

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ARGENTINA

**PRIVATE/PUBLIC SECTOR COLLABORATION FOR INTEGRATED SOLID
WASTE MANAGEMENT IN LA PAMPA, ARGENTINA**

(TC-00-07-01-8-AR)

PLAN OF OPERATIONS

This document was prepared by the project team consisting of: Helena Landázuri, Project Team Leader (RE1/EN1); Paula Giraldez (LEG); Seth Binder (RE1/EN1); Rolando Jirón (COF/CAR); y Alicia Maldonado (RE1/EN1).

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PLAN OF OPERATIONS
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**PRIVATE/PUBLIC SECTOR COLLABORATION FOR INTEGRATED SOLID WASTE MANAGEMENT
IN LA PAMPA, ARGENTINA**

I. EXECUTIVE SUMMARY

- A. *Beneficiary:* Under secretariat of Ecology of the Provincial Government of La Pampa
- B. *Executing Agency:* Inter-American Development Bank through the Country Office Argentina (COF/CAR)
- C. *Target Beneficiaries:* The technical cooperation seeks to pave the way toward actions that will improve the system of solid waste management in the province, benefiting: households, via improved service and sanitary conditions; municipal governments, via improvements in efficiency and cost recovery; and private entrepreneurs, via the creation of collaborative business opportunities in the sector.
- D. *Financing:* Total project cost: US\$ 370,000, financed by the Italian Fund for Sustainable Development of Argentina.
- E. *Objectives:* The aim of the project is to give the province access to a range of expertise that it would otherwise be unable to assemble, in order to resolve the outstanding solid waste management issues. Components include: identification and implementation of appropriate disposal methods for different size communities in the province; safe closure of dumpsites which cannot be upgraded; further development of markets for recovered and recycled materials; development of local waste management enterprises; improvement of cost recovery for waste management services; establishment of permanent mechanisms for joint problem solving supported by the necessary institutional arrangements; and identification and development of opportunities for further private sector investment in solid waste management in the province.
- F. *Execution Timetable:* The program execution and disbursement period will be 12 months
- G. *Special Contractual Conditions:* None.
- H. *Exceptions to Bank Policies and Procedures:* None.
- I. *Environmental and Social Review:* The Committee on Environment and Social Impact (CESI) reviewed the operation on June 18, 2004, and recommended: (i) that the studies consider methane capture as a cost recovery opportunity and a tool to attract additional financing; and (ii) that the actual investment projects will be considered according to their environmental viability, based on EIAs (which will be done by the financing institution). The analysis of methane capture is among the areas of investigation (see par. 3.5 and 3.6). While the present operation will not finance any investments, the terms of reference of the consultants require that the Business Plan to be developed include

investments that are viable from the environmental point of view besides financial, economic and other technical considerations (see par. 3.12 and 3.13).

- J. *Coordination with other Official Development Finance Institutions:* This project would complement the World Bank's Municipal Development Project by increasing the efficiency and cost-effectiveness of service delivery in the solid waste sector

II. BACKGROUND AND PROBLEM STATEMENT

- 2.1 Basic data. La Pampa province, in Argentina, is situated in the centre of Argentina and covers an area of 143,500 square km. The eastern boundary of La Pampa is approximately 600 km South West of the Federal Capital, Buenos Aires. La Pampa is landlocked and is bordered by the provinces of Buenos Aires, Cordoba, San Luis, Mendoza, Nuequén and Rio Negro.
- 2.2 La Pampa has a population of 295,000 and a surface area of 143,000 million square kilometers; population density is 2 persons per square kilometer. Nearly half of La Pampa's 295,000 people are concentrated in two large cities – Santa Rosa (94,200) and General Pico (48,300) -- with the remainder of the population concentrated in small, remote towns of less than 13,000 inhabitants. Therefore, the province is characterized by a large number of small urban populations and large distances between them.
- 2.3 Agricultural and agro-industrial exports account for 93 percent of the Province's exports - grains and oil seeds 67%; honey 10%; meat 8%; and oils 7%. The remaining 7% of exports are made up of a range of industrial activities including production of soft drinks, bottled water, textiles, shoes, car parts, metal piecwork, concrete, plastic products and plaster boards.

2.4 Waste generation.

Estimates of waste arisings for the major urban centres of La Pampa are shown in *Table 1* and are based upon amount of waste being received at the major waste treatment and disposal facilities¹. These figures give an estimated waste generation rate of 0.6 kg per capita day. However, the actual amount of waste arriving

Table.1 Estimated Urban Waste Generation in La Pampa (30/12/97)¹

| Population Range | No. of Urban Centres | Estimated Population (1997) | Percentage of total population | Tonnes /month |
|------------------|----------------------|-----------------------------|--------------------------------|---------------|
| -500 | 42 | 8599 | 3.4 | 155 |
| 500-1000 | 14 | 9553 | 3.7 | 172 |
| 1001-2000 | 12 | 18505 | 7.2 | 333 |
| 2001-3000 | 7 | 16808 | 6.5 | 302 |
| 3001-4000 | 4 | 13795 | 5.5 | 248 |
| 4001-5000 | 2 | 8589 | 3.3 | 155 |
| 5001-6000 | 2 | 10933 | 4.2 | 197 |
| 6001-7000 | 3 | 18809 | 7.3 | 339 |
| Eduardo Castex | 1 | 8798 | 3.4 | 158 |
| General Acha | 1 | 11512 | 4.6 | 207 |
| General Pico | 1 | 46642 | 18.1 | 840 |
| Santa Rosa | 1 | 84486 | 32.8 | 1521 |
| | 90 | 257029 | 100 | 4627 |

at treatment and/or disposal sites, in many cases, is found to be higher than the estimated value. For example, the site managers at the Santa Rosa sanitary landfill estimate a waste generation rate of 1.2 kg per capita day. This is partly attributable to the fact that in

(1) Plan Modelo Manejo de Residuos Sólidos, Provincia de la Pampa 2000

addition to household and commercial waste, green and bulky waste, industrial and agricultural waste are also sent to the landfill site.

- 2.5 Household waste composition, *Table 2* has been estimated based upon sampling at different waste treatment plants in the Province. The results show that over 60% of the waste is organic material followed by significant ferrous metals and plastics fractions. There are also significant amounts of disposable nappies and glass in the waste.

