

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK  
MULTILATERAL INVESTMENT FUND

**ARGENTINA**

**PROGRAM TO PROMOTE CLEANER PRODUCTION AND  
INDUSTRIAL ECOEFFICIENCY**

**(TC-01-10-05-3)**

**DONORS MEMORANDUM**

This document was prepared by the project team consisting of: José Marcus Menezes (RE1/FI1), Project Team Leader; Emilio Cueto (LEG); Antonio Rossin (RE1/EN1); Daniel Shepherd (MIF); Karen Pienknagura (RE1/FI1); Héctor Castello (COF/CAR); and Haydemar Cova (RE1/FI1).

## CONTENTS

### EXECUTIVE SUMMARY

I.	COUNTRY AND PROGRAM ELIGIBILITY .....	1
II.	BACKGROUND.....	1
III.	PROGRAM OBJECTIVES AND DESCRIPTION .....	5
	1. Component I: Raising ecoefficiency awareness .....	5
	2. Component II: Ecoefficiency training.....	6
	3. Component III: Technical assistance to businesses in ecoefficiency .....	6
	4. Component IV: Institutional strengthening and dissemination of outcomes .....	7
IV.	PROGRAM COSTS AND FINANCING.....	7
	A. Sustainability.....	8
V.	PROGRAM EXECUTION .....	9
	A. Executing agency .....	9
	B. Implementation mechanism.....	9
VI.	MONITORING AND EVALUATION.....	11
VII.	RATIONALE AND RISKS .....	12
	A. Benefits .....	12
	B. Beneficiaries of the program .....	12
	C. Risks .....	13
VIII.	SOCIAL AND ENVIRONMENTAL ASPECTS .....	13
IX.	CONDITIONS PRECEDENT TO THE FIRST DISBURSEMENT .....	13
X.	PROGRAM READINESS .....	13
XI.	EXCEPTIONS TO BANK POLICIES AND PROCEDURES.....	13

## ANNEXES

Annex I      Logical framework

## **ABBREVIATIONS**

EMS	Environmental Management System
FEM	Federación Económica de Mendoza [Economic Federation of Mendoza]
ISO	International Organization for Standardization
PRODIA	Programa de Desarrollo Institucional Ambiental [development program for environmental institutions]
PROMENDOZA	Promotora de las Exportaciones de la Provincia de Mendoza [Export Development Company of the Province of Mendoza]
SMEs	Small and medium-sized enterprises

## PROGRAM TO PROMOTE CLEANER PRODUCTION AND INDUSTRIAL ECOEFFICIENCY

(TC-01-10-05-3)

### EXECUTIVE SUMMARY

<b>Requester and executing agency:</b>	Federación Económica de Mendoza [Economic Federation of Mendoza] (FEM)	
<b>Beneficiaries:</b>	Small and medium-sized enterprises (SMEs) in the industrial and commercial sectors, universities and civil society.	
<b>Amount and Source:</b>	MIF (Facility III-A)	US\$ 940,000
	Local counterpart:	<u>US\$ 615,000</u>
	Total:	US\$1,555,000
<b>Execution timetable:</b>	Execution period:	48 months
	Disbursement period:	54 months
<b>Objectives:</b>	The overall objective of the program is to promote the concept of ecoefficiency in the province of Mendoza, with an emphasis on increasing industrial productivity and competitiveness. The purpose is to facilitate the use of loss minimization techniques by companies, including cleaner production technologies, by developing demand for services and strengthening local capacity to meet the demand generated.	
<b>Description:</b>	The program consists of four components: (i) promotion and dissemination of ecoefficiency information; (ii) ecoefficiency training; (iii) technical assistance to companies; and (iv) institutional strengthening.	
<b>Social and environmental review:</b>	The program was reviewed by the Committee on Environment and Social Impact (CESI) on 20 June 2002, and its recommendations were incorporated into the document (see paragraphs 2.8 to 2.10 and 3.6).	

**Special  
contractual  
clauses:**

Conditions precedent to the first disbursement will be evidence submitted to the Bank's satisfaction that: (i) the program director has been appointed; and (ii) the Operating Regulations have entered into force.

**Exceptions to  
Bank policy:**

None.

## I. COUNTRY AND PROGRAM ELIGIBILITY

- 1.1 The Donors Committee declared the Republic of Argentina eligible for all of the financing modalities provided for under the Multilateral Investment Fund (MIF) on 30 November 1993. The program is eligible for MIF financing under the Small Enterprise Development Facility (III-A), since it will provide services to improve the competitiveness and sustainability of these economic units thereby increasing their participation in the national and international economy. This program will be part of the MIF cluster “*Achieving ecoefficiency through cleaner production and environmental management.*”<sup>1</sup> The proposed program would be the fifth belonging to this cluster. As in the other programs, the objective of the MIF is to help companies improve their performance, achieving significant economic benefits using productive processes with less environmental impact and greater sustainability.

