Project Name	ARGENTINA-Enabling Activity for 2nd... National Communication of Argentine Goverment to the Convention on Climate Change (GEF)
Region	Latin America and Caribbean Region
Sector	Solid waste management (100%)
Project ID	P078143
Borrower(s)	GOVERMENT OF ARGENTINA
Implementing Agency	Address MINISTRY OF FOREIGN AFFAIRS Address: Ministry of Foreign Affairs, Buenos Aires, Argentina Contact Person: Raul Alfredo Estrada Oyuela Email: eoy@mrecic.gov.ar
Environment Category	C
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1. Country and Sector Background

Climate Change, sources and impact

The projected impacts of climate change, or in more specific terms of global warming, include increasing temperatures, sea level rise, and changing precipitation patterns. Although there is a significant level of uncertainty concerning the causes of climate change, it has been recognized that global climatic patterns have changed considerably during the last century. It is also well known that the impacts of severe climatic events have become increasingly damaging to natural resources and infrastructure, as well as threatening to human life.

The concentration of greenhouse gases in the atmosphere has been increasing steadily for the past century. It is nowadays widely accepted that GHG are, at least to some extent, responsible for the global warming trend. A reversal of this trend is therefore related to the management and the abatement of greenhouse gas pollution, both of which depend on the type of source of the emissions. Increasing emissions of GHG mainly result from: 1) combustion of fossil fuels (i.e. oil, coal) that occur, among others, during power generation and industrial and transportation activities; 2) reduction of carbon sinks through, for example, deforestation activities; and 3) methane emissions originating from organic matter decomposition related to human activities.

Studies have shown that the capacity to adapt to relatively short-term climatic change is not distributed evenly amongst different societies and that in fact, the impacts of climatic change are more severely felt in developing countries, amongst the poorest fractions of the population. Furthermore, the ability to manage and to control GHG emissions and pollution, and therefore the ability to reduce the impact of climate change, requires an institutional, technological and financial framework

that may not exist in these countries.

GHG emissions in Argentina

The 1997 inventory of GHG emissions revealed that between 1990-1994 and 1994-1997, GHG emissions increased by 13.7% and 6.2% respectively, a cumulative increase of 20.7%. (Figures do not include emissions from changes in crop management or from silviculture). The economic context during 1990-97 can be used to justify trends of emission production. Indeed, in 1990 the economy was undergoing a deep recession. A period of rapid recovery started in 1992, manifested by increasing economic activity and consequently rising GHG emissions. 1997 marked the peak of economic activity for the decade, but the decreasing trend of emissions was already evident. A combination of factors contributed to this decreasing trend of emissions, of which the most influential were: i) increased power generation from clean energy sources; ii) replacement of public transportation fleet with cleaner vehicles; and iii) reduction of total heads of cattle with a resulting decrease in enteric emissions.

GHG emissions in Argentina mainly originate from: 1) combustion of fossil fuels, consistently releasing approximately 90% of the CO2 emissions and around 42% of the total GHG emissions of the country in 1997 (power generation (30%) and transport (33%) account for most of the energy-related GHG emissions); 2) enteric fermentation, releasing 62% of methane emissions and 19% of total GHG emissions in 1997 (mainly cattle); and 3) management of agricultural land, releasing 95% of total nitrous oxide emissions and 21% of total GHG emissions in 1997. Annex 13 contains a detailed breakdown of GHG emissions.

National circumstances and impacts of climate change

A series of physical characteristics and of cultural traits make Argentina particularly vulnerable to climate change. The following sections provide brief descriptions of national priority issues that need to be addressed in order to reduce potential impacts of climate change.

Water resources

The wide range of climatic conditions in Argentina result in complex water resource management issues. Argentina is repeatedly subjected to periods of extreme drought in the dry regions and to inundations in the more humid zones. It is to be expected that the various regions have considerably different water resource issues concerning their surface water bodies, groundwater supplies, and irrigation practices.

Land resources

The lack of effective land management policies in Argentina is a contributing factor to the severity of the impacts from climate change-related events. Unsustainable land use (e.g. substitution of pastures for crops), soil degradation (e.g. salinization) and deforestation contribute to the degradation of the natural vegetation cover, a factor that ultimately leads to erosion. Erosion of extensive productive areas is not only a devastating economic event, but in the context of this study, it increases the vulnerability of a region to the damaging effects of extreme climatic incidents

Human settlements

Inadequate zoning regulations in urban areas of Argentina and the incomplete access to water and sanitation services are partly to blame for the expansion of the cities towards flood-prone areas. Settlements grow

along the banks of major waterways, without consideration to the risks of flooding. The infrastructure is, in many cases, precarious, aggravating the extent of the damages and the number of people affected during flooding events.

