



# REQUEST FOR CEO ENDORSEMENT

**PROJECT TYPE: Full-sized Project**

**TYPE OF TRUST FUND: GEF Trust Fund**

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## PART I: PROJECT INFORMATION

Project Title: Brazil: Recovery and protection of climate and biodiversity services in the Southeast Atlantic Forest Corridor of Brazil			
Country(ies):	Brazil	GEF Project ID: <sup>1</sup>	4834
GEF Agency(ies):	IADB (select) (select)	GEF Agency Project ID:	BR-G1003
Other Executing Partner(s):	Ministry of Science, Technology and Innovation (MCTI); Secretariat for Environment State of São Paulo; Secretariat for Environment of the State of Rio de Janeiro; Secretariat for Science; Technology and Higher Education of the State of Minas Gerais	Submission Date:	2014-04-14
GEF Focal Area (s):	Multifocal Area	Project Duration(Months)	60
Name of Parent Program (if applicable):		Project Agency Fee (\$):	3,150,596
	<ul style="list-style-type: none"> <li>➤ For SFM/REDD+ <input type="checkbox"/></li> <li>➤ For SGP <input type="checkbox"/></li> <li>➤ For PPP <input type="checkbox"/></li> </ul>		

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

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) BD-1	1.1: Improved management effectiveness of existing and new protected areas and corridors	New protected areas established (4) and coverage (63,816 Ha) of previously unprotected ecosystems, including new AF corridors, and improved management and infrastructure in a three-state network of CU	GEF TF	1,850,000	119,710,329
(select) BD-2	2.1: Increase in sustainably managed landscapes that integrate biodiversity conservation	Pilot program for certifying small producers operating in buffer zones of CU (including sustainable management CU such as RDS, APA, RESEX) in sustainable management practices	GEF TF	3,150,000	7,717,424
CCM-5 (select)	5.1: Carbon stock monitoring system established	Carbon stocks monitoring system established	GEF TF	4,998,960	11,921,214
CCM-5 (select)	5.2: Restoration and	Forest and non-forest lands	GEF TF	16,657,000	25,437,844

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

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

	enhancement of carbon stocks in forests and non-forest land	under good management practices (62,557 ha)			
(select) SFM/REDD+ - 1	1.3 Good management practices adopted by relevant economic actors	Payment for ecosystem services (PES) systems established (3)	GEF TF	4,850,000	23,032,232
<b>Total project costs</b>				31,505,960	187,819,043

## B. PROJECT FRAMEWORK

<b>Project Objective: Recovery and preservation of the Atlantic Forest (AF) of Brazil's Southeast AF Corridor</b>						
<b>Project Component</b>	<b>Grant Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>Grant Amount (\$)</b>	<b>Confirmed Cofinancing (\$)</b>
<p>1. Capacity Building for carbon stocks and biodiversity management and monitoring.</p> <p>CCM: \$4.72871M BD:\$0.05 SFM: \$0.05</p>	TA	Measurement models adopted, capacity for continuous updating of databases established and Measurement and Evaluation System operational	<p>1.1 Metrics for carbon stock developed and validated</p> <p>1.2 Carbon stock management metrics integrated in management protocols</p> <p>1.3 Database completed on (i) Complete and validated map of carbon stocks for project area (ii) Complete map of biodiversity for project area (iii) Detailed report on water resource management in project area (iv) Detailed report on CC, BD and SFM projects in Project area.</p> <p>1.4: Carbon and biodiversity monitoring and evaluation system to assess the methods and strategies used in the project developed and validated</p> <p>1.5 Capacity building program for human resources training and capacity building</p> <p>1.6 Monitoring of proposed GEF activities, results and impacts</p>	GEF TF	4,828,710	11,753,799

<p>2. Recovery and enhancement of carbon stocks in the Paraiba watershed along Brasil's southeast AF corridor</p> <p>CCM:\$15.822M BD: \$0 SFM: \$0</p>	<p>Inv</p>	<p>3 PES schemes implemented for restoration and enhancement of carbon stocks in 64,057 hectares of forest and non-forest lands:</p> <ul style="list-style-type: none"> <li>- Sao Paulo: 52,745 ha</li> <li>- Rio de Janeiro: 9,812 ha;</li> <li>- Minas Gerais: 1,500 ha</li> </ul> <p>Carbon benefits derived from restoration and enhancement of carbon stocks through the implemented PES schemes:</p> <ul style="list-style-type: none"> <li>- Lifetime direct GHG emissions avoided: 27,251 tones CO<sub>2</sub>eq</li> <li>- Lifetime direct carbon sequestration: 204,456 tones CO<sub>2</sub>eq</li> </ul>	<p>2.1: Contracts for participation in PES schemes signed (Sao Paulo: 2,070 contracts; Rio de Janeiro: 560 contracts)</p> <p>2.2: Monitoring and verification system implemented</p> <p>2.3 Area in Minas Gerais managed by small producers trained though the Program for recovery and enhancement of carbon stocks (1,500 ha)</p>	<p>GEF TF</p>	<p>15,822,000</p>	<p>25,186,244</p>
<p>3. Increase effectiveness and financial sustainability of CU along Brazil's southeast AF corridor</p> <p>CCM: \$0 BD: \$4.71M SFM: \$4.57M</p>	<p>Inv</p>	<p>Effective protection in 498,816 ha of existing and new conservation areas through improved management effectiveness.</p> <p>Increase in sustainably managed production landscapes (forests and non- forests) that integrate BD conservation (3,500 ha within buffer zones under certification and managed with sustainable land use practices and 3,600 ha managed with environmentally-sustainable business practices)</p> <p>Enhanced enabling environment for establishing innovative financing mechanisms for Sustainable Forest Management through</p>	<p>3.1: 4 New Conservation Units (PESM, Jureia, Bertioga, Paranapiacaba) established increasing the protected surface by 63,816 ha</p> <p>3.2: Improved management and infrastructure planning of CUs (measured by the Management Effectiveness Tracking Tool) by end of project (Sao Francisco Xavier: 42; Bananal: 75; PESM Santa Virginia: 79; Itariru: 60)</p> <p>3.3: Pilot program for certifying small producers operating in buffer zones of CU and sustainable use CU (RDS, APAS, RESEX) in sustainable management practices: 160 small producers certified and 1,300 small producers trained in</p>	<p>GEF TF</p>	<p>9,280,000</p>	<p>150,879,000</p>

		3,375 ha in buffer zones monitored and audited as conserved through PES scheme  Increase in continuous vegetation coverage and species richness of the Atlantic Forest fragments in the four areas of intervention (Bananal, São Francisco Xavier, Santa Virginia and Itarirú) measured by mean distance (and standard variation) in meters between forest fragment and nearest neighboring fragment: - Bananal: 69 - São Fran. Xavier: 64.5 - Santa Virginia: 98.5 Itarirú: 71	sustainable management practices consistent with certification standards but not certified; and 180 small producers incorporated in sustainable value chains.  3.4: Pilot of PES scheme within the buffer zones of CU along the Serra do Mar biodiversity corridor, including incentives for the creation and implementation of private CUs (RPPN): 2,583 contracts signed by small producers.			
Subtotal					29,930,710	187,819,043
Project Management Cost (PMC)				GEF TF	1,575,250	<sup>3</sup>
<b>Total project costs</b>					<b>31,505,960</b>	<b>187,819,043</b>

### C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Science, Technology and Innovation (MCTI)	Cash	4,753,799
Local Government	Sao Paulo Research Foundation (FAPESP), BIOTA Program	Cash	7,000,000
Local Government	Secretariat of Finances, State of Sao Paulo	Cash	15,000,000

<sup>3</sup> State agencies will be responsible for the technical oversight and coordination of all activities to be undertaken in their respective territories. These administrative costs are embedded in each component and not fully integrated into the PMC budget item. Actual project management costs within counterpart budget are equivalent to US\$9,270,750 (5.19% of counterpart contribution). A more detailed explanation is included in Section B.1 below and Annex G.

GEF Agency	Inter-American Development Bank. Project: “Serra do Mar and Atlantic Forest Mosaics System Socioenvironmental Recovery” (BR-L1241; Loan 2376/OC-BR)	Hard Loan	143,379,000
Local Government	Secretariat for the Environment, Rio de Janeiro	Cash	8,560,000
Local Government	Secretariat for Science, Technology and Higher Education, Minas Gerais	Cash	1,639,613
Local Government	Secretariat of Environment and Sustainable Development, State Forestry Institute (IEF)	Cash	7,486,631
<b>Total Co-financing</b>			<b>187,819,043</b>

#### D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
IADB	GEF TF	Climate Change	Brazil	21,655,960	2,165,596	23,821,556
IADB	GEF TF	Biodiversity	Brazil	5,000,000	500,000	5,500,000
IADB	GEF TF	Multi-focal Areas	Brazil	4,850,000	485,000	5,335,000
<b>Total Grant Resources</b>				<b>31,505,960</b>	<b>3,150,596</b>	<b>34,656,556</b>

<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.

#### F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	0	0	0
National/Local Consultants	1,806,080	0	1,806,080

#### G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## PART II: PROJECT JUSTIFICATION

### A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.NA

Brazil’s voluntary commitment (as set out by its National Policy on Climate Change) is to reduce emissions by between 36.1% and 38.9% of projected emissions of 2020. To achieve this objective it has submitted NAMAs to UNFCCC including reduction of deforestation (with focus on the Amazonia and Cerrado biomes) as well as the

<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

implementation of afforestation, reforestation and forest restoration and promotion of low carbon practices in agriculture (recuperation of degraded pastures, integrated productive systems) elsewhere. The project supports both forest restoration and reforestation as well as low carbon agricultural practices in the Atlantic Forest biome, and as such, it supports Brazil's proposed NAMAs. Experiences developed in the project could be replicated in other Atlantic Forest areas, considering the high demand for forest restoration in this biome.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. NA

A.3 The GEF Agency's comparative advantage: NA

A.4. The baseline project and the problem that it seeks to address:

Baseline Initiatives

The Government of Brazil, both at the national and state level, is making important efforts to advance long-term solutions to the prevalent and emerging threats to the AF. Amongst the most note-worthy ones for their scope and scale and level of effort are the strengthening of the areas under designated conservation (CUs), implementation of the Forest Code, and the promotion of incentives to support restoration and conservation amongst private landholders. The following are existing projects (baseline projects) to which the proposed GEF grant contributes and which are presented as co-financing:

Component 1:

A number of existing projects (baseline projects or BLP) by the Ministry of Science, Technology and Innovation (MCTI), the Ministry of Environment (MoE) and others that deal directly with issues of mitigation options and carbon stocks will benefit directly from the implementation of the proposed project. Specific benefits, which would not be accrued in the absence of GEF financing, are listed under each:

"Mitigation Options of Greenhouse Gas Emissions in Key Sectors in Brazil" (MCTI): The project seeks to identify mitigation alternatives and quantify their respective potentials and costs for various sectors. The project would update the carbon baseline scenario based on the newest available data (reference scenario) and build new low-carbon scenarios, both for the 2012-2035 and 2035-2050 periods. Additionally, the project aims to assist the Government of Brazil, both at the federal and state levels, to strengthen its technical capacity in supporting the implementation of its mitigation actions for GHG emissions in key economic sectors.

The proposed project's Component 1 will generate information on the "Mitigation options" of different land-based options as well as on associated costs relevant for the Atlantic Forest biome, which are currently missing from the BLP. The proposed project will make use of the methodologies for estimating carbon emissions from LULUCF for the AF developed by the BLP for the Project area. Conversely, the results and data generated by the GEF project will be used to update the BLP database and estimation procedures for the AF. The BLP is implementing capacity building activities and training materials that can be readily useful to the GEF project, as this BLP aims at enhancing local capacities and readiness for the implementation of climate change mitigation policies (Brazilian NAMAs), by increasing technical skills and abilities of government and non-government stakeholders to identify mitigation alternatives, to quantify their respective potentials and costs for the different sectors of the Brazilian economy, and to evaluate the possible impacts of different climate policies on the Brazilian economy. Capacity building takes into account three dimensions: (i) institutional capacity to promote the development of policies, procedures, regulations and the systems of goals and incentives that constitute the mitigation actions for GHG emissions; (ii) organizational capacity for increasing the planning and management capacity of individuals by creating goals, internal mechanisms and resources; and finally (iii) human resource capacity by training government personnel to define objectives, to design and manage climate policy programs, to mobilize resources and to implement the climate policy. The training infrastructure available through the BLP will be used by the proposed project's Component 1 to develop educational material on carbon mitigation/stock/sinks quantification and monitoring systems, which will enhance the training capabilities of the baseline project. Information made available through C1 (particularly on costs and reduction potentials of

alternative mitigation options) are fundamentally necessary for the country to implement their Nationally Appropriate Mitigation Actions (NAMAs), and to detail the emission reduction targets set by the National Policy on Climate Change ( Law No. 12,187 , of December 29, 2009 and Decree No. 7.390 , of December 9, 2010). Rounding up the identification of mitigation options and their costs with the inclusion of the Atlantic Forest biome should result in more efficient policies and new laws at the federal and state levels. The baseline project has the technical capacity to integrate educational material and other information generated by the proposed project's C1 as it is part of the project's implementation schedule to continuously integrate lessons derived from other projects and experiences throughout Brazil as part of the analyses it performs to develop Brazil's baseline scenario. To do so, the baseline project personnel keep a dedicated database where those inputs are stored to be analyzed and incorporated. Baseline project staff includes experts with the technical skills to perform this function, as it was done before for the Amazon region and is being developed now for the Cerrado region.

This BLP will support the generation of the following Component 1 outputs: (i) Output 1.2 Integration of carbon stock management metrics, as much as BLP is developing methodology for the identification of mitigation alternatives, which will be used by the GEF project for the AF, and (ii) Output 1.3 Database on carbon stocks, since BLP will provide updated carbon baseline scenario for other biomes. GEF project will utilize same protocols developed by BLP to build map of carbon stocks in AF project area.

