

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BRAZIL**

**CONSERVATION RESTORATION AND SUSTAINABLE MANAGEMENT STRATEGIES TO ENHANCE  
CAATINGA, PAMPA AND PANTANAL BIODIVERSITY**

**GEF TERRESTRE**

**(BR-G1004)**

**PROPOSAL FOR OPERATION DEVELOPMENT**

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<b>ELECTRONIC LINKS</b>	
<b>REQUIRED</b>	
1.	<a href="#">Development Effectiveness Matrix (DEM)</a>
2.	<a href="#">Pluriannual Execution Plan (PEP)</a>
3.	<a href="#">Annual Operational Plan (POA)</a>
4.	<a href="#">Monitoring and Evaluation Arrangements</a>
5.	<a href="#">Procurement Plan (PA)</a>
<b>OPTIONAL</b>	
1.	<a href="#">Technical Design Document – Component 1</a>
2.	<a href="#">Technical Design Document – Component 2</a>
3.	<a href="#">Technical Design Document – Component 3</a>
4.	<a href="#">Technical Design Document – Component 4</a>
5.	<a href="#">Technical Design Document – Component 5</a>
6.	<a href="#">Social Strategy for the Integration and Relation with Communities</a>
7.	<a href="#">Economic Viability Analysis</a>
8.	<a href="#">Institutional Capacity Analysis for project execution</a>
9.	No-Objection Letter from SEAIN/ Brazilian Ministry of Planning, dated 30/03/2012
10.	Letter from Ministry of Environment regarding executing mechanism, dated 01/06/2016
11.	Commitment letters form Project Partners
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<b>ABBREVIATIONS</b>	
AOP	Annual Operational Plan
BES	Biodiversity and Ecosystem Services
IDB	Inter-American Development Bank
UC	Conservation Unit (as defined by SNUC)
DEM	Development Effectiveness Matrix
ESMR	Environmental and Social Management Report
ESS	Environmental and Social Strategy
FUNBIO	Brazilian Biodiversity Fund
GEF	Global Environment Facility
IBGE	Brazilian Institute of Geography and Statistics
ICMBio	Chico Mendes Institute for Biodiversity Conservation
JBRJ	Botanical Garden of Rio de Janeiro
MMA	Brazilian Ministry of the Environment
OMP	Operations Manual for the Project
PA	Protected Area
PAN	National Action Plans for the conservation of threatened species
PEA	Project Executive Agency
PIR	Project Implementation Report
POD	Proposal for Operation Development
PMR	Project Monitoring Report
PMU	Project Management Unit (in FUNBIO)
SNUC	Brazilian National System of Conservation Units
SPF	Safeguard Policy Filter
SSF	Safeguard Screening Form
UTCP	Technical Project Coordination Unit (in MMA)

**PROJECT SUMMARY**  
**BRAZIL**  
**CONSERVATION, RESTORATION AND SUSTAINABLE MANAGEMENT STRATEGIES TO ENHANCE**  
**CAATINGA, PAMPA AND PANTANAL BIODIVERSITY- GEF TERRESTRE**  
**(BR-G1004)**

Financial Terms and Conditions				
<b>Beneficiary:</b> Federative Republic of Brazil, through the Ministry of Environment (MMA)				
<b>Executing Agency:</b> <i>Fundo Brasileiro Para A Biodiversidade - FUNBIO</i>				
Source	Amount (US\$)	%		
<b>IDB (GEF):</b>	32,621,820	17	<b>Disbursement Period:</b>	60 months
<b>Parallel Financing<sup>(a)</sup>:</b>	159,154,671	83	<b>Execution Period:</b>	60 months
<b>Total:</b>	191,776,491	100	<b>Currency of Approval:</b>	US\$ Dollars
Project at a Glance				
<p><b>Project Objective:</b> The general objective of the project is to contribute to the long term viability of threatened priority species, avoid carbon emissions and increase forest and non-forest area under sustainable management practices in three Brazilian biomes. The specific objectives are: (i) expand coverage and effectiveness of the protected areas system in those biomes; (ii) improve management of priority habitats and priority species; and (iii) foster community-driven sustainable use practices in productive areas associated to the PA system.</p>				
<p><b>Special Contractual Clauses prior to the first disbursement of the IDB/GEF resources:</b></p> <p>(i) Evidence of the establishment of the PMU within the organizational structure of FUNBIO and designation of, at minimum, the technical team specified in (¶3.3) (¶3.2); (ii) Evidence of the creation of the UTCP within the organizational structure of the MMA (¶3.4); (iii) entry into effect of the Technical Cooperation Agreement between MMA and FUNBIO, on terms and conditions acceptable to the Bank (¶3.4); (iv) entry into effect of the OMP on terms and conditions acceptable to the Bank (¶3.6); and (v) presentation of the Initial Project Report, on terms and conditions acceptable to the Bank (¶3.7) and (vi) adaptation and customization of FUNBIO's project system to generate the financial and procurement reports required by the Bank. (¶3.8).</p>				
<p><b>Special Contractual Clauses of execution:</b></p> <p>(i) The conflict resolution mechanisms and priority community relation measures, as defined in the Social Strategy, need to be established by FUNBIO prior to contracting any GEF-financed Component 1 activity and maintained active throughout the project execution period (¶2.3); and (ii) the entry into effect of project-specific Technical Agreements between FUNBIO, MMA and any strategic partners (referred to as "operating units" in ACT) on terms and conditions acceptable to the Bank prior to the execution of any activity financed with IDB/GEF resources in their respective States (¶3.5).</p>				
<b>Exceptions to Bank Policies:</b> None.				
Strategic Alignment				
<b>Challenges<sup>(b)</sup>:</b>	SI <input type="checkbox"/>		PI <input type="checkbox"/>	EI <input type="checkbox"/>
<b>Cross-Cutting Themes<sup>(c)</sup>:</b>	GD <input type="checkbox"/>		CC <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>

<sup>(a)</sup> *Parallel financing:* Financing for contracts and activities that are distinct from those financed by the IDB (GEF) resources governed by the legal agreement between the executing agency and the IDB, but complementary to the objectives and activities financed with IDB resources. Parallel financing is not subject to Bank policies, but amounts will be reported to the GEF for information purposes.

<sup>(b)</sup> SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

<sup>(c)</sup> GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, Problem Addressed, Justification

- 1.1 **Conservation of the Caatinga, Pampa and Pantanal Biomes: Challenges and Opportunities.** With a total area of 1.17 million km<sup>2</sup>, the Caatinga, Pampa and Pantanal constitute 13.6% of Brazil's continental land area<sup>1</sup> and three biomes of elevated socio-environmental importance: The semi-arid Caatinga, the only exclusively Brazilian biome, includes some of the poorest areas in the Northeast region; the Pampa is a fertile plains habitat intrinsically linked into the culture and economic activity of the state of Rio Grande do Sul; and the Pantanal is one of the world's largest freshwater wetland systems, straddling the agro-industrial states of Mato Grosso and Mato Grosso do Sul.
- 1.2 **Caatinga.** This biome, dominated by xerophyte shrubland and thorn forests, presents the highest solar radiation and mean annual temperature and the lowest levels of relative humidity and pluviometric precipitation in Brazil, with precipitation being highly irregular in both time and space. Partly as a result of these extreme conditions, the Caatinga is rich in biodiversity, with 178 species of mammals, 591 of birds, 177 of reptiles, 79 species of amphibians, 241 fish species and no less than 221 species of bees<sup>2</sup>. Much of this biodiversity is endemic to the Caatinga: 318 out of 932 plant species, 137 fish species, at least 57 reptiles and amphibians, and 3 mammal species<sup>3</sup>. Yet, only 7.7% of the Caatinga is legally protected at all, and most of it through protected areas (PA) of sustainable use category; only 1.2% of the biome is within PA that grant strict protection<sup>4</sup>.
- 1.3 **Pampa.** The Pampa is a fertile grassland-dominated lowland with annual precipitation averages of 1,250–2,000mm, relatively uniformly distributed during the year,<sup>5</sup> and four well-characterized seasons<sup>6</sup>. By virtue of its biogeological age, the Pampa harbors an estimated 3,000 plant species, 500 species of birds and 100 species of mammals<sup>7</sup>. However, only 2.7% of the Brazilian Pampa is legally protected and a mere 628km<sup>2</sup> enjoy strict protection<sup>8</sup> in a context of strong anthropic pressures on the biome and its remaining natural vegetation.
- 1.4 **Pantanal.** This wetland system, which has been recognized on the Ramsar List of Wetlands of International Importance<sup>9</sup> and as a UNESCO World Heritage Site<sup>10</sup>, forms part of the *Alto Paraguai* Basin. The vast majority of the basin, an approximate area of 362,376km<sup>2</sup>, lies within Brazilian territory and includes the Pantanal plain (equivalent to the Pantanal biome) and the surrounding plateaus (located in the Cerrado and Amazon biomes) that harbor the springs waters of the