Table 2 Estimated Urban Waste Composition in La Pampa (1998)

| Waste Component | Percentage by weight (%) |
|--------------------|--------------------------|
| Organics | 63.00 |
| Ferrous Metals | 10.00 |
| Plastics | 9.00 |
| Disposable Nappies | 8.00 |
| Glass | 4.00 |
| Cardboard | 2.00 |
| Paper | 1.50 |
| Tetra Brik | 1.00 |
| Bones | 0.80 |
| Aluminium | 0.35 |
| Batteries | 0.28 |
| Wood | 0.04 |
| Other | 0.03 |
| Total | 100.00 |

- 2.6 *Waste collection.* The vast majority of municipalities in La Pampa operate their own waste collection services. Most municipalities recognize that the cost of urban waste collection is high and attribute this to a lack of flexibility in employment conditions for municipal staff. There is therefore scope to improve the efficiency and effectiveness of waste collection services. Some municipalities currently operate separate waste collection services whereas others expressed interest in establishing these services for organic and/or inorganic recyclable waste fractions but had so far been unable to accommodate these services within their existing municipal services budget.
- 2.7 *Materials Recovery and Recycling.* A number of municipalities in La Pampa have developed materials recovery and recycling plants that treat either mixed solid waste, partially segregated or segregated solid waste. The site visits undertaken by the consultants reveal that these plants are technically working very well. However, they are often being run below their design capacity. Success in marketing recovered materials has so far been limited to materials such as aluminum, paper and cardboard and PET plastic. The establishing of markets for recovered materials will be key to the long term sustainability of these materials recovery and treatment plants. Finally, there is a significant proportion of the urban waste stream that needs special handling due to its problematic, pathological or hazardous nature. The handling, treatment and disposal of these wastes are currently inadequate.
- 2.8 *Waste Disposal.* The majority of municipalities in the province dispose of their waste in uncontrolled or controlled dumps. The main exception to this is the city of Santa Rosa, which has a sanitary landfill. Thus there are a large number of small dumpsites scattered around the province. Environmental degradation is localized and dependent on original sitting of the dump, sensitivity and vulnerability of underlying groundwater resources and current level of operational control. There is and will continue to be a on-going requirement for landfill capacity in the province in order to dispose of urban waste for which there is no market e.g. disposable nappies or to safely dispose of pathological or hazardous wastes.

- 2.9 *Operational costs and financing.* With the exception of hazardous and medical wastes, the responsibility of solid waste management lays wholly with the Municipalities. Operational costs and financing systems vary from Municipality to Municipality; several finance the collection of solid waste via user charges, often added on to other utility bills, such as water or electricity. This strategy has led to higher rates of payment, but overall receipts from user charges generally do not cover all operational costs. In many cases, the costs of final disposal are not taken into account in the calculation of user charges. Some Municipalities look to material recovery and recycling as an additional source of financing, but this has not provided adequate revenue streams due to the underdeveloped state of markets for recovered materials. The result common to most Municipalities is that they must subsidize the solid waste management sector.
- 2.10 Problem identification and current efforts. Solid waste management in La Pampa has been identified as a priority problem because the existing disposal practices of dumping presents major problems of water, soil and air pollution as well as increasing health risks for people living and working on or near to the dumpsite. Lack of adequate treatment and disposal facilities for medical and hazardous waste, limited human and financial resources, and the absence of comprehensive guidelines on good waste management practices compound the problem.
- 2.11 Significant progress has been made to improve waste management in recent years through the inter-municipal forum (CoProBa) including a number of initiatives to increase materials recovery and recycling. In 1998, CoProBa jointly produced a “Plan Modelo Manejo de Residuos Sólidos” (Model Plan for Solid Waste Management), whose main objectives were: (i) establish strategies and lines of action that allow the development of a sustainable waste management system; (ii) integrate the different aspects of waste management according to the reality of the Province; and (iii) design a working model that incorporates the waste management hierarchy, quality criteria and allows for integration into regional and national markets. This Plan has served as the basis for the feasibility studies being undertaken with Bank support (see par. 5.3).
- 2.12 In spite of CoProBa’s efforts, the problem of inadequate disposal for residual municipal, medical and hazardous waste remains and further development of materials recovery and recycling activities is required in order to access significant economies of scale and develop a local economy based on adding value to the recovered materials.
- 2.13 The program seeks to analyze and develop solutions to a number of interrelated problems in the solid waste management sector of the La Pampa province: (i) widespread dumping of waste, causing water, soil and air pollution, exacerbating the health risks to those living and working on and around the disposal sites; (ii) lack of adequate treatment and disposal facilities for medical and hazardous waste; (iii) limited human and financial resources; (iv) absence of comprehensive guidelines on good waste management practices; and (v) forgone benefits of potential economies of scale in design and construction of waste management infrastructure and better prices for recovered and recycled materials by working in cooperation.

- 2.14 Program financing would provide the government of the province of La Pampa with access to a range of expertise that it would otherwise be unable to assemble in order to thoroughly analyze the various problems in the sector and create a strategic plan to resolve the outstanding solid waste management issues. The project should enable the province to improve and extend service in the sector in a cost-effective and environmentally sound manner inclusive of the private financing, while at the same time strengthening the institutional base upon which the project will operate.
- 2.15 In view of the current stringent financial conditions in Argentina, the Bank attempts, through this project, to create alternative sources of financial support for worthwhile projects in Argentina, through innovative partnerships with the private sector both locally and internationally, and tapping other multilateral investment corporations or funds, which may be able to help Argentina undertake investments avoiding incurring into additional debt.
- 2.16 The proposed project is consistent with the Bank country program for Argentina, insofar as it represents an initiative to raise living standards by reforming the sanitation sector of the province, as well as an initiative to promote fiscal balance at the provincial and municipal levels by seeking to improve cost recovery rates and attract private financing. This final element is an essential theme in the sanitation sector strategy as well.
- 2.17 This project would complement the World Bank's Municipal Development Project², from which the La Pampa municipalities are eligible to receive funding, by increasing the efficiency and cost-effectiveness of service delivery in the solid waste sector. Prior experience in the sector suggests that efforts should be made to ensure that the terms of reference and the outputs of the project stress an integrated approach to solid waste management, and that the consulting team should coordinate fully with the loan beneficiary to ensure that all prior analysis undertaken by the beneficiary is shared with and can be utilized by the consulting team.

