PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Towards a green economy in Uruguay: stimulating sustainable production practices and low-emission technologies in prioritized sectors.		
Country(ies):	Uruguay	GEF Project ID:[1]	4890
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):		Submission Date:	2012-03-13
GEF Focal Area (s):	Climate Change	Resubmission Date:	2012-04-11
		Project Duration (Months)	48
Name of parent program (if applicable): ➢ For SFM/REDD+ ☐		Agency Fee ($):	339,273

A. FOCAL AREA STRATEGY FRAMEWORK[2]:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
CCM-1	Technologies successfully demonstrated, deployed, and transferred	1.1: Innovative low-carbon technologies demonstrated and deployed on the ground	GEFTF	550,000	625,000
	Enabling policy environment and mechanisms created for technology transfer	1.2: National strategies for the deployment and commercialization of innovative low-carbon technologies adopted		400,000	400,000
CCM-3	Favorable policy and regulatory environment created for renewable energy investments	3.1: Renewable energy policy and regulation in place	GEFTF	504,727	505,000
	Investment in renewable energy technologies increased	3.2: Renewable energy capacity installed 3.3: Electricity and heat produced from renewable sources		1,775,000	18,020,000
		Sub-Total		3,229,727	19,550,000
		Project Management Cost[3]	GEFTF	163,000	250,000
		Total Project Cost		3,392,727	19,800,000

B. PROJECT FRAMEWORK

Project Objective: To transform the different kinds of waste generated in the agriculture and the agroindustry production chains in Uruguay in various types of energy and/or other byproducts, aiming at the development of a low carbon sustainable production model, supported by an adequate technology development and transfer.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Cofinancing ($)
Policy and regulatory framework strengthened	TA	1. The policy framework to promote sustainable production schemes and implement low-	•A taskforce has been established under coordination of DNE/DINAMA/MGAP to prepare strategies in the	GEFTF	504,727	505,000

[1] Project ID number will be assigned by GEFSEC.
[2] Refer to the reference attached on the Focal Area Results Framework when filling up the table in item A.
[3] GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

		emission technologies in prioritized sectors (agricultural and farming sector, processing industries, small communities) has been strengthened.	targeted sectors. •Studies have been carried out as inputs for enhancing policy instruments on: (i) regulation to promote sustainable productions schemes and implement low-emission technologies in prioritized sectors; (ii) promotion of environmental responsibility within target sectors ; and (iii) development of market opportunities. •Policies for financial incentives have been developed and/or fine-tuned; provisions and guidelines for the non-grant instrument have been established in close cooperation with local institutions e.g. local banks •Carbon market project opportunities have been explored (including e.g. voluntary credits amongst others) in the targeted sectors			

Waste valorization technological capacities strenthened	TA	2. The in-country technological capacities to design and implement waste to energy valorization altenatives have been enhanced.	•The waste streams generated by the different targeted production chains in Uruguay (bovine meat chain, sheep meat and wool chains, milk chain, porcine and poultry chains, biofuels, etc) have been characterized, and technological solutions for energy production and other forms of waste valorization have been identified. Potentiality of energy production or other byproduct generation has been assessed and priorities have been defined •Laboratory research for targeted sectors identified in previous stages is carried on for technology development, adaptation, assessment and transfer.[This will be fully covered by co-financing]. •Pre-feasibility studies (including social, economic and environmental dimensions) have been carried out to assess the viability of most promising waste valorization processes identified for each production chain.	GEFTF	550,000	625,000

Demonstration of waste to renewable energy valorization technologies	Inv	3. The feasibility of waste to energy valorization projects have been demonstrated in full-size scale in the targeted sectors.	•Feasibility and technical design studies have been carried out for at least three large full-scale cases in the targeted sectors. •At least three full-scale fully functional plants have been comissioned by large private agro/bio-industrial companies. •Feasibility and technical design studies have been carried out for at least five full-scale cases in small and medium size farms or industries in the targeted sectors. •At least five full-scale demonstration projects in medium or small size agroindustries have been implemented, possibly incorporating urban residues of nearby small cities •A financial mechanism (e.g. revolving fund) has been put in place targetetting investments in low-emission technologies at small- and medium sized farms in order to assure scaling-up of such technologies. •A portfolio of cost-effective, sustainable production schemes including waste valorisations and low-emission technologies treatment has been prepared and implemented at small farms •Operators have been trained on the operation of installed plants	GEFTF	1,775,000	18,020,000

Delivery skills and promotion of waste to renewable energy transformation, sustainable production schemes and low-emission technologies	TA	4. The capacities of sector agents to deliver state-of-the-art sustainable production schemes through sustainable waste management and low-emission treatement technologies in prioritized sectors have been strengthened.	•A web-based knowledge management platform has been created for the exchange of know-how and expertise on sustainable production schemes, in particular waste to energy production and other sustainable waste management, and low-emission treatement technologies among researchers, sector organizations and cooperatives, consultants, and international experts. •Tool-kits to promote waste to energy transformation, sustainable production schemes and low-emission technologies have been developed for agro-industrial companies, small farm holders, sector organizations, among others. •A campaign targetting private companies in the agricultural and farming sectors has been implemented to promote waste to energy transformation, sustainable production schemes and low-emission technologies and exchange experiences in the region.	GEFTF	400,000	400,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
			Sub-Total		3,229,727	19,550,000
			Project Management Cost[4]	GEFTF	163,000	250,000
			Total Project Costs		3,392,727	19,800,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, ($)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount ($)
National Government	DNE, DINAMA, MGAP, UDELAR	In-kind	1,090,000
National Government, Public Entities	Instituto Nacional de Colonizacion and sector organizations	Cash / In-kind	2,500,000
Sector Organizations	INAC, INALE, CONAPROLE	Cash	100,000

[4] Same as footnote #3.

