

OFFICE MEMORANDUM

DATE: April 4, 2002

TO: Mr. Ken King, Assistant CEO, GEF Secretariat
Att: GEF PROGRAM COORDINATION

FROM: Lars Vidaeus, GEF Executive Coordinator 

EXTENSION: 3-4188

SUBJECT: **ARGENTINA: Enabling Activities Leading to Second National
Communication of the Argentine Government to the Conference of Parties
to UNFCCC
Submission for Work Program Inclusion**

Please find enclosed the electronic attachment of the above mentioned project brief for work program inclusion. We would appreciate receiving any comments by April 16, 2002.

The proposal is consistent with the *Criteria for Review of GEF Projects* as presented in the following sections of the project brief:

- **Country Drivenness:** As indicated in Section D.4 Argentina has shown a particular interest and active role in the making of the global instruments to handle climate change. It presided the Conference of the Parties when the Kyoto Protocol got shape, and has been committed to the learning on climate change and the development of mitigation plans almost from the UNFCCC's inception. This project is to prepare the Second Communication to the Conference of the Parties.
- **Endorsement:** GOA has submitted an endorsement letter supporting this project to the Director of the Country Management Unit.
- **Program Designation & Conformity:** Climate Change, consistent with the guidelines for second national communications Enabling Activity.
- **Project Design:** Annex 1 describes the logical framework. Basically, to advance sound policies, programs, and projects addressing climate change, it is necessary to count with solid and updated knowledge and information about vulnerabilities to climate change, and opportunities to mitigate GHG emissions. To produce this information, the local institutions need to be strengthened so that further work and communications can be pursued on their own. Also, to devise feasible policies and strategies, good mechanisms for participation have to be built and improved.

Section A describes the Project Development Objective, mainly to support enabling activities for the preparation of the Second National Communication of the

Government of Argentina to the Conference of the Parties to UNFCCC. Section B describes sector issues and government strategy.

Section C describes the project components which will mainly consist of (i) GHG emissions inventories; (ii) vulnerability assessment and adaptation plan; (iii) mitigation plan; (iv) public awareness; and (v) drafting of Second Communication.

Being an Enabling Activity, the project does not have the annex on Incremental Costs.

- Sustainability: Section F.1 emphasizes the need to have endorsement from all relevant governmental authorities and stakeholders of plans and strategies, in addition to the institutional capacity.
- Replicability: One of the components described in detail in Section C.1 is public awareness, where dissemination of results is a major activity. Also, the project is aimed at strengthening participation mechanisms.
- Stakeholder Involvement: As mentioned above, Section C.1 includes a component on public awareness. Actual drafting of the communication will involve participatory workshops. Also, Section C.4 includes the institutional arrangement for the implementation of the project, which includes a Steering Committee (formed by governmental stakeholders). Section E.6.3 describes mechanisms for social participation.
- Monitoring & Evaluation: Section D.3 mentions lessons learned from similar projects in the past. Indicators for M&E are described in both Section A.2 and Annex 1.
- Financing Plan: Section C.1 includes a Cost Table, describing GEF and counterpart funding.
- Cost-effectiveness: Not applicable
- Core Commitments and Linkages: Section B.1 describes how the project is consistent with the CAS for Argentina and with the Bank's environment strategy.
- Consultation, Coordination and Collaboration between IAs: UNDP acted as the IA for the first communication. The Bank will seek a collaborative relationship to ensure that lessons learned are fully materialized within the project (see Section D.3).
- Response to Reviews: No comments were received from GEFSEC at pipeline entry. STAP review not required.

Please let me know if you require any additional information to complete your review prior to inclusion in the work program. Many thanks.

Distribution:

Messrs.: F. Pinto, UNDP
A. Djoghla, UNEP (Nairobi)
K. Elliott, UNEP (Washington, DC)
W. Arensberg IADB
G. Nolet, IADB
M. Gadgil, STAP
M. Griffith, STAP (Nairobi)
C. Parker/M. Perdomo, FCCC Secretariat

cc: Messrs./Mmes. J. Lopez-Silva, L. Tlaiye, K. Shepardson, T. Bradley (LCSES); T. Johnson, R. Khanna, S. Wedderburn, D. Aryal (ENV); ENVGC ISC, IRIS7

Francine Stephens

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PROJECT BRIEF

1. IDENTIFIERS:

PROJECT NUMBER:

PROJECT NAME: Argentina: Enabling Activity for Second Communication to the Convention on Climate Change

DURATION: 2 years

IMPLEMENTING AGENCY: World Bank

EXECUTING AGENCY: Fundación Bariloche

REQUESTING COUNTRY: Argentina

ELIGIBILITY: Argentina ratified the Framework Convention on Climate Change

GEF FOCAL AREA: Climate Change

GEF PROGRAMMING FRAMEWORK: Enabling Activity

2. SUMMARY: This project has as its objective to support enabling activities for the preparation of the Second National Communication of the Government of Argentina to the Conference of the Parties to UNFCCC. This project will complement ongoing activities undertaken by the Government of Argentina to implement the UNFCCC requirements and will: a) Update and improve GHG National Inventories; b) Strengthen local capacities to integrate climate change issues into the planning process and develop public awareness; c) Assist in the preparation of national mitigation policies and measures, including identification of mitigation opportunities in transport and electric energy demand side management (DSM); and d) Assess vulnerability and adaptation options for key ecosystems and agricultural regions.

3. COSTS AND FINANCING (US\$ MILLION):

GEF:	Project:	1.14
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Cofinancing:	Government of Argentina:	0.71
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Total Project Cost:	1.85
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4. ASSOCIATED FINANCING: NA

5. OPERATIONAL FOCAL POINT ENDORSEMENT:

Name: Raúl Estrada Oyuela

Organization: Secretariat of Foreign Affairs

Title: Ambassador / GEF Focal Point

Date: February 14, 2002

6. IA CONTACT:

Karin Shepardson, GEF Regional Coordinator

Latin America and Caribbean Region

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Argentina
 Enabling Activities Leading to Second National Communication
 of the Argentine Government to the Conference of Parties to UNFCCC
Project Concept Document

Latin America and Caribbean Region
 LCSEN

Date: March 13, 2002 Country Manager/Director: Myrna Alexander Project ID: Lending Instrument:	Team Leader: Juan Andres Lopez-Silva Sector Manager/Director: John Redwood Sector: VY – Other Environment Theme(s): Environment – Climate Change Poverty Targeted Intervention: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Project Financing Data <input type="checkbox"/> Loan <input type="checkbox"/> Credit <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other [Specify]				
For Loans/Credits/Others: Total Project Cost (US\$m) 1.85 Cofinancing: Total Bank/GEF Financing 1.14 (US\$m) Has there been a discussion of the IBRD financial product menu with the borrower? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Proposed Terms: Grace period (years): Years to maturity: Commitment fee: Financing Plan: Source Local Foreign Total				
Borrower		0.71	-	0.71
IBRD (GEF)		1.14	-	1.14
Total:		1.85		1.85
Borrower/Recipient: Government of Argentina Responsible agency: Ministry of Foreign Affairs Contact person: Estrada Oyuela Raúl Alfredo Address: Ministry of Foreign Affairs, Buenos Aires, Argentina Tel: Fax: E-mail: eyoy@mrecic.gov.ar Other Agency(ies): Contact person: Address: Tel: Fax: E-mail:				
Project implementation period: two years Expected effectiveness date: Expected closing date:				

A: Project Development Objective

1. Project development objective: (see Annex 1)

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 UNFCCC. The Government of Argentina already submitted its First National Communication in 1997 and a revised version in 1999. This project will enable the Government of Argentina (GOA) to duly satisfy requirements under Art.12.1 of the UNFCCC, in accordance with decisions 10/CP.2, 11/CP.2 and 8/CP.5.

This project will complement ongoing activities undertaken by the Government of Argentina to implement the UNFCCC requirements and will: a) Update and improve GHG National Inventories; b) Strengthen local capacities to integrate climate change issues into the planning process and develop public awareness; c) Assist in the preparation of national mitigation policies and measures, including identification of mitigation opportunities in transport and electric energy demand side management (DSM); and d) Assess vulnerability and adaptation options for key ecosystems and agricultural regions.

2. Key performance indicators: (see Annex 1)

Key outcome-level performance indicators, used for instance to monitor the progress of development objectives, would typically include:

- Institutional procedures in place to prepare national communications;
- Updated GHG emissions inventory and trend analysis;
- Local factors of emissions and carbon sequestration ;
- Harmonized Energy Balance;
- Assessment of vulnerability of particular ecosystems to climate change (coastal zone, Pampa, Patagonia);
- Assessment of Economic impact of climate change;
- Design of adaptation measures;
- High Circulation Model developed;
- Assessment of technologies and policies that aim at reducing the effects of climatic variations;
- Assessment of priorities and opportunities for mitigation carbon sequestration and technology transfer.