III. PROGRAM OBJECTIVE AND DESCRIPTION

A. Program objectives

- 3.1 Program goal and purpose: The goal of the project is to reduce the impact that inadequate disposal of solid waste has on the population of the La Pampa Province. The purposes of the project are to improve local authorities' ability to manage solid waste, and to design a technical and financially viable solution for the collection and final disposal of solid waste that could later find financing from other sources.
- 3.2 Main products expected out of the present operation are: (i) a proposal for a Integrated Solid Waste Management (ISWM) Strategy, discussed with and supported by major stakeholders in the Province; (ii) an ISWM investment proposal presented under a Business Plan structure, including required public and private investment; and (iii) a

² The Second Municipal Development Project seeks to contribute to: (i) more effective public sector management at the Provincial and Municipal levels through improved financing mechanisms for municipal investments, and (ii) more effective physical federalism by strengthening the municipalities' capacity to assume the responsibilities being transferred to them.

proposal for the financial structure of a public/private partnership, detailing findings and recommendations resulting from the surveys and interviews undertaken with Italian and Argentinean private and public agencies.

- 3.3 Objectives. The proposed operation has the following objectives: (i) perform technical, financial, environmental and social feasibility studies required to devise an integrated solid waste management scheme; (ii) identify sources of financial support within the Italian Government which could provide support to the province in this context; (iii) identify private (Italian and Argentinean) entrepreneurs potentially interested in investing risk capital and expertise in Argentina in this sector; and (iv) design a business plan for the investment phase that could be presented for consideration of multilateral investment corporations and/or funds (IIC, IFC, MIF), as well as governmental and private partners.

B. Project Components

- 3.4 The project is organized under three components: (i) feasibility studies; (ii) development of public/private partnerships; and (iii) development of a Business Plan. These activities respond to the Logical Framework presented in Annex 1, and will be undertaken under Terms of Reference presented in Annex 2.

1. Feasibility studies

- 3.5 The TC will finance an update and further development of a comprehensive baseline assessment of waste management in the Province. A first strategy development workshop will be undertaken, where all relevant stakeholders would contribute to the drafting of a critical path through which current institutional and technical limitations can be tackled. With the support of consultants, local authorities would then develop specific options to improve waste management operations. Such options will offer differing levels of recycling, service etc, and will be evaluated with regard to: economic viability; financial cost; net budget impacts; affordability and willingness to pay on the part of waste generators. Cost recovery alternatives will figure prominently in this analysis, taking into consideration material recovery and methane capture.
- 3.6 The analysis will also cover institutional requirements necessary to support the options; socio-economic impacts, including employment generation; likely environmental and health impacts; and timing, ease and practicability of implementation. Local authorities would also develop a waste reduction and recycling program, including an analysis of mechanisms for the improvement of cost recovery.
- 3.7 Through this component, local authorities will determine appropriate operational areas for waste management, examining options such as: retaining existing, municipal operational areas; organizing municipalities into groupings; province-wide approaches; and/or a combination of the all of these. Options for rehabilitation and closure of disposal sites will also be analyzed. With support from the technical assistance to be financed by the project, authorities will also determine the most appropriate institutional arrangements to facilitate this process and bring about the desired improvements to waste management services in the province. The findings of the technical assistance and the results of deliberations by local authorities will be discussed with relevant stakeholders in

a second strategy development seminar, and summarized in a draft ISWM strategy document.

- 3.8 The Centro de Estudios Ambientales (EcoSur), based in La Pampa, will collaborate with the primary consulting team to compile, systematize and publicly disseminate the data, assessments and strategies resulting from the various component studies. EcoSur will develop a web site to facilitate the actualization and diffusion of this information and to enable communication between principal stakeholders. Moreover, the organization will foster direct communication amongst stakeholders via workshops and seminars, and will also publish CDs and hard copies of informational materials.

2. Development of public/private partnerships

- 3.9 The project will finance the search and identification of candidates for external donor support for the future investment project. In this search, potential Italian governmental and private sources will be included, in view of the Italian Government's supportive policies towards investment in Argentina. The search for potential partners will pay special attention at the identification of local and regional private entrepreneurs who could be interested in participating in the context of the Business Plan. At that time, other potential external sources, such as the IIC, IFC, MIF and other institutions will be interviewed to analyze lines of financing that could be appropriate for the future public and private investments. In particular, depending on the conclusions of feasibility studies for methane capture, consideration will be given to the potential for financing via the Clean Development Mechanism.
- 3.10 Based on the results of the financial analysis, the operation will finance the structuring of the proposed partnership for a joint venture with selected private sector firms. Documents will be drafted to establish the rules for the selection of partner organizations and draw up the terms and conditions of the necessary legal agreements.

3. Business plan development

- 3.11 The project will assist local authorities in the development of a business plan, which would reflect the institutional and technical structure of the proposed operation, including selected private sector partners, in cooperation with stakeholders in La Pampa. The business plan will describe the specific investments that would have been designed through the present operation.
- 3.12 The business plan will be developed according to IIC guidelines³, including an environmental management plan, and will contain at least information regarding: owners/sponsors; the company; the project; investment costs; financial projections; Environmental Management Plan; implementation; financial plan; operating and working capital financing; and proposed security arrangements
- 3.13 The main area in which the consultants will support the preparation of the business plan will be in the project design. They will assist the private sector firm in the preparation of:

³ How to apply for financing from the IIC, Inter-American Investment Corporation, Serving Small and Medium-Size Enterprises in Latin America and the Caribbean

a project description; preliminary technical, market and financial feasibility studies; a comparative and competitive advantages analysis; the identification of major sources of competition; a description of technological arrangements; an analysis of current and projected employment generated; an analysis of current and expected foreign exchange generation; and an analysis of potential environmental impacts and mitigation measures.

- 3.14 The consultants will also provide support to the private sector partner in the financial project planning. Nevertheless, the private sector partner will bear ultimate responsibility for finalizing the business plan and ensuring that it meets the requirements of external financing sources.

IV. COST AND FINANCING

- 4.1 *Project costs and financing sources.* The project will have a total cost estimated in US\$370,000, which will be contributed by the Italian Fund for Sustainable Development of Argentina. The Beneficiary will contribute counterpart in kind, in terms of technical counterpart personnel, logistics and transportation, coordination of field and institutional activities, and support personnel and office space. A detailed budget is presented in Annex 3.

| Summary Cost Table | |
|---------------------------|------------------|
| International consultants | \$156,000 |
| Local consultants | \$58,800 |
| Overhead | \$85,920 |
| Travel & Per Diem | \$55,280 |
| Other | \$14,000 |
| TOTAL | \$370,000 |

- 4.2 *Sustainability:* At the time of final disbursement, this project will have produced an ISWM Strategy Document agreeable to all stakeholders that outlines concrete steps to be taken in the future, as well as a Business Plan to bring aboard the necessary financial capital from multilateral lenders and foreign and domestic entrepreneurs. Both documents will contribute significantly to the sustainability and efficacy of efforts to solve the problems of solid waste management in La Pampa.