Other Multilateral Agency (ies)	MGAP/World Bank Loan (P124181)	Loan (total $48M)	2,000,000
Other Multilateral Agency (ies)	CONAPROLE/IDB-FOMIN (UR-1041)	Grant (total $1.5M)	250,000
Private Sector	Agro/bio-industries	Cash	13,750,000
GEF Agency	UNIDO	Cash	60,000
GEF Agency	UNIDO	In-kind	50,000
(select)		(select)	
(select)		(select)	
Total Cofinancing			19,800,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
Total Grant Resources						

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

[2] Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 the GEF focal area/LDCF/SCCF strategies /NPIF Initiative: Climate Change

The Project is fully consistent with Objective CCM-1 of the GEF-5 Results Framework (Promote the demonstration, deployment, and transfer of innovative low-carbon technologies) by (i) transferring advanced technological solutions to improve environmentally sound technologies in the target sectors and the adaptation thereof to local conditions; (ii) demonstrating the technical feasibility of transforming waste to energy and another forms of waste valorization in prioritized sectors (agricultural and farming sector, processing industries and small communities), reducing the amount of waste disposal in the land and landfilled; (iii) demonstrating selected, low-emission waste treatment technologies - including the capture and use of biogas for energy purposes- in a number of full-scale enterprises in collaboration with private partners and improving municipal solid waste landfill quality standards; and (iv) strengthening the policy and regulatory framework to promote the implementation of environmentally sound technologies, use of renewable energy technology, valorization of waste and low-emission waste treatment and for increasing market penetration of low-emission technologies. The Project will directly contribute to the outcomes of the GEF-5 Results Framework *"Technologies successfully demonstrated, deployed, and transferred"*, and *"Enabling policy environment and mechanisms created for technology transfer"*.

The Project is also supportive to CCM-3 (Promote investment in renewable energy technologies), as a result of the proposed project intervention, Uruguay will have strengthened the policy framework and established appropriate incentives for energy generation from agricultural and agro-industry waste and will have mobilized investment, directly as well as indirectly, in this particular area. In this regard, important GHG mitigation effects are expected compared to the baseline situation.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

N/A

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

N/A

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The proposed Project is designed to be inserted into the following legislation and high-level policy of the Government of Uruguay, to which it is supportive: (a) the national Environment Protection Act ("LGPA") No 17.283 (2000); (b) National Plan for Responding to Climate Change (2010) (c) the Water Protection Act No 14.859 (1978), the national Water Policy Law No 18.610 (2009); (d) the National Greenhouse Gas Inventory (2004) and the Third National Communication to the COP of the UNFCCC (2010), which demonstrate the contribution of the sectors targeted by the Project to the national greenhouse gas emissions and identified the priority action lines for both adaptation and mitigation; (e) the National Energy Plan 2008-2030; and (f) the National Action Plan for Environmentally Sustainable Production and Consumption

2010-2015 (2010), specifically transversal strategies T.2. "*Promote efficient use of energy and diversification of the energy matrix*" and T-5 *"Environmentally appropriate management of residues and waste flows"*, which targets in the priority sector dairy (P-1) and meat (P-2).

The Project further builds forth on -and contributes to- legislation to promote the investment in cleaner production technologies (Investment Law 16.906 (1998) and Decree 455/007, and the interconnection thereof to the electricity grid operated by UTE (Electricity Law No. 16.832 (1997).

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

Problem statement

The global objective of this project is to contribute to the goal of the National Plan for Responding to Climate Change (mitigation of GHG strategy) and the National Energy Policy 2008-2030 (which includes the promotion of renewable energy) through improving the local technology capacity to transform different kinds of waste generated in the agriculture and the agroindustry production chains in Uruguay into various types of energy and/or other by-products, aiming at the development of a low carbon sustainable production model.

The target sectors, agriculture and agroindustries, were selected because of their importance in the development of a green economy model in Uruguay, environmental benefits and the potentiality for energy generation and/or other kinds of waste valorisation, aiming at the mitigation of greenhouse gases.

This project will contribute to a comprehensive approach of technology solutions and capacity building for waste valorisation, generating territorial synergies between large, medium and small scale farms and agroindustries, as well as nearby small municipalities, aiming at a sustainable waste management and energy production.

Most of the production chains involved in this project are also present in many countries in Latin American and in other regions. Uruguay being the smallest country in South America, with a solid economic, political, social and cultural background, this project can be seen as a pilot plan aiming at the construction of a new green model for the development of many emerging countries.

Uruguayan economy is growing very fast: 6.5% GDP mean annual growth for the last 7 consecutive years. Agriculture, cattle and sheep farming have been –and are– a major contributor to the economy of Uruguay[5]. The warm, humid climate and the abundance of grasslands and arable soils create ideal conditions for agriculture, silviculture, and pasture for cattle and sheep. With a population of approx. 3.3 million people and an area of 176,215 km2 Uruguay produces large surpluses of meat, dairy products, agricultural produce, wood, leather and wool. There were more than 32,000 cattle farms in the country with a total stock of over 11 million bovines. The large majority (near 80%) are family-run cattle farms. Large establishments (over 1,250 ha) make up 8.6% of the total, but represent more than 50% of the sector in terms of land area and

[5] Agriculture accounted for 11.1% of GDP in 2008. Source: *"Uruguay at a Glance"*, World Bank / Development Economics LDB Database, 25 February 2011.

animals (2000). The number of dairy farms is much smaller (of the order of 4,500), with an average of 59 milk cows occupying 189 ha (2007)[6].

In a sparsely populated country like Uruguay, the waste and residues from traditional activities in the primary sector were generally not considered of major concern. The often severe environmental impacts of the corresponding processing industries were not recognized either until late. Residues from agriculture and agro-industries, such as sawdust, rice husk, bagasse and cow manure were commonly piled up or disposed of on the land. Not sufficiently treated liquid manure was discharged into streams and rivers, as well as the effluents from dairy factories, meat packagers, wool washeries and leather tanneries. The Government has established a national plan for sustainable production, which includes the dairy and meat sector among its main lines of action[7].