B: Strategic Context

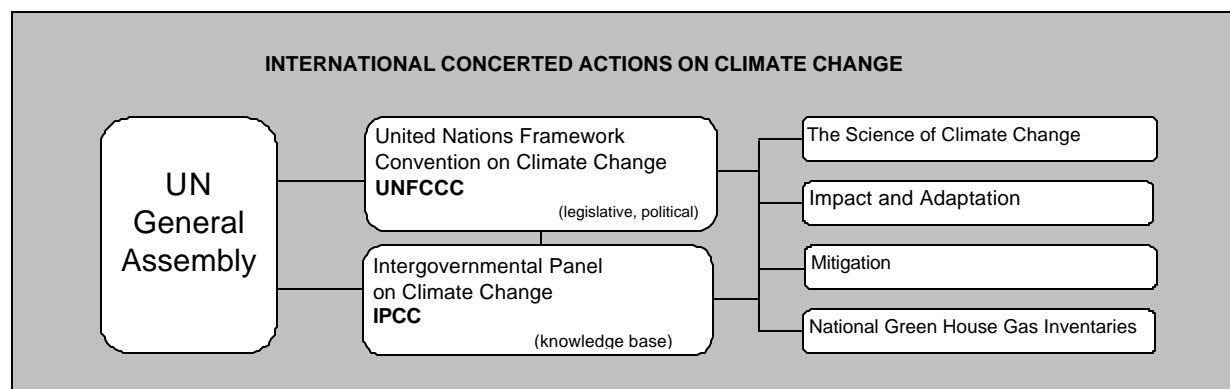
1. Sector-related Country Assistance Strategy (CAS) goal supported by the project:

The CAS highlights the need for the country to take measures to promote sustainable growth. The CAS identifies pollution reduction as a strategy to attaining sustainable growth; and measures performance in this regard in terms of GOA's fulfillment of its commitments under global environmental agreements. Furthermore, the CAS highlights the need to expand the use of GEF resources to complement national programs and to innovate on global issues; and identifies continued building of the GEF pipeline including global warming objectives as an integral feature of its strategy. Also, the project fits perfectly within both the Bank's Environment and Energy Strategy, and the Environmental Strategy, as climate change is a key sector that needs to be addressed. With relation to the Environmental Strategy co-benefits from activities addressing climate change result in Air Quality, Water conservation and competitiveness or improved access to markets.

The UN Framework Convention on Climate Change, UNFCCC, (See Box 1, below) seeks to stabilize greenhouse gases concentrations in the atmosphere at levels that would prevent dangerous interference with the sustainability of economic activity. At the same time UNFCCC promotes adequate impact

assessment of climate change in ecological and economic systems and supports adaptation policies to deal with the climate changes already observed and those contemplated for the next century.

Box 1



Note to box: The UNFCCC is implemented (regulated) through decisions taken by the community of nations (conference of parties, COP) at annual meetings which also decide on how to use the financial mechanisms available for implementation of its mandate. The COP is also assisted by subsidiary bodies, namely the Subsidiary Bodies on Science and Technology (SBSTA) and the Subsidiary Body for Implementation (SBI). The SBSTA advises the COP on scientific and technical information that may be relevant to its deliberations, while the SBI assists with the assessment and review of the effective implementation of the Convention (*i.e.* inventories and national communications). The IPCC was formed in 1998 by resolutions of the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) as an independent and permanent consultative body. The role of the IPCC was that of reviewing and evaluating scientific data and findings in order to: 1) keep the COP informed about scientific progress; and 2) respond to specific requests for scientific information.

In accordance with the UNFCCC and COP decisions, GOA presented its First National Communication in 1997 and a revision in 1999. The first communications reported on the Argentine national context, GHG 1990 and 1994 inventories, vulnerabilities, and on national strategies and policies and measures to implement the convention. In 1999 a revised version of the 1990 and 1994 inventories was presented, together with an inventory for 1997 and a projection for GHG emissions in 2008/12 for different economic scenarios.

This project will enable the Government of Argentina to produce its Second National Communication to the Conference of Parties as mandated by Art.12.1 of the UNFCCC, and decisions 10/CP.2, 11/CP.2 and 8/CP.5. It is evident from the foregoing that this project is consistent with the CAS objectives for Argentina.

2. Main sector issues and Government strategy:

Major Issues

Argentina faces the following issues relating to the implementation of the UNFCCC:

Integration of Climate Change into National Planning: Despite heightened level of attention given to climate change issues in international circles, linkages with development decision-making in Argentina remain weak at national, provincial, district and private levels. Contributory factors to this situation include the prevalent dichotomy between policy and science; weak institutional capacity; and lack of collaboration between public and private institutions on climate change issues.

Recently, Argentina has suffered several hazardous climatic events with far-reaching adverse effects geographically and in terms of the affected sectors, notably agriculture, hydro-power, human health,

urban and rural settlements. The severity of the impacts sustained from such events have served to emphasize the need to strengthen linkages of climate change and other environmental issues to national planning.

Institutional Capacity: Institutional coordination is key to developing priority plans both for climate change mitigation and adaptation, which are not only feasible, but achievable, and endorsed by the different stakeholders.

National Policy on Technology Transfer: There is a lack of coherent national policy, in particular with respect to assessing priorities for technology transfer and designing, evaluating and identifying potential projects.

Government Strategy

Programs related to research and information: In accordance with the UNFCCC, GOA carried out a study on Climate Change in Argentina (ARG/95/G/31) funded by GEF and implemented through UNDP. This project allowed Argentina to prepare the “First National Communication of the Argentine Republic corresponding to the UNFCCC”. Argentina was amongst the very first non-Annex I nations to submit National Communications to the UNFCCC. The project comprised three parts: (a) Inventory of Greenhouse Gases for 1990 and 1994; (b) Preliminary study on GHG mitigation for the period between 1995-2020, and (c) Three studies related to climate change vulnerability.

A later project, ARG/99/003 updated the inventory of GHG emissions with 1997 data, applying a newly developed methodology by the IPCC and OECD. GHG inventories for 1990 and 1994 were also revised according to the new methodology. The use of identical methodologies in all three inventories readily allows their comparison.

The 1997 inventory represented the starting point for a series of mitigation studies. In coordination with the RISØ - UNEP Center, Fundación Bariloche was in charge of the studies under the international project, *Economic Aspects of Greenhouse Effect Gas Mitigation: the Argentine case*. This project examined methodological aspects and conceptual approaches to evaluation of mitigation actions. Within the same framework the project *Energy and the Environment in Argentina: Past and future evolution* was developed also by Fundación Bariloche for the RISØ 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 Fundación Bariloche for OLADE and completed in August 1993.

There have been different Projects related to the Rational Use of Energy, both at domestic as well as 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 participation of a network of NGOs and academic institutes of several developing countries (including Fundación Bariloche from Argentina).

Much research has been devoted to the study of climate change issues throughout the country at various levels including universities, research centers, and private enterprises. These studies examine climate change issues of national and regional significance, taking into consideration cross cutting social and economic issues. Particular attention has been given to the hydrological cycle, as influenced by climate change and climate variability; with emphasis on flood and drought events, and management of water resources. Other studies have focused on inter-linkages between climate change and other environmental

issues, including stratospheric ozone depletion, changing concentrations of tropospheric ozone and other trace gases; surface ozone and pollution matters; biodiversity; desertification, and their regional and local implications.

Other research activities have examined the ENSO Phenomenon and SPARC, a program designed to analyze the linkages between climate change and atmospheric ozone. The running of global climate models and the development of regional climate models are also undertaken by different research teams in Argentina, as CIMA (Centro de Investigación del Mar y la Atmósfera – Research Center on the Sea and the Atmosphere), involved in the development of the badly needed regional climate models.

Argentina participates actively in the Intergovernmental Panel on Climate Change (IPCC) and Argentine scientists currently contribute to the development of IPCC Technical Papers on Climate Change and Sustainable Development, Climate Change and Biodiversity and adverse effects of CO₂ concentrations on natural systems among others. The Ministry of Foreign Affairs continues to play a key role in international discussions on climate change issues such as the Second World Climate Conference, UNGA Second Committee, and UNEP leading to the creation of the INC on Climate Change

Programs related to public awareness: Subsequent to the *World Conference on the Changing Atmosphere: Implications for Global Security*, held in June 1988, outreach activities to promote public awareness of climate change issues within Argentina have been routinely conducted by public and private sector entities as well as national and international NGOs.

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 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 and requests their inputs in defining a national position on issues under debate in international fora.

Policy Options for Monitoring Systems: Outreach activities within the country, particularly those providing information on climate change implications on the various sectors and activities, for the sake of national, provincial and district authorities, and stakeholders in the country, are undertaken by the Secretariat of Sustainable Development and Environmental Policy, the Secretariat of Science and Technology, the Secretariat of Agriculture, the Secretariat of Energy, the Secretariat of Transport and the Secretariat of Industry. The Federal Council on the Environment (COFEMA) disseminates information on climate variation impacts, such as those resulting from the ENSO processes, extreme events and climatic jumps. The occurrence of hazardous situations presented by 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. This project is oriented to further the continuous monitoring of national emissions conditions, implementing newly available guidance material developed by the IPCC, which will provide for an improved assessment of emissions from all sources and a better definition of appropriate monitoring systems.

On-going Mitigation Strategies: The construction and operation of several hydropower plants and two nuclear power plants; the replacement of carbon and petrol by natural gas as the fuel for thermoelectric plants; and the use of natural gas in internal combustion motor vehicles, have contributed to the advances made in mitigation of air pollution in Argentina's energy sector and have placed her in the forefront of clean energy production.