“Rede Clima (Climate Network) initiative for development of Brazilian Model of Earth System”: This multi-sector initiative led by MCTI attempts to define a regional atmospheric modelling system, which includes a subcomponent that represents the Carbon dynamics in different Brazilian biomes. The network is headquartered at the National Institute for Space Research (INPE ) in São José dos Campos ( SP). The proposed project will utilize the infrastructure available under this BLP's network (particularly, access to databases and climate scenarios; access to the supercomputer to the use of climate models, supporting capacity building initiatives, and the dissemination and communication of results) which will facilitate greatly the work with the information gathered under each component. Conversely, data derived from activities in Component 1 will support the refinement of the model and allow better projections of climate change impacts on tropical ecosystems, with particular application to the Atlantic Forest Biome. These data will be transferred from the proposed GEF project to the Rede Clima in a format that will be directly useful to the structuring of the modelling system for the Atlantic Forest. Rede Clima will provide the specifications of the data format requirements; Rede Clima has the infrastructure to acquire, analyze and process the data to be generated by C1 and incorporate such to its modelling function. This BLP will support the generation of the following Component 1 outputs: (i) Output 1.1 Development and validation of carbon stock metrics, because BLP will contribute a model of carbon dynamics developed for other biomes, which will be utilized by the proposed GEF project to develop the same model for the AF in project area; (ii) Output 1.3 i Database on carbon stocks, as the proposed GEF project will use infrastructure (data bases, super computer, software) available under BLP network to develop its own carbon stock maps; (iii) Output 1.3 iv Report on CC projects, as the BLP will be included in inventory of CC projects underway in GEF project area; (iv) Output 1.4 Carbon M&E System, since the sub network "Changes in land use" of the Rede Clima is coordinating the efforts of researchers to develop methodologies for MRV of CC mitigation activities in different biomes, which will be used by the proposed project as a basis for its monitoring and evaluation system.

Research Program on Global Climate Change (PFPMCG), of Sao Paulo's Research Foundation (FAPESP): the program aims to advance knowledge on global climate change patterns, so as to contribute to scientifically-based decision-making referring to risk evaluation as well as mitigation and adaptation strategies. The program includes projections of climate change impacts (which can affect Carbon permanence in forests systems), but does not address the biophysical aspects of Carbon dynamics in the Atlantic Forest or socio-economic aspects. FAPESP has extensive experience and consolidated research groups, research programs and calls for proposals in this field, as well as to analyze the results of the research projects that will address the specific questions

raised by Component 1. The extended network of researches upon which FAPESP draws its expertise will be able to analyze and make direct use of the new information on biophysical aspects of carbon dynamics in the AT and related socio-economic aspects. Additionally, state research agencies from the three states (FAPESP, FAPEMIG and FAPERJ) with involvement of the federal agencies can support initiatives involving assessments and studies across state borders (as it is the case of the current project). The strong presence of FAPESP in international forums (e.g. Belmont Forum, Future Earth Initiative) can also represent a platform for interactions with initiatives in different countries.

Resources requested for Component 1 will add to the efforts of FAPESP's program, covering the gap in biophysical and socio-economic research referred to the Atlantic Forest, opening a significant and durable opportunity for cross-fertilization among these and other projects associated to the proposed project. This BLP will support the generation of the following Component 1 outputs: (i) Output 1.1 Development and validation of the carbon stock metrics, as much as the proposed GEF project will use the organization capabilities and know-how of FAPESP to undertake the research projects, which will generate the carbon stock models. There is precedent for this in launching joint programs in partnership amongst FAPERJ, FAPEMIG and FAPESP, involving research networks in the three southeastern states, which leverages the consolidation of the proposed project activities in the three states; (ii) Output 1.2 Integration of carbon stock management metrics, because the proposed GEF project will benefit from FAPESP's experience in affecting decision-making through its research outputs, to pursue the integration of learnings derived from its carbon models into the management decisions of local and regional institutions; and (iii) Output 1.3 Database on carbon stocks, due to the fact that FAPESP (Biota Program) has a data base, which has been used for the construction of the Environmental Information System (SinBiota), which will support the proposed project's data base. See: <http://sinbiota.cria.org.br>.

All the above mentioned BLPs will also support Output 1.5, as the proposed GEF project will use established institutional strengthening infrastructure available in those BLPs to complement its own human resources training and capacity building activities.

#### Component 2:

State of Sao Paulo. The State of Sao Paulo is starting the implementation of the recently approved PES legislation is being promoted through a "family of projects". Sao Paulo has adopted a State Policy on Climate Change (PEMC), an objective of which is to define the State's commitments to reduction of greenhouse gas emissions. The Sao Paulo Riparian Forests Program was established within this policy framework, with the objective of conserving and recovering riparian forests and forest fragments within the State. The program includes several financial instruments such as PES and economic incentives for voluntary reduction of deforestation. One of such instruments is the Mina D'Agua (Springwater) Project and the Water Producer in PCJ Project. The Mina D'Agua Project establishes contracts with farmers for a minimum of 2 years and a maximum of 5 years. The focus of the project is the protection of freshwater springs through elimination of degradation factors (over-grazing, fire, erosion, etc.), assisted natural regeneration (removal of competing species, nucleation techniques), and the planting of native species. In addition to protecting the production of water, the project also ensures the fixation of carbon through reforestation and maintenance of APPs. The funds available for this program amount to US\$ 1.57 million, with an estimated 3,150 springs protected (maximum of four springs per producer, and 150 springs per participating town). The "Water Producer in PCJ Project" is shorthand for the project entitled "Diffusion and Experimentation of a System of Payments for Environmental Services for the restoration of 'ecosystem health' of the watersheds of the Cantareira sub-basin". The project is piloting PES in the watersheds of the municipalities of Nazaré Paulista and Joanópolis. The project pays landowners who adopt best practices and provides technical support for environmental actions. At the time of writing 13 landowners had signed up to the project and 25 applications were in process. The scope of the contracts signed includes restoration of APPs, forest conservation and soil conservation on 197 ha for a total



amount of US\$29,248. There are no evaluations yet of these projects. Experience developed in these projects by the Secretariat for the Environment of the State of Sao Paulo have been analyzed to define the financial and institutional characteristics of the PES scheme proposed under the GEF project.

The proposed project will contribute knowledge for future undertakings, because it focuses in two important areas not touched by the other projects in the family: (i) the project focuses on income-generating productive activities that have conservation value as well; and (ii) the project will act as catalyzer for rural landowners to use rural credit to convert degraded pastureland into sustainable productive landscapes. Information on carbon dynamics in the Atlantic Forest generated under C1 of the proposed GEF project, as well as lessons derived from the economics of carbon-related benefits for PES in C2, will be directly transferred and used by this family of baseline projects as the institutional structures in charge of such projects are the same as the ones which will take responsibility for the proposed project; in those institutions there is sufficient technical expertise specialized in the various aspects touched by the baseline project—including carbon sequestration, carbon dynamics and carbon data management—so as to make direct use of such information.

Rio de Janeiro. In this State, the principal baseline project to which implementation GEF funding will contribute is the Program for Sustainable Rural Development in Microbasins of the State of Rio de Janeiro (Rio Rural) that seeks to improve the livelihoods of rural population in the State, by increasing their income while at the same time conserving the natural resources. The program promotes the adoption of sustainable productive practices throughout 470 microbasins with the objectives of reducing the threats to biodiversity, increasing carbon stocks and reducing land degradation within the Atlantic Forest; the program will also provide co-financing for PES schemes. In partnership with Embrapa Solos and UFF, Rio Rural monitors, in 3 watersheds, carbon stocks in biomass and soils in forest and pasture since 2010. The program is co-funded by the World Bank and the State of Rio de Janeiro for a total amount of US\$79 million and is implemented by the Agriculture and Livestock Secretariat (SEAPEC). The proposed GEF project will contribute methodology and lessons learned through its PES activities, which will significantly strengthen and enhance the scope of this baseline project in the area where GEF funds will be applied (Paraiba do Sul watershed). Data on carbon stock in biomass and soils collected by C2 and processed through C1 will serve to check and fine-tune data collected by Rio Rural in the watersheds where it operates. As Rio Rural has carbon stocks monitoring as one of the main lines of work of the environmental monitoring, it has the technical capabilities and structural conditions to make direct use of this information when relayed by the proposed GEF project. The proposed GEF project will also interact directly with the Rio Rural project, focusing on the “forest” part of the rural landscape, which Rio Rural focuses more on agricultural activities. Implementation of the proposed project with the participation of Rio Rural executing agency guarantees fruitful interaction and flow of knowledge and experiences between the two projects.

Additionally, under the Secretariat for the Environment of the State of Rio de Janeiro, the Biota-RJ project will benefit from methods and experiences developed by the GEF project. Biota-RJ is aimed at funding interdisciplinary research projects about the conservation and sustainable use of biodiversity within the state borders. Among the specific objectives of the study relevant to the current project are: i) surveying, mapping, characterization, conservation, restoration and sustainable use of biodiversity of the State; ii) expanding knowledge about biodiversity and conservation of flora, fauna and microorganisms through the mapping of the different levels of diversity and its relationship with ecosystem functioning; iii) systematic mapping of changes in landscapes and biodiversity monitoring involving studies to establish reference levels (baselines); iv) expanding knowledge about the distribution and conservation status of rare and endangered species. In 2010, the program approved the disbursement of US\$ 4 million, distributed among 27 projects and 10 participating institutions. Bio-RJ has significant technical expertise to incorporate C1 and C2 findings of the proposed GEF project within its data bases and analytical programs.

Minas Gerais. Minas Gerais has issued a State Forest Policy and Protection of Biodiversity (2002); it has also issued Law No. 17.727/2008, which provides for payment for environmental services by the State Government, under the Bolsa Verde (“Green Grant”) Program, established in 2010. The program provides economic incentives to rural landowners and inhabitants, for identification, retrieval, preservation, and conservation of native vegetation. The Bolsa Verde currently has 989 beneficiaries and has US\$1.5 million that can be used for payments. The grants are being used to maintain 32,788 ha of native vegetation. The Water Conservation Project came into being in 2005 and currently has 144 beneficiaries. The proposed GEF project will provide technical and material assistance to farmers within the Paraíba do Sul watershed so as to improve their chances of accessing fund from the Bolsa Verde program by preparing landowners to become eligible for the "Green Grant" program through the regeneration of native forests within their properties. Bolsa Verde will not need enhanced technical or structural capabilities to handle the added demand for funding potentially generated through the proposed GEF project.

### Component 3:

Sao Paulo: The Serra do Mar and Mosaic Socio-Environmental Rehabilitation project (IDB loan 2376/OC-BR) is a central baseline project. This loan operation, financed by IDB, can invest in forest conservation exclusively within participating Conservation Units. GEF financing provides a most needed support to promote sustainable productive activities in the Conservation Units’ buffer zones. Such contribution is essential for the long-term sustainability of the loan investment; such buffer zones are the origin of significant pressure over the edges of those Conservation Units. The proposed GEF project will foster improved forest management practices – specifically forest conservation—and more sustainable agricultural practices in the buffer zones of CU directly associated to the Serra do Mar State Park, thus contributing to the consolidation of ecological corridors, which will enhance the benefits to be derived from the baseline project. The baseline project is equipped to integrate the methodology and best practices derived from the proposed GEF project and translate those into management strategies to be applied in the baseline project’s area.

In addition, the proposed GEF project activities under component 3, specifically for the implementation of Certification and Value-Added Chains are closely related to the process of implementation of the revised Forest Code (Law 12,651 of 05/2012) by which farmers are mandated to “regularize” their properties using the new Rural Cadaster Registry. The code also promotes the creation of conservation incentives to promote the adoption of sound technologies and practices by producers. Incentives imply a direct compensation, monetary or not, for conservation practices carried out by farmers. Compensation modalities include: lower interest rates on government issued credit lines, tax deductions on property taxes by lowering the tax base discounting conservation areas from total taxable area, tax exemptions on machinery and other inputs for sustainable land uses, and soft financing lines for the adoption of voluntary conservation measures. The code also allows property owners to issue quotes of environmental reserves for areas under native vegetation that extend beyond what is required as a Forest Reserve (FR) (20% for MA). These areas will be validated by the local authority and can be used as offsets of FRs in the same biome. Despite these new provisions, which authorize State-level governments to implement instruments such as PES, no funding has been allocated to finance the incentives for farmers. This is a major drawback as it will be difficult to believe that the revised Code will be more effective than its previous version in attaining the mandatory areas of permanent protection (APPs) or the Legal Forest Reserves. The proposed GEF project will contribute to solve by the allocation of incentives through the above mentioned Certification and Value-Added Chain activities and will thus constitute significant support for the successful implementation of the revised Forest Code.

A.5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

### Project Components

GEF and Co-financing resources allocated to Components 1<sup>5</sup> and 2 have varied. The new amounts are shown in Table 1 below:

Table 1

Component	GEF (US\$)	Co-financing (US\$)
<b>1. Capacity Building for carbon stocks and biodiversity management and monitoring.</b>	<b>4,828,710</b>	<b>11,753,799</b>
<b>2. Recovery and enhancement of carbon stocks in the Paraíba watershed along Brazil's southeast AF corridor</b>	<b>15,822,000</b>	<b>25,186,244</b>

The new targets to be met with the increased budget are included in Table B above and the Results Framework (Annex A). The differences amongst targets between PIF and Project Document can be seen in Table 2 below:

Table 2

PIF	Project Document
<b>Component 1</b>	
No changes in outcomes or outputs	
<b>Component 2</b>	
<b>Outcome: Restoration and enhancement of carbon stocks in forest and non-forest lands. Output: 25,800 Ha (16,800 Ha São Paulo; 9,000 Rio Janeiro) in forest and non-forest lands in Paraíba do Sul watershed recovered and restored.</b>	<b>Outcome: 3 PES schemes implemented and enhancement of carbon stocks in 64,057 ha of forest and non-forest lands (52,745 ha São Paulo; 9,812 ha Rio de Janeiro; 1,500 ha Minas Gerais);</b>
N/A	<b>Outcome: Carbon benefits derived from restoration and enhancement of carbon stocks through implementing PES schemes: Lifetime direct GHG emissions avoided: 27,051 tonnes CO2eq and lifetime direct carbon sequestration: 204,456 tonnes CO2eq</b>

<sup>5</sup> Analyses during the PPG phase indicated large gaps in information that need to be addressed for project success. As such, additional funding was allocated for component 1. These additional funds allowed for investments in additional training and research in component 1.

