PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
THE GEF TRUST FUND

Submission Date: 04/20/2009
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PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID[1]**:** tbd **PROJECT DURATION: 36 MONTHS**
GEF AGENCY PROJECT ID: 4016
COUNTRY(IES): Brazil
PROJECT TITLE: Mitigation Options of Greenhouse Gas (GHG) Emissions in Key Sectors in Brazil
GEF AGENCY(IES): UNEP, (select), (select)
OTHER EXECUTING PARTNER(S): Ministry of Science and Technology in association with……
GEF FOCAL AREA (S): Climate Change
GEF-4 STRATEGIC PROGRAM(S): Enabling Activity
NAME OF PARENT PROGRAM/UMBRELLA PROJECT:

INDICATIVE CALENDAR	
Milestones	**Expected Dates**
Work Program (for FSP)	05/15/2010
CEO Endorsement/Approval	09/01/2010
GEF Agency Approval	12/01/2010
Implementation Start	03/01/2011
Mid-term Review (if planned)	09/01/2012
Implementation Completion	28/02/2014

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective: To assist the Government of Brazil to strengthen its technical capacity in supporting the implementation of its mitigation actions for greenhouse gas emissions in key economic sectors (energy, forests, industry, agriculture and animal husbandry, transportation, civil construction, and residues) in Brazil (including costs) as identified in the Brazilian National Policy and Plan on Climate Change.

Project Components	Indicate whether Investment, TA, or STA**	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total ($)
				($)	%	($)	%	
1.Three long range emission scenarios for Brazil established	TA	1.1 Historical data has been consolidated and revised	About 20 review and summarization reports have been elaborated	120,000	27.9	310,000	72.1	430,000
		1.2 The logic and basic structure of the economic model to be used has been defined	About 8 summarization reports: "anchor variables" and economic models have been elaborated and made available	70,000	28.0	180,000	72.0	250,000
		1.3 The logical structure of the emissions model to be used has been defined	About 7 reports (one for each economic sector) have been elaborated.	100,000	43.0	132,000	57.0	233,000
		1.4 Economic sectoral scenarios A, B and C – definitions of inputs and results have been	About 24 reports for each of the 7 economic sectors, for the economy as a whole, and for Scenarios A, B and C have been elaborated.	490,000	18.3	2,190,000	81.7	2,680,000

[1] Project ID number will be assigned initially by GEFSEC.

		established						
		1.5 Sectoral emissions results for Scenarios A, B, and C have been established and proposals for achieving the best results possible have been elaborated.	About 8 reports on the results for each economic sector and for the economy as a whole have been elaborated and compared with announced mitigation actions through a broad discussion with interested groups.	200,000	44.2	252,000	55.8	452,000
		1.6 Cost benefit evaluation among Scenarios A, B, and C have been made	About 4 reports with cost and benefits for each scenario and a general comparison among them have been elaborated	100,000	63.0	59,000	37.0	159,000
		1.7 Final reports are published and made available	About 3 reports (Portuguese and English), other documents, etc	20,000	25.3	59,000	74.7	79,000
		1.8 The system for 3 years has been run and yearly updated	About 10 reports every year, for the Scenarios, for the economy as a whole, and each economic sector have been elaborated and made available.	100,000	16.4	508,000	83.6	608,000
		Sub-total for component		**1,200,000**	**24.5**	**3,690,000**	**75.5**	**4,890,000**
2:Identification of mitigation, cost and efficiency opportunities for specific sectors	TA	2.1 Mitigation opportunities and costs for improved efficiency of energy use in appliances and buildings have been identified	a) One report on analysis of business as usual practices in appliances and buildings has been elaborated; b) About 4 reports on analysis of GHG mitigation potential in appliances and buildings (air conditioning, thermal insulation in buildings, building techniques for better thermal comfort, comparative evaluation of buildings materials life cycle emissions) have been elaborated and made available.	350,000	26.9	950,000	73.1	1,300,000
		2.2 Mitigation opportunities and costs for	a) About 5 reports on analysis of business as usual practices in 5 in-	450,000	27.3	1,200,000	72.7	1,650,000

		improved efficiency of industrial production have been identified	dustrial production and manufacturing processes have been elaborated. b) About 6 reports on analysis of GHG mitigation potential in industrial production and manufacturing processes in sectors chosen (iron, cement, chemistry, food and beverages, oil extraction and refining) have been elaborated and made available.					
		2.3 Mitigation opportunities and costs for improved energy efficiency of electricity generation from power plants have been identified	a) One report on analysis of business as usual practices in existing power plants has been elaborated b) Five reports on analysis of GHG mitigation potential in existing power plants on spillover loss in hydroelectric plants, coal plants and self-producers of energy have been elaborated and made available.	300,000	26.1	850,000	73.9	1,150,000
		2.4 Mitigation opportunities and costs of increased production of renewable energy in electricity grids have been identified	a) One report on analysis of the influence on emissions of the new policy of building hydroelectric plants with small reservoirs has been elaborated. b) 3 reports containing analysis of business as usual practices of on-grid renewable energy, as well as the legal, financing and technical situation of producers of energy by biomass, have been elaborated. c) Analysis of GHG mitigation potential of renewable energy areas (mainly sugar and ethanol, food and beverages, paper and cellulose, etc) have been elaborated and made available d) One report on suggestions for new governmental programs on renewable energy as PROINFA (national	300,000	26.1	850,000	73.9	1,150,000

			program designed to stimulate greater use of electricity generated from non-traditional renewable energy resources) has been elaborated and made available					
		2.5 Mitigation opportunities and costs of innovative sustainable transport systems have been identified	a) About 2 reports on analysis of business as usual practices in transport systems (cargo and passengers) has been elaborated; b) One report on analysis of GHG mitigation potential in medium or big cities has been elaborated; c) Four reports on analysis of the mitigation potential of the change of transportation modals between cities and regions have been elaborated and made available	400,000	27.6	1,050,000	73.4	1,450,000
		2.6 Mitigation opportunities and costs of selected low GHG-emitting energy technologies have been identified	a. Analysis of GHG mitigation using low GHG-emitting energy technologies (1 report) b) About 20 booklets and divulgation material intended for important stake holders.	300,000	25.0	850,000	75.0	1,150,000
		Sub-total for component		**2,100,000**	**26.8**	**5,750,000**	**73.2**	**7,850,000**
3. Testing domestic MRV: Reduction of GHG emissions from the use of bio-fuels applying the GBEP methodological framework	TA	3.1 Draft methodological framework in the lifecycle analysis (LCA) of bio-energy production has been tested and used applying GBEP methodological framework	a) One report on testing of the draft methodological framework in the life cycle analysis (LCA) of bio-fuels in Brazil;	75,000	38.7	119,000	61.3	194,000
			b) One report on the revision of historical GHG emission reduction resulting from ethanol program (production and consumption) in Brazil (1970-2010) have been elaborated and made available applying GBEP methodological framework	125,000	21.7	450,000	78.3	575,000
			c) One report on projected GHG emission reduction resulting from increased use	150,000	27.0	400,000	73.0	550,000