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<sup>1</sup> IBGE Mapa de Biomas e Vegetação. [www.ibge.gov.br/home/presidencia/noticias/21052004biomashtml.shtml](http://www.ibge.gov.br/home/presidencia/noticias/21052004biomashtml.shtml).

<sup>2</sup> MMA (2012). Caatinga. Available at: <http://www.mma.gov.br/biomas/caatinga>.

<sup>3</sup> Almanaque Brasil Socioambiental (2008).

<sup>4</sup> MMA Cadastro Nacional de Unidades de Conservação.

[http://www.mma.gov.br/images/arquivo/80112/CNUC\\_PorBiomaFev16.pdf](http://www.mma.gov.br/images/arquivo/80112/CNUC_PorBiomaFev16.pdf).

<sup>5</sup> FAO: <http://www.fao.org/ag/agp/agpc/doc/counprof/brazil/brazil.htm>

<sup>6</sup> Wurdig Roesch, L.F. et al (2009).

<sup>7</sup> MMA (2012). Pampa. Available at: <http://www.mma.gov.br/biomas/pampa>

<sup>8</sup> Idem

<sup>9</sup> Ramsar (2016). List of Wetlands of International Importance. <http://www.ramsar.org/sites-countries/the-ramsar-sites>

<sup>10</sup> World Heritage List (2000). Pantanal Conservation Area. <http://whc.unesco.org/en/list/999>

Pantanal rivers<sup>11</sup>. During the rainy season (October to March, with precipitation averages of 1,400mm annually), flooding inundates some 80% of the plains<sup>12</sup>. The Pantanal biome's ecological importance is reflected by the number of species catalogued to date within its boundaries (fish: 263, amphibians: 41, reptiles: 113, birds: 463, mammals: 132<sup>13</sup>) and the fact that it links the Amazon and the La Plata Basins, providing a biogeographical corridor for certain species of flora and fauna between the two largest river basins in South America.

- 1.5 The protection rate in these three biomes is low compared to other biomes in Brazil whose average protection rate is 16%.<sup>14,15</sup> Aware of their biological importance, Brazil has committed to increasing their protection, aiming to protect at least 17% of the Caatinga, Pampa and Pantanal through protected areas. Currently, levels of protection are 7.6%, 2.7%, and 4.6%, respectively. In the Caatinga and Pampa, sustainable use protected area category predominate (for these two biomes combined, 84% of the area is under this protection category), while in the Pantanal, 64% of PA area is in the full protection category.<sup>16</sup>
- 1.6 Limitations are also found in PA management. Of the 1,979 protected areas established in Brazil, 1,189 are the responsibility of the public sector, depending for their financing on governmental budget and international aid<sup>17</sup>. Allocated budgets tend to be insufficient for cover operating and investment costs, resulting in scarcity of infrastructure, equipment, maintenance, staff and other services. These deficiencies result in limited capacity to prevent and combat illegal use of the resources protected in each PA; in time, they have given way to invasions and other illegal occupation or use of those territories. A comparative evaluation of the management effectiveness of protected areas, implemented by ICMBio/WWF in 2005-06 and 2010 (Protected Areas Management Effectiveness Information Module - RAPPAM), whose sample included PA in the two of the three biomes, found a medium 48% effectiveness overall, and showed low scores for specific aspects of management, such as shortage of human and financial resources and a general lack of thorough communication and information sharing.
- 1.7 These deficiencies in management effectiveness and budgetary restrictions carry broad directives towards the needs to strengthening conservation unit management capabilities, as well as adequate planning and funding to undertake core activities such as elaboration or revision of management plans and their implementation, including public use programs, biodiversity monitoring, species and habitat preservation, research and sustainable use of specific resources according to the pertinent management category. In particular, the integration of sustainable financing plans into general management plans, would help reduce the impact of budget shortages. Additionally, participatory management is required to provide conservation units with protection against encroachment from urban and

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<sup>11</sup> IBGE (2004). Mapa de Biomas e Vegetação.

[www.ibge.gov.br/home/presidencia/noticias/21052004biomashtml.shtml](http://www.ibge.gov.br/home/presidencia/noticias/21052004biomashtml.shtml)

<sup>12</sup> Alho, C.J.R. & Silva, J.S.V. (2012). Effects of Severe Floods and Droughts on Wildlife of the Pantanal Wetland (Brazil) – A Review. In *Animals*, 2(4): 591-610. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC4494280](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4494280)

<sup>13</sup> <http://www.mma.gov.br/biomas/pantanal>

<sup>14</sup> Overbeck G.E., et al. (2007). Brazil's neglected biomes : the South Brazilian Campos. *Perspectives in Plant Ecology, Evolution and Systematics*, 9: 101-116.

<sup>15</sup> Brazil, Ministry of the Environment. Fifth national report to the Convention on Biological Diversity: Brazil. 2015

<sup>16</sup> MMA (2010). Cadastro Nacional de UCs. <http://www.mma.gov.br/areas-protetidas/cadastro-nacional-de-ucs>

<sup>17</sup> Geluda and Serrão, 2015. See description in IDBDocs 40323060.

agricultural sprawl. The impact of these types of activities on the effectiveness of protected area has been recently documented by the GEF's Independent Evaluation Office.<sup>18</sup>

- 1.8 Adding to these low levels of critical ecosystem protection and weak protected area management, are the significant anthropic pressure these ecosystems are facing. In the Caatinga, approximately 27 million persons live within the region, most of them in socio-economic conditions that result in a significant dependency on natural resources for sustenance and fire wood. The illegal and unsustainable consumption of fire wood, for both domestic and industrial purposes, together with overgrazing and conversion of natural areas to pasture and agricultural land has led to the deforestation of 45.82% of its original area of 826.441 km<sup>2</sup> up until 2011, a deforestation rate of approximately 0.12%/year<sup>19</sup>.
- 1.9 In the case of the Pampa biome, its natural grasslands are a source of forage for around 18 million animals, mainly cattle and sheep<sup>20</sup>. Pampa has lost 54% of its original area, of 177.767 km<sup>2</sup>, its current average rate of deforestation is 0.2%/year<sup>15</sup>. The main sources of pressures on native vegetation are the expansion of planted pastures, and forests and grain plantations. The introduction and progressive expansion of monocultures and exotic species-based pastures have contributed to a rapid degradation and degeneration of natural Pampa landscapes: in 2002 an estimated 41.3% of natural areas remained intact, compared to 36% in 2008<sup>21</sup>. An aggravating factor is the sandy texture of the soil that makes the soils highly susceptible to water and wind erosion: inappropriate human activities have led to intense soil degradation, which in turn has contributed to losses of both biodiversity and socio-economic opportunities<sup>22</sup>.
- 1.10 Despite its low level of legal protection, the Pantanal plain is still relatively well preserved. Based on 2009 satellite imagery, the Pantanal biome has lost about 17,80% original area and a deforestation rate estimated around 0.12%/year<sup>15</sup>. Original vegetation in its plateaus has suffered more severe reduction, with about half of the original area having been deforested<sup>23</sup>. Deforestation is linked to the expansion of agriculture, cattle ranching, hydropower plants and mining. Other key activities of the Pantanal economy are tourism and fisheries, with ecotourism and sport fishing being the prime tourism segments.
- 1.11 Despite drawbacks from weak management, protected areas are an effective tool to reduce the impact of deforestation. Empirical evidence demonstrates their effectiveness, though more recent studies which control for the nonrandom siting of PA suggest a more moderate success than traditional simple inside-outside