Integration of climate change into national planning

Despite the heightened level of attention given to climate change issues in international circles, linkages between the facts regarding climate change and preventive decision-making in Argentina remain weak at national, provincial, district, and private levels. Contributing factors include the prevalent dichotomy between policy and science, a weak institutional capacity, and the lack of collaboration between public and private institutions on climate change issues. Efforts have been made by government agencies to sponsor interactions between private and public sectors on issues related to climate change, such as promotional activities, workshops and studies sponsored by the SecretarÚa de Ambiente y Desarrollo Sustentable (SayDS). However, the severity of the impacts of climatic events of the past two decades have emphasized the need to strengthen linkages between climate change issues and national planning. The contribution to the development of a National Mitigation Program, the design of a national pilot plan to promote public awareness to adaptation and mitigation strategies, and the development of an institutional framework to carry out public awareness activities are critical to encouraging the formulation of priority plans for mitigation and adaptation to climate change.

Government Strategy

First National Communication to the UNFCCC

The Government of Argentina submitted its First National Communication to the UNFCCC in 1997. The project was led by the SecretarÚa de Ciencia, TecnologÚa, e Innovación Productiva (SECyT) and the executing agency was the Programa de las Naciones Unidas para el Desarrollo (PNUD).

The areas covered by the study and the main findings are summarized as follows:

1. An inventory of GHG was compiled, following IPCC procedures
2. The overall vulnerability of water resources to climate change was investigated. It was concluded that:

i. A decrease in the amount of precipitation in the Southern Cone would reduce the available volumes of water used for irrigation in the arid and semi-arid regions of the country

ii. Higher precipitations would in turn increase the risks of flooding and inundations in the humid regions of the country.

3. The vulnerability to climate change of two specific ecosystems was evaluated:

i. Oases between 29 S and 36 S - These Oases are located at the foothills of the arid provinces of La Rioja, San Juan and Mendoza, the water resources of which depend on snow melt from Andean mountain tops. Increasing temperatures resulting from climatic changes would decrease minimum levels of snow cover and would therefore have impacts on summer melting conditions.

ii. Ocean levels along the Argentine coastline - Two areas were found to be at risk from flooding due to increasing ocean levels: a) BahÚa of Samborombón, in northern Buenos Aires province, where economic losses would be significant; and b) BahÚa Blanca and the RÚo Colorado delta in

the south of Buenos Aires province.
4. The vulnerability to climate change of the following two economic sectors was considered:
i. Agriculture - It was found that crops would be more affected than livestock activities. The net impact on crops and pastures was found to be negative.
ii. Energy - A reduction in the volumes of water from snow melt was found to have significant repercussions for the electricity sector. Indeed, many hydroelectric facilities in the north-eastern region of the country operate using water from local rivers, the flow of which is dependent of snow melt.
5. Finally, the impact of climate change on public health was investigated, and results showed that higher temperatures could lead to increases in the number of the vectors of certain diseases (e.g. dengue, malaria, etc.)

GHG inventories were updated in 1999, and a revised version of the First Communication was submitted to the UNFCCC.

Mitigation strategies
Several projects have been implemented that have contributed to mitigating air pollution by the Argentine energy sector, which have placed the country in the forefront of clean energy production. These include: 1) the construction and operation of several hydropower plants and two nuclear power plants; 2) the replacement of coal and petroleum derivatives by natural gas for thermoelectric plants; 3) the promotion of compressed natural gas (CNG) as motor vehicle fuel; 4) the adoption of specific regulations to abate gas-flaring; and 5) the reduction of natural gas flaring at its source.
There have been pilot or sporadic measures implemented such as: (1) initiatives of co-generation of electricity and heat in industry; (2) programs for energy-efficient drying of seeds and crops; (3) programs of efficient street lighting; (4) energy saving initiatives in public and commercial buildings; and (5) energy-saving residential heating systems. In spite of the fact that these measures present large saving potentials, they were not supported by policy initiatives and other measures aimed to overcome existing market barriers and, consequently, were not adopted by either energy suppliers or consumers.