Also during the PPG phase, results of the surveys and field work indicated additional surface areas with potential to be included as part of the project. These areas were signaled as priority for conservation and sustainable use because of their location in the upper watershed of the Paraitinga River. Survey results for the new areas showed significant interest among the land owners in participating I the project. Thus, additional resources were requested in order to include the new areas into the PES activity.

N/A	<b>Outputs:</b> - PES Contracts signed (São Paulo 2,070; Rio de Janeiro 560) - Monitoring and verification system implemented - Small producers in Minas Gerais trained and enhancement of carbon stocks in 1,500 há
<b>Component 3</b>	
<b>Outcome: Effective protection in existing and new conservation areas.</b> <b>Output: Establishment of approx. 65,000 ha in new 4 Conservation Units (CUs)</b>	<b>Outcome: Effective protection in 498,816 ha of existing and new conservation areas through improved management effectiveness.</b>
	<b>Outcome: Increase in continuous vegetation coverage and species richness of the AF fragments in the four CUs/areas of intervention (Bananal 69 mt, São Francisco Xavier 64.5 mt, Santa Virginia 98.5 mt and Itarirú 71 mt) measured by mean distance (and standard variation) in meters between forest fragment and nearest neighbouring fragment:</b>
	<b>Output: Establishment 63,816 ha in new 4 C Us.</b>
<b>Output: Improved management and infrastructure planning of CUs (measured by the Management Effectiveness Tracking Tool) by end of project in a network of 6 CUs</b>	<b>Output: Improved management and infrastructure planning of CUs (measured by the Management Effectiveness Tracking Tool) by end of project in a network of 4 CUs</b>
<b>Outcome: Increase in sustainability managed production landscapes (forests and non-forest) that integrate BD conservation</b> <b>Output: Pilot program for certifying small producers in sustainable management in 18,000 ha</b>	<b>Outcome: Increase in sustainability managed production landscapes (forests and non-forest) that integrate BD conservation (3,500 ha within buffer zones under certification) and (3,600 ha managed with environmentally sustainable business practices)</b> <b>Output: Pilot program for certifying small producers: 160 small producers certified, 1,300 small producers trained and 180 small producers incorporated in value chains</b>
<b>Outcome: Enhanced enabling environment for establishing innovative financing mechanisms for SFM</b> <b>Output: Pilot for PES scheme within the buffer zones... implemented in XXX há</b>	<b>Outcome: Enhanced enabling environment for establishing innovative financing mechanisms for SFM through 3,375 ha in buffer zones ...</b> <b>Output: Pilot of PES scheme within the buffer zones... implemented in 2,583 contracts signed by small producers</b>

### Global Environmental Benefits

The high biodiversity in the Atlantic Forest is a function of the extreme environmental variation in this biome. One of the most important factors in this variation is the 38° latitudinal span of the hotspot. The geographic distribution of lizards in the Atlantic Forest, for example, is significantly affected by latitude, with only one wide-ranging species in this area. The second major source of variation is elevation, as forests extend from sea level up to 1,800 meters, with corresponding gradients of biodiversity. Finally, inland forests differ considerably from coastal ones. These factors combine to generate a unique diversity of landscapes supporting extraordinary biodiversity.

The complexity of this biome can be illustrated by the definition and delimitation of Atlantic Forest vegetation in the Federal Decree 750/93, which regulates the use of natural resources and deforestation in the region: “The Atlantic Forest is to be considered as forest formations and associated ecosystems inserted in the Atlantic Forest domain, with the following delimitations established by the Brazilian Vegetation Map of IBGE (1988): ombrophilous dense Atlantic forests, mixed ombrophilous forests, open ombrophilous forests, semideciduous seasonal forests, deciduous seasonal forests, mangroves, restingas, altitudinal grasslands, the countryside swamps, and the northeastern forest enclaves.”

Because its landscape has been so radically altered, Brazil has more endangered birds, mammals and vascular plants than almost any other country. Less than 8% of the original forest now remains, and it occurs mostly in isolated remnants scattered throughout a landscape dominated by agricultural uses. Deforestation is much more severe in the states of northeastern Brazil, where only 1-2% of the original cover remains, mostly in southern Bahia. In the states of the Central Corridor (Bahia and Espírito Santo) and Serra do Mar Corridor (Rio de Janeiro, part of Minas Gerais and São Paulo), the amount of remaining forest ranges from 2.8% in Minas Gerais to 21.6% in Rio de Janeiro.

Despite these disturbances, the Atlantic Forest and its associated ecosystems (restingas and mangroves) is still extremely rich in biodiversity, sheltering a significant proportion of the national total, with high levels of endemism. The Atlantic Forest contains an estimated 250 species of mammals (55 endemic), 40 amphibians (90 endemic), 1,023 birds (188 endemic), and approximately 20,000 trees, half of them endemic. More than two-thirds of the primates' species are endemic.

Centers of endemism have been recognized in the Atlantic Forest. Scientists believe that during the much drier conditions of the Pleistocene, there was a drastic reduction of the forest area in the Amazon and in the Atlantic Forest regions, resulting in “island” refuges in which only a few species could find favorable conditions. The long period of isolation led to species differentiation. When more favorable climatic conditions returned, thousands or millions of years later, vast areas of forest recovered, linking fragmented refuges. The extent and position of these centers is a matter of controversy, but most experts believe that at least four centers can be recognized in the Atlantic Forest, considering information for terrestrial vertebrates, forest butterflies, and plants: one in the northeast (Sergipe/Alagoas/Pernambuco), one in southern Bahia, one in northern Espírito Santo (Rio Doce center), and one in São Paulo (Paulista center). The region of the Central Corridor includes, therefore, one or two centers of endemism, and the Serra do Mar Corridor is located in another center.

Very recent analysis suggests that the distribution of wild birds, mammals, and butterflies — the most well-documented animal groups in the Atlantic Forest — indicates the existence of six bioregions: the Northeastern Swamps, Pernambuco, São Francisco, Diamantina, Bahia, and Serra do Mar. Bahia and Serra do Mar overlap, partially, with the Central and Serra do Mar corridors, respectively. The corridors are dominated by dense ombrophilous forest, including wet forests in flat, low-lying terrain in the Central Corridor (less than 200 meters above sea level) or in the forested slopes of Serra do Mar and Serra da Mantiqueira (200-2,000 meters above sea level), and small forest formations over recent marine sediments close to the sea, generally called restingas, as well as mangrove forests along estuaries.

**The Serra do Mar Bioregion.** The distribution of threatened species is not homogeneous throughout the Atlantic Forest. The largest number of threatened species is in two areas, one is in the montane forests shared by the States of Sao Paulo and Rio de Janeiro<sup>6</sup>, the proposed GEF project geographical location; the other is the lowland forests between the States of Bahia and Espírito Santo. These regions are also reported to have the greatest number of endemic species within the taxa in Table 3.

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<sup>6</sup> Tabarelli et al. Idem. Page. 87

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**Table 3. Total number of species, endemic species and threatened species for selected groups in the Atlantic Forest of Brazil**

<b>Taxa</b>	<b>Total number of Species</b>	<b>Endemic Species</b>	<b>% Endemism</b>	<b>Threatened Species</b>	<b>% Threatened</b>	<b>Threatened at a regional scale</b>
<b>Trees and shrubs</b>	<b>-20,000</b>	<b>-8,000</b>	<b>40.00</b>	<b>367</b>	<b>1.84</b>	<b>151</b>
<b>Birds</b>	<b>849</b>	<b>188</b>	<b>22.14</b>	<b>104</b>	<b>12.25</b>	<b>362</b>
<b>Mammals</b>	<b>250</b>	<b>55</b>	<b>22.00</b>	<b>35</b>	<b>14.00</b>	<b>113</b>
<b>Reptiles</b>	<b>197</b>	<b>60</b>	<b>30.46</b>	<b>3</b>	<b>1.52</b>	<b>18</b>
<b>Amphibians</b>	<b>340</b>	<b>90</b>	<b>26.47</b>	<b>1</b>	<b>0.29</b>	<b>16</b>

Source: Tabarelli, Marcelo et al. « Endangered Species and Conservation Planning », Page 86, in State of the Hotspots. The Atlantic Forest of South America. Biodiversity Status, Threats and Outlook. Conservation International, 2013.

Originally, 95% of this region was covered with dense ombrophilous forest, including patches of mangroves and restingas. The Serra do Mar Biodiversity Corridor partially overlaps with this bioregion. This Corridor is defined in the south by the Paraíba do Sul watershed and in the north by the Paraíba do Sul river. The area covers about 7.5 million hectares and represents about 35% of this bioregion. The Serra do Mar Corridor is one of the richest biodiversity areas in the Atlantic Forest. It encompasses several distinct ecosystems, such as submontane forests, montane forest, restingas, and mangroves. The northern Serra do Mar, especially in Rio de Janeiro state, is the subregion of the Atlantic Forest with the greatest concentration of endemic species for many groups and the greatest concentration of threatened species of birds.

The coastal streams in the state of Rio de Janeiro have the highest level of fish endemism in the Atlantic Forest. An example is the São João river basin, a priority area identified in the Conservation Priority-Setting Workshop for the Atlantic Forest, where the lowland rivers and hillside streams are of extreme biological importance owing to their high diversity, high level of endemism and the presence of unique fish communities. Twelve areas in the Serra do Mar Corridor were assigned the highest priority for conservation within the Atlantic Forest, based on biodiversity and endemism. The Serra dos Órgãos, for example, stands out as a continuous forest of the montane and high montane type, showing impressive levels of endemism, richness of invertebrates, and numbers of threatened species of mammals, amphibians, and reptiles. In this region, many forest fragments are now part of protected areas, making them suitable for long-term conservation action and investment — particularly the implementation of corridors to increase connections. The Itatiaia region, between Rio de Janeiro and Minas Gerais, also features high levels of endemism. The Serra da Mantiqueira, located in the Serra do Mar Corridor, was also considered a conservation priority for the state of Minas Gerais. This region also has high diversity of plants and animals, including many endemic species of amphibians and reptiles and the greatest diversity of small mammals in the Atlantic Forest. The restingas also support important endemics. The Restinga of Jurubatiba, on the north coast in Rio de Janeiro State, is one of the best-preserved restingas of Brazil. Jurubatiba National Park shows a great mosaic of well-defined ecosystems, with many rare, endemic, or threatened species. This area can be considered a refuge for species already extinct in other regions of Rio de Janeiro, where the restingas are degraded or have already disappeared.

The Serra do Mar region includes the largest remaining block of Atlantic Forest *sensu stricto* (dense ombrophilous forest), formed by the slopes and tops of Serra do Mar and Serra da Mantiqueira, and adjacent flat lowlands. Although these forests are near the two largest metropolitan areas in Brazil (the cities of São Paulo and Rio de Janeiro), they remain well preserved, thanks to steep slopes that are not suitable for agriculture.

## Other Global Benefits

Positive environmental benefits will be attained through the land use options fostered by the PES and certification schemes, among others: conservation of forests, recovery and increase of connectivity between forest fragments and reduction of border effects, sustainable supply chains and certified organic agricultural practices. Carbon benefits will be derived from reduced levels of deforestation, conservation and recovery of forests, and conversion of low productivity areas to productive systems with enhanced carbon stocks and include: (i) 62,557 hectares of AF managed for recovery and enhancement of carbon stocks; (ii) 227,083 tCO<sub>2</sub>e of lifetime GHG direct emissions avoided, and (iii) 204,456 tCO<sub>2</sub>e of lifetime direct carbon sequestration for the duration of the project;

Biodiversity benefits will be derived from enhanced management of 84,446 ha of CUs, as well as increasing the ecological linkage between CUs by adding 63,816 new hectares under protected area designation, protect globally important populations of rare and endemic species, and increase the resilience of the forest system to climate change; and provision of alternative income generation strategies for the populations surrounding CUs in 7,100 ha of private lands in buffer zones applying sound management practices. One of the main challenges for global conservation is to develop sustainable economic alternatives that simultaneously generate income for the local population while protecting biodiversity and essential ecosystem services. Two related activities in the project will promote economic activities that would at the same time generate biodiversity benefits: (i) promotion of value-added chains that are based on native species (threatened or endangered) - such as cultivation of jucara or heart-of-palm tree (*Euterpe edulis*) that has a high commercial value and high ecological value, feeding no less than 70 species of local fauna, some of them endangered on their own; the production of cambuci (*Campomanesia phaea*) and other native fruits; and the commercialization of native tree species seedlings.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

RISK	MITIGATION MEASURE
<p><b>High risk.</b> Lack of interest from beneficiaries/local stakeholders to adhere to the project's proposed activities due to lack of understanding of benefits and commitments, lack of trust on government authorities, and risk aversion towards the proposed practices and technologies.</p>	<p>As part of project preparation activities, careful consideration has been given to the selection of Land Use, Land-Use Change and Forestry (LULUCF) actions with the highest potential impact on carbon sequestration and income generating potential from the project and, ultimately, to generate a sustainable framework to compensate and benefit local participating stakeholders. Also, the project contemplates that the extension/dissemination activities will concentrate on the diffusion of the potential benefits for landholders to be derived from both, the actual adoption of sustainable land management practices, as well the cash flows to be derived from their participation in the Payment for Environmental Services (PES) through legal contracts. This will be part of the project's overall communications strategy.</p>
<p><b>Medium risk.</b> Changes in policy and regulatory priorities for land use in target project areas</p>	<p>A careful analysis of the legal environment surrounding the operation took place during project preparation with the participation of the partner agencies to ensure the compatibility between Federal and State legislation with respect to both, conservation actions, as well as the provision performance incentives to the private sector. The partner agencies and the PEA will monitor any changes in applicable legislation during the project implementation period, and submit any necessary adjustments to the objectives and/or activities of the</p>

	project for consideration of the Program Institutional Coordination Committee, and the non-objection from the Bank.
<b>Medium risk.</b> Fluctuations in the exchange rate.	The Project team has utilized an exchange rate which provides a buffer for possible appreciations in the cost of the R\$ against the US\$. Nonetheless, the PEA will monitor exchange rate fluctuations continuously and, if necessary, adjustments introduced in specific activities so as not to affect the reach, scope and objectives of the project, should appreciations of the local currency occur. Such adjustments would be analyzed by the strategic partners and submitted to the Bank by the PEA for non-objection. The administrative and investment budget of the operation contains inflation adjustments for the five-year project implementation period which also leaves room for possible cost adjustments. In this respect, most, if not, all expenses of the project are associated to local costs (i.e. no imported goods and services).
<b>Medium risk.</b> Interruption in the adoption of sustainable land management practices beyond the life of the project.	<p>State laws that establish PES as a sustainability framework for the initiatives proposed in the project and therefore require the State to continue honoring the contracts initiated with the project. In this context, domestic resources from different sources (e.g. royalties from offshore oil exploration in the case of Rio de Janeiro and Sao Paulo, and payments for water usage) will be allocated to mitigation and conservation activities, and would thereby provide additional cash inflow to maintain PES payments over the long term, including the commitment from local landholders.</p> <p>Furthermore, specific project areas have been targeted based on a careful technical assessment of the sites with the highest potential for environmental protection and, correspondingly, for the generation of benefits from carbon sequestration. In this context, the compensation system designed for the project provides the necessary incentives for local landholders to adopt the proposed LULUCF technologies with: (a) direct monetary compensation in the short and medium term; and (b) support for the sustainable and productive use of the land which is associated with long term monetary/market benefits for such landholders.</p>
<b>Low risk.</b> Impacts of potential forest fires, drought or other natural hazard associated to higher temperatures or climate change impacts may compromise the effectiveness and long-term benefits of the proposed activities.	<p>The State of Sao Paulo is currently drafting legislation to ban the use of fire in agriculture, which, if strictly enforced, will significantly reduce the risk of forest fires. The States of R�o de Janeiro and Minas Gerais may follow with similar legislative actions.</p> <p>The activities proposed under the PES schemes will help reduce the risks posed by forest fires, droughts and other natural hazards. These aim at: (a) conservation of forests, with the objective of reducing the loss of</p>



