



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL SIZE PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROJECT INFORMATION

Project Title:	Fourth National Communication and Biennial Update Reports to the United Nations Framework Convention on Climate Change (UNFCCC)		
Country(ies):	BRAZIL	GEF Project ID: <sup>1</sup>	
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5187
Other Executing Partner(s):	Ministry of Science, Technology and Innovation	Submission Date:	5 April 2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	48
Name of parent program (if applicable):		Agency Fee (\$):	715,208
	<ul style="list-style-type: none"> <li>• For SFM/REDD+ <input type="checkbox"/></li> <li>• For SGP <input type="checkbox"/></li> </ul>		

### A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM- 6 Outcome 6.1: Adequate resources allocated to support enabling activities under the Convention	GEFTF	7,528,500	22,735,500
Total Project Cost		7,528,500	22,735,500

### B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To prepare the Fourth National Communication (4NC) and Biennial Update Reports required to meet obligations under the UNFCCC						
Project Component	Grant Type <sup>3</sup>	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. National GHG Inventory	TA	National GHG Inventory is improved and updated	1.1 Procedures for inventory development and management to enhance the current system evaluated and adjusted.  1.2 Best practices in the elaboration of inventories adopted.  1.3 National GHG Inventory updated to 2014 (1990-2014) in the energy, industry, agriculture, land use change and forestry, and waste sectors.	GEFTF	3,250,000	9,750,000
2. National Circumstances, Envisaged Steps for the Convention	TA	Report on National Circumstances and description of steps taken or envisaged for	2.1. Report on national and regional development priorities and institutional	GEFTF	440,000	1,020,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the reference attached on the [Focal Area Results Framework](#) when completing Table A.

<sup>3</sup> TA includes capacity building, and research and development.

Implementation, and other relevant information		the Convention implementation regarding the period 2014 to 2017.	arrangements.  2.2. Report on needs, constraints and gaps and other relevant information.  2.3. Report on measures for climate change mitigation.			
3. Vulnerability assessment and adaptation measures	TA	<p>Vulnerability to climate change in Brazil assessed and adaptation measures identified for agriculture, water resources, energy, economy, health, biodiversity, and ecosystems.</p> <p>Climate scenarios and projections for Brazil improved with the use of advanced and updated Regional and Global Climate Change models.</p>	<p>3.1. Documented climate scenarios based on the Brazilian Earth System Model (BESM) and downscaling with the Atmospheric Regional Model Eta.</p> <p>3.2. Impact assessment of the atmospheric chemistry component of BESM; impact assessment of surface vegetation fires simulated by the fire module of BESM; impact assessment of projected large scale climatic fluctuations of rainfall on river runoff variations and its impacts on ocean carbon cycles and coastal erosion.</p> <p>3.3 Regional and sectoral vulnerability analysis (using vulnerability indexes) and generation of maps, under various emission scenarios and time slices, in GIS format.</p> <p>3.4. Network of low cost data collection devices for the assessment of the human perception of climate variability (extreme events) and change, to be used as a metric for adaptation policies.</p> <p>3.5 Adaptation</p>	GEFTF	1,550,000	4,650,000

			measures for the key sectors identified.			
4. Public Awareness and Education Strategy in Place	TA	An enhanced public awareness strategy on climate change is developed, including the compilation and update of relevant information.	<p>4.1. Relevant documents and policy briefs published and disseminated.</p> <p>4.2. Web site of the Ministry of Science, Technology and Innovation updated with information on GHG Inventories, legislation, scientific knowledge and other climate change issues.</p> <p>4.3. Workshops and seminars organized and participation in public events in order to disseminate information on climate change issues, presenting main findings of the project.</p>	GEFTF	700,000	2,450,000
5. Publication and submission of the Fourth NC	TA	Fourth NC is published and submitted to the UNFCCC.	<p>5.1. Publication of the 4NC in hard copy and alternative media in Portuguese and English.</p> <p>5.2. Reference Reports of the National Inventory published for the different sectors.</p>	GEFTF	230,000	690,000
6. Preparation and submission of Biennial Update Reports (BUR) in 2016 and 2018	TA	Biennial Update Reports (BUR) for 2016 are prepared, published and presented to the UNFCCC.	<p>6.1. BURs for 2016 and 2018 published and submitted, including updates of information regarding:</p> <ul style="list-style-type: none"> <li>- National circumstances and institutional arrangements;</li> <li>- National GHG inventory (up to 2012 and 2014, respectively);</li> <li>- Mitigation actions and their effects;</li> <li>- Constraints and gaps, and related</li> </ul>	GEFTF	1,000,000	3,000,000