As a result of the insertion of Uruguay into the global markets and the inflow of foreign capital, the primary sector is undergoing a process of up-scaling and concentration of activities. Integrated cattle farms (the so-called "feedlots") and dairy factories (the "tambos") may count thousands of animals bound to a small area[8]. Manure is evacuated in liquid form and must be treated, which is usually done in open lagoons, causing methane releases. Regulation requires residues to be treated before discharge[9]. Some agro-industries follow a proactive approach, anticipating more stringent legislation in the future but also pursuing cleaner production as a business strategy. Other companies adhere to the mandatory requirements as long as investments in environmental measures are financially unrewarding.

The large majority of small farmholders in Uruguay generally have limited awareness of environmental issues. Given their weak investment capacity and the lack of readily available solutions for residues treatment, the Government expects that coercitive regulation will have limited effect. The traditional primary sector in Uruguay suffers a number of problems[10] that will likely induce a significant number of farmers to stop in the coming years. Small or medium-size, family-run farms will continue to be the mainstay of rural Uruguay however. Sector organizations and government entities provide assistance to enhance production methods, increase competitiveness and reduce environmental impacts. Initiatives supported by multilateral agencies include a World Bank/GEF programme[11] and the recently approved IADB/FOMIN project to promote energy efficiency among small dairy farmers[12].

---

[6] Source: Cadenas de Valor (I), Gabinete Productivo Etapa 2, Fase I, Presidencia de Uruguay. August 2008.

[7] The project *"Plan de Acción Nacional en Producción y Consumo Ambientalmente Sostenible 2010-1015"* UNEP/ORPALC-MVOTMA, SAF/IND-004-2008, Ministry of Housing, Territorial Planning and Environment, February 2010.

[8] Article dairy farm Estancias del Lago, Durazno. Source: newspaper "El Pais", Montevideo 21 July 2010.

[9] Decree 253/79, 9 May 1979, article 11.

[10] Including: a large heterogeneity of farm holders, lack of property rights, underinvestment, generational continuity, exposure to climate risks, price volatility and currency exchange risk. Half of the area used for dairy farming is not owned by the farmer. Source: Cadenas de Valor (I), Gabinete Productivo, August 2008.

[11] The World Bank/GEF Project Integrated Natural Resources and Biodiversity Management (P77676), GEF Approval date 9 June, 2005. It is implemented by the Ministry of Agriculture (MGAP) and generally known as the *"Programa de Producción Responsable"* (http://www.cebra.com.uy/presponsable/).

[12] The IADB Project *"Promoción de la mejora de la eficiencia energética y uso de energía renovables en pequeños y medianos establecimientos lecheros (UR-M1041)"* approved in 2011. The assigned grant from IADB´s multilateral investment fund (FOMIN) is US$ 1,500,566. The Project is implemented by the national cooperative of dairy producers (CONAPROLE).

On a regulatory and policy level, several relevant national plans have been conceived such as the National Plan for Responding to Climate Change 2010, the National Action Plan for Environmentally Sustainable Production and Consumption 2010 – 2015 and the National Energy Plan 2008-2030. However, currently further substantive inputs are required to assure that the above mentioned regulations effectively target the deployment of low-emission technologies and sustainable practices (i.e. waste-to-energy technologies). Furthermore, the Government is strengthening the policy for promoting environmentally and economically sustainable rural development through the provision of technical and financial assistance to improve productivity and sustainable utilization of natural resources. In November of 2011, the World Bank approved the project "Uruguay Sustainable Management of Natural Resources and Climate Change" with the Ministry of Livestock, Agriculture and Fisheries (MGAP) as the responsible agency. The development objective of the project is to support Uruguayan efforts to promote farmer adoption of improved environmentally sustainable and climate smart agricultural and livestock practices. This objective would be achieved through the development and implementation of instruments that would provide farmers with critical and timely information for the adoption of improved on-farm natural resources management as well as technical and financial assistance to promote investments in their production systems aimed at reducing risks and making them more resilient to extreme climatic events.

Therefore, to readdress the current trajectory of growth in the country and complement some of the ongoing initiatives above-mentioned, a pattern of agro-industrial development that is economically, environmentally and socially sustainable is herewith proposed, through the inclusion and adoption of a range of technologies in the production sectors of Uruguay that lead to sustainable growth schemas by implementing sustainable waste management and low-emission treatment technologies, mainly through the production of different kinds of energy (electricity, heat, biofuels).

Complementing the production chains waste analysis, proper management of urban solid waste is a fundamental part of sustainable development. The Ministry of Housing, Territorial Planning and Environment (MVOTMA) is planning and improving the waste management system promoting recycling, energy production and another forms of valorization of waste. In Uruguay, municipal solid waste generation is estimated in 2200 ton per day, with 58 % of organic matter. Out of the Metropolitan Area of Montevideo (AMM) only three of the 24 landfill surveyed, have an acceptable condition, with important negative environmental impacts. Alternatives of recycling, energy production and production of fertilizer from waste are under study in the country. There is an important potential of waste valorisation through transferring advanced technologies and demonstrating their technical feasibility.

While explicitly excluding waste valorisation from the Metropolitan Area of Montevideo[13], this project aims at considering the adequate management of solid waste from small municipalities. A first experience of biogas production from urban solid

[13] Waste solid urban case in the Montevideo area is under study within the World Bank Carbon Fund Project *"Montevideo Landfill Gas Recovery Project"* (P094495), Approval date 5 December 2006.

waste was the 1MW demonstration project at Las Rosas, in Maldonado[14], in which methane from the landfill is captured and used to generate electricity. However, the small size of the majority of the cities all over the country (excluding the Montevideo area) calls for the consideration of other solutions, based in the synergy with other projects, as those from production chains described above. With this project, the amount of landfilled waste an another forms of land disposal of solid and liquid waste are expected to drop considerably. Expected benefits are linked with the reduction of green house gas emission, together with the improving of the quality of water and soil.

As part of this new approach towards a green economy in Uruguay, the country has defined in 2008 a National Energy Policy "Uruguay 2030". In 2010, this long term energy policy was approved by a Special Committee including all political parties represented in the Uruguayan Parliament. This National Energy Policy is based in 4 Strategic Axes, short, medium and long-term Goals and many dozens of Action Lines. One of the Strategic Axes aims at the diversification of the energy mix, enhancing the share of renewable energies. One of the most relevant short-term Goals of the policy is to reach 50% of renewables in the global primary energy mix of the country by 2015, with more than 90% in the electric mix.