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 *Executing agency.* The IDB itself will act as executing agency for this project. The Bank will administer the contract through the Country Office in Argentina (CAR). CAR will be responsible for supervising the work of the consultants, with input from the beneficiary agency.
- 5.2 *Executing mechanism.* According to Art.31 of the “Ley Ambiental de la Provincia de La Pampa” (Law 1914, 2001), the Subsecretaría de Ecología of La Pampa (SELP) has the authority of enforcement, in coordination with other responsible provincial and municipal authorities. Specifically, for the solid waste sector, SELP is coordinating with CoProBa and non-governmental organizations to foster better and more efficient services. SELP will be the beneficiary of the project and will be responsible for: (i) providing technical counterparts to the consultants; (ii) supervising the work of the consultants, in

coordination with CAR; (iii) facilitating and ensuring the coordination between the consultants and local organizations that bear relevance to the project; and (iv) providing support personnel, office space, telecommunication and transportation. The tasks detailed in this operation will be undertaken by an Italian consulting firm, which will assemble a joint international/national consultant team.

- 5.3 *Program implementation readiness.* The beneficiary lead the preparation of a Model Plan for Solid Waste Management for the province in 1998, involving all relevant stakeholders, and particularly ensuring the active participation of the Municipal governments. To proceed with the plan, the beneficiary requested and obtained a small preparatory technical assistance from the Bank, (ATN/KC-7627-AR), financed with resources from the United Kingdom Technical Operation for Consultants Fund; this previous operation produced a pre-feasibility analysis of the solid waste management problem in the La Pampa Province and the terms of reference for the feasibility studies described in the current proposal. The institutional setting is appropriate and involved in the project, and the technical capabilities of the beneficiary agency are sufficient to provide the counterpart for the consulting services planned. Additionally, terms of reference for the consulting work have been developed and thoroughly discussed with the beneficiary.
- 5.4 *Execution period and disbursement schedule.* The program execution period will be 12 months, during which time 6 disbursements will be made according to the following schedule:
- a. 10% upon presentation of inception report to the Bank;
 - b. 10% upon completion of the first strategy development workshop;
 - c. 20% upon acceptance of the ISWM proposal;
 - d. 20% upon presentation of progress report on the financial structure proposal;
 - e. 30% upon presentation of the draft Business Plan;
 - f. 10% upon presentation of the final report
- 5.5 *Procurement.* A Italian consulting firm will be hired to undertake all activities foreseen under this operation, in coordination with and with the support of the beneficiary. The firm will be responsible for all individual consultant contracting, including local consultants.

VI. MONITORING AND EVALUATION

- 6.1 *Monitoring.* CAR and the beneficiary will be jointly responsible for supervising the work of the consultant team. The beneficiary will generate monthly reports advising CAR on the status and progress of the consulting firm's work, and identifying possible obstacles to the achievement of project objectives.
- 6.2 *Technical and basic responsibility.* Basic and technical responsibility lay with the Bank's country office in Argentina (CAR). CAR will also be responsible for all disbursements, reporting and monitoring associated to this project.
- 6.3 *Progress and final reports.* A progress report on the proposed financial structure of the partnership, detailing findings and recommendations resulting from the surveys and

interviews undertaken with Italian and Argentinean private and public officers, is to be written approximately at the end of the eighth month of project execution. A Final Report, summarizing findings and achievements, and containing the final version of the Business Plan, plus individual reports in an Annex, is to be submitted no later than 12 months after project inception.

- 6.4 *Evaluations.* CAR will write a mid-term report discussing progress *vis a vis* the objectives pursued by the project, and based on specific achievements for each indicator identified in the Logical Framework and recorded in the PPMR for non-reimbursable technical cooperation, at the end of the sixth month of project execution.

VII. PROGRAM BENEFITS AND RISKS

- 7.1 *Program benefits and developmental impact.* The program will help stakeholders in the province improve solid waste management services and ease pressing environmental, health and budgetary problems. This will raise the living standards of many residents in the province and increase the capacity of the provincial and municipal governments to deal with solid waste management issues, while potentially freeing up scarce budgetary resources for use on other problems.
- 7.2 *Target Beneficiaries.* The technical cooperation seeks to pave the way toward actions that will improve the system of solid waste management in the province, benefiting: households, via improved service and sanitary conditions; municipal governments, via improvements in efficiency and cost recovery; and private entrepreneurs, via the creation of collaborative business opportunities in the sector. The identification of specific beneficiaries will depend on the substance of the reports drafted during and at the completion of the technical cooperation.
- 7.3 *Risks.* The main risks that affects this operation is common to all current operations in Argentina, and has to do with the overall financial situation of the country. If the financial conditions of the La Pampa province, currently solvent and one of the least-indebted in Argentina, were to deteriorate significantly, or if the conditions for foreign investment were to become less-reliable, interest among private local and non-local investors may diminish. To reduce the potential impact of country-wide economic changes, the operation proposes the development of partnerships with Italy, a country that has sustained its support to Argentina through the crisis, and which has several lines of credit and grants for Italian firms and agencies interested in invested in job-generating programs in Argentina. A first auscultation of potential partners in that country yielded positive results.

VIII. ENVIRONMENTAL AND SOCIAL ASPECTS

- 8.1 The Committee on Environment and Social Impact (CESI) reviewed the operation on June 18, 2004, and recommended: (i) that the studies consider methane capture as a cost recovery opportunity and a tool to attract additional financing; (see par. 3.5) and (ii) that the actual investment projects will be considered according to their environmental viability, based on EIAs. While the present operation will not finance any investments, the terms of reference of the consultants require that the Business Plan to be developed

include investments that are viable from the environmental point of view besides financial, economic and other technical considerations (see par. 3.11 and 3.12).

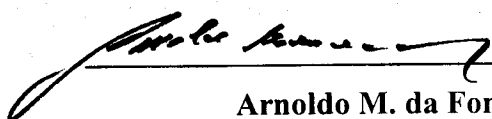
- 8.2 The proposed project approach for ISWM planning and development in La Pampa is to maximize the diversion and commercialization of materials from the final disposal site to the extent that this is cost effective. At the same time, the negative environmental impacts of uncontrolled dumping will be reduced by efforts to improve disposal practices through the establishment of sanitary landfills in the province. The Business Plan to be produced as a result of this operation will include an Environmental Management Plan to deal with undesirable environmental and social impacts, as well as to maximize environmental and social benefits of the project.

