private sector linkages: efforts undertaken by the Government of Uruguay and the Uruguayan Chamber of Commerce, with bilateral support from the Government of Denmark, to improve management of effluents with high organic content, thereby reducing methane emissions; cement production: evaluation and recommendations related to reducing carbon emissions related to cement production) as well as programs targeted towards increasing carbon sinks (e.g., recent passage of the Forestry Law, which includes promotion of reforestation activities).

PART IV - INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY**22. Project identification number:**

23. Implementing Agency contact persons: Fernando Maribog - LCSES - 202-458-0402 and John Kellenberg - LCSES - 202-458-1397.

24. Project linkage to Implementing Agency program(s): The Project is consistent with the World Bank's Country Assistance Strategy for Uruguay (June 5, 1997), which identifies increasing urban pollution problems among the country's principal environmental concerns. Recent dialogue between the Government of Uruguay and the World Bank has addressed the potential for Bank investments in the area of coastal zone, pollution and fisheries management and municipal development (including solid waste management); project identification is expected to begin in FY98.

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related project



Montevideo, 22 de abril de 1998

Sra. Myrna Alexander
 Directora
 Dirección Subregional Argentina, Chile y Uruguay
 Banco Mundial

De mi mayor consideración:

Tengo el agrado de dirigirme a Ud. con referencia a la propuesta de asistencia para la formulación y preparación del "Landfill Methane Recovery Demonstration Project" (Block A PDF), que fuera enviada al Banco Mundial, - Unidad Sectorial de Desarrollo Ambiental y Socialmente Sostenible - mediante Fax del Director Nacional de Medio Ambiente del 19 de marzo pasado.

A los efectos de continuar con el proceso de gestión del mencionado proyecto, pongo en su conocimiento que la iniciativa presentada cuenta con la aprobación y el respaldo del Gobierno.

Asimismo, se solicita se designe al Banco Mundial como Agencia de Implementación para el referido proyecto.

Sin otro particular, saluda a Ud. muy atentamente,

Ing. Guzmán Luis A. Santos
 Punto Focal Operacional del FIDAM
 en URUGUAY

BE:SI 85-23-248

INFORMACION FIDAM

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