			financial, technical and capacity needs; - Level of support received to enable the preparation and submission of BURs; - Domestic measurement reporting and verification; and other relevant information.			
Subtotal					7,170,000	21,560,000
Project Management Cost (PMC) <sup>4</sup>				GEFTF	358,500	1,175,500
Total Project Cost					7,528,500	22,735,500

**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	Ministry of Science, Technology and Innovation, other Ministries, universities and institutes	In kind	22,585,500
GEF Agency	UNDP	In kind	150,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
<b>Total Cofinancing</b>			22,735,500

**D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>**

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) <sup>2</sup>	Total (\$) c=a+b
UNDP	GEFTF	Climate Change	Brazil	7,528,500	715,208	8,243,208
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
<b>Total Grant Resources</b>				7,528,500	715,208	8,243,208

<sup>1</sup> 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. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

**E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>**

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

Amount

Agency Fee

<sup>4</sup> To be calculated as percent of subtotal.

<sup>5</sup> On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

- No PPG required. Requested (\$)  
-- 0--
- (upto) \$50k for projects up to & including \$1 million for PPG (\$)<sup>6</sup>  
--0--
- (upto)\$100k for projects up to & including \$3 million \_\_\_\_\_
- (upto)\$150k for projects up to & including \$6 million \_\_\_\_\_
- (upto)\$200k for projects up to & including \$10 million \_\_\_\_\_
- (upto)\$300k for projects above \$10 million \_\_\_\_\_

**PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF ROJECT ONLY**

Trust Fund	GEF Agency	Focal Area	Country Name/ Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
<b>Total PPG Amount</b>				<b>0</b>	<b>0</b>	<b>0</b>

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

<sup>6</sup> PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

## PART II: PROJECT JUSTIFICATION<sup>7</sup>

### **1) PROJECT OVERVIEW**

#### *A.1. Project Description.*

##### Background and Context

Brazil, as a Party to the UNFCCC, has the obligation to prepare a National Communication Document, based on the guidelines provided by the Conference of Parties (COP) for non-Annex I countries (Decision 17/CP.8). The Government of Brazil (GoB) has successfully submitted the First and Second National Communications and is currently preparing its Third National Communication (3NC).

In the process of elaborating the 3NC, a permanent data platform for the National Inventory is currently under development ensuring regular updating, security, transparency and continuity. The platform will allow and promote wider public access to data. Another important contribution for the Third and Fourth National Communications are the multiple research programs conducted by the Brazilian Research Network on Global Climate Change (Rede Clima). The research programmes are filling information gaps identified in the 1NC and 2NC. This network was established by the Ministry of Science, Technology and Innovation (MCTI) in 2007 with the mission to generate and disseminate knowledge about the causes and effects of global climate change.

As the preparation of the 3NC moves forward, Brazil has identified several aspects that should be enhanced for the 4NC. The Inventory for the Land Use, Land Use Change and Forestry (LULUCF) Sector will be further refined by the utilization of satellite images taken at shorter time intervals for all biomass. The Inventory will be further improved by calculating country specific emission factors for energy, agriculture and LULUCF. This work will allow the extension and consolidation of existing partnerships with relevant government institutions and research centers, besides the foreseen improvement of current models and data platforms. However, these upgrades will imply higher costs, thus requiring additional funding for the expected refinement vis-à-vis the 3NC.

The 3NC will be presented to the UNFCCC by December 2014, and the implementation of the 4NC will begin after the official submission of the 3NC. The first biennial update report will be presented in conjunction with the 3NC as section of the National Communication Report. The BUR to be presented in 2016 will be a stand alone update report, and the 2018 BUR will be presented in conjunction with the 4NC, according to Decision 2/CP.17.

