Document of
The World Bank

Report No: PAD1057

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED STRATEGIC CLIMATE FUND–FOREST INVESTMENT PROGRAM LOAN
(SCF–FIP)

IN THE AMOUNT OF US$32.48 MILLION

TO THE

FEDERATIVE REPUBLIC OF BRAZIL

FOR AN

ENVIRONMENTAL REGULARIZATION OF RURAL LANDS
IN THE CERRADO OF BRAZIL PROJECT

June 11, 2015

Environment and Natural Resources Global Practice
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective: April 11, 2014)

Currency Unit	=	Brazilian Reais
BRL 2.90	=	US$1.0
BRL1.00	=	US$0.4534

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABC Plan	*Plano ABC–Agricultura de Baixo Carbono* (Sectoral Plan for the Mitigation and Adaptation of Climate Change for Low Carbon Emission Agriculture)
APP	*Áreas de Preservação Permanente* (Areas of Permanent Preservation)
BIP	Brazil Investment Plan
BIP–EC	BIP's Executive Committee
CAR	*Cadastro Rural Ambiental* (Rural Environmental Cadastre)
CCIR	*Certificado de Cadastro do Imóvel Rural* (Certificate of Registration of Rural Property)
CEL	*Comissão Especial de Licitação* (Special Bidding Committee)
CH_4	Methane
CIF	Climate Investment Funds
CNIR	*Cadastro Nacional de Imóveis Rurais* (National Cadastre of Rural Properties)
CO_2	Carbon dioxide
CONACER	*Comissão Nacional do Programa Cerrado Sustentável* (National Commission for the Sustainable Cerrado Program)
CPS	Country Partnership Strategy
CRA	*Cota de Reserva Ambiental* (Parcel of Legal Reserve)
DEFRA	Department for Environment, Food and Rural Affairs of the United Kingdom
DGM	Dedicated Grant Mechanism for Indigenous Peoples and Local Communities
EMBRAPA	*Empresa Brasileira de Pesquisa Agropecuária* (Brazilian Agricultural Research Corporation)
ESMF	Environmental and Social Management Framework
FIP	Forest Investment Program
FM	Financial Management

FUNAI	*Fundação Nacional do Índio* (National Indigenous Foundation)
GDP	Gross Domestic Product
GIS	Geographic Information System
GoB	Government of Brazil
GHG	Greenhouse Gas
IBAMA	*Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis* (Brazilian Institute for the Environment and Renewable Natural Resources)
IBGE	*Instituto Brasileiro de Geografia e Estatística* (Brazilian Institute of Geography and Statistics)
IBRD	International Bank for Reconstruction and Development/ The World Bank
ICMBio	*Instituto Chico Mendes de Conservação da Biodiversidade* (Chico Mendes Institute for Biodiversity Conservation)
IFR	Interim Unaudited Financial Report
ICE	International Cooperation Entity
INCRA	*Instituto Nacional de Colonização e Reforma Agrária* (National Institute for Colonization and Land Reform)
INPE	*Instituto Nacional de Pesquisas Espaciais* (National Institute for Space Research)
IPCC	Intergovernmental Panel on Climate Change
IPLCs	Indigenous Peoples and Local Communities
IPPF	Indigenous Peoples Planning Framework
IT	Information Technology
LUCF	Land Use Change and Forestry
M&E	Monitoring and Evaluation
MAPA	*Ministério da Agricultura, Pecuária e Abastecimento* (Ministry of Agriculture, Livestock and Supply)
MCTI	*Ministério da Ciência, Tecnologia e Inovação* (Ministry of Science, Technology and Innovation)
MDB	Multilateral Development Bank
Mg/ha	Megagrammes per hectare
MMA	*Ministério do Meio Ambiente* (Ministry of Environment)
MOP	*Manual Operacional do Projeto* (Project Operational Manual)
NGO	Nongovernmental Organization
PDO	Project Development Objective
PNMC	*Política Nacional de Mudanças Climáticas* (National Policy on Climate Change)
PPCerrado	*Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas: Cerrado* (Action Plan to Prevent and Control Deforestation and Fires in the Cerrado Biome)
PPG7	Pilot Program to Conserve the Brazilian Rain Forest

PRA	*Programa de Regularizacão Ambiental* (Environmental Regularization Program)
PRAD	*Plano de Recuperação de Áreas Degradadas* (Plan to Rehabilitate Degraded Areas)
PRODES	*Programa de Cálculo do Desflorestamento da Amazônia* (INPE's Program to Calculate the Deforestation of the Brazilian Amazon)
PRONAF	*Programa Nacional de Fortalecimento da Agricultura Familiar* (National Program to Strengthen Family Agriculture)
REDD+	Reducing emissions from deforestation and forest degradation; and the role of conservation, sustainable forest management and enhancement of forest carbon stocks
RFT	Rain Forest Trust Fund
RL	*Reserva Legal* (Legal Reserve)
SCF	Strategic Climate Fund
SEA	*Secretaria Estadual de Meio Ambiente* (State Environmental Agency)
SecEx	*Secretaria Executiva* (Executive Secretariat, under MMA)
SICAR	*Sistema Nacional de Cadastro Ambiental Rural* (Rural Environmental Cadastre System)
SIMLAM	*Sistema Integrado de Monitoramento e Licenciamento Ambiental* (Integrated System for Environmental Licensing and Monitoring)
SINIMA	*Sistema Nacional de Informação sobre o Meio Ambiente* (National System for Environmental Information)
SNCR	*Sistema Nacional de Cadastro Rural* (National Rural Cadastre System, issued by INCRA)
tCO_{2eq}	Tons of carbon dioxide equivalent
TORs	Terms of Reference
UGP	*Unidade de Gestão do Projeto* (Project Management Unit)
UNFCC	United Nations Framework Convention on Climate Change

Regional Vice President:	Jorge Familiar, LCRVP
Country Director:	Deborah L. Wetzel, LCC5C
Senior Global Practice Director:	Paula Caballero, GENDR
Acting Practice Manager:	Emilia Battaglini, GENDR
Task Team Leader:	Bernadete Lange, GENDR

BRAZIL

ENVIRONMENTAL REGULARIZATION OF RURAL LANDS IN THE CERRADO OF BRAZIL PROJECT

TABLE OF CONTENTS

PAD DATA SHEET

Brazil

Environmental regularization of rural lands in the Cerrado of Brazil (P143334)

PROJECT APPRAISAL DOCUMENT

LATIN AMERICA AND CARIBBEAN

Report No.: PAD1057

.			
Basic Information			
Project ID P143334	EA Category B - Partial Assessment	Team Leader(s) Maria Bernadete Ribas Lange	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 22-Feb-2016	Project Implementation End Date 30-Sep-2019		
Expected Effectiveness Date 15-Feb-2016	Expected Closing Date 28-Feb-2020		
Joint IFC No			
Practice Manager/Manager Emilia Battaglini	Senior Global Practice Director Paula Caballero	Country Director Deborah L. Wetzel	Regional Vice President Jorge Familiar
.			
Approval Authority			
Approval Authority Board/AOB Decision please explain This is a Strategic Climate Fund Loan under the Forest Investment Program (FIP).			
.			
Borrower: Federative Republic of Brazil			
Responsible Agency: Ministry of Environment			
Contact: Allan Milhomens		Title: Project Manager	
Telephone No.: (55-61) 2028-1413		Email: allan.milhomens@mma.gov.br	

.

Project Financing Data(in USD Million)					
[X]	Loan	[ ]	IDA Grant	[ ]	Guarantee
[ ]	Credit	[ ]	Grant	[ ]	Other

Total Project Cost:	49.98	Total Bank Financing:	0.00
Financing Gap:	0.00		

.

Financing Source	Amount
Borrower	17.50
Strategic Climate Fund Credit	32.48
Total	49.98

.

Expected Disbursements (in USD Million)

Fiscal Year	2016	2017	2018	2019	2020					
Annual	3.20	15.00	12.50	1.48	0.30					
Cumulative	3.20	18.20	30.70	32.18	32.48					

.

Institutional Data

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Cross Cutting Topics

[X] Climate Change
[ ] Fragile, Conflict & Violence
[ ] Gender
[ ] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	Forestry	60		40
Public Administration, Law, and Justice	Public administration-Agriculture, fishing and forestry	20		20

Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	20		20
Total		100		

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Environment and natural resources management	Climate change	60
Environment and natural resources management	Land administration and management	20
Environment and natural resources management	Environmental policies and institutions	20
Total		100

.

Proposed Development Objective(s)

The Project Development Objective is to enhance the capacity of the Federative Republic of Brazil's Ministry of Environment (*Ministério do Meio Ambiente* -MMA) and nine State Environmental Agency (SEAs) to receive, analyze and approve rural environmental cadastre entries and link them to the national system (*Sistema Nacional de Cadastro Ambiental Rural* -SICAR); and support, in selected municipalities, landholding registration in the Rural Environmental Cadastre (*Cadastro Ambiental Rural* -CAR).

.

Components

Component Name	**Cost (USD Millions)**
Strengthening State Environmental Agencies' Capacity to Implement the CAR.	6.15
Registration of Landholdings in Selected Municipalities.	25.18
Project Management, Monitoring and Evaluation.	1.15

.

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
.		
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [X]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]

Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

.

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36	X	
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

.

Legal Covenants

Name	Recurrent	Due Date	Frequency
Project Management Unit (*Unidade de Gestão do Projeto*, UGP) within MMA for project implementation with manager		21-Sep-2015	

Description of Covenant

The Federative Republic of Brazil (Borrower), through MMA, shall establish, and thereafter maintain until the completion of the Project, a Project Management Unit (UGP) for project implementation with a structure, responsibilities, and key staff with terms of reference, qualifications and functions acceptable to the World Bank to perform all Project related functions, as stated in the Legal Agreement Schedule 2, Section I.A.2.(a) and (b).

Name	Recurrent	Due Date	Frequency
Technical Cooperation Agreements with the State Environmental Agencies (SEAs)	X		CONTINUOUS

Description of Covenant

The Borrower, through MMA, shall enter into an agreement with the relevant Participating SEA under terms and conditions approved by the World Bank for purposes of assisting MMA in the implementation of the Project, and thereafter maintain the pertinent Technical Cooperation Agreement throughout the implementation of the Project, as stated in the Legal Agreement Schedule 2, Section I.A.1.(a).

Name	Recurrent	Due Date	Frequency
Maintain the special bidding committee (*Comissão Especial de Licitação*- CEL)	X		CONTINUOUS

Description of Covenant

The Borrower, through MMA, shall maintain the special bidding committee (the *Comissão Especial de Licitação* -CEL), responsible for the procurement of goods and services required under the Project. Maintain said committee with a structure, responsibilities, and key staff with terms of reference, qualifications and functions

acceptable to the World Bank to perform all Project related functions, as stated in the Legal Agreement Schedule 2, Section I.A.2.(a) and (b).

Conditions

Source Of Fund	Name	Type
CSCC	Create and maintain a unit (the Project Management Unit - UGP)	Effectiveness

Description of Condition

The Project Management Unit (UGP) has been established in a manner acceptable to the Bank, as stated in the Legal Agreement Article IV, 4.01.

Source Of Fund	Name	Type
CSCC	Loan registered with the Borrower's Central Bank.	Effectiveness

Description of Condition

The Borrower shall have the Loan duly registered with the Borrower's Central Bank, as stated in the Legal Agreement Article IV, 4.02.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Maria Bernadete Ribas Lange	Team Leader (ADM Responsible)	Senior Environmental Specialist		GENDR
Frederico Rabello T. Costa	Procurement Specialist	Senior Procurement Specialist		GGODR
Thiago De Oliveira Teodoro	Financial Management Specialist	E T Consultant		GGODR
Alberto Coelho Gomes Costa	Safeguards Specialist	Senior Social Development Specialist		GSURR
Catarina Isabel Portelo	Counsel	Senior Counsel		LEGLE
Christian Albert Peter	Team Member	Lead Environmental Specialist		GENDR
Daniella Ziller Arruda Karagiannis	Team Member	Operations Analyst		GENDR
Emilia Battaglini	Program Manager	Senior Environmental Specialist		GENDR
Garo J. Batmanian	Peer Reviewer	Lead Environmental Specialist		GENDR
Gregor V. Wolf	Team Member	Program Leader		LCC5C
Maria Joao Pagarim Ribei Kaizeler	Team Member	Financial Management Specialist		GGODR
Maria Virginia Hormazabal	Team Member	Finance Officer		WFALN
Mariana Margarita Montiel	Counsel	Senior Counsel		LEGLE

Miguel-Santiago da Silva Oliveira	Team Member	Senior Financial Management Specialist		GGODR
Tatiana Cristina O. de Abreu Souza	Team Member	Finance Officer		WFALN
Waleska Magalhaes Pedrosa	Team Member	Paralegal		LCC5C
Wanessa De Matos Firmino Silva	Team Member	Team Assistant		LCC5C

Extended Team

Name	Title	Office Phone	Location
Evelyn Levy	Consultant		
Flavio Chaves	Peer reviewer		
Henrique Krigner Laino	Temporary		
Janice Molina	Temporary		
Magno Castelo Branco	Consultant		
Monika Roper	Consultant		
Paulo Barreto	Peer reviewer		
Ronaldo Chaves	Consultant		

.

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Brazil	Piauí	Piauí	**X**		
Brazil	Maranhão	Maranhão	**X**		
Brazil	São Paulo	São Paulo	**X**		
Brazil	Paraná	Paraná	**X**		
Brazil	Minas Gerais	Minas Gerais	**X**		
Brazil	Mato Grosso do Sul	Mato Grosso do Sul	**X**		
Brazil	Mato Grosso	Mato Grosso	**X**		
Brazil	Goiás	Goiás	**X**		
Brazil	Federal District	Distrito Federal	**X**		
Brazil	Bahia	Bahia	**X**		
Brazil	Tocantins	Tocantins	**X**		

.

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required? Consultants will be required

I. STRATEGIC CONTEXT

A. Country Context

1. A sustainable path of poverty reduction and development would be one that manages natural resources for future generations, ensures social inclusion, and adopts fiscal responsibility to ensure that gains are not short-lived or achieved at the cost of future prosperity.

2. Brazil has made significant social, economic and environmental management progress in recent years. Endowed with a broad diversity of landscapes and substantial land resources appropriate for agriculture and livestock production, Brazil ranks third among the world's major agricultural exporters, fourth for food products and second for bio-ethanol production. Much of this agricultural growth has occurred over the last decade, and much of it has taken place in the Brazilian savanna, known as the Cerrado Biome.

3. The Cerrado Biome, located in central Brazil, covers nearly one quarter, or 2.04 million km^2, of the country, with a mosaic of 23 types of vegetation composed of tropical savannas, woodlands, grasslands and forests[1]. It covers a large area with significant carbon stocks and water resources, and with substantial biodiversity. Twenty-two percent of Brazil's population (42.7 million[2]) lives in the Cerrado, compared to 14 percent who reside in the rural areas. Distributed over 11 Federative Units[3], the Cerrado Biome is mostly occupied by private landholdings. Some 78 percent of about 1 million landholdings in the biome are up to four fiscal modules[4]but they occupy only 15 percent of the area of all landholdings[5]. Protected Areas represent 8.2 percent of the biome, while Indigenous Lands occupy 4.3 percent of the area.

4. The structural diversity of vegetation types in the Cerrado involves a broad spectrum of total biomass amounts. Total biomass in Central Brazil varies from 21.8 Mg/ha in the *campo sujo* (parkland) to 77.8 Mg/ha in the dense Cerrado (dry forest). The root/shoot ratio in all Cerrado vegetation types shows values above 1, ranging from 2.6 in the open Cerrado (woodland) to 7.7 in *campo limpo* (grassland) (Castro and Kauffman 1998[6]). Organic matter in the soil represents the most substantial carbon stock in the Cerrado's ecosystems[7]. The total estimated carbon stock amounts to 265 Mg/ha, with soil organic matter comprising 70 percent (185 Mg/ha), when the vegetation and the soil up to 1m depth are considered.

---

[1] Conservation International considers the Cerrado Biome one of the world's 34 biodiversity hotspots.

[2] Brazilian Census 2010, IBGE.

[3] States of Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Bahia, Maranhão, Piauí, São Paulo and Paraná; and the Federal District.

[4] The fiscal module *(módulo fiscal)* is a land unit established by the National Institute of Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*, INCRA) mainly for rural real estate taxation according to Federal Decree Nº 8.485/1980 and INCRA NIº 20/1980. The fiscal module in Cerrado municipalities varies from 0.04 to 0.1 km^2, with an average of 0.46 km^2 (46 ha).

[5] Statistics for the biome were derived from 2006 agricultural census data for municipalities that are located partially or wholly in the Cerrado. Absolute numbers (1,066,000 landholdings over 1.5 km^2) overstate the total number of landholdings and area actually in the Cerrado Biome.

[6] Castro, EA, and Kauffman, JB. 1998. Ecosystem structure in the Brazilian Cerrado: a vegetation gradient of aboveground biomass, root mass and consumption by fire. *Journal of Tropical Ecology*, vol. 14, no. 3, pp. 263–283.

[7] Abdala, G.C., (1993) Análise energética de um Cerrado e sua exploração por atividade de carvoejamento rústico. Brasília: Universidade de Brasília. Dissertação de Mestrado em Ecologia.

5. A carbon uptake of 0.14 Mg C ha/year is estimated for the tropical savannas, including the Cerrado. This carbon uptake contributes to a total of 0.39 Gt C/year, representing up to 15 percent of all carbon fixed by vegetation in the world. Seasonal flows of CO_2 in a typical Cerrado indicate that this ecosystem is a CO_2 sink during the rainy season, as well as a source of CO_2 for a brief period at the end of the dry season[8].

6. The rapid expansion of agriculture in the Cerrado Biome has caused natural vegetation to be converted to alternative land uses and has also increased the use of slash-and-burn as an agricultural practice. In 2010 the Cerrado lost about 6,469 km^2 of natural vegetation cover, similar to what was observed in the Amazon, but this still represents a far higher percentage in relative terms: 0.32 percent in the Cerrado versus 0.15 percent in the Amazon. Studies indicate that the clearing and burning of native vegetation, followed by cultivation of the soil in the process of conversion of the Cerrado's agricultural areas, results in a reduction of carbon stocks in the soil and an increase in greenhouse gas (GHG) emissions[9].

7. Between 2003 and 2008, emissions from deforestation and burning (including CH_4 and N_2O emissions) of Cerrado areas resulted in the emission of 1,450 Mt CO_2eq. Of this total, conversion to pastures corresponds to approximately 820 Mt CO_2eq (Bustamante et al. 2012[10]). Moreover, according to the Brazilian Greenhouse Gases Inventory (Brazil 2010), carbon emissions due to deforestation in the Cerrado increased from 0.05 Pg C yr–1 (1988 to 1994) to 0.06 Pg C yr–1 (2002 to 2008). Continuing along such a path would threaten the long-term future of the Brazilian Cerrado Biome and its natural resources, and consequently the process of economic growth and poverty reduction.

8. The Government of Brazil (GoB) recognizes that improving the effectiveness and efficiency of Brazil's environmental management system is a necessary step to: (i) improve the resilience of environments to climate change; (ii) face the challenges imposed by economic growth, which demands greater natural resource use; and (iii) promote an inclusive and environmentally sustainable growth.

B. Sectoral and Institutional Context

9. **Climate Change Policy Framework**. The main reference points for Brazil's REDD+ type actions are the National Plan on Climate Change, launched by Brazil in 2008, and the National Policy on Climate Change, Law 12.187/2009 (*Política Nacional de Mudanças Climáticas*, PNMC), enacted in 2009. The PNMC defines the objectives and guidelines for domestic operations in Brazil aimed to deal with climate change. It legally defines the country's voluntary commitment to reduce emissions, which could generate a reduction of 36.1 to 38.9 percent in the projected emissions for 2020. Brazil's goal is to achieve an 80 percent reduction in deforestation in the Amazon from the 1996–2005 average (19,535 km^2), and a reduction of 40 percent in the Cerrado from the 1999–2008 average (15,700 km^2).