In addition, GOA has recently adopted a new set of policies aimed at reducing future GHG emissions, which include: 1) the promotion of wind and solar energy through programs of temporary subsidies that have been recently enacted as national law; 2) the promotion of co-generation projects and Rational Use of Energy (RUE) programs; 3) the implementation of the Efficient Lighting Initiative (ELI), an IFC-GEF project developed through ENDESA-ENDESUR (Argentina) and ELECNOR (Perú), which promotes the sale of efficient lamps to residential users around the country; and 4) the implementation of the Renewable Energies in the Rural Market project (PERMER), supported by the World Bank and GEF, aimed to supply modern energy based on renewable sources to dispersed rural populations.

Efforts have also been made to reduce emissions from deforestation. Several afforestation and reforestation programs are developing increasing interest, particularly within the framework of the Joint Implementation

(JI) and Clean Development Mechanism (CDM). Technical cooperation programs, from Germany and France for instance, have evaluated the participation of NGOs and other institutions in projects that would improve carbon-sink capabilities in Argentina. The SAyDS is actively participating in CDM initiatives and has established the Oficina Argentina del Mecanismo para un Desarrollo Limpio (OAMDL), with the purpose of promoting projects that can be implemented within the context of the CDM. The OAMDL was amongst the first non-Annex I CDM offices to formulate detailed guidelines for project preparation and is conducting a series of workshops to advance in the formulation of LULUCF-CDM projects.

In 1999, with the support of the Government of Canada and of the World Bank, the GOA published its first National Strategy Study (NSS). These types of studies promote market-based instruments for GHG reduc-tions within the framework of the CDM. The results of the first NSS helped Argentina define its position in global climate change negotiations. A second NSS is currently being conducted, funded by the Bank, with the main purpose of identifying a portfolio of GHG mitigation projects that can be implemented through the CDM. This activity is tightly related to the development of the National Mitigation Program under the present project

Initiatives currently existing for the achievement of the Convention

Monitoring systems
The occurrence of flooding events related to climate change led to the establishment of Inter-Province Boards, which are responsible for the implementation of coordinated measures to address adverse effects of heavy precipitation and flood events. Other mechanisms have been instituted at the national level to coordinate responses to emergency situations. The Sistema de Alerta Hidrológico del RÚo Paraná, for example, is managed from the Instituto Nacional del Agua (INA), and is charged with the monitoring and prediction of impacts from extreme climatic events

Programs related to public awareness
Outreach activities to promote public awareness of climate change issues within Argentina are routinely conducted by both public and private sector entities as well as by national and international NGOs. These activities are mainly conducted by the SAyDS and the Federal Council on the Environment (COFEMA). During the last two years, the SAyDS organized several workshops, seminars and public audiences on climate change issues. Other Secretariats, such as Science and Technology, Agriculture, Energy, Transport, and Industry frequently participate in these activities. On the international front, the Ministry of Foreign Affairs was involved in discussions on membership of global agreements on climate change. For example, the Ministry took an active role in the negotiation and adoption of the Kyoto Protocol and the elaboration of its implementation plan in Argentina, OECD environmental issues, and the bodies derived from the international and regional agreements dealing with the Global Change Issues. The Ministry established the Expanded Working Group on Environmental Issues (Grupo de Trabajo Ampliado sobre Cuestiones Ambientales - GTACA) in early 1989, which meets regularly to inform national stakeholders of relevant international discussions. The GTACA consolidates stakeholder inputs and defines a national position on issues under debate at international fora.

2. Objectives

The primary objective of this project is to support enabling activities for the preparation of the Second National Communication of the Government of Argentina to the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC). This Communication will enable the Government of Argentina (GOA) to satisfy requirements under Art.12.1 of the UNFCCC, in accordance with decisions 10/CP.2, 11/CP.2 and 8/CP.5, and following the new guidelines for the preparation of National Communications accorded in CP.8. The Government of Argentina submitted its First National Communication in 1997 and a revised version in 1999.

This project will complement ongoing activities undertaken by the Government of Argentina to implement the UNFCCC requirements and consists of five major components. First, studies will be carried out to update and improve national inventories of greenhouse gases (GHG). Second, the project will assess the vulnerability of various ecosystems to climate change and will formulate possible adaptation strategies. To this end, studies will evaluate the impacts of climate change on: (a) coastal zones and water resources in different regions of the country; (b) agricultural production; (c) precipitation patterns; (d) energy system and infrastructure; and (e) socio-economic sector. Third, the project will contribute to the formulation of a National Mitigation Program, which will include measures to reduce national emissions of GHG. Fourth, activities will be conducted around the country to promote capacity building and public awareness. Finally, the fifth component of the project will assist in the drafting of the Second National Communication to the UNFCCC.