##### Project Components

The process to complete the Brazilian 4NC to the UNFCCC envisages the following project components.

#### **Component 1 - National GHG Inventory.**

This component consists of 3 sub-components: (1) Updating of the inventory of GHG emissions to 2014 in the energy, industrial processes, solvents and other products, agriculture, LULUCF, and waste sectors (removal of GHG will be accounted in the LULUCF sector as a result of protected area management and reforestation activities); (2) Updating of the GHG Inventory Database and inventory management system; and, (3) Improvement of the GHG emission forecasting and modeling methodologies. The inventory years of the previous NCs will be updated, as needed, so that a consistent time series for the 1990-2014 can be reported through the BUR and 4NC.

The 4NC will focus on improving and refining the data and emission factors of the LULUCF, agriculture and energy sectors, due to their relevance in Brazil<sup>8</sup>.

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<sup>7</sup> Part II should not be longer than 5 pages.

The GHG inventory process will involve additional activities and procedures. It shall support national research institutions and strengthen their experience in order to generate more detailed and reliable GHG inventories. At present, the 3NC is already working with the Brazilian Research Network on Global Climate Change (Rede CLIMA) in the development of a national emission factor database for key sources and country specific emission factors. This database will be validated with detailed and accurate emission factors in order to be available for the 4NC preparation. Based on the experience and capacity built during the previous NCs, Tier III methods and models will be adopted, as appropriate, for the preparation of the GHG inventories of the 4NC. The usage of Tier III will involve development, validation and application of models for different sectors and regions. The institutional framework for managing such a database is currently being discussed along with its technical specifications, under the coordination of the MCTI. Some of the basic technical features will be available by the time the 3NC is submitted, and it is expected that the 4NC will rely on an enhanced database infrastructure. The costs of setting up such a system are still being estimated and a gradual implementation schedule is envisaged with the corresponding expenses deployed over time. Financial support will be needed in order for the additional efforts to translate into more reliable, detailed results. The development of this database system will also contribute to the establishment and implementation of sustained QA/QC procedures as recommended by the IPCC good practice guidance. Brazil is confident the system will help reduce the uncertainties of the GHG inventories during the 4NC preparation.

## **Component 2 - National Circumstances and Envisaged Steps for the Convention Implementation. (Period 2014 to 2017)**

Under this component, efforts will focus on having a better understanding of the Brazilian climate change context, including the national actions to address climate change and related challenges. Data referring to geographic, environmental and socioeconomic aspects will be updated in a development context. This component will cover the relevant institutional arrangements for the preparation of the 4NC.

Under this component, Brazil will assess the following aspects: demographic and socioeconomic features, such as occupation patterns and rural-urban population; economic structure of the country, information on social development such as poverty level, educational level; forest categories and soil types; river basins; climatic systems; and rainfall and temperature trends. Furthermore, a report will be prepared covering the existing institutional arrangements for the preparation of GHG inventory.

Brazil has made substantial progress on the legal and institutional framework for climate change policies. The 4NC will describe such progress, especially concerning the National Plan on Climate Change. It will also include a description of identified challenges in terms of institutional arrangements and scientific knowledge.

This component will also include detailed descriptions of other relevant information:

- Steps taken or envisaged to mitigate climate change;
- Activities related to technology transfer;
- Climate Change research and systematic observations;
- Research to adapt to and mitigate climate change;

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<sup>8</sup> For the energy sector more tests will be carried out in collaboration with the Ministry of Mines and Energy in order to determine emission factors from fuels. Concerning agriculture, the 4NC aims to improve country specific emission factors for the following subsectors: livestock enteric fermentation and manure management, promoting a regional assessment of manure management systems; N<sub>2</sub>O from agricultural soils, using the results of complete studies related to emission factors for the cultivation of rice for different regions, initiated in the 3NC. With regard to LULUCF, in the 1NC, the satellite images covered only 50% of the national territory. For the 3NC, satellite images are being used for all Brazilian biomass in order to obtain emission estimates; and national data includes the biomass above and below ground (also using data from literature). The 4NC is intended to estimate emissions and removals based on images taken at a higher frequency so as to obtain more accurate data from the transition matrix of categories/subcategories of land use built in previous inventories. A quantitative assessment of uncertainties in the inventories will also be carried out.