Market reforms introduced by Argentina in the early 1990s made the economy more efficient while providing mixed, but on balance, positive, environmental results. Argentina's electric power demand is expected to more than triple over the next 15 years, but the successful implementation of market-based reforms and increasing competition in power generation could continue to play an important role in the

future in lowering emissions from projected levels. Argentina aims at limiting net emissions of GHG while complying with Montreal Protocol restrictions on Ozone Depleting Substances (ODS) that also contribute to the greenhouse effect. Measures adopted by GOA have contributed to a significant reduction in the nation's index of carbon emissions. In the Energy Sector, these measures include among others, the promotion of compressed natural gas (CNG) as motor-vehicle fuel; the adoption of specific regulations to abate gas-flaring; and the reduction of natural gas flaring at source. The Argentine Government launched the Natural Gas Motor-Vehicle Program in 1984 to promote the use of CNG; and today boasts the world's largest fleet of over 500,000 such units.

Buenos Aires city is a member of the Clean Air Initiative for Latin American Cities, a consortium of six Latin American cities, private industry, banks, national and international environmental agencies, NGOs and foundations. The initiative has World Bank support through the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC), and the Multilateral Investment Guarantee Agency (MIGA).

GOA has recently adopted a new set of policies that will reduce future GHG emissions, including the promotion of wind and solar energy through programs of subsidies that have been recently enacted as national law; the promotion of co-generation projects and Rational Use of Energy (RUE) programs; and the implementation of the Efficient Lighting Initiative (ELI). The ELI is a program financed by IFC of the World Bank developed in several municipalities of the country, focused on developing RUE projects in street lighting at local level. Increasing energy efficiency by end-users and demand-side management would reduce carbon dioxide, sulfur dioxide and nitrogen oxide emissions.

Policy Frameworks and Programs for Adaptation Measures: Art.41 of the Constitution of Argentina enshrines the main principles of the national environmental policy. International agreements approved by the Argentine Legislative branch have a high hierarchical level in the legal system, second only to the Constitution itself.

The UNFCCC and the Kyoto and Montreal Protocols, ratified by Argentina belong to the category of international agreements, and competent authorities have adopted regulations requiring that any development project must be supported by a feasibility assessment including environmental impact and risk assessment reports. The existing institutional arrangements require that CDM projects involving adaptation / mitigation to climate change and the inter-linking environmental issues, must be cleared by a commission with the participation of the Ministry of Foreign Affairs, Secretariat of Sustainable Development and Environmental Policy, the Secretariat of Science and Technology, the Secretariat of Agriculture, the Secretariat of Energy and the Secretariat of Transport and the Secretariat of Industry.

Programs on sink enhancement: Deforestation has been one of the most serious drawbacks in developing areas. Trade distortions due to subsidies on agricultural production in industrialized countries induced land use changes in Argentina, including deforestation aimed to "expand the agricultural frontier". Deforestation for that purpose, added to establishing new urban settlements, or simply to use the wood as a fuel, brought the country to lose practically 50 % of the forested areas available in the 19th Century.

"Debt for nature initiatives" and Activities Implemented Jointly (AIJ) and Clean Development Mechanism (CDM) approaches to forestry capacities of afforested and reforested areas have created increasing interest for sink enhancement programs. Various technical cooperation programs (from Canada, Germany, etc) have already considered the participation of NGOs and other institutions to undertake projects to improve sink capacities in Argentina. The Secretary of Sustainable Development and Environmental Policy has operated the Oficina Argentina de Implementación Conjunta (OAIC) and analyzed numerous proposals to enhance and develop new sinking capacities, in different regions of the country, in the context of the UNFCCC. Lately, the Office has been turned into the Argentine Office for the Clean Development Mechanism.

Financing programs for mitigation, carbon sequestration and adaptation measures: The First National Communication submitted by GOA with GEF financial support, included studies on

vulnerability of a section of the Argentine coast to a possible sea level rise, as well as the possible impacts of climate change on agricultural production and on the oasis located between 29° and 36 ° S in the Andean Region. The same communication contained a study on greenhouse gases emissions reductions or limitation by electric energy plants substitution and sinks enhancement. The Revision of that Communication, issued in 1999 went deeper into the mitigation studies, including a possible voluntary emissions target dynamically linked to GDP growth.

3. Sector Issues to be addressed by the project and strategic choices:

The project will address all of the sector issues mentioned above. Institutional Capacity will be built to ensure that climate change can be really integrated into national planning; the national mitigation and adaptation plans resulting from the project will need to be inserted as part of the sectoral agendas. Therefore, inter-agency coordination will be emphasized during project appraisal and implementation.

Institutional Framework:

C: Project Description Summary

1. Project components: (see Annexes 1 & 2)

Project components are entirely directed to produce the Second National Communication to the FCCC. 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.

Component	First National Communication GEF grant (US\$M)	Second National Communication			
		Indicative Costs (US\$M)	% of Total	GEF financing (US\$M)	% of Total
a. Updating of National GHG Inventories and development of emission factors	0.32	0.496	26.82%	0.320	64.49%
▪ GHG Inventory	0.32	0.268		0.180	
▪ Emission Factors	-	0.101		0.070	
▪ Comparative analysis	-	0.074		0.035	
▪ Energy Balance harmonization	-	0.054		0.035	
b. Vulnerability assessment and institutional strengthening for adaptation	0.448	0.744	40.22%	0.400	53.79%
▪ Assessment of coastal zone vulnerability ¹	0.103	0.134		0.045	
▪ Assessment of Pampa Bonaerense's Social vulner.	-	0.054		0.040	
▪ Assessment of climate change impact on watersheds in Chaco, Pampa, and Parana River	-	0.047		0.030	

¹ FNC covered from San Borombon to Bahía Blanca. SNC will cover Gran Buenos Aires and Parana Delta.

Component	First National Communication GEF grant (US\$M)	Second National Communication			
		Indicative Costs (US\$M)	% of Total	GEF financing (US\$M)	% of Total
<ul style="list-style-type: none"> ▪ Agric. Production at Pampa² ▪ Assessment of Oasis region Vulnerability ▪ Assessment of impact from rainfall increases in Patagonia ▪ Economic Impact Assessment to help formulate Adaptation Plan (stage II) ▪ Assessment of vulnerability of energy system ▪ Design of Adaptation measures (stage II) ▪ Development of High Circulation Models 	0.239	0.141		0.100	
	0.106	0.000		0.000	
	-	0.107		0.060	
	-	0.094		0.040	
	-	0.074		0.030	
	-	0.054		0.030	
		0.040		0.025	
c. Formulation of National Mitigation Plan	0.171	0.228	12.32%	0.170	74.56%
<ul style="list-style-type: none"> ▪ Assessment of DSM opportunities ▪ Assessment of opportunities for energy efficiency in transport ▪ Assessment of renewable energy technologies ▪ Opportunities for CO2 sequestration 	0.11	0.080		0.060	
	0.041	0.034		0.030	
	0.02	0.020		0.020	
	-	0.094		0.060	
d. Promotion of public awareness	-	0.188	10.15%	0.120	63.91%
e. Elaboration of Second National Communication to FCCC		0.060	3.24%	0.050	83.33%
f. Project Management	0.0608	0.134	7.25%	0.080	59.65%
TOTAL	1	1.85	100%	1.14	61.63%

A. National GHG Inventories (US\$496,000 of which GEF grants US\$320,000)

The objective of this component is to update and standardize national databases of GHG emissions with data from 2000, to allow historic and trend analyses. In addition, the project will enable the development of national emission factors for future GHG inventories and analyses. The following three tasks will be completed as part of this component:

² SNC will update previous assessment, considering the changes to transgenic soja.

a) *GHG inventory update* – Updating of existing emission inventories will be performed by completing the following activities: i) information gathering from sectors as listed in 1.2 ut supra; ii) data processing, using IPCC methodological tools; iii) analysis on evolving GHG emission trends and cross sector evaluation; iv) review and adjustment of national emission factors, with emphasis in methane emissions from cattle enteric fermentation; v) review and study recent methodological improvements of IPCC, review of late national inventories, and identification of methodological or informational gaps; and vi) review methodology recognized by IPCC for determining own factors of emissions for energy sectors as well as that for land-use and forestry.

(b) *Comparative analysis of previous and current GHG inventories* - Argentina will be one of the few countries that will have performed four inventories of GHG emissions during the period 1990-2000. As a result, a detailed assessment and analysis of the evolution of emissions, by sector, has been proposed. All economic sectors have been included in the analysis, namely: energy, industrial processes, agriculture, land-use change and forestry, waste, and CO₂ emission from biomass. This analysis aims at identifying existing trends of GHG emissions, both globally and by sector, as well as at identifying the main drivers of the evolution of GHG emissions.

Using pertinent socio-economic data, a series of indicators will subsequently be generated. These indicators will reflect the evolution of emissions by economic activity, relative to population. Results will illustrate the evolution of emissions during the period 1990-2000.