	<p>standing forested remnants or their degradation; (b) restoration, aimed at promoting recovery and increase of vegetation connectivity between forest fragments and reducing border effects, increasing carbon stocks and fostering recovery of forests important for hydrological regulation services; and (c) conversion of areas of low productivity to systems (agroforestry and silvopastoral systems). These participatory mechanisms derived from PES activities are expected to enhance appropriation of project objectives by local communities, making long-term protection of ecosystem services a concrete and palpable, socially-relevant objective.</p> <p>However, project proponents are aware that the realization of benefits from forest conservation, forest rehabilitation or restoration activities require relatively long time frames. Thus, the project is built as a link – important link—in the larger chain of multi-State efforts to conserve biodiversity and foster capture of carbon and maintenance and growth of carbon stocks. Funding from the State Agencies participating in Components 2 and 3 will accompany and eventually replace project funding, to continue the flow of PES funding several years after project completion (see Results Matrix, Co-financing section). Associated (baseline) projects will continue project efforts and utilize its results to enhance, specialize or improve its own activities. This multiplier effect is what makes this “link” in the chain important.</p>
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#### A.7. Coordination with other relevant GEF financed initiatives

The proposed project will carry out its activities in coordination with various initiatives being implemented across the three states associated to biodiversity conservation and climate mitigation services of the Atlantic Forest. In particular, activities under component 2 related to the state of SP will have a close coordination with the project “Ecosystem Restoration of Riparian Forests in Sao Paulo” (GEFID 2356), as the project aims to facilitate large-scale restoration of riparian forests towards biodiversity conservation through the implementation of riparian forest corridors. This project also seeks to increase connectivity of native AF ecosystems along the productive landscape through the restoration of degraded lands and preservation of waterways, springs, recharge areas, etc. In addition, the proposed PES schemes will complement and strengthen the current efforts to implement long-term biodiversity conservation. The project will take lessons learned and capacity building experiences from the “SFM Strengthening National Policy and Knowledge Frameworks in Support of Sustainable Management of Brazil's Forest Resources” (GEFID 3767) to support the community engagement and governmental efforts aimed at strategic decision making in natural resources management, particularly unsustainable land use-changes.

Although the proposed project’s intervention areas are outside of Ilha Grande Bay Ecosystem, it is expected that the results and lessons learned will be compatible and complementary with project “Integrated Management of the Ilha Grande Bay Ecosystem” (GEFID 3848), which focuses on the long-term conservation and sustainable use this ecosystem. Both projects will be supporting and strengthening conservation units, increasing public awareness towards conservation of biodiversity and ecosystem services, increased capacity of local authorities to monitoring, enforcement and engaging positively with the private sector and local watershed inhabitants.

It is important to point out that vegetation cover monitoring strategies, as well as the implementation of the national GHG monitoring system are both under the responsibility of the Ministry of Science, Technology and Innovation (MCTI) and its institutes, a central institutional partners in this project. This fact facilitates coordination and interaction will the various converging initiatives listed here. Furthermore, the MCTI is coordinating several

research programs which are developing methodology and protocols for the monitoring of biodiversity and landscape in various biomes in Brazil.

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

B.1 Describe how the stakeholders will be engaged in project implementation.

- Project Executing Agency. The Project Executing Agency (PEA) of the project will be the Technological and Scientific Ventures Foundation (FINATEC). FINATEC is a dedicated support foundation with the objective of promoting and supporting scientific and technological progress, transfer of technology, research and graduate studies. FINATEC is accredited by the Ministry of Education and the Ministry of Science, Technology and Innovation in accordance with Federal Law # 8.958/94. FINATEC was founded on March 13th, 1992 at the University of Brasilia and has managed more than 4000 research and development projects across several areas of activity in Brazil and abroad. In Brazil, Foundations established to support the work of the public sector, such as FINATEC, constitute an agile and reliable conduit to administer project resources in coordination with the public sector. MCTI, as principal institutional partner in the project, with non-objection from central government SEAIN—nominated FINATEC as executing agency for this project, in view of its strong credentials and significant positive experience in the management of an array of projects undertaken for major government and multilateral institutions, which have often involved the participation of several States.
- FINATEC specializes in the management of agreements and contracts, specifically through: i) supporting and monitoring technical and legal requirements of funding agencies; ii) coordinating the acquisition of goods and services, and; iii) accounting and financial management and accountability of funds from the funding agencies. FINATEC is governed by a Board (the Superior Council), which determines the general direction of the Foundation and is assisted by an Audit Committee, responsible for overseeing financial and asset management. Three officers exercise the executive functions: the president, a secretary and a financier. IDB conducted an Institutional Capabilities Analysis (SECI) and concluded FINATEC has the administrative and supervisory capacity to undertake the role of Executing Agency. The SECI analysis recommended that FINATEC contract supplemental personnel devoted exclusively to the project's management, which has been accepted by FINATEC and included in the budget.

As PEA, FINATEC will be responsible for the technical, financial and fiduciary administration of the Project including, among others: (a) operating the accounting system for the Project's financial resources; (b) implementing and executing the planning and monitoring systems; (c) executing all procurement activities for goods and services contained in each of the Project's components, and ensuring their effectiveness; (d) implementing the necessary control systems to ensure the efficiency and transparency in the management of the Project's physical and financial resources; (e) opening a bank account for the exclusive administration of the IDB/GEF resources; (f) preparing the disbursement requests and submitting them to the Bank, along with all the supporting documentation; (g) in coordination with the beneficiary agencies [see below], ensuring the quality of the goods and services provided by contractors and vendors; (h) preparing the physical and financial progress reports of the project; (i) ensuring the compliance with the stipulations of the Non-Reimbursable Financing Agreement between the Bank and FINATEC as well as Bank policies; and (j) monitoring and reporting on the parallel financing contributions agreed by the Federal and State Agencies with the Bank within the framework of the present GEF-funded project.

State and Government Agencies participating in the project. FINATEC will coordinate its activities with the following Federal and State agencies, which will designate the necessary personnel to support the project execution process according to their technical and geographic area of intervention and mandate: (a) the Ministry of Science, Technology and Innovation (MCTI) for the overall coordination of the relationship between the project and the governmental institutions participating in the initiative, and to ensure that the project generates the results envisioned by the Government of Brazil when requesting financing from GEF; (b) the Secretariat for the Environment of the State of Sao Paulo (SMA-SP) and the Forestry Foundation (FF-SP), for the implementation of activities contained in Component 2 and Component 3 of the project, which take place within the State of São Paulo; (c) the Secretariat for the Environment of the State of Río de

Janeiro (SEA-RJ), for the implementation of activities contained in Component 2 of the project, which take place within the State of Rio de Janeiro; and (d) the Secretariat for Science, Technology and Higher Education of the State of Minas Gerais (SECTES) and the Minas Gerais State Forestry Institute (IEF), for the implementation of activities contained in Component 2 of the project, which take place within the State of Minas Gerais. The State agencies will be responsible for the technical oversight and coordination of all activities to be undertaken in their respective territories; each agency will deploy the technical personnel and logistical facilities to provide such supervision; the costs of providing these services (which would normally be described under the Administrative Costs section) are embedded into the co-financing costs presented by each agency under the corresponding component 7. Active participation by the State Agencies in the implementation of the field activities has the added value of strengthening their capabilities and improving the sustainability of the project investment for the period after-the-project. These agencies will also be the recipients of the goods, services and works procured by FINATEC with resources from the Project. These Federal and State agencies and FINATEC will sign a “Collaboration Agreement” establishing the specific arrangements, responsibilities and relations of such institutions within the framework of the Project.

**Institutional Coordination Committee.** An Institutional Coordination Committee (ICC) will be established with the overall objective of providing a governance, policy and strategic framework for the Project. The ICC will be chaired by the MCTI or his/her designee. Members will include the Ministers/State Secretaries or designees from the SMA-SP, the SEA-RJ, the SECTES, as well as the IEF. FINATEC will participate in the IIC acting in the function of Secretary of the Committee. The Committee will be responsible for, among others: (a) approving the Operational Manual of the Project (OMP); (b) approving the Annual Operational Plan (AOP) of the Project; (c) reviewing and assessing the physical and financial implementation progress reports to be submitted to the Bank; (d) ensuring that project execution and results are timely, consistent and ultimately contribute to the attainment of the strategic objectives of the initiative; and (e) providing strategic recommendations to enhance to the project execution process. The functions of the ICC will be stipulated in the Technical Cooperation Agreement.

**Operational Manual of the Project (OMP).** Project execution will be regulated by the OMP, to be approved by the Bank, which will establish, among others: (a) the organizational structure and execution mechanism, as described in the “Collaboration Agreement” prepared by the participating institutions; (b) the activities and responsibilities of the PEA, the State and Federal agencies and other stakeholders participating in the Project; (c) the fiduciary requirements, norms and procedures related to the financial and procurement administration of the Project; (d) the technical execution of the three components; (e) provisions for an effective, efficient and transparent execution of the Project including planning, financial administration, monitoring, evaluation and audit; and (f) the inter-institutional coordination mechanisms.

**Project Execution Mechanisms.** Consistent with the results of the institutional capacity assessment, FINATEC will undertake the execution of the Project through the utilization of its internal administrative, technical and overall organizational and internal control capabilities. FINATEC will fulfill its obligations by allocating all human and technical resources needed for project execution from the resources available at its Division of Programs, Division of Planning and Management and at other relevant units. In addition, the Project will use FINATEC’s systems capacity for integrated procurement, financial administration and reporting, as well as project management and monitoring systems, while ensuring their compatibility with Bank’s norms, procedures and control and reporting systems requirements. FINATEC will designate a Project Leader from the Division of Programs, and will allocate additional technical and administrative human resources needed, based on a pro-rated cost reimbursement structure that is included in the budget of the Project. Also, based on the expected level and volume of incremental responsibilities for FINATEC directly related to Project

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<sup>7</sup> Counterpart project management costs thus incurred by each agency are not presented jointly under the Administrative Costs item of the budget, because they are component-specific; that is, not all agencies participate in all components, and the level of effort of the various Agencies differs greatly among them. Due to this uneven distribution of responsibilities, and to very different technical supervision needs posed by each component, a flat percentage project management cost item was deemed inadequate. It was deemed more accurate and appropriate by the MCTI and all participating State governments to retain the respective administrative costs embedded into each component description, all the more so since each beneficiary agency will manage those resources separately and not through the Executing Agency due to legal limitations in Brazil. The share of each counterpart contribution that will be devoted to Project Management Costs is presented in a separate table in Annex G.

implementation, monitoring and administration, additional personnel will be contracted through fixed-term consultancies, to be funded with resources from the project and selected and contracted after non-objection by the Bank. FINATEC will ensure and streamline the presence of its technical/project personnel in the geographic areas of the Project in direct coordination with the technical counterparts assigned to the Project by the State and Federal Agencies in Sao Paulo, R o de Janeiro and Minas Gerais. Specific arrangements for the technical execution of each of the three project components are included in the OMP.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

Recovery and protection of biodiversity and ecosystem services of the AF in the Southeastern AF Corridor will result in multiple, interlinked benefits. At a global scale, it will contribute to climate change mitigation by enhancing carbon storage while simultaneously conserving biodiversity within one of the world's most biodiverse and most threatened terrestrial biomes. It will also develop innovative approaches to PES, which, if successfully implemented, could be rolled out across the entire AF and beyond.

At the local level, the project is expected to bring about visible and long-standing benefits as a significant portion of the project focuses on working with poorer communities in rural areas whose practices are currently unsustainable but who require incentives and support to shift to sustainable alternatives. The activities are expected to have a strong impact on family and local economies and would reach 5,513 direct beneficiaries who will receive payments and training for adoption of sustainable management practices in their properties. This in turn will generate in the medium and long term increased incomes of these families as a result of diversified production and higher yields, hence improving their livelihoods. Moreover, 180 small and medium organized producers will be incorporated into supply chains while another 160 small and medium organized producers will be benefited with certification of their production, hence adding value to their production and generating higher incomes that would also help improve their livelihoods. Additionally, 1,300 small producers operating in buffer zones of CUs will be trained in sustainable management practices consistent with international certification standards.

At the regional level, the inhabitants of the States of S o Paulo, Rio de Janeiro and Minas Gerais that depend on the Paraiba do Sul basin for their water supply (20 million people) would also benefit from this project. Lessons learned from this approach can be used to replicate incentives and protection mechanisms in the entire Atlantic Forest domain.