- Information on education, training and public awareness
- Information on capacity-building at the national, regional and sub-regional levels;
- Efforts to promote information sharing;
- Constraints and gaps, and related financial, technical and capacity needs.

### **Component 3 - Vulnerability Assessment and Adaptation Measures.**

This component encompasses activities that will evaluate Brazil's vulnerability to the threats associated with global climate change. Impact assessments will be carried out on agriculture, water resources, energy, economy, health, biodiversity and ecosystems. The studies will also assess adaptation opportunities in order to develop adaptation policies and measures.

The 4NC intends to profit from results of the Brazilian Earth System Model (BESM). This system is used to conduct climate change studies at global and continental scales. The atmospheric chemistry component of BESM shall allow the evaluation of the impacts of surface vegetation fires simulated by the fire module of BESM's surface model. The evaluation on atmospheric composition and its effects on global clouds' optical properties and the hydrological cycle are also envisaged in the BESM. The continental hydrology developed in the BESM will allow the evaluation of projected large scale climatic fluctuations of rainfall on river runoff variations and its impacts on ocean carbon cycles and coastal erosion.

The BESM will be used to generate new global climate change projections, with resolutions of the order of 80 km atmospheric and 25 km oceanic for at least 3 emission scenarios. Such scenarios shall encompass the time periods of 1960 to 2075. It is expected to allow the evaluation of continental and regional scale changes on the hydrology, temperature, and severe weather frequency, both for the current climate period (1960-2010) and for modeling a future period (2015-2075).

Vulnerability indexes shall be used to map and perform regional and sector analysis under various emission scenarios and time frames. Such indexes shall include the frequency and intensity of droughts and floods, the occurrence of severe weather with electrical discharges, hail, heat and cold waves, ocean swells, crop failures, public transportation disruptions, human health hazards, among others. The maps are expected to be built in GIS format, allowing and promoting their use for public policy planning, civil defense, and economic measures for adaptation.

One of the major risks and opportunities associated with climate change is the lack of public awareness concerning the real dimensions and related challenges. Brazil believes in promoting scientific exchange among specialists and diffusing scientific findings to society. This will allow scientific knowledge to promote a change in current paradigms and adequately inform the policy making community. The component will also produce a network of low cost data collection devices for the assessment of the human perception of climate variability (extreme events) and change as an input to devise adaptation policies.

### **Component 4 - Public Awareness And Education Strategy.**

This component aims at strengthening the institutional capacity of the Brazilian Government to promote public awareness on climate change issues. Information generated by the project will be disseminated, addressing different aspects such as legislation, scientific knowledge, governmental and non-governmental actions, GHG emissions estimates, and ongoing adaptation and mitigation initiatives. Such information shall be presented in adequate formats to the different audiences – students, specialists, governmental actors, civil society organizations and the general public – including printed materials, electronic media, besides meetings and seminars.

Brazil has identified this component as a priority, as this strategy is needed to address aspects not covered by previous NCs. The component is expected to encompass the publication and distribution of relevant documents, the organization of workshops and seminars focused on stakeholders of different sectors as well as the participation of the 4NC team in public events in order to disseminate information on climate change issues and to present the main findings of the project.



## **Component 5 - Publication and Submission of the Fourth National Communication**

The 4NC will be presented to the UNFCCC by December 2018. This component focuses on two major Outputs: 1) Publication of the 4NC in hard copy and alternative media in Portuguese and English, and 2) Publication of Reference Reports of the National Inventory for the different sectors.

## **Component 6 - Publication and Submission of Biennial Update Reports**

Brazil's BURs, in accordance with Decision 2/CP.17 will contain: information on national circumstances and institutional arrangements; information on the national GHG inventory, including a national inventory report; information on mitigation actions and their effects; information on constraints and gaps, and related financial, technical and capacity needs; information on the level of support received to enable the preparation and submission of BURs; information on domestic measurement reporting and verification; and other relevant information. Data gathering and analysis work, as well as consultations with relevant institutions that were involved in the national communications preparation, will be carried out in order to produce comprehensive and complete BURs.