			(production and consumption) of ethanol in Brazil (2010-2020) applying GBEP methodological framework have been elaborated and made available d) One report on projected GHG emission reduction resulting from increased use (production and consumption) of biodiesel in Brazil (2010-2020) applying GBEP methodological framework have been elaborated and made available	150,000	27.0	400,000	73.0	550,000
		Sub-total for component		**500,000**	**26.8**	**1,369,000**	**73.2**	**1,869,000**
4. Project management				380,000	100.0	1,081,000		1,461,000
Total project costs				**4,180,000**		**11,890,000**		**16,070,000**

* List the $ by project components. The percentage is the share of GEF and Co-financing respectively to the total amount for the component.

** TA = technical assistance; STA = scientific & technical analysis.

B. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE and by NAME (in parenthesis) if available, **($)**

Sources of Co-financing	**Type of Co-financing**	**Project**
Project Government Contribution	In-kind	2,300,000
GEF Agency(ies)	(select)	
Bilateral Aid Agency(ies)	(select)	
Multilateral Agency(ies)	(select)	
Private Sector	In-kind and Cash	9,590,000
NGO	(select)	
Others	(select)	
Total Co-financing		11,890,000

C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT ($)

	Previous Project Preparation Amount (a)[2]	**Project (b)**	**Total c = a + b**	**Agency Fee**
GEF financing	0	4,180,000	4,180,000	418,000
Co-financing		11,890,000	11,890,000	
Total	0	16,070,000	16,070,000	418,000

[2] Include project preparation funds that were previously approved but exclude PPGs that are awaiting approval.

D. GEF RESOURCES REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES)[1]

GEF Agency	Focal Area	Country Name/ Global	(in $)		
			Project (a)	Agency Fee (b)[2]	Total c=a+b
UNEP	Climate Change	Brazil	4,180,000	418,000	4,598,000
(select)	(select)				
Total GEF Resources			0	0	0

[1] No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

[2] Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

Brazil gives full importance to the problem of climate change, considering that it is an issue of concern for the future generations of all nations. Although Brazil is a developing country with many other socioeconomic priorities, it has played an important role in the international discussions and scientific assessment of climate change, as well as in setting up an international institutional framework. Although Brazil, as a developing country, does not have commitments to reduce or limit its anthropogenic emissions of GHGs, there are many programs in Brazil that result in a considerable reduction of GHG emissions and contribute to the ultimate objective of the UNFCCC.

Recalling that through the Bali Plan of Action (Decision 1/CP. 13 of the UNFCCC) Parties to the UNFCCC decided to "launch a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session by addressing, inter alia", "enhanced national/international action on mitigation of climate change, including, inter alia," "consideration of nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner" (paragraph 1.b.ii of the Bali Plan of Action).

Although an agreed outcome was not reached at CoP 15, His Excellency President Luiz Inácio Lula da Silva announced during the High Level Segment of the 15th Conference of the Parties (COP 15) and the 5th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5) held at Copenhagen, and the Government of Brazil indicated, through a 'note verbale' of January 2010 for information of the Parties to the UNFCCC, the nationally appropriate mitigation actions that Brazil intends to take[3]. It is anticipated that these actions will lead to an expected reduction of 36.1% to 38.9% regarding the projected GHG emissions of Brazil by 2020.

After the overall reduction of GHG regarding the "business as usual scenario" (BAU) by 2020 announced by President Lula in Copenhagen, it was translated into the National Policy on Climate Change (Federal Law No. 12,187 of December 29, 2009). Some of the mitigation actions had already been announced in the National Plan on Climate Change.

- Reduction in Amazon deforestation (range of estimated reduction: 564 million tons of CO_2 eq. in 2020);
- Reduction in "Cerrado" deforestation (range of estimated reduction: 104 million tons of CO_2 eq. in 2020);
- Restoration of grazing land (range of estimated reduction: 83 to 104 million tons of CO_2 eq. in 2020);
- Integrated crop-livestock system (range of estimated reduction: 18 to 22 million tons of CO_2 eq. in 2020);
- No-till farming (range of estimated reduction: 16 to 20 million tons of CO_2 eq. in 2020);
- Biological N_2 fixation (range of estimated reduction: 16 to 20 million tons of CO_2 eq. in 2020);
- Energy efficiency (range of estimated reduction: 12 to 15 million tons of CO_2 eq. in 2020);
- Increase the use of bio-fuels (range of estimated reduction: 48 to 60 million tons of CO2 eq. in 2020);
- Increase in energy supply by hydroelectric power plants (range of estimated reduction: 79 to 99 million tons of CO_2 eq. in 2020);
- Alternative energy sources (range of estimated reduction: 26 to 33 million tons of CO_2 eq. in 2020);
- Iron & steel (replace coal from deforestation with coal from planted forests (range of estimated reduction: 8 to 10 mil-

[3] see http://unfccc.int/files/meetings/application/pdf/brazilcphaccord_app2.pdf

lion tons of CO_2 eq in 2020).

The current project aims at assisting the Government of Brazil to strengthen its technical capacity in supporting the implementation of its mitigation actions for greenhouse gas emissions in key economic sectors in Brazil (including costs) as identified in the Brazilian National Policy and Plan on Climate Change.