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<sup>18</sup><https://www.thegef.org/sites/default/files/council-meeting-documents/IMPACT%20EVALUATION%20OF%20GEF%20SUPPORT%20TO%20PROTECTED%20AREAS%20AND%20PROTECTED%20AREA%20SYSTEMS.pdf>

<sup>19</sup> [http://www.mma.gov.br/images/arquivo/80120/HEX\\_RelatorioBiomaCaatinga\\_2010-2011\\_V2%20-%20MMA.pdf](http://www.mma.gov.br/images/arquivo/80120/HEX_RelatorioBiomaCaatinga_2010-2011_V2%20-%20MMA.pdf)

<sup>20</sup> Carvalho, P.C.F & Batello, C. (2009). Access to land, livestock production and ecosystem conservation in the Brazilian Campos biome: the natural grasslands dilemma. *Livestock Science*, 120: 158-162.

<sup>21</sup> CSR/IBAMA (2010). Monitoramento do Desmatamento nos Biomas Brasileiros por Satélite: Pampa. At: [www.mma.gov.br/estruturas/sbf\\_chm\\_rbbio/arquivos/relatorio\\_tecnico\\_monitoramento\\_desmate\\_bioma\\_pampa\\_72.pdf](http://www.mma.gov.br/estruturas/sbf_chm_rbbio/arquivos/relatorio_tecnico_monitoramento_desmate_bioma_pampa_72.pdf)

<sup>22</sup> Wurdig Roesch, L.F. et al (2009).

<sup>23</sup> Area Studies – Brazil: Regional Sustainable Development Review (2009). Editor: Sanchez, L.E. Pg. 304.



comparison of PA impacts on land use. A recent *World Development* special issue devoted to forests, livelihoods, and conservation (Wunder, Angelsen and Belcher 2014) highlights the importance of this emerging trend to control for systematic location differences when assessing the impacts of protected areas, including whether they alleviate or exacerbate poverty. The thin but quickly growing body of evidence using such approaches suggests that on average, even after controlling for nonrandom siting, protected areas are in fact effective in reducing deforestation, although substantially less effective than indicated by a simple inside-outside comparison. For example, using a global sample, Joppa and Pfaff (2010) find that protected areas stem deforestation in three quarters of the 147 countries in their sample, but typically by less than half the amount that an inside-outside comparison would suggest. Nelson and Chomitz (2011) find that in Latin America and the Caribbean as a whole, strictly protected areas that prohibit all extractive activity reduce fire incidence (a proxy for tropical deforestation) by 3 to 4 percentage points, multiuse protection reduces it by 5 to 6 percentage points, and protected areas in indigenous areas reduce it by 16 to 17 percentage points. Andam et al. (2008) find that protected areas in Costa Rica reduce deforestation by 10 percentage points. And in northern Thailand, Sims (2010) finds that protected areas cut deforestation by 7 to 19 percentage points.

- 1.12 Of concern also, is the effect of PA on local communities, as in many instances, communities may be faced with restrictions over use of resources when PA are created. An emerging literature also examines protected areas' effects on local communities, controlling for their preexisting characteristics. Andam et al. (2010) find that protected areas reduce poverty by 1.27 percentage points in Costa Rica and by 7.9 percentage points in Thailand. In the case of Costa Rica, poverty was measured using a poverty index at the community level, while in Thailand poverty was measured using the poverty headcount ratio at the subdistrict level. Likewise, Robalino and Villalobos (2010) find that nonagricultural wages earned close to parks in Costa Rica are higher only for people living near tourist entrances. Canavire and Hanauer (2013) find mixed results for Bolivia, depending on the socioeconomic indicator. And Robalino et al. (2012) find that protected areas in Mexico lead to higher levels of economic marginality in both the short and the long run. Finally, Clements et al. (2014) assess the impact of two protected areas on the welfare of households in Cambodia. They find that compared to households in buffer zones, those inside protected areas are worse off, because they had worse access to markets and social services. However, when compared to a matched sample of households in similarly remote sites, those inside the protected area are better off than those outside the park, because of better and more secure access to land.
- 1.13 Despite their elevated socio-environmental importance, the three biomes have, historically, received relatively little conservation effort compared to other forest biomes in Brazil<sup>24</sup>, and the efforts applied have not been extensive and rigorous enough to ensure effective conservation, restoration and sustainable management in these biomes. Currently, principal issues are: the limited extent of existing protected areas; the state of degradation of habitat and carbon stocks in conservation units and adjacent areas; and land use practices that increase the

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<sup>24</sup> Overbeck G.E., et al. (2007). Brazil's neglected biomes : the South Brazilian Campos. *Perspectives in Plant Ecology, Evolution and Systematics*, 9: 101-116.

risks of wildfires and losses in ecosystem services and biodiversity, including endangered species of fauna and flora.

- 1.14 Sustainable management of these biomes also depends on the ability of the protected area system to involve local communities living within the limits of existing or proposed protected areas. In the three biomes there are indigenous and traditional populations whose rights are protected under the law, and who must be integrated under the conservation objectives to ensure sustainability of the effort. For areas not yet under protection, there are also settlements of populations not protected under the law, which will nevertheless need to be considered at the time of establishing the management category, limits and conditions under which such new areas would operate (see Social Strategy and Sustainability sections below).
- 1.15 **Priority areas for protection in the three biomes.** The Ministry of Environment (MMA), responsible for the coordination of the Brazilian National System of Conservation Units (SNUC) has made a selection of priority areas to be included under new Protected Areas for each of the three biomes. Working in coordination with State-level Secretariats of Environment, the MMA has targeted: (i) 1,428,764 ha in the Caatinga Biome; (ii) 312,822 ha in the Pampa Biome; and (iii) 868,905 ha in the Pantanal Biome. Of these, approximately 1M has have been targeted as the focus of the present proposal (400,000ha of Caatinga and 300,000 ha each of Pampa and Pantanal). Once these new Protected Areas are established, the percentages of coverage for each biome are targeted to be: Caatinga 8.1%, Pampa 4.5% and Pantanal 6.6%.
- 1.16 In regards to component 2, the process selecting existing PA consisted of a stepwise multiple-criteria analysis, that assessed, among others, the following criteria: (i) the existence of threatened species in the area; (ii) the need for investments for equipping the protected area; (ii) interest and human and financial capacity to implement project activities; and (iv) the likelihood of establishing working partnerships with local communities. The exercise resulted in the preliminary choice of: (i) 1,497,389 ha in the Caatinga biome; (ii) 335,067 ha in the Pampa biome; and (iii) 333.521 ha in the Pantanal biome.
- 1.17 **Government Strategy.** In addition to the need to increase protection of priority ecosystems and its biodiversity, by both creating new PA and improving the management effectiveness of current PA, the government strategy includes critical actions to deal with pressures related to production landscapes adjacent or inside PAs, degraded landscapes, fire and threatened species management.
- 1.18 Degraded landscapes within priority areas. Degradation of natural vegetation is derived mostly from man-made factors including deforestation, fires and introduction of invasive alien species. In particular, deforestation for agriculture places pressure on PAs, fragmenting landscapes and reducing the viability of flora and fauna communities. Restoration of degraded areas can mitigate the effects of fragmentation by increasing connectivity and reducing the extent of forest border areas, and thus the incursion of pioneering species.
- 1.19 Biome-appropriate fire management. All three biomes are subject to wildfires related to land-use practices, but the nature and frequency of wildfires differs in the three biomes. Data from INPE's Programa Queimadas monitoring of hot spots in these biomes show high year-to-year variability with long term trends either