The 2016 BUR will be a stand-alone update report (the GHG base year will be 2012) and the 2018 BUR will be presented in conjunction with the Fourth National Communication as a summary of its parts, in line with Decision 2/CP.17.

### *Global Environmental and National Socio-Economic Benefits*

No direct environmental benefits are associated with the proposed Enabling Activity Project although indirect global environment benefits are expected since the studies developed and information provided will be the basis for efforts to mitigate Brazil's GHG emissions and enhancement of sinks, and to reduce its vulnerability to impacts of climate change.

The 4NC of Brazil will address gender concerns by building capacities of both men and women (and children) to equally cope with the adverse impacts of climate change and reduce negative effects on national welfare and environmental sustainability. More specifically, the project will: 1) systematically analyze and address the specific needs of both women and men; identify targeted interventions to enable both genders to participate in – and benefit equally from – development efforts; and, 2) address any gaps in attaining gender equality particularly in the context of adaptation to impacts of climate change by designing strategies and policies to close these gaps. This can be accomplished during the workshops and seminars and with the research work needed for the development of BESM.

#### ***A.2. Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project preparation:***

As previously mentioned, the Brazilian Research Network on Global Climate Change (Rede Clima) is expected to be involved in the preparation of the 4NC and BURs, through its numerous research institutions and universities. The Network produces information for the formulation and follow up of public policies on climate change and to support the Brazilian negotiations under the UNFCCC.

Rede Clima generates and disseminates knowledge about causes and effects of global climate change in 13 sub-networks: Agriculture, Biodiversity and Ecosystems, Cities, Natural Disasters, Regional Development, Economy, Renewable Energy, Modeling, Oceans, Water resources, Health, Environmental Services and Coastal Zones

The Network is based at the National Institute of Spatial Research – INPE, in São José dos Campos (State of São Paulo) and is comprised of a Board of Directors, a Scientific Committee, and an Executive Secretariat in support of a network of public institutions such as research institutions (INPE, INPA, MPEG, FIOCRUZ and EMBRAPA) and Universities (e.g. UnB, UFC, UFPE, UNICAMP, COPPE/UFRJ, USP, UFRGS, UFSC).

Besides the institutions on the Rede Clima network, other institutions may be involved in the preparation of the NC and BURs, as listed below:

<b>Institution</b>	<b>Contributes to / Prepares</b>
<b>Brazilian Research Network on Global Climate Change (Rede Clima)</b>	<ul style="list-style-type: none"> <li>• Conducting research on various aspects of climate change.</li> </ul>
<b>Brazilian Chemical Industry Association (ABIQUM)</b>	<ul style="list-style-type: none"> <li>• Industry reference reports on chemical industry emissions.</li> <li>• Industry reference reports on industrial processes emissions.</li> <li>• Industry reference reports on industrial processes: mineral products – production of lime, limestone and dolomite.</li> </ul>
<b>National Cement Industry Union (SNIC)</b>	<ul style="list-style-type: none"> <li>• GHG emissions of industrial processes: mineral products – production of cement.</li> </ul>
<b>Brazilian Association of Portland Cement (ABCP)</b>	<ul style="list-style-type: none"> <li>• Industry reference reports on industrial processes: mineral products – production of cement.</li> </ul>
<b>Brazilian Aluminum Association (ABAL)</b>	<ul style="list-style-type: none"> <li>• Industry reference reports on industrial processes: metal products - aluminum.</li> </ul>
<b>Brazil Steel Institute (IABr)</b>	<ul style="list-style-type: none"> <li>• Industry reference reports on industrial processes: metal products – iron and steel.</li> </ul>
<b>Brazilian Lime Producers Association (ABPC)</b>	<ul style="list-style-type: none"> <li>• GHG emissions of industrial processes: mineral products – production of lime, limestone and dolomite.</li> </ul>
<b>Ministry of External Relations</b>	<ul style="list-style-type: none"> <li>• It formulates foreign policy and conducts international negotiations on climate change.</li> </ul>
<b>Ministry of Mines and Energy (MME)</b>	<ul style="list-style-type: none"> <li>• GHG emissions of industrial processes: mineral products – production of lime, limestone and dolomite.</li> <li>• GHG emissions of vehicles</li> <li>• Carbon dioxide emissions from fossil fuel combustion: top-down method.</li> <li>• GHG emissions from fossil fuel combustion: bottom-up method.</li> </ul>
<b>Ministry of the Environment</b>	<ul style="list-style-type: none"> <li>• It coordinates, at the executive level, the work undertaken by the Interministerial Committee on Climate Change.</li> </ul>
<b>Ministry of Planning, Budget and Management</b>	<ul style="list-style-type: none"> <li>• It is responsible for planning and budgetary issues.</li> </ul>
<b>Secretariat of Strategic Affairs (SAE)</b>	<ul style="list-style-type: none"> <li>• It has an important role in long term planning</li> </ul>
<b>Ministry of Finance</b>	<ul style="list-style-type: none"> <li>• It is responsible for coordinating discussions on carbon markets.</li> </ul>
<b>Ministry of Development, Industry and External Commerce (MDIC)</b>	<ul style="list-style-type: none"> <li>• It is responsible for the mitigation plan for the industrial sector.</li> </ul>
<b>Ministry of Transport</b>	<ul style="list-style-type: none"> <li>• It is responsible for the mitigation plan for the transport sector.</li> </ul>
<b>Ministry of Cities</b>	<ul style="list-style-type: none"> <li>• In collaboration with the Ministry of Transport, it is responsible for the mitigation plan for the transport sector,</li> </ul>