## II. BACKGROUND

- 2.1 Since the mid-twentieth century, society has been increasingly concerned about the quality of the environment. In the early stages, the more developed countries established legislation and corresponding control organizations, aimed principally at the treatment of effluents. More recently, with the development of advanced technologies, they have been devoting special attention to the compatibility of processes and products with environmental preservation, in order to minimize the possibilities of pollution and/or risk.
- 2.2 In Argentina, as in the rest of Latin America, pollution control followed the same strategy, although the topic is a more recent concern. Currently, regulations are being implemented that tie the use of the natural resource to the final disposal of industrial wastes. As a result, companies devote their efforts principally to the treatment and proper disposal of their wastes. However, this control strategy, carried out only at the end of the process, is economically inefficient. In addition, it requires time and resources from the environmental control agencies.
- 2.3 **The concept of ecoefficiency.** Ecoefficiency enables companies to improve production and competitiveness through loss minimization with respect to material, energy and the investment in human capital. This concept also aims to reduce the exposure of people to the effects of harmful materials and products, and it develops a sustainable cleaner production program for key industrial sectors. Businesses produce more with the same amount of raw materials, energy, and inputs, and therefore achieve more economical production while at the same time reducing their pollution indexes. In addition, with the growing concern over environmental degradation, markets increasingly are demanding improved processes and products

---

<sup>1</sup> Document MIF/GN-58-1.

from their suppliers of raw materials and goods. One indicator of this trend is the growing number of businesses seeking International Organization for Standardization (ISO) 14001 certification. Currently, these mechanisms are accessible mostly to large businesses. However, small and medium-sized enterprises (SMEs) in Latin America do not generally have the economic, technical, or technological means to fully comply with environmental legislation and at the same time gain access to markets that are more demanding in terms of environmental quality.

2.4 Ecoefficiency programs facilitate compliance with environmental legislation and investigate businesses' processes and products to determine the reasons behind waste production in order to avoid it, or to reduce the amounts generated. This reduction is achieved through a drop in the consumption of raw materials and inputs, prevention of waste generation, internal or external recycling of waste generated, or a change in the technologies used. These activities result in cost reductions and shortened investment payback periods, as shown in the examples in Table 2.1. Based on this precedent, the goal is to avoid pollution generated by processes and products, and consequently to reduce production costs and risks to the employees and the environment. Finally, an additional benefit of these programs is that sometimes ecoefficiency-related efforts identify new opportunities in the labor market, such as the creation of new environmental service and waste recycling companies. Table 2.2 shows some examples of how ecoefficiency is applied in Latin America.

<b>TABLE 2.1</b> <b>Projects with Economic and Environmental Benefits derived from the Minimization of Industrial Wastes <sup>(1)</sup></b>			
Projects	Investment (US\$)	Savings (US\$/year)	Payback (months)
Fertilizer manufacturing plants. Reduction in water consumption.	6,800	51,000	2
Meat processing plant. Reduction in water consumption.	1,447	11,600	3
Tannery. Reduction in energy consumption and waste production.	600	4,130	2
Textiles. Energy conservation, reduction in water consumption.	20,000	26,000	10
Dairy products. Reduction in water consumption and waste production.	3,100	6,500	6
Ammonia. Reduction in energy consumption and emissions.	14,500	25,100	8
Copper metallurgy and waste reduction.	24,800	243,700	1
<sup>(1)</sup> World Environment Center, 1995.			

2.5 There is a considerable lack of information, training and planning related to these topics, especially in industrial sectors with fewer available resources (SMEs). The objective of the proposed program is to support the Federación Económica de Mendoza [Economic Federation of Mendoza] (FEM) in promoting and implementing ecoefficiency in the productive sectors in Mendoza, with an emphasis on improving the competitiveness of small and medium-sized enterprises.



TABLE 2.2 Ecoefficient solutions in Latin American SMEs <sup>(1)</sup>	
Country/Company	Outcomes
<b>Argentina</b> <i>Cultivos Tommy</i> . Planting and harvesting of cut flowers.  <i>Faisán</i> . Aluminum sulphate production, industrial and domestic wastewater treatment services.	To reduce silver thiosulphate generation and improve final disposal.  Environmental management system (EMS) certificate as well as an ISO 9002 Quality Assurance System.
<b>Brazil</b> <i>Global Transporte Oceánico</i> . Transportation of bulk liquids along the Brazilian coast.	Identified the best international environmental safety and protection models, in anticipation of their international safety management (ISM) code certification.
<b>Colombia</b> <i>Curtiembres FACA</i> . Leather manufacturing.  <i>Finca Betica</i> . Production of dry parchment coffee.	To reduce water, energy and chemical consumption and improve product quality.  Mechanical removal of mucilage to avoid the fermentation stage, and transportation of the dry pulp, thereby reducing water consumption by 90%.
<b>Costa Rica</b> <i>Finca Bananera de EARTH</i> . Produces plantain, banana, palmetto and cattle feed.  <i>Productores de Monteverde</i> . Production of pasteurized cheese.	Development and implementation of an ISO 14001 EMS.  To eliminate waste generation.
<b>Mexico</b> <i>Anodizados Especializados</i> . Aluminum anodizing  <i>Cromadora Delgado</i> . Chrome plating	Energy savings, waste minimization, reduction of treatment costs.  Sustainable use of raw materials and energy, and reduction of emissions and waste derived from manufacturing processes.
<sup>(1)</sup> Centro Interamericano para el Desarrollo Sostenible [Inter-American Center for Sustainable Development], 2000.	