**PRIVATE/PUBLIC SECTOR COLLABORATION FOR INTEGRATED SOLID
WASTE MANAGEMENT IN LA PAMPA, ARGENTINA**

(TC-0007018-AR)

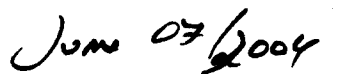
CERTIFICATION

I certify that this operation was approved for financing by the donor of the Italian Special Trust Fund for the Sustainable Development of Argentina through an e-mail dated April 22, 2004 submitted by Mr. Sebastiano Salvatori, Head of Office VIII, Directorate General for Development Cooperation, Ministry of Foreign Affairs of Italy. Also, I certify that resources from the Italian Special Trust Fund for the Sustainable Development of Argentina are available for up to US\$370,000 in order to finance the activities described and budgeted in this document. The commitment and disbursement of these resources shall be made only by the Bank in US\$ dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except that local consultants working in their own borrowing member country shall have their remuneration defined and paid in the currency of that country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this Plan of Operations. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.



**Arnaldo M. da Fonseca
Chief**

Technical Cooperation Coordination Unit



Date

Private/Public Sector Collaboration for Integrated Solid Waste Management in La Pampa, Argentina (TC-00-07-01-8-AR)

Logical Framework

| Descriptive Summary | Indicators | Means of Verification | Assumptions |
|---|--|--|---|
| <p>Goal</p> <p>Contribute to a reduction of the impact that inadequate solid waste disposal has on the population of the Provincia de La Pampa</p> | <p>To be determined within the context of the investment project that will be proposed as an output of this technical cooperation</p> | | |
| <p>Purpose</p> <p>Investments in integrated solid waste management in the Provincia de La Pampa financed.</p> | <ol style="list-style-type: none"> 1. 50% of investments outlined in ISWM Strategy Document implemented 24 months after project completion 2. Proposed public/private investment project implemented | <ol style="list-style-type: none"> 1. Follow-up by CAR 2. Project progress reports | <p>Increases in solid waste generation in the province do not outstrip investments in solid waste management</p> <p>Changes in the basic composition of solid waste generated in the province due to changing preferences or technology do not inhibit adequate management</p> <p>Transportation infrastructure essential to the collection and disposal of solid waste is maintained in good condition</p> |

| Descriptive Summary | Indicators | Means of Verification | Assumptions |
|---|--|---|--|
| COMPONENTS | | | |
| <p>1. Feasibility studies –</p> <p>Local authorities' management and investment strategy for the collection and disposal of solid waste strengthened</p> | <p>1.1 All critical benchmarks stated in ISWM met 18 months after project completion</p> <p>1.2 Cost recovery for waste management services improved by an additional 30%, 36 months after project completion</p> | <p>1.1 Progress report by Beneficiary</p> <p>1.2 Financial/budget documents from relevant local authorities</p> | <ul style="list-style-type: none"> • The current (or projected) financial situation of the local governments does not significantly deteriorate • Solid waste management remains the responsibility of local governments |
| <p>2. Private/public partnerships and Business Plan –</p> <p>Private investment and external donor financing attracted to the sector</p> | <p>2.1 Private sector firms express interest in a joint venture for solid waste management in the province 12 months after project inception</p> <p>2.2 Business Plan for public/private joint venture in the sector approved by all stakeholders, at project completion</p> <p>2.3 Business Plan attracts external donor financing 24 months after project completion</p> | <p>2.1 Progress report by Beneficiary</p> <p>2.2 Progress report by Beneficiary</p> <p>2.3 Press release or official documentation of approval from donor institution</p> | <ul style="list-style-type: none"> • Economic conditions in the province and country as a whole do not deteriorate, driving away potential investors. |

ANNEX II

PRIVATE/PUBLIC SECTOR COLLABORATION FOR INTEGRATED SOLID WASTE MANAGEMENT IN LA PAMPA, ARGENTINA

Italian Fund for Sustainable Development in Argentina

TERMS OF REFERENCE

I. PROBLEM DEFINITION

- 1.1 The key stakeholders involved in the planning and delivery of waste management services in La Pampa have been working together for the last five years to address the most important waste management problems in the province. The key drivers to joint problem solving in La Pampa include:
- widespread dumping of waste giving rise to water, soil and air pollution as well as exacerbating the health risks to those living and working on and around the disposal sites;
 - lack of adequate treatment and disposal facilities for medical and hazardous waste;
 - limited human and financial resources available at the level of individual municipalities;
 - the absence of comprehensive guidelines on good waste management practices; and
 - the perceived benefits of potential economies of scale in the design and construction of waste management infrastructure as well as from better prices for recovered and recycled materials by working in cooperation.
- 1.2 However, these stakeholders now need assistance in the form of an Inter American Development Bank (IADB) funded technical cooperation project to continue to push this process forward. The aim of the project is to give the province access to a range of expertise that they would otherwise have been unable to assemble in order to resolve the outstanding solid waste management issues.

II. OBJECTIVES

- 2.1 General Objectives: (i) support the effort of the stakeholders in La Pampa to improve solid waste management (SWM) services and solve a pressing environmental and health problem; (ii) identify a solution to the solid waste collection and disposal problem that is economically, socially, environmentally

and institutionally sustainable; (iii) at times of stringent financial restrictions, plan and prepare the ground for financial support from external governmental and private sources in the implementation phase of the project; and (iv) develop a showcase for the potential private/public cooperation between Italy and Argentina as a response to the current crisis.

- 2.2 Specific Objectives: (i) perform the technical, financial, environmental and social feasibility studies required to devise an integrated solid waste management (ISWM) scheme for the La Pampa Province; (ii) identify sources of financial support within the Italian Government structure which could be interested in providing support to the country and the province; (iii) identify private (Italian and Argentinian) entrepreneurs potentially interested in investing risk capital and expertise in Argentina; and (iv) design a business plan for the investment phase that could be presented for consideration of multilateral investment corporations or funds, and the governmental and private potential partners.

III. ROLES AND RESPONSIBILITIES OF THE CONSULTANTS, THE BANK AND LOCAL COUNTERPARTS

- 3.1 Long term improvements to municipal SWM in La Pampa will only be achieved by ensuring that the planning and implementation of the strategy and action plan is carried in a participative way. The consultants will therefore work closely with the beneficiary (Undersecretariat for Ecology, Government of La Pampa), members of Consorcio Provincial para la Basura (CoProBa), and other key stakeholders in the development of strategy components, specific actions, pilot projects and the business plan.
- 3.2 The consultant will ensure that Bank representatives are kept fully informed of project developments and that national and international staff are invited to all key workshops.