	regarding urban mobility issues.
<b>Brazilian Forum on Climate Change</b>	<ul style="list-style-type: none"> <li>It has the purpose of raising the awareness of society and mobilizing it for discussion and decision-making on problems resulting from climate change, thus promoting stakeholder dialogue. It promotes the institutional interface between Government and Civil Society.</li> </ul>
<b>São Paulo State Environmental Company (CETESB)</b>	<ul style="list-style-type: none"> <li>Reference reports on solid waste disposal emissions treatment.</li> </ul>
<b>Foundation for Space Science, Technology and Applications (FUNCATE)</b>	<ul style="list-style-type: none"> <li>Reference reports on carbon dioxide emissions from land use, land-use change and forestry.</li> </ul>
<b>Petrobras</b>	<ul style="list-style-type: none"> <li>Reference reports on fugitive GHG emissions in oil and natural gas industry.</li> </ul>
<b>Brazilian Coal Association (ABCM)</b>	<ul style="list-style-type: none"> <li>Industry reference reports on industrial processes: metal products – iron and steel.</li> <li>Energy reference reports: fugitive GHG emissions from coal mining and handling.</li> </ul>
<b>Association of the Santa Catarina Coal Industry (SATC)</b>	<ul style="list-style-type: none"> <li>Energy reference reports: fugitive GHG emissions from coal mining and handling.</li> </ul>
<b>Pontifical Catholic University of Rio Grande do Sul (PUCRS)</b>	<ul style="list-style-type: none"> <li>Energy reference reports: fugitive GHG emissions from coal mining and handling.</li> </ul>
<b>National Civil Aviation Agency (ANAC)</b>	<ul style="list-style-type: none"> <li>Energy reference reports: GHG emissions from civil aviation.</li> </ul>
<b>Department of Airworthiness (SAR)</b>	<ul style="list-style-type: none"> <li>Energy reference reports: GHG emissions from civil aviation.</li> </ul>
<b>Center for Environmental Protection Studies (NEPA)</b>	<ul style="list-style-type: none"> <li>Energy reference reports: GHG emissions from civil aviation.</li> </ul>

*A.3 Indicate risks, including climate change, potential social and environmental 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 (table format acceptable):*

No major risks can be identified in the implementation of this project since the Government of Brazil is strongly committed to its obligations under the Convention and in particular to fulfilling reporting requirements. Nevertheless, administrative and financial risks with a low grade were identified:

Coordination with stakeholders: delays due to coordination with a large number of stakeholders from different sectors may cause delays to the project. However this risk will be minimized by building on intersectoral agreements and institutional collaboration established when preparing the 3NC. The PIF is being presented at this stage to allow for continuity in the National Communication process, ensuring that the 4NC can initiate as soon as the 3NC is presented to the UNFCCC. Commitment from all stakeholders will also be maintained through effective coordination and communication between stakeholders and Government.