3. Rationale for Bank's Involvement

The Bank as one of the GEF implementing has extensive experience in the design of projects which address critical threats to the global environment such as climate change, biodiversity loss, degradation of international waters and ozone depletion, throughout the world. The Bank therefore will facilitate and provide technical expertise and act in an advisory capacity on design and implementation issues. Its comparative strength in this area can be used to assist Argentina to provide a sustainable framework within which it can address the key climate change issues which it faces. Furthermore, this project will complement on-going projects in the country and opens up potential opportunities for Argentina's involvement in Prototype Carbon Fund type projects.

4. Description

The five project components presented in this section were planned such to result in the preparation of the Second National Communication to the UNFCCC, in accordance to the new guidelines for the preparation of National Communications accorded in CP.8. The communication will be structured according to the categories set out in the GEF Operational Guidelines for Expedited Funding of Second National Communications from Non-Annex I Parties. Each sub-component represents a study or activity, all of which have been conceived as steps towards the implementation of the Convention in Argentina. These include the update of GHG inventories, contributions to the development of both adaptation and mitigation strategies for climate change, public awareness campaigns, and the drafting of the Second Communication.

a. Updating of National GHG Inventories and Development of Emission Factors:
b. Vulnerability Assessment and Institutional Strengthening for adaptation
c. Formulation of National Mitigation Plan
d. Promotion of Public Awareness
e. Drafting of Second National Communication to the UNFCCC

5. Financing

	Total (US$m)
BORROWER/RECIPIENT	$0.50
IBRD	
IDA	
GLOBAL ENVIRONMENT FACILITY	$1.14
Total Project Cost	$1.64

6. Implementation

The recipient of the grant will be the Fundación Bariloche -FB, which was selected for its trajectory, institutional capacity and experience related to climate change topics to execute the project. It was decided that an independent NGO could better achieve the project objectives without any institutional bias and independent from the constant political cycles present in Argentina. FB will not only compile the results from the different studies in order to produce the Second National Communication to the Convention on Climate Change, but also will directly implement Component A (Update of GHG emissions inventory), given its experience and participation in previous inventories. All other studies will be contracted following the World Bank procurement procedures.

The Fundación Bariloche was created in 1963, as a non-profit private organization engaged in scientific and economic research, and education. It is associated to the United Nations University (UNU); to UNESCO; to the International Federation of Institutes for Advanced Studies (IFIAS); and to the Association of Ibero-american Education Televisión (ATEI). The FB has ample experience in dealing with energy and environment, and in particular with climate change related topics. In 1990-91 participated in elaborating a regional document with UNDP and IADB in preparation for the Rio Summit. Later in 1994 participated with discussion papers for the Summit of the Americas. It has produced technical documents for GEF and participated in the making of the national GHG emissions inventories, undertaken for the FNC to the Parties to the Climate Change Convention, its revision in 1999, and in the World Bank study on Flexible Mechanisms established under the Kyoto Protocol. With programs in energy economics, and environment, the FB has a working relationship with prestigious international organizations such as WRI, UNDP, CEPAL, IISD, RISO, and the European Union.
In coordination with the RISÄ - UNEP Center, the Fundación Bariloche produced a study on the Economic Aspects of Greenhouse Effect Gas Mitigation, which examined methodological aspects and conceptual approaches to evaluation of mitigation actions. Within the same framework, the project entitled "Energy and the Environment in Argentina: Past and Future Evolution" was also developed by the FB for the RISÄ National Laboratory / UNEP and completed in March 1994. The project on Environmental Impacts of the Latin American Energy System 1970 - 1990 / 1990 -2010, was carried out by FB for OLADE and completed in August 1993.

There have been different projects related to energy efficiency, both at domestic and the regional levels, including the Study on the Rational Use of Energy in Argentina, carried out by Fundación Bariloche within the framework of the COPED network, with partial financing from DGXVII / European Union. Another study, "Confronting Climate Change. Economic Priorities and Climate Protection in Developing Nations, Argentina Case Study", demonstrated that developing countries have taken significant steps to reduce GHG emissions with far fewer technological and capital resources than developed nations. This study was carried out with support from the National Environmental Trust (NET) and with the participation of a network of NGOs and academic institutes of several developing countries (including the FB).