IV. SCOPE OF WORK/TASKS

A. Specific Objective 1: Feasibility studies

- 4.1 Task 1: Baseline Assessment. Using information from the Plan Modelo¹ and the pre-feasibility study, the Consultant should work with municipalities to update and further develop a comprehensive baseline assessment of waste management in the Province. This assessment should include:

- waste raisings, sources and composition;

¹ Plan Modelo. Manejo de Residuos Sólidos. Provincia de La Pampa, 2000. By Consorcio Provincial para la Basura Co.Pro.Ba.

- relevant stakeholders and their roles/responsibilities, including identification of local waste management firms;
 - waste management infrastructure, equipment and staffing;
 - costs, charges and revenues; and
 - other issues as deemed relevant by the Client and Consultant.
- 4.2 As a part of this task, the Consultant should undertake a waste generation and waste characteristics analysis in order to forecast future waste generation, taking into account high, medium and low growth scenarios.
- 4.3 Task 2: First Strategy Development Workshop. The Consultants should organize a strategy development workshop early in the project. The workshop should include key members of the Consulting team, representatives of the Provincial and municipal governments and other parties with responsibility for or a stake in waste management (co-operatives, private sector firms, non-governmental organizations).
- 4.4 The strategy development workshop represents the first opportunity for all stakeholders to get together to be introduced to the methodology laid out in the Strategic Planning Guide for Municipal Solid Waste Management, to discuss the objectives of the Strategic Plan, to discuss key issues and agree the strategic planning framework.
- 4.5 A Steering Group should also be established to monitor and advise on key issues and to secure the on-going participation of all key stakeholders in the planning and project development process.
- 4.6 A report on the workshop, setting out key findings, should be prepared and circulated to participants and other relevant stakeholders. Participants should be given an opportunity to comment on the workshop report.
- 4.7 Task 3: Option Development, Design and Evaluation for Improved Waste Management Operations. The purpose of this task is develop and evaluate a range of options for waste management operations which will enable the Province to meet the objectives for improved waste management, as defined and agreed in the First Strategy Development Workshop. Options should be developed that offer differing levels of recycling, service etc, and should be evaluated with regard to:
- financial cost, including discounted cash flow and average incremental cost analyses;
 - net impacts on municipal and provincial budgets and the ability of municipalities to finance them (having due regard to items that are eligible for private and/or external financing);
 - affordability and willingness to pay on the part of waste generators, assessed through surveys in a representative selection of communities;
 - institutional requirements required to support the options;

- socio-economic impacts, including employment generation;
- likely environmental and health impacts, in terms of both local impacts and general resource requirements (full environmental impact assessments are not required at this stage, an environmental impact assessment and corresponding environmental management plan will be developed as part of the Business Plan); and
- timing, ease and practicability of implementation.

4.8 The task should evaluate the alternatives for waste management operations and is likely to address the following:

- based on case study work in a representative sample of municipalities, collection practices including assessment of beats/routes, collection schedules (ie daily, weekly etc), vehicle types and nature of collection (ie mixed, segregated etc);
- waste transfer procedures, including direct haul to treatment or disposal sites and use of transfer stations;
- waste treatment, including selected development or (in the case of existing facilities) improvement of recycling and waste separation facilities, consideration of incineration for selected waste streams (eg medical wastes);
- identification of appropriate disposal methods for different size communities in the province
- development of new landfill capacity and upgrading of existing final disposal sites, taking account of the level of engineering that is appropriate to different sized sites and different types of wastes.
- further development of markets for recovered and recycled materials;
- identification and development of opportunities for private investment

4.9 Task 4: Development of Waste Reduction and Recycling Program. The program must maximize, to the extent that is cost-effective, the diversion of recyclable waste from the final disposal site, as it helps to increase landfill lifetimes and increase cost recovery. Under this task, specific measures to promote waste reduction and recycling and maximize revenues from the sale of separated materials and recycled products will be developed.

4.10 The activities under this task will include:

- A review of current recycling activities and markets for recovered and recycled material, including:
 - quantity and quality of the outputs of recycling plants, covering all significant products (aluminum, cardboard, compost, ferrous metals, glass, paper, plastics (by type), textiles, waste oils etc);
 - costs of current recycling activities, and assessment of the cost-effectiveness and efficiency of these costs; and

- revenue generation from recycling, by municipality and by output, updating information presented in the Plan Modelo and collected during the pre-feasibility study.
- A brief review of municipal solid waste recycling activities undertaken elsewhere in Argentina, including cost, revenue and quality comparisons.
- An assessment of the opportunities to further develop local recycling markets through the establishment of micro-enterprises. The aim of these micro-enterprises will be to add value to recovered materials by for example processing of PET into plastic products. The assessment should also consider the role of intermediaries in the process and seek to create more direct marketing routes where possible. This assessment will include an analysis of potential gross and net employment generation possible by establishing recycling micro-enterprises at Provincial level.
- Assessment of the scope for waste minimization in La Pampa (or other activities that reduce waste raisings), including:
 - public or enterprise education;
 - initiatives such as home or neighborhood composting; and
 - legislation at the provincial or municipal level, addressing issues such as packaging wastes, deposit refund schemes etc.
- An assessment of potential purchasers for separated wastes and recycled products in Argentina which addresses:
 - volumes currently being purchased and potential capacity of the market to absorb further wastes;
 - prices being paid; and
 - any obstacles to increasing purchases of separated or recycled wastes, and the extent to which these can be overcome (through improved treatment practices, bulking of wastes, publicity and marketing and education of potential purchasers or by developing preferential purchase/incentive schemes such as lower waste management charges for purchasers of compost).
- Development of a plan for promoting the marketing of specific products, which:
 - details market opportunities;
 - specifies investments, technical improvements and technical assistance required;
 - describes marketing activities; and
 - outlines public education activities, for example the importance of source separation.

4.11 Task 5: Cost Recovery Options. Cost recovery in waste management in La Pampa is very low. Treatment and disposal are not charged for, and fees for collection are not collected in full. In addition, the country is experiencing a serious economic crisis and significant increases to charges may not be affordable. Despite these problems, cost recovery will need to be improved if waste management is not to be a burden on municipalities. Mechanisms for the

improvement of cost recovery should be developed and evaluated, taking account of the outputs of Tasks 3 and 4. The mechanisms should include:

- increased enforcement of charges;
- reducing costs of operations through increased efficiency or targeted service retrenchment;
- covering revenue shortfalls from general municipal or provincial budgets;
- differential charges by waste source and type, including domestic, commercial, agricultural, industrial etc and municipal organic, municipal inorganic sanitary etc;
- developing charging structures that better reflect waste generation rates and the full cost of the service;
- revising charging structures to increase affordability, including setting of charges with regard to income levels, ie cross-subsidy; and
- adopting alternative collection methods, for example expanding the use of utilities bills or payroll taxes.