Delays in the preparation of reports: the risk is low given Brazil's experience in preparing national communications and the expected level of GEF financing for this project.

Restricted information base on climate change: the project will help mitigate climate change risks and support decision making related to climate change by improving the corresponding knowledge base.

Risks related to dollar depreciation against the Brazilian currency: when preparing the Second and Third National Communications, the team has faced challenges in financing due to dollar depreciation, which

has caused a reduction in the absolute value of GEF grant in Reais, the national currency. However, economic forecasts project a more stable valuation of the Brazilian currency vis a vis the US dollar in the medium term.

**A.4. Coordination. Outline the coordination with other relevant GEF financed and other initiatives:**

The project will benefit from the previous NCs funded by the GEF. The 4NC will update all information contained in the TNC, including national inventories of greenhouse gas emissions and sinks up to the year 2014.

Brazil shall soon start to implement a project also financed by the GEF and executed by the MCTI named “Mitigation Options of Greenhouse Gas (GHG) Emissions in Key Sectors in Brazil”, in partnership with the United Nations Environment Program (UNEP). It shall reach completion by November 2015. The Project’s objective is to assist the Government of Brazil in strengthening its technical capacity for supporting the implementation of its mitigation actions for GHG in key economic sectors (industry, energy, transportation, household and services, LULUCF, waste management and other cross-sector alternatives). It will, in sum: (i) identify mitigation alternatives and quantify respective potentials and costs, developing scenarios for 2012-2035 and 2035-2050; (ii) provide an integrated analysis of different mitigation alternatives; evaluate possible impacts of climate policies on the economy; test domestic measurement, reporting and verification (MRV) of proposed mitigation alternatives; and (iii) promote capacity-building for the implementation of mitigation actions.

Thus, results presented by the Mitigation Options Project, including scenario development, identification of mitigation alternatives, cost abatement projections and specific training shall provide important inputs and be reported in the 4NC and the BURs to be submitted in 2016 and 2018, respectively.

From the point of view of environmental sustainability, the results to be delivered by this project, especially regarding the inventory and vulnerability and adaptation assessment, will provide methodological references that will be important for the formulation of future mitigation and adaptation projects, as well as important inputs for the scientific literature assessment review periodically undertaken by IPCC.

**B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

***B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.:***

Brazil has played an important role in international discussions and scientific assessment of climate change, as well as in setting up an international institutional framework. Brazil has a strong interest in continuing its leading and innovative role in the international dialogue on climate change. Brazil has already established a number of projects, programs and policy measures to monitor the impacts of and adapt to climate change. Several governmental programs and initiatives in Brazil are resulting in important reductions of greenhouse gas emissions. Some of these programs are responsible for Brazil having a comparatively “clean” energy mix, with low levels of greenhouse gas emissions per unit of energy produced and consumed.

The National Plan on Climate Change was approved in December 2008. It has four general themes: (I) mitigation; (II) vulnerability, impact and adaptation, (III) research and development; and (IV) enhancement of skills and dissemination. The main objectives of the Plan are: (i) to stimulate efficiency increase in a constant search for better practices in the economic sectors; (ii) to keep the high share of renewable energy in the energy mix, preserving the important position Brazil has always held in the international scenario; (iii) to encourage a sustainable increase in the share of biofuels consumption in the transport sector and also work towards the structuring of an international market of sustainable biofuels; (iv) to seek a sustained reduction of deforestation rates, in all Brazilian biomass, in order to reach zero illegal deforestation; (v) to eliminate the net loss of forest coverage in Brazil by 2015; (vi) to strengthen cross-sector actions aimed at reducing vulnerabilities of populations; (vii) to identify

environmental impacts resulting from climate change and to stimulate scientific research that can trace out a strategy to minimize socio-economic costs of adaptation.