- 2.6 The FEM plays an important role in creating the appropriate conditions for innovative economic development by stimulating environmental awareness, promoting human resources training, strengthening scientific institutions and supporting modernization initiatives in the business community. The FEM participated successfully in another MIF program involving the Confederación General Económica [General Economic Confederation] (CGE), whose objective was to improve the competitive capacity of microenterprises that produce urban goods and services. The FEM has recovered 75% of the costs through fees. It created the Fundación Empresa, a micro bank through which the FEM supports microenterprises, as a supplement to the CGE's MIF program.
- 2.7 The FEM is aware that a large demand exists for these types of services among businesses in the region, who constantly approach the FEM requesting support. The need to comply with current legislation, as well as with certification requirements, practically guarantee this demand.
- 2.8 The Bank supported the Government of Argentina in a development program for environmental institutions (PRODIA). The program was based on three subprograms: (i) support for the establishment of a national environmental system;

- (ii) demonstration programs for the prevention and control of environmental degradation; and (iii) preparation of environmental projects. The proposed program will provide technical assistance to entrepreneurs and institutions for the purpose of establishing administrative standards and regulations designed to eliminate or reduce industrial pollution. This MIF operation will complement the efforts of the government and the productive sectors by providing continuity to the activities of the PRODIA.
- 2.9 The province of Mendoza is located in a desert-like zone, and water usage is very strictly controlled. Under the program, the minimization of inputs will contribute to the more efficient use of water. Therefore, these activities will be complementary to the Bank's water supply and sanitation program, Stage VI (loan 857/OC-AR).
- 2.10 It is important to mention the potential complementarity of the activities and objectives of this program with the MIF regional ISO standards program, executed through Argentina's Fundación CANE and locally through the semipublic enterprise Promotora de las Exportaciones de la Provincia de Mendoza [Export Development Company of the Province of Mendoza] (PROMENDOZA) as well as the Instituto Nacional de Vitivinicultura [National Viniculture Institute], headquartered in the city of Mendoza, which has support from the technological modernization program TMP-II (loan 1201/OC-AR) for quality control laboratories related to wine production.

### **MIF Strategy**

- 2.11 Upon completion of this program, sufficient local capacity should have been created to provide environmental management and cleaner production services for businesses, and to create greater awareness of the advantages of integrating cleaner production methods into the SMEs' productive processes. Successful execution of this program is also expected to have a **demonstration effect** on other businesses through the cost minimization achieved by applying cleaner production systems. The **innovative** aspect of the program in Mendoza consists of SMEs using such tools as clean production and environmental management based on market demand.
- 2.12 As part of the MIF cluster, the design of this project has benefited from the experience of the first initiatives and other cluster activities such as the Yale University study of best practices for cleaner production. As well, during the execution of the proposed initiative, there will be an opportunity to exchange information and lessons learned from the other cluster initiatives that are farther along, all of which will be important to improve the execution and impact of this program.

### III. PROGRAM OBJECTIVES AND DESCRIPTION

- 3.1 The overall program objective is to promote the concept of ecoefficiency in the province of Mendoza, with an emphasis on increasing industrial productivity and competitiveness. The purpose is to facilitate the use of loss minimization techniques by companies, including cleaner production technologies, by developing demand for services and strengthening local capacity to meet the demand generated.
- 3.2 The program consists of four components: (i) raising ecoefficiency awareness; (ii) ecoefficiency training; (iii) technical assistance to companies; and (iv) institutional strengthening.