(c) *Evaluation of National Energy Balances* - This activity involves the evaluation of modifications needed by existing National Energy Balances so as to make them compatible with Inventory Emission Source Categories. Currently, the energy balance structure groups energy consumption for commercial, public, and residential sub-sectors under one single category, while the GHG emissions inventory breaks it down into the three groups. Since the methodology for building the energy balance has been applied for years, the study proposes to identify any adjustment and modification that should be incorporated in the elaboration of the National Energy Balances, in order to make it compatible Inventory Emission Source Categories.

B. Vulnerability Assessment and Institutional Strengthening for Adaptation (US\$744,000 of which GEF grants US\$400,000)

The project will enable Argentina to expand on a series of vulnerability assessments that was conducted as part of the First National Communication, which addressed potential impacts of climate change on various regions of the country. A second series of vulnerability studies is proposed as part of this project. These studies will take advantage of the development of a high resolution Regional Circulation Model (RMC) by the CIMA – Centro de Investigación del Mar y la Atmósfera, at the Scientific and Technological National Center, that simulates the effects of climate change on hydrological conditions around the country and suggests adequate adaptation strategies. The following series of independent vulnerability studies will be conducted:

a) *Assessment of vulnerability of coastal zone* - The study will focus on the area north of Bahía de San Borombon, including Gran Buenos Aires and the Paraná Delta. These areas are vulnerable to the tide floods produced by storms over the Río Paraná and over the nearby Atlantic Ocean. The increasing development of resort areas on the northern coast of the Río Paraná and of the nearby Paraná Delta, as well as the occupation of part of this coastal area for precarious housing by impoverished population intensifies the social and economical impacts of the tide floods.

The focus of the Project will be to study the complex interactions arising from the effects that climate change will have on the water level of the Río Paraná and the impact of the Paraná Delta expansion on the borders of the Río Paraná.

b) The Pampa Bonaerense under climate change conditions - This project focuses on the critical issue resulting from the Pampas flatness (< 10 cm per km), which leads to recurrent conditions of flood and drought. The project will collect existing information and will develop complementary studies to achieve an adequate characterization of the sensitivity of the region's water resources to climate fluctuations. The assessment of the vulnerability of water resources to climate change will provide information on hydrologic conditions that could arise as a consequence of atmosphere warming in the analyzed areas. The purpose of this data gathering is to provide reference information to decision makers that will be used in the development of adequate adaptation strategies to potential impacts of climate change.

c) Assessment of vulnerability of water resources to climate change - This study focuses in the Paraná, Pilcomayo, Salado, Bermejo rivers and in the Pampa and Chaco plains. These are regions of high population density, which concentrate most of the economic activities of the country. The geographic and climate conditions of these two systems are such that their hydrological response to already large climate variability signals is notably amplified. The work will consist in collecting existing information and developing complementary studies to achieve an adequate characterization of the sensitivity of water resources to climate fluctuations. It is expected that this information will allow to establish adaptation measures and strategies to mitigate the vulnerability of hydrological resources.

d) Evaluation of climate change effects on agriculture production in the Humid Pampa region - This study will focus on productivity effects and vulnerability of both transgenic crops and new cropping systems in the Pampas region under the current climate variability (1970-2000) and under future climatic scenarios. The main activities will include: i) assessment of the impact of climatic variability and climate change on crop production; ii) identification of adaptive measures leading to avoidance of yield reductions; iii) assessment of crop water requirements and water availability considering current and future climatic inputs; and iv) assessment of the overall vulnerability of the agricultural sector.

Results from this study will lead to adaptive measures aiming to avoid adverse effects of climate variability, change on crop production, and water resources management addressed to different stakeholder levels.

e) Overall socio-economic impacts of climate change - This project aims at identifying the reciprocal relations between the impacts associated with climate change and the range of options available for individual and institutions to respond to those altered conditions. Among the different impacts, the most relevant are the ones related to natural ecosystems, food security, agricultural and forest sector, coastal zones, water resources, health, infrastructure and on the socioeconomic structure.

The most critical activities to be developed include: i) determining basic lines of adaptation policies and objectives of adaptation; ii) development of a framework of adaptation policies to reduce present and future vulnerabilities; iii) assessment of current vulnerabilities and policy context; and iv) assessment of future vulnerabilities and development of adaptation policies.

f) Impact assessment from precipitation increases in the Patagonia region - This project will identify and assess the impacts from precipitation increases on natural ecosystems, human settlements, and economic activities in the Patagonia region. The impacts of erosion, flood, and glacial meltdown on the regional environment as well as the productivity of relevant activities will be specifically addressed, in an attempt to identify preliminary adaptive responses.

g) Assessment of vulnerability of the Energy System and Energy infrastructure to climate change - This study will focus on evaluating climate change impacts on energy supply and demand. Results will identify the vulnerability of the energy system to climate change, as well as detect the main actions and possibilities of adaptation to known climatic impacts.

h) Adaptation program and regional adaptation plans - Building upon the vulnerability and adaptation assessments an Adaptation Policy Framework will be applied, with the objective of elaborating a portfolio of adaptation strategies, policies, and measures. The development of this framework will give valuable information on how policy for adaptation can be integrated into national sustainable development initiatives. Such strategies, particularly through improved adaptive capacity, will contribute to minimize risks associated with climate change. This component will therefore aim at strengthening local institutional capacity in order to reduce vulnerability and to adapt to the impacts of climate change.

i) Estimates of regional climate change scenarios through Regional Climate Models (RCM) - Regional climate scenarios in Argentina, including climate predictions resulting from increasing CO₂ concentrations, will be evaluated through the use of climate models. Data obtained from these models will be used to evaluate potential climatic conditions to which natural and human systems may be exposed. Regional climate simulations will be performed using limited-area models nested in global circulation models.

This component will provide training to develop models for the simulations, which would be devised at Centro de Investigaciones del Mar y la Atmósfera (CIMA / CONICET / UBA) and Centro Nacional Patagónico (CENPAT / CONICET). CIMA is currently running an Atmosphere General Circulation Model (AGCM) coupled to an ocean model developed at IPSL, France as well as a regional high-resolution model MM5 developed at the National Center for Atmospheric Research (NCAR), USA. CENPAT is running the coupled AGCM MARK 4 developed at CSIRO (Australia) and the regional high-resolution ETA model from NCEP, USA.

Regional scenarios of climate change for South America will be based on an increase in greenhouse gasses according to the IPCC “business-as-usual” emission scenario. Predictions of climate for South America will be made over the period 1970 – 2050. The information obtained will include predictions of local circulations patterns and estimates of temperature and precipitation scenarios.

C. Formulation of National Mitigation Plan (US\$228,000 of which GEF grants US\$170,000)

A Global Change Working Group will design and formulate a National Mitigation Plan, which will include mandatory and voluntary measures for the reduction of national GHG emissions levels. The Plan will identify opportunities for mitigation of emissions through measures in the following areas: (i) *Demand Sector Management*, such as pricing measures, energy savings, energy efficiency, and alternative energy sources; (ii) *Transportation sector*, which include among others, energy efficiency measures, infrastructure assessments, transportation policies, and cleaner fuel alternatives; (iii) *Renewable energy sources*, involving assessment of new technologies and feasibility studies; and (iv) *Carbon dioxide sequestration*, which involve socioeconomic considerations related to reforestation policies, economical and technological feasibility studies, and review of current practices. A detailed description of the activities that will be performed as part of this project component is included in Annex 2.

D. Promotion of Public Awareness (US\$188,000 of which GEF grants US\$120,000)

The public awareness program should develop and promote climate change outreach information, and education plans, and encourage both individual and collective actions that will reduce climate change.

The promotion of public awareness on Climate Change should encourage environmentally responsible behavior by fostering: i) awareness - a sensitivity to the climate change and associated problems; ii) knowledge - an understanding of how climate change functions, how people interact with and depend on climatic conditions, and how climate change problems may be solved; iii) attitudes - a concern for the environment and the personal motivation and commitment to participate in environmental improvement and protection; iv) skills - the ability to identify and investigate climate change problems and to contribute to their resolution; and v) participation - active involvement in working toward the reduction of climate change.

The project will develop a pilot plan for public awareness education for community leaders, as well as for every member of the community interested in the topic. In order to reach a widespread audience, the project will involve media, educational institutions, NGOs and any other organization that could contribute in any way to climate change outreach. Audiences need to be specifically targeted in order to maximize the efficiency of the education campaign. All population groups, both urban and rural, must be taken into account, including all students and teachers, professionals, parents, senior citizens, community leaders, etc.

The project will focus on capacity building and assistance for planning and conducting actual public awareness campaigns in the future. Following is series of activities suggested as a way of implementing the pilot awareness campaign: i) review and evaluation of current public information programs in order to suggest the necessary upgrading where needed; ii) information exchange on climate change challenges and opportunities to leaders and representatives from stakeholders' institutions; iii) development of climate change outreach products as press releases announcing climate change initiatives, as well as public service announcements on radio and television; iii) development of grade school education materials such as booklets, manuals, brochures, interpretive displays, training manuals, and slide shows; iv) coordination of seminars and workshops; v) design of a possible National Climate Change Web Site; and vi) design of civil society events to improve public awareness.

A plan for evaluating the success of the pilot program must be implemented. After any outreach product is distributed to the intended audience, follow-up activities should be instituted such that the effectiveness of the product can be assessed.