The Plan, which is now undergoing a process of revision and updating, is based on the general directives provided by the National Policy on Climate Change (Federal Law No. 12,187 of December 29, 2009), proposed by the Executive branch to Congress in 2008. The National Policy organizes Brazil's efforts in areas such as mitigation, adaptation, scientific and technological research, institutional coordination, public information and capacity building. Through its article 6, IV, the National Policy defined as one of its instruments the National Communication.

Brazil's voluntary nationally appropriate mitigation actions, presented to the UNFCCC in January of 2010, are directed towards reductions of deforestation in the Amazon and Cerrado biomass; restoration of grazing land; integrated crop-livestock system; no-till farming; biological N<sub>2</sub> fixation; energy efficiency; increased use of bio-fuels; increased energy supply by hydroelectric power plants; alternative energy sources; and the use of charcoal from planted forests in the iron & steel industry.

Brazil's National Policy also provides for the elaboration of specific plans directed towards mitigation and adaptation. These plans focus on industry, mining, transport and urban mobility and health. According to the National Policy, both the elaboration of specific plans and the updating of the National Plan will be undertaken on the basis of Brazil's National Communications to the UNFCCC.

The project is in line with the National Policy and National Plan on Climate Change. The Fourth National Communication of Brazil to the UNFCCC will be fundamental for the implementation of national mitigation and adaptation actions. Also, the proposed project will provide for the preparation of Biennial Update Reports to the UNFCCC.

### ***B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:***

The proposed project will be carried out in accordance with the UNFCCC Guidelines for non-Annex I Parties "preparation of national communications from non-annex I Parties (decision 17/CP.8)". The proposed project fits the GEF climate change mitigation strategic objective (SO-6) under GEF-5: Enabling Activities: Support enabling activities and capacity building under the Convention. The outcome is: Completed climate change enabling activities under the UNFCCC. The Convention further specifies the rationale for the Global Environment Facility (GEF) involvement, as an operating entity of the financial mechanism of the Convention (Article 11).

### ***B.3 The GEF Agency's comparative advantage for implementing this project:***

UNDP's comparative advantage for the GEF lies in its global network of country offices, its experience in integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation. UNDP is present in 166 countries where it implements programmes in the areas of climate change mitigation, biodiversity conservation, land degradation, international waters and chemical management.

UNDP assists countries in promoting, designing and implementing activities consistent with both the GEF mandate and national sustainable development priorities. UNDP also has extensive inter-country programming experience. UNDP Brazil has provided technical cooperation under GEF enabling activities for both the Convention on Biological Diversity and the UNFCCC.

The three previous NCs of Brazil were prepared with the support of UNDP-GEF in partnership with the Ministry of Science, Technology and Innovation. UNDP Brazil has been working collaboratively with the stakeholders and MCTI in the preparation and implementation of the country's NCs.

Within the Climate Change focal area, UNDP GEF ongoing portfolio includes the Hydrogen Fuel Cell Buses for Urban Transport Project with MME; the Biomass Power Generation: Sugar Cane Bagasse and Trash with MCT; among others. Moreover, the UNDP Brazil provides technical cooperation to Eletrobras in the execution of the National Rural Electrification Program - "Luz no Campo" and the Energy


Efficiency Program conducted at the national level and co-funded by the International Bank for Reconstruction and Development (IBRD) and GEF. Also with Eletrobras, as executing agency, support is given to the National Energy Conservation Program (PROCEL). UNDP also works closely with MCT and ANEEL in the execution of the Power Sector Capacity Building on Climate Change Project and the Regulating the Brazilian Power Sector Program. Under the execution of MME, UNDP is also a partner in the implementation of the National Program for the Energy Development of States and Municipalities (PRODEEM).

**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)
Rodrigo Martins Vieira	General Coordinator for External Financing, GEF Operational Focal Point	MINISTRY OF PLANNING, BUDGET AND MANAGEMENT	03/28/2013

**B. GEF AGENCY(IES) CERTIFICATION**

<b>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.</b>					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu Officer-In-Charge UNDP/GEF		04/05/2013	Oliver Page Regional Technical Advisor RCU Panama	(507)302-4500	Oliver.page@undp.org