Many of the Action Lines were launched in order to reach these, as well as other, goals. The introduction of wind and forest biomass energy has received assistance from the GEF through the United Nations Development Programme (UNDP)[15]. Wind projects for a total of 937 MW have already signed a PPA contract with the national public utility UTE, with energy prices as low as 63,5 US$/MWh. Many of these projects are already under construction. In 2014, up to 28% of the total electricity of the country shall be produced using wind energy. Eight biomass power or cogeneration projects, with a total capacity of 170 MW, are already running and other 20 projects have already signed a PPA contract with UTE. The fuel used in these biomass plants is mainly forestry waste, black liquor and sugar cane bagasse.

Unlike wind and biomass and despite the large amount of different kinds of waste in Uruguay's production chains, energy generation from agriculture and agroindustrial waste is almost unexploited. The goal of the National Energy Policy is that, in the short-term, at least 30% of the total waste in the country shall be transformed into different types of end-use energy (electricity, heat, biofuels).

Concerning only biogas production, a preliminary power generation estimate is of the order of 50 MW[16]. This represents 5% of the mean total power demand in Uruguay (the total electricity demand in 2010 was 9550 GWh). This amount is significant from a strategic perspective of the energy policy and worthwhile further exploration. Most significantly, for small farmers, biogas production can be a valuable renewable energy source to replace LPG for heat production. Especially dairy farmers and small cheese producers face high energy costs for pasteurizing the milk; for them, biogas from cow manure can be an asset to reduce production costs. For agro-industries, investments in biogas facilities for energy purposes are usually unattractive. Waste treatment and

[14] World Bank Project P058303, *"Methane Recovery Demonstration Project from the municipal landfill of Las Rosas in the Municipality of Maldonado (Intendencia Municipal de Maldonado)"*. Approval date 9 May, 2000, closing date 31 December, 2005. GEF grant USD 400,000.

[15] The UNDP/GEF projects *"Uruguay Wind Energy Project"* (PIMS 2292) and *"Electricity production from Biomass in Uruguay"* (PIMS 3618).

[16] Estimates by National Energy Direction (DNE).

biogas capture however fit into a cleaner production approach, in which companies strive at maximizing the value of core and by-products while minimizing the burden for the environment. Large establishments may be able to use biogas for co-generation, delivering excess electricity to the national grid. In addition, state of the art technologies to produce ethanol from straw (rice straw, wheat straw, oat straw) will be also considered in the framework of this initiative. Furthermore, in addition to looking at renewable energy as an outcome, residuals can be also managed in variety of ways, including the development of marketable residual products used to fertilize or condition the soil and to produce cattle food, which will also be observed.

Concerning the academic sector, the "Agencia Nacional para la Investigación y la Innovación" (ANII), together with the "Dirección Nacional de Energía" (DNE), the public utility (UTE) and the national oil company (ANCAP), manage the "Fondo Sectorial de Energía", a fund to finance research and development projects in line with the National Energy Policy. During the first 2 years of the fund, more than a hundred projects were proposed, many of them in areas related to this project. In particular, the University of the Republic (UDELAR)[17] performs research in the field of biological treatment technologies of waste. Experts from the department of reactor engineering are a source of information for sector organizations and private companies. The department recently prepared an assessment of opportunities for anaerobic treatment of effluents in the meat packing sector, including the use of biogas[18]. It is concluded that climate change mitigation in this sector is feasible, preferably under a programmatic approach. The overall GHG benefits are estimated of the order of 300 kton CO2eq annually. The experts make clear though, that the lack of experience with anaerobic digesters in Uruguay is an important barrier, which has led to negative experiences in the past. A biological process must therefore be designed properly, tested and optimized by an industry-scale pilot, prior to full-scale implementation. One must also bear in mind that operators in commercial companies are not trained to understand and operate a complex biological process that is not part of the core business.

Baseline project

The problem addressed by the baseline project is both environmental and economic:

I. The waste flows and residues from the primary and secondary sectors and municipal solid waste in Uruguay represent a threat for the environment. The inadequate handling of waste is an important source of greenhouse gas emissions in Uruguay, contributing to global climate change.

II. The production methods applied by the large group of small farmholders are generally inefficient and polluting, which leads to increased product costs and a loss of competitiveness. Multiple barriers are present for this group, including limited access to finance, low awareness of environmental issues and the lack of knowledge of enhanced production methods, and best technological solutions for waste management. There are a number of underlying structural factors

[17] More specifically: the Department for Reactor Engineering's Environmental Bio-Technology Group, Faculty of Engineering, Universidad de la República (UDELAR).

[18] The document *"Estudio del potencial de reducción de emisiones de gases de efecto invernadero de la industria frigorífica y factibilidad de financiamiento con el MDL"*, UDELAR/INVECO, October 2011. This study was supported by UNDP under the Carbon 2012 Programme and financed by the Government of Spain.

affecting this target group[19].

The baseline project consists of coordinated activities under leadership of the involved ministries[20] with the aim to improve the economic and environmental performance of the targeted sectors. Clearly, the environmental problem, including the emission of greenhouse gases contributing to global climate change, is a result of the inadequate level of technological and economic development. While restrictive legislation can be issued relatively fast, it will take a much larger effort to transform current production methods in the primary and secondary sectors and in the waste management in general.

The Government receives support under multilateral and bilateral agreements. Relevant programmes under the baseline project include: (a) IADB/FOMIN project on energy efficiency, and (b) the upcoming MGAP/World Bank programme "Sustainable Management of Natural Resources and Climate Change", (c) UNIDO and UNDP initiatives on climate change and carbon reduction, including the regional programme Observatory for Renewable Energy in LAC. The ministries MGAP and MIEM collaborate jointly in the "Gabinete Productivo", an inter-ministerial initiative that analyzes the performance of promising sectors for the national economy and identifies measures for improvement[21]. In recent year, Uruguay has deepened his commitment to climate change and its impacts, integrating these approaches in the social, economic and environmental policies. The conformation of the National Response to Climate Change and Variability System (SNRCC) coordinated by the Ministry of Housing, Territorial Planning and Environment (MVOTMA) has been one of the most issues important for this integration.