4.12 It is likely that a number of mechanisms will need to be implemented in order to increase cost recovery, and consideration will need to be given to phased implementation.

4.13 Task 6: Options for Operational Areas. There are a number of options for organizing the collection, treatment, disposal and administration of municipal solid waste in La Pampa. The purpose of this task is to determine appropriate operational areas for waste management. Possible options include:

- retaining existing, municipal operational areas;
- organizing municipalities into groupings (further developing the “micro-region” concept being explored by CoProBa);
- province-wide approaches; and/or
- a combination of the above.

4.14 In order to select the most appropriate options, the activities under this task will include:

- examining the feasibility of CoProBa’s micro-region approach for solid waste management;
- examining and developing other options for developing operational areas; and
- determining the optimum number of operational areas and defining their waste catchment areas, taking account of waste generation, existing and planned solid waste management infrastructure, political willingness to participate, willingness and ability to pay and other factors particular to municipalities and the Province.

4.15 Task 7: Institutional and Organizational Options. Municipal governments of La Pampa recognize the need to work together and with other key stakeholders in the

planning and implementation of a Province wide approach to integrated solid waste management. The purpose of Task 7 is to determine the most appropriate institutional arrangements to facilitate this process and bring about the desired improvements to waste management services in the province.

4.16 The activities under this task will include:

- An evaluation of current institutional arrangements identifying the key functions of stakeholders ie. who is responsible for organizing service provision and fee collection (client/service purchaser), who is providing the service (operator); and who is developing the legal framework and ensuring that services are provided to an agreed standard (regulator). The Consultant should develop and evaluate options to separate these functions where they are found to overlap.
- Based on these findings and those of Task 6, the consultant will develop and evaluate operating models for the participation of municipalities in joint waste management systems and define the functions they will perform. The models evaluated will include the option of establishing local waste management enterprises for SWM service provision. The consultant will also propose institutional agreements regarding the implementation of permanent mechanisms to jointly resolve problems arising from the management of solid wastes.
- The consultant will assess alternatives for the ownership and/or operation of solid waste management infrastructure in the province including: public-private partnerships, BOO, BOT, management contract or any other model. The activities under this task will include:
 - A review of private sector participation experiences in solid waste management operations in Latin America and recommendations as to the most suitable model for La Pampa; and
 - Delineation of the roles and responsibilities of participants in solid waste management in La Pampa, including municipalities, facility owners, facility operators and contractors.

4.17 Task 8: Options for Rehabilitation and Closure of Disposal Sites. A number of existing disposal sites in the Province are inadequately engineered and managed. These sites have the potential to cause serious adverse environmental and health impacts. Activities under Task 8 will include:

- a detailed review of current disposal sites and practices in La Pampa including mapping the locations of existing and planned sites;
- an evaluation of different strategies for reducing health and environmental risks arising from these disposal sites. Proposals should be prepared to rehabilitate and make safe life-expired or fundamentally unsuitable disposal sites (upgrading of sites with remaining capacity will be assessed in Task 3, Option Development, Design and Evaluation);

- an environmental impact assessment allowing for the comparison of positive and negative impacts of alternative disposal solutions (e.g close dumpsite and open new sanitary landfill, upgrade old site, etc.).
- 4.18 Task 9: Second Strategy Development Workshop. The findings of the analysis will be summarized in a draft ISWM strategy document. The document will contain preferred options for:
- process and management improvements;
 - cost recovery;
 - operational areas;
 - institutional structures;
 - contracting and private sector participation; and
 - closure and rehabilitation of old disposal sites.
- 4.19 In addition, the draft ISWM strategy will identify priority investment items which will be developed into a business plan which can be presented to private partners and multilateral investment corporations or funds for funding.
- 4.20 A Second Strategy Development Workshop should be held to provide an opportunity for full discussion of the draft ISWM strategy amongst the wider stakeholder group. The aim should be to maximize the time for discussion, debate and refinement of strategy proposals.
- 4.21 The output from the ISWM Strategy Workshop should be a set of requirements and revisions to the draft Strategy. All issues raised by participants should be adequately debated and hence it may be necessary to organize further meetings on issues where final Strategy proposals have not yet been agreed.
- 4.22 The ISWM Strategy Workshop should establish a firm foundation for finalizing the draft Strategy document and obtaining necessary political approval. The document should be finalized under the direction of the Steering Committee before submission to political leaders. The draft strategy will be submitted to the Bank for comment and approval.

B. Specific Objective 2: Identify External Donor Support

- 4.23 Task 10: Survey of potential governmental sources of support among Italian agencies. The consultants, directly through the project team or through headquarters personnel, will identify governmental agencies, private foundations, or other organizations, who could be interested in providing funding to support those areas of the project (and future business plan) which will not be amenable to private financing. Such areas could include, for example: environmental investments, including rehabilitation of degraded sites; community outreach; community based initiatives and small projects --separation at source, recycling; training; education; institutional strengthening. The consultants will also research

possible lines of support from the government to the Italian private sector, designed to induce the latter's getting involved in support of Argentina.

- 4.24 Task 11: Reporting on options. The consultants will meet with Italian officials in charge of the most appropriate agencies, in search of an expression of interest to be admitted as part of the Business Plan. At the conclusion of this process, the consultants will report on identified options, conditions of such participation, and procedures to follow up.

C. Specific Objective 3: Identify Potential Private Partners

- 4.25 Task 12: Liaise with potential financiers. The consultants will contact officers from IIC, IFC, MIF and others identified as potential financiers, in order to discuss with them the scope of the project, auscultation of potential interest in participating in the project, consult procedures and requirements to gain access to their financing, and identify potential private sector companies which could be known to the financiers and might be interested in the project.
- 4.26 Task 13: Survey of Italian entrepreneurs. The consultants will seek Italian corporations and private entrepreneurs who could be interested in entering a partnership with local entrepreneurs to undertake private investments in fulfillment of the ISWM Business Plan being shaped for La Pampa, within which additional external sources are being sought to cover non-typically private associated investments. Unless initial findings advise otherwise, these entrepreneurs will be presented with an option to participate with 50% or higher. The consultants will prepare a presentation --power point and/or other format— and will conduct individual or group meetings where the opportunities will be presented, including whatever findings resulting from the survey on governmental sources.
- 4.27 Task 14: Identify potential local private partners. Following a process similar to the one to be conducted in Italy, the consultants will seek local (La Pampa or Argentinean) entrepreneurs, who could participate as the local partner. Unless initial findings advise otherwise, these entrepreneurs will be presented with an option to participate with approximately 10%, initially, with the option to buy in additional percentage in the future (for example, buying out the multilateral investment corporation or fund).
- 4.28 Task 15: Reporting on options. The consultants will seek to obtain expressions of interest, for specific firms to be admitted as part of the Business Plan. At the conclusion of this process, the consultants will report on identified options, conditions of such participation, and procedures to follow up.