The project will also contribute to addressing gender issues by promoting full and equitable participation of women in the conservation and landscape management approach of the AF, particularly through their involvement in the investments and capacity building activities that will provide sustainable livelihoods and ecosystem services upon which they depend. The Project will facilitate the access of women to project benefits, and will take into account: (i) proportional representation of women in community organizations associated to the project; (ii) contents and schedule of training activities will be tailored to ensure that women are proportionally represented in each event. Moreover, the project interventions will benefit women in several manners. In regards to PES, women are expected to benefit indirectly from the increased family incomes through diversified production and higher yields to be achieved through adoption of more sustainable practices. Socio-economic benefits derived from the implementation of sustainable value chains will have direct and positive impacts over women given the high percentage of female population in the buffer zones of Conservation Units where the project will implement this activity (between 48% and 51%) and the active participation of women in production, harvesting and processing of non-timber products. The project will also promote access of women to existing credit lines (i.e. PRONAF – Family Agriculture Programme which has a specific credit line for women for the implementation of the value chains).

In terms of activities and outputs that explicitly include the gender dimension, the proposed project will use the same existing mechanisms available through the State agencies to encourage and ensure that women participate in the benefits of the project. Specifically:

- Rio de Janeiro, Rio Rural project: Management Committees established in each watershed where the project is implemented; each Committee has at least 30% of its members who are rural women. The project provides training specific for women both to improve farming skills as well as to generate additional family income from agricultural and non-agricultural activities. In the project's experience so far, 20% of its financial incentives are being requested and successfully applied by rural women.
- In São Paulo, approximately 50,000 people live in the area of influence of the project, of which close to half (47%) live in rural properties; pastures cover 64% of the area and milk cattle is the principal economic activity, where women outnumber men 2 to 1. Women participation in Sustainable Value Chains (SVC) to be promoted by the project – particularly cultivation of jussara palm, native fruit trees, medicinal plants and others—will involve mostly women. Thus, women participation in the project is of the outmost importance. Project benefits in terms of improved pasture management (Component 2) and support to Sustainable Value Chains (Component 3) will involve and benefit women directly. Training and technical assistance activities will be designed with this in mind.
- No data are presented for Minas Gerais since there will be no direct beneficiaries from the PES activities in that State.

In terms of public participation from CSOs and indigenous people within project components:

- Component 1: individual producers and associations of producers will be involved in the training activities under this component.
- Component 2 & 3: PES schemes require community participation for the success of the project:
  - Engagement of associations of rural producers in the selection of beneficiaries is being used, not only to ensure veracity of information presented by candidates but also to strengthen the individual commitments assumed by community members.
  - In Rio de Janeiro, the Rio Rural project's objective is to promote sustainable development of the rural communities inhabiting target watersheds; in each micro-watershed a "collective plan" is agreed upon with the participation of all community members through periodic open meetings; communities have direct responsibility for the implementation of those collective plans. For each watershed, a Management Committee is established, in which each community has representatives; part of the functions of those committees is the participation in the diagnostic analysis before the intervention, and intervention follow-up once the collective plans are approved. Since 2006, Rio Rural has established 200 such Committees, involving approximately 2,000 stakeholders; another 166 will be established until 2015. Each watershed Committee sends representatives to the Paraíba do Sul Watershed Management Committee where decisions on the use of the funds available to the watershed are made.
  - Rural producer organization in the São Paulo share of the project area is incipient, but several community-based NGOs are active. An informal group of producers interested in participating in the project has been formed, which is helping coordinate training and project promotion events. That informal group is expected to grow into a formal project follow-up role, acting as a focal point within local Municipal Councils and NGOS.
  - In Minas Gerais, Municipal Sustainable Development Councils (CMDRS), where family-unit farmers and farmer workers associations are represented, validate all proposals presented by individual or group candidates to the Bolsa Verde program. The program also incentivizes community associations, as candidacies to Bolsa Verde by groups of rural beneficiaries receive greater weight at the time of selecting beneficiaries.

### B.3. Explain how cost-effectiveness is reflected in the project design:

The goal of cost-effectiveness analysis is to calculate the ratio of the amount of "impact" a program achieves for a given amount of cost incurred, or in other words, the amount of cost required to achieve a given impact. The bulk of the project's funding will be allocated to the implementation of PES schemes under components 2 and 3. The key expected impact of the components 2 and 3 is the reduction of CO<sub>2</sub>e emissions from forest degradation or enhancement of stocks of CO<sub>2</sub>e through recovery of degraded lands via reforestation. The

alternative considered in the cost-effectiveness analysis was the establishment of PAs to achieve the same carbon benefits.

The analysis showed that the establishment of PAs to reduce emission of CO<sub>2</sub>e from forest degradation was not the most effective alternative. The cost per tCO<sub>2</sub>e for PAs was estimated at US\$281 while the cost per tCO<sub>2</sub>e for the PES was estimated at US\$19 (see Economic Evaluation annex). The alternative PES was therefore selected as the most cost-effective to apply for highly degraded areas and areas subject to forest degradation in components 1 and 2. In addition, as part of the cost-effectiveness analysis the project's team had estimate landholders "willingness to accept" a given level of payment to participate in the PES. This information (probability to participate and levels of payments) was used to structure the payment scheme.

We have not considered the purchase of carbon credits as an alternative in the cost effectiveness analysis due to the following considerations:

1. International experience shows that, in order to achieve an increase in forest cover, PES schemes are far more effective than carbon market transfers.
2. PES schemes are already recognized and regulated in different federal states in Brazil including RJ, MG and SP. On the other hand, forest carbon credits are instruments that are not so well developed in Brazil, where REDD credits are still being discussed at a national level and carbon ownership is mostly unclear.
3. Areas where PES will be implemented producers are predominantly smallholders, and access to carbon markets can be rather complicated. Commonly, small farmers are poorly organized and have limited information level, which prevents their access to sophisticated markets.

In this sense, technical, institutional and political environments are more favorable for an immediate use of PES schemes than for the use of carbon markets and therefore carbon markets are not considered a comparable alternative for the cost effectiveness analysis. Finally, while the proposal for the GEF project does not include carbon credit transactions it is one of the possible alternatives for long term financial sustainability of the project. This alternative is contingent on overcoming the points made above on why carbon markets were not selected from the start.

### **C. DESCRIBE THE BUDGETED M & E PLAN:**

Project monitoring and evaluation will be conducted in accordance with established IADB and GEF policies and will be supervised by the project team in the IADB Country Office in Brazil. The monitoring will follow the Project Results Framework in Annex A that includes output, outcome and impact indicators for project implementation along with their corresponding means of verification. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may be fine-tuned at the inception workshop. The M&E plan includes: inception report, project implementation reviews, quarterly and annual review reports, and final evaluation.

M&E will be undertaken at three levels: (i) project outcomes and impacts in relation to the logical framework; (ii) delivery of project outputs in accordance with the annual work plans, and; (iii) monitoring of project implementation and financial performance. The project team will supervise the achievement of the outcomes and results associated to IADB/GEF funding and will incorporate them in the Project Monitoring Report (PMR); the project team will also incorporate all project outcomes and results associated to the co-financing into the Project Implementation Reports (PIR), to be reported periodically to GEF. The AOP will be used to monitor progress in physical implementation according to planned schedules, and observations derived from this will constitute an input to the periodic evaluations, as well as to regular follow-up supervision missions to be undertaken by the project team during project implementation. The project will also make use of the GEF Tracking Tools to assess progress at mid-term and final evaluation.

Specific methodologies to assess carbon and biodiversity benefits of the project will be developed during the first year of project implementation. The carbon monitoring system will evaluate carbon stock dynamics over time by comparing satellite images at an initial time period with future images. A monitoring baseline is being developed as part of the

project preparation activities, but further research is needed to calibrate carbon stocks for different land uses. This will enable the revision of the current baseline in light of future information. Carbon estimates on a per hectare basis will be produced by studies to be funded by Outcome 1, where alternative management practices will be evaluated based on several criteria, among which is carbon. This will enable the project to use these estimates from case studies and apply them to project targets by multiplying the carbon stocks per hectare by the number of hectares of land use change accomplished by the project.

FINATEC will be responsible for monitoring the performance and progress of the program during the implementation period. FINATEC will be responsible for collecting the information for different output and outcome indicators included in the Results Framework, establish administrative control mechanisms that allow report semiannually on physical and financial progress of product as well as to collect relevant information indicators and implementation plans. The Institutional Coordinating Committee will receive periodic reports on progress and will make recommendations to IADB concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight (to ensure that the project meets IADB and GEF policies and procedures) is the responsibility of the IADB/GEF Coordination Team. This team will also review the quality of draft project outputs, provide feedback to project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Mid-term and end-of-project evaluations will be carried out by independent third party evaluators, whose role will be to identify project strengths, document lessons, and facilitate correction of weaknesses. The mid-term evaluation will take place after 2.5 years of project execution, or when 50% of IDB/GEF contribution has been disbursed, whichever comes first, and will pay special attention to the following subjects: (i) close relationship, inter-action and feedback between the research activities in Component 1 and the field activities in Components 2 & 3; (ii) progress in the implementation of the PES schemes in each of the three participating States, considering the distribution of financial resources among each State; (iii) success of the project in developing a demand for Component 3's Certification and Value Chain incentives, and; (iv) pari passu of the application of co-financing, and adequate coordination between GEF-funded activities and those executed under co-financing. The mid-term evaluation will recommend adjustments in the distribution of project resources, if necessary, as well as other management or technical adjustments as needed. The Final Evaluation will take place within the last 6 months of project execution and will focus on the overall achievement of results and the perceived impact of the project, as well as fulfillment of the project's objectives.

The Project will carry out an impact evaluation. This evaluation will focus on the effectiveness of PES schemes, which is the main activity for the project in terms of funding and expected impact on natural ecosystem. This evaluation will address the following question: what would have happened in the absence of PES schemes? The focus of the assessment will be on avoided degradation and enhanced carbon stocks for the reason that deforestation rate is very low within the study area. To evaluate the impact of the PES schemes, household questionnaires will be carried out and separate control and treatment groups will be established and will rely on matching methods for some areas and regression discontinuity in others.

The following table summarizes the M&E plan and budget:

<b>M&amp;E activity</b>	<b>Responsible Parties</b>	<b>Total Budget US\$ (Budget Item)</b>	<b>Period</b>
Inception Workshop	<ul style="list-style-type: none"> <li>· Project Team</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> </ul>	US\$10.000 (1.2.1.5)	Within 2 months of Project start-up
Inception Report	<ul style="list-style-type: none"> <li>· Project Team</li> <li>· IADB</li> </ul>	None	Immediately after Inception Workshop
Progress Reports	<ul style="list-style-type: none"> <li>· FINATEC</li> </ul>	None	Quarterly

<b>M&amp;E activity</b>	<b>Responsible Parties</b>	<b>Total Budget US\$ (Budget Item)</b>	<b>Period</b>
Annual Evaluation Workshops (3)	<ul style="list-style-type: none"> <li>· Project Team</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> </ul>	US\$100,000 (1.2.1.2)	Annually
Annual Report/Project Implementation Report (APR/PIR)	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> </ul>	None	Annually
Mid-term Evaluation	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> <li>· External Consultants</li> </ul>	US\$35,000 (5.1.1.0)	Project mid-term as defined above
Terminal Evaluation	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> <li>· External Consultants</li> </ul>	US\$35,000 (5.1.1.1)	End of Project implementation
Terminal Report	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> </ul>	None	At least one month before end of project
Impact Assessment	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> <li>· External Consultants</li> </ul>	US\$90,000 (1.2.1.4)	End of Project implementation
Publications (comparative studies on PSA in the 3 States)	<ul style="list-style-type: none"> <li>· FINATEC</li> <li>· MCTI</li> <li>· States (RJ, SP, MG)</li> <li>· IADB</li> <li>· External Consultants</li> </ul>	US\$75,000 (1.2.1.1)	End of project implementation
Project website	<ul style="list-style-type: none"> <li>· FINATEC</li> </ul>	US\$40,000 (1.2.1.3)	Throughout project duration
Field visits	<ul style="list-style-type: none"> <li>· IADB</li> <li>· Government representatives</li> </ul>	Paid through Agency fees and operational budgets	Annually
<b>TOTAL INDICATIVE COST</b> Excluding project team staff time and travel expenses of IADB staff		US\$385.000	

Budget resources to cover monitoring and evaluation costs are distributed in two items: (i) project administration (budget item 5.1) and (ii) monitoring system for the project, in Component 1 (budget item 1.2). The specific budget items in the detailed budget are as follows:

MCTI and FAPESP' contribution of counterpart funds for component 1, for an equivalent of US\$ 11,753,799, are direct support for M&E activities to the extent that those resources will be used to: (i) funding for research projects devoted to filling knowledge gaps on capture carbon stocks and sinks in anthropic landscapes, biodiversity, water resource management, and initiatives of climate change, biodiversity, and sustainable forest management within the forest area;



(ii) design and implementation of a carbon and biodiversity M&E system to assess the methods and strategies used in the project; and (iii) human resources training and capacity building in these same areas.

Annex I includes the detailed M&E Plan.