Further efforts are needed in order to effectively address to promote the implementation of environmentally sound technologies, use of renewable energy technology, valorization of waste and low-emission waste treatment. Technological solution should be put in place in order to improve energy production and other forms of waste valorization, as well as promoting markets for secondary raw materials.

Identified barriers and rationale for GEF involvement

Under the baseline project, a number of barriers are present which provide a rationale for GEF involvement:

- The technological available options for waste recovery and waste to energy transformation are limited due to the fact that, traditionally, an end of pipe approach was considered. As a consequence, the in-country knowledge and development capacities in sustainable technological alternatives for waste valorization to reduce GHG emissions are limited. Moreover, a regional and integrated approach to waste management with the concept of life cycle and the development and adaptation of best technologies applicable to the reality of Uruguay is still lacking.
- The technological options for waste treatment in Uruguay are too limited due to the historical lack of urgency and the insufficient technological basis. For a country that relies on the exports of agricultural produce and meat, this situation

[19] See footnote 11.

[20] These are: (i) Ministry of Industry, Energy and Mines (MIEM); Ministry of Livestock, Agriculture and Fishery (MGAP); and (III) Ministry of Housing, Territorial Planning and Environment (MVOTMA).

[21] Gabinete Productivo, www.presidencia.gub.uy.

constitutes a major flaw in the production chain compared to competing economies. For example, in the area of anaerobic treatment while reactors can be imported or built locally, the major challenge consists in the design and optimization of the biological processes in function of local ambient conditions and feedstock composition. This requires the transfer of knowledge from leading countries in this field, to research institutes, sector agencies and professionals. Laboratory tests and industry-scale reactors can provide valuable information on process stability and optimization and reduce the risk of failure of full-scale investments.

- There is a lack of specific regulation that favours the application of effective waste recycling and low-emission treatment technology. Once technological options are available, regulation can oblige producers to take advantage of them. The National Environmental Directorate (DINAMA) is in the process of developing improved regulation[22], but inputs on technological issues are needed. It is also recognized that implementing more stringent regulation will not be effective if appropriate technologies are not available.
- Access to finance is a serious barrier for small and medium-size agricultural producers and cattle farmers. The recently approved IADB/FOMIN energy efficiency project will address dairy farmers through the cooperative CONAPROLE. Fiscal benefits are already foreseen to stimulate investment in cleaner production technologies, including renewable energy options[23]. The profitability of biogas energy generation may remain marginal however, which suggests the establishment of some (investment) incentive.
- The agricultural and farming sectors in Uruguay are subject to substantial changes, i.e. leading to a more intensive land-use. This trend exacerbates the adverse environmental impacts of residues, especially locally. The sector is also vulnerable to climate change. The upcoming MGAP/World Bank project pursues establishing an encompassing information system to predict and prevent climate effects.
- Different types of agents have been identified to deliver technological solutions. The largest source of technology in the country is the national university (UDELAR), which has laboratories and staff working on waste treatment. Other agents include sector organizations and cooperatives (including INAC, INALE, ALUR and CONAPROLE), but there are also consultants and individual professionals that offer services for the primary sector. In the field of energy efficiency, energy service companies (ESCO's) have been formed with the support from the World Bank Energy Efficiency programme. However, the present infrastructure in terms of technological know-how, staff, laboratory facilities and commercial service companies is insufficient to address the market.

B. 2. incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the

[22] Specifically related to the future solid waste law (now in developing), industrial solid waste regulation and the Decree 253/79 that will change and make more restrictive the efluent standards.

[23] The Investment Law (Ley 16.906 (7 January 1998) establishes a preferential tax regime for eligible investment, based on a combination of criteria. Renewable energy sources are explicitly included by Decree of 03 August 2009.

associated global environmental benefits (GEF Trust Fund/NPIF) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The proposed UNIDO/GEF Project will support the Government of Uruguay in its efforts to mitigate the emissions of greenhouse gases related to the release of solid waste and the primary and secondary agricultural and cattle farming processes into the environment. The Project will contribute to the baseline project by demonstrating the application and feasibility of energy production and another by-product generation from waste, low-emission treatment technologies and strengthening the technological infrastructure in Uruguay[24] for project identification and implementation. For example, the Project will encourage the use of biogas from landfill by small communities and anaerobic digesters by rural farmers for which this renewable energy source has a significant economic value. Under the baseline project, the technological barrier is not adequately addressed, which provides a rationale for GEF involvement.

Project boundaries

The GEF Project will focus on the identified technological barrier. As a baseline, it is assumed that targeted businesses have limited access to advanced, energy production from waste and low-emission residues treatment technologies and methane is released into the atmosphere. As a result of the GEF intervention, advanced technologies become available and can be implemented effectively in Uruguay. The Project is targeted at individual businesses in the primary and secondary sector. The Project further supports the implementation of regulation to improve the market demand for clean technologies, sustainable waste management and low-emission waste treatment technology. Naturally, the project strategy is supportive to the sector transformation process as pursued by the Government. The impacts of the Project can be measured by evaluating the environmental benefits of individual investments (direct benefits) and the penetration of alternatives for waste valorization and low-emission waste treatment technologies in the market (indirect benefits).

The objective of the proposed GEF Project is to reduce the greenhouse gas emissions by agricultural and agro-industrial production chains in Uruguay by strengthening the in-country technological capacities to implement low-emission residues treatment systems, mainly by energy production. This is pursued through the following four components:

I. Strengthening of the policy framework (including for financial incentives / financial instruments) to promote sustainable production schemes and implement low-emission technologies in prioritized sectors (agricultural and farming sector, processing industries and small communities).
II. Enhancing the in-country technological capacities to design and implement waste to energy valorization alternatives and another by products, and low-emission processes.
III. Demonstrating the feasibility of production of energy by waste and other by-products which improve the reduction of GHG emission, low emission waste treatment plan and energy generation in full-size production processes in the targeted sectors.