D. Specific Objective 4: Development of the Business Plan

- 4.29 Task 16: Structuring Implementation Partnership. Solid waste management infrastructure requirements would have been identified for the province in the previous tasks. Under previous tasks, suitable private sector partners, both in Italy and in Argentina, would have been identified to undertake this investment and work alongside the stakeholders of La Pampa in the implementation of the provincial waste management strategy. As part of this task, the consultants will assist the province in structuring the proposed partnership for strategy implementation and develop a workable structure for a joint venture with selected private sector firms. Documents will be drafted to establish the rules for the selection of partner organizations and draw up the terms and conditions of the necessary legal agreements.
- 4.30 The consultants will also support the stakeholders of La Pampa in the search for a potential source of financial support within the Government of Italy's several financial support lines set up to help Argentina overcome the current crisis. Governmental funding would go to cover the costs of environmental investments, training, institutional strengthening, community education and small projects, and other needs identified as part of the ISWM Strategy, which would not typically be covered by the private sector.
- 4.31 Task 17: Business Plan Development. The purpose of this task is to assist the selected private sector partner/s, in cooperation with stakeholders in La Pampa, to develop a preliminary business plan to present to multilateral investment corporations or funds (IIC, IFC, MIF) for financing. This financing will be used to implement priority actions identified in the strategy.
- 4.32 The business plan will be developed according to IIC guidelines², including an environmental management plan, and will contain the following information:
- General Information
 - Owners/Sponsors
 - The Company
 - The Project
 - Investment Costs
 - Financial Projections
 - Environmental Management Plan
 - Implementation
 - Financial Plan
 - Operating and Working Capital Financing
 - Proposed Security Arrangements

² How to apply for financing from the IIC, Inter-American Investment Corporation, Serving Small and Medium-Size Enterprises in Latin America and the Caribbean

4.33 The main area in which the consultants will support the preparation of the business plan will be in the project design. They will assist the private sector firm in the preparation of:

- a project description;
- preliminary technical, market and financial feasibility studies;
- a comparative and competitive advantages analysis;
- the identification of major sources of competition;
- a description of technological arrangements;
- an analysis of current and projected employment generated;
- an analysis of current and expected foreign exchange generation; and
- an analysis of potential environmental impacts and mitigation measures.

4.34 The consultants will also provide support to the private sector partner in the financial project planning. Nevertheless, the private sector partner will bear ultimate responsibility for finalizing the business plan and ensuring that it meets the requirements of multilateral investment corporation or fund financing.

V. REPORTING

5.1 The working language of the assignment will be Spanish. The Consultants will be required to submit the following reports in Spanish:

- a. An Inception Report, within four (4) weeks of mobilization, confirming project schedules, staff inputs and elaborating on planned consultations, dates for the Planning Workshop and roles for local partners.
- b. A Strategy Development Workshop Report, submitted not later than eight (8) weeks after project inception, detailing the outcomes of the workshop. The report should be circulated to local stakeholders.
- c. A draft ISWM project proposal, at the conclusion of the activities under Specific Objective 1 (activities 1 through 9). (approximately at the end of the fourth month)
- d. A progress report on the proposed financial structure of the partnership, detailing findings and recommendations resulting from the surveys and interviews undertaken with Italian and Argentinean private and public officers, in fulfillment of Specific Objectives 2 and 3 (activities 10 through 14); approximately at the end of the eight month.
- e. A Draft Business Plan in compliance with Specific Objective 4 and as a result of the implementation of activities 15 and 16 (to be submitted not later than eleven (11) months after project inception.

- f. A Final Report, summarizing findings and achievements, and containing the final version of the Business Plan, plus individual reports in Annex, to be submitted not later than twelve (12) months after project inception.

VI. MEETINGS AND PRESENTATIONS

6.1 To complement reporting activities, Consultants will be required to attend and prepare appropriate materials for:

- An Inception Meeting and two Strategy Development Workshops in La Pampa. These meetings should be held in Spanish, or have provision for simultaneous translation.
- Several meetings with governmental officials and private entrepreneurs in Italy meetings, in order to identify potential partners for the Business Plan.
- Two meetings with the Bank in Washington DC, one during the inception phase and one to present the results of the Draft Final Report to Bank staff and other parties invited by the Bank.

6.2 Senior members of the Consulting team should be present at all the above meetings including, as a minimum, the project director or project manager.

VII. TEAM COMPOSITION

7.1 The assignment will be undertaken by a joint international/national consultant team. The assignment should be structured around a core team of two international and two local experts with the following skills and experience.

- one solid waste management specialist with over 15 years of related technical and economic analysis experience;
- one project economist and financial expert with over 7 years experience;
- one integrated solid waste management strategy development expert with over 7 years experience; and
- one management consultant with experience in business plan development for innovative contracting arrangements with over 7 years experience.

7.2 This core team will be supported by international and local short-term experts as required. The team should cover the following disciplines:

- design engineering for SWM infrastructure;
- resource recovery and recycling (including international experience);
- environmental analysis and impact assessment;
- private sector participation (including international experience);
- institutional development and organizational design;
- social development;

- employment generation;
- contract law, for development of concession documents for privatization of solid waste disposal/transfer/ treatment facilities; and
- project formulation.

VIII. PAYMENTS

8.1 Payments for the project will be scheduled as follows; all reports will be presented to the Bank (CAR and HQ), which will emit acceptance notes or requests for modifications or clarification within 5 business days of reception of such documents:

- 10% upon presentation of inception report to the Bank;
- 10% upon completion of the first strategy development workshop;
- 20% upon acceptance of the ISWM proposal;
- 20% upon presentation of the progress report on the financial structure proposal;
- 30% upon presentation of the draft Business Plan;
- 10% upon acceptance of the final report.

IX. SUPPORTING DATA, MATERIALS AND INFORMATION

9.1 The following support data and materials are available to tenderers:

- the Background Information document attached to this ToR;
- the Plan Modelo prepared by CoProBa;
- the Technical Report, prepared by a previous consultancy, which provides a summary of the key solid waste management problems and proposed solutions, together with reports of site visits to major waste management facilities in the province, further details on the legislative context (in Spanish) and the economic and demographic conditions in Argentina and La Pampa (in Spanish).