#### **1. Component I: Raising ecoefficiency awareness (MIF US\$72,650; Local US\$87,800)**

- 3.3 The objective of this component is to promote cleaner production and to publicize the program in all regions of Mendoza through awareness-raising activities, thus creating a positive attitude among the different stakeholders toward the application of ecoefficiency concepts. Talks will be given to emphasize both the benefits to SMEs of implementing cleaner production and the overall program objectives.
- 3.4 The program will produce promotional materials to be used at conferences, visits, meetings and lectures, and to disseminate the outcomes. In addition, press releases will be sent quarterly to the principal newspapers or union and manufacturers' association bulletins. Other mass media avenues, including radio and television, will promote the program and communicate the outcomes.
- 3.5 As part of the activities to be carried out in the seminars, examples of successful cases in Argentina will be discussed, and other examples will be given about the application of cleaner production, ecoefficiency and integrated or organic production, with special emphasis on the impact these types of programs have on business competitiveness. The program will make use of lessons learned and material developed through other Bank initiatives with the PRODIA (Pescara Collector), the training program prepared by the United Nations Industrial Development Organization on ecologically sustainable industrial development, disseminated by the Bank, and the MIF under the MIF cluster "*Achieving ecoefficiency through cleaner production and environmental management.*"
- 3.6 The program also provides for a specially designed website that will include general information about cleaner production, details about planned events, information about qualified consultants in the program and other relevant information. Upon completion of the program, a conference will be held to communicate its outcomes and achievements, and will include the participation of representatives from the private and public sectors and civil society.

## **2. Component II: Ecoefficiency training (MIF US\$255,150; Local US\$141,560)**

- 3.7 This component consists of a training program for specialists and professionals in industrial and consulting companies, as well as for university professors, who will be seen as multipliers in the program. Depending on demand, it will also include training programs in specific topics for certain industrial sectors, and refresher training with respect to environmental and technological management in businesses, integrated and organic production, and workplace health and safety. The program will include the participation of short-term external consultants and the hiring of specialized technical personnel.
- 3.8 A database of specialized professionals and experts will be created to promote the concept of reduction, reuse and recycling, including creation of a waste exchange. Training events for business managers will also be held, and manuals and other teaching material will be published.
- 3.9 A part-time consultant will be hired to identify possible clients, coordinate the various events and adjust the training programs offered to meet the demand. Once the courses begin, the consultant will participate periodically in the events and coordinate the submission and receipt of evaluation reports, as well as instructor ratings, and will compare their quality in the different regions and training centers in Mendoza.

## **3. Component III: Technical assistance to businesses in ecoefficiency (MIF US\$332,900; Local US\$143,980)**

- 3.10 Pilot projects will be carried out in industrial plants to verify the technical and economic viability of cleaner production and to demonstrate the improvement in business competitiveness as a result of its implementation. Each company participating in the pilot project will analyze its initial situation so that it can quantify the economic and environmental benefits once cleaner production systems have been implemented. Advisory services will be provided for the implementation of cleaner production and environmental management systems, and waste reduction audits will help companies comply with environmental regulations.
- 3.11 This activity will be carried out through a program of directed workshops and in-plant technical assistance with consultants. Through a matching grants scheme, the program will finance 50% of the professional fees and additional consulting costs, such as transportation services and demonstration materials, up to US\$3,000 per company (see Operating Regulations). Each company will assume responsibility for the remaining 50%, and will agree on payment modalities, deadlines and any additional commitments. The participating companies will have a cleaner production program that will include measures implemented and evaluated,

opportunities in the implementation stage, long-term opportunities, indicators and a monitoring plan.

- 3.12 To reduce the time required to prepare the cleaner production reports and plans that the participating companies must present, an expert in cleaner production will be hired to develop environmental management software that will facilitate the identification of short-, medium- and long-term goals. The software will help prepare energy matrixes, materials balance sheets, financial evaluations of the projects, and analysis of the types of alternatives to be implemented.
- 3.13 To identify possible clients and adapt the technical assistance programs offered to the specific needs of the companies, a part-time consultant will be hired to work throughout program implementation, responsible for defining the annual technical assistance programs and coordinating the activities of this component.

#### **4. Component IV: Institutional strengthening and dissemination of outcomes (MIF US\$22,050; Local US\$113,380)**

- 3.14 This component will strengthen the institutional structure supporting the promotion and implementation of the ecoefficiency program in Mendoza. It will be put into effect through a plan to offer more advanced training in cleaner production and environmental management within the FEM, including the capability to promote this topic—currently almost unknown in the market—among businesses. Later on, the initiative could encourage the establishment of new companies offering specialized services in this area.
- 3.15 Annual information seminars will be held at which business managers and leaders will discuss the results obtained in their companies with others in the same or similar sectors. The target audience will consist of businesspeople in different industrial sectors. Companies with similar technological and environmental problems will be grouped together in order to maximize the benefits of the presentations.
- 3.16 Meetings will also be held in the regions of Mendoza to promote coordination between the public sector and organizations offering training and technical assistance. Four quarterly meetings or seminars are to be held in the four principal regions of Mendoza, with the participation of institutions, businesses, and program personnel, to discuss the local institutional framework and to adapt it to the needs identified.