[24] I.e.skilled human resources and laboratory and test facilities.

IV. Strengthening the capacities of sector agents by a technology transfer process to deliver state-of-the-art waste recovery, waste treatment and energy production to end-users.

A GEF funding of US 3,392,727 will be implemented, which will expectedly leverage the following co-financing: US$ 19,800,000. The total project budget is estimated at US$ 23,192,727. Co-funding is expected from: (a) the government (MIEM, MVOTMA, and MGAP) valued at US$ 1,090,000. This amount includes the in-kind support from national research institutes (specifically UDELAR's Faculty of Engineering, which works under an institutional agreement with the Government); (b) US$ 2,500,000 mobilized for the implementation of residues treatment plants by small farmers, with support from public and private sector organizations (INC); (c) US$ 100,000 in-kind support from sector organizations, including INAC, INALE, and CONAPROLE; (d) US$ 13,750,000 from in-cash support from large agro/bio-industrial enterprises for investment in full-size anaerobic treatment facilities, and support for pilot plants; (e) US$ 250,000 co-financing under the IDB/FOMIN grant UR-1041 and US$ 2,000,000 under the World Bank/MGAP loan P124181; and (f) US$ 60,000 grant and US$ 50,000 in-kind from UNIDO. A detailed budget breakdown, including a consolidated list of project co-funders, will be submitted at PPG stage.

Industry-scale pilot plants and full-scale demonstration projects

During PIF stage, the following cases have been identified to be addressed by the envisaged UNIDO/GEF Project, based on the following criteria: (i) relevance in terms of market share and replicability; (ii) environmental impact due to size or type of residues; (iii) social and economic impact for beneficiaries; and (iv) willingness of counterparts to participate as a co-financier of the Project. A preliminary list of demonstration projects is given by:

- FAROLUR. S.A., an integrated dairy farm expanding to 2,500 animals in stables. The company has demonstrated interest in environmentally-responsible production and currently explores the use of anaerobic digester technology for treatment of liquid cow manure. The investment costs are estimated at US$ 3,000,000.
- Estancias del Lago S.A, a very large bio-industrial complex in the dairy sector currently under development. The Project can assist in providing technical solutions for manure treatment for intensive cattle and dairy farming in Uruguay. The investment costs for a stock of 4,500 animals are estimated at US$ 5,500,000.
- Alcoholes de Uruguay (ALUR S.A.) produces bioethanol. The residue (the "vinaza") is presently treated in open lagoons. Anaerobic digester technology is considered as an alternative, including the capture of biogas for heat supply[25]. Other waste valorisations in both the bioethanol and biodiesel chains, including energy generation as well as cattle food and fertilizer production, are under investigation. The total investment costs are US$ 5,000,000.
- The Instituto Nacional de Colonizacion (INC) can support the implementation of digesters for cow manure among the large number of family-run farms in

[25] See: www.alur.com.uy.

Uruguay, for which biogas can be a valuable asset for energy supply and cost reduction. The INC has expressed its interest to collaborate with the project. The institute can draw on its relations with sector organizations, including INALE, CONAPROLE, INAC and the Government to coordinate support for this target group. Co-financing for investment targeting this group of beneficiaries is estimated at US$ 2,500,000 from various public and private sources, plus US$ 2,250,000 for supportive activities from IDB/FOMIN and World Bank/MGAP projects.

Prior to full-scale implementation, the biological processes and plant designs must be verified by means of pilot plants, which greatly reduce the risk of failures. The budget for pilot scale plants is included in the total budget for the full scale plants.

One of the objectives of the present project is to identify the potentiality of waste-to-energy and other waste valorisations and to determine the better technologies for each link of the various targeted production chains. In this respect, it should be noted that although waste-to-energy technologies have been proven effective in various countries, in Uruguay, there currently exist only very limited experiences in implementing these types of projects, which stands in contrast to the large potential of low-emission technologies. Through the proposed project and based on the outcome of the technologies identified during the PPG phase, important efforts will be made to facilitate the demonstration, deployment, and transfer of innovative low-emission technologies as well as commercially available technologies that still need further adaption to the local conditions in Uruguay. Technologies shall be transferred via North-South as well as South-South cooperation; the specifics of which will depend on the identified technologies. The most competitive alternatives of these shall only be determined when the first stage of the project shall be completed. However, during the preparation of this PIF some demonstration plants have already been identified: (i) manure treatment large dairy farmers; (ii) manure treatment small-scale farmers; (iii) centralized treatment of solid organic residues; (iv) treatment of liquid and solid residues form meat packers industry; and (v) treatment of agro-industrial residues from ethanol industry. Within the present project, feasibility studies and small-scale pilot plants shall be financed by the project and various Governmental agencies, while large scale demonstration plants shall be financed by private investors.

Global GHG benefits

The Project will generate global environmental benefits to fight against climate change by (a) avoiding the release of greenhouse gases (methane) by organic residues; and (b) avoiding the release of CO2 into the atmosphere by using waste energy to replace fossil fuels for electricity and heat production.

The annual methane emissions by manure handling in the agricultural sector are 15.87ktons (CH_4)[26], equivalent to 365kton CO_2eq[27]. As mentioned in B.1, the emission reduction potential in the meat packing industry is estimated to be another 300kton CO_2eq annually. Moreover, considering only biogas production, a preliminary estimate

[26] Source: Uruguay Third National Communication, MVOTMA, November 2010.
[27] Based on a GWP of methane of 23 as indicated in the Manual for Calculating GHG Benefits of GEF projects: Energy Efficiency and Renewable Energy Project, GEF, 2008, (pg. 7).

of the emission reductions to replace fossil fuels is of the order of 100kton CO_2eq[28]. Other emission reductions can be achieved in the bioethanol industry, which have not been quantified yet. The total emission reduction potential in the sector is therefore estimated to be between 500 and 1,000kton CO_2eq per year.

Assuming a ten-year horizon and a modest attribution of indirect emissions to the baseline[29], the total avoided emissions would be of the order of 3-6Mton CO_2eq[30]. Detailed benefits will be estimated during PPG stage, but the benefits related to the avoidance of methane releases are clearly predominant.