E. Elaboration of Second National Communication to FCCC (US\$60,000 of which GEF grants US\$50,000)

This component addresses the actual generation of the Second National Communication. This document will result, not only from results of the other project components, but also from other existing available information. This information includes national statistics concerning population, social and cultural characteristics, economic indicators, and institutional settings.

The Second National Communication will include the following sections: i) national statistics; ii) national inventories and emission factors; iii) comparative analysis of previous and current GHG inventories (1990-1994-1997-2000); iv) study on the possibilities to increase consistency between National Energy Balances and the Inventory Emission Source Categories; v) vulnerability assessment and institutional strengthening for adaptation; vi) support to the formulation of a National Mitigation Plan; vii) development of circulation models and climate change scenarios; viii) statement of financial needs; ix) promotion of public awareness.

The Second National Communication will be drafted, translated if necessary, published, and ultimately distributed.

F. Project Management (US\$134,000 of which GEF grants US\$80,000)

Periodic progress reports on all subprojects will be routine condition for evaluation of performance. Four workshops with participation of all coordinators, experts, and assistants have been projected in order to launch the project, assess its progress, exchange information among subprojects, and produce a final assessment. Lectures from experts (including foreign experts) have been envisioned as one additional method to verify advances in the fulfillment of objectives.

The following matrix allows a comparison of activities undertaken to prepare the first communication and activities required to prepare the Second Communication.

Enabling Activity Commitment	Work Done Under first enabling activity Work Done under other projects	Work proposed in preparation of second national communication			
		Planning and execution	Capacity Building		
			Data gathering and Research	Institutional Strengthening	Training and Education
1. National Circumstances	First National Communication (FNC) described national circumstances, presenting relevant information related to climate, population, economy, agriculture, stockbreeding and forestry, energy, and transport	Systematic information and indicators about population, social and cultural characteristics economic circumstances and institutional setting (Component E)	NA	NA	NA
2. GreenHouse Gas Inventories (see table A2 as completed) 1. Energy Sources 2. Industrial Processes 3. Agricultural Processes 4. Land Use change & Forestry 5. Other Sources 3. Improvement of emission factors for preparing GHG inventories (relate this activity to item 2 above, as appropriate)	FNC reported on 1990 and 1994 inventories. Gases included in the inventories were: carbon dioxide (CO ₂), methane (CH ₄), nitrogen oxide (NO _x), nitrous oxide (N ₂ O), carbon monoxide (CO), and non-methane volatile organic compounds (NMVOC). In 1999 revised versions of 1990 and 1994 inventories were presented together with 1997 GHG inventory. Updating added HFC, PFC, SO, and SF ₆ . In the updating most IPCC emission factors were used, but in the energy sector some were adapted to national circumstances, as the ones for NO _x and SO _x from power generation.	New inventory will be done with 2000 data and previous inventories will be updated using same methodology to allow trend analysis.	National emission factors for future GHG inventories and analysis will be developed, in particular for energy sector, land-use and forestry, and review and adjustment of national emission factors with emphasis in methane emissions from cattle enteric fermentation Information gathering from relevant sectors using IPCC methodological tools	Review IPCC new methodologies and identify national gaps Evaluate modifications needed for National Energy Balances to make them compatible with GHG emissions inventories, in what respect to emission source categories	Training on new guidelines and improvement of methodologies
4. General Description of steps taken or envisaged to implement the convention					
(a) Program related to Monitoring systems			NA		

Enabling Activity Commitment	Work Done Under first enabling activity Work Done under other projects	Work proposed in preparation of second national communication			
		Planning and execution	Capacity Building		
			Data gathering and Research	Institutional Strengthening	Training and Education
(b) Policy Options for Monitoring Systems and Response Strategies fro Impacts		Periodic continuous monitoring of national emission conditions, using newly available guidance material by IPCC, which will provide for improved assessment of emissions from all sources and a better definition of appropriate monitoring systems	IPCC assessment and guidance material set basis for required monitoring system.	Improvement of monitoring capacities	
(c) Policy Frameworks for Implementing Adaptation Measures and Response Strategies		Development of policy and strategic framework for Adaptation	Several vulnerability studies in complementary vulnerable areas identified according to the water, agriculture, food security, coastal zones, forests, human settlements, and social economic systems		

Enabling Activity Commitment	Work Done Under first enabling activity Work Done under other projects	Work proposed in preparation of second national communication			
		Planning and execution	Capacity Building		
			Data gathering and Research	Institutional Strengthening	Training and Education
(d) Building Capacity to Integrate climate change concerns into planning			Generation of regional scenarios of climate change in Argentina		Pilot plan of public awareness education for opinion and community leaders and stakeholders, in order to offer methodology and experience to GOA authorities at national, provincial, and local levels, as well as to NGOs
(e) Programs to address climate change and its adverse impacts, including abatement and sink enhancement	A study was developed including two scenarios: (i) Baseline Scenario, which did not have explicit policies to mitigate GHG emissions nor to improve sink capacity; and (ii) Mitigation Scenario, which set climate change mitigation options	Design and formulation of National Mitigation Plan, which would include voluntary measures	Following assessment studies to be conducted: 1. Opportunities for Demand Side Management (DSM); 2. Opportunities for energy efficiency in transport; 3. Renewable Energy Technologies; and 4. Opportunities for CO2 sequestration		Education and training resulting from programs
5. Other Information					
(a) Material relevant for calculation of global Emission trends			Provision of indicators to show evolution of specific emissions with relation to population and economic activity (GDP). A comparison of Argentina and other nations' performance will be made		

Enabling Activity Commitment	Work Done Under first enabling activity Work Done under other projects	Work proposed in preparation of second national communication			
		Planning and execution	Capacity Building		
			Data gathering and Research	Institutional Strengthening	Training and Education
(b) Financial and Technological needs and constrains for : Project Financing National Communications Vulnerability Assessment and Adaptation		Elaboration of portfolio of adaptation strategies, policies, and measures to support appropriate policy interventions.		Following the assessment of vulnerability factors, the activity will evaluate policy to develop/increase adaptive capacity.	
6. Planning for Adaptation ^{II} Stage I/Stage II	Three vulnerability studies were conducted under FNC: i) Evaluation of vulnerability of Argentine coast to sea-level rising; ii) Vulnerability of Oasis if Andean Mountains; iii) Vulnerability of agriculture. EPA Project on Climate Change Impacts (2001) mainly devoted to a historical analysis of links between climate variations and extreme events and food production, and floods and ecosystems vulnerability in the Pampa region	Assessment of possibility to develop and apply an Adaptation Policy Framework for preparing adaptation strategies, policies and measures. Elaboration of portfolio of adaptation strategies, measures, and policies.	Analysis of other vulnerabilities to facilitate design and adaptation policies: 1. Coastal zone in the area north of Bahia de San Borombon, including Gran Buenos Aires and Parana Delta. 2.Pampa Bonaerense. 3. Vulnerability of water resources to climate change. 4. Effects on agriculture production in the humid Pampa region 5. Economic impact of climate change. 6. Impact assessment on precipitation increases in Patagonia. 7. Vulnerability of energy and infrastructure systems	Strengthening capacity of stakeholders to adapt to impacts of climate change and risks	
7. Capacity building to asses technology needs, modalities to acquire and absorb them, design , evaluate and host projects		Building block for developing National Mitigation Plan			
8. Identification and submission of prioritized technologies needs		Building block for developing National Mitigation Plan			

Enabling Activity Commitment	Work Done Under first enabling activity Work Done under other projects	Work proposed in preparation of second national communication			
		Planning and execution	Capacity Building		
			Data gathering and Research	Institutional Strengthening	Training and Education
9. Capacity Building for Participation in systematic observation networks		NA	NA	Development of projections if climate change variables over the southern continent and to improve information on climate conditions. High resolution scenarios will consist of downscaling through selecting time-slices from a global model (LMDZ) and nesting a regional model (MM5)	Additional training will include collection, processing and validation of proxy data
Compilation and production of Second National Communication			NA	NA	NA

2. Key policy and institutional reforms to be sought:

This project seeks to ensure that appropriate climate change policies with respect to adaptation and mitigation concerns are adequately incorporated into national planning. To this end, adaptation measures will be developed based on assessment of vulnerable sectors and geographical regions; and form the basis for integrating adaptation and mitigation policies into national planning.

In terms of institutional reforms, the project will strengthen coordination among the various institutions and groups that have been working on climate change studies prior to and after the submission of the First Communications. Furthermore the project will strengthen institutional capacity in terms of identification of adaptation and mitigation measures and the development of adaptation and mitigation policies accordingly.

3. Benefits and target population:

This project will benefit the country as a whole, including decision-makers and technical personnel in government, the private sector (including agriculture, energy) the general populace (through improved water resources management and so on). The primary benefit of engaging in the activities involved in the preparation of the Second Communications will be strengthened institutional capacity to address climate change issues; as a result of increased awareness and knowledge of the dimensions of the problem within the Argentine context and consequently of appropriate adaptation measures and tools to address it.