Thought the implementation of the project, consistent analysis of the expected overall reduction of GHG will be performed, with solid economic foundations, in order to evaluate its feasibility and, if necessary, to present alternatives which might better suit to the Brazilian economic conditions while at the same time allowing Brazil to collaborate to the maximum extent possible for the common goal of reducing GHG emissions. Given that the announced overall reduction of GHG will involve the efforts of many stakeholders, the project proposes a thorough discussion with third parties representing the Brazilian society and Government agencies during the performance, which might improve proposed solutions.

Brazil takes seriously its commitments under the UNFCCC, especially developing, periodically updating, publishing and making available to the Conference of the Parties, inventories of anthropogenic emissions by sources and removals by sinks of all the GHGs not controlled by the Montreal Protocol (in accordance with Article 4.1 and 12.1 of the UNFCCC). Brazil has the expertise gained by the Ministry of Science and Technology - MCT in coordinating all the institutions involved with the GHG inventory preparation, and the growing awareness of climate change. With all this, the MCT helped to build the capacity of the Brazilian electric sector for producing scientific information related to its GHG emissions, in order to assist in the definition of national policies in this area. In December 1998, ANEEL, MCT and UNDP signed a Protocol of Intentions concerning technical co-operation to implement research activities related to climate change within the Brazilian electrical sector.

It has to keep in mind that the total Brazilian emissions is different from those of most developed countries, where the emissions from fossil fuel combustion represent a major share of GHG emissions. This is due to the low fossil fuel share of the Brazilian energy sector, the large extent of agricultural activities and the increase in deforestation rates in the recent past. Climate change is a issue that requires all new research directions. Additionaly, hydroelectric energy is the main source of electricity in Brazil, representing 85% of the total electricity produced in the country. This important primary source stands out for its availability, economic attractiveness and non-GHG emission profile. Today, a worldwide debate is taking place on how to reduce dependence on oil, especially in the transportation sector, given that the price of oil, a finite resource, is rising significantly in the international market and that its combustion is recognized as one of the main factors intensifying the greenhouse effect on our planet.

Thus, understanding and assessing the energy sector in Brazil and all the sectors that demand most of energy in the country would help the government to establish actions to continue as a low-emitting country for energy and to implement new possibilities of actions in the Climate Change National Plan, which involves 17 ministries in Brazil. Brazil has made significant efforts in the mitigation of climate change and is determined and engaged to do more, taking full advantage of its national capacity under the auspices of a global effort to combat climate change. An adequate flow of financing, technological transfer and capacity building, resulting from international cooperation, will be important elements to help fully meet the objectives stipulated in the National Plan, which will be more effectively implemented if comprehensive analysis of mitigation potential – which are the expected outputs of this project – are available.

The project will also seek to address mitigation potential in several sectors, although it does not intend to address land use, land use change and forestry activities. It is worth recalling that, according to the Brazilian GHG emissions profile, 58% of emissions are related to LULUCF (Land Use, Land Use Change and Forestry) and 22% to Agriculture. However, regarding LULUCF mitigation activities, especially reduction of emissions from deforestation in the Amazon region, there is a programme at national level for this purpose, which might be funded by the Amazon Fund. Moreover, Brazil has one of the most sofisticated and reliable assessment of deforestation in the world, using sattelite data information.

In spite of the fact that, in Brazil only the remaining 20% of GHG emissions are related to energy, industry and residues treatment, an evaluation of the future Brazilian emissions profile shows that this latter percentage should increase between 33% and 47%, depending on the reductions which may be achieved in the other sectors. Therefore, the GHG emission profile of Brazil will come closer to the profile which is shown today in the world as a whole.

Although in the short term the Brazilian largest mitigation effort shall still be directed towards reduction in agriculture (mostly methane), in the medium and long range future efforts shall also be made towards mitigation in the specific areas, which will grow in importance and which currently constitute the main concern of developed countries.

On the other hand the Brazilian low emissions in the energy sector are due mostly to the predominant use of hydroelectricity and of the use of bio-fuels in transportation. This favorable situation tends to be change with the more intense use of fossil fuels. However, still exists large potential to keep Brazil as a low carbon user in these sectors, mostly through efforts related to conservation and to more complete use of biomass-derived energy, even considering the recent discoveries of oil in the so called "pre salt" areas.

Therefore, additional specific efforts should be made in order to achieve a diagnosis related to opportunities and costs and possible solutions. 7 (seven) economic sectors that are considered worth evaluating will be analyzed in this regard. In all cases, evaluation will be made in coordination with the most interested parties, and essentially market solutions will be sought and proposed whenever possible.

Moreover, increase use of bio-fuels is also seem as an important element to keep Brazil as a low emitter in the energy sector; a situation that has been foreseen by the National Policy on Climate Change (Política Nacional de Mudança do Clima – PNMC). However, this domestic action must be measured so that it could be correctly reported and verified. Given that in the recent past, it has been a debate on the real mitigation impact of bio-fuels, the project will also explore the analysis of a domestic MRV action (increased use of bio-fuels) following a methodology that has been developed at international level.

Component 1: Establishment of three long range emission scenarios for Brazil (from 2010 up to 2050)

The objective of this component is to establish three long range emission scenarios for Brazil, up to 2035 and with an informative view up to 2050. The scenarios will be established for each economic sector on basis of a global, fully tested, economy forecasting model, and emissions will be calculated for each sector through a model which is also fully tested. The final outcome of the project will allow comparisons to be made among the different emission reduction possibilities, to allow choices to be made which are less costly and most effective.

Three overall economic scenarios will be established for Brazil, and about seven economic sectors (energy; forests; industry; agriculture and animal husbandry; transportation; civil construction; residues) will be evaluated within these scenarios for the time period starting in 2010 and up to 2035 , with additional informative view up to2050:

- Scenario A – will reflect a condition of maintenance of the present levels of application of public policies, that is, without considering the measures of mitigation proposed in the National Plan on Climate Change (Plano Nacional sobre Mudança do Clima - PNMC);
- Scenario B – will reflect a condition of effective implementation of the mitigation measures proposed in the PNMC that seem possible on basis of economic and social analysis performed within the project;
- Scenario C – will be constructed on basis of the effective implementation of measures (as in Scenario B) plus additional measures whose objective is to achieve further reductions in emissions, including those measures which the analysis performed for Scenario B may have indicated as not feasible; in this Scenario the variable emissions will largely be the main decision factor.