stable or slightly decreasing.<sup>25</sup> Fires in the Caatinga are most commonly of anthropic origin: to clear land, force vegetative resprouting or assist with firewood collecting, or simply the result of negligence<sup>26</sup>. Yet, the use of fire degrades both vegetation and soils, thus being of short-lived benefit to those who employ it and resulting in considerable losses in surface and sub-soil carbon stocks. In contrast, the Pampa plains evolved under the influence of fire and adapted to these disturbances; the native grassland species have developed mechanisms to resist fire and/or regenerate quickly<sup>27</sup>. However, with the increasing conversion of native vegetation, this coevolved protection is being lost. Finally, the Pantanal, being a wetland, experiences only occasional surface fires (caused by lightning, especially at the beginning of the rainy season), though it is quite commonly subject to subsoil fires in the peatland regions. Given these natural and anthropic differences, fire management – in order to be effective and cost-efficient – has to be tailored to the specific context in each biome.

- 1.20 Considering current practices in the biomes, it also becomes clear that fire management has to become integrated and inclusive: Integrated, in the sense that the protocols and practices (reducing dry biomass, prescribed burns, firebreaks etc) to be established for each biome should consider institutional and structural aspects, socio-cultural elements related to the use of fire as a land management practice, and the effect of the fire management regime on biodiversity, ecosystem services and carbon stocks. And inclusive, in the sense that integrated fire management in the three biomes has to move beyond the boundaries of preservation areas and include local communities in reducing the risks of devastating large-scale wildfires.
- 1.21 Management of threatened species of flora and fauna. The challenge of managing threatened species of flora and fauna in Brazil, one of the world's 17 megadiversity countries<sup>28</sup>, is embodied by a few numbers: in 2015, the total number of *known* native species in Brazil was estimated at over 148,000<sup>29</sup>, which in turn is thought to be less than 10% of the country's total biota<sup>30</sup>. In 2014, 3,286 (2%) of the known native species of flora and fauna were officially recognized as threatened<sup>31</sup> - almost certainly only a fraction of the actual number, and likely to increase with increasing pressures from land-use conversions and expanding socio-economic activities. But already the 3,286 recognized species pose a formidable challenge in terms of how to plan, monitor and implement effective actions for reducing their extinction risk in line with Brazil's 12<sup>th</sup> National Biodiversity Targets 2011-2020 under the Convention on Biological Diversity<sup>32</sup>.
- 1.22 The fundamental planning tool for this task is the National Action Plan for the Conservation of Species Threatened with Extinction (PAN), that defines *in situ* and *ex situ* actions for the conservation and recovery of threatened species over a 5-

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<sup>25</sup> [http://queimadas.dgi.inpe.br/queimadas/estatistica\\_estados](http://queimadas.dgi.inpe.br/queimadas/estatistica_estados) (accessed June 15, 2017)

<sup>26</sup> Funch, R. 2007. Um guia para a chapada Diamantina, Flora Editora e Artes Visuais, Lençóis, Bahia, Brasil.

<sup>27</sup> UFRGS, 2015. Campos Sulinos - conservação e uso sustentável da biodiversidade.

<http://ecoqua.ecologia.ufrgs.br/arquivos/Livros/CamposSulinos.pdf>

<sup>28</sup> Mittermeier, R.A., Robles-Gil, P., Mittermeier, C.G. (Eds) 1997. Megadiversity. Earth's Biologically Wealthiest Nations. CEMEX/Agrupacion Sierra Madre, Mexico City

<sup>29</sup> MMA (2015). Fifth National Report to the Convention on Biological Diversity – Brazil.

<sup>30</sup> Lewinsohn, T. & Prado, P. (2005). How many species are there in Brazil? Conservation Biol.: 19(3):619-624

<sup>31</sup> MMA (2014). Portaria nº 443/2014 – Flora Ameaçada. Portaria nº 444/2014 – Fauna Ameaçada.

<sup>32</sup> MMA (2015). Fifth National Report to the Convention on Biological Diversity – Brazil.

year time horizon. Between 2009 and 2016, the number of threatened species with a PAN rose from 30 to 1011; a significant increase, but still over 2000 PAN's short. With a view to rapidly scaling up planning efforts, the MMA together with ICMBio and the JBRJ established a methodology for the development of territorial PANs, rather than species-specific PANs as they were more commonly developed until now. These territorial PAN's define conservation and recovery actions for threatened species found within the delimited geographic area, and promote the collaboration of key actors within that area to achieve more integrate and agile implementation of actions<sup>33</sup>.

- 1.23 **Experience in the sector.** Two Bank operations are particularly relevant to the technical and operational design of the Project: Recovery and Protection of Climate and Biodiversity Services in Brazil's Southeast Corridor (GRT/FM-14550-BR), approved in 2014; and Serra do Mar and Atlantic Forest Mosaic System Socioenvironmental Recovery (2376/OC-BR), approved in 2010. Lessons learned from these operations are summarized below.

Table 1. Lessons Learned		
Issue	Description	Application
Establishment of new PA in territories where indigenous or traditional populations are present	There is a high level of risk associated to the establishment of new PA in territories where indigenous or traditional populations are present. In spite of the careful compliance with Bank Operating Policies, there is risk of significant delays during project execution	Involuntary resettlement has been included as an exclusion criteria in the selection of new PA to be established
Weight of social and cultural conditions in planning and implementation of conservation actions	Engagement of populations associated to PA results in project appropriation and improved project design; project activities fostering social communication and cultural expression have enhanced project benefits and communities' commitment to project success (2376/OC-BR)	A full component has been added in the project to facilitate and enhance community participation (Component 5)
Complexity of project execution structure	Projects that require the involvement of multiple levels of government (Federal and State in this case), particularly in the case of Brazil, require significant levels of support at the coordination and administration levels, which implies relatively high costs and involves the participation of third parties (GRT/FM-14550-BR)	The MMA designated a private organization to act as PEA. Administrative costs reflect the complexity of this task; a cap has been established based upon recommendations from the Bank.

- 1.24 **Conceptualization of the project.** The GEF Terrestre project supports GEF's Global Operational Strategy by contributing to the long-term protection of Brazil's

<sup>33</sup> Instrução Normativa ICMBio nº 25/ 2012.

globally important ecosystems. It takes actions required for expanding and strengthening the country's protected area system whilst enhancing knowledge and effective protection of endangered wildlife. In coherence and coordination with other initiatives, the current proposal aims at consolidating the National System of Protected Areas (SNUC) and the improved protection of endangered species. The project is in line with the GEF Focal Area Strategies on biodiversity, climate change mitigation and land degradation as it aims to: (i) improve management effectiveness of existing and new protected areas and greater coverage of unprotected ecosystems and threatened species; (ii) restore and enhance carbon stocks in forests and non-forest land; and (iii) develop and apply good management practices in protected and productive areas.