### **IV. PROGRAM COSTS AND FINANCING**

- 4.1 The program has a total cost of US\$1,555,000. The MIF will contribute US\$940,000 on a nonreimbursable basis, and the FEM will contribute US\$615,000,

half of which will be in cash. The following table summarizes the costs and financing:

<b>TABLE No. 4.1</b>				
<b>BUDGET (US\$)</b>				
<b>COMPONENTS</b>	<b>MIF</b>	<b>LOCAL</b>	<b>TOTAL</b>	<b>%</b>
1. Awareness-raising program	72,650	87,800	160,450	10.3
2. Cleaner production training	255,150	141,560	396,710	25.5
3. Technical assistance to businesses	332,900	143,980	476,880	30.7
4. Institutional strengthening	22,050	113,380	135,430	8.7
Administration	146,040	107,400	253,440	16.3
Cluster monitoring	16,000	—	16,000	1.0
Evaluation	50,000	—	50,000	3.2
Financial auditing	10,000	—	10,000	0.6
Contingencies	35,210	20,880	56,090	3.5
<b>TOTAL</b>	<b>940,000</b>	<b>615,000</b>	<b>1,555,000</b>	<b>100.0</b>
Percentage	60%	40%	100%	

4.2 The program will establish rates that guarantee resources for advertising and promotion, with gradual increases in the price of services, thereby permitting the progressive substitution of the resources invested and ensuring program sustainability. The income earned from the sale of services will be used exclusively and increasingly to cover the cost of such services, complementing the contributions of the MIF and local counterpart organizations. During program implementation, if income exceeds budgeted amounts, the surplus may only be used to increase the number of services offered or to develop new ones.

4.3 On average, the program will share 50% of the cost of the services provided with the beneficiaries. Initially, the program should cover 70% of the costs, decreasing to 30% by the end of the program.

#### **A. Sustainability**

4.4 Program sustainability is closely connected to the ability of the FEM to promote and expand the new services offered under this initiative. Based on an analysis of expected cost recovery, the FEM should have sufficient income flow to continue with several of the activities, especially training. In addition, the FEM should be strengthened through the program, and thus will be able to continue with other activities, such as awareness-raising and promotion, after the MIF program has ended.

4.5 The program will strengthen the ability of local organizations to provide cleaner production services. Therefore, the cost to companies of implementing cleaner production should decrease substantially during the four-year program and the cost/price ratio for assistance should approach equilibrium. As a result, a market for

cleaner production services should be created that will help to ensure the sustainability of technical assistance for businesses.

## **V. PROGRAM EXECUTION**

### **A. Executing agency**

- 5.1 The FEM will be the executing agency of this program and the organization responsible for contributing the local counterpart resources. It was created in 1953 and is a second-tier not-for-profit business organization that brings together diverse third-tier organizations such as chambers of commerce, associations and centers. It is deeply integrated into the community, participating in such activities as technical university institutes, PROMENDOZA, the Fondo de Inversión y Desarrollo Social [Social Development and Investment Fund] (FIDES), and business promotion. The main office of the FEM is located in the city of Mendoza, and it also has a number of field offices throughout the province. The FEM is in complete agreement with the terms of this program.
- 5.2 The governing body of the FEM is the executive committee, which is currently made up of 48 representatives of various provincial institutions. The president's committee is subordinate to the executive committee and is comprised of a number of FEM directors, who report to the executive committee on the progress and outcomes of the different FEM initiatives.

### **B. Implementation mechanism**

- 5.3 The FEM will hire a director and an administrator to implement the program. The director will be in charge of: (i) managing program activities in accordance with the action plan; (ii) contracting goods and services; (iii) supervising consultants; (iv) overseeing budget management and administration by means of established procedures; (v) processing disbursement requests for the Bank's contribution; (vi) preparing the statements of account for resources used; (vii) presenting administrative and technical reports to the Bank; and (viii) coordinating necessary actions with the institutional partner and other entities working in this area.
- 5.4 The FEM will appoint an oversight committee consisting of the president of the FEM and other members that he may designate. This committee will: (i) supervise the work of the project director; (ii) submit the annual operating plan to the president's committee for approval; (iii) sign contracts, agreements and other project documents; (iv) select the consultants hired by the program; and (v) choose the companies and individuals who will participate in program activities.
- 5.5 The program's Operating Regulations will include: (i) description and detailed timetable of the components; (ii) selection criteria for workshops; (iii) criteria for granting subsidies for technical assistance to businesses; (iv) allocation of funds

from both MIF and local contributions; and (v) duties of the director and the oversight committee.