Specific benefits include improved capacity in design and implementation of adaptation policies and responses; a more coordinated approach to addressing climate change issues at the provincial and national levels; improved data sets for informing decisions on adaptation policies; increased involvement of stakeholders through comprehensive public awareness and education programs. Of significant benefit no doubt, also are the environmental benefits that will derive from the project such as protection of ecosystems that are vulnerable to climate change, improved air quality among others.

Primary beneficiaries of this project will be national and provincial governments, as well as stakeholders vulnerable to climate change and its effects such as farmers, residents of coastal and delta areas. NGOs, members of the public, students will benefit from additional training and information from project activities.

4. Institutional and implementation arrangements:

The project will be executed by Fundación Bariloche, an NGO designated by the Government of Argentina, under close supervision and monitoring from the Ministry of Foreign Affairs. Also, the project will have a Steering Committee at political level, where representatives from the main federal authorities will participate in general project supervision. Besides, a technical panel of experts will ensure the soundness of studies and policies developed by the project. The Ministry of Foreign Affairs is the focal political and operational point for GEF and will monitor the implementation of the project. It will also liaise with UNFCCC Parties and international organizations. The Clean Development Office at the Secretariat of Environment, which governing board include representatives from the governmental agencies dealing with climate change, will be a supporting basis for developing the mitigation plan.

Fundación Bariloche (FB), created in 1963, is 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). FB has an 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 has participated in the making of the national GHG emissions inventory; in the first communication to the COP of UNFCCC; and in the World Bank study on Flexible Mechanisms established under the Kyoto Protocol. With programs in energy economics, and environment, FB has a working relationship with prestigious international organizations such as WRI, UNDP, CEPAL, IISD, RISO, and the European Union.

The project studies will be contracted and coordinated by FB, according to a detailed Project Implementation Plan; and to the Procurement Plan acceptable to the Bank. It is anticipated that a small number of studies will be contracted; during appraisal a Procurement Plan will be pursued. All Terms of Reference will be prepared in close coordination with the Secretariat of Foreign Affairs (SFA) and will have the approval of the Steering Committee and the Panel of Experts. Also, consultants will be selected under the same mechanism, according to the selection criteria and rules applicable to World Bank loans. Fundación Bariloche will follow the rules and regulations of the World Bank for procurement and disbursement when implementing the project.

D: Project Rationale

1. Project alternatives considered and reasons for rejection:

N.A.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned):

Sector issue	Project	Latest Supervision (Form 590) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
Protection of Ozone Layer	Reduction of Ozone Depleting Substances project	S	S
Natural Resource Management	Biodiversity Conservation Project	S	S
Environment	Pollution Management	U	U
Renewable Energy	Renewable Energy in Rural Markets	U	S
Other development agencies			
Country Study on Climate Change (UNDP)	Country Study		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in proposed project design:

The first communication of the parties was carried out by UNDP in 1997; later, a revised communication was produced in 1999. Later that year, the Bank sponsored a study on opportunities under the flexible mechanisms recently established by the Kyoto Protocol. The lessons learned can be summarized as

follows:

- Participation of political stakeholders and decision makers in the development of policies and strategies is key, as this will ensure ownership and commitment for implementation.
- 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.
- Development of local emission factors and carbon sequestration coefficients is necessary, as Argentina presents particularities not easy to standardize with general approaches.
- Development of regional circulation models is important to better estimate vulnerability of fragile and critical ecosystems.
- 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.

4. Indications of borrower commitment and ownership:

The GOA has shown a consistent commitment to the topic of climate change and has demonstrated leadership in the advancement of current global policies that address this issue. In accordance with the UNFCCC and COP decisions, GOA carried out the Project Study on Climate Change, and as a result, the First National Communication of the Argentine Republic to the UNFCCC was submitted in 1997. Argentina was amongst the very first non-Annex I nations to submit a National Communication to the UNFCCC.

The first communication reported on the Argentine national context, GHG 1990 and 1994 inventories, vulnerabilities, and on national Strategies and Policies and Measures to implement the Convention. The 1997 inventory was the starting point for a series of international studies that have used the Argentinean example to debate methodological aspects and conceptual approaches to evaluate mitigation actions.

Continuing governmental participation in climate change issues has encouraged academic institutions to contribute to the study of climate change. Studies and research on environmental issues are in full development in universities, research centers and even in private enterprises, along the whole country. Each group is involved in issues of a national and regional nature, in accordance with their particular interests.

In an international context, the Argentinean government has a trajectory of participation in conventions and negotiations that address climate change issues. The GOA has had an active participation in the negotiation of the UNFCCC and the Kyoto Protocol, contributing at the same time to the establishment and functioning of GEF and to the activities of the IPCC. In November 1998, Argentina hosted the UNFCCC Fourth Meeting of the Conference of the Parties (COP-4), and contributed to the understandings reached in Bonn and Marrakech in July and November 2001 for the implementation of the Buenos Aires Plan of Action (BAPA). Under the BAPA, Parties set a two-year deadline for strengthening FCCC implementation and preparing for the future entry into force of the Kyoto Protocol.

Argentina participates in the Intergovernmental Panel on Climate Change (IPCC), is member of its bureau, holds key posts in the preparation of the IPCC Special Reports (application of Article 3 of the Kyoto Protocol). More than 20 Argentine scientists are engaged as leading and contributing authors as well as review editors of the IPCC Assessment Reports and, some of them, were involved in the preparation of the IPCC TAR Synthesis Report. Argentina's specialists are currently contributing to the development of IPCC Technical Papers, such as that on Climate Change and Sustainable Development,

Climate Change and Biodiversity, and CO₂ concentrations involving dangerous effects to natural systems.

The commitment of the Argentinean government to support national and global initiatives aiming at: i) understanding climate change; and ii) developing mitigating strategies, has been continuous for over a decade. This commitment continues today, as will be demonstrated by the outcomes of the second national communication. This project will enable the GOA to produce its Second National Communication as mandated by Art.12.1 of the UNFCCC and decisions 10/CP.2, 11/CP.2, 2/CP.4 and 8/CP.5. This second report will complement ongoing activities undertaken by GOA to implement the UNFCCC. Expected results include institutional strengthening in areas related to development and implementation of policies and measures aimed at mitigating climatic change.

GOA has submitted an endorsement letter supporting this project to the Director of the Country Management Unit.

5. Value added of Bank support in this project:

The Bank as one of the 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.

E: Issues Requiring Special Attention

1. Economic

Argentina is in the throes of economic recession characterized by a plunge of the peso by as much as 60% since it was devalued and allowed to float in early January 2002 following years of being pegged to the US dollar. In an effort to curb the rapid devaluation of its currency, Argentina recently imposed restrictions on foreign exchange holdings in domestic and foreign accounts. National Banks were ordered to limit their dollar holdings and restrictions on bank transactions were imposed. Additionally, restrictions on cash withdrawals known as the "corralito" were created, as a means of protecting the financial system from bankruptcy due to insufficient liquidity and to act as a pseudo-monetary policy instrument.

Careful consideration therefore needs to be made when selecting a Fund transfer mechanism (special account) for this project.

2. Financial

NA

3. Technical

NA

4. Institutional

This project will be executed by FUNDACION BARILOCHE, and it will require effective inter-agency coordination and participation of all stakeholders, including non-governmental institutions. As plans and strategies that cross all sectors will be developed, a great degree of institutional coordination, participation, and transparency is needed.

While the Secretariat of Foreign Affairs will be coordinating and supervising the general implementation process, there will be a Steering Committee and a Panel of Experts which will help ensure that participation and transparency will be present.

5. Environmental

5.1 Environmental category and justification/rationale for category rating:

Category 'C' rating.

The focus of this project is environmental and as such the major environmental effects of the project are expected to be beneficial. This project will not be implementing any adaptation measures. However, selection of adaptation measures to address climate change impacts in vulnerable areas will be based on analysis of alternatives from an environmental standpoint and preparation of environmental impact assessments where applicable.

Medium and long-term effects of climate change such as changes in agricultural patterns, vegetation cover, biodiversity, precipitation, wind speed and direction have great potential for major environmental and subsequently social impacts. The project will allow environmental and social considerations to be taken into account in national planning on climate change.

5.1.1 For Category A and B projects, timeline and status of EA

EA start-up date:

Date of first EA draft:

Expected date of final draft:

5.2 Determine whether an environmental management plan (EMP) will be required and its overall scope, relationship to the legal documents, and implementation responsibilities. For Category B projects for IDA funding, determine whether a separate EA report is required. What institutional arrangements are proposed for developing and handling the EMP?

5.3 How will stakeholders be consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed EMP?

5.4 Are mechanisms being considered to monitor and measure the impact of the project on the environment? Will the indicators reflect the objectives and results of the EMP section of the EA?

6. Social

- 6.1 Summarize key social issues arising out of project objectives, and the project's planned social development outcomes. If the issues are still to be determined, describe current or planned efforts to do so.

The only potential social issues are linked to the level of participation achieved. The project is aimed at developing strategies and plans for both mitigation and adaptation; therefore, the community and stakeholder participation is key to ensure implementation.

Promotion of public awareness:

- Approximately 10% of the total budget of the project has been assigned to raising public awareness levels. The is allocating significant funds to education and to the general change in perception of the overall population

Elaboration of second communication

- The Government has made plans to publish and distribute the communication widely, further promoting communication efforts.