- 1.25 The project aims at tackling the principal limitations affecting Brazil's efforts to protect the Pantanal, Pampa and Caatinga biomes described in preceding sections, by gathering and generating the information and tools necessary to strengthen the SNUC and promote sustainable management of adjacent forest and non-forest lands. Project activities will be based on a unit-specific assessment of protected area effectiveness and endangered species conservation status, as well as on the identification of main threats and conservation opportunities. The issue of habitat fragmentation in the three biomes will be addressed through new mosaic approaches, combining the establishment of protected areas with sustainable management in surrounding buffer zones and productive landscapes. Improved management of PA (newly created and existing) will be complemented by protocols for advanced fire management, land restoration tools and action plans for *in situ* biodiversity monitoring, thus ensuring the improvement of degraded landscapes and reducing the impact of natural and manmade events on ecosystems and endangered species. To promote private landowner and local community participation in implementing management protocols and tools in the areas surrounding PAs, the project will provide public awareness and training on sustainable practices which can provide some direct benefits for landowners.
- 1.26 **Strategic Alignment.** The program is consistent with the Update to the Institutional Strategy (UIS) 2010-2020 (AB-3008) and is aligned with two of the cross-cutting issues identified as hindering the region's ability to successfully tackle the three development challenges targeted in the strategy. Those cross-cutting issues are: (i) climate change and environmental sustainability; and (ii) institutions and the rule of law (par.2.5). The project will contribute to strengthening the region's ability to tackle with those cross-cutting issues by increasing the forested surface under protection, reducing CO<sub>2</sub> emissions, improving management of forest and non-forest areas, and strengthening the protected areas system and its management capabilities. Additionally, the program will contribute to the Corporate Results Framework 2016-2019 (GN-2727-6) (CRF) by generated benefits aligned with the following CRF Country Development Results Indicators: (8) beneficiaries of improved management and sustainable use of natural [and cultural] capital; and (9) reductions of CO<sub>2</sub> emissions with support of IDBG financing (annual million tons CO<sub>2</sub> equivalent).
- 1.27 The project is also aligned with the Bank's Country Strategy for Brazil 2016/2018 (GN-2850) as the Strategy places climate change as one of the cross-cutting issues (par. 3.79, 3.80) supporting the policy objectives identified in the Update to the Institutional Strategy referenced above; the bank intends to improve the debate to reduce the risks associated with the issue of climate change in Brazil by

supporting institutional strengthening of the various levels of government, creating innovative mechanisms and instruments to leverage national and external resources to reduce carbon emissions, supporting the production of strategic knowledge for decision-making; boosting cooperation initiatives among the countries in the region to improve climate risk mapping and management, and supporting public-private best practices and strategies to expand investments aimed at reducing greenhouse gas emissions<sup>34</sup>. The CS also mentions institutional strengthening and modernization of public sector management system as a strategic area of support, to which the project contributes through support given to improving management in the PA sector<sup>35</sup>. Finally, the operation is consistent with the Environment and Biodiversity Sector Framework Document (GN-2827-3), by contributing to improving environmental performance through policy frameworks, governance, and management instruments, as well as with the Climate Change Sector Framework Document (GN-2835-2), by supporting the use of international climate funding to support mitigation activities.

## **B. Objective, Components and Cost**

- 1.28 **Objective.** The general objective of the project is to contribute to the long-term viability of threatened priority species, avoid carbon emissions and increase forest and non-forest area under sustainable management practices in three Brazilian biomes. The specific objectives are: (i) expand coverage and effectiveness of the protected areas system in those biomes [Components 1 and 2]; (ii) improve management of priority habitats and priority species [Components 3 and 4]; and (iii) foster community-driven sustainable use practices in productive areas associated to the PA system [Component 5].
- 1.29 **Component 1. Creation of New Protected Areas (USD2,830,265).** This component fosters an improved representativeness of the SNUC by supporting the legal protection of ecologically important but currently unprotected areas within each of the three target biomes, and exploring sustainable financing options for newly created areas. Specifically, the component will finance the following activities: (i) environmental, socio-economic and land-titling assessments; (ii) public consultations and participation events; (iii) elaboration of legal documents to establish the PA; (iv) for units with tourism/visitation potential, basic outreach and information materials; and (v) for PA with sustainable use provisions or tourism/visitation potential, analyses related to sustainable development of natural capital (financing plans).
- 1.30 **Component 2. Management of Existing Protected and Adjacent Areas (USD12,736,192).** This component aims to increase protected area management effectiveness by strengthening planning, monitoring and implementation capacity with PA's; promoting biome-appropriate fire management, and fostering biodiversity and ecosystem services-based management practices to benefit communities adjacent to PA's. It consists of three sub-components:
- a. **Effective Conservation Management.** This sub-component will finance: (i) preparation and implementation of planning tools, including management and monitoring plans and sustainable financing plans; (ii) selection and implementation of priority actions to improve management effectiveness;

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<sup>34</sup> CS places climate change adaptation and mitigation as direct contributor to improved productivity and competitiveness in most economic and public services sectors (see par. 3.16, 3.21, 3.33, 3.35).

<sup>35</sup> See par. 3.58 and 3.60.

(iii) biodiversity monitoring programs and equipment; and (iv) together with parallel financing, the project will finance the implementation of priority actions such as control of invasive alien species; basic infrastructure for conservation, public use and surveillance, including demarcation, signage, trails and ranger stations; surveillance and equipment; and basic outreach and information materials for visitors. Besides partially financing such priority actions, parallel financing will also provide remote sensing data to support these activities.

b. **Fire Management.** This sub-component will finance the following activities: (i) fire prevention, monitoring and control activities within PA's; (ii) **Integrated Fire Management (IFM<sup>36</sup>) researches and workshops**; (iii) fire management protocols; and (iv) outreach and training to promote implementation of fire management protocols in areas adjacent to PA's.

c. **Sustainable Management of Productive Landscapes.** This sub-component aims to regulate natural resources uses and to conciliate economic activities with biodiversity and ecosystem services maintenance on productive areas through the adoption of good management practices. This sub-component will finance the following activities: (i) development of management instruments for PA's resident communities' natural resources uses; and (ii) implementation of good management practices by local communities related to productive activities that contribute to biodiversity and ecosystem services maintenance.

1.31 **Component 3. Restoration of Deteriorated Areas (USD 6,572,360).** This component will contribute to improving landscape connectivity, both within PA's and with surrounding areas by providing information essential for discerning prioritization of restoration efforts and by thereafter restoring prioritized areas. As such, the component will finance: (i) analytical decision-making instruments and monitoring protocols for Caatinga, Pampa, Pantanal and Cerrado<sup>37</sup>; (ii) restoration maps for the three target biomes; (iii) **restoration implementation, including restoration monitoring and** community engagement. Parallel financing will finance restoration activities by private land owners and activities to prevent, control and combat desertification in the Caatinga biome.

1.32 **Component 4. Monitoring of Flora and Fauna Extinction Risks (USD 5,660,530).** This component will promote more effective management of threatened species in the three biomes through an innovative planning approach, targeted risk-reduction activities, effectiveness evaluations and improved access to information. The component will finance the following activities: (i) territorial National Action Plans for the conservation of threatened species (PAN)<sup>38</sup> developed for the three biomes; (ii) implementation of threatened species guidelines planned in PAN in the three biomes; (iii) monitoring of implemented PANs; (iv) effectiveness assessment of selected PA for the conservation and

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<sup>36</sup> **Integrated Fire Management (MIF)** is an approach that considers ecological, cultural and management practices to propose the rational use of controlled burning, as well as the prevention and control of fires so as to promote the conservation and sustainable use of ecosystems.

<sup>37</sup> These planning instruments include the Cerrado biome due to its strong ecological and hydrological connectivity to the Caatinga and Pantanal biomes.

<sup>38</sup> National Action Plans for the conservation of threatened species, instituted by the do "Programa Pró-Espécies" (art. 8º Portaria MMA 43/2014), identify appropriate management instruments needed to curb existing threats to specific species. GEF Terrestre will adapt PANs to include a territorial aspect, where more numerous species and their habitat can be included in the conservation effort.

recovery of threatened species; (v) assessment of threatened species extinction risks; and (vi) consolidation of biodiversity information portal. Scientific analysis for the territorial PAN, as well as the implementation of priority conservation actions for selected threatened species as well as an update of extinction risks and threats to priority species, will be financed both, with GEF resources and with parallel financing.