- 5.6 The FEM has established cooperation agreements with various national and international institutions for the purpose of supporting its development and operation. For this initiative, the FEM expects to sign agreements with a group of cooperating institutions that includes: (i) PROMENDOZA; (ii) Instituto Nacional de Vitivinicultura [National Viniculture Institute]; (iii) Dirección General de Irrigación [Irrigation Directorate]; and (iv) Universidad Nacional de Cuyo [National University of Cuyo]. The FEM will coordinate various program activities with these organizations to ensure the best use of resources in the province and to mitigate the possibility of a duplication of efforts.
- 5.7 **Execution period and revolving fund.** The program execution period will be 48 months and the disbursement period, 54 months. The Bank will establish a revolving fund for a maximum of 10% of the total approved, based on the program of expenditures that the FEM will submit for the Bank's approval. The FEM will proceed with the procurement of goods and services and the contracting of the consulting services necessary for program execution, in accordance with applicable Bank and MIF procedures and policies. The FEM will prepare and submit an annual work plan indicating the projects and activities to be carried out during the year, the cost (contribution of the program and that of the beneficiaries) and the manner of execution, within six months after the agreement takes effect, and also before 30 September of each year during program implementation.
- 5.8 **Accounting and audit.** The FEM will keep proper internal accounts and monitor the program funds. The accounting system will be organized to provide the necessary documents, enable verification of transactions, and facilitate the timely preparation of financial statements and reports. The program files will be set up to make it possible to: (i) identify the amounts received from the various sources; (ii) report on program expenditures in accordance with a chart of accounts approved by the Bank, distinguishing between MIF contributions and funds from other sources; and (iii) include the details needed to identify goods acquired and services contracted, as well as the use of such goods and services. The FEM will also: (i) open separate and specific bank accounts for the administration of the MIF contribution and local counterpart funds; (ii) process requests for disbursement and the respective expense reports, according to the Bank's disbursement procedures; and (iii) submit a final financial statement to the Bank audited by an independent firm or consultant acceptable to the Bank, and semiannual financial reports on the status of the revolving fund.
- 5.9 **Procurement of goods and consulting services.** The procurement of goods and the contracting of consulting services necessary to execute the program will be carried out in accordance with the Bank's and the MIF's standard rules and procedures. Consulting services for amounts less than the equivalent of US\$30,000



will be contracted in the same way as is established for individual consultants, pursuant to Annex B of the letter of agreement.

## VI. MONITORING AND EVALUATION

- 6.1 **Progress reports:** The FEM will be responsible for preparing semiannual progress reports in which the activities conducted during the previous six months will be documented. A work plan and disbursement schedule will be prepared for the following period according to the indicators in the logical framework. These reports will be submitted to the Bank's Country Office in Argentina for approval within 60 days following the end of each six-month period. The Country Office will provide a report to the MIF three months after the program has ended, indicating the results thereof.
- 6.2 **Monitoring.** The executing agency will prepare and submit project progress reports to the Country Office of the Bank within thirty (30) days after the end of each six-month period, and it will submit a final report thirty (30) days after the last disbursement. These reports will follow a format agreed upon with the Country Office and will cover project activities and finances, as well as outcomes measured against the performance indicators identified in the logical framework of the project. The Country Office will use these reports to monitor the progress of project implementation and to prepare a final project report within three months after the last disbursement.
- 6.3 **Cluster monitoring.** Under the heading of "cluster monitoring," the MIF office will use the program's financial resources to monitor activities, such as workshops and lectures, specifically related to the MIF cluster "*Achieving ecoefficiency through cleaner production and environmental management.*"
- 6.4 **Evaluation.** The Bank will hire individual consultants to carry out two project evaluations. A midterm evaluation will be carried out once 50% of the funds have been disbursed. A final evaluation will be made three months after the termination of the project. Based on the midterm evaluation, the Country Office, together with the project team, if necessary, will carry out annual performance evaluations to determine if the project should continue, be suspended or cancelled.
- 6.5 During the execution of the project, the executing agency will compile the project oversight and evaluation indicators. These indicators are presented in the logical framework (see Annex I), and the Country Office and executing agency will use them to gauge the general impact of the project and evaluate outcomes.

## VII. RATIONALE AND RISKS

### A. Benefits

- 7.1 Given Argentina's current economic situation, a program of this type that increases the competitiveness of SMEs is very important. It helps reactivate certain industrial sequences in the primary industrial sector, thus increasing the value added of goods available in internal and external markets.
- 7.2 This program will enable Mendoza's small businesses to strengthen their capacity to carry out ecoefficiency programs with a view to improving their competitiveness. The program combines: (i) widespread mobilization of small businesses, which will have a positive impact on the industrial sector, including a demonstration effect; and (ii) implementation of innovative cooperation programs that may be replicated once they have been evaluated, and whose objective is to improve the productivity and competitiveness of small businesses. The program will also help to train ecoefficiency consultants to work for small industrial businesses.
- 7.3 The **expected outcomes** of the program are: (i) to strengthen the productive capacity of small enterprises, in terms of ecoefficiency; (ii) to create awareness of the competitive advantage to be derived from the use of loss minimization techniques (ecoefficiency) as a competitiveness tool; and (iii) to increase local capacity to disseminate information and offer training and services that will provide continuity, and ensure the sustainability of program activities and initiatives.
- 7.4 Once the program has ended, the body of human and technical resources developed during its implementation are expected to serve as a catalyst for ongoing and expanded promotion of ecoefficiency through a focused and institutionalized effort. In order to address the demand created by the program activities, an organization will be created to coordinate systematization and provision of information and technical assistance, promote dissemination and adoption of ecoefficiency technologies, and provide training to professionals in the industry.