The proposed methodology assumes the existence of a reference macroeconomic scenario. This scenario has to be established in accordance with the contracting partners and to be discussed with groups representing the civil society and the Brazilian government.

The consortium Economia & Energia (e&e) and Ecology Brasil is in possession of a software called "Projetar_e"[4] which will be used in the analysis and is property of e&e. The Consortium will be strongly supported in this analysis by the Institute for Energy Efficiency (Instituto de Eficiência Energética – IEE) from the University of São Paulo (USP).

The results obtained with the software "Projetar_e" show very good adherence to the results shown in the National Plan of Energy 2030 (Plano Nacional de Energia - PNE 2030). The model to be used utilizes, as "anchor variables", the historical behavior of some macroeconomic variables which have presented, in the past, a strong inertia. The future is projected considering the historical behavior of these variables which have been accompanied for a period of 50 years in most cases.

[4] This software allows the forward projection of the Brazilian economy and the energy consumption on basis of some macro-economic variables of the past. It was developed, following a PhD thesis in the University of Brasilia, for the studies called "Brazil 2020", it was later used in studies performed by Eletrobrás and by CETEPETRO and, recently, for GHG emissions evaluations performed for the Ministry of Science and Technology. In 2007, the software was utilized in studies performed for MCT/UNDP and related to the preparation of the National Inventory of anthropogenic GHG emissions for the energy sector.

Experience of more than 10 years with the application of the model has shown that these variables tend in the future to present a similar behavior shown in the past, although short term perturbations may arise. For instance, the strong changes which occurred in the internal savings rate in the early 1990's, because of grave macroeconomic perturbations, were clearly reverted and returned to its historical previous behavior.

The historical data base is periodically updated through the adjustment of the behavior functions according to new historical values or revisions performed by the statistical offices. A recent comparison of forecasts made 10 and 5 years ago showed the model's good capacity to project the economic growth.

The model incorporates the option to modify historical tendencies because of changes in foreseen economic policies or technological questions, but always taking into account the historical inertia of previous tendencies. This option allows the performance of very coherent sensibility studies, pointing to possible changes in global policy but maintaining coherence with historical data. This is the case with the incorporation of the consequences of the huge pre-salt oil deposits in the evaluations. Another issue which will probably emerge (it has still to be better evaluated) is the question of the increased and over-proportional use of air-conditioning and refrigeration both in industrial establishments and in residences.

The software "Projetar_e", which will be used for the economic assessment, is already adapted for the generation of scenarios in the areas of energy, agriculture and cattle husbandry, industry, transportation and civil construction, and can be easily adapted to include the remaining areas. Because of its characteristics, the software is particularly appropriate for the evaluation of large periods of past history and, similarly, to project large periods into the future. Thus, periods of decades are adequately accompanied in the past and projected into the future, if small variations are not considered.

The historical "anchor variables" which are accompanied by the code are the following: internal savings; capital/product ratio (it is the inverse of the capital productivity); external commerce (average of export and imports); commercial balance; total liability; net transfers from outside the country; utilization factor of the economy; relation between total investments and those in machines and equipment, and in civil construction; scrapping factor of the economy; population; gross internal product; data from the national energy balance (Balanço Energético Nacional, [BEN]).

For the calculation of emissions and specifically in the energy area, the consortium Economia & Energia (E&E) and Ecology Brasil is in possession of a code for the calculation of emissions which is based on the carbon balance and uses data derived from BEN called "bal_eec". The code utilizes the concept of equivalent energy, which facilitates the analysis of substitution among energy sources. The code is property of E&E, and will be extended to the areas of land utilization and residues. The general methodology to be used is recommended by IPCC. The interconnection between the two codes will allow obtaining curves for GHG emissions when sector parameters or scenarios are changes. This automatic feeding back and forth will greatly enhance the performance of the work.

It is proposed that the economic projection will be performed starting in 2010, with specific evaluations up to 2020 (year of the Brazilian emission targets), up to 2035 (year of the National Energy Plan now being revised), and with an informative extension up to 2050 (reference year for the global planning on climate change). The scenarios will be built with annual evolution, and the results will be presented in five-year, in principle. The results of the emissions of GHG will be presented at least at the level of CO_2, CH_4, and N_2O and other specific gases (depending on the case) and will be presented in temporal curves for the country, for the sectors, in several measuring units.

The establishment of scenarios and of the basic "anchor variables", the outputs for the scenarios, the characteristics of the several economic sectors and their prospective, will be thoroughly discussed with different stakeholders. It is expected the involvement of interested groups of society and of key companies for the analysis of the most important input data and results during the implementation period. During the discussions with these companies and interest groups they will be asked to present suggestions which in their view might improve the results finally achieved. Specifically it is the intention to address solutions related to a market approaches for the overall question of GHG emission reductions. The involvement of these third party groups will have a catalytic effect. The co-financing foreseen for the project involves mostly the work and analysis of these third parties.

Component 2: Identification of mitigation, cost and efficiency opportunities for specific sectors

Mitigation opportunities may have net gains. In other words, mitigation can create a positive financial result for the economy, for example through the development of new technologies or reduced energy costs.

The establishment of three long range emission scenarios for Brazil, up to 2020 and with an informative view up to 2035, will allow more reliable basis for the identification of mitigation options for specific sectors. Mitigation options in such sectors are, in general, additional to the overall expected reduction of GHG announced by Brazil at CoP 15 and have a bottom-up approach. Therefore, if these mitigation options and related costs are identified and further implemented it may represent an additional effort by Brazil for the stabilization of GHG emissions in the atmosphere.

Studies will be done to identify mitigation opportunities and costs for improved efficiency of energy use in appliance and building, for improved efficiency of industrial production, for improved energy efficiency of electricity generation form existing power plants, for improved energy efficiency of electricity generation from existing power plants, of increased production of renewable energy in electricity, of innovative sustainable transport system and of selected low GHG-emitting energy technologies. These sectors are fully in line with the GEF Strategic Objectives in the Climate Change Focal Area for the GEF-4 (see pages 30 and 31, GEF doc. "Focal Area Strategy and Strategic Programming for GEF-4", October 2007).