- 1.33 **Component 5. Integration and Community Relations (USD 1,086,651).** This component will support the other four components by fostering effective collaboration between different levels and areas of government, as well as communication and participation programs designed to engage local communities in the creation and effective implementation of conservation activities. This component’s activities will complement the community-oriented activities specified in previous components. Specifically, it will finance: (i) seminars to foster institutional collaboration; (ii) technical guidance and workshops for participatory communication with affected communities; (iii) production and dissemination of communication materials to assist local engagement; and (iv) implementation of conflict resolution mechanisms. Potential beneficiaries in terms of number of inhabitants in Project intervention areas have been estimated approximately as follows: (i) Pampa 88,000 persons; (ii) Pantanal 62,000 persons; (iii) Caatinga 114,000 persons –counting only those living inside existing PA.
- 1.34 **Cost.** The total cost of the project is US\$191,776,491, to be financed with US\$32,621,820 from the IDB/GEF, and parallel financing of US\$159,154,671 from several Federal and State-level sources<sup>39</sup>: Parallel financing will support investment in the creation and management of protected areas, remote sensing and mapping data, restoration of degraded landscapes, elaboration of land use plans, evaluations of extinction risks and implementation of priority mitigation measures, as well as a cash transfer program - Bolsa Verde – that benefit extremely poor people that live in PA or other relevant areas to environmental conservation (see Annex II for details).

<b>Investment Category</b>	<b>IDB/GEF</b>	<b>Parallel financing</b>	<b>Total</b>	<b>%</b>
<b>I. Direct Costs</b>	<b>28.89</b>	<b>159.14</b>	<b>188.07</b>	<b>98%</b>
1. Creation of New Protected Areas	2.83	9.13	12.18	
2. Management of Existing Protected and Adjacent Areas	12.74	98.31	111.01	
3. Restoration of Deteriorated Landscapes in Priority Areas	6.57	24.72	31.10	
4. Monitoring of Flora and Fauna Extinction Risks	5.66	20.00	25.77	
5. Integration and Community Relations	1.09	6.99	8.02	

<sup>39</sup> MMA; ICMBio; Botanical Garden of Rio de Janeiro; State Secretariats of the Environment in the States of Bahia, Ceara, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Paraíba, Pernambuco, Piauí, Rio Grande do Sul e Rio Grande do Norte. The KfW *Entwicklungsbank* will also contribute investment resources for this purpose. Specific investment and in-kind commitments from each of these sources will be detailed in the Technical Cooperation Agreement to be signed between the MMA as main project beneficiary, the FUNBIO, and the other operational partners whose contributions are listed here.



<b>II. Project Administration</b>	<b>3.73</b>	<b>0.00</b>	<b>3.69</b>	<b>2%</b>
Administration & Coordination <sup>40</sup>	3.26	0.00	3.26	
Monitoring, evaluations and audits	0.47	0.00	0.43	
<b>Total</b>	<b>32.62</b>	<b>159.15</b>	<b>191.77</b>	<b>100%</b>
<b>Percentage</b>	<b>17%</b>	<b>83%</b>	<b>100%</b>	

### C. Key Results Indicators

1.35 The main expected outcomes of the project are: (i) Increase of extension of conservation priority areas in each biome that are legally protected, with view to meeting the following national and internationally agreed targets: Caatinga 8.1%; Pampa 4.5% and Pantanal 6.6%; and (ii) improved effectiveness of conservation of biodiversity, ecosystem services and endangered species of flora and fauna in existing protected areas and productive landscapes measured by management effectiveness scores, with a target of achieving scores of 60 or higher. (See also Annex II.)

### D. Economic Evaluation

1.36 As discussed earlier, protected areas provide a variety of ecosystems services, including biodiversity benefits. Ecosystem services provided by the three biomes targeted by this project include: (i) water supply quality and quantity for human consumption and hydroelectric energy generation derived from savannah, wetlands and grasslands; (ii) hydrologic and nutrient cycle regulation by large water masses such as Pantanal; (iii) carbon sequestration by forest and non-forest ecosystems; (iv) soil erosion control; (v) forest products and by-products, natural forage and medicinal plants. Protected areas have an economic value as a result of the provision of these services. However, given that no formal markets exist for the services, price observations for the services are not possible, though different economic valuation techniques are available to obtain estimates of the economic value of these services. Using previous studies that value one or more ecosystem services in the three biomes, whose results can be used as proxies for those services, Arriagada (2016) calculates the annual total economic value of the ecosystem services provided by the protected areas included in this project as US\$278 million for Caatinga, US\$397 million for Pampa and US\$2.8 billion for Pantanal (see Table 10, [Economic Evaluation Annex](#)).

1.37 An economic evaluation was conducted to assess the viability of establishing new PA and enhancing conservation, restoration, and sustainable management of existing PA in the Caatinga, Pampa and Pantanal, considering a social discount rate of 12%. Overall, the Net Present Value (NPV) of BR-G1004 is greater than US\$469 million. The Internal Rate of Return (IRR) is robust at 44%. Benefits from establishing new PA amount to US\$520 million. In addition, benefits from an effective conservation management and restoration of deteriorated areas amount to US\$91 million. Furthermore, the economic benefits of avoided deforestation as a result of new PA is US\$20 million. Sensitivity analyses were also conducted and, under the most conservative assumptions, the NPV of benefits is still US\$240 million with an IRR of 21%, reflecting that BR-G1004 is a viable investment from an economic standpoint.

<sup>40</sup> Administrative costs are not to exceed the 10% of total GEF financing.

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing Instruments

- 2.1 This project is structured as an investment grant operation financed with resources from the GEF, to finance goods, services and consulting services, operational costs, decentralized subprojects and scholarship support<sup>41</sup>. Use of the GEF resources will be supervised by the IDB as a GEF Implementing Agency for the project. (Parallel financing activities will be accompanied by FUNBIO, but execution is the responsibility of each project partner, in accordance with their respective commitment letters – see also Optional [Link 11](#).) The disbursement period will be five (5) years as of the signature date of the Non-Reimbursable Financing Agreement between IDB and FUNBIO, in accordance with the following preliminary financial plan:

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
BID	3,725,914	5,096,639	7,918,089	9,253,814	6,627,364	32,621,820
%	11%	16%	24%	28%	20%	100,00

### B. Environmental and Social Safeguard Risks

- 2.2 The project has been classified as Category “C” in accordance with the Environment and Safeguard Compliance Policy (OP-703). During the preparation of the project, the expected environmental and social risks were analyzed, paying special attention to potential social impacts from the declaration of new areas (Component 1) and in the context of conservation and restoration activities that depend for their success at least partly on the participation of local communities (Components 2-4). This analysis confirmed that the project’s environmental impacts are likely to be positive, including improved conservation of biodiversity and ecosystem services, more sustainable management of productive landscapes, and avoided CO<sub>2</sub> emissions (see also key results indicators). The Risk analysis identifies one medium risk, namely ‘environmental and social sustainability: resistance from local communities to new conservation units’.
- 2.3 With respect to social risk, the analysis resulted in a Social Strategy for the Integration and Relation with Communities (see Optional [Link 6](#)) that formed the basis for the design of Component 5. This Strategy summarizes the various forms of social participation in the creation, implementation and management of conservation areas stipulated by Brazilian law, and complements them with specific recommendations for the execution of the activities of the present project. It also addresses the issue of involuntary resettlements as a result of declaring new protected areas of ‘strict protection’ group (which, by law, does not permit human occupation except for traditional and indigenous communities): Section III.A sets out the procedures and conflict resolution mechanisms that must be followed with respect to determining and avoiding potential resettlements and impacts on indigenous or traditional populations, and establishes that involuntary resettlement will be grounds for exclusion of an area from the project. (To prevent possible impacts of such exclusions on the target of Component 1, the sum total of areas included in the component exceeds the overall target). The conflict resolution mechanisms and priority community relation measures, as defined in

<sup>41</sup> Eligible activities and the eligibility criteria for decentralized subprojects and scholarship support will be detailed in the OMP.

the Social Strategy, need to be implemented by FUNBIO prior to contracting any GEF-financed Component 1 activity and maintained active throughout the project execution period.