### B. Beneficiaries of the program

- 7.5 It is estimated that the awareness of at least 200 managers will be heightened, of which 30 will disseminate their knowledge and at least 60 SMEs will implement or have implemented ecoefficient technologies with technical assistance provided by the program experts. In addition, the province's human resource pool will be strengthened by training 15 instructors, 30 technicians and 15 local consultants to implement technical assistance and training programs in ecoefficiency.
- 7.6 **Eligibility of the beneficiaries:** Local entities will offer services to companies that meet the following requirements: (i) small or medium-sized enterprises (up to 100 employees); (ii) ability and willingness to pay for the services; (iii) a certain

degree of commitment on the part of senior managers and/or owners; and (iv) willingness to demonstrate the benefits of in-plant implementation of cleaner production to other SMEs.

**C. Risks**

- 7.7 The response level of businesses may be low. This situation can be overcome through promotion and dissemination activities. In addition, periodic program reviews can be undertaken to analyze outcomes and make any necessary changes in order to meet planned objectives.

**VIII. SOCIAL AND ENVIRONMENTAL ASPECTS**

- 8.1 The services planned under the program will make it possible to reduce industrial impact on the environment by providing technical assistance to the industrial sector through consulting, technology transfer, environmental auditing, specialized services and training. In addition, the program will contribute to strengthening scientific and technical capacity in the areas of pollution prevention and the treatment of industrial wastes, combining applied research, training and high-level human resource specialization, as well as the modernization of laboratories.

**IX. CONDITIONS PRECEDENT TO THE FIRST DISBURSEMENT**

- 9.1 Conditions precedent to the first disbursement will be evidence submitted to the Bank's satisfaction that: (i) the program director has been appointed; and (ii) the Operating Regulations have entered into effect.

**X. PROGRAM READINESS**

- 10.1 This program has been designed with the active participation of the executing agency and the beneficiaries. The FEM has collaborated on the design of the logical framework and the Operating Regulations, and has been in constant communication with the beneficiaries so as to include their needs and requirements in the program design.

**XI. EXCEPTIONS TO BANK POLICIES AND PROCEDURES**

- 11.1 No exceptions to the Bank's policies and procedures are anticipated.

## PROGRAM TO PROMOTE CLEANER PRODUCTION AND INDUSTRIAL ECOEFFICIENCY

### LOGICAL FRAMEWORK

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<b>GOAL</b>			
To promote the concept of ecoefficiency, with an emphasis on increasing industrial productivity and competitiveness	Reduction of at least 10% in the ratio of raw materials and inputs to manufactured products Reduction of around 20% in the amount of waste disposed, especially dangerous waste	Comparison of baseline evaluations with periodic and final evaluations under the program	Macroeconomic and business conditions remain stable for participating small and medium-sized enterprises (SMEs).
<b>PURPOSE</b>			
To facilitate companies' use of loss minimization techniques, including cleaner production technologies, by developing demand for services and strengthening local capabilities.	Demand from at least 100 SMEs to implement cleaner production programs The Federación Económica de Mendoza (FEM) has a network of ecoefficiency product and service providers.	Midterm evaluation reports	Cleaner production, environmental management and technological methodologies, including total quality, take on greater importance in the national and especially the international marketplace.
<b>COMPONENTS</b>			
1. Awareness program	By means of company visits, seminars, lectures and mass media, 800 businesses learn about the ecoefficiency program.	Records of participation in seminars; records of visits, midterm and final evaluation reports	
2. Training in the use of ecoefficiency techniques	At least 96 professionals, 370 business technicians and 80 managers trained in ecoefficiency A database of suppliers and customers for cleaner products and services, and also of local experiences	List of participants in each course and course completion certificates	SMEs and participating institutions allocate funds to cofinance technical assistance services provided through the project.
3. Technical assistance to businesses in implementing ecoefficiency programs	At least 320 companies have received technical assistance through the ecoefficiency program.  The program uses software to implement ecoefficiency projects.	Contracts and/or agreements between FEM and businesses; contracts between FEM and consultants Reports and minutes of meetings with companies/consultants	SMEs allocate funds to cofinance technical assistance services provided through the project to optimize the use of raw materials, inputs and the productive process.
4. Institutional strengthening and promotion	At least 120 new companies learn about the program outcomes. The program cooperates with six institutions in the four principal productive regions of Mendoza.	Offices set up; brochures and material promoting regional activities available; contracts with businesses to provide services	The FEM allocates resources to establish the Department of Ecoefficiency.