Appliances and buildings

The participation of the Brazilian commercial, public and residential sectors in direct GHG emissions is very modest (less than 1%). However, their participation in consumption of electric energy is of the order of 45%. This percentage will tend to grow with the increase in the use of ambient air conditioning. In 1999, only 8% of the Brazilian households were air-conditioned, and half of those were located in the Rio de Janeiro city region.

There exists a large potential of increase in air conditioning use, and this will inevitably happen in parallel with the improvement of the economic situation of the Brazilian population. The verified increased use is already causing regional blackouts during the summer. On the other hand, there still exists little concern with adequate thermal insulation in buildings and households in general, moreover in the installation of the appliances.

The increase in the efficiency of air conditioning installation conditions seems to have a large potential of reduction in future emissions. Additionally, air conditioners and household appliances by themselves should be evaluated technically and compared with international data and targets.

Improvements in insulation and the use of architectonic technologies that can make a better use of the natural daylight for public, commercial and residential buildings must be considered.

The Brazilian industry utilizes mostly reinforced concrete in large buildings, but there exists a large potential for the utilization of steel structures. The life cycle emissions potentials of these production chains shall be evaluated and consequences be drawn.

The practice of using noble wood in household buildings is still verified in Brazil. This use creates pressures on the forests but it is, on the other side, a way of fixing carbon. Technologies exist for the use of reforestation wood in these applications which would reduce pressures on native forests.

Efficiency in industrial production.

Industry represents about 5% of Brazilian total emissions, about 30% of emissions in energy use, and about 45% of electricity consumption. Analyses that have been performed related to energy efficiency have shown large savings potential.

Only 3 (three) activities (in 11) are responsible for 63% of emissions, and activities related to iron industry represent more than half of the direct energy emissions. The activities related to iron are important in Brazilian because of exportation, but represent a small portion of the aggregated value generated by the industry as a whole.

Production and refining of oil (which for statistical and analysis purposes are not included in the industry sector) are also very important in energy emissions and will have a growing participation with the foreseen increase in oil production and refining.

Additionally, Brazil is a large producer of commodities with high indicators of emissions per added value. These indicators can and should be improved very much.

Improved energy efficiency for electricity generation of existing Power Plants

Electricity generated in Brazil is predominantly hydroelectric, with high intrinsic efficiency, which might at first view turn ineffective any effort towards conservation. However, efficiency of the hydroelectric power plants is calculated without

considering the energy, which is lost through the dams' spillways. In some years this loss has been 20%, and it will inevitably grow as more and more plants will be built with small reservoirs, which will in turn require more thermal complementation.

Therefore it will be highly relevant to evaluate the overall efficiency of the existing and future hydroelectric plants with this consideration in mind. One way to improve the situation may be, for instance, over-motorization of the plants, which will in turn increase construction costs.

There exists also the question of the existing thermal plants (principally the older coal fired) and the captive power producers (10% of the total), which require a better utilization.

Improvement of renewable energy in electric grids

Brazil has a large potential of energy generation through biomass. More than 4% of the electric energy is generated from sugar cane and other vegetal refuse. A large part of the generation is performed with low efficiency because it is used for the supply of heat and energy for the related industrial plant. Only recently have the regulations and some incentives lead to the commercialization of the excess energy to the distribution grid.

Production of energy in these units has a further advantage, namely that the production season occurs during the dry season, when hydroelectric plants show low inflow. It is estimated that the process may be improved very much, through incentives, through better technologies or through incorporation of new agents. This question shall be evaluated mainly in the areas of sugar cane and ethanol, food and beverages industry, paper and cellulose, etc.

The most efficient utilization of the hydroelectric energy and its integration with the thermal plants shall be evaluated from the point of view of GHG emissions, in order to avoid irreversible decisions which will reduce their potential benefits. The recent policy in Brazil has been to build the new hydroelectric power plants with very small reservoirs and accumulation potential because of a number of legal, political or environmental questions. This has happened even at the huge power plants that are being planned or built (Madeira River, Belo Monte, etc.) This low accumulation potential decreases enormously the firm energy potential of the hydroelectric plants, and therefore the system will require the construction of thermal plants for complementation, which in turn will generate emissions. This situation shall be evaluated through a thorough comparison of the increase in emissions versus accumulation potential of the hydroelectric power plants.

Innovative sustainable transport systems

The transportation sector is responsible for 43% of the Brazilian energy emissions, in spite of the large use of ethanol in individual transportation (38%).

Domestic transportation is predominantly by roads, of the order of 2/3 of the transported cargo. Railways account for 20% of total, but mostly in iron ore and related cargo, and are responsible for 1% of the emissions in the transportation sector.

Rivers are scarcely and under-utilized, in spite of the existing large grid of navigable rivers. Problems of infrastructure and even controlling power make difficult the utilization of river transportation and the integration with roads.

Air transportation (because of the large distances and the precariousness of other means) is intensely utilized and is responsible for 6% of the emissions in the transportation sector.

It is estimated that an overall evaluation of the transportation sector, using "large" numbers and considering emissions as one more decision variable (besides bare costs and other objectives) will make clear alternatives that might exist. It is not intended to present a renewed program for the sector (which anyway is the responsibility of other areas), but simply to show clearly potential emissions savings. Areas to be specially covered include evaluations of mitigation potential in big cities, of mitigation potential resulting from the change of transportation modals between cities and regions, etc.

Selected low GHG-emitting energy technologies

Only since very recently have GHG emission issues started to be considered as part of the decision process by the several economic actors. For instance, the National Energy Plan 2030, which was issued in 2007 and elaborated in the previous years does not consider GHG emissions as part of the decision process, and only states the emissions resulting from a already decided plan.

It seems important that for the most important sectors and from a GHG emissions point of view, booklet and divulgation material identifying opportunities and costs related to low GHG-emitting energy technologies be elaborated and made available for all decision-making management levels, in order to show simple and clear facts related to GHG emissions by the several possible choices.