**C. Fiduciary Risk**

2.4 An institutional evaluation of FUNBIO's capacity to plan, organize, execute and control the program, applying the Bank's SECI methodology, was conducted during project preparation. The assessment concluded that the level of fiduciary risk was **Low**. The principal recommendation of the assessment is to carry out an independent audit that is exclusively focused on the activities of the GEF Terrestre, rather than include the project in FUNBIO's general annual audit. This has been incorporated in the implementation plan (¶3.9) and the budget (¶ 1.34).

**D. Other Key Issues and Risks**

2.5 A Risk Assessment was prepared for the project and the following risks identified: (i) macroeconomic and fiscal sustainability: increase in poverty-driven habitat degradation, low prioritization and/or political support for conservation measures, including reduced parallel financing, due to macroeconomic situation; (ii) public management and governance: insufficient coordination among participants could cause delays in execution; (iii) environmental and social sustainability (see ¶2.2), and (iv) development: potentially low interest or participation by the private sector that could hinder implementation of key activities. All identified risks are being mitigated through: (i) project design provisions, such as investing in sustainable financing plans for PAs and dedicating a full component (C5) to foster involvement of local communities and private sector in the project; (ii) adoption of clear execution guidelines - the Operational Manual and Social Strategy establish clear criteria for engagement with the communities and establishing conflict resolution mechanisms; and (iii) complementary legal agreements between the executing Agency and federal and state-level partners to solidify commitments and responsibilities.

2.6 Participation of Women. The proposed project is consistent with the mandate established in OP-761 in the sense that activities included in the project will contribute to empowering women in project intervention areas. While the project does not include any activities specifically targeted at promoting the participation of women in conservation efforts, the activities financed through the project will enable equal access, regardless of gender. Additionally, the following project activities will benefit women particularly: (i) women will be encouraged to participate actively in project-related public consultations through adequate and timely information; (ii) participation of women associations and individuals in PA planning and management will be fostered, placing emphasis on their participation in Consultative Committees established to support decision-making in PA; (iii) fire control benefits will impact positively on women, as fire events limit the availability of firewood for household consumption, which is a woman's responsibility. Women participation will be monitored and reported under Component 5.

2.7 Climate Change Risks. Regarding the potential for increased GHG emissions from possible leakage outside of the project boundaries, it is not anticipated that this will constitute a risk in the present project. The GHG reductions sought by the project will be attained through applying improved fire management protocols and sustainable forest management practices in collaboration with private landowners. While better land management in the three fragile target biomes is anticipated to

benefit landowners in the medium- to long-term (especially through a reduction in uncontrolled fires), the project will also raise awareness to landowners concerning sustainable practices. As such, the project should neither directly nor indirectly incentivize leakage outside the project area.

- 2.8 **Sustainability Risks.** Bearing in mind the sustainability challenges faced in PAs (paragraph 1.12), the sustainability of the interventions financed are a concern that needs attention through project execution. The Program support long-term sustainability of the investments in two main ways: (i) by financing activities that seek to access and maximize funding sources for a steady and sufficient long-term flow of resources for PA management, including the delineation of a long-term strategy based on the definition of baselines (funding status and estimates of the necessary investment) and the mapping and prioritization of funding sources; and (ii) through investments in capacity building, as well as in management plans and protocols for fire management activities, environmental restoration and elaboration of territorial action plans for endangered species, that promote more effective long-term conservation approaches.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of Implementation Arrangements

- 3.1 **Executing Agency.** The Executing Agency (EA) for the project is the *Fundo Brasileiro para a Biodiversidade* – FUNBIO, a not-for-profit entity specialized in the fiduciary and operational management of environmental projects<sup>42</sup>. FUNBIO will be responsible for the technical, financial and fiduciary execution and administration of the Project including, among others: (i) operating the accounting system for the Project's financial resources; (ii) implementing and executing the planning and monitoring systems; (iii) executing all procurement activities for goods and services contained in each of the Project's components, and ensuring their effectiveness; (iv) implementing the necessary control systems to ensure the efficiency and transparency in the execution and management of the project's physical and financial resources; (v) opening a bank account for the exclusive administration of the IDB/GEF resources; (vi) preparing the disbursement requests and submitting them to the Bank, along with all the supporting documentation; (vii) in coordination with the Beneficiary, ensuring the quality of the goods and services provided by contractors and vendors; (viii) preparing physical and financial progress reports for the project in accordance with the project's monitoring and evaluation arrangements; (ix) ensuring compliance with Bank policies and provisions of the Non-Reimbursable Financing Agreement to be executed between the Bank, FUNBIO and MMA; and (x) monitoring and reporting on parallel financing.
- 3.2 **Project Execution Mechanisms.** Consistent with the results of the institutional capacity assessment, FUNBIO will execute the project using its internal administrative, technical and overall organizational and internal control capabilities. FUNBIO will execute the project through a Project Management Unit (PMU) to be created within its organizational structure and will allocate the necessary human and technical resources needed for project execution. The

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<sup>42</sup> FUNBIO was founded in 1996 as a financial mechanism for the implementation of the UN Convention on Biological Diversity (CBD) in Brazil. Since its foundation, FUNBIO has signed management contracts equivalent to US\$ 579 million, supporting 245 projects from 170 different organizations (Source: FUNBIO).

project will use FUNBIO's existing systems, especially *Sistema Cérebro*, for integrated project planning, procurement, financial administration, reporting, and monitoring, while ensuring compatibility with Bank norms, procedures and control systems. **Evidence of the establishment of the PMU within the organizational structure of FUNBIO and designation of, at minimum, the technical team specified in (¶3.3), is a special contractual condition prior to the first disbursement of the IDB/GEF resources.**

- 3.3 FUNBIO will designate a Project Manager and allocate additional technical and administrative human resources needed, based on a pro-rated reimbursement structure. Based on the expected level and volume of responsibilities for FUNBIO directly related to project implementation, monitoring and administration, the PMU would consist mainly of personnel already hired by FUNBIO, complemented by consultants to be hired specifically for the project. The PMU should consist at a minimum of the following multidisciplinary team of professionals with exclusive dedication to the project: (i) one general coordinator of project activities; and (ii) **three multidisciplinary technical staff**. FUNBIO will also provide financial, procurement and legal support specialists, as well as support functions such as communications and data management. FUNBIO's projects supervisor will devote part of his/her time to the project. Other specialists<sup>43</sup> in areas relevant to the project (conservation planning and management, restoration, sustainable management of productive areas and/or ecological monitoring, social issues will be contracted as individual consultants for determinate lengths of time under each component. FUNBIO will ensure and streamline the presence of its technical/project personnel in the geographic areas of the project in direct coordination with the project Beneficiary and collaborating governmental entities (¶3.5).
- 3.4 **Government Beneficiary.** The Ministry of Environment (MMA) is the direct project beneficiary, as the MMA will receive the goods, services and knowledge products and will benefit from the results from consulting services procured by FUNBIO with IDB/GEF resources. However, no IDB/GEF resources will be received by or channeled to the MMA. MMA will lead the institutional and technical coordination of the relationship among the government institutions participating in the project (¶3.5), including the elaboration and submission of planning and monitoring inputs for FUNBIO. For this purpose, the MMA will create and maintain a Project Technical Coordination Unit (UTCP/MMA) throughout the project's execution, staffed and funded by the MMA. To formalize the specific functions and activities to be carried out by MMA and FUNBIO within the project execution and governance scheme, these two entities will sign a Technical Cooperation Agreement, as per the terms and conditions agreed with the Bank, establishing specific arrangements and responsibilities within the project's execution framework. **Evidence of the creation of the UTCP within the organizational structure of MMA and entry into effect of the Technical Cooperation Agreement between MMA and FUNBIO, on terms and conditions acceptable to the Bank, are special contractual conditions prior to the first disbursement of IDB/GEF resources.**
- 3.5 **Collaboration with other governmental entities.** FUNBIO will also coordinate its activities to be carried out within the project's execution scheme with the following

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<sup>43</sup> FUNBIO will not hire any employee with the IDB/GEF resources, but only individual consultants will be hired, as per the terms of paragraph 3.3 of this grant proposal.