- 6.2 Participatory Approach: How will key stakeholders participate in the project?

- One of the project objectives is to integrate climate change issues into national planning. The project will be coordinated by INGEIS which will act to ensure participation by all stakeholders.
- The Ministry of Foreign Affairs will monitor the implementation of the project.
- Public awareness activities will provide opportunity for various members of the public to participate. Activities will also feature tailored messages targeted at identified audiences such as students, professionals, clubs and civil organizations, media personnel, community leaders and so on through seminars, workshops, educational material and web-based discussion groups.

- 6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

- The project will develop a pilot plan of public awareness education for all members of the community. One of its objectives is that of providing methodology and experience to NGOs for future action in the field of climate change.
- Also, project implementation emphasizes participation, through workshops and seminars. Informal meetings and discussions will be promoted between, among others, members of the private sector, NGOs, national and regional public servants, academics, and civil society leaders, to encourage exchanges of information and collaborations

- 6.4 What institutional arrangements are planned to ensure the project achieves its social development outcomes?

- The Secretary of Desarrollo Sustentable y Política Ambiental will be involved in evaluating project progress and in providing support and cooperation

- 6.5 What mechanisms are proposed to monitor and measure project performance in terms of social development outcomes? If unknown at this stage, please indicate

TBD.

7. Safeguard Policies

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability		
Environmental Assessment (OD 4.01)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> TBD
Natural habitats (OP/BP/GP 4.04)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Forestry (OP 4.36)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Pest Management (OP 4.09)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Cultural Property (OPN 11.03)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Indigenous People (OD 4.20)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Involuntary Resettlement (OP 4.30)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Safety of Dams (OP 4.37)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Projects in International Waterways (OP 7.50)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD
Projects in Disputed Areas (OP 7.60)	<input type="radio"/> Yes	<input checked="" type="checkbox"/> No	<input type="radio"/> TBD

7.2 Project Compliance

(a) Describe provisions made by the project to ensure compliance with safeguard policies which are applicable.

N/A

8. Business Policies

8.1 Check applicable items:

- ☐ _ Financing of recurrent costs ([OMS 10.02](#))
- ☐ _ Cost sharing above country 3-yr average ([OP/BP/GP 6.30](#))
- ☐ _ Retroactive financing above normal limit ([OP/GP/BP 12.10](#))
- ☐ _ Financial management ([OP/BP 10.02](#))
- ☐ _ Involvement of NGOs ([GP 14.70](#))

8.2 For business policies checked above, describe issue(s) involved.

N/A

F: Sustainability and Risks

1. Sustainability:

A critical factor for the sustainability of the project benefits is the capacity for the country to produce the Second and further National Communications. Also, the endorsement of produced information, and strategies and plans resulting from the project, from all relevant authorities dealing with climate change issues

2. Critical Risks: (reflecting the failure of critical assumptions found in the fourth column of Annex 1)

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
GHG Inventory is solid and accepted by stakeholders	M	Make information public and open to comments and suggestions by general public

Risk	Risk Rating	Risk Mitigation Measure
Secretary of Energy coordinates methodology for energy balance	M	Involve key players at Secretary of Energy in the development
Data are available from regional authorities	M	Check from the beginning the need to produce primary information Have political support
Data and information produced is reliable and sound	L	Utilize state-of-the-art methodologies
Political commitment	M	Ensure that Steering Committee on Climate Change meets periodically to know the development of the project
Economic and technical feasibility of potential energy efficiency measures	N	Build probable scenarios to anticipate different outcomes
Stakeholders support measures in Climate Change Mitigation and Carbon Sequestration National Plan	M	Promote participation of NGO and private sector
From Components to Outputs		
Political commitment	M	Steering committee meets and participation is ensured
Consistent data can be gathered around the country	M	Local universities will be involved, and government agencies will be consulted from the beginning
Accurate and consistent records of GHG emissions exist	L	Data available from former communications and updated registers
Overall Risk Rating:		
	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

Risk Analysis:

The overall risks associated with this project are modest. The project has been designed to support the climate change initiative of GOA, a government that has shown a relatively consistent commitment with the issue of global climate change. The active participation of the GOA in key positions of the IPCC, for instance, indicates the level of commitment of the administration. Furthermore, a significant factor in the success of this project involves raising the level of awareness of both the industry and the general public to the topic of climate change and to the measures that can be adopted to mitigate its effects. The record of the actions taken by the government over the past decade is proof that measures to change public perceptions have and will continue to be achieved. These measures include, for example, the implementation of consistent monitoring and the development of inventories of GHG emissions.

G: Project Preparation and Processing

1. Has a project preparation plan been agreed with the borrower: (see Annex 2 to this form)

[] Yes, date submitted: MM/DD/YY [] No, date expected: MM/DD/YY

2. Advice/consultation outside country department:

[] Within the Bank:

[] Other development agencies:

3. Composition of Task Team: (see Annex 3)

Juan Andres Lopez-Silva Team Leader

Yewande Awe
Catalina Marulanda

Environmental Specialist
Consultant Environment

4. Quality Assurance Arrangements:

Peer Reviewers:

5. Management Decisions:

Issue	Action/Decision	Responsibility

[] GO

[] NO GO

Further Review [Expected Date]

(signature)

Team Leader: Juan Andres Lopez-Silva

(signature)

Sector Manager/Director: John Redwood

(signature)

Country Manager/Director: Myrna Alexander

Annex 1: Project Design Summary

Argentina Enabling Activities Leading to Second National Communication of the Argentine Government to the Conference of Parties to UNFCCC

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Sector-related CAS Goal:	Sector Indicators:	Sector / Country Reports:	(from Goal to Bank Mission)
Promoting sustainable growth, pollution abatement, integration of global warming objectives in local strategies	<ul style="list-style-type: none"> -Local capacity enhanced to incorporate global environmental dimension in sector planning -Increase in number of projects dealing with climate change and pollution abatement 	Second National Communication to the UNFCCC Sector Work (World Bank)	Macroeconomic stability Political acceptance
Project Development Objective:	Outcome / Impact Indicators:	Project Reports:	(from Objective to Goal)
<ul style="list-style-type: none"> ▪ Support enabling activities for the preparation of the Second National Communication of the GOA to the Conference of the Parties of UNFCCC ▪ Update and improve GHG National Inventories ▪ Strengthen local capacities to integrate climate change issues in planning and in the development of public awareness ▪ Assist in the preparation of National mitigation policies and measures ▪ Assess vulnerability and adaptation options for key ecosystems and agricultural regions 	<ul style="list-style-type: none"> ▪ Institutional procedures in place to prepare national communications ▪ Updated GHG emissions inventory and trend analysis ▪ Local factors of emissions and carbon sequestration ▪ Harmonized Energy Balance ▪ Assessment of vulnerability of particular ecosystems to climate change (coastal zone, Pampa, Patagonia) ▪ Assessment of Economic impact of climate change ▪ Design of adaptation measures ▪ High Circulation Model developed ▪ Assessment of technologies and policies that aim at reducing the effects of climatic variations ▪ Assessment of priorities and opportunities for mitigation carbon sequestration and technology transfer 	<ul style="list-style-type: none"> ▪ Second National Communication to the UNFCCC ▪ Project Reports 	Commitment from Agencies and stakeholders Sustainability of institutional framework Programs, Policies and Programs addressing climate change are economically and technically feasible
Project Global Objective: Development of country policies that will contribute to global efforts to mitigate climate change	<ul style="list-style-type: none"> ▪ Measurements of variation of local climatic patterns ▪ Results from simulations of global circulation models using regional indicators 	Reports of the UNFCCC	Sector policies include climate change mitigation and carbon sequestration measures

Output from each component:	Output Indicators:	Project Reports:	(from Outputs to Objective)
a. GHG emissions inventory <ul style="list-style-type: none"> ▪ GHG emissions inventory update ▪ Factors of Emission ▪ Energy balance harmonization 	<ul style="list-style-type: none"> ▪ information gathering from various economic sectors; ▪ data processing, using IPCC methodological tools; ▪ analysis on evolving GHG emission trends and cross sector evaluation; ▪ review and adjustment of national emission factors, with emphasis in methane emissions from cattle enteric fermentation; ▪ review and study recent methodological improvements of IPCC; ▪ review of late national inventories, and identification of methodological or informational gaps; ▪ review methodology recognized by IPCC for determining own factors of emissions for energy sectors as well as that for land-use and forestry Record of national emissions factors per economic sector. 	Progress, evaluation, and completion reports	<ul style="list-style-type: none"> ▪ GHG Inventory is solid and accepted by stakeholders ▪ Secretary of Energy coordinates methodology for energy balance
b. Vulnerability Assessment <ul style="list-style-type: none"> ▪ Assessment of vulnerability in specific ecosystems (Patagonia, Pampa Humeda, Coastal Zone) ▪ Evaluation of climate change impacts on hydrological resources and on the energy sector ▪ Economic impact assessment ▪ Design adaptation measures ▪ Regional Climate models 	<ul style="list-style-type: none"> ▪ Environmental indicators and data sets either generated or updated will include: <ol style="list-style-type: none"> i) water level dependence on tidal fluctuations along coastline ii) seasonal record of flood and drought in the flatlands iii) seasonal, regional water resource fluctuations in the flatlands iv) dependence of crop performance on water inputs v) precipitation records in Patagonia ▪ Hydrological budget for various regions of the country ▪ Mapping of the following indicators: <ol style="list-style-type: none"> i) zones of water scarcity ii) zones of potential natural hazards iii) zones of environmental stress iv) zones of population stress ▪ Identification of institutional capacity gaps to address potential natural disasters ▪ Review of regulatory framework to address natural disasters ▪ Review of natural energy resources ▪ Figures of national energy demand ▪ Regional Climate Model ▪ Various projections of climatic scenarios as function of emissions levels ▪ Results from simulations of mitigation strategies 	Progress, evaluation, and completion reports	<ul style="list-style-type: none"> ▪ Data are available from regional authorities ▪ Data and information is reliable and sound