In 2004, the landfill disposal of waste was the annual estimated methane emission of 53.91 ktons (CH_4) equivalent to 1,120 kton CO_2eq[31]. With the implementation of this project increasing emphasis on energy production, recycling materials, composting and anaerobic digestion is expected. So important expected benefits are linked with reduction of greenhouse gas emission. The total emission reduction potential in these sectors has not been quantified yet. This study will be done during project formulation and cover benefits for capture and use of biogas emission and emission avoided by replacing virgin materials and energy derived from recycling and recovery of waste.

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF.":

The envisaged Project fits into national strategies to promote cleaner production technologies, enhance sector productivity and competitiveness, preserve natural resources, protect the local and global environment and diversify the energy mix by increasing the share of renewable energies. As such, the Project is expected to deliver tangible socioeconomic benefits for the nation of Uruguay, for the targeted sectors, and for individual producers and their families. The socioeconomic benefits for the country as a whole are achieved indirectly, as a result of economic growth and of the targeted sectors and the Project's contribution to preservation of the national environment.

The Project will provide direct technical assistance to identified subsectors, including dairy farmers and factories, cattle farmers for meat production, meat packers, and specific enterprises with a large carbon footprint, such as producers of bioethanol. These will benefit from the Project by acquiring technological know-how to deepen the use of renewable energy, improve the waste management, reduce methane emissions and treat waste and effluents in a more environmentally-responsible way. This technological capital will create opportunities to (i) add value to the product chain and become more successful on the international commodity markets, (ii) reduce the present burden on the environment, water courses and aquifers in Uruguay and the La Plata river basin; and (iii) assist producers in the primary sector and corresponding

[28] Assuming: 5 MW installed biogas capacity, 5,000 operating hours per year, a CO_2 emission factor of 0.5 ton CO_2eq/MWh, and a 10-year lifetime.
[29] According to the Manual for Calculating GHG Benefits of GEF projects: Energy Efficiency and Renewable Energy Project, GEF, 2008 (pg. 19) this would reflect Level 3 and imply a GEF causality of 60%.
[30] Based on the calculations: 500,000tCO2eq * 10 * 0.6 = 3,000,000 tCO2eq and 1,000,000 tCO2eq * 10 * 0.6 = 6,000,000 tCO2eq.
[31] Source: Uruguay Third National Communication, MVOTMA, November 2010.

industries to become more competitive[32].

Through the transfer of state-of-the-art technological concepts and process designs, the Project further contributes to the development of a professional sector to supply environmental services and equipment, which requires high-quality jobs in the field of agronomy, engineering and consultancy. With regard to the group of small farmers, the Project will contribute to improving their economic position by making available biogas as an energy source to replace more costly LPG or electricity. Government organizations consider this impact as highly relevant for this group of farmers and their families.

Additionally the project will contribute to reduced economic dependence on fossil fuel imports, through strengthening the diversification strategy by increasing the use of renewable energy.

At PIF stage, no gender-specific situations have been identified. In principle, the Project will benefit male and female equally. Socio-economic data on the distribution of male, respectively female, workers in the targeted sectors and industries are expected to be available from sector associations and the National Statistical Institute (INE). It is proposed to make a quantitative assessment of the participation of men and women in the targeted sectors and industries during PPG.

It is not certain whether the expected socio-economic benefits alone are sufficient to make the Project's results fully sustainable in the long term. This risk has been identified as item 2 (section B.4). Environmental regulation, and the enforcement thereof, will likely be needed as well to induce private actors to integrate environmental protection measures in their business practices, as they presently lack the financial incentive to do so. Once there exists a legal obligation for all to comply with, the market for advanced, low-emission residues treatment technologies is expected to take off quickly.

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Risks	Likelihood	Remedial actions
1. The national Government would withdraw political support for environmental control measures and renewable energies	Low	The Government of Uruguay is firmly committed to its objective to modernize the national economy and become a competitive player in the globalized markets. Cleaner production methods and environmental control are key to long-term sustainability of the traditional agriculture and farming sectors, which are one of the mainstays of the economy. In order to reduce its dependence on imported fossil fuels, the use of domestic, renewable energy sources is a key pillar in Uruguay's energy policy, with has been demonstrated successfully during recent years. The exploitation of waste to energy production like biogas and others alternatives fits into this strategy and is fully supported by the

[32] Other beneficiaries include wool producers and the leather tanning industry. These have not been approached at PIF stage.

		DNE. Given the political stability in the country, it is highly unlikely that this context would change and affect the implementation of the Project. Moreover, the Nation Energy Policy is supported by all political parties in the Parliament.
2. Private companies would prove not willing to implement advanced, low-emission residues treatment technologies.	Moderate	Investments in waste treatment plants are generally financially unrewarding for private companies, compared to alternative investments. Environmental control is still unfamiliar for many companies and presently not perceived as part of the business. Some large companies however, take a proactive approach and recognize the added value of more sustainable, cleaner production chains. Other companies will need technical assistance to keep up with increasingly stringent residues control limits. In the short term, i.e. the timeframe of the Project, only proactive enterprises are expected to develop a particular technology: anaerobic digester plants for effluent treatment. The successful demonstration of a number of pilot facilities under this Project is expected to greatly reduce the perceived risks and create more confidence among end-users. In the medium- and long-term, policy measures, enforcement of regulation, technical assistance and financial incentives will be key for further market development. The commitment of private companies to implement a first batch of full-scale facilities for demonstration under the Project will be formalized during the PPG phase. The associated risk is considered low. Most factors critical for market, including enforcement of regulation, cannot be controlled by the Project; the risk that low-emission residues treatment technologies would not be widely adopted by the sector after the Project, is therefore assessed as moderate.
3. The use of wastes for energy purposes would prove technically and economically unsuccessful.	Moderate	The use of waste as an energy source reduces Uruguay's dependence on imported fossil fuels. Similarly, it contributes to off-set the emission of greenhouse gases by the energy sector. It will also contribute to mitigate the difficulties of some production chains to manage adequately their residues, which constitutes a bottleneck for production developments. However, these investments by the end-user can be technically complex and financially unrewarding. The most promising application is biogas capture for heat production, possibly by small-scale cheese makers, the meat packers industry, and for co-generation in large agro- and bio-industries. The Project is expected to provide a detailed set of alternatives to improve waste to energy production, developing feasibility studies for their development. National Energy Policy and the current processes of development of new environmental regulations on waste provides the framework This risk is therefore evaluated as moderate.