ACTIVITIES				
COMPONENTS	LIST OF ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
1. Awareness program	1.1 Production of printed materials for dissemination	- Six different formats of promotional material: two three-page leaflets, two posters, one folder, two types of information sheets	Project brochures, three-page leaflets, binders	Suitable companies are available for this activity, at costs within budget
	1.2 Design and production of bimonthly press bulletins	- 800 businesses and 20 institutions receive the information.	Printed materials, public response, publication in local newspapers	A suitable system is available for the production and distribution of bulletins.
	1.3 Program launch	- 150 participants at the event	Attendance list; event documentation; speaker's contract	Counterpart resources are available to arrange the event.
	1.4 Awareness program	- Visits to 150 companies, of which 30 will reply to the invitations	Visit reports; participation of the companies visited in the events promoted by the center	The companies show interest in receiving the information provided.
	1.5 Advertising the program through the mass media	- Two programs annually with monthly radio and television spots	Radio and television program recordings, registration in program events as a result of media advertising	Qualified personnel are available to participate in radio and television programs.
	1.6 Development of a web page with weekly updates	- At least 50 visitors per month visit the web page	The program website is listed on international search engines; registration in the program as a result of advertising through this medium	Qualified personnel are available to develop and maintain the program website.
	1.7 End-of-program conference	- 200 private, public and civil society participants take part in the event.	Attendance list; event documentation	Counterpart resources are available for this event.

ACTIVITIES				
COMPONENTS	LIST OF ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
2. Ecoefficiency training	2.1 Ecoefficiency workshops to train consultants and multipliers and to develop cleaner production cases	- At least 96 trained professionals implementing the program in at least 40 companies	Lists of participants; final assignments; documentation from the companies about opportunities for improvement that have been implemented	The minimum required number of students and companies participate.
	2.2 Training modules on specific ecoefficiency topics	- At least 288 representatives of companies, institutions or experts have been trained	Documentation of the proposed changes in businesses; contracts for delivery of services related to training provided	Training requirements have been adequately defined and qualified trainers are available to meet the demand.
	2.3 Training modules on organic and integrated production	- 90 companies and 12 professionals have been trained.	Documentation of the changes proposed in companies; contracts for delivery of services related to training training provided, attendance lists	Training requirements have been adequately defined and qualified trainers are available to meet the demand.
	2.4 Management and leadership workshops	- At least 80 business leaders have been trained.	Workshop documentation, documentation of companies' procedures	Mendoza businesspeople show an interest in leadership during certification and export programs.
	2.5 Development of a database	- Readily accessible information for consultants and companies participating in the program	Database	Qualified personnel and counterpart resources are available to carry out the activities.
	2.6 Publication of guidelines and teaching materials	- At least six sets of guidelines published and available on CD	Guidelines and teaching material produced	Qualified personnel and counterpart resources are available to carry out the activities.
	2.7 Procurement of bibliography and information material	- The FEM has a library with up-to-date materials on cleaner production.	Books, magazines, CDs, videos and invoices for purchases	Materials of local interest are available.

ACTIVITIES				
COMPONENTS	LIST OF ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
3. Technical assistance to businesses	3.1 Implementation of ecoefficiency programs	- At least 80 industrial companies and 40 agricultural companies implement ecoefficiency programs.	Service contracts or agreements; documentation from companies and consultants on the programs implemented	Companies show interest in the program and qualified personnel and adequate resources are available to carry out the activity.
	3.2 Technical assistance for ecoefficiency and integrated production	- At least 240 companies have benefited from technical assistance.	Service contracts or agreements; documentation from companies and consultants on the topic covered	Companies and local experts express their needs for advanced training in areas that the center can provide.
	3.3 Development of ecoefficiency implementation software	- The program has an implementation tool available for ecoefficiency projects.	CDs with software developed	Affordably priced resources are available to carry out the activity.
4. Institutional strengthening and promotion	4.1 Annual seminar for the dissemination of outcomes and exchange of information	- At least 120 new companies are aware of the benefits of the program.	Lists of participants, cooperation agreements between the center and companies	Local companies show an interest in implementing ecoefficiency improvement programs.
	4.2 Quarterly coordination meetings in the different regions of Mendoza	- The principal industrial regions know about the program and attract at least 20 companies of each participating region.	Minutes of meetings; lists of meeting participants; agreements with companies in each region	The departments possess the minimum required infrastructure and show interest in participating in the program.
	4.3 Procurement of two portable laboratories	- The managers of at least 80 companies are informed periodically of the characteristics of their waste byproducts.	Equipment available, standardized curves for parameters, analysis reports	A standardization laboratory is available and clients exist.
	4.4. Procurement of the necessary equipment to implement the program	- The executing agency has two PCs, one Notebook, one video projector, two printers, one camera, one photocopier and computer supplies.	Computers, printers, projectors, supplies and peripheral equipment, PowerPoint presentations prepared by the center	Infrastructure suitable for the equipment is available as are counterpart resources.