[8] Miranda, HS, Rocha e Silva, EP, and Miranda, AC. 1996, Comportamento do fogo em queimadas de campo sujo, in Miranda, HS, Saito, CH, & Dias, BFS, *Impactos de queimadas em áreas de cerrado e restinga*, Universidade de Brasília. pp. 1–10, Brasília, Brasil.

[9] Franchini et al. 2007; Smith et al. 2008

[10] Bustamante, MC, Nobre, C, Smeraldi, R, Aguiar, APD, Barioni, LG, Ferreira LG, Longo, K, May, P, Pinto, AS, Ometto, JPHB. 2012. Estimating Greenhouse Gas Emissions from Cattle Raising in Brazil, *Climatic Change*.

10. The aim of the Action Plan to Prevent and Control Deforestation and Fires in the Cerrado Biome (*Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas no Cerrado,* PPCerrado 2010), which is one of the PNMC's instruments, is to promote sustained reductions in the rate of deforestation and forest degradation, as well as in the incidence of forest fires in this biome.

11. **Forest Legal and Policy Framework.** The Brazilian Forest Code (Law 12.651 of 2012) requires that: (i) all private rural landholdings maintain a percentage of native vegetation as Legal Reserves (*Reservas Legais*, RLs)[11]; and (ii) Areas of Permanent Preservation (*Áreas de Preservação Permanente,* APPs), such as riparian forests along watercourses, steep slopes, mountain tops, etc., also be maintained by landholders. The Forest Code also obliges landholders to register their landholdings in the Rural Environmental Cadastre (*Cadastro Ambiental Rural*, CAR)[12]. The CAR is an electronic register of rural landholdings maintained by an official environmental entity whose aim is to effectively monitor, supervise, control, plan and ensure the environmental compliance of landholdings. This register contains details of the total area of individual farms, the areas earmarked for alternative land use, APPs and RLs. The CAR provides essential information for monitoring and controlling private rural land use, including compliance with reforestation obligations. The system will be able to distinguish between legal and illegal land clearing, and will facilitate land use planning.

12. In addition, Decree 7.830 of 2012 defines the rural environmental cadastre system and gives special treatment to small landholdings or family agricultural landholdings[13], settlements, agrarian reform projects, demarcated Indigenous Lands, and traditional communities that make collective use of their territory (i.e., *quilombos,* extractive communities). Decree 8.235 of 2014 establishes general rules for environmental regularization programs for landholdings. MMA Normative Ruling no. 2, of 2014, defines procedures for enrollment in CAR, functionalities of the SICAR system, standards for communication between state's systems and SICAR, among other operational issues.

13. **Forest Investment Program (FIP).** The FIP is a targeted program of the Strategic Climate Fund (SCF), which is one of two funds under the framework of the Climate Investment Funds (CIF) managed by the World Bank. The SCF was created to provide financing for new ways of developing or up-scaling activities that seek to respond to a specific challenge related to climate change or to provide a sectoral response through targeted programs. The FIP was created as one of these targeted initiatives in order to catalyze policies and measures and mobilize funds to facilitate the decrease in deforestation and forest degradation, with a view toward promoting more

[11] The percentage to be held as Legal Reserves varies from 80 percent in the Amazon to 35 percent in the Cerrado within the Legal Amazon, to 20 percent in the rest of Brazil.

[12] Federal Law 12.651, May 2012, articles 29, 30, and 53, as amended by Law 12.727 of October 2012 and Federal Decree 7.830 of October 2012.

[13] A family landholder and rural family entrepreneur is one who carries out activities in rural areas, simultaneously meeting the following requirements: (i) he or she does not hold, in any capacity, an area of up to four fiscal modules; (ii) he or she mostly uses the manual labor of his or her own family in the economic activities of his or her establishment or undertaking; (iii) he or she has a minimum percentage of household income arising from economic activities of his or her establishment or enterprise, i.e., those defined by the Executive Authority (wording of Law Nº 12.512 of 2011); and (iv) he or she directs his or her establishment or undertaking with his or her family. Law 11.326/2006.

sustainable forest management, thus leading to reduced emissions and enhanced conservation of forest carbon stocks (REDD+)[14]. The FIP finances efforts to address the underlying causes of deforestation and forest degradation and to overcome barriers that have hindered past efforts to do so in eight FIP pilot countries (Brazil, Burkina Faso, Democratic Republic of the Congo, Ghana, Indonesia, Lao People's Democratic Republic, Mexico and Peru).

14. **Forest Investment Program: Brazil Investment Plan (BIP**). The BIP, approved by the FIP Subcommittee in May 2012, seeks to promote sustainable land use and forest management improvement in the Cerrado Biome in order to reduce pressure on remaining forests, reduce GHG emissions and increase carbon dioxide (CO_2) sequestration. The BIP's specific objectives are to: (i) improve environmental management in previously converted areas in the Cerrado Biome, and (ii) produce and disseminate environmental information at the biome scale. Therefore, it will be essential to take these actions forward in a joint effort in order to avoid the conversion processes that could occur if command and control actions are not accompanied by incentives to promote sustainable productive activities. The BIP has two thematic areas and four projects, to be implemented as a coordinated set. Project 1.1 is the subject of this document.

<table>
<tr><th colspan="5">Brazil Investment Plan</th></tr>
<tr><td colspan="5">Project: Brazil Forest Investment Plan Management
Grant:US$1 million MDB: IBRD</td></tr>
<tr><th>Special window</th><th colspan="2">Theme 1: Management and Use of Already Anthropized Areas</th><th colspan="2">Theme 2: Generation and Management of Forest Information</th><th>Set-aside</th></tr>
<tr><td rowspan="2">Dedicated Grant Mechanism for Indigenous Peoples and Local Communities</td><td>Project 1.1.
Environmental regularization of rural lands (based on Rural Environmental Cadastre, CAR)

MDB: IBRD</td><td>Project 1.2.
Sustainable production in areas previously converted to agricultural use

MDB: IBRD</td><td>Project 2.1.
Forest information to support public and private sectors in managing initiatives

MDB: IDB</td><td>Project 2.2.
Implementation of an early-warning system for preventing forest fires and a system for monitoring the vegetation cover.
MDB: IBRD</td><td rowspan="2">Private concessional funds</td></tr>
<tr><td colspan="2">Improvement of producers' access to resources available for Low Carbon Emission Agriculture
Implementation of the Rural Environmental Cadastre in the entire biome</td><td colspan="2">Generation and availability of spatially and temporally consistent environmental information = forest inventory, remote-sensing monitoring and early-warning system for forest fires</td></tr>
</table>

15. In addition, as a special window under the FIP, the Dedicated Grant Mechanism for Indigenous Peoples and Local Communities (DGM) has been established to provide Brazilian Indigenous Peoples and traditional communities with financing and learning mechanisms to complement the BIP. The Brazil DGM (US$ 6.5 million) will support capacity building activities and provide community grants to support initiatives related with livelihood diversification, forest and land use management in order to strengthen their social resilience in face of climate change as well as their participation in the FIP and other REDD+ processes at the local, national and global levels.

16. Furthermore, under the FIP, over US$50 million in grants and concessional funds were set aside to contribute to the financing of innovative programs and projects that engage the private sector in reducing emissions from deforestation and forest degradation, and promote sustainable forest management in FIP pilot countries. To date, one project from Brazil was approved: Brazil:

[14] REDD+ stands for "Reducing Emissions from Deforestation and Forest Degradation, and the role of conservation, sustainable management of forests, and the enhancement of forest carbon stocks in developing countries". It is a mechanism being negotiated under the UNFCCC.

Macaúba Palm Oil in Silvicultural Systems, See Annex 8 for further information.

17. The continental size and environmental complexity of Brazil's Cerrado Biome and the need to ensure the consistency of the various instruments employed, coordinate efforts in the regions, and share timely and relevant information are all challenges that call for the building of synergies among the various actors and activities with a view toward securing cost-effective solutions. Each of the projects in the BIP will contribute to this coordinated effort by funding investments and activities designed to support actions by the various executors and their working relationships with other government entities involved. The BIP will contribute to the efforts being undertaken by the GoB to reduce emissions and maintain the carbon stock of the country's second-largest biome.

C. Higher-Level Objectives to which the Project Contributes

18. The BIP of the Forest Investment Program seeks to promote sustainable land use and forest management improvement in the Cerrado, the second-largest biome in Brazil and South America, and thus contribute to a reduction in pressure on the remaining dry forests and in GHG emissions, and to an increase in CO2 sequestration

19. The proposed Project's objectives and strategy are fully in line with the World Bank Group's twin global goals of shared prosperity and poverty reduction. The Project will help small rural landholders to be in compliance with the national environmental law and, consequently, enable them to access government rural credit and technical assistance services, which may lead to: (i) improvements of the land use and natural resource management systems which their livelihood, food security, income, and quality of life mostly rely on; and, (ii) increases in job opportunities and income for landholders and other stakeholders included in the value chains generated by farming activities. Additionally, the Project will develop the Government's capacity to manage the Cerrado Biome's natural resources on a sustainable path that may protect the interests of future generations and promote social resilience in face of climate-change envisaged effects.

20. The Project's objectives are fully in line with the current World Bank Group Country Partnership Strategy (CPS 2012–2015), discussed by the Executive Directors on November 1, 2011 (Report No. 63731-BR), under Strategic Objective 4: Improving sustainable natural resource management and climate resilience. The engagement in the biome seeks to: (i) support the mapping of degraded areas across all Brazilian biomes and help develop financial incentives to promote their rehabilitation; (ii) support the increased sustainability of agricultural production and forestry in the Cerrado; (iii) support efforts by the Federal Government and selected subnational governments to further strengthen and integrate their environmental management systems, including those at the metropolitan level, and ensure environmental compliance in rural areas; (iv) help improve the efficiency and effectiveness of environmental licensing and monitoring systems; and (v) help the Federal Government and the private sector to implement Brazil's Climate Change Plan.

II. PROJECT DEVELOPMENT OBJECTIVE (PDO)

A. PDOs

21. The Project Development Objective is to enhance the capacity of the Federative Republic of Brazil's Ministry of Environment (*Ministério do Meio Ambiente* - MMA) and nine State Environmental Agency (SEAs) to receive, analyze and approve rural environmental cadastre

entries and link them to the national system (*Sistema Nacional de Cadastro Ambiental Rural* - SICAR); and support, in selected municipalities, landholding registration in the Rural Environmental Cadastre (*Cadastro Ambiental Rural* -CAR).

B. Project Beneficiaries

22. Considering the specific activities, the main beneficiaries are: (i) public goods such as natural vegetation and dry forest; (ii) MMA, (iii) State Environmental Agencies (SEAs), because activities may affect cadastre and licensing practices; and (iv) small landholders in 47 selected municipalities.

23. The Cerrado Biome's rural population is expected to benefit from Project implementation. There are an estimated six million indirect beneficiaries, i.e., people who live in rural areas of Brazil's Cerrado Biome. The Project's core area will include a total of nine Federative Units: the States of Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Paraná and São Paulo; and the Federal District[15]. The Project's implementation strategy is to register small landholdings in 47 selected municipalities.

24. The following criteria were used to select priority municipalities: (i) deforestation rate greater than 25 km^2 (2009 to 2010); (ii) areas of remnant native vegetation greater than 20 percent of the municipality or existence of protected areas (Indigenous Lands, Quilombola Territories and Protected Areas); and (iii) municipalities that are not financially supported by external funds or grants to carry out a landholding cadastre. In addition, 19 selected municipalities are stated in Ordinance 97/2012, which lists 52 municipalities that are deemed priorities under the PPCerrado. The 47 selected municipalities cover an area of 256,340 km^2, or 9.6 percent of the Cerrado Biome, where nearly 40 percent of the native vegetation has been cleared. The population in these municipalities totals 4.43 million people, 12 percent of whom live in rural areas. See Annex 7 for further information.

25. The overall goal is to have registered in the CAR 6.65 million hectares, 60 percent of the area of family farms, and 40 percent of the area of a municipality's other types of landholdings. The average size of family farms is 26.5 hectares in these 47 municipalities, while the average size of other landholdings is 837 hectares. The overall goal is to have 67,345 landholdings enrolled in the SICAR. (See Annex 2 for more details).

C. PDO-Level Results Indicators

26. Project results would be measured against the following indicators:

- Government institutions provided with capacity-building support to improve management of forest resources (number);
- Land area where sustainable land management practices were adopted as a result of the Project, i.e., land areas of small, medium and large landholdings in a selected municipality registered in the state or national cadastre system, in accordance with applicable federal and state legal norms (ha);
- Direct Project beneficiaries, i.e., small landholders in a selected municipality registered in the state or national cadastre system, in accordance with applicable federal and state legal

[15] CAR implementation in the States of Bahia and Piauí will be supported through the Cerrado Climate Change Mitigation Trust Fund, administered by World Bank. This is a single trust fund supported by the Department for Environment, Food and Rural Affairs (DEFRA) of the United Kingdom.

norms; (number and female percentage);

- Medium and larger landholdings in a selected municipality registered in the state or national cadastre system, in accordance with applicable federal and state legal norms; (number and female percentage).

III. PROJECT DESCRIPTION

27. The Project will act in synergy with the other BIP projects, and will contribute to the achievement of objectives of both the National Policy on Climate Change and the Plan to Prevent and Control Deforestation and Fires in the Cerrado. The Project will be implemented in partnership with the Federative Units' Governments, led by the SEAs, in the selected Municipalities. MMA will conduct overall coordination.

A. Project Components

28. **Component 1: Strengthening the State Environmental Agencies' (SEAs) capacity to implement the CAR.** *(Estimated total cost: US$17.28 million; Bank: US$6.15 million.)* The aim of this component is to support MMA and Participating SEAs in: (a) the development, implementation of CAR and its integration with SICAR; (b) the structuring of teams within Participating SEAs and the set up and training of Participating SEAs and their teams to guide, receive and analyze cadastres; and (c) to SEAs management teams involved in the execution of the Project. This component will include the following subcomponents:

- **Subcomponent 1.1: SICAR Developed, Implemented and Integrated in the States' Systems.** This subcomponent includes: (i) the creation, adaptation and implementation of computer systems, such as the CAR database, user interface modules, offline modules for registration, electronic modules for automated analysis of registration entries in the CAR, to detect inconsistencies in the entries submitted, thus minimizing the need for manual analysis; (ii) field inspections; (iii) field surveys; and (iv) "web-service" systems interconnecting state systems with the SICAR.

- **Subcomponent 1.2: SEAs and Teams Structured and Trained to Guide, Receive and Analyze Cadastres.** This subcomponent includes: (i) the carrying out of studies, training and analysis for SICAR requirements, process flow, registry procedures, and mapping of beneficiaries, including the procurement of operational infrastructure such as computers, vehicles and equipment for field inspections; and (ii) the design and development of the SEAs' related capacity, including dissemination and mobilization efforts, field visits, verification of enrollment, and supervision with the support of equipment and vehicles.

- **Subcomponent 1.3: Support to the SEAs' Project Management Team**. This subcomponent includes: (i) the structuring of the project management team's working conditions to monitor dissemination and mobilization actions; (ii) field visits and verification of landholders' engagement; and (iii) the carrying out of studies and analyses related to operations and methodologies for CAR implementation.

29. This component would finance workshops and meetings, acquisition of equipment and other utilities, software, hardware, licenses, travel, studies and information technology assistance. The component also includes the contracting, mobilization and training of SEA teams for local management of the process.

30. **Component 2: Registration of Landholdings in Selected Municipalities.** *(Estimated total cost: US$31.09 million; Bank: US$25.18 million.)* The aim of this component is to provide support for the gathering and compilation of up-to-date environmental cadastral data containing information about smallholders, their landholdings and their enrollment in the CAR, through: (a) the carrying out of surveys, mapping and geo-referencing of land use and rural holdings in each of the selected Municipalities; (b) the carrying out of a communications campaign and mobilization in the selected Municipalities; (c) the establishment of service desks in selected Municipalities aimed at guiding landholders to carry out the registration process and to assist landholders with the documentation required to file the registration with environmental agencies; (d) the carrying out of surveys, mapping, geo-referencing and enrollment of small landholdings in the CAR in each of the selected Municipalities; and (e) the carrying out, when necessary, of an environmental assessment and a plan for the recovery of degraded areas of the small landholdings located in selected Municipalities. This Component will include the following subcomponents:

- **Subcomponent 2.1: Thematic Basis Available to the Municipalities**. This subcomponent will focus on the surveying, mapping and georeferencing of land use and rural holdings in each of the targeted SEAs and Municipalities.

- **Subcomponent 2.2: Communications Campaign and Mobilization in the Selected Municipalities.** The communication campaign and mobilization will seek to inform, raise awareness, mobilize and engage local governments, stakeholder and landholder representatives in the selected Municipalities about the CAR, its purpose, what it involves, how it will be carried out, and its advantages for landholders and local governments.

- **Subcomponent 2.3: Service Desks and Joint Efforts in the Selected Municipalities.** In order to better serve small and large farmers, service desks will be established with the support of local governments, partner organizations and unions in the selected Municipalities, with qualified staff and equipment, to guide farmers, carry out the registration process, and assist farmers with the documentation required to file the registration with the environmental agencies.

- **Subcomponent 2.4: Cadastre of Small Landholdings.** This subcomponent will focus on the surveying, mapping, georeferencing and enrollment of small landholdings in the SICAR, in each of the selected Municipalities.

- **Subcomponent 2.5: Recovery Plan for Degraded Areas.** This subcomponent will focus on environmental assessments in each of the selected Municipalities and, when necessary, recovery of degraded areas plans of the small landholdings within the selected Municipalities. It will prepare a diagnostic sampling with the environmental status of the rural landings in the selected Municipalities, with emphasis on APPs and RLs.

31. Under this component, institutional arrangements will be sought with local partners to help create legitimacy for the Project, and to secure the active support of local governments, especially through the provision of logistical support in the selected States and Municipalities.

32. This component would finance acquisition of satellite images, publications, communication consultants and materials, workshops, seminars, meetings, follow-up visits, travels, exchange visits and training. The component also includes studies and field analyses, geoprocessing services, training, technical assistance, acquisition of computers and equipment, operational infrastructure, special customized vehicles, and travel expenses.

33. **Component 3: Project Management, Monitoring and Evaluation.** *(Estimated total cost: US$1.56 million; Bank: US$1.11 million.)* The aim of this component is to provide support for the technical and administrative management of the Project, including monitoring and evaluation activities. This component would finance studies, training, travel, technical assistance, administrative services, limited acquisition of software and computers, and operating costs.

B. Project Financing

Lending Instrument

34. The operation under consideration is a US$32.48 million investment Project financed by the Strategic Climate Fund (SCF) under the Forest Investment Fund (FIP). Consistent with the BIP of the FIP, the following concessional loan terms are proposed.

	Maturity	Grace period	Principal repayments Years 11–20	Principal repayments Years 20–40	FY 10—1 service charge [a/]
FIP Loan	40	10	2%	4%	0.25%

Project Cost and Financing (US$)

35. Up to US$3.8 million in retroactive financing will be available for eligible expenditures on goods, non-consulting services, consultants' services, works, training and operating costs under Components 1 and 2 of the Project, in accordance with Bank guidelines for payments made prior to the Signing Date but on or after May 16, 2014, but in no case more than one year prior to the date of the Loan Agreement. The table below shows the breakdown of project costs and sources of funding by component.

Project Components and Subcomponents	Project Cost US$	FIP Financing	Estimated Counterpart[16]	% Financing
Component 1: Strengthening SEAs	17,282,668	6,146,304	11,136,364	64%
Component 2: Registration	31,087,310	25,178,219	5,909,091	19%
Component 3: Project Management	1,610,022	1,155,477	454,545	28%
Total Project Costs	**49,980,000**	**32,480,000**	**17,500,000**	**35%**

C. Lessons Learned and Reflected in the Project Design

36. The Project's design draws on the experience and lessons learned from the pilot Brazil Rural Environmental Cadastre Technical Assistance Project (P126343), funded by the Pilot Program to Conserve the Brazilian Rain Forest (PPG7).