**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 form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Rodrigo Martins Vieira	General Coordinator for External Financing and GEF operational Focal Point for Brazil	MINISTRY OF PLANNING, BUDGET AND MANAGEMENT. SECRETARIAT FOR INTERNATIONAL AFFAIRS (SEAIN)	08/30/2013

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

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Michael Collins		04/14/2014	Helena Piaggessi	(202) 623 1872	helenal@iadb.org

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

<b>Project Objective</b>	<i>The project seeks the recovery and preservation of the Paraíba do Sul basin of the Atlantic Forest of Brazil (AF) corridor to protect the generation of carbon sequestration and biodiversity benefits.</i>
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Outcome Indicators		Base Level			Target Level			Comments
<p><b>Outcome 1:</b> CO2 outcome</p> <p><b>Indicator 1.1:</b> CO2 stocks from land-use, land-use change and forest degradation</p> <p><b>Indicator 1.2:</b> Tons of CO2 sequestered and/or avoided emissions within the framework of implemented PES schemes</p> <p><b>Outcome 2</b> The continuous vegetation coverage and species richness of the Atlantic Forest fragments in the four areas of intervention (Bananal, São Francisco Xavier, Santa Virginia and Itarirú) has increased.</p> <p><b>Indicator 2.1.</b> (Isolation of forest fragments/ landscape connectivity): Mean distance (and standard variation) in meter between forest fragment and nearest neighboring fragment</p>		<p>0 tons (PES schemes do not currently exist)</p>			<p>Lifetime direct GHG emissions avoided: 227,083 tones CO2eq Lifetime direct carbon sequestration: 204,456 tones CO2eq</p>			<p>Means of verification:</p> <p>Tons of carbon emissions captured or avoided as per recorded in the carbon monitoring system</p> <p>Assumptions: See Annex X for land use change and carbon scenario estimates</p>
		<p>Bananal: 72.5 (45.9) São Fran. Xavier: 68.0 (41.8) Santa Virginia: 103.8 (90.8) Itarirú: 75.3 (68.4)</p>			<p>Bananal: 69 São Fran. Xavier: 64.5 Santa Virginia: 98.5 Itarirú: 71</p>			<p>Methodology is described in “Methodology to determine Landscape Connectivity”; Values cited consider conservation area and buffer zone (= “paisagem inteira”).</p>
Component 1	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Means of Verification/Comments
<b>Component 1 - Products (Outputs)</b>								
P1.1 Model for carbon stock management developed and validated	0			1			1 model	MoV: Bi-annual project report, confirming validation of model by Executor
P.1.2 Carbon stock management model integrated into management protocols	0				1		1 model	MoV: Bi-annual project report, confirming integration of models into protocols

P.1.3 Database completed on (i) Complete and validated map of carbon stocks for project area (ii) Complete map of biodiversity for project area (iii) Detailed report on water resource management in project area (iv) Detailed report on CC, BD and SFM projects in Project area.	0						1 database	MoV: Bi-annual project report, confirming validation of maps and receipt of final reports by Executor
P1.4 Monitoring and evaluation system developed and validated	0				1		1 system	MoV: Bi-annual project report, confirming validation of system by Executor
P1.5 Capacity building program implemented	0					1	1 program	MoV: Bi-annual project report, reporting on implementation over time (# of events and people trained), as well as on completion of program implementation (in accordance with capacitation plan)
<b>Component 2</b>	<b>Base</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	
<b>Component 2 - Products (Outputs)</b>								
P2.1 Contracts for participation in PES schemes signed by producers	0	273 (SP: 200 + 45; RJ:28)	490 (SP: 260 + 90; RJ:140)	574 (SP: 260 + 90; RJ:224)	512 (SP: 325 + 75; RJ:112)	381 (SP: 325; RJ:56)	2230 contracts	Comment: A total of 1670 contracts in SP and 560 in RJ. After the third year of project execution, contracts will be financed by funding sources outside of the project (see last part of matrix)  MoV: Bi-annual project report, reporting the number of contracts signed by both producer and Financial Agent, according to the Executor's records.

P2.2 Monitoring and verification system implemented	0				1		1 system	MoV: Bi-annual project report, reporting on implementation over time (advance in implementation of elements/modules), as well as on completion of system implementation (in accordance with initial design)
P.2.3 Area in Minas Gerais managed by small producers trained through the Program for recovery and enhancement of carbon stocks [Minas Gerais]	0 ha				500	505	1005	MoV: Bi-annual project report, reporting on implementation of training program as well as area of land managed according to training by small producers
<b>Component 2 - Results (Outcomes)</b>								
R2.1 Area managed for recovery and enhancement of carbon stocks in a given year	0 ha	2,883  (SP: 2,200 + 495; RJ: 188)	7,677  (SP: 5,060 + 1,485; RJ: 1,132)	12,542  (SP: 7,920 + 1,980; RJ: 2,642)	16,518  (SP: 11,495 + 1,815; RJ: 3,208)	18,537  (SP: 15,070 + 825; RJ: 2,642)	58,157  hectares under contract per year	MoV: Bi-annual project report, reporting the sum total of areas (in Ha) under contract in each year of execution, reported by the Executor based on signed contracts.  Assumptions in calculating target:  SP: 11 ha (average) per contract RJ: 6.7 ha (average) per contract
R2.2 PES schemes for recovery and enhancement of carbon stocks in the productive landscape established	1 PES scheme (MG)			2  (1 SP, 1 RJ)			3 PES schemes	MoV: Bi-annual project report, confirming payments made for valid contracts under each of the developed schemes.  Assumption: A scheme is considered established once the first payment under the contract has been made
<b>Component 3</b>	<b>Base</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	

Component 3 - Products (Outputs)								
P3.1 Capacity strengthening program to improve management effectiveness implemented	0					1	1 program	MoV: Bi-annual project report, reporting on implementation over time, as well as on completion of program implementation (in accordance with Action Plan and detailed program design)  Note: Action Plan is being developed using needs analysis based on BD and SFM Tracking Tools
P3.2 Small producers operating in buffer zone certified	0			25	35	100	160 small producers	MoV: Bi-annual project report, reporting the number of small producers that have received official certification from the corresponding certification authority, according to the Executor's records.
P3.3 Small producers operating in buffer zone trained in sustainable management practices consistent with international certification standards, but not certified	0					1300	1300 small producers	MoV: Bi-annual project report, reporting the number of small producers that have participated in training events, financed by the project, on sustainable management practices that are consistent with international certification standards  Comment: While producers will be trained to comply with certification standards, the project will not pursue certification for this group of producers (in contrast to the previous product, which includes both training and certification)

P3.4 Small producers incorporated in sustainable value chains (SVC)	0					180	180 small producers	MoV: Bi-annual project report, reporting the number of small producers that are incorporated into SVC, in accordance with the project's Operational Regulations, according to the Executor's records.
P3.5 Contracts for participation in PES scheme signed by small producers in buffer zones	0		75	150	150	125	500 contracts	MoV: Bi-annual project report, reporting the number of contracts signed by both producer and Financial Agent, according to the Executor's records.
<b>Component 3 - Results (Outcomes)</b>								
R3.1. Improved management effectiveness score of CU – APA SFX	Score: 23			32		42	Score: 42	MoV: Application of GEF's Tracking Tool (TT) for Biodiversity – Objective 1, Section II during mid-term and final evaluation of project
R3.2. Improved management effectiveness score of CU – EE Bananal	Score: 50			63		75	Score: 75	MoV: Application of GEF's Tracking Tool (TT) for Biodiversity – Objective 1, Section II during mid-term and final evaluation of project
R3.3 Improved management effectiveness score of CU – PESM Santa Virginia	Score: 50			71		79	Score: 79	MoV: Application of GEF's Tracking Tool (TT) for Biodiversity – Objective 1, Section II during mid-term and final evaluation of project
R3.4 Improved management effectiveness score of CU – PESM Itarirú	Score: 29			42		60	Score: 60	MoV: Application of GEF's Tracking Tool (TT) for Biodiversity – Objective 1, Section II during mid-term and final evaluation of project

R3.5 Area within buffer zone of PESM and within APA São Francisco Xavier under certification, managed with sustainable land use practices	0			500		3500	3500 hectares	MoV: Bi-annual project report, reporting the sum total of hectares managed by small producers that have received official certification from the corresponding certification authority, according to the Executor's records.  Note: the number of hectares per producer is measured as part of the pre-assessment documentation of each producer.
R3.6 Areas managed with environmentally-sustainable business practices.	0			0		3600	3600 hectares	MoV: Bi-annual project report, confirming sum total of area indicated in technical assistance reports accepted by the Executor.  Note: the number of hectares per producer is measured as part of the pre-assessment documentation of the supported group of producers.
R3.7 Area of AF in buffer zone of PESM monitored and audited as conserved through PES scheme	0			675		3375	3375 hectares	MoV: Bi-annual project report, reporting number of hectares receiving PES payments (measured through Financial Agent's monitoring system for PES payments) and verified by the Executor.

Products and Results to be achieved through local (Co-financing) resources								
Component 1	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Target	
<b>Products (Outputs)</b>								
Call for proposals for research projects tied to priority knowledge gaps completed	0	1	1	1	1		4	Cost corresponding to product: 500,000 USD



Selected research projects completed and results transmitted to project	0			5	5	5	15	Cost corresponding to product: 11,500,000 USD
<b>Component 2</b>	<b>Base</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	
<b>Products (Outputs)</b>								
Calls for PES proposals completed (including final selection)	0		2	4	4	2	12	Total of 8 for SP and 4 for RJ Cost corresponding to product: 170,000 USD
Contracts for participation in PES schemes signed by small producers	0 contracts			100	100	200	400	Total of 400 in SP and 0 in RJ; Contracts in Y1-Y3 will be financed through GEF resources, with overlap in Y3 Cost corresponding to product: 6,922,875 USD
Small producers trained and monitored for managing non-forest lands for recovery and enhancement of carbon stocks	SP: 0 RJ: 0 MG: 0 small producers	SP: 290 RJ: 656 MG: 25	SP: 830 RJ: 984 MG: 50	SP: 830 RJ: 480 MG: 150	SP: 0 RJ: 480 MG: 150	SP: 200 RJ: 0 MG: 0	SP: 1950 RJ: 2600 MG: 375	Cost corresponding to product: SP: 2,086,650 USD RJ: 2,676,375 USD
<b>Results (Outcomes)</b>								
Area managed for recovery and enhancement of carbon stocks	0 ha					4400	4400	Assumptions: SP: 11 ha (average) per contract
<b>Component 3</b>	<b>Base</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	
<b>Products (Outputs)</b>								

Proposals for expansion of CU presented to the Government of the State of São Paulo	0	4					4	Cost corresponding to product: 110,086,371 USD
CU protection infrastructure installed and operating	50%	10%	15%	15%	10%		100%	Cost corresponding to product: 7,666,307 USD
CU support equipment and operation costs	0		50%		50%		100%	Cost corresponding to product: 553,000 USD
Educational campaigns in PESM	0	1	1	1			3	Cost corresponding to product: 1,193,664 USD
RDS infrastructure in support of sustainable development	0		1				1	Cost corresponding to product: 4,303,380USD
RDS support equipment and operation costs	0	20%	30%	50%			100%	Cost corresponding to product: 274,000 USD
Contracts to monitor and administer certification schemes	0			25	35	400		Cost corresponding to product: 1,975,000 USD
PES contracts signed by small producers	0				1200	1183	2383	Cost corresponding to product: 1,485,000 USD
<b>Results (Outcomes)</b>								
Additional area conserved through expansion of existing protected areas  Indicator: Area (ha) protected in each area (PESM, Jureia, Bertioga and Paranapiacaba)	PESM: 320,000 Jureia: 80,000, Bertioga: 10,000, Paranapia: 25,000			PESM: 337,000 Jureia: 92,504 Bertioga: 19,312 Paranapia.: 50,000			Same as year 3; therefore, a total of  63,816 ha additional hectares protected	Verified through legal documentation of newly created or expanded areas;

**ANNEX B: RESPONSES TO PROJECT REVIEWS** (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

<p><b>GERMANY</b></p> <p>Germany requests that the following requirement is taken into account during the design of the final project proposal:</p> <p>1. The project proposal is aligned with projects supported by the German Ministry of the Environment (BMU) developed in cooperation with the Brazilian Ministry of the Environment (MMA) and the Chico Mendes Institute for the Management of Protected Areas (ICMBio), respectively, the Atlantic Forest Protection Project as well as the Project on Biodiversity Monitoring. Therefore, it is recommended a close coordination with these projects in order to benefit from the outcomes and outputs already provided by them and to avoid duplicate efforts but promote complementary ones. Two main aspects of the above cited projects under the coordination of the Brazilian Environmental Ministry MMA that can significantly contribute to this project proposal are:</p> <p>i) Capacity building for Conservation Units staff on Management Tools such as the Program for Results (PGR) and Strategic Management Tools, which can contribute to project Component 3 (Increase effectiveness and financial sustainability of Conservation Units); and ii) Lessons learnt from the PES schemes for increasing financial sustainability of Conservation Units, as well as promoting their role for territorial politics, contributing to the goal of Component 3.</p>	<p>1. The IDB is in contact with the specialists from the KfW and GIZ regarding the German government's dedicated support to the conservation of the Atlantic Forest, in the context of the Atlantic Forest Protection Project and the Project on Biodiversity Monitoring, as well as the LifeWeb initiative in preparation. While neither MMA nor ICMBio are direct partners in this project, the solutions and instruments developed through these three projects will influence the project during execution as a result of the link between KfW, GIZ and IDB.</p>
<p>2. In addition, although the project shows a good institutional arrangement as well as a network with the main institutions and initiatives for the protection of the Atlantic Forest, it is highly recommended that the project coordinates efforts related to payment for ecosystem services with the PES Learning Community (<a href="http://www.aprendizagempsa.org.br">www.aprendizagempsa.org.br</a>) in order to empower and create synergies with the Community platform regarding capacity building, to exchange experiences as well as to share best practices and lessons learned.</p>	<p>2. The project has indeed already started coordinating efforts with the PES Learning Community. At its most recent meeting in Sao Paulo in November 2012, the IDB and project beneficiaries, namely the environment secretariats from the three participating states (RJ, SP and MG) participated in the "IV International Congress on Payment for Ecosystem Service", sponsored amongst others by IDB. In a meeting organized prior to the event, the project's team and beneficiaries had a discussion workshop with some of the leading speakers and experts in this topic that came to the Congress. The discussion lead indeed to the improvement of the project's design as well as to see opportunities for further collaboration in evaluating and future research associated to the results of the project.</p>

**GEFSEC**

1. By CEO endorsement, please ensure STAP guidance is clearly incorporated into the PES design. Also, it is not clear in the response to comments for the state of Minas Gerais in particular how carbon benefits will be considered as part of the PES. By CEO endorsement, please include a clear description of how carbon benefit criteria are included in the PES.

1. a) The Project will pilot two PES schemes based on existing state-level legislation, mainstreaming global environmental benefits and identifying lessons learned that would contribute to upscaling PES to a landscape level. These are (a) Multiple Use PES, and; (b) a Conservation PES scheme. The schemes will target three main carbon stock enhancement and conservation strategies: (a) conservation of forests, with the objective of reducing degradation of forest fragments, as well as maintaining and increasing carbon stocks and biodiversity (Conservation PES); (b) restoration, aimed at promoting recovery and increase of connectivity between forest fragments and reducing border effects, increasing carbon stocks and fostering recovery of riparian forests and forests of high value for connectivity; (c) conversion of areas of low productivity to systems (agroforestry and silvo pastoral systems, tree consortia) with enhanced carbon stocks and greater ecological and economic functionality. The Multiple Use PES integrates the 3 strategies. STAP guidance has been included in the design of the PES schemes. More specifically:

Entry Points: The project takes into account three potential entry points: (i) set up and pilot direct payments, which is the main focus of the project; (ii) co-financing of multiple-service strategies, as it covers different social-ecological contexts with conservation, restoration and conversion approaches focusing on respectively on forest and habitat connectivity, carbon stocks and multiple ecosystem services, including direct services; and also (iii) financing of PES start-up costs, as the current project are proposing incorporating already established public funds (state and federal) to support long term payments.