Brazilian federal and state governmental entities, which have agreed to participate and support the project's execution in the geographic or technical area corresponding to their respective legal mandates: (i) ICMBio will contribute and assist FUNBIO in the operationalization and implementation of activities in all project components, particularly those focused on federal conservation areas and surrounding areas; (ii) Botanical Garden of Rio de Janeiro will contribute to the implementation of Component 4 activities related to endangered species of flora; and (iii) the environmental secretariats for the States of Alagoas, Bahia, Ceará, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Rio Grande do Sul and Sergipe, will contribute to the implementation of Components 1 and 2 activities focused on their respective state-level protected areas. Each of these entities will act as an operating unit in support of the project, being also recipients of goods, services and knowledge products provided through FUNBIO; no IDB/GEF resources will be received by or channeled to these entities; each of these entities will sign a Technical Cooperation Agreement with FUNBIO and the MMA, in order to establish specific arrangements and responsibilities in the framework of the project's execution scheme. The entry into effect of project-specific Technical Cooperation Agreements between FUNBIO, MMA and any strategic partners (referred to as "operating units" in ACT) on terms and conditions acceptable to the Bank is a contractual condition prior to the executions of any activity financed with IDB/GEF resources in their respective States.

- 3.6 **Operating Manual and Regulations.** Project execution will be regulated by the Operation Manual and Regulations of the Project (OMP). The OMP will establish: (i) detailed execution mechanism; (ii) activities and responsibilities of FUNBIO, the Beneficiary and other collaborating governmental entities; (iii) applicable fiduciary policies, rules and procedures; (iv) planning, financial administration, monitoring, evaluation and auditing requirements; and (v) regulations and procedures governing the technical execution of the project, especially any potential changes, prioritizations or exclusions of pre-selected areas of intervention; the selection of communities, individuals and/or private properties to be directly benefitted by project activities; and the prioritization of implementation actions financed through Components 2 and 4. The Technical Cooperation Agreements signed between FUNBIO, MMA and collaborating governmental entities will have to be fully consistent with the OMP. **Entry into effect of the OMP on terms and conditions acceptable to the Bank is a special contractual condition prior to first disbursement of the IDB/GEF resources.**
- 3.7 **Initial Project Report.** FUNBIO will present to the Bank an initial project report that will include: (i) up-to-date Project Execution Plan (PEP) and Procurement Plan (PA), in accordance with Bank-specified formats and following the procedures for PEP/PA elaboration stipulated in the approved operating manual; (ii) description of the project management system to be used (*Sistema Cérebro*), any potential adaptations of the system necessary to comply with Bank requirements and formats, and the timeline and budget for implementing these adaptations; and (iii) listing of project, GEF and IDB documents that will be required for the PMU prior to the project's start-up mission. **Presentation of the Initial Project Report on terms and conditions acceptable to the Bank is a special contractual condition prior to the first disbursement of the IDB/GEF resources.**

- 3.8 **Disbursement, procurement and supervision.** Procurement administration of the project will take place in accordance with established private sector and commercial practices acceptable to the IDB, as per the terms of IDB Procurement Policies (documents GN-2349-9 and GN-2350-9). Use of private sector procurement regulations is warranted due to FUNBIO private sector nature. The procurement of goods and services, including the selection and contracting of consultants with resources from the IDB/GEF will follow the norms and procedures of FUNBIO, as contained in the FUNBIO Procurement Manual. FUNBIO and the Bank have agreed on a "Procurement Plan" for the 18 months of execution. Any change or revision of the Procurement Plan by FUNBIO will be submitted to the Bank for non-objection. The supervision of the procurement function by the IDB will be based on the "ex post" modality. The Bank will disburse the financial resources to FUNBIO based on an initial advance and periodic requests for advance of funds. The disbursements of the project will be subject to ex post supervision by the Bank and by the external auditors. **Adaptation and customization of FUNBIO's project system to generate the financial and procurement reports required by the Bank is a special contractual condition prior to the first disbursement of the IDB/GEF resources.**
- 3.9 **External Audits.** The financial statements of the Project will be subject to annual independent, project-specific audits to be conducted by a firm of external public accountants, acceptable to the Bank, which will be contracted by FUNBIO with IDB/GEF resources specifically for the GEF Terrestre. These external audits must be conducted in accordance with Terms of Reference approved by the Bank and the Bank's norms for the selection and contracting of auditing firms (AF-200). Auditing reports shall be submitted to the Bank within 120 day of the EA's annual financial closure date.

## **B. Summary of Arrangements for Monitoring Results**

- 3.10 Project Monitoring and Evaluation (M&E) will follow IDB and GEF procedures. M&E will focus on: (i) project outcomes and impacts as stated in the projects Results Framework; (ii) delivery of project outputs in accordance with the Annual Operational Plan (AOP); and (iii) monitoring of project implementation and performance through periodic project evaluations. Results Framework's outcomes and results associated to BID/GEF funding will be incorporated in the Project Monitoring Report (PMR), while project outcomes and results associated to the financing and parallel financing will be incorporated into the Project Implementation Reports (PIR), to be reported periodically to GEF. The AOP will be used to monitor progress in physical implementation. (See also Required Link 4).
- 3.11 **Performance evaluations.** A 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, to cover: (i) progress in the selection, preparation (including population-related issues—and legal establishment of the new PA; (ii) improvements in management efficiency of PA, under the parameters included in GEF evaluation tools; (iii) progress in the application of parallel financing to implement recovery activities in degraded areas (Component 3) and scientific research in support of monitoring of flora and fauna (Component 4); (iv) progress in the attainment of results associated to enhanced institutional coordination and community participation (Component 5), including progress in the adoption of BES-based business plans developed and implemented with communities adjacent to PA (Component 2); and (v) *pari passu* and coordination of the application of

parallel financing<sup>44</sup>. An adequate Action Plan will be devised to correct identified problems or delays, if any. A final evaluation will take place within the last 6 months of project execution and will focus on the results and the perceived impact of the project, as well as fulfillment of the project's objectives.

- 3.12 **Impact evaluation.** The impact evaluation for this project will focus on assessing progress towards achieving the project's impact indicators: (i) long-term endangered species population growth –biodiversity indicator; (ii) carbon emissions avoided in all three biomes through creation of new protected areas and good fire management practices and restoration of selected degraded landscapes –climate change indicator; and (iii) increase habitat quality in degraded landscapes –sustainable forest management indicator.

**C. Significant Design Activities Post Approval**

- 3.13 The following activities remain to be developed as part of project execution: (i) selection of proposed PA to be legally established and operated initially with project financing; (ii) PA-specific communities and family data collection, and (iii) derivation of site-specific baseline information for the climate change impact indicator (carbon emissions). For political, institutional and technical reasons, it was only possible to establish a 'short list' of likely PA sites. Yet, site-specific community, family and climate change data depends on the final selection of sites. The definitive selection of PA sites will be made during the first 12 months of execution (from time of total eligibility) and the data collected within 18 months.

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<sup>44</sup> *Pari passu*: BID/GEF 17%; parallel financing 83%.