<p>c. Identification of alternatives aimed at reducing GHG emissions</p> <ul style="list-style-type: none"> ▪ DSM opportunities ▪ Transport energy efficiency ▪ Renewable Energy Technologies ▪ Carbon sequestration 	<ul style="list-style-type: none"> ▪ DSM Opportunities <ul style="list-style-type: none"> (i) Evaluate energy pricing schemes and trends; (ii) Review current energy efficiency programs; (iii) Identify energy saving measures at the demand side, and pre-feasibility analysis of options for households, public and commercial buildings; (iv) Identify energy saving measures and pre-feasibility analysis at the production sector, including co-generation and self-generation. (v) Cost-effectiveness and incremental cost evaluation of measures. (vi) Analysis of the possibilities of energy sources switch. ▪ Assessment of opportunities for energy efficiency in transport <ul style="list-style-type: none"> (i) Evaluate energy use in the transport sector. (ii) Identify feasible options to improve energy efficiency in transport, including analysis of regional and national transportation and travel needs, energy efficiency of current transport mode mix, and infrastructure assessment. (iii) Evaluate fuel mixes and fuel formulation, with the aim of coordinating the promotion of efficient vehicle technologies with <i>cleaner</i> fuel specifications. (iv) Evaluate government plan, programs, and policies, which may be used to boost energy efficiency in transportation. (v) Identify opportunities for GEF and CDM fundable pilots aimed at promoting energy efficiency. ▪ Assessment of renewable energy technologies <ul style="list-style-type: none"> (i) Identify technologies (ii) Analyze opportunities for RETs (iii) Cost-effective analysis of different technological options ▪ Assessment of opportunities for CO₂ sequestration <ul style="list-style-type: none"> (i) Identify areas suitable for forestation and reforestation or the establishment of plantations for the sequestration of CO₂. (ii) Assess economic cost and social impacts of forestation and reforestation as substitutes for the agricultural use of former forest and forested soils (iii) Evaluate alternatives to deforestation when it is done to clear land for crop and livestock production or a way to obtain fuel. (iv) Assess feasibility of sink enhancement in native forests through sustainable management practices. (v) Survey CDM opportunities on carbon sequestration. (vi) Evaluate legal and regulatory framework governing native forest management at the regional and national levels. 	<p>Progress and completion reports</p>	<p>Political commitment</p> <p>Economic and technical feasibility of potential energy efficiency measures</p> <p>Interest and support from stakeholders</p>
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d. Encouragement of public environmentally responsible behavior	<ul style="list-style-type: none"> Fostering awareness - a sensitivity to the climate change and associated problems knowledge - an understanding of how climate change functions, how people interact with and depend on climatic conditions, and how climate change problems may be solved attitudes - a concern for the environment and the personal motivation and commitment to participate in environmental improvement and protection skills - the ability to identify and investigate climate change problems and to contribute to their resolution participation - active involvement in working toward the reduction of climate change. Increasing voluntary programs/ public participation Consultation of the climate change web site 	<ul style="list-style-type: none"> Progress reports. Monitoring of effectiveness of campaign can be done through: <ul style="list-style-type: none"> i) utility bills ii) enrollment figures at education institutions iii) balance sheets of pro-environmental companies Completion report 	<ul style="list-style-type: none"> Political commitment. Available channels of communication Public acceptance
e. Drafting and distribution of Second National Communication to FCCC	<ul style="list-style-type: none"> Compilation of environmental, economic, and social indicators; Draft communication Consultation with authorities and main stakeholders; 	Final document to FCCC	Political endorsement
f. Monitoring of project performance	<ul style="list-style-type: none"> General coordination of activities; Monitoring performance. 	Progress and workshop reports	Funding and project completion will take place as planned Political support
Project Components/Sub-components:	Inputs: (budget for each component)	Project Reports:	(from Components to Outputs)
a. Updating of National GHG Inventories and development of emission factors <ul style="list-style-type: none"> GHG Inventory Local Emission Factors Comparative GHG Inventory analysis Energy Balance harmonization 	US\$0.496 million (GEF: US\$0.32 M) US\$0.268 million US\$0.101 million US\$0.074 million US\$0.054 million	Progress, evaluation, and completion reports	<ul style="list-style-type: none"> Access to cross-sector information is available Accurate and consistent records of GHG emissions exist

b. Vulnerability assessment and institutional strengthening for adaptation <ul style="list-style-type: none"> Assessment of coastal zone vulnerability Assessment of Pampa Bonaerense's Social vulnerability Assessment of climate change impact on watersheds in Chaco, Pampa, and Paraná River Agric. Production at Pampa Assessment of impact from rainfall increases in Patagonia Economic Impact Assessment to help formulate Adaptation Plan (stage II) Assessment of vulnerability of energy system Design of Adaptation measures (stage II) Development of High Circulation Models 	US\$0.744 million (GEF: US\$0.4 M) US\$0.134 million US\$0.054 million US\$0.047 million US\$0.141 million US\$0.107 million US\$0.094 million US\$0.074 million US\$0.054 million US\$0.04 million	Progress, evaluation, and completion reports	<ul style="list-style-type: none"> Consistent data can be gathered around the country
c. Formulation of National Mitigation Plan <ul style="list-style-type: none"> Assessment of DSM opportunities Assessment of opportunities for energy efficiency in transport Assessment of renewable energy technologies Opportunities for CO₂ sequestration 	US\$0.228 million (GEF: US\$0.170 M) US\$0.08 million US\$0.034 million US\$0.02 million US\$0.094 million	Progress and completion reports	<ul style="list-style-type: none"> Political Commitment
d. Promotion of public awareness	US\$0.188 million (GEF: US\$0.12 M)	Progress and completion reports	
e. Elaboration of Second National Communication to FCCC	US\$0.06 million (GEF: US\$0.05 M)	Final document to FCCC	The GOA will continue to endorse global efforts to limit the extent of climate change
f. Project Management	US\$0.134 million (GEF: US\$0.08 M)	Progress and workshop reports	Funding and project completion will take place as planned

Formulation of National Mitigation Plan

GOA will start the design and formulation of a National Mitigation Plan, which will include voluntary as well as mandatory measures. The following series of activities have been proposed as part of the plan, and would make part of the Terms of Reference:

A. Assessment of opportunities for demand sector management response measures

- (i) Evaluation of energy pricing schemes and trends
- (ii) Review of current energy efficiency programs and scope of intervention.
- (iii) Identification of energy saving measures at the demand side, and pre-feasibility analysis of options for households, public and commercial buildings.
- (iv) Identification of energy saving measures and pre-feasibility analysis at the production sector, including co-generation and self-generation.
- (v) Cost-effectiveness and incremental cost evaluation of measures.
- (vi) Analysis of the possibilities of energy sources switch.

B. Assessment of opportunities for energy efficiency in transport

- (i) Evaluation of energy use in the transport sector.
- (ii) Identification of feasible options to improve energy efficiency in transport, including analysis of regional and national transportation and travel needs, energy efficiency of current transport mode mix, and infrastructure assessment.
- (iii) Evaluation of fuel mixes and fuel formulation, with the aim of coordinating the promotion of efficient vehicle technologies with cleaner fuel specifications.
- (iv) Evaluation of government plan, programs, and policies, which may be used to boost energy efficiency in transportation.
- (v) Identification of opportunities for GEF and CDM fundable pilots aimed at promoting energy efficiency.

C. Assessment of renewable energy technologies

- (i) Identification of technologies to be considered
- (ii) Analysis of needs capable to be satisfied by renewable energy technologies
- (iii) Identification of the economic niche for renewable technologies
- (iv) Cost-effective analysis of different technological options

D. Assessment of opportunities for CO₂ sequestration

- (i) Identification of areas suitable for forestation and reforestation or the establishment of plantations for the sequestration of CO₂.
- (ii) Assessment of economic cost and social impacts of forestation and reforestation as substitutes for the agricultural use of former forest and forested soils
- (iii) Evaluation of alternatives to deforestation when it is done to clear land for crop and livestock production or a way to obtain fuel.
- (iv) Assessment of the feasibility of sink enhancement in native forests through sustainable management practices.
- (v) Survey of CDM opportunities on sequestration.
- (vi) Evaluation of the legal and regulatory framework governing native forest management at the regional and national levels.
- (vii) Survey of options to improve reporting and control of wildfires.