PES as a financing and mainstreaming tool: Project design intends to use PES in both ways, as it will cover all direct PES interventions during the first 3 years, while creating an interface with existing state and mixed state-private funds.

Contract design: Project design included a study on the willingness to accept (valuation for areas to be contracted for conversion, restoration and conservation), and assessments on land use and gross income of farm activities were used to calibrate PES values in this component for the opportunity cost of land. Also, the Conservation PES will be implemented partially using the reverse auction approach, in order to optimize resources allocation in priority areas, aiming for cost effectiveness of the PES scheme. To set parameters and indexes for the payments, a set of biophysical and social-economic aspects were identified, coherent with the special targeting studies. Public announcements will then define indexes composition and weights according to site-specific features (i.e., more or less fragmentation, connectivity, demand for water services, average size of the farms).

Indicators to evaluate the four main threats to PES effectiveness: (i) non-compliance; (ii) poor administrative selection; (iii) spatial demand spillovers; and (iv) adverse self-selection: To avoid non-compliance (i), the flow of the proposals until payments was designed with different checking points, including external audits for the verification of contract execution and related documentation. For items (ii), (iii) and (iv), the project design incorporates the following strategies:

- In São Paulo, all landowners in the sub-basins of Chapéu and Turvo will be eligible to participate in the PES (Multiple-use), but timing of allocation of contracts to different areas of the watershed will be used to evaluate the impact, and a control group outside these sub-basins will allow for impact evaluation

	<p>through matching, which would control for possible spillovers by producers within the same sub-basins;</p> <ul style="list-style-type: none"> <li>· At a larger area in the Paraitinga River watershed of Sao Paulo the project will select landowners to participate in the Conservation PES scheme through a reverse auction mechanism, with impact evaluation focusing on regression discontinuity between successful and unsuccessful bidders. As a backup option the last recipients of the PES contracts will serve as control groups for the first recipients.</li> <li>· In Rio de Janeiro the project will work together with an ongoing project called Rio Rural, implementing an Multiple-use PES scheme, using landowners that sign a PES contract in year 1 as treatment and participants signing contracts in year 4 as control group, and will use matching to select controls for the treatment group.</li> </ul> <p><u>Long-term funding:</u> The project will be implemented in two states, SP and RJ and will enhance capacities of landowners in a third –MG all already with ongoing schemes of PES running, with PES Trust Funds and legal frameworks, and potential for long term financing. The GEF funds for PES in this project, although short term oriented (3-5 years), will allow for the consolidation process of procedures and political empathy demanded to attract public and private funds to the already existing PES State Funds (MG, SP, RJ) and the Federal PES Fund to be created.</p> <p><u>Capacity building for PES start-up:</u> SP and RJ committed resources along with GEF funds to achieve a social learning process on PES schemes and recommended practices to be implemented. Capacity building will be then focused on identified risks and barriers for PES, including i.e. business plans and sustainable productive chains linked to the PES schemes (Component 3), improving Individual Plans design and verification (Component 3 and Component 2) through workshops and helping desks. The purpose is fastening and making more clear and agile the flow of proposals to reduce transaction costs. In this framework, the process will target technical personnel from Rural Extension Services and NGO staff as well as other relevant collaborators in local partnerships.</p>
<p>2. CEO endorsement, please provide the specific choice and details for certification.</p>	<p>2. Several certification protocols were assessed under the following criteria: (1) recognition in the international or domestic market; (2) alignment with project objectives, especially with regard to conservation and sustainable management of forest resources; (3) high probability for adding value to certified products; (4) potential for the scheme to operate successfully in small properties. On the basis of such an assessment (see Table below), the most appropriate systems selected for piloting are the Organic Protocol and the Sustainable Agriculture Network (SAN) protocol, and these will be the basis for certification of all products and processes in the pilot projects</p>

	<b>Criteria</b>	<b>Organic</b>	<b>SAN</b>	<b>Globalgap</b>	<b>Fair Trade</b>
	Market recognition	YES	YES	YES	YES
	Environmental content	YES	YES	NO	NO
	Agroecological systems	YES	YES	NO	NO
	Biodiversity management	YES	YES	NO	NO
	Added value	YES	YES	NO	YES
	Smallholdings	YES	YES	YES	YES
	Certification of extraction	YES	YES	NO	NO
	Group certification	YES	YES	YES	YES
	Certification of processes	YES	YES	NO	YES
	Prohibition or restriction of agrochemicals	Forbidden	Restricted	Restricted	Restricted
3. At CEO endorsement, please include more details about the private financing mechanism.	3. During project preparation it was agreed that this was going to be a government funded PES and not user funded. This doesn't mean that the beneficiaries won't consider the engagement of possible private sector participants that benefit directly of the ecosystem services provided by the areas under payment schemes. It does however exclude them in this first phase of PES implementation.				
4. Please provide an estimate of the carbon benefits likely to accrue from the project. At CEO endorsement, this may need to be updated.	4. Carbon benefits for this project are estimated at 231,707 tCO2e in 5 years and 850,364 in 10 years of which 88% accrue from new carbon stocks (carbon capture) and the remaining from avoided deforestation.				
5. Does the project take into account potential major risks, including the consequences of climate change and provides sufficient risk mitigation measures? (i.e., climate resilience). At CEO endorsement, please include the more specific plans that will be further developed during project preparation.	5. Please see section A.6 with the corresponding risks and mitigation measures, including climate change.				
6. Continued post-project funding is identified as important for the longevity of the PES scheme -- royalties from oil and water usage charges are identified as future funding sources. Are these sources potential or guaranteed? At CEO endorsement, please include the more specific plans that will be further developed during project preparation.	6. As indicated in section A.6, the State governments participating of the PSE already have strong legislation that allows and supports public expenditures in this area. In particular, strategies for continued funding include using water charges at Federal and State levels (e.g. SP State estimates that it will be able to charge about US\$70 million/year in water usage for applying in PES) and to participate of the voluntary environmental services markets. The development of the international carbon markets could be a future alternative towards the financial sustainability of PES projects.				
7. A large number of organizations have been listed for participation in the project-- how is the project planning to coordinate these efforts? Field level implementation will be important in particular working with small scale landowners -- which organizations will be focusing on field implementation? At CEO endorsement, please give more details about these coordinated efforts and the organizations that will be involved.	7. The Project will make use of formal participation and coordination mechanisms. The Inter-institutional Coordinating Committee will comprise representatives of the IDB, MCTI and State Governments and will be responsible for providing overall guidance for Project implementation. At field level, the Project will take advantage of existing local participation and coordination mechanisms, namely CU Management Councils and Municipal Development Councils. New CU Management Councils will also be established in the case of CUs to be established under the project. The government technical				

	<p>assistance bodies are already working in the field in each State will be responsible for implementation of activities in the field, hence ensuring field working experience and knowledge with landowners. Moreover, planning and coordination within the framework of the afore-mentioned councils and engagement of key stakeholders such as NGOs, CSOs and private sector will have the purpose of enhancing mobilization of beneficiaries, in particular small-scale landowners. The description of the project components in Section A.5 above includes a detailed explanation on how the multiple initiatives and organizations referred will be integrated into the project's activities.</p>
<p>8. The text indicates the monitoring system is monitoring ecosystem services more broadly. A carbon monitoring system does need to include land use/cover monitoring, but also monitoring of carbon per hectare changes. At CEO endorsement, please be clear about how carbon per hectare changes will be monitored. Typically observational remote sensing based data will not be adequate for the precision of interest for carbon estimates.</p>	<p>8. The carbon monitoring system will evaluate carbon stock dynamics over time by comparing satellite images at an initial time period with future images. A monitoring baseline is being developed as part of the project preparation activities, but further research is needed to calibrate carbon stocks for different land uses. This will enable the revision of the current baseline in light of future information.</p> <p>Carbon estimates on a per hectare basis will be produced by studies to be funded by Outcome 1, where alternative management practices will be evaluated based on several criteria, among which is carbon. This will enable the project to use these estimates from case studies and apply them to project targets by multiplying the carbon stocks per hectare by the number of hectares of land use change accomplished by the project.</p>
<p><b><u>STAP</u></b></p> <p>1. The title and objective of the project appear to differ in terms of their emphasis. The title stresses the recovery and protection of climate (note: how does one recover climate?) and biodiversity services in the Paraiba do Sul basin whereas the objective is to the recover and preserve the Paraiba do Sul basin so as to ensure the generation of carbon sequestration and biodiversity benefits. Both are somewhat misleading considering the scope of the proposal as outlined in the PIF and it is proposed that this be reconciled (along with greater clarity in the use of the terms protection and preservation).</p> <p>2. In Section A of the PIF - Strategic Framework, at present there is a lack of specificity, clarity and also coherence between the expected outcomes and the necessary outputs to deliver them. Without this, it is difficult to undertake a technical assessment and/or estimate global benefits. For example, the Output under CCM -5 Outcome 5.1 is exactly identical to the Outcome. Under SFM/REDD-1 Outcome 1.3 "Good management practices adopted by relevant economic actors" is not informative in terms of the specific outcome that may be anticipated. Similarly, the outcome under CCM-5 Outcome 5.2 "Forest and non-forested lands under good management" is also not clear or informative. Additional examples include the SFM/REDD-1 Outcome "Good management practices adopted by relevant economic sectors" and the corresponding Output "Payment for ecosystem services established", as well as the CCM-5 5.2 output "Forest and non-forest lands under good management practices". Additional specificity and clarity is required to assess this fully.</p>	<p>1. The title of the project refers to the capacity of the Atlantic Forest biome in the specific targeted areas (the Paraiba do Sul basin and South-Eastern corridor of the Atlantic forest) to provide services of climate regulation and habitat for biodiversity. The title reflects the objectives and components of the project.</p> <p>2. Table A follows the Strategic Framework corresponding to each of the Focal Areas that the propose project targets. We concur that the outputs and outcomes between CCM-5 and SFM/REDD+-1 are similar, but they are precisely complementary and this has allowed enlarging the project's budget to enlarge the impact of the interventions financed with it, particularly the PES. As per the CEO Endorsement guidelines, Table A is just a reflection of the Focal Areas results framework; hence the outputs and outcomes in it are strictly consistent with the ones under each Focal Area results framework, not the direct outputs and outcomes of the proposed activities.</p>

<p>3. The global environmental benefits are well presented and clear. The description of threats is well done as well. What is presented as root causes, however, for the most part are the barriers that the project will attempt to address, and should be recast that way. In addition, an assessment of root causes would be useful during full project development.</p>	<p>3. The project focuses in the barriers and threats to the ecosystems that it aims to help conserve and restore, but is well aware of the root causes behind these drivers of biodiversity and ecosystem services loss. In particular, as indicated in the socioeconomic context in section A.4, this area was long time ago transformed from tropical forests to agricultural uses, which at the turn of the 20th century were abandoned for coffee production and cattle ranching. The primary land use in the area is low-productive cattle ranching for meat and dairy and small-scale farming for local or regional markets. The decline of coffee production left the soils degraded and one of the only possible economic alternatives was the creation of pastures for livestock production, especially dairy cattle. The lack of extension services, linkages to value chains and capital to improve degraded lands makes it very difficult to farmers in the area to halt further degradation of the existing productive lands as well as the use of forest resources to complement their agricultural income. This underpins the threats that affect the conservation, restoration and sustainable use of the AF.</p>
<p>4. The adoption of a landscape based management approach is very welcome but STAP questions the proposed use of exotic (i.e. non-native) species (page 14). The rationale for this should be provided.</p>	<p>4. The project will promote consortiums of native and exotic tree species in areas of productive conversion (where the project will be promoting more sustainable practices than existing low productivity pastures). The inclusion of exotic species (fruit trees, mostly) is justified to increase producer's income by incorporating species with existing market demand and commercial value among the group of planted trees. This strategy will provide incentives to implement this type of conversion as well as increase carbon stocks and biodiversity benefits (which will be less than an all native stand but more than exotic stands or current land use).</p> <p>There are regions, as in much of the Rio Paraiba do Sul basin, where the topography and soil conditions indicate forestry as the most appropriate form of production. Recognizing this vocation, the project aims to encourage the planting of forests for production, aimed at generating timber and non-timber products as an alternative to the low productivity of livestock prevalent today.</p> <p>Forestry activities will be sustainable only if they are economically feasible. For this reason, the definition of the models to be adopted must consider both the productive potential as well as the forests' ecological functions. Along these lines, the project will identify models that utilize at least one "flagship" species on which there is sufficient information to guide silvicultural practices and to perform economic evaluations.</p> <p>While it would be most desirable that new forests were formed only by species native to the region, there is little information available on local species, both as regards the silvicultural aspects (growth rate, appropriate management, etc.), which have not been studied in detail, as well as in regards to the economies of their production (value of the product, size of the markets, etc.). This lack of information makes it difficult for native species to assume the role of "flagship" species in models. Thus, it is still difficult to draw productive models exclusively based on native species while their economic feasibility has not been demonstrated.</p> <p>Exotic species have been identified with the potential to constitute "flagship" species to introduce in the project's models, which, in addition to generating income, do not threaten –and sometimes improve—the restoration of ecological processes. Those will be combined with native species under a high-diversity structure so as to preserve the ecological function of the resulting forests. The planting of forests with native species, even if intercropped with</p>