Component 3: Testing domestic MRV: Evaluation of estimated reduction of GHG emissions with the increased use of bio-fuels in Brazil applying the draft methodological framework in the lifecycle analysis (LCA) of bio-energy production and use developed by the Task Force on GHG Methodologies of the Global Bio-energy Partnership (GBEP)

There is a great interest and an increasing evidence that "renewable fuels" produced from agricultural products or from the fermentation of organic materials represent an economically and environmentally effective way to replace or increase the availability of oil distillates and the use of existing vehicle fuels, given that they can be used either "pure" or as a blend with such conventional fuels. The production and consumption of bio-fuels can contribute in increasing the diversification of the energy mix and in reducing the reliance on fossil fuels. The GHG reduction potential of bio-fuels is large, although it varies significantly, given that it depends on the choice of feedstock, the main different routes of production5, and the basis of their well-to-wheel performance with respect to conventional fossil fuels. This reduction can be difficult to calculate, given different feed stocks, the diverse and complex production and use systems for bio-energy and for the fossil fuels they replace.

In order to facilitate emissions comparisons between different bio-energy production systems relative to fossil fuels, the Task Force on GHG Methodologies of the Global Bio-energy Partnership (GBEP)[6] has produced a draft methodological framework intended to be appropriate for use in the lifecycle analysis (LCA) of bio-energy production and use. The framework is intended to provide a template for LCA that is transparent and that can be applied to a wide range of bio-energy systems. It does not set data standards and does not specify particular emissions models. The goal of the framework is to ensure that countries and organizations can evaluate GHG emissions associated with bio-energy in a consistent manner, using methods appropriate to their circumstances, conditions and systems of production. Furthermore, the framework enables a multi-tiered approach to be taken to the analysis of GHG emissions depending on the level of sophistication employed in the production of the bio-fuel and the data available.

The framework consists of 10 "Steps" of analysis. Steps 1 and 2 are simple checkboxes in which the user identifies the GHGs included in the LCA and the source of the biomass feedstock. In cases that the feedstock is waste material, further explanation is requested. Steps 3-9 walk through a full LCA appropriate for bio-energy production and use, including emissions due to land use change, biomass feedstock production, co-products and by-products, transport of biomass, processing into fuel, transport of fuel, and fuel use. For each Step the framework presents a series of yes/no questions and checkboxes, with requests for further explanation where appropriate. Step 10 is the comparison with replaced fuel. In this Step the framework includes options for reporting LCA of fossil transport fuels and LCA of stationary heat and electricity production systems.

Brazil has been constantly pointed out by a model in the production and use of bio-fuels, especially ethanol from sugarcane. Brazil adopted its National Ethanol Program (ProAlcool more than 30 years ago, adding ethanol to petrol (blended with petrol, with a current content of 25% of anhydrous alcohol, forming a "gasohol" mixture) and even developing engines capable of running on a 100% ethanol blend (in the form of hydrated alcohol). Therefore, considering its leadership and the expected reduction of GHG emissions with the increased use of bio-fuels in Brazil, as announced as an important national mitigation action, this component of the project will allow the draft methodological framework in the lifecycle analysis (LCA) of bio-energy production and use, developed by the Task Force on GHG Methodologies of the Global Bio-energy Partnership (GBEP), to be tested.

The expected outcome of this component is a comprehensive analysis of GHG emission reduction with increased use of bio-fuels in Brazil (production and consumption) utilizing the framework in reporting bio-fuels LCA. This experience will

[5] Some examples are: fermentation of sugars to alcohol, extraction of vegetable oils, gasification and chemical synthetic diesel, bio diesel and bio oil.

[6] The Global Bio-energy Partnership (GBEP) was established to implement the commitments taken by the G8 in the 2005 Gleneagles Plan of Action to support "biomass and bio-fuels deployment, particularly in developing countries where biomass use is prevalent." It is a forum where national governments and organizations seek to facilitate effective policy frameworks and suggest rules and tools to promote sustainable bio-energy development through voluntary cooperation. It also aims to identify ways and means to support investments, to contribute to remove barriers to collaborative project development and implementation, and to foster bioenergy related RD&D activities and commercial bio-energy activities. GBEP Partners now include the following countries and organizations: Brazil, Canada, China, Fiji Islands, France, Germany, Italy, Japan, Mexico, Netherlands, Russian Federation, Spain, Sudan, Sweden, Switzerland, Tanzania, United Kingdom, United States of America, FAO, IEA, UNCTAD, UN/DESA, UNDP, UNEP, UNIDO, UN Foundation, World Council for Renewable Energy (WCRE) and European Biomass Industry Association (EUBIA).

also allow bio-fuels producers, universities (e.g. Unicamp) and industry groups to provide feedback on points requiring clarification or modification.
The importance of this component is that it will represent a domestic MRV (a mitigation action that will be domestically measured, reported and verified) following a nationally developed methodology that takes into consideration a methodological framework that has been developed at international level (by the GBEP).

On the Global Environment benefits, this project will increase the availability of data and information on the state of Brazil's energy emission and by analyzing this information, will enhance the capacity of the Brazilian Government to tackle environment threats with adapted strategic policies and measures. The main expected GEB is to reduce emissions through renewable and more efficient energy.

The implementation of project activities by the country is expected to generate indirect global environmental benefits through the reduction of GHG. The expected outcomes and outputs of this project can serve as important inputs to a better understanding of mitigation challenges in Brazil. The identification of mitigation options and their costs can also lead to more efficient policies, new legislations at federal and state levels. Therefore, the project has the potential to help to change Brazil's policies on energy efficiency (and associated GHG emissions) and assist the country in moving towards a less carbon-intensive and more sustainable energy consumption path.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS:

The Government of Brazil is seriously concerned with the problem of climate change, considering that it is an important issue for the future generations of all nations. Despite other overriding socioeconomic priorities, Brazil has played a leading role in the international discussions and scientific assessment of climate change, as well as in setting up an international institutional framework.

Brazil has already instigated a number of projects, programs and policy measures to monitor and prevent climate change. There are a number of governmental programs and initiatives in Brazil that are resulting in important reductions in the emission of greenhouse gases. Some of them are responsible for Brazil having a comparatively "clean" energy matrix, with low levels of greenhouse gas emissions per unit of energy produced or consumed. Initiatives in other sectors, such as supporting renewable energy, biofuels and energy efficiency, are also helping to lower the curve of greenhouse gas emissions in Brazil.