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The proposed Project will be implemented under shared responsibility of the three ministries MIEM (DNE), MVOTMA (DINAMA) and MGAP. An important, but not exclusive, role will expectedly be assigned to the national university UDELAR. The national colonization institute (INC) will be a key partner to address the large group of small dairy and cattle farmers in the country and to liaison with authorities, local communities and other stakeholders, as and if required. Sector agencies such as INALE (dairy farmers) and INAC (meat packers) will be involved throughout the Project to coordinate and implement promotional and technical support activities aimed at their stakeholders. The stated owned biofuel production company ALUR, which is very active in the field of innovation, will play an important role. The national cooperative CONAPROLE (dairy sector) will be involved to implement specific project activities, including biogas installations at small farms. Private companies in the agricultural and farming sector and the secondary industries will be partners throughout the preparation and implementation of the Project, and are its direct beneficiaries. They are also a major source of co-financing for investment.

B.6. Outline the coordination with other related initiatives:

The following initiatives are particularly relevant for project design and coordination.

- The AIDB/FOMIN energy efficiency project with CONAPROLE (UR-1041);
- The upcoming MGAP/World Bank programme *"Sustainable Management of Natural Resources and Climate Change"* (P124181)*;*
- The World Bank/GEF energy efficiency programme[33]; and
- The UNDP/GEF wind energy "UWEP" and biomass "PROBIO" projects.

Important synergies are expected with the AIDB/FOMIN project, which targets the group of small farmers which are part of the actors of the present project. Presently, the scope of the MGAP/World Bank programme is not yet decided, but it will focus on goals different from those of the present project. Nevertheless, during the formulation of the project, coordination with MGAP is necessary to avoid potential overlaps.

The UNDP/GEF wind energy project, which is being finalized, has generated important regulatory instruments to stimulate the integration of renewable energy sources that may prove beneficial for waste to energy production as well. The proposed Project will limit its scope on those issues that require further enhancement. The PROBIO project has recently started. It is limited to the treatment of biomass resources from the forestry sector. Nevertheless, it can provide useful information on resources and technologies envisaged under the present Project.

[33] Uruguay Energy Efficiency Programme (P068124), Approval date 13 May 2004, closed 31 December 2011, GEF Grant USD 6.875 mln.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

Since its establishment, UNIDO has built up a long track record assisting countries to implement industrial support programmes, by pursuing the integration of reduced carbon objectives into industrial development policies and activities. The GEF Council document specifically highlights UNIDO's comparative advantage in capacity building and technical assistance, which are key components of the proposed project.

More specifically, UNIDO has been implementing since 2008 the regional programme Observatory for Renewable Energy in LAC, which aims at establishing bridges inside and outside the LAC region to share good practices and increase the presence of renewable energy technologies in the LAC region. UNIDO has been addressing through this regional programme key efforts to develop an extensive portfolio of projects and programmes at the country level, focusing on technology transfer and cooperation among countries. The proposed GEF initiative, which has been identified in the framework of the regional Observatory, will benefit from its experiences and networking.

Furthermore, through this and other significant technical cooperation projects and programmes, UNIDO has widespread experience to interact with both high- and low-level stakeholders from the private sector and public sector as well as NGOs. The proposed GEF initiative draws on UNIDO's experience by strengthening the competitiveness of local industries and by introducing renewable energy technologies. The proposed activities range from demonstration, institution building, and policy support, involving a broad range of stakeholders. UNIDO is well-placed to implement this Project because of its experience and expertise in renewable energy projects, its long history of cooperation with key stakeholders, and its high standards of fiduciary responsibility.

C.1 Indicate the co-financing amount the GEF agency is bringing to the project:

At PIF stage UNIDO has committed its support (cash and in-kind) to an amount of US$ 110,000.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The proposed UNIDO/GEF initiative fits into two thematic areas of UNIDO: (i) "Poverty reduction through productive activities by promoting renewable energy" as the energy source for industrial and productive activities; and (ii) "Energy and environment", in which UNIDO assists its clients to solve two fundamental problems: decoupling energy intensity and material use from economic growth, and reducing the environmental impact related to energy and material uses. UNIDO's Energy Strategy aims at supporting developing countries and countries in transition to achieve the following objectives:

- To increase the competitiveness of their industries by reducing the dependence on fossil fuels;
- To reduce their impact on climate change by decreasing the carbon emissions of their industries
  and by promoting renewable energy technologies; and

- To increase the viability of their enterprises, particularly in rural areas, by augmenting the use of locally available renewable energy sources.

Moreover, UNIDO counts with own staff and experts in the 12 countries covered under its regional programme mentioned before *Observatory for RE in Latin America and the Caribbean*. In Uruguay, UNIDO has a permanent office which covers activities in Uruguay, Argentina, Chile and Paraguay.

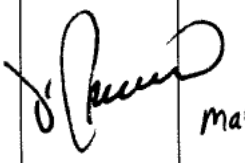
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
MRS. MARIA VALERIA PEREZ GUIDA	ADVISOR TO DIRECTOR	MINISTRY OF HOUSING, LAND PLANNING AND ENVIRONMENT, NATIONAL DIRECTORATE OF ENVIRONMENT	03/01/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	DATE *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email Address
MR. DMITRI PISKOUNOV, MANAGING DIRECTOR PTC, UNIDO GEF FOCAL POINT		March 15 2012	MS. NINA ZETSCHE, INDUSTRIAL DEVELOPMENT OFFICER, PTC/ECC/RRE, UNIDO	+43 (1) 26026-3569 	N.ZETSCHE@UNIDO.ORG