	<p>exotic species, will bring social, economic and environmental benefits, favoring the permeability of the landscape matrix to genetic flows and to biodiversity conservation. Furthermore, these forests will sequester carbon, and the contribution of the exotic species will be significant for the increase in stocks (mainly due to their rapid growth rates).</p> <p>The Secretariat for the Environment of the State of Sao Paulo, along with the Institute of Forestry Research and Studies – IPEF-- is developing a study aiming to fill the information gaps to enable a plan of native forests for production, which will generate data, and information for the design of the models.</p>
<p>5. Payment for ecosystem service schemes represents a significant component of this project. Most of the discussion around PES revolves around increasing the carbon stock. It is suggested that during further development of the project more attention should be paid to additional services beyond carbon sequestration and its direct economic benefits (such as the ones mentioned including reduction of mudflows and floods, river siltation, water recharge, water flow etc.). Care should be taken to put in place monitoring frameworks in order to measure both economic and GEB gains realized from these approaches. The need to further develop PES schemes is recognized and these should be elaborated further during the PPG stage. The baseline concerning ongoing investments is presented, however during the PPG stage it is proposed that quantifiable indicators and baseline be developed for the expected outcomes. The provision of realistic opportunities and mechanisms for local populations to derive economic benefits, while at the same time maintaining biodiversity values, is central to the realization of the project's objective outside of PAs and overall.</p>	<ul style="list-style-type: none"> <li>• 5. Ecosystem benefits in C2 are limited to carbon as the funding for this component comes from the climate change budget. There are considerable co-benefits to accrue from re-establishing carbon stocks such as biodiversity, reduction in mudflows and floods, river siltation, water recharge and flow, etc. The provision of these services will be evaluated based on studies to be carried out in Component 1 of the project. As mentioned in point 8 by the GEFSEC, these studies will develop not only carbon but also other indicators for different land use types. Therefore, numbers will be produced that link hectares of a certain land use type to a specific benefit provision. This will allow us to quantify the benefits of other services beyond carbon to be achieved by the PES schemes promoted by the project. Component 2 will implement PES schemes to increase and recover carbon stocks in priority areas along the river Paraíba do Sul, shared by the three states of Rio de Janeiro, São Paulo and Minas Gerais (RJ , SP, MG ). This component will develop payment schemes for environmental services (PES) to reward the owners or occupiers of rural land through adoption of conservation and production practices that enhance the ability to sequester carbon in the landscape mosaic of agriculture and forestry. In particular, the proposed intervention will create a payment scheme of in cash transfers as well as benefits in kind (including technical assistance) to producers selected after completion of specific conservation measures. Measures aim specifically the restoration of remaining native forests and biomass increase in the properties through improvements in production landscapes of the activities in agroecosystems (pastures, silvopastoral, agroforestry and / or planted forests).</li> <li>• The Project will implement two types of PES interventions: i) Conservation PES, for private forest reserves , and ii) Integral Management PES, which reward: a) conservation of existing private forests , b) ecological restoration of private native forests , and c ) productive conversion of pastures and degraded land to alternative land uses with higher carbon storage . The design of the PES scheme will vary according to the component of the Project and the State (SP and/or RJ) on which the scheme will be implemented. In Rio de Janeiro, the GEF resources will be used to fund a PES scheme associated with an existing project. In São Paulo, the GEF resources will be used for pilot projects to support producers in the area of intervention to change the existing land use systems to ones that promote greater biodiversity and increase carbon stock. In Minas Gerais, GEF resources will be used to support farmers in priority areas for biodiversity and carbon services for their environmental compliance, so that they would be able to participate in the PES scheme existing in the state, the "Bolsa Verde".</li> <li>• These actions (PES) will result in the benefit of biodiversity</li> </ul>

	<p>conservation, recovery of carbon stocks in fragile areas, maintaining and improving environmental services, such as the reduction of landslides, mudflows and flooding, recharging of groundwater reservoirs, and reduction of rivers siltation.</p> <p>A specific Operating Manual for PES is one of the annexes to the POD.</p>
<p>6. The risks are realistically presented although a 3C rise in temperature (assuming mean annual) is very significant while it is not explicitly considered as such in the PIF. The implications of this predicted rise in temperature should be examined more explicitly during the project's further development.</p>	<p>6. The 3°C rise in temperature mentioned in the PIF was obtained from a bibliographical source. After a careful review, we have not found sufficient background to sustain the argument. We would therefore like to request that it be disregarded. Nevertheless potential forest fires and other natural hazards are still considered as a risk, although of low probability of occurrence according to our assessment, and have been maintained as such in section A.6, including risk mitigation measures.</p>

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>8</sup>**

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: <b>185,454</b>			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Literature review of knowledge gaps and research priorities	10,500	12,070	0
Torso for data collection systems and carbon monitoring system	25,117	28,470	0
Carbon monitoring system baseline	36,693	39,014	0
Human training and capacity building	9,009	3,000	0
Baseline data, economic evaluation, methodology and OM for PES	69,326	69,000	0
Pilot to certify small landholders with CU buffer zones	34,809	33,900	0
<b>Total</b>	<b>185,454</b>	<b>185,454</b>	<b>0</b>

The activities undertaken through PPG funds provided the necessary inputs for the full document preparation allowing the project team to set a more realistic scope for the project and provided information for decision-making and determination of the project’s areas of intervention. These included technical and methodological inputs for the project’s design, data collection, surveys, establishment of baselines and economic validation of the feasibility of the proposed interventions, as well as consultations with private and public project partners.

The outputs developed with PPG funds comprise:

**Component 1:**

Carbon Baseline

Biodiversity Baseline

Analysis of knowledge gaps & priorities

Research gap analysis

Design of carbon stocks monitoring and verification system

Data base of existing bibliography on BD & Carbon

**Component 2:**

Survey of potential project beneficiaries

<sup>8</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

Analysis of Willingness to Pay for PES

Legal framework & analysis of praxis of PES in SP, RJ & MG

**Component 3:**

Conservation Units (CU) Baselines

CU Selection criteria & results

Cartography Baseline for CU

Field surveys and design of certification activity.

Field surveys and design of Value Chains activity

**General project inputs:**

Economic Valuation

Impact Evaluation Methodology

Design & TOR for training and technical assistance activities

**ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

NA

**ANNEX E: GEF AND CO-FINANCING BUDGETS**

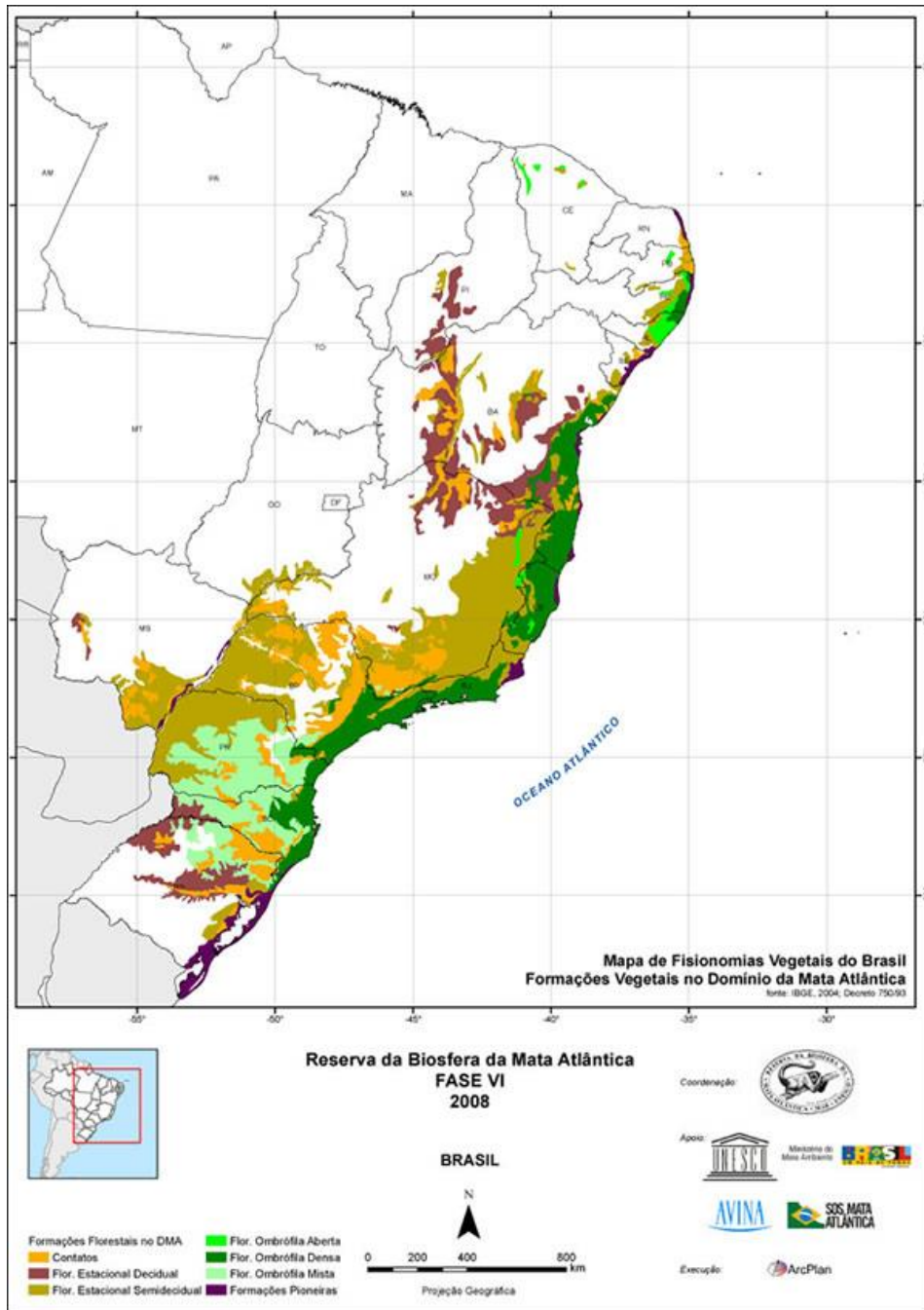
**Annual GEF and Co-financing Budget**

Components	TOTAL		PY1		PY2		PY3		PY4		PY5	
	GEF	Co-financing	GEF	Co-financing	GEF	Co-financing	GEF	Co-financing	GEF	Co-financing	GEF	Co-financing
Outcome 1: Capacity Building for carbon stocks and biodiversity management and monitoring	4,828,710	11,753,799	62,000	-	402,742	4,000,000	1,391,696	4,000,000	1,776,438	2,753,799	1,195,834	1,000,000
Outcome 2: Recovery and enhancement of carbon stocks in the Paraiba watershed along Brazil's southeast AF corridor	15,822,000	25,186,244	2,241,296	4,378,893	5,320,727	7,868,919	4,210,278	5,647,829	2,970,653	3,860,798	1,079,045	3,429,807
Outcome 3: Increase effectiveness and financial sustainability of CU along Brazil's southeast AF corridor	9,280,000	150,879,000	966,833	100,457,821	1,460,533	18,101,673	2,480,134	17,810,550	2,191,500	13,899,656	2,181,000	609,300
Project Management	1,575,250	-	290,494	-	303,689	-	338,689	-	303,689	-	338,689	-
<b>Total</b>	<b>31,505,960</b>	<b>187,819,043</b>	<b>3,560,623</b>	<b>104,836,714</b>	<b>7,487,691</b>	<b>29,970,592</b>	<b>8,420,797</b>	<b>27,458,379</b>	<b>7,242,280</b>	<b>20,514,253</b>	<b>4,794,568</b>	<b>5,039,107</b>

### Co-financing Budget per Source

Outcomes	Sources of Financing (US\$)									
	GEF	Co-financing								TOTAL
		Total	MCTI	FAPESP	Sec.Fin. SP	Sec.Fin. SP	Sec.Env. RJ	Sec.Sc.Tc MG	IEF-MG	
Outcome 1. Capacity Building for carbon stocks and biodiversity management and monitoring.	4,828,710	11,753,799	4,753,799	7,000,000	-	-	-	-	-	16,582,509
Outcome 2. Recovery and enhancement of carbon stocks in the Paraíba watershed along Brazil's southeast AF corridor.	15,822,000	25,186,244	-	-	7,500,000	-	8,560,000	1,639,613	-	41,008,244
Outcome 3. Increase effectiveness and financial sustainability of CU along Brazil's southeast AF corridor.	9,280,000	150,879,000	-	-	7,500,000	143,379,000	-	-	7,486,631	160,159,000
Project Management	1,575,250	-	-	-	-	-	-	-	-	1,575,250
<b>Total</b>	<b>31,505,960</b>	<b>180,819,043</b>	<b>4,753,799</b>	<b>7,000,000</b>	<b>15,000,000</b>	<b>143,379,000</b>	<b>8,560,000</b>	<b>1,639,613</b>	<b>7,486,631</b>	<b>219,325,003</b>

MAP 1: BRAZIL'S ATLANTIC FOREST







**ANNEX G: Distribution of Co-financing Costs (including Project Management Costs)**

**Project Management Costs (PMC) included in Counterpart Resources**

COMPONENTS & Activities in Detailed Budget	Ref. Items in Detailed Budget	Amount US\$	Partial totals	Total per component	Totals per State	
					Sao Paulo	R. Janeiro
<b>COMPONENT 2</b>				3.460.750		
<b>Estado de Sao Paulo</b>			3.130.750		3.130.750	
Monitoring services	2.1.1.1.2	2.086.650				
Operating costs SMA	2.1.1.1.10	250.000				
Equipment SMA	2.1.1.1.11	794.100				
<b>Estado de Rio de Janeiro</b>			330.000			330.000
Operating costs SEA-INEA	2.1.1.2.11	250.000				
Equipment SEA-INEA	2.1.1.2.12	80.000				
<b>COMPONENT 3</b>				5.810.000	5.810.000	
<b>Estado de Sao Paulo</b>			5.810.000			
Hard Loan Serra do Mar, partial estimated PMC	3.1.1	3.000.000				
Operating Costs - GESP-UC	3.1.2.8	88.500				
Operating Costs - GESP-Productive landscapes	3.2.1.9	36.500				
Monitoring audit	3.3.1.11	64.000				
Operating Costs - GESP-Financing mechanisms	3.3.4	89.000				
Technical assistance and operation costs for Forestry Foundation	3.4	2.532.000				
<b>Grand total</b>				<b>9.270.750</b>	8.940.750	330.000
					<b>9.270.750</b>	

**ADDITIONAL ANNEXES (FILES INCLUDED IN PROJECT DOCUMENT SUBMISSION E-MAIL)**

- **ANNEX H: GEF TRACKING TOOLS (3 FILES)**
- **ANNEX I: M&E PLAN**
- **COFINANCING LETTERS**