This low contribution to greenhouse gas emissions is due to several decisions to adopt renewable energy sources taken by the country over the past few decades, even within a natural process of the use of firewood as a primary energy source.

Examples related to energy include the National Ethanol Program, the National Biodiesel Program, the Flex-Fuel cars, the Program to Foster Alternative Electricity Source (Proinfa), the Light for All Program, the National Electricity Conservation Program (Procel), among many others.

Brazil adopted its National Plan on Climate Change in December 2008, which defines actions and measures aimed at mitigation and adaptation to climate change, and enacted Federal Law No. 12,144 of December 9, 2009, which launched the Brazilian Climate Change Fund in order to financially support mitigation and adaptation action with resources from the oil royalties. The Third National Communication of Brazil to the UNFCCC will be fundamental for the identification and prioritization of national mitigation actions.

Moreover, Federal Law No. 12,187 of December 29, 2009, launched the Brazilian Climate Change Law and provides for the principles, objectives, guidelines and implementation mechanisms as regards Brazilian climate change public policies. This federal law is a milestone for Brazilian actions on climate change, since its gives strong legal grounds for actions that had already been implemented by the Federal Government, as well as creates a positive environment for the Federal, State and Local Governments to further develop public policies on the subject matter. In order to reach the objectives of the Law, it was established a national voluntary commitment of reducing Brazil's greenhouse gases emissions by 36.1% to 38.9% as regards 2020 projected emission, which must be calculated pursuant to data gathered on the National Inventory. This cross-sectoral effort will be undertaken by the federal government and the enabling activity will provide reliable emissions data for national and sub-national activities related to this issue.

This project is consistent with the aims and objectives of the UNFCCC and its linkage with sustainable development will contribute to provide the necessary data to help developing actions related to climate change actions in Brazil.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:

The project is consistent with GEF's operational criteria for enabling activities in the area of climate change that aim to facilitate the implementation of GEF operational programs. In particular, the project will strengthen the capacity of the Government of Brazil to estimate GHG emissions in key sectors, enhance its capacity to address environmental threats with adapated strategic policies and measures, make a better assessment of climate change mitigation potential and cost and determine the best climate change mitigation actions, and support the implementation of such mitgation actions. The project is also closely related to the proposed Third National Communication project in Brazil for which GEF approved a PIF in November 2009.

The GEF's approach has evolved through time and has shifted upstream toward creating a environment policy away from subsidizing individual investments, but rather creating the market environment in which the technologies and practices can diffuse into the target markets. During GEF-4, the overarching goal is to reduce GHG emissions through transforming markets. However, market transformation is a complex, long-term process, and requires a strong commitment from participating governments and engagement from the private sector for advice on establishing pre-conditions for success and for making the necessary investments themselves. The project will promote discussions on possible market solutions in the various economy sectors and present suggestions.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The project will benefit from the implementation of the project UNDP/BRA/05/G31, which is funded by the GEF. The project aims at preparing the Second National Communication of Brazil to the United Nations Framework on Climate Change. However, it must be highlighted that the guidelines for the preparation of the Second Communication of Non-Annex I Parties indicates that such countries shall update information on national inventories of greenhouse gas emissions and sinks up to the year 2000. Therefore, although the information to be provided by the second inventory will be extremely valuable, this project will represent as additional effort to calculate the BAU in the selected sectors.

Another related initiative in Brazil that can be highlighted is the GEF project entitled "Market Transformation for Energy Efficient Building HVAC Appliances, building on CFC-free Chillers". The goal of such a project is to create an enabling environment for the type of actions and decisions that, in addition to addressing the CFC-problem, will also significantly improve the energy efficiency of the chiller and the connected air-conditioning system, thereby combining the economic and environmental benefits. However, such a project differs from this one, given that one of its expected outcomes is to improve efficiency of energy use in appliances and buildings and to explore mitigation options of greenhouse gas emissions not controlled by the Montreal Protocol, especially CO_2.

E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING :

The high level of proposed government co-financing for this project certainly indicates that with GEF support, Brazil will continue to gather more data and information on its energy resources. However, with a more limited budget, it is likely that this effort will be focused on national priorities (focused mainly in the economic domain) and pays less attention to data collection, analysis and development of policies to support the generation of global and environmental benefits. In particular, policy reform that is likely to be more difficult with limited resources that would probably devoted to national coordination, capacity-building and analysis in support policy reform.

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MEASURES THAT WILL BE TAKEN:

Brazil has already launched some of these activities and is strongly committed to its obligations under the international agreements on climate change. Commitment will be sustained through effective coordination and communication between stakeholders and Government. The risks are also low due to the expertise of Brazil related to energy efficiency, renewable energy and transport. Some of the governmental programs and initiatives in Brazil are resulting in important reductions in the emission of greenhouse gases. Some of them are responsible for Brazil having a comparatively **"**clean**"** energy mix. Brazil has several initiatives related to bio-fuels and energy efficiency that helps the comparative advantage of the country related to this issue.

Climate change concerns will trigger decisions that are not well supported by knowledge. The project will help mitigate both overarching climate change risks as well as the risks in decision making related to climate change by securing a sys-

tematic and reliable knowledge base as foundation for devising strategies and following-up on implementation of decisions, specially for the National Plan and National Policy on Climate Change.

Nevertheless the following are some of the possible concerns:

- Coordination with stakeholders: delays due to coordination with a large number of stakeholders from different economic sectors of the society might cause delays to the project; however this risk will be minimized by building on the intersectoral agreements and institutional collaboration. Commitment from all stakeholders will be also maintained through effective coordination and communication between stakeholders and Government.
- Access to data and database: some data may be restricted or protected by property rights or of use of private sector. However this risk will be minimized by building on the intersectoral agreements and institutional collaboration. Commitment from all stakeholders will be also maintained through effective coordination and communication between stakeholders and Government.
- Access to software and codes: especially component 1 has been designed based on a specific methodology which uses specific software and codes, which are in possession of specific companies and NGOs. However, they are strongly committed to the results of the project. This risk can be limited with an agreement between the Ministry of Science and Technology and the abovementioned entities.
- Delays in the preparations of reports: the risk is low given the expertise of Brazil in preparing national communication and the fact that it is expected that the approval of this project will allow the successful completion of the SNC.
- Limited political support to Climate Change issues: The project will help mitigate both overarching climate change risks as well as the risks in decision making related to climate change by securing a systematic and reliable knowledge base as foundation for devising strategies and following-up on implementation of decisions, specially for the climate change actions.