The execution of the project will be directed by a Steering Committee that will be created with representatives from the main federal authorities (Ministry of Foreign Affairs, Trade and Religion, Secretariats of Environment and Sustainable Development, Science and Technology and Innovative Production, Energy; Industry, Transport, Infrastructure, and Agriculture, the Subsecretariat of Water Resources, National Institute of Water, and Chief Cabinet of Ministers) as well as relevant members of academia and the private sector. The Steering Committee, will be presided by the President of the National Committee on Science and Technology. The functions of the Steering Committee will be to direct the planning, implementation, and monitoring stages of the project, by: (a) reviewing and defining terms of reference; (b) approving final structure of project documents; (c) overseeing the selection of consultants; (d) defining the procurement and implementation plans; (e) reviewing studies and implementation progress; and (f) setting strategic orientation for the project outputs. The Steering Committee is the link between the Fundación Bariloche and the Government and stakeholders. As the project involves strategic studies leading to the adoption of national policies, the Steering Committee is necessary to ensure proper ownership while keeping implementation and financial responsibilities under FB's control. The President of the Steering Committee will be in charge of communicating with the Bank to request no objections regarding TORs and consultants selection. Its logistic support will be provided by FB.

To carry out the different tasks associated to the implementation of the project, a Project Implementation Unit (PIU) will be formed and hosted by FB. The PIU will provide logistical and administrative support both to the Steering Committee and to FB. The PIU will also act as a link between the Steering Committee and the consultants contracted for the project studies. This unit will have a Project Coordinator, a procurement and contract analyst, two technical experts with knowledge in mitigation and vulnerability topics, and one technical assistant.

7. Sustainability

The project will promote integration of climate change concerns into sector policies and programs, while promoting cross-sectoral coordination. This will help influence the investments of the country, complementing and redirecting resources towards mitigation and adaptation options. Joint financial efforts from different sectors will ensure a synergetic effect towards reducing GHG emissions and adaptation related costs.

Active participation from all stakeholders in the formulation of policies, programs and projects oriented to both mitigating and adapting to climate change will ensure ownership and sustainability. Many of the measures oriented to reduce GHG emissions also offer economic savings and local environmental benefits and rational policies to avoid floods, erosion, and salinization will avoid future corrective and expensive measures. Sustainability is therefore linked to achieving win-win results, geared by a participatory and coherent approach.

The project will aim at identifying investment options to be financed under the Clean Development Mechanism, GEF, or the Carbon Prototype Fund.

Also, the project will identify barriers to measures contributing to reduce GHG emissions, such as energy efficiency, use of renewable energy, or a rational transport system integrated to land-use policies; and to sound adaptation measures involving land-use planning and enforcement, and adequate infrastructure investment.

Argentina being part of UNFCCC is obligated to continue to produce National Communications to the convention, showing advance and policies oriented to comply with its objectives. National adaptation plans will be necessary to minimize the impact of climate-influenced events such as flooding, hurricanes, salinization, drought, and the associated productivity loss.

Finally, to ensure a sustained Government policy towards consistent goals and objectives in terms of climate change mitigation and adaptation, the institutional layout will have to be strengthened. Not only will a good and sustained coordination of policies have to be pursued through the Steering Committee, but also it will be necessary to train officials at the institutional level to enhance the national capacity to produce subsequent National Communications.

8. Lessons learned from past operations in the country/sector
The First Communication of the Parties was performed by UNDP in 1997. A revised communication was produced in 1999. Later that year, the Bank sponsored the first Argentine NSS, a study on opportunities under the flexible mechanisms recently established by the Kyoto Protocol. Lessons learned from those involvements can be summarized as follows:
ñ Participation of political stakeholders and decision makers in the development of policies and strategies is of critical importance, as this will ensure ownership of the project and commitment for the implementation phase. Since the project will help develop cross-sectoral strategies and programs, joint participation from all relevant governmental agencies since the project inception and during its development and implementation will ensure proper implementation and adequate mainstreaming at the different sectors.

ñ A close coordination and supervision of the studies is needed, in particular with relation to the vulnerability assessments implemented by local institutions. This will ensure coherence in the approach of the strategies devised under the study.

ñ Development of local emission factors and carbon sequestration

coefficients is important, as Argentina presents particularities not easy to standardize with general approaches.

ñ Development of regional circulation models is important to better estimate vulnerability of fragile and critical ecosystems.

ñ A strong consultative process with the general public will ensure that whatever voluntary commitments are assumed or ratified are fully endorsed by the general population and stakeholders.

9. Environment Aspects (including any public consultation)
Issues : Category C

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Note: This is information on an evolving project. Certain components may not be necessarily included in the final project.

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