37. The specific lessons learned include: (i) communication strategies, partnership development, interaction with land tenure management institutions, and establishment of other strategic connections (including the State Office of the Public Attorney, *Ministério Público*) should be planned, taking into consideration local characteristics; (ii) landowners' willingness to register in the CAR is directly linked to the Project's credibility and image; large investments in communications, considering that partnership development is also a part of the communication strategy; strong and clear dissemination of legal and market requirements and also of environmental regulation requirements; (iii) collaborations are essential for the successful implementation of the CAR at all government levels, based on local scenarios and seeking the involvement of the most influential institutions; (iv) identification of the size of most of the properties and an estimate of the number of owners in the target group are important for better strategic planning of the Project; and (v) public services, such as cellphones, internet access,

[16] The counterpart could be monetary or non-monetary.

energy and the availability of trained technicians are necessary inputs for Project activities. Location for field support offices should be decided after verification of the availability of these services, with direct impact on the Project's implementation timeline.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

38. The Project will be implemented over a four-year period. Several SEAs will participate in Project implementation, under the overall coordination of MMA. MMA will establish a Project Management Unit (*Unidade de Gestão do Projeto,* UGP), which will be responsible for the Project's integrated coordination and implementation. The UGP will coordinate all Project activities in states with the assistance of SEAs. The UGP will be the Bank's main interlocutor during Project implementation.

39. Each selected state has signed a Technical Cooperation Agreement with MMA for the implementation of the SICAR. It has been agreed that each SEA will identify a focal point for Project activities, who will act as the main interlocutor with MMA. Project Components 1 and 2 will be implemented in partnership with the State Governments, led by the SEAs, and with the participation of local governments in the selected Municipalities.

40. Financial resources will not be transferred to the Federative Units. The necessary goods and services for each state will be arranged by MMA, who has the responsibility for all Project procurement. As a new implementation strategy, MMA established a Special Bidding Committee (*Comissão Especial de Licitação,* CEL)[17], which will be in charge of processes for the procurement of goods and services for the three international financial cooperation projects with the World Bank—the National Environment Program (Programa Nacional do Meio Ambiente, PNMA), the Federal Integrated Water Project *(Programa de Desenvolvimento do Setor Água, Interáguas*), and the proposed Project. The CEL will result in an economy of scale and the streamlining of hiring processes; will internalize the knowledge built on administrative and financial management of projects funded with international resources; and will enable greater coordination between the technical and legal areas to be consulted during the bidding processes that will be generated. The CEL is under MMA's Executive Secretariat (Secretaria Executiva, SecEx) and will be staffed with adequate staff specialized in procurement management.

41. For purposes of assisting in the carrying out of Components 1, 2, and 3 of the Project, MMA may enter into an International Cooperation Agreement with an International Cooperation Entity (ICE) with qualifications, procurement and financial management experience acceptable to the Bank, which shall include, *inter alia*, the obligation of the above referred cooperation entity: (i) to carry out the procurement of certain goods, Non-consultant services and the selection of Individual Consultants under the Project in accordance with the provisions set forth in the Operational Manual; and (ii) to keep separate records and accounts in respect of such goods, Non-consulting services and Individual Consultants and to assist the Borrower in complying with its obligations. See Annex 3 for further information.

B. Results Monitoring and Evaluation

42. The UGP will have primary responsibility for tracking progress related to Project outputs and outcomes. All baseline data for monitoring are available. Each SEA will provide support in

[17] MMA's Ordinance Nº 264 of July 28, 2014.

this task by monitoring progress in its respective state. Project progress reports will be prepared and submitted to the Bank and BIP–EC twice a year. The M&E indicators and arrangements are further detailed in Annexes 1 and 3.

43. The number and area of landholdings registered in the CAR will be also monitored by the SICAR, which automatically generates progress reports and statistics, disaggregated by landholding type (small or non-small) and gender.

44. Good rural environmental cadastre governance plays a key role in achieving the registration of private landholdings. It is also critical to ensure the effectiveness of the CAR system's implementation. In order to assess, monitor and evaluate the SEAs' institutional capacity to register landholdings in the CAR system, MMA, in collaboration with the German Cooperation Agency (GIZ), is developing an electronic system to monitor the SEAs' implementation of the CAR.

45. In addition, Project monitoring and evaluation (M&E) will be conducted in accordance with: (i) the BIP monitoring and evaluation plan to be prepared; and (ii) established FIP rules and procedures. Two evaluations will be undertaken. Project progress reports will be prepared and submitted to the Bank and BIP–EC twice a year.

C. Sustainability

46. Overall, the Project will help MMA, the SEAs and landholders to comply with the Forest Code mandate of conducting a cadastre of landholdings to be enrolled in the SICAR. The Project will reinforce the importance of the SICAR in MMA and in the SEAs, and will help to mainstream this mandatory tool for the monitoring of landholdings with regard to environmental compliance and for controlling illegal deforestation in APPs and RLs.

47. It is important to note that the CAR's implementation is a priority for the Federal Government. The strong commitment by MMA and the SEAs to implement the SICAR was evidenced during the Project preparation by: (i) technical agreements signed by the SEAs and MMA; (ii) investments made by MMA to provide satellite images for the mapping of rural landholdings in order to create a database of the SICAR's geographic information system (GIS), aimed at the implementation of the CAR; and (iii) progress by some states in the environmental regulation process. Municipal authorities and local landholders' associations will contribute to social sustainability through their participation in the Project.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Stakeholder Risk	**Moderate**
Implementing Agency Risk	
- Capacity	**High**
- Governance	**Moderate**
Project Risk	
- Design	**Moderate**
- Social and Environmental	**Low**
- Program and Donor	**Low**
- Delivery Monitoring and Sustainability	**Moderate**
Overall Implementation Risk	**Substantial**

B. Overall Risk Rating Explanation

48. The principal risks inherent in the Project design are: (i) shortfalls in MMA's ability to handle the financial and procurement load, as evidenced by similar demands to MMA by several other internationally funded projects; (ii) the heavy dependence of the Project's feasibility and success on the participation and commitment of key stakeholders such as the SEAs and landholders; and (iii) the operation's complexity. All SEAs involved in the Project have a mandate for and experience in environmental management. However, there is a risk that the SEAs may not have adequate capacity to implement the Project due to lack of staff and high turnover. Although several SEAs will participate in Project implementation, MMA will conduct the overall coordination. Each targeted Federative Unit has signed a Technical Cooperation Agreement with MMA for the implementation of the SICAR.

49. To ensure adequate technical coordination, the implementation arrangements will include a UGP, and it will be supported by a dedicated Special Bidding Committee (*Comissão Especial de Licitação*, CEL). Measures to mitigate capacity risk have been put in place. These include qualified procurement staff, procurement packaging, and a CEL. MMA is committed to improving its performance in the management of Bank-funded projects.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

50. The Project strategy has been designed specifically to maximize sustainability and efficiency. To this end, it will invest in activities that seek an optimum combination of immediate and long-term benefits. Overall, revenues from agricultural crops are a very important part of the GDP of several selected Municipalities. In 21 of the selected Municipalities, the revenues from soybeans, corn and sugar cane account for at least 10 percent of GDP. In 10 of the selected Municipalities, the share is over 30 percent. Therefore, these Municipalities will benefit the most from the CAR process, which provides a framework for ensuring landholders' compliance with environmental legislation and contributes toward promoting access to markets concerned with sustainability and official credit lines, such as the Brazil Low Carbon Agriculture Program.

51. When one thinks of the Project's rationale, one must consider the costs against the benefits or effectiveness of actions to reach a set of measures that maximize the expected results for a specific public policy. In this case, it means strengthening the main instrument for environmental recovery under the Forest Code, the CAR. The CAR process costs in each selected municipality will be monitored during Project implementation.

52. By choosing key Cerrado Biome Municipalities in terms of deforestation status and importance of agricultural production, the Project shows a strong economic rationale both for providing the many socioeconomic benefits arising from the CAR, and for accelerating the implementation of this instrument at a crucial time for the implementation of the Forest Code.

53. As stated in the BIP, the GoB has not set a target for the reduction of tCO_2 equivalent emissions under the Project. However, the Project has strong mitigation potential. Its mitigation potential will be known only after the CAR has started to be implemented throughout Brazil. Annex 6 describes in detail the economic analysis and cost effectiveness.

B. Technical

54. This Project will focus on the most critical areas of the Cerrado Biome, thus making it possible to scale up the CAR to other Municipalities and biomes through the implementation of the SICAR, and through the application of lessons learned from its implementation. The legal framework gives special treatment to small landholdings or family agricultural landholdings, settlements, agrarian reform projects, demarcated Indigenous Lands, and traditional communities that make collective use of their territory. For small landholdings or family agriculture, the Project will provide technical assistance to landholders in their cadastral statements. CAR registration for this group is covered by the Government. Medium and large landholders will not receive direct assistance in preparing their entries in the CAR, but they can benefit from the service desks to be set up in the States and Municipalities where they can receive guidance, ask questions and request geographic information. The CAR certificate is not the same as the environmental licensing of economic activities on rural landholdings. However, without the CAR certificate, no license will be issued by the SEAs after 2017. The Project will not interfere with Indigenous Lands because CAR procedures do not fully apply to them.

C. Financial Management

55. The Bank undertook an assessment of the financial management (FM) arrangements for the Project. As a result of this assessment, the Bank concluded that the arrangements meet its minimum requirements under OP/BP10.00, and are adequate to provide, with reasonable assurance, accurate and timely information on the status of the Project as required by the World Bank. Although MMA will execute the activities financed by the Project, funds are expected to be transferred to the ICE to partially execute Components 1, 2, and 3. MMA will be responsible for the Project's overall financial management arrangements.

56. The key challenges that the UGP may face in achieving these objectives arise from the need to ensure effective supervision and coordination of arrangements for the accountability of Project finances, and to comply with established internal control procedures. To address these challenges, , MMA will set up an implementation structure with clear roles and responsibilities in order to review estimates for budgeting, prepare a disbursement plan, prepare a schedule for the Project's life cycle, and establish milestones and deliverables for cost allocations to enable an effective procedure for monitoring and evaluation. Annex 3 describes in detail the fiduciary arrangements for this Project.

D. Procurement

57. The Bank undertook an assessment of the procurement arrangements for the Project. As a result of this assessment, the Bank concluded that the arrangements meet its minimum requirements under OP/BP11.00, and are adequate to provide, with reasonable assurance, accurate and timely information on the status of the Project as required by the World Bank.

58. Procurement for the Project would be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers," dated January 2011 (revised in July 2014) (Procurement Guidelines); "Guidelines: Selection and Employment of Consultant under IBRD Loans and IDA Credits & Grants by World Bank Borrowers," dated January 2011 (revised in July 2014) (Consultant Guidelines); and the provisions stipulated in the Legal Agreement. For each contract to be financed by the Loan, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior-review requirements, and time frame

are agreed by the Loan Recipient and the World Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the Project's actual implementation needs and improvements in institutional capacity.

E. Social (including Safeguards)

59. The CAR has no intention of promoting land regularization or land titling. Law 12.651/2012 makes it clear that the CAR does not imply recognition of any right or title to land. One of the CAR's objectives is to support environmental policy with a tool that can be used immediately, instead of awaiting the end of a lengthy process of land regularization.

60. The CAR has benefits both for the Government and for landholders. For landholders, the benefits of registration with the CAR (besides fulfilling a legal obligation) include the following: (i) greater legal certainty: the ability to demonstrate environmental compliance; (ii) suspension of fines (in some cases); (iii) access to credit: after five years, i.e., in 2017 the official credit cannot be extended to landholdings not registered in the CAR; (iv) access to programs that promote environmental regulation (loans, grants and technical assistance for planting and restoring APPs and RLs); and (v) input for better planning of a landholding's land use. The Project will work directly with the SEAs, small landholders and selected Municipalities. In the CAR process, the rights of current occupiers of landholdings must be respected provided they are not in violation of legal provisions. Undisputed occupation is therefore a basic requirement for the issuance of CAR certificates. On December 20, 2012, MMA and the National Institute for Colonization and Agrarian Reform (*Instituto Nacional de Colonização Reforma Agrária,* INCRA) signed a technical cooperation agreement to share information and data. Regular meetings are planned to integrate efforts with the Ministry of Agriculture (*Ministério da Agricultura e Pecuária,* MAPA) and INCRA.

61. The Project will be implemented in 47 selected Municipalities in the Cerrado Biome and will benefit private landholders. There are an estimated 101,580 landholdings in the selected municipalities, 82,774 of which (81 percent) are smallholdings or family farms, the Project's main target population. MMA and the SEAs will provide technical assistance for small landholders' cadastral statements, and the records will be based on simplified procedures and documentation.

62. Municipal authorities and local landholders' associations will contribute to social sustainability through their participation in the Project. The National Commission for the Sustainable Cerrado Program (*Comissão Nacional do Programa Cerrado Sustentável,* CONACER), established in 2006, should act as the consultative committee for the Investment Plan. It will monitor and review the BIP's progress and results, and will advise the BIP's Executive Committee (BIP–EC) on how to improve actions mandated to promote the integration of programs, projects and sectorial policies related to the Cerrado Biome.

63. There are 19 Indigenous Lands in nine of the selected Municipalities. However, OP 4.10 is not triggered because the provisions in the Forest Code establish special treatment for Indigenous Lands and *quilombola* territories, which have not been regulated yet. Thus, CAR procedures do not fully apply to Indigenous Lands yet. Therefore, the project will not interfere with Indigenous Lands, the cadastre of these Indigenous Lands will not be supported by the Project.

64. Involuntary population displacement and/or negative impacts on livelihoods are not envisaged. In accordance with the Bank's OP 4.12, the Involuntary Resettlement policy is not triggered because the proposed Project will not cause involuntary physical resettlement or

economic displacement insofar as: (i) no person would be displaced or relocated from his/her landholding or lose any of his/her assets as APP and RL remain part of his/her private landholdings; (ii) the Rural Environmental Cadastre (CAR) focuses on regulating natural resources management on a national and State level (Presidential Decree 7029/2009); (iii) the Project would not restrict the management of natural resources; (iv) the Project will not register in the CAR system any land which is the subject of dispute between private parties; and, (v) the enforcement of restrictions will not affect access to natural resources in protected areas.

65. The Environmental and Social Management Framework (ESMF) includes a summary assessment of Indigenous Peoples found in the selected Municipalities and the potential indirect impacts of implementing the CAR in areas surrounding or near Indigenous Lands. These impacts are considered positive because the CAR will contribute to the maintenance and/or recovery of APPs and RLs, the protection of watercourses and the recovery of the vegetation cover around Indigenous Lands.

F. Environment (including Safeguards)

66. The Project is expected to have a positive environment impact because it seeks to promote the rural environmental cadastre of holdings by landholders. It is rated as Category B. The nature and scale of the proposed investments in environmental regularization will not have significant adverse impacts. Despite these positive impacts, the Project will be working in various sensitive biodiversity and dry-forest areas. Since 1965, the Forest Code has required landholders to retain natural vegetation on steep slopes, along watercourses (up to a given distance from riverbanks) or in the vicinity of springs. In this context, the Forest Code has introduced the CAR as an additional tool to monitor and control deforestation. Registration of landholdings in the CAR is an effort toward bringing them into compliance with Brazil's Forest Code. MMA has prepared the Project's Environmental and Social Management Framework (ESMF). The ESMF, dated 01/10/2014, raised the positive and negative impacts of the environmental regulation process, taking to consideration the current Forest Law, state laws and Bank safeguards. The ESMF also defines a number of preventive and mitigating actions in the ten most relevant Municipalities, and seeks to present alternatives to prevent or minimize the diagnosed impacts. Such measures do not represent direct Project actions. Instead, they indicate strategies to be adopted in order to complement actions and more effectively achieve the goals set by the Project.

67. The following safeguards are triggered: Environmental Assessment (OP/BP 4.01), Forests (OP/BP 4.36), and Natural Habitats (OP/BP 4.04). MMA prepared an ESMF, published and available to the public on the website http://www.mma.gov.br/images/publicacoes/CAR/MGAS_CAR_FIP_MMA_dez.pdf, including social and environmental assessments, to provide guidance on potential issues that could arise during Project implementation. This report contains a detailed description of the environmental impacts of Project activities and identifies preventive/corrective measures. The ESMF also includes measures to be taken to avoid potential social conflicts that could result from Project activities.

68. The proposed Project was prepared through an intensive consultation process with key stakeholders. The consultation process was conducted in two stages. The first consisted of preliminary meetings to discuss the project's concept. These meetings took place in 2012 in Brasília with representatives from the States in the Cerrado Biome. The second stage, was held in 2012 and 2013, and it included four seminars to present the Project and four consultation workshops applying participative methodology for the design and survey of demands of each federation unit, taking into account aspects such as technical and institutional capacity,

infrastructure and logistics, and previously established criteria in the scope of the BIP. The activities proposed by the Project have received broad support by SEAs, producers, community organizations based on consultations with representatives thereof. No major issues were raised, and the Project received strong support from the consulted groups.

G. World Bank Grievance Redress

69. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org."

Annex 1: Results Framework and Monitoring

Country: Brazil

Project Name: FIP: Environmental regularization of rural lands in the Cerrado of Brazil (P143334)

Results Framework

Project Development Objectives

PDO Statement

The Project Development Objective is to enhance the capacity of the Federative Republic of Brazil's Ministry of Environment (*Ministério do Meio Ambiente* - MMA) and nine State Environmental Agency (SEAs) to receive, analyze and approve rural environmental cadastre entries and link them to the national system (*Sistema Nacional de Cadastro Ambiental Rural* - SICAR); and support, in selected municipalities, landholding registration in the Rural Environmental Cadastre (*Cadastro Ambiental Rural* -CAR).

These results are at | Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values				
		YR1	YR2	YR3	YR4	End Target
government institutions provided with capacity building to improve management of forest resources (Number) - (Core)	0.00	4.00	8.00	9.00	9.00	9.00
Land area where sustainable land management. practices were adopted as a result of project (Hectare(Ha)) - (Core)	0.00	500000.00	3000000.00	5000000.00	6653472.00	6653472.00
Direct project beneficiaries (Number) - (Core)	0.00	5000.00	20000.00	36000.00	57942.00	57942.00
Female beneficiaries (Percentage - Sub-Type: Supplemental) - (Core)	0.00	10.00	10.00	10.00	10.00	10.00
Medium and large landholdings registered in the CAR system	0.00	1400.00	7000.00	8000.00	9403.00	9403.00

(Number)						
Medium and large landholders - female landholders (Percentage - Sub-Type: Supplemental)	0.00	10.00	10.00	10.00	10.00	10.00

Intermediate Results Indicators

		Cumulative Target Values				
Indicator Name	Baseline	YR1	YR2	YR3	YR4	End Target
SICAR implemented and integrated to the SEA's systems (Number)	0.00	4.00	8.00	9.00	9.00	9.00
Staff in targeted SEAs trained to use SICAR and to analyze and validate data (Number)	0.00	100.00	200.00	200.00	200.00	200.00
Female staff targeted SEAS trained to use SICAR and to analyze and validate (Number - Sub-Type: Breakdown)	0.00	15.00	30.00	30.00	30.00	30.00
Small landholdings' applications to enroll in the CAR system (Number)	0.00	5000.00	20000.00	36000.00	57942.00	57942.00
Number of small landholding applications to enroll in the CAR system: female (Percentage - Sub-Type: Supplemental)	0.00	10.00	10.00	10.00	10.00	10.00
Small landholdings with liabilities provided with support to prepare plans to rehabilitate degraded areas (Percentage)	0.00	10.00	30.00	50.00	80.00	80.00

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Government institutions provided w/ capacity building to improve management of forest resources	No description provided.	annual	Technical reports	MMA - UGP
Land area where sustainable land mgt. practices were adopted as a result of project	This indicator measures the land area that as a result of the Bank project incorporated and/or improved sustainable land management practices. This indicator can track progress toward sustainability at farm scale and at landscape scales within agroecological zones, watersheds, or basins. The baseline value for this indicator is expected to be zero.	annual	SICAR reports	UGP
Direct project beneficiaries	Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female. This indicator is calculated as a percentage.	annual	SICAR reports	UGP
Female beneficiaries	Based on the assessment and definition of direct project beneficiaries, specify what percentage of the beneficiaries are female.	annual	SICAR reports	UGP

Medium and large landholdings registered in the CAR system	Non-small landholding beneficiaries are landholdings registered in the CAR system. The RLs and APPs will be measured as disaggregated data from the landholding areas inputted in the CAR system. The baseline for this indicator is zero.	annual	SICAR reports	UGP
Medium and large landholders - female landholders	Medium and large landholdings in the selected Municipalities registered in the CAR system - specify what percentage are female. The baseline for this indicator is zero.	annual	SICAR report	UGP

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
SICAR implemented and integrated to the SEA's systems	This indicator measures the total number of OEMAs that have implemented a CAR system and are commonly used as a tool to monitor and control illegal deforestation. The baseline value for this indicator is zero.	annual	Technical reports.	UGP
Staff in targeted SEAs trained to use SICAR and to analyze and validate data	This indicator measures the cumulative total number of people trained to implement the SICAR under the Project. Data will be tracked by training providers (consultants and/or MMA staff) engaged by the Project. The baseline value for this indicator is zero.	biannual	Technical reports	UGP
Female staff targeted SEAS trained to use SICAR and to analyze and validate	This indicator measures the cumulative total number of females trained to implement the SICAR under the Project. Data will be tracked by training providers (consultants and/or MMA staff) engaged by the project. The baseline value for this indicator is zero.	Biannual	Technical reports	UGP

Small landholdings' applications to enroll in the CAR system	This indicator measures the cumulative total number of small landholding entered in the SICAR. It will assess the efficiency of each service offered (service desks, events, “collective mobilization,” “one-stop shopping,” etc.). The baseline value for this indicator is zero.	biannual	SICAR report	UGP
Number of small landholding applications to enroll in the CAR system: female	This indicator measures the cumulative total number of small landholding entered in the SICAR and registered in name of a female. This indicator can track progress toward CAR registration in female landholdings. The baseline value for this indicator is zero.	biannual	SICAR reports	UGP
Small landholdings with liabilities provided with support to prepare plans to rehabilitate degraded areas	This indicator measures the cumulative total percentage of small landholdings with environmental liabilities enrolled in the CAR that have a plan to rehabilitate degraded areas in RLs and/or APPs.	annual	SICAR reports	UGP

Annex 2: Detailed Project Description

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil

A. Brazil FIP Investment Plan

1. The Forest Investment Program (FIP) is a targeted program of the Strategic Climate Fund (SCF), which is one of two funds under the framework of the Climate Investment Funds (CIF) managed by the World Bank. The SCF was created to provide financing for new ways of developing or up-scaling activities that seek to respond to a specific challenge related to climate change or to provide a sectoral response through targeted programs. The FIP was created as one of these targeted initiatives in order to catalyze policies and measures, and to mobilize funds to facilitate the decrease in deforestation and forest degradation, with a view toward promoting more sustainable forest management, thus leading to reduced emissions and enhanced conservation of forest carbon stocks (REDD+). The FIP finances efforts to address the underlying causes of deforestation and forest degradation, and to overcome barriers that have hindered past efforts to do so.

2. The FIP Subcommittee approved the Brazil Investment Plan (BIP) in May 2012. The BIP's aim is to promote sustainable land use and to improve management of the productive landscape in the Cerrado, the second-largest biome in Brazil and South America, and thus to contribute toward reducing pressure on the remaining forests, reducing GHG emissions and increasing CO_2 sequestration. The BIP's specific objectives are to: (i) improve environmental management in areas previously anthropized; and (ii) produce and disseminate environmental information at the biome scale.

3. This Project is part of the BIP and will support the Ministry of Environment (MMA) in its efforts to reduce deforestation and forest degradation on rural landholdings by ensuring environmental compliance of owners or occupiers of private landholdings in the Cerrado Biome by: (i) strengthening the Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Paraná, São Paulo and Federal District Environmental Agencies' capacity to receive, analyze and approve rural environmental cadastre entries and link them to the national system (*Sistema de Cadastro Ambiental Rural*, SICAR); and (ii) registering[18] in the rural environmental system at least 70 percent of the landholdings in the selected Municipalities.

4. The Project will scale up actions to reduce deforestation and forest degradation. The implementation of the environmental regularization of rural landholdings through the CAR enables more effective supervision and monitoring of the deforestation and degradation of natural vegetation. Furthermore, the widespread application of the CAR contributes to better management of remaining forest areas on private landholdings and to the recovery of degraded Legal Reserves (RLs) and Areas of Permanent Preservation (APPs) within them.

[18] Applications for registration in the CAR in the selected Municipalities have been received, entered in the system and linked to the national system.

B. Cerrado Biome

5. The Cerrado is a strategic biome for economic and environmental reasons as well as for food security. It covers a large area with significant carbon stocks and water resources, and with substantial biodiversity. The Cerrado is home to the headwaters of three major South American river basins: Tocantins–Araguaia, Paraná–Plata, and São Francisco.

6. The Cerrado is the Brazilian biome that has suffered the most alteration due to human occupation, after the Atlantic Forest. The Cerrado is mostly occupied by private landholdings. Planted pasture is by far the most common form of land use in the Cerrado, covering over 600,000 km^2. However, as a result of inadequate pasture management, about 50 to 60 percent of pastures show some degree of degradation, leading to the occupation or clearing of new land. Estimates also indicate that deforestation in the Cerrado Biome is proportionally more severe than that of the Amazon Biome. Between 2002 and 2010, Amazon deforestation represented 3.5 percent of the biome, with 82 percent of the original forested area remaining. Over the same period, the Cerrado Biome lost 4.5 percent of its cover, with 50.8 percent of the original vegetation cover remaining. In 2010, the area deforested in the Cerrado was similar to the area deforested in the Amazon (6,469 km^2), although this still represents a higher percentage in relative terms (0.32 percent in the Cerrado versus 0.15 percent in the Amazon).

Box 1: Cerrado Biome: Facts and Figures

Area: 2.04 million km^2 (24% of Brazil's territory)

Distribution: Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Bahia, Maranhão, Piauí, Paraná, São Paulo, and the Federal District

Private landholdings: 1,059,181 units
1,477,415 km^2
Small landholdings: 826,058 units (78%)
218,693 km^2 (15%)
Medium and large landholdings: 233,123 units (22%)
1,258,722 km^2 (85%)

Agriculture: 135 million head of cattle (64% of national herd)
61% of Brazil's soybean production in 2011

Protected Areas: 167,381 km^2 (8.2%)
Strict protection: 59,522 (2.9%)
Sustainable use: 104,637 (5.1%)

Indigenous Lands (TIs):88,762 km^2 (4.3%); Number of TI: 89

Quilombola Lands (TQs): 5,519 km^2 (0.3%);
Number of TQs: 41

Deforestation rate: 2008–2009: 7,600 km^2
2009–2010: 6,469 km^2

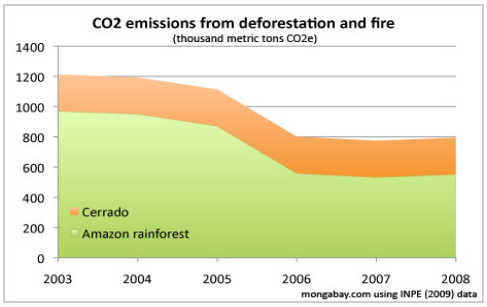
Cumulative deforestation: 1,000,334 km^2 (49% of biome)

Cerrado land use and forestry activities: CO_2 emission in 2010: 109 TgCO_2eq (39% of national **land use and forestry activities emissions**)

Mitigation Targets: Brazil voluntarily committed to a GHG emissions reduction target of 36 to 39% of projected emissions by 2020, implying a reduction in emissions of around 1 billion tCO_2e/year in 2020. Some areas targeted:
40% reduction of deforestation in the Cerrado (104 MtCO_2e);
80% reduction of Amazon deforestation (564 MtCO_2e reduction in 2020);
Recovery of 15 million ha of degraded pastures (104 MtCO_2e);
Increase in the use of biofuels (60 MtCO_2e),
Increase in hydroelectricity (99 MtCO_2e)
Alternative energy sources (33 MtCO_2e)

C. Greenhouse gas emissions (GHG)

7. In the climate context, Brazil's forests are important due to the substantial carbon stored in biomass and soils. The national inventory of GHG emissions, taking year 2005 as a baseline, showed that Land Use Change and Forestry (LUCF) was responsible for 57 percent of CO_2 emissions in Brazil[19]. Land use change and forestry in the Cerrado contributed to 23.9 percent of

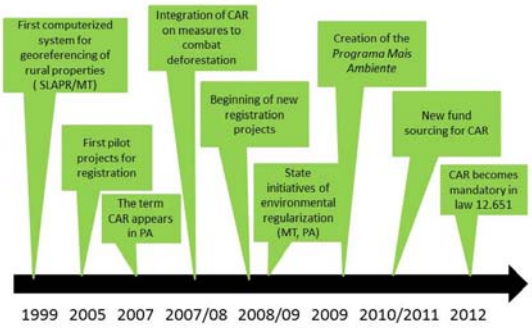


[19] Brazil 2010: Second National Communication of Brazil to the UN Framework Convention on Climate Change. Available at: www.mct.gov.br/index.php/content/view/326984.html#lista

LUCF CO_2 emissions in 2005. By 2010, the relative contribution of the Cerrado Biome's LUCF CO_2 emissions increased by 16 percent.

D. Rural Environmental Cadastre (CAR)

8. Registration of rural landholdings and environmental licensing of activities in landholdings were first implemented by the State of Mato Grosso in the late 1990s under the context of the Natural Resources Policy Subprogram, supported by the Pilot Program to Conserve the Brazilian Rain Forest (PPG7). The possibility of accurately identifying the location of deforestation has led to the search for mechanisms that would allow these methodologies to be used to correlate deforestation with landholders. Based on this idea, a series of efforts were conducted to develop instruments and registration applications, generating an accumulation of learning and successive conceptual development.



9. In 2012, the Forest Code (Law 12.651 of 2012) introduced the CAR[20] as an initiative to support environmental regulation on a national basis. The CAR is an electronic registry of privately owned rural landholdings. It is maintained by an official environmental entity whose purpose is to effectively monitor, supervise, control, plan and ensure the environmental compliance of landholdings. The CAR will provide essential information for monitoring and controlling rural land use, including compliance with reforestation obligations. The system will be able to distinguish between legal and illegal land clearing, and will facilitate land use planning.

10. The CAR was further detailed in normative instruments such as Decrees 7830/2012 and 8235/2012, which established the Environmental Regularization Program (*Programa de Regularizacão Ambiental*, PRA) and Normative Instruction Nº 2/2014, which establishes minimum content, status, and the beginning of the one-year deadline, extendable for another year.

11. The CAR is essentially an environmental management system that has the purpose of relating people to land use. It includes the following: (i) a spatial referencing system (geodetic survey); (ii) an unambiguous land parcel description system (including cadastral mapping); (iii) a land cover classification system that provides a basis for evaluation; and (iv) a system for marking ground-based boundaries (cadastral survey).

12. The CAR does not cover regularization, registry of land tenure, or land titling. Land tenure regularization is a separate process that involves the licensed public notary offices *(cartórios)* in the states and INCRA. This is not under the scope of this Project[21] (see Annex 3).

[20]See articles 29, 30 and 53 (Federal Law 12.651, dated May 2012), as modified by Law 12.727 (October 2012) and Federal Decree 7.830 (October 2012).

[21] The high precision of geodetic surveys of property boundaries required by INCRA for registration in the National Rural Cadastre System (*Sistema Nacional de Cadastro Rural*, SNCR) is very stringent (about 0.5 m). Land tenure legislation stipulates the methodology to be used in defining the boundaries of landholdings.

E. Project Area

13. The Project's core area will include a total of nine Federative Units: the States of Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Paraná and São Paulo; and the Federal District[22] (1,793,729 km^2; 88 percent of the Cerrado Biome). The Project's implementation strategy is to register the small landholdings in 47 selected municipalities.

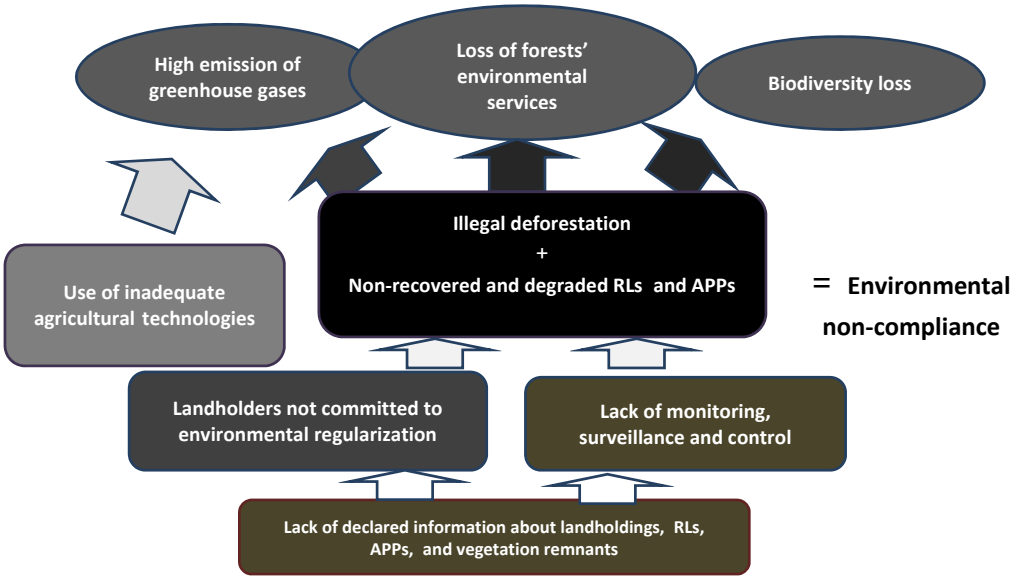
14. The following criteria were used to select the municipalities: (i) a deforestation rate greater than 25 km^2, observed from 2009 to 2010; (ii) areas of remnant native vegetation larger than 20 percent of the municipality or existence of protected areas (Indigenous Lands, Quilombola Territories and Conservation Units); (iii) Decree 97/2012, which lists 52 municipalities deemed priorities under the Action Plan to Prevent and Control Deforestation and Fires in the Cerrado Biome (PPCerrado); and (iv) municipalities that are not financially supported by external funds or grants to carry out a landholding cadastre. The 47 selected municipalities cover an area of 256,207 km^2, or 9.6 percent of the Cerrado Biome, where nearly 40 percent of the native vegetation has been cleared. The population in these municipalities totals 4.43 million people, 11 percent of whom live in rural areas.

F. Project Strategy

15. As part of the BIP's general objective, GHG emissions, the loss of forest's environmental services, and loss of biodiversity rank at the top of the problem-analysis tree. This is a consequence of the high level of illegal deforestation, which is inconsistent with the Forest Code, and of the lack of recovery of deforested and degraded RLs and APPs. Traditional farming technologies also contribute to high GHG emissions. This problem will be addressed by another BIP project (Project 1.2. Sustainable production in areas previously converted to agricultural use, based on the ABC Plan).

16. Illegal deforestation and the lack of recovery of degraded areas result from the challenges faced by environmental authorities in enforcing the Forest Code in such a vast area, and from the lack of formal commitment by landholders to environmental regularization, as well as to adhering formally to a plan for restoration of degraded areas. This is a specific problem that the Project expects to address. The CAR was introduced by the Forest Code (Law 12.651/2012) as an additional tool to monitor environmental compliance and control deforestation. With such available tools, landholders will be enrolled to join a regularization project, or to plan and commit them to maintaining RLs and APPs.

[22] CAR implementation in the States of Bahia and Piauí will be supported through the Cerrado Climate Change Mitigation Trust Fund, administered by World Bank. This is a single trust fund supported by the Department for Environment, Food and Rural Affairs (DEFRA) of the United Kingdom.

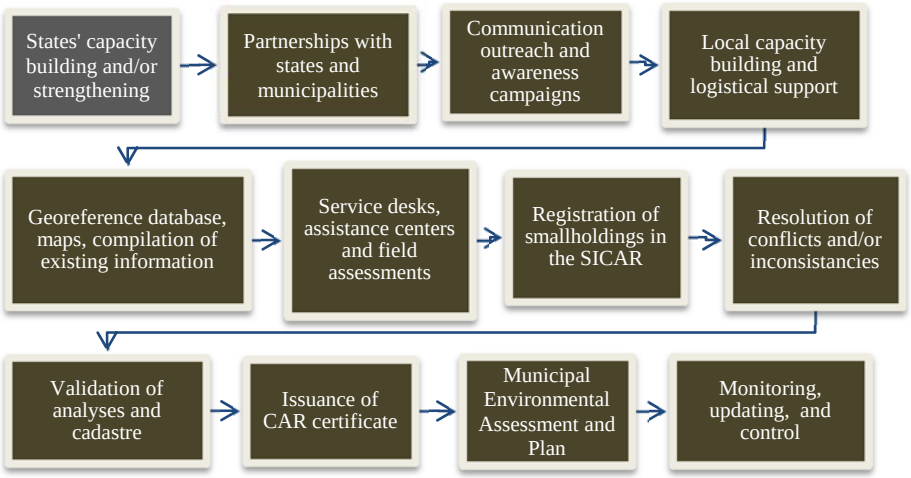


17. This Project will focus on the most critical areas of the Cerrado Biome and enable a scale-up of CAR implementation for other municipalities and biomes through the implementation of the SICAR and the application of lessons learned from its implementation.

18. The Federative Units have the option of creating and keeping their own CAR subscription system, or using the SICAR, which is under continuous development by MMA. So far, the Federal District (DF) and the States of Goiás (GO), Maranhão (MA) and Mato Grosso (MT) are using the SICAR. The remaining states targeted by the Project — Mato Grosso do Sul (MS), Minas Gerais (MG), Tocantins (TO) and São Paulo (SP) — are using their own systems. MG, TO and SP already have functional systems, while MS is finishing the development of its system. It is important to mention that the States of MA and TO have approved projects in *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES)'s Amazon Fund, and the States of MS and MT have submitted their own projects which include funding for further systems development.

19. The SEAs and local governments of the selected municipalities play an important role in the Project. They will be able to receive landholders' statements for inputting in the CAR system through local state systems or the SICAR. Some SEAs have already made progress in the process of decentralizing environmental management and environmental regulation. Besides the enrollment process, some of the selected municipalities may also become responsible for the processes of analyses, surveys and resolution of disputes for validation in the CAR system.

20. The strategy to be adopted in order to achieve the Project's objectives comprises the following stages that may even occur simultaneously, and not necessarily in a strict sequence:



21. The Forest Code (Law 12.651 of 2012), Decrees 7.830 of 2012 and 8235 of 2014, and Normative Ordinance Nº 2 of 2014 give special treatment to small landholdings or family agricultural landholdings[23,24], settlements, agrarian reform projects, demarcated Indigenous Lands, and traditional communities that make collective use of their territory (i.e., *quilombos*, extractive communities). In this Project, these small landholdings are referred to as Type A, while the largest are Type B. For Type A landholdings, the Project will provide technical assistance to landholders in their cadastral statements, including the RL statement. In accordance with the Forest Code, the record will be based on simplified procedures and documentation, including only the identity of the landholder (owner or occupant), a sketch indicating the boundaries of exploitation, the APPs, and areas of remnant vegetation that form the RL. Government agencies will provide georeferencing information and legal support. Enrollment in

FU	Number of Municipalities	Targeted Type A number	Targeted Area Type A hectare	Targeted Type B number	Targeted Area Type B Hectare	Total Targeted number	Total targeted hectare
DF	1	11,967	7,162	1,385	96,181	13,351	103,343
GO	6	5,209	300,964	2,582	1,072,544	7,791	1,373,508
MA	12	24,665	246,611	1,503	313,428	26,168	560,039
MG	5	1,912	138,589	1,182	457,985	3,094	596,574
MS	5	3,802	89,263	1,023	1,579,105	4,825	1,668,368
MT	4	3,247	133,002	544	1,389,996	3,790	1,522,998
PR	3	1,725	18,086	226	96,304	1,951	114,390
SP	4	2,886	48,869	451	114,615	3,337	163,484
TO	7	2,531	156,314	509	394,456	3,040	550,769
Total	47	57,942	1,138,858	9,403	5,514,614	67,345	6,653,472

[23] A family landholder and rural family entrepreneur is one who practices activities in rural areas meeting the following requirements simultaneously: (i) he or she does not hold, in any capacity, an area of up to four fiscal modules; (ii) he or she mostly uses the manual labor of his or her own family in the economic activities of his or her establishment or undertaking; (iii) he or she has a minimum percentage of household income arising from economic activities of his or her establishment or enterprise, those defined by the Executive Authority (wording of Law Nº 12.512 of 2011); and (iv) he or she directs his or her establishment or undertaking with his or her family. Law 11.326/2006.

[24] A fiscal module is a unit of land measurement used in Brazil, instituted by Law No. 6.746 of 1979. It is expressed in hectares. It is variable and is set for each municipality, taking into account: (i) the type of exploitation prevalent in the municipality; (ii) proceeds from the prevalent exploitation; (iii) other exploitations in the municipality, which, although not dominant, are significant because of income or area used; and (iv) the concept of family landholding. The fiscal module corresponds to the minimum area required for a rural property's exploitation to be economically viable. In the Cerrado Biome, most Municipalities have fiscal modules ranging from 20 to 75 ha, with exception of metropolitan areas.

the CAR is free for this group. Type B landholdings (with holdings over four fiscal modules) will not receive direct assistance in preparing their entries in the CAR, but can benefit from the service desks to be set up in the states and Municipalities so that they can receive guidance, ask questions and request geographic information.

22. MMA is providing satellite images to map rural landholdings. These images will compose a database of geographic information for the SICAR, aimed at the implementation of the CAR. The SICAR has been created and is being tested.

23. The CAR certificate is not the same as the environmental licensing of economic activities on rural landholdings.

24. Each landholding must be registered by the landholder or by a firm or consultant accredited by the respective SEA. Official property data available in the National Cadastre of Rural Properties (*Cadastro Nacional de Imóveis Rurais*, CNIR), Certificates of Registry of Rural Property (*Certificados de Cadastro do Imóvel Rural*, CCIR) issued by INCRA, and other land data available in the State Land Agencies will be used by project agents in the selected Municipalities. Where land conflicts (overlaps) exist, an effort will be made to resolve them and proceed with the CAR validation. Where this is not possible, the records in the CAR will remain suspended and will not be approved.

25. Based on selected Municipalities' data, goals regarding the number and areas of landholdings were set for the Project. The overall goal is to have registered in the CAR 70 percent of the total number of small landholdings and 50 percent of medium and large landholdings, and, 60 percent of the area of family farms, and 40 percent of the area of a municipality's other types of landholdings. The average size of family farms is 26.5 hectares in these 47 Municipalities, while the average size of other landholdings is 837 hectares.

26. The Project design includes three components. The first component is focused on the SEAs' capacity to implement the CAR, the second focuses on support for registration in the selected Municipalities, and the third targets the management, monitoring and evaluation of the Project by MMA. The first two components were collaboratively designed by MMA and the SEAs.

G. Project Components

27. **Component 1: Strengthening State Environmental Agencies' Capacity to Implement the CAR.** *(Estimated total cost: US$17.28 million; Bank: US$6.15 million.)* The aims of this component are to: (i) empower Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Paraná, São Paulo and Federal District Environmental Agencies and 47 selected municipal governments to receive, analyze and approve the rural environmental cadastre entries and link them to the national system (SICAR); and (ii) establish the necessary conditions to implement the SICAR in terms of legislation and standards, staff training, electronic systems, maps, imagery and thematic databases, infrastructure services for the target audience, information technology (IT) and operational infrastructure. This will be accomplished through three subcomponents.

28. **Subcomponent 1.1: SICAR Developed and Integrated in the States' systems.** This subcomponent includes the following activities: (i) the creation, adaptation and completion of computer systems, such as the CAR database, user interface modules, offline modules for registration, and electronic modules for automated analysis of entries in the CAR, to detect inconsistencies in the registration entries submitted, thus minimizing the need for manual analysis;

(ii) field inspections; (iii) field surveys; and (iv) "web-service" systems that interconnect state systems with the SICAR.

29. For those SEAs that are advanced in the process of implementing their respective computer systems, the subcomponent would include the development of several features and the improvement of systems. Infrastructure needs related to IT for proper system operations, such as computers, servers, logical networks, software licenses, Internet links, etc., will also be financed.

30. This subcomponent would finance equipment, including software licenses, hardware, servers, services, IT assistance, and workshops.

31. **Subcomponent 1.2: SEAs and Teams Structured and Trained to Guide, Receive and Analyze Cadastres.** This subcomponent will include the following activities: (i) carrying out of studies, training and analyses for SICAR requirements, process flow, registry procedures, and mapping of beneficiaries, including the procurement of operational infrastructure such as computers, vehicles and equipment for field inspections (e.g., GPS, cameras); and (ii) design and development of the SEAs' related capacity, including dissemination and mobilization efforts, field visits, verification of enrollment, and supervision with the support of equipment, vehicles and per diems.

32. This subcomponent would finance training, workshops and events, vehicles, computers, equipment for field inspections (e.g., GPS, cameras), audiovisual equipment, services and consultants to analyze CAR requirements, processes and procedures, and to support the CAR process.

33. **Subcomponent 1.3: Support to the SEAs' Project Management Team.** This subcomponent would include the following activities: (i) structuring the working conditions of the Project management team to monitor dissemination and mobilization actions; (ii) field visits and verification of landholders' engagement; and (iii) carrying out of studies and analyses related to operation and methodologies for CAR implementation.

34. This subcomponent would finance travel, technical assistance to implement the CAR process, studies and analyses related to CAR implementation.

35. **Component 2: Registration of Landholdings in Selected Municipalities.** *(Estimated total cost: US$31.09 million; Bank: US$25.18 million.)* The aim of this component is to obtain up-to-date environmental cadastre data containing information about smallholders (names, addresses, etc.) and their landholdings (surface area, boundaries, forest cover, RLs and APPs), and their enrollment in the SEAs' CAR system, focusing on the 47 selected Municipalities. This will be accomplished through five subcomponents.

36. **Subcomponent 2.1: Thematic Basis Available to the Municipalities**. This subcomponent will focus on surveying, mapping and georeferencing land use and rural holdings in each of the targeted States and Municipalities.

37. This subcomponent would include the following activities: (i) acquisition of satellite images; (ii) geographic data and information; (iii) validation and classification of satellite imagery; (iv) surveys of hydrography, topography, remnant vegetation and corridors; (v) surveys and organization of landholdings maps; (vi) classification of images taken in 2011 in the areas of the 47 selected municipalities, at a scale of 1:50,000; and (vii) integration of the land database in collaboration with INCRA and other institutions.

38. This component would finance the acquisition of satellite images, studies and analyses related to the mapping and georeferencing of land use, and travel.

39. **Subcomponent 2.2: Communications Campaign and Mobilization in the Selected Municipalities**. The communication campaign and mobilization will seek to inform, raise awareness, mobilize and engage local governments, stakeholder representatives and landholders in the selected Municipalities about the CAR, its purpose, what it involves, how it will be done, and its advantages for landholders and local governments. It will follow a communication plan prepared for each municipality.

40. This subcomponent would include the following activities: (i) identification of relevant stakeholders and mapping of audiences; (ii) definition of Project messages for target audiences, language, tools and local media channels; (iii) design and development of communication materials and tools, including leaflets, folders, radio spots, meetings, workshops and training; (iv) communication and dissemination events; and (v) call centers.

41. The subcomponent would finance communication consultants, communication materials such as brochures, booklets, posters and banners, radio spots, videos, "airtime" for advertisers, events, fairs, workshops, seminars, meetings, follow-up visits, travel, exchange visits, and training of Project teams for local management of the campaign.

42. **Subcomponent 2.3: Service Desks and Joint Efforts in the Selected Municipalities.** In order to better serve small and large farmers ("Type A" and "Type B" landholdings), service desks will be established with the support of local governments, partner organizations and unions in the selected Municipalities, with qualified staff and equipment to guide landholders, carry out the registration process and assist farmers with the documentation required to file the registration with the environmental agencies.

43. This subcomponent would include the following activities: (i) implementation of service desks at the municipal and/or regional level; (ii) planning of the logistics and organization of personalized "joint-effort" events in the targeted Municipalities, involving municipal government agencies and partner organizations; and (iii) preparation of customized vehicles to be used as CAR enrollment offices.

44. This subcomponent would finance the acquisition of computers and equipment, operational infrastructure such as tents, stands and furniture, small civil works, wireless service, special customized vehicles, training-event services, consultants and travel.

45. **Subcomponent 2.4: Cadastre of small landholdings.** This subcomponent will focus on the surveying, mapping, georeferencing and enrollment of small landholdings in the SICAR, in each of the selected Municipalities. Typical activities envisaged under this component are: (i) the compilation and organization of existing information on rural landholdings, and georeferencing of a sample of landholdings; (ii) field surveys and creation of a georeferenced database; (iii) the creation of municipal maps of small landholding; and (iv) the enrollment of small landholdings in the CAR electronic system, individually or in bulk, through the intervention of accredited companies.

46. This subcomponent would finance georeferencing and CAR registration services, studies and field analyses, supervision and technical assistance, and travel.

47. **Subcomponent 2.5: Recovery Plan for Degraded Areas.** This subcomponent will focus on environmental assessment of each of the selected Municipalities, and, when necessary, plan the

recovery of degraded areas of the small landholdings within the selected Municipalities, with the provision of technical assistance and financial support to help prepare a complete mosaic of landholdings, APPs and RL areas in each selected Municipality, involving field validation activities, environmental assessment and mapping.

48. This subcomponent would finance, *inter alia*, technical assistance to prepare an environmental assessment and to plan the recovery of degraded areas in each of the selected Municipalities.

49. Under this subcomponent, institutional arrangements will be sought with local partners to help create legitimacy for the Project and secure the active support of local governments, especially through the provision of logistical support by selected States and Municipalities.

50. **Component 3: Project management, monitoring and evaluation.** *(Estimated total cost: US$1.61 million; Bank: US$1.15 million.)* The aim of this component is to support the Project's effective and efficient management and administration (in close coordination with other projects that support the CAR within MMA), monitoring and evaluation. This component would include the following activities: (i) technical coordination, monitoring and reporting; (ii) adequate financial management, procurement and auditing; (iii) assistance to efforts by the SEAs and selected local governments to further implement the CAR systems; (iv) building of synergies between the Project and other projects under the Brazil Investment Plan (BIP), as well as with other initiatives in Cerrado Biome, with the aim of securing cost-effective solutions; and (v) financial and technical activities for Project closure. Annex 3 presents further information.

51. This component would finance studies, technical assistance, computers, training and operating costs.

H. Linkage with the BIP's Other Projects and Programs

52. The Project, as part of the BIP, will act in synergy with and contribute to the achievement of objectives of the National Policy on Climate Change and the Plan to Prevent and Control Deforestation and Fires in the Cerrado. It is important to highlight the fact that, since the beginning of the BIP design phase, the successful collaboration among MMA, MAPA and MCTI has allowed the development of a strategic approach to foster synergies not only among the BIP's projects, but also with ongoing Cerrado government plans and policies already under implementation at federal, state and municipal levels.

53. The environmental regularization of landholdings in selected Municipalities would generate the conditions for landholders to access the technical and financial support provided under the Low Carbon Agriculture Plan (*Agricultura de Baixo Carbono,* ABC), and from other sources, which would enable them to use land in a more sustainable manner as well as to protect the environment. The Brazil Cerrado Climate Change Mitigation Trust Fund, supported by the Department for Environment, Food and Rural Affairs (DEFRA) of the United Kingdom (US$16 million) will also act complementarily with the Project by focusing its actions on supporting the implementation of the SICAR system in the selected Municipalities in the Cerrado Biome of the States of Bahia and Piauí.

54. Annex 8 describes in detail the linkages and synergies with other projects and programs.

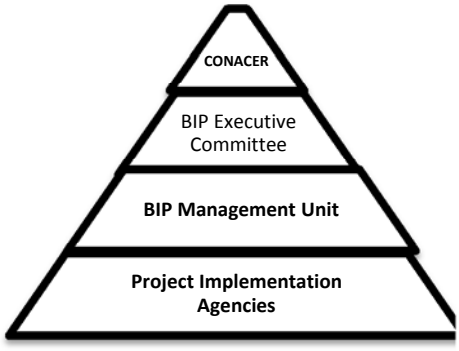
Annex 3: Implementation Arrangements

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil

A. Brazil Investment Plan (BIP) Arrangements

1. The BIP has developed a management arrangement to ensure synergies among the different projects and institutions during its implementation phase.

2. According to the BIP, the National Commission for the Sustainable Cerrado Program (*Comissão Nacional do Programa Cerrado Sustentável,* CONACER), established in 2006, should act as the consultative committee for the Investment Plan. It will monitor and review the BIP's progress and results, and will advise the BIP's Executive Committee (BIP–EC) on how to improve actions mandated to promote the integration of programs, projects and sectoral policies related to the Cerrado Biome. CONACER is composed of representatives from: (i) MMA; (ii) the Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mendes de Conservação da Biodiversidade,* ICMBio); (iii) the Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário,* MDA); (iv) the Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária,* EMBRAPA); (v) the Brazilian Society for the Progress of Science (*Sociedade Brasileira para o Progresso da Ciência,* SBPC); (vi) the Brazilian Association of State Environmental Entities (*Associação Brasileira de Entidades Estaduais de Meio Ambiente,* ABEMA); (vii) civil society organizations (including representatives of NGO networks of Indigenous Peoples and local communities); and (viii) the rural productive sector.



3. The BIP–EC will be responsible for: (i) the monitoring and evaluation of the overall BIP implmentation and (ii) the interaction of the BIP's projects with other government programs. The BIP–EC should promote synergies among the BIP's projects and the involvement of different stakeholders. The BIP–EC will have representatives from MMA, MAPA and MCTI. The BIP–EC will report periodically to CONACER about the BIP's progress and results, and will also receive feedback and guidance for the improvement of the BIP's execution. The BIP Management Unit will support the BIP–EC.

4. The table below summarizes the partners and responsibilities under BIP.

Table 1. BIP partners and responsibilities

	Responsibilities
National Commission for the Sustainable Cerrado Program (CONACER)	CONACER should act as the consultative committee for the Investment Plan. It will monitor and review the BIP's progress and results and will advise the BIP–EC on how to improve execution. CONACER is composed of representatives from: (i) MMA; (ii) ICMBio; (iii) MDA; (iv) EMBRAPA; (v) SBPC; (vi) ABEMA; (vii) civil society organizations (including representatives of NGO networks of Indigenous Peoples and local communities); and (viii) the rural productive sector.
BIP–Executive Committee **(BIP-EC)**	The BIP-EC, established on March 26, 2014, will be responsible for the BIP's monitoring and evaluation through the coordination of actions of the different ministries involved and the interaction of FIP projects with other government programs. The BIP–EC should promote synergies among FIP projects and the involvement of

	Responsibilities
	different stakeholders. The EC will have representatives from MMA, MAPA and MCTI. The BIP–EC will report periodically to CONACER about the BIP's progress and results and will also receive feedback and guidance for the improvement of the BIP's execution.
BIP Management Unit (UGPI)	UGPI, to be established as part of the Brazil Investment Plan Coordination Project, will be responsible for the development and implementation of the BIP monitoring system; coordination of activities among projects, DGM, and private sector, with a view toward strengthening coordination and synergies among projects throughout the implementation phase; preparation of progress reports; monitoring and evaluation; and outreach of the BIP.
Project Management Unit (UGP)	The UGP will be responsible for coordinating project implementation; technically supervising the development of project activities, including effective coordination of research and development activities at the project level with other government agencies; coordinating the Project's different actors; project monitoring and evaluation. The UGP will also be responsible for financial and administrative management; supervision of procurement activities; financial management; financial reporting; annual budget and project planning; preparation of terms of reference (ToRs) and technical specifications for project activities; and technical reports for submission to the MDB and BIP Coordination Unit.

B. Project Administration Mechanism

5. The Project will be managed by MMA.

6. Although several SEAs will participate in Project implementation, MMA will conduct the overall coordination. Project Components 1 and 2 will be implemented in partnership with the State Governments, led by the SEAs, and with the participation of local governments in the selected Municipalities.

7. Each selected state has signed a Technical Cooperation Agreement with MMA for the implementation of the SICAR. It has been agreed that each SEA will identify a focal point for Project activities, who will act as the main interlocutor with MMA.

8. Alliances would also be formed with sectoral entities (land tenure agencies, unions, agricultural and family farmers' federations, etc.) and with civil society organizations. INCRA would support the compilation of the land database.

9. To ensure adequate technical coordination, the implementation arrangements will include the Project Management Unit (*Unidade de Gestão do Projeto*, UGP).

10. As a new implementation strategy, MMA established a Special Bidding Committee (*Comissão Especial de Licitação*, CEL)[25], which will be in charge of processes for the procurement of goods and services of the three international financial cooperation projects with the World Bank—the National Environment Program (*Programa Nacional do Meio Ambiente,* PNMA), the Federal Integrated Water Project (*Programa de Desenvolvimento do Setor Água,* Interáguas), and the Project. The CEL will result in an economy of scale and the streamlining of hiring processes; will internalize the knowledge built on administrative and financial management of projects funded with international resources; and will enable greater coordination between the technical and legal areas to be consulted during the bidding processes that will be generated.

[25] MMA's Ordinance Nº 264 of July 28, 2014.

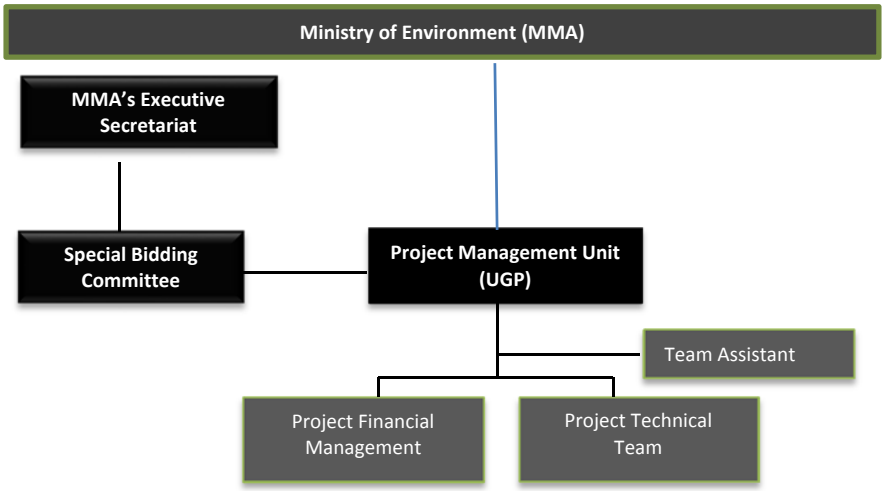
11. The CEL is under MMA's Executive Secretariat (*Secretaria Executiva*, SecEx) and will be staffed with adequate staff specialized in procurement management.

12. The duties of the CEL are defined in MMA Ordinance Nº 264 of July, 28 2014:

- Perform all bidding procedures related to actions or activities foreseen in the procurement plans of the projects or programs;
- Guide technical areas and UGPs in drafting technical specifications, TORs and cost estimates;
- Guide technical areas and UGPs on the formal requirements and the necessary measures for each stage of bidding procedures to be addressed;
- Submit the processes related to procurement to MMA's legal counsel;
- Attend the audits regarding procurement procedures;
- Participate in World Bank missions concerning their duties; and
- Proceed to award of procurement result.

13. The figure below represents the Project implementation arrangement.

Figure 1. Project Implementation Arrangements



14. The UGP will coordinate all Project activities in states with the assistance of SEAs. Financial resources will not be transferred to the States, but the States' needs with regard to goods and services will be met through hiring conducted by MMA, which will provide these goods and services to the requesting states.

15. The UGP will be the Bank's main liaison during Project implementation. As the formal Project manager, it will compile all Project-related information provided by the SEAs, and will produce technical and safeguard reports as required by World Bank policies. The UGP will also be responsible for planning, management, monitoring and coordination with the SEAs; the preparation of technical specifications for procurement and TORs; and the selection of consultant candidates. Specifically, the UGP's main responsibilities are to:

- Ensure timely implementation of all Project activities, and monitor such activities and the Project's related indicators. To this end, the UGP will maintain regular communications with the CEL and hold regular meetings with the BIP Management Unit.

- Prepare progress and financial reports (and other Project-related documents as necessary), as agreed in the Loan Agreement, and compile Project information and results from other implementing agencies. These reports and their content shall be in a format acceptable to the Bank.
- Prepare TORs for specific public-sector management activities, supervise their procurement, and oversee contracts to ensure satisfactory implementation.
- Provide assistance to SEAs on Project implementation, monitoring and supervision.
- Ensure that the Bank's safeguard policies triggered under the Project, as well as related Environmental and Social Management Frameworks, are observed and complied with.
- Host and facilitate the Bank's supervision missions and work with the Bank to optimize the operation's results and impact.
- Disseminate results in such a manner as to strengthen reform constituencies and ensure the conduction of reforms stemming from the Project's studies and recommendations.
- Maintain technical dialogue with stakeholders, including any sector-specific decision-making bodies, as required for successful Project implementation.

16. The UGP will also manage financial and disbursement activities as required by World Bank policies, and to be described in the Loan Agreement. Administrative and technical support to the UGP through contracted consultants, as needed, is envisioned during Project implementation. Specifically, the UGP's main responsibilities are to:

- Prepare progress and financial reports (and other Project-related documents as necessary), as agreed in the Loan Agreement.
- Ensure that procurement is carried out following Bank rules and procedures, including the preparation of procurement plans when applicable.

17. The UGP will be staffed with a minimum of ten professionals with TORs and qualifications acceptable to the Bank. These include a Project manager, three technical specialists, two financial management specialists, and three assistants.

18. For purposes of assisting in the carrying out Components 1, 2, and 3 of the Project , MMA may transfer a portion of the loan proceeds to an International Cooperation Entity (ICE) under a subsidiary agreement to be entered into by MMA and such entity under terms and conditions acceptable to the Bank. The Agreement will set forth their respective roles and responsibilities with regard to Project implementation. It is estimated that US$9 million is the total amount that might be transferred to the ICE. The ICE will be assessed from a financial and procurement standpoint to ensure that it has the necessary fiduciary arrangement in place to manage the funds that will be received.

19. Under this agreement, MMA will be allowed to transfer funds to the ICE on condition that: (i) the ICE will follow the Bank's procurement guidelines for those contracts procured using loan funds, and the ICE's procurement procedures may be used for those contracts procured exclusively using counterpart funds; (ii) any remuneration paid to the ICE (i.e., fees) for its work as collaborator under the Project shall not be paid out of loan proceeds; (iii) the ICE will comply with the Bank's recommendations to MMA regarding financial management and procurement, and

MMA will be responsible for ensuring compliance; and (iv) the final draft of the ICE Agreement (or equivalent document) shall be submitted to the Bank for no-objection prior to signing.

20. MMA has prepared a Project Operational Manual (*Manual Operacional do Projeto,* MOP). The MOP documents the arrangements made for recording Project impacts, outcomes, outputs and inputs that are required to assess progress toward the achievement of Project objectives. The MOP contains detailed procedures and guidelines for disbursements, payments, approvals, commitments, payments and reporting, and procurement procedures. The MOP also contains the M&E strategy and guides overall Project implementation.

C. Financial Management, Disbursements and Procurement

Financial Management

21. This section describes the arrangements related to: (i) budgeting and counterpart funding; (ii) flow of funds; (iii) accounting and maintenance of accounting records; (iv) internal controls, including internal audit; (v) periodic financial reporting; and (vi) external audits to effectively execute the financial management and monitoring of this Project.

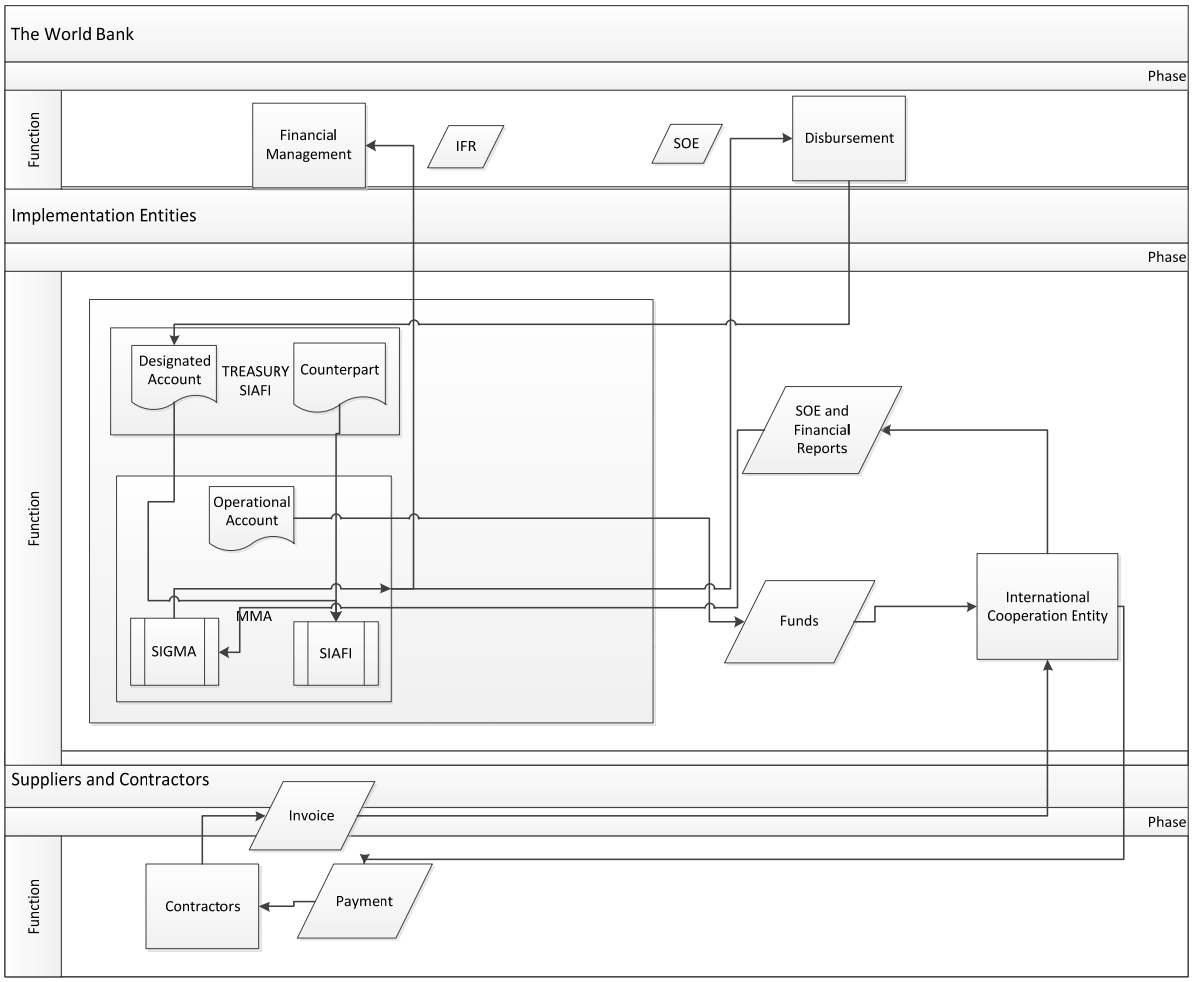
22. **Planning and Budgeting**. The federal budgeting systems will be used for the purposes of the Project. Federal budget documents include a four-year plan (*Plano Pluri-anual*, PPA), budget preparation regulations (*Lei de Diretrizes Orçamentárias*, LDO), and the annual budget (*Lei Orçamentária Anual*, LOA). The MMA budget will reflect the appropriate amount of funds corresponding to the Project within the budget appropriation. The annual budget for the Project will be placed on a disbursement schedule and will be prepared based on the policy guidelines issued by implementing agencies.

23. **Budget Execution Cycle and the Budget Decentralization Framework.** The budget cycle in Brazil comprises three phases: commitment (*empenho*), verification (*liquidação*), and payment (*pagamento*). Dates of transactions for all the phases will be recorded in the Federal Integrated Financial Administration System (*Sistema Integrado de Administração Financeira,* SIAFI). The funds for Project activities will be transferred partially to the ICA under a procedure known as "budget decentralization" (*descentralização de créditos orçamentários*) for the implementation of Components 1, 2 and 3.

24. **Internal Controls and Procedures.** The internal control environment for the Project appears reasonable. The Project will be implemented within the federal internal control environment, which is based on a series of laws and regulations. Public Accountability Law 4.320/64 establishes high-level accounting principles. The National Treasury Secretariat is responsible for issuing manuals that document and detail accounting procedures. Under federal legislation, regulations provide adequate segregation of duties, supervision, quality control reviews, reconciliation, internal audits, and independent external audits. A Project Operational Manual (*Manual Operacional do Projeto,* MOP) was developed to reflect the procedures to be adopted with the operation.

25. **Flow of Funds.** The funds will be deposited in the Designated Account managed by MMA and it will follow the Secretariat of National Treasury (STN) and the Bank's operational policies and procedures also to the funds made available to the ICE. A new bank account will be set up and maintained for the purposes of the Project in MMA; and in the ICE a specific project fund account will be segregated in their fund account.

26. **Disbursement of Bank Funds to the Implementing Agency**. Disbursements may be made on the basis of Advances and Reimbursements, which will be observed for both MMA and the ICE. The supporting documentation required to document eligible expenditures paid from the designated account and for reimbursements will include Statements of Expenditure (SOEs) and Summary Sheets with records. These documents will be reported by MMA to the Bank and it will consolidate financial information including those under the ICE. The MMA is ultimately responsible for the reporting and follow-up of expenditures under the ICE project account. The ICE will report their expenditures periodically to the MMA in order to enable the MMA to fulfill the financial management requirements to provide the interim financial reports and submit withdrawal applications timely. The National Treasury (STN) will open a segregated designated account (DA), in US Dollars, in the Banco do Brasil and have a Fixed Ceiling of US$3.2 million and eligible expenditures paid from the Designated Account will be reported on a quarterly basis. The minimum application size for Reimbursements will be US$300,000 equivalent. The Project will have a four-month Application Deadline Date (Grace Period). Up to US$ 3.8 million retroactive financing will be available for eligible expenditures under Categories (1) and (2) as per Bank guidelines for payments made prior to the Signing Date but on or after May 16, 2014, but in no case more than one year prior to the date of the Loan Agreement. The funds will be transferred as follows:



27. After the definition of the ICE, in order to provide satisfactory implementation under the financial management requirements the entity shall observe the same requirements under the MMA responsibilities which include: (i) budgeting arrangements; (ii) flow of funds; (iii) accounting and maintenance of accounting records; (iv) internal controls, including internal audit; (v) periodic financial reporting (including quarterly/half-yearly, interim, and annual audit) and the format of the standard reports, as well as whether entity financial reports are required in addition to project financial reports; and (vi) arrangements for external audit, including (if required) Bank review of terms of reference and the appointment of the audit firm, and the deadline for furnishing audit reports.

28. **Financial Management Manual.** The accounting systems, policies and procedures employed in the accounting and management of Project funds are documented in the MOP. The MOP will be used by MMA staff as a reference manual; by the World Bank to assess the continuing adequacy of Project accounting, reporting and control systems; and by the auditors to assess Project accounting systems and controls as well as in designing specific Project audit procedures.

29. **Accounting System.** SIAFI will be used to record all accounting transactions related to Project activities. It also plays a key role in ensuring the implementation of internal controls through built-in procedures that are required to be undertaken during the budget execution process. SIAFI has been used as the primary financial information system in a number of Bank projects with the Federal Government in Brazil. In addition, MMA maintains and manages the *Sistema de Informações Gerenciais do Meio Ambiente* (SIGMA system), which was used to manage other donor-financed projects in the past. All supporting documentation will be available in MMA.

30. **Financial Reporting.** The Project will use the same reporting formats for the various periodic financial reports. These reports will be designed to provide quality and timely project performance information to Project management, implementing agencies and various stakeholders. The Interim Unaudited Financial Reports (IFRs) will be prepared in a spreadsheet format and supported by information gathered from the accounting system.

31. The UGP in MMA will prepare quarterly IFRs and submit them to the Bank no later than forty-five days after the end of each quarter. IFRs will make use of existing financial reporting information entered in SIAFI. These will include: a statement of sources and uses of funds by disbursement category; a statement of uses of funds by project activity, component and subcomponent; a progress report considering the percentage of completion of each component; and a bank reconciliation of funds provided.

32. **Internal and External Auditing Arrangements**. (A) Project transactions will be subject to review by the Federal Office of the Inspector General (*Controladoria Geral da União*, CGU), a government organization responsible for internal auditing at the federal level. The CGU will help ensure the continuing adequacy of the internal control environment. The UGP will need to ensure that its own internal control structure is sufficiently strong and that the FM function is adequately staffed with professionals who are familiar with Bank policies and procedures, in order to: (i) avoid ineligible expenses and delays in flows of funds and Project implementation; (ii) safeguard Project assets; and (iii) avoid misuse of funds. (B) An audit of the Project's financial statements will be conducted by the Federal Office of the Inspector General (*Controladoria Geral da União*, CGU) in accordance with TORs acceptable to the Bank. The audit will be due no later than six months after the end of the fiscal year. The audit report will contain a single opinion on the Project's financial statements and the designated account, and a management letter (report on internal

controls). The Bank will review the audit report and periodically determine whether audit recommendations are satisfactorily implemented.

33. **Allocation of Eligible Expenditures**. Table 2 specifies the categories of eligible expenditures that may be financed out of the proceeds of the Loan ("Category"), the allocations of the amounts of the Loan to each Category, and the percentage of expenditures to be financed for eligible expenditures in each Category.

Table 2. Allocation of Loan Proceeds

Category	Amount of Loan Allocated (expressed in US$)	Percentage of Expenditures to be Financed (inclusive of taxes)
(1) Goods, non-consulting services, consultants' services, works, training and operational costs under Component 1 of the Project	6,146,304.00	[100%]
(2) Goods, non-consulting services, consultants' services, works, training and operational costs under Component 2 of the Project	25,178,219.00	[100%]
(3) Goods, non-consulting services, consultants' services, works, training and operational costs under Component 3 of the Project	1,155,477.00	[100%]
TOTAL AMOUNT	32,480,000.00	

34. For the purposes of this Project the term:

- "Operating Costs" means the reasonable incremental operational costs (which would not have been incurred absent the Project), related to Project technical and administrative management monitoring and supervision required under the Project, including inter alia, administrative and operational support, office equipment, supplies, travel costs (including accommodations, transportation costs and per diem), printing services, communication costs, utilities, maintenance of office equipment and facilities, vehicle operation and maintenance costs, and logistics services; and
- "Training" means expenditures (other than those for consultants' services) incurred in connection with the carrying out of training, seminars, and workshops, including the reasonable travel costs (e.g. accommodations, transportation costs and per diem) of trainees and trainers (if applicable), catering, rental of training facilities and equipment, logistics and printing services, as well as training materials and equipment under the Project.

Procurement

35. **General**: Procurement for the Project would be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers," dated January 2011 (Procurement Guidelines); "Guidelines: Selection and Employment of Consultant under IBRD Loans and IDA Credits & Grants by World Bank Borrowers," dated January 2011 (Consultant Guidelines); and the provisions stipulated in the Legal Agreement. The general description of various items under different expenditure categories is provided below. For each contract to be financed by the Loan, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior-review requirements, and time frame are agreed by the Loan Recipient and the World Bank in the Procurement Plan. This Plan will be updated at least annually or as required to reflect actual Project implementation needs and improvements in institutional capacity.

36. **Procurement of Works**. Works procured under the Project would include renovations and small construction works. Procurement methods for works are International Competitive Bidding (ICB), National Competitive Bidding (NCB) and shopping. Their respective thresholds will be defined in the Procurement Plan. It is anticipated that works under the Project are likely to fit below the threshold for shopping.

37. **Procurement of Goods**. Goods procured under the Project would include *inter alia* vehicles, GPS, satellite images, IT and electronic equipment. Procurement methods for goods are International Competitive Biddings (ICB), National Competitive Bidding (NCB), and shopping. Their respective thresholds will be defined in the Procurement Plan. The method known as "*pregão eletrônico,*" as provided in Guarantor's Law No. 10520 of July 17, 2002, under "COMPRASNET," the Guarantor's procurement portal, or any other e-procurement system approved by the Bank, may be used in replacement of NCB and Shopping when off-the-shelf goods are procured, subject to the following additional procedure, i.e., that the bidding documents shall be acceptable to the Bank

38. **Procurement of Non-consulting Services**. "Non-consulting Services" means services that are of a non-intellectual nature and can be procured on the basis of performance of measurable physical outputs, including *inter alia* the cost of equipment installation, repairs and/or maintenance services, and airline tickets. Procurement methods for non-consulting services are ICB, NCB, and shopping. Their respective thresholds will be defined in the Procurement Plan. The method known as "*pregão eletrônico,*" as provided in Guarantor's Law No. 10520 of July 17, 2002, under "COMPRASNET," the Guarantor's procurement portal or any other e-procurement system approved by the Bank, may be used in replacement of NCB and Shopping when readily available services are procured, subject to the following additional procedure, i.e., that the bidding documents shall be acceptable to the Bank.

39. **Selection of Consultants**. Consulting services by firms and individuals selected under the Project would include *inter alia*, training, studies and legal advice. Individual consultants would be selected following the procedures set forth in Section V of the Guidelines, including sole-source selection procedures. Consulting firms would be selected following Quality- and Cost-Based Selection (QCBS), Least-Cost Selection (LCS), Selection under a Fixed Budget (FBS), Selection Based on Consultant's Qualifications (CQS), Selection of Consultants under Indefinite Delivery Contract or Price Agreement, or Single-Source Selection (SSS). Shortlists of consultants for services estimated to cost less than US$500,000 equivalent per contract may be composed entirely

of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

40. **Operational Costs**. These costs would include recurrent costs associated with the coordination and implementation of the Project, including: (i) operation and maintenance of vehicles, repairs, fuel and spare parts; (ii) equipment and computer maintenance; (iii) shipment costs (whenever these costs are not included in the cost of goods); (iv) office supplies; (v) rent for office facilities; (vi) utilities; (vii) travel and per diem costs for technical staff carrying out supervisory and quality control activities; (viii) communication costs including advertisement for procurement purposes; and (ix) costs associated with audits.

41. **Assessment of the agency's capacity to implement procurement**. Building on recent experiences with externally financed loans, MMA created a Special Bidding Committee (*Comissão Especial de Licitações,* CEL[26]), which will be responsible for MMA's procurement under this and other loans and grants. Although still a relatively untested body, it is expected that the CEL will overcome the bottlenecks that were experienced in the past when procurement services were outsourced to third parties. Most of the Project's procurement will be executed by the CEL, but it is likely that individual consultants, per diems, goods, and airline ticket service providers will be processed by the ICE because MMA has legal barriers to contracting them. With regard to the CEL's procurement, although this is a new procurement approach for MMA, it has long been the arrangement recommended by the Bank, because it can centralize all Bank-financed procurement for this and other MMA projects. The nominated head of the CEL is an experienced civil servant who has been dealing with Bank-financed procurement for over 10 years. The other members of the CEL are still to be nominated and they will need procurement training, but this arrangement already helps to lower procurement risk. In addition, the MMA Project team was already trained in procurement and financial management. The overall Project risk for procurement is HIGH, because this is the first time MMA will work through a CEL. Risk is expected to drop to MODERATE as soon as the CEL is fully trained and operational.

42. **Procurement Plan**. MMA developed a Procurement Plan for the first 18 months of Project implementation. This Plan provides the basis for procurement methods. It will also be available in the Project's database and on the World Bank's external website. The Procurement Plan will be updated in agreement with the World Bank annually or as required to reflect actual Project implementation needs and improvements in institutional capacity.

43. **Frequency of Procurement Supervision**. In addition to the prior-review supervision to be carried out from World Bank offices, the capacity assessment of the implementing agency has recommended that yearly supervision missions visit the field to carry out post reviews of procurement actions.

44. **Prior and Post Reviews**. Thresholds for procurement prior review are established by the Procurement Plan.

D. Environmental and Social (including safeguards)

45. The Project is expected to have a positive environmental and social impact because it seeks to promote the rural environmental cadastre of landholdings. The CAR has benefits both for the Government and for owners of the landholdings. For landholders the benefits of registration with the CAR (besides fulfilling a legal obligation) will include the following:

[26] MMA Ordinance Nº 264 of July 28, 2014.

- free enrollment in SICAR for small landholdings;
- greater legal certainty: the ability to demonstrate environmental compliance;
- suspension of fines (in some cases);
- access to credit: after five years, i.e., in 2017, the official credit cannot be extended to landholdings not registered in the CAR;
- access to programs that promote environmental regulation (loans, grants and technical assistance for planting and restoring APPs and RLs);
- input for better planning of a landholding's land use;
- technical assistance to recover degraded APP and RL areas of their rural landholdings; and
- provision of rural technical assistance, environmental education, seedlings, seeds and training to small landholders to recover degraded APP and RL areas of their rural landholdings.

46. The Project will work directly with SEAs, small landholders and selected Municipalities. Benefits will accrue to rural landholders, directly or indirectly, from the environmental regularization promoted by the Project. In the CAR process, the rights of current occupiers of landholdings must be respected provided they are not in violation of legal provisions. Undisputed occupation is, therefore, a basic requirement for the issuance of the CAR certificate. Project preparation is evolving through discussions with INCRA, individual SEAs, FUNAI, and land tenure agencies.

47. To engage landholders, the Project will offer local service desks and assistance centers to facilitate CAR enrollment.

48. **Land Tenure Regularization.** The CAR has no intention of promoting land regularization or land titling. Law 12.651/2012 makes clear that the CAR does not imply recognition of any right or title to land. One of the CAR's objectives is to support environmental policy with a tool that can be used immediately, instead of awaiting the end of a lengthy process of land regularization.

49. Official property data available in the National Rural Cadastre System *(Sistema Nacional de Cadastro Rural*, SNCR), and Certificates of Registry of Rural Property (*Certificados de Cadastro do Imóvel Rural*, CCIRs) issued by INCRA, as well as other land data available in the State Land Agencies, will be used in the CAR (see Table 1).

Table 1: CAR and CCIR Framework

	Rural Environmental Cadastre (CAR)/ Rural Environmental Cadastre System (SICAR)	**Certificates of Registry of Rural Property (CCIRs)/ National Rural Cadastre System (SNCR)**
Legal framework	Law 12.651/2012	Law 4.947/1966
	Decree 7.830/2012	Law 10.267/2001
	Simplify procedures for small landholdings, settlements, Indigenous Lands, land reform projects and traditional communities. Enrollment in CAR for these groups is the responsibility of the state; no charges will apply for these groups.	
Definition	The CAR is a Brazilian environmental policy instrument, particularly for policies on forests and other natural plant cover and on deforestation control.	CCIR is the legal registration of the rural property, and is mandatory to subdivide, lease, mortgage, sell or promise to sell rural property and for approval of sharing.
Issued by	IBAMA, State Environmental Agencies (SEAs)	INCRA

	Rural Environmental Cadastre (CAR)/ Rural Environmental Cadastre System (SICAR)	Certificates of Registry of Rural Property (CCIRs)/ National Rural Cadastre System (SNCR)
Information needed	Identity of the landholder. Proof of ownership or informal proof of rights. Geographic description of the landholding (preferably georeferenced, with coordinates), including boundaries, remnant vegetation, APPs, RLs.	Identity of the owner. Proof of ownership/property title. Geodetic survey of property boundaries. Property data, including land use information, production and legal title. Only those who prove a genuine presence on the land before 12/01/2004 are eligible to be entered in the SNCR.
Benefits	Greater legal certainty: the ability to demonstrate environmental compliance. Suspension of liabilities (in some cases). Access to credit: after 2017, the official credit cannot be extended to landholdings not registered in the CAR. Access to programs that promote environmental regulation. Input for better planning of a landholding's land use.	Ability to sell or lease land. Input for better planning of a property's land use.
	Official property data available in SNCR and CCIR, and other land data available in the State Land Institutes, will be used in the CAR.	MMA, INCRA and IBAMA are working on the integration of land regularization information in the geospatial information to be used in environmental regulation.
	Landholding with CCIR can migrate data on the landholding's perimeter to the CAR system.	According to the law, the CAR registration cannot create a basis for formalizing land tenure and cannot be used as proof of any claim for registration in the SNC.
	On 12/7/2012, MMA and INCRA signed a technical cooperation agreement to share information and data.	
Conflict resolution	Where landholding conflicts (overlaps) exist, an effort will be made to resolve them before the entries in the CAR system are approved. Where this is not possible, the records in CAR will remain suspended and will not be validated and approved. Undisputed occupation is therefore a basic requirement for CAR environmental regularization.	

50. On December 20, 2012, MMA and INCRA signed a technical cooperation agreement to share information and data. Regular meetings are planned to integrate efforts with MAPA, INCRA and other relevant institutions.

51. **Social and Environmental Safeguards.** The proposed Project is expected to have an overall positive impact on the effectiveness and efficiency of federal- and state-level environmental management. The Project's core area will include a total of nine Federative Units: the States of Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Maranhão, Paraná and São Paulo, and the Federal District, and 47 selected Municipalities. Activities under the proposed Project should lead to positive impacts on natural habitats, such as their conservation and recovery.

52. During Project preparation, the team carried out a detailed assessment of potential impacts on private landholders from registering their landholdings in the CAR system. The assessment concluded that the legal framework gives special treatment to small landholdings or family agricultural landholdings, settlements, agrarian reform projects, and traditional communities that make collective use of their territories. For these landholdings, the proposed Project will provide technical assistance to landholders in their cadastral statements. CAR registration for this group is covered by the Government. Medium and large landholders will not receive direct assistance in preparing their entries in the CAR, but can benefit from the service desks to be set up in the States

and Municipalities where they can receive guidance, ask questions and request geographic information.

53. The assessment shows that the Project is expected to generate the following socioeconomic benefits: (i) enabling landholders to access the resources and other assistance services provided under the ABC Plan; (ii) assurance to landholders that they are fulfilling part of the environmental legislation requirements, enabling them to undertake investment in agricultural products that will allow them to access a range of markets which require such compliance; (iii) establishment of enabling requirements for landholders (including land reform settlers and traditional communities) to access target rural credit such as PRONAF; and (iv) increases in employment and income for landholders (including land reform settlers and traditional communities) and other partners in the business chain generated by farming activities, thereby contributing to poverty alleviation.

54. The CAR certificate is not the same as the environmental licensing of economic activities on rural properties. However, without the CAR certificate no license will be issued by the SEAs after 2017. The CAR will not register any landholdings under dispute.

55. There are an estimated 101,580 landholdings in the selected Municipalities, 82,774 of which (81 percent) are smallholdings or family farms, the Project's main target population. For small landholders, MMA and the SEAs will provide technical assistance in their cadastral statements, and the record will be based on simplified procedures and documentation.

56. Based on the assessment of potential impacts under the Project, the following safeguards are triggered:

- Environmental Assessment (OP/BP 4.01). This conservation Project is rated as Category B. The nature and scale of the proposed investments in environmental regularization will not have significant adverse impacts. Despite these positive impacts, the Project will be working in several sensitive biodiversity and dry forest areas. Since 1965, the Brazilian Forest Code requires landholders to retain natural vegetation on steep slopes, along watercourses (up to a given distance from riverbanks) or in the vicinity of springs. These are Areas of Permanent Preservation (APPs). The holdings must also set aside Legal Reserves (RLs). In this context, the CAR has been introduced by the Forest Code (Law 12.651/2012) as an additional tool to monitor and control forest deforestation. MMA prepared the Project's environmental and social management framework (ESMF). The ESMF raised the positive and negative impacts of the process of environmental regulation, considering the current Forest Law, state laws, and safeguards. The ESMF also defines a number of preventive and mitigating actions in the ten most relevant municipalities, and seeks to present alternatives to prevent or minimize the diagnosed impacts; and
- Natural Habitats (OP/BP 4.04). Activities under the proposed Project should lead to positive impacts on natural habitats, such as their conservation and recovery. The rural environmental cadastre procedures will comply with: (i) the Brazilian Forest Code (Law 12.651 of 2012); (ii) Brazilian legislation on protected areas (SNUC, Law 9.985 of 2000, Decree 4.340 of 2002, and Decree 5.758 of 2006); and (iii) national, state and local laws on natural habitats.

57. Forests (OP/BP 4.36). This Project will contribute to the conservation of the Cerrado Biome. It is expected to have a positive impact by avoiding deforestation and by maintaining natural vegetation in parts of privately owned rural landholdings (all land on steep slopes, along watercourses [up to a given distance from riverbanks] or in the vicinity of springs), thus protecting the environmental services and values of natural vegetation. These are APPs. The Project will also

contribute to conserving and/or restoring special areas in private landholdings, which are to be set aside and preserved, known as RLs. The Project will be implemented in 47 selected Municipalities in the Cerrado Biome and will benefit private landholders. There are 19 Indigenous Lands in 9 of these selected Municipalities:

- In the State of Maranhão: Canabrava/Guajajara, Rodeador, Porquinhos and Kanela Indigenous Lands (Barra do Corda municipality);
- In the State of Mato Grosso do Sul: Kadiwéu (Porto Murtinho), Nioaque (Nioaque), Buriti and Buritizinho (Sidrolândia), and Jatayvari and Pirakua (Ponta Porã);
- In the State of Mato Grosso: Bakairi and Marechal Rondon (Paranatinga); and
- In the State of Tocantins: Palmas and Funil (Tocantínia), and Kraolandia (Itacajá and Goiatins).

58. However, OP 4.10 is not triggered because:

- The provisions in the Forest Code establish special treatment for Indigenous Lands and quilombola territories, which have not been regulated yet. Thus, CAR procedures do not fully apply to Indigenous Lands yet.
- The project will not interfere with Indigenous Lands, the cadastre of these Indigenous lands will not be supported by the Project.

59. The ESMF includes a summary assessment of Indigenous Peoples found in the selected Municipalities, and of the potential impacts of implementing the CAR in areas surrounding or near Indigenous Lands. Such impacts are deemed positive because the CAR will contribute to the maintenance and/or recovery of APPs and RLs, the protection of watercourses, and the recovery of vegetation cover around Indigenous Lands.

60. The ESMF has also established the screening process to identify and avoid overlaps between landholdings and Indigenous Lands, as well as the procedures to be followed when landholdings that overlap Indigenous Lands are found. In these cases, FUNAI will be notified and the landholdings will not be registered in the CAR until information provided by the landholders is checked and unless the land tenure issues regarding the overlapping areas are resolved. In short, no landholding will be registered in CAR if it is found to overlap with land claimed by Indigenous Peoples, even in cases where such land is not yet declared or registered as Indigenous Land. FUNAI will also have access to all the information and tools produced by the CAR system (SICAR).

61. The consultation process was conducted in two stages. The first consisted of preliminary meetings to discuss the concept of the Project. These meetings took place from May to November 2012 and included several meetings in Brasília with representatives from the states in the Cerrado Biome.

62. The second stage included four information workshops and four consultation workshops that applied participatory methodology for the design and survey of demands of each Federative Unit, taking into account aspects such as technical and institutional capacity, infrastructure and logistics, and previously established criteria under the scope of the BIP. The first workshop took place in Palmas, Tocantins, on December 12, 2012, and was attended by representatives of the State Governments of Maranhão, Mato Grosso, Mato Grosso do Sul and Tocantins, as well as representatives of MMA. The second workshop, held in Brasília on January 24, 2013, took

advantage of the presence of entities representing agribusiness and state managers of the ABC Plan, in the ABC–FIP project consultation workshop (low carbon emission agriculture in the Cerrado). There were representatives of the Federation of Farmers of Goiás; the National Confederation of Agriculture (*Confederação Nacional da Agricultura,* CNA); the National Rural Learning Service (*Serviço Nacional de Aprendizagem Rural,* SENAR); the Organization of Brazilian Cooperatives (*Organização das Cooperativas Brasileiras,* OCB); the Banco do Brasil; the Ministry of Agriculture, Livestock and Supply (*Ministério da Agricultura, Pecuária e Abastecimento,* MAPA); the Ministry of Science, Technology and Innovation (*Ministério da Ciência, Tecnologia e Inovação,* MCTI); the Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária,* EMBRAPA); and the CAR Steering Group of the Federal District and Bahia, among others. The third workshop was held on January 30, 2013, in Brasília with representative bodies of family farmers and traditional populations *(quilombos),* NGOs and research institutions, as well as representatives of MMA, MAPA and INCRA. The fourth workshop, held on January 31, 2013, in Brasília, was a public consultation with state environmental agencies, agricultural and rural technical assistance agencies, land reform agencies, environmental police and municipalities. There were also representatives of the State Governments of Goiás, Minas Gerais, São Paulo, Piauí, Mato Grosso do Sul, Maranhão, as well as the Federal District. The activities proposed by the Project have received broad support from the SEAs, producers and community organizations, based on consultations with their representatives. No major issues were raised, and the Project received strong support from the groups consulted.

E. Monitoring and Evaluation

63. Good rural environmental cadastre governance plays a key role in achieving the registration of private landholdings. Assessment and monitoring of CAR governance are essential tools.

64. In order to assess, monitor and evaluate the SEAs' institutional capacity to register landholdings in the CAR system, MMA, in collaboration with the German Cooperation Agency (GIZ), is developing an electronic tracking tool to monitor the implementation of the CAR by the SEAs. This tool will measure institutional performance in each state through qualitative and quantitative variables and geospatial data.

65. The first version of the CAR Tracking Tool (CAR-TT) has been tested in association with five SEAs: Minas Gerais, Pará, Acre, Amazonas and Mato Grosso. The results and suggestions were incorporated in a new version of this tool.

66. The CAR-TT uses a set of nine variables and about 25 indicators scored in consensus-oriented SEA workshops. Thus, the CAR-TT can increase ownership of results among the SEAs. It is transparent and includes the SEAs' self-evaluations.

67. Making this electronic tool of core elements-based assessment available to CAR governance data collection will help MMA to monitor and evaluate the Project's progress.

68. Through the CAR-TT, MMA will be able to periodically calculate overall CAR governance index scores that could be compared across SEAs. Furthermore, it will be possible for MMA to focus on specific issues of CAR governance.

69. In terms of the number of landholdings and the area registered in the CAR, the SICAR will automatically generate progress reports and statistics, disaggregated by landholding type (small or non-small) and gender.

70. In addition, Project monitoring and evaluation (M&E) will be conducted in accordance with: (i) the BIP monitoring and evaluation plan to be prepared; and (ii) established FIP rules and procedures. Two evaluations will be undertaken. The UGP will have primary responsibility for tracking progress related to Project outputs and outcomes. Project progress reports will be prepared and submitted to the Bank and BIP–EC twice a year.

71. All baseline data for monitoring are available. The UGP will have primary responsibility for tracking progress related to Project outputs and outcomes. Each SEA will provide support in this task by monitoring progress in its respective state. Project progress reports will be prepared and submitted to the Bank and BIP–EC twice a year.

Annex 4 - Operational Risk Assessment Framework (ORAF)

Brazil: FIP: Environmental regularization of rural lands in the Cerrado of Brazil (P143334)

Project Stakeholder Risks						
Stakeholder Risk	**Rating**	**Moderate**				
Risk Description: The project's feasibility and success are highly dependent on the participation and commitment of key stakeholders such as SEAs and landholders.	**Risk Management:** Project efforts includes dissemination and mobilization campaigns, information support to medium and large landholders to motivate and facilitate their voluntary self-registration, creation of local service desks and state call centers, as well as field surveys and direct assistance to smallholders in documenting their landholdings and registering them in the CAR. On March 11, 2013, MMA and MAPA signed a cooperation agreement regarding CAR and to create incentives for medium and large landholders to register their holdings in the SICAR. MMA has been working to establish other linkages associated with CAR, such as the creation of facilities for producing seedlings with a view toward implementing agroforestry systems for the restoration of natural areas. Project design is aligned with the Brazilian Forest Code and Decree 7.830 of 2012.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Implementation	☑		CONTINUOUS
Implementing Agency (IA) Risks (including Fiduciary Risks)						
Capacity	**Rating**	**High**				
Risk Description: Shortfalls in the ability to handle the administrative and procurement load because of similar demands to MMA by several other internationally funded projects.	**Risk Management:** The Project follows a new implementation arrangement that will centralize all procurement/fiduciary arrangements. Project implementation includes technical assistance to the Ministry; a clear definition of procedures is included in the MOP. Close supervision will be conducted during implementation. Technical assistance includes actions related to developing specific procurement procedures and training UGP staff in these, and enhancing MMA's capacity to undertake financial management.					

	The Bank will provide training on procurement in general, and guidance to prepare TORs specifically. The key financial management risks that the UGP may face in achieving these objectives arise from the need to ensure effective supervision and coordination of arrangements for the accountability of project finances, and to comply with established internal control procedures. To mitigate these risks, the financial management team requested MMA to define a clear scope, review estimates for budgeting, prepare a disbursement plan, prepare a schedule for the project life-cycle period, and establish milestones and deliverables for cost allocations in order to enable an effective procedure for monitoring and evaluation.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Both	In Progress	Implementation	☑		CONTINUOUS
Governance	**Rating**	**Moderate**				
Risk Description: Operational complexity: notably, multilevel and multi-agency implementation will require strong inter-institutional coordination.	**Risk Management:** The BIP's Executive Committee (BIP–EC) is responsible for the monitoring and evaluation of the Investment Plan through the coordination of actions by the different ministries involved, and the interaction of FIP projects with other government programs. The BIP–EC should promote synergies among FIP projects and the involvement of different stakeholders. A Technical Cooperation Agreement for the implementation of this Project was signed by the Ministry of Environment (MMA) and each targeted Federative Unit through their respective State Environmental Agency.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Both	In Progress	Implementation	☑		CONTINUOUS
	Risk Management: Project implementation carried out by MMA staff trained in Bank procedures and guidelines reduces the possibilities of fraud and corruption, and facilitates the monitoring and supervision of activities since these are all centralized by them. During implementation, the team will ensure close monitoring/supervision as well as training in Bank procedures and regular missions by the team's specialists.					

	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Implementation	☑		CONTINUOUS
	Risk Management:					
	Project implementation carried out by MMA staff trained in Bank procedures and guidelines reduces the possibilities of fraud and corruption, and facilitates the monitoring and supervision of activities since these are all centralized by them. During implementation, the team will ensure close monitoring/supervision as well as training in Bank procedures and regular missions by the team's specialists.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Implementation	☑		CONTINUOUS
Project Risks						
Design	**Rating**	**Moderate**				
Risk Description: There is a risk that environmental agencies may not have adequate capacity to implement the Project due to lack of staff and to high turnover. Coordination of all entities involved in the BIP. It may be difficult to integrate efforts among FIP projects.	**Risk Management:** Project efforts builds on the knowledge of MMA, State Agencies and Municipalities with extensive on-the-ground experience in the selected Municipalities to encourage landholders to adhere to the CAR. BIP–EC is responsible for the monitoring and evaluation of the Investment Plan through the coordination of actions by the different ministries involved and the interaction of FIP projects with other government programs. The BIP–EC should promote synergies among FIP projects and the involvement of different stakeholders. The Project has: (i) conducted a detailed capacity assessment of each environmental agency; (ii) prepared a detailed Project Operational Manual and TORs for technical assistance; and (iii) identified key staff to be included in training activities.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Implementation	☑		CONTINUOUS

<table>
<tr><td>Social and Environmental</td><td>Rating</td><td colspan="6">Low</td></tr>
<tr><td>Risk Description:

The activities and works proposed under the projects are not expected to generate negative environmental or social impacts. Nonetheless, some activities should be closely monitored to ensure that they do not lead to future safeguard risks.

Once the CAR systems begin operating, the projects might run into land registration conflicts, which will not validate the CAR registration.</td><td colspan="7">Risk Management:

Brazil has very good national legislation and safeguards similar to those of the World Bank. MMA has prepared an environmental and social assessment and a management framework that evaluates and proposes measures to mitigate the potential environmental and social impacts generated by the Project. MMA has engaged in extensive consultation with Project stakeholders.
Project efforts includes dissemination and mobilization campaigns, information support to medium and large landholders, creation of local service desks and state call centers, and direct assistance to smallholders in documenting their landholdings and registering them in the CAR.

<table><tr><td>Resp:</td><td>Status:</td><td>Stage:</td><td>Recurrent:</td><td>Due Date:</td><td>Frequency:</td></tr><tr><td>Both</td><td>In Progress</td><td>Implementation</td><td>☑</td><td></td><td>CONTINUOUS</td></tr></table></td></tr>
<tr><td>Program and Donor</td><td>Rating</td><td colspan="6">Low</td></tr>
<tr><td>Risk Description:

Brazil is one of eight pilot countries participating in the FIP. The BIP comprises actions by three Ministries: Environment (MMA); Science, Technology and Innovation (MCTI); and Agriculture, Livestock and Supply (MAPA). Multilevel and multi-agency implementation will require strong coordination.</td><td colspan="7">Risk Management:

The BIP was approved by the FIP Subcommittee in 2012. The funds are committed by the FIP Subcommittee.
The BIP–EC is responsible for the monitoring and evaluation of the Investment Plan through the coordination of actions by the different ministries involved, and the interaction of FIP projects with other government programs.
BIP–EC should promote synergies among FIP projects and the involvement of different stakeholders.

<table><tr><td>Resp:</td><td>Status:</td><td>Stage:</td><td>Recurrent:</td><td>Due Date:</td><td>Frequency:</td></tr><tr><td>Bank</td><td>In Progress</td><td>Implementation</td><td>☑</td><td></td><td>CONTINUOUS</td></tr></table></td></tr>
<tr><td>Delivery Monitoring and Sustainability</td><td>Rating</td><td colspan="6">Moderate</td></tr>
<tr><td>Risk Description:</td><td colspan="7">Risk Management:

MMA will centralize, coordinate and monitor all project activities, including management of environmental and social impacts, monitoring and reporting. Monitoring</td></tr>
</table>

Under the context of a complex project with multiple SEAs, there may be instances in which the SEAs do not fully implement and monitor particular Project activities.	arrangements have been defined and BIP–EC will supervise the Project's results. Clear protocols and procedures for monitoring indicators will be developed.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Implementation	☑		CONTINUOUS

Overall Risk		
Overall Implementation Risk:	**Rating**	**Substantial**

Risk Description:

There are three principal risks inherent in the proposed Project: (i) shortfalls in MMA's ability to handle the administrative and procurement load, due to several other internationally funded projects making similar demands to the Ministry; (ii) lack of motivation and effective engagement of state governments and selected Municipalities in the process; and (iii) insufficient response by landholders to the legal obligation to register their landholdings in the CAR.

Annex 5: Implementation Support Plan

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil

A. Strategy and Approach for Implementation Support

1. The strategy for implementation support has been developed based on the FIP and BIP designs, Project design, and measures required during implementation. The strategy remains a flexible tool that may be amended during Project supervision in response to the changing needs of MMA and the SEAs.

1. The implementation support strategy envisages taking advantage of MMA's existing knowledge and experience, and supporting further strengthening of MMA's abilities during the course of the Project.

2. **Overall Implementation.** Although several SEAs will participate in Project implementation, Project management will be centralized within MMA. Centralizing implementation in one entity, supported by a dedicated Project Implementation Unit (*Unidade de Gestão do Projeto,* UGP) with adequate staffing and skills, has been shown to be a good practice in other operations in Brazil. For the Project, MMA and the Bank agreed on the Project's structure for implementation based on a dedicated unit, staffed with adequate procurement and financial management experts. It was also agreed that each SEA will identify a focal point for Project activities to act as the main liaison with MMA.

3. Staff members from the CEL and UGP have been trained in procurement and financial management. Their participation in further training during implementation will be encouraged, both through on-the-job training during the Bank's semiannual supervision visits, and through participation in specific training courses on procurement, financial management and safeguards organized occasionally by the Bank in Brazil. Administrative support to the UGP through contracted consultants, as needed, is envisioned in the initial phase of Project implementation.

4. **Technical.** A set of activities under the institutional strengthening component is expected to support the various SEAs in achieving the Project Development Objective (PDO). During implementation, the Bank team will work closely with the UGP to ensure that technical and environmental/social supervisors provide appropriate oversight and feedback to MMA. In addition, external support by experts will be provided for institutional strengthening when the need arises.

5. **Environmental and Social Safeguards.** MMA and some SEAs are familiar with the Bank's environmental and social policies. An Environmental and Social Management Framework (ESMF) was prepared. This will be taken into account during implementation. The ESMF focuses on Project-specific aspects, such as institutional arrangements and capacity. It includes an analysis of the social impacts that project activities might have on vulnerable groups, traditional communities or poor rural communities.

6. **Procurement.** The UGP will prepare, evaluate and submit key procurement documents. Further support will be provided by the Bank team to review these documents and ensure that (a) the processes are carried out in accordance with agreed procedures, and (b) Bank templates have been used.

7. In addition to the prior-review supervision to be carried out from World Bank offices, the capacity assessment of the implementing agency has recommended that yearly supervision missions visit the field to carry out post reviews of procurement actions.

8. **Financial Management**. MMA has historically been outsourcing Financial Management (FM) functions to manage World Bank Projects, such as the use of the *Caixa Econômica Federal* (CAIXA) and FUNBIO to perform the FM functions of PROBIO II. More recently, MMA has been trying to be the agency responsible for FM functions instead of delegating them to other entities. PNMA II is a recent example of this effort. Unfortunately, MMA has not had much success until now due to the lack of an adequate FM structure with the necessary technical capacity and personnel. Due to the rather uniform nature of FM activities in World Bank projects, it was suggested, for purposes of economy and efficiency, that a single FM unit, responsible for the financial management of all projects financed by the World Bank, be created within MMA. It is expected that, once this unit is created and FM training and continued support are provided by the Bank, MMA's FM arrangements will increase to a satisfactory and sustainable level, instantly decreasing risk from the current high level to average.

B. Implementation Support Plan

9. Considering the Project's design and the need to conclude the definition of several FM arrangements, the level of technical support needed for implementation is considered, for the time being, moderate on the technical side, high on the fiduciary side, and moderate on the environmental and social sides. The Bank team will conduct at least annual supervision missions, desk reviews and field visits to follow up on Project implementation, supported by FM, procurement, social and environmental specialists, as well environmental management, IT and climate change specialists. The proposed Bank support includes:

- **Technical**. Experts in environmental management, climate change and IT will: (i) based on known national and international best practices, engage and orient technical and institutional dialogue with the respective beneficiaries; (ii) advise on the design of envisaged activities, including the preparation of TORs; (iii) participate in Project supervision and field visits to advance the dialogue with MMA and review progress; and (iv) engage with MMA to enable knowledge transfer and guidance. Randomized field visits would serve to verify compliance with the Project Operational Manual and encourage adjustments to Project design, as needed, given the results in the selected Municipalities. The Bank's supervision team will provide, through short-term cross-support by Bank staff and, as warranted, the targeted engagement of external technical experts. Ongoing support by Bank specialists for M&E and contracted evaluation expertise, as needed, would continue to strengthen MMA's ability to monitor Project progress and report outcomes to the Brazil Investment Plan's Executive Committee.

- **Fiduciary requirements and inputs**. FM and procurement specialists will conduct semiannual reviews of MMA. These reviews will include checking for compliance with agreed procurement and FM procedures, identifying potential capacity gaps such as staffing, and evaluating the adequacy of documentation and recordkeeping arrangements and systems. The Bank's FM and procurement specialists will provide training during Project preparation and implementation.

- **Environmental and Social Safeguards**. The environmental and social specialists will monitor and evaluate the implementation effectiveness of the agreed Environmental and

Social Framework. Ongoing support will be made available by the Bank when identified or required by MMA and the SEAs.

10. The main focus of implementation support is summarized in the table below.

Time	Focus	Skills Needed	Resource Estimate
1–12 months (SW/year)	Procurement implementation support and training	Procurement Specialist	5SW
	FM implementation support and training	FM Specialist	4 SW
	Safeguards implementation support and compliance	Environmental Specialist Social Specialist	2 SW 1 SW
	Environmental programming and monitoring	Environmental Specialist	6 SW
	Project management, implementation support, supervision	Task Team Leader Operations Analyst	12 SW 24 SW
13–48 months (SW/year)	Procurement process reviews, implementation support	Procurement Specialist	4 SW
	FM field reviews and audit review	FM Specialist	3 SW
	Safeguards review, compliance	Environmental Specialist Social Specialist	2 SW 2 SW
	IT activity development and review	IT Specialist	2 SW
	Project management, implementation support, supervision	Task Team Leader Operations Analyst	10 SW 20 SW

Note: SW = Staff-Week

Annex 6: Economic Analysis and Project's Relationship with FIP Investment Criteria

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil Project

A. REDD+ equivalent in Brazil

1. Brazil's commitment to climate change has been constant since its participation in the 1992 United Nations Conference on Environment and Development in Brazil (Rio Conference). In the context of the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen in 2009, Brazil voluntarily committed to a greenhouse gas (GHG) emissions reduction target between 36.1 percent and 38.9 percent of projected emissions by 2020, implying a reduction in emissions of around 1.2 billion tCO_2eq[27].

2. The main reference points for Brazil's REDD+ type actions are the National Plan on Climate Change, launched in December 2008, and the National Policy on Climate Change Law, enacted in December 2009. The National Policy on Climate Change, which includes the National Plan as one of its instruments, defines the objectives and guidelines for domestic operations in Brazil that deal with climate change. It legally defines Brazil's voluntary commitment to reduce emissions, which could generate reductions of 36.1 percent to 38.9 percent in projected emissions for 2020. Brazil's set of initiatives involving emissions mitigation includes combating deforestation and initiating alternative processes in the agricultural, energy and steel manufacturing sectors. The National Plan on Climate Change states that Brazil's goal is to achieve an 80 percent reduction in deforestation in the Amazon from the 1996–2005 average (19,535 km^2), and a reduction of 40 percent in the Cerrado from the 1999–2008 average (15,700 km^2). The National Policy also seeks to promote adaptation measures aimed at reducing the adverse effects of climate change and environmental, social and economic vulnerability.

3. The Action Plan to Prevent and Control Deforestation and Fires in the Cerrado Biome (PPCerrado 2010), one of the instruments in the National Policy on Climate Change, aims to promote sustained reduction in the rate of deforestation and forest degradation, as well as in the incidence of fires and forest fires in this biome. The PPCerrado guidelines include: (i) the integration and improvement of monitoring and control activities by federal agencies aimed at the environmental regulation of rural landholdings, sustainable forest management and firefighting; (ii) land use planning for conserving biodiversity, protecting water resources and encouraging the sustainable use of natural resources; and (iii) promotion of environmentally sustainable economic activities, maintenance of natural areas, and restoration of degraded land.

4. The Brazil Investment Plan (BIP), under the FIP, is in line with the National Plan on Climate Change and the PPCerrado.

B. Forest Investment Program Criteria

5. The Brazil Investment Plan (BIP), endorsed by the FIP Subcommittee on May 18, 2012, represents an important step in the implementation of the FIP in Brazil. The BIP seeks to promote sustainable land use and forest management improvement in the Cerrado, the second-largest biome in Brazil and South America, thus contributing to reducing pressure on the remaining forests, reducing GHG emissions and increasing CO_2 sequestration.

[27] See Annex II of the Copenhagen Accord: Nationally Appropriate Mitigation Actions (NAMAs) by developing countries. Available at: http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php

6. The BIP complies with the FIP's four specific objectives. It was built on existing climate change-related policies and practices in Brazil and supports the instruments that guide federal and state financing policies in the land use sector, particularly the PPCerrado, thus overcoming key barriers to their implementation. As such, the BIP invests in replicable models that will catalyze transformational changes in the land use, forestry and agricultural sectors in the Cerrado Biome, generating new knowledge and building the foundations to leverage additional financial resources in the context of an eventual future REDD+ mechanism under the UNFCCC.

C. Compliance with FIP Investment Criteria

7. This section details the Project's compliance with FIP investment criteria. As part of the BIP, the overall objective of the present Project is to assist the Government of Brazil, a select number of States that form part of the Cerrado Biome, and relevant agencies in their efforts to reduce illegal deforestation and forest degradation in rural landholdings by ensuring environmental compliance by owners or occupiers of private landholdings.

8. The Project's aim is to be executed through the development of three components: (i) strengthening the Environmental Agencies' capacity to implement the CAR system; (ii) registration of landholdings in the selected Municipalities, and (iii) Project management, monitoring and evaluation, which together meet several of the objectives[28] and principles[29] of a FIP project.

9. The Project's contribution to a transformational impact is that the CAR system will be field tested in the nine Federative Units. It could then be deployed in the other states and thus create a true national CAR.

10. Due to the barriers that prevent the regularization of existing landholdings, and the historical lack of enforcement of the Brazilian Forest Code, which has not yet been implemented, this Project takes place at a perfect time in order to accelerate the implementation of the rural environmental cadastre in the selected Municipalities by strengthening the existing institutional framework and promoting capacity building.

11. The Project's objectives, the strengthening of the states' capacity for the SICAR, and the implementation of the CAR process in the selected Municipalities, will have several positive impacts locally and regionally. By issuing the CAR, the landowner will assume the duty to recover the natural vegetation cover in his or her land area, gain (and maintain) access to credit and markets, and achieve environmental compliance with the Forest Code.

12. The success of this Project is expected to be an incentive to trigger similar initiatives in other Brazilian municipalities.

13. Through the implementation of this Project and the subsequent recovery of forests, the following outcomes are expected:

- Restoration of the structure, function and ecosystem services of riparian forests located in the selected rural landholdings;
- Enhancement of the biodiversity of degraded riparian areas, further contributing to the creation and enhancement of ecological corridor connectivity along the rivers;

[28] Paragraph 11 a).i, a).iii, a).vi, a).vii and d) (FIP 2009)
[29] Paragraph 13 a) and f) (FIP 2009)

- Removal of CO_2 from the atmosphere by increasing carbon sequestration in riparian and RL forests;
- Improvement of soil and erosion control;
- Halting and reversal of land degradation processes in rural landholdings, with special focus on riparian ecosystems; and
- Poverty alleviation, because low-income communities will be paid to implement the forest restoration activities.

14. In compliance with FIP guidelines, the following criteria were used:

(A) Climate change mitigation potential

15. This section provides a summary of the Project's economic and financial analysis[30]. It profiles the selected Federative Units and Municipalities, using the following parameters: (i) area; (ii) population; (iii) per capita GDP; (iv) Human Development Index (HDI); (vi) male-owned landholdings; (vii) female-owned landholdings (area and number); (viii) land use in the selected Municipalities; (ix) native forest cover; (x) agricultural production in the selected Municipalities; and (xi) APPs and RLs[31] in the selected Municipalities. Unfortunately, the available data[32] do not provide an overview of the size of the landholdings with and without forest cover.

16. **Assumptions.** Two main scenarios of mitigation potential through forest cover restoration due to the subsequent regularization of rural landholdings are considered: (i) use of the carbon content for forest formations of the Cerrado Biome provided by the Second Brazilian Report; and (ii) the spatialized factors developed in the Low Carbon Country Study Brazil (LCCS), which was carried out by the World Bank.

17. For the previous version of the Forest Code, all farms in the Cerrado Biome would need to have 20 or 35 percent forest cover as RLs, in addition to APPs, depending on whether the landholding is part of the Legal Amazon (35 percent) or not (20 percent). However, under the Forest Code Law (12.651 of 2012), small landholdings with fewer than four fiscal modules[33] are exempt from the recovery of RLs with regard to deforestation activities prior to 2008. Other landholdings that do not fit this classification should carry out the recovery of forest cover provided by the Forest Code.

18. The Project's mitigation potential was estimated as a scenario of legality. Landholders who register in the CAR would provide the forest cover recovery in their landholdings, according to the definitions in the Forest Code. Thus, total potential carbon removals through forest restoration will be achieved, so that the mitigation potential was calculated assuming the completion and subsequent maintenance of the scenario of legality, or the low carbon scenario.

19. Another premise is that the surplus forest cover is not removed after enrollment in the CAR.

[30] Report: Economic/financial and cobenefits analysis, and mitigation potential analysis of the Project: Environmental Regularization of Rural Lands in the Cerrado of Brazil. Consultant: Magno Botelho Castelo Branco, 2014. 49 pg.
[31] The percentage to be held as Legal Reserves varies from 80 percent in the Amazon to 35 percent in the Cerrado within the Legal Amazon, to 20 percent in the rest of Brazil.
[32] Source: Censo Agropecuário Brasileiro 2006. Available at http://cidades.ibge.gov.br
[33] The fiscal module *(módulo fiscal)* is a land unit established by the National Institute of Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*, INCRA) mainly for rural real estate taxation according to Federal Decree Nº 8.485/1980 and INCRA NIº 20/1980. The fiscal module in the Cerrado municipalities varies from 0.04 to 0.1 km^2, with an average of 0.46 km^2 (46 ha).

20. Under this scenario, deforestation activities prior to 2008 in small landholdings will not be recovered. Calculation of the amount of forest cover loss before 2008 that must be restored began with the premise that deforestation was proportional to the area of landholdings: that is, if in a given municipality 70 percent of the landholdings do not fall under family ownership, it was assumed that up to 70 percent of the deforestation occurred before 2008 in this type of landholding.

21. Due to the lack of data on forest cover in each landholding, the analyses considered the forest deficit and, when applicable, the surplus forest cover in each municipality (taking into account the percentage of area for family and non-family farms), and the potential for total removal of carbon by growing forests and carbon stored by existing forests that exceed Forest Code requirements, taking into account the carbon content of the Second National Communication as well as the Low Carbon Country Study for Brazil, conducted by the World Bank.