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The expected outputs of the project involve analyses of GHG mitigation potential in different sectors (including costs), which will allow a better and country-driven assessment of the costs of abatement (in terms of $/ton of CO_2 abated). Therefore, the PIF cannot anticipate such analyses presenting the cost-effectiveness of the project at CEO endorsement. Mechanisms to set criteria to verify mitigation potential in different sectors will be developed in collaboration with stakeholders as part of full project preparation.

The proposed project will bring results only in the long term, and even so in an indirect way. It is difficult to build up an indicator in order to measure and compare cost and output, as well as to evaluate possible alternatives. In general, it can be stated that the projected cost of the project bears absolutely no relevance if compared to any evaluation which might be made related to any projected cost of emissions or of their economic consequences. In order to justify this statement, an evaluation will be made in what follows. For this purposes, suppose that a study (such as the present one) will be made for a direct cost of R$ 8,5 million, about US$ 5 million. The purpose of the study is to provide further knowledge and insight to the responsible government agencies, which then in turn will lead to more informed decisions by these government authorities.

Just to get an insight, let us take a look on the situation for some values for CO_2 (or CO_2 eq.) for 2020, in some chosen areas, as shown in the Table below. The "value" of CO_2 is assumed (just for reasoning purposes) as US$ 40.00 per ton. Such a value (or a similar one) is often mentioned as the "cost" to be imposed on CO_2 emitting sources in order to allow economic comparisons with non-emitting sources. Conversely, it could then also be assumed to be the cost of its "removal" if this was possible. Confessedly such "cost" is meaningful only for a short term reasoning, and it is made here only to demonstrate the order of magnitude of the financial resources that might be involved.

STATUS OF CO_2 EMISSIONS IN 2020 BY SELECTED SOURCES						
GHG	**Factor**	**As usual tendency**	**Reduction proposed by Brazil (hypothesis 1)**			**After reduction tendency**
		Mt	**%**	**Mt**	**bi US$**	**Mt**
CO_2	**Energy**	560.0	6.1	34.2	1.4	525.8
CO_2	**Land Use**	1,840.0	24.7	454.5	18.2	1,385.5
CH_4	**Cattle**	20.0	4.9	1.0		19.0
CO_2 eq		400.0		20.0	0.8	380.0
Total		2,800.0		508.7	20.4	2,291.3

If these numbers are considered, it becomes evident that efforts should be made in order to rationalize the investments which will have to be made in order to achieve reductions.

The involvement of the directly interested parties in the whole process of evaluations will allow that specificities are considered in the process and influence the investment minimization. Such involvement will also allow catalytic influences (such as capacity building, policy changes, etc.) to be exercised on these interested parties. Suggestions will be asked from these third parties aiming at achieving optimized solutions, including specifically possible market approaches to the problem.

In short, it is clear that the cost of the project is negligible in face of its potential benefits. On the other hand, it is difficult to see how a different (and less costly) approach could be established in order to achieve the stated objective.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

Established in 1972 under the UN System, UNEP mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action.

The organization has more than twenty years of experience with various aspects of climate change as a global environmental issue and is well positioned to support to a greater extent moves by governments, the private sector, and civil society to reduce the emission of greenhouse gases and to adequately prepare for the consequences resulting from a changed climate. UNEP, in cooperation with WMO, provides support to the joint secretariat of the Intergovernmental Panel on Climate Change (IPCC) and its bureau and working groups, including facilitating the participation of developing countries and countries with economies in transition in the IPCC.

UNEP portfolio contains a range of climate change related initiatives including tools for promoting climate change awareness at the national level, to support to the development of criteria and indicators for assessing ecological and economic vulnerabilities to climate change and to enhancing scientific and technical capacities for the assessment of impacts of adaptation to climate change in multiple regions and sectors.

Since 2008, UNEP has identified climate change as one of six thematic priorities/focus during 2010-2013 as per decision taken by the Governing Council / Global Ministerial Environment Forum as well as the global framework agreed through the UNFCCC. So far, UNEP has been developing an strategic process to identify areas where UNEP skills and capabilities are distinctive in the area of climate change. These include (i) a broad environmental perspective that treats the range of environmental issues and development concerns in an integrated manner. (ii) a global mandate for action that allows UNEP to both work with developed and developing countries on normative frameworks and undertake projects in developing countries. (iii) scientific expertise and a science based approach that is strongly supported by a wide network of scientific institutions and UNEP collaborating centres and (iv) convening power and a proven ability to work in a multi-stakeholder manner, including with the private sector.

UNEP climate change strategy is structured around four themes – mitigation, adaptation, science, and communication. The overarching emphasis is on a broad, science-based, multidimensional approach that captures the inter-linkages among climate change issues and builds solution oriented coalitions among key stakeholders from the north and south. The ap-

proach places a high value on the transmission and sharing of information, both outward to key groups using a variety of media, and among them using various means of networking and communication.

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 country endorsement letter(s) or regional endorsement letter(s) with this template).

Carlos Eduardo Lampert Costa *General Coordinator for Social Operations* *Ministry of Planning, Budget and Management* *Secretariat of International Affairs* *Esplanada dos Ministerios, Bloco K, 5 andar* *CEP 70040-906* *Brasilla DF, Brazil* *phone: 55 61 3226 1993* *fax: 55 61 3225 4022* *e-mail:carlos.lampert@planejamento.gov.br*	Date*: 04/15/2010*

José Domingos Gonzalez Miguez *General Coordinator on Global Climate Change* *Ministry of Science and Technology* *Secretariat of* *Esplanada dos Ministérios, Bloco E, sala 268* *CEP 70067-900* *phone: 556133177923* *fax: 556133177657* *e-mail: miguez@mct.gov.br*	Date*:05/05/2010*

B. GEF AGENCY(IES) CERTIFICATION

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

Agency Coordinator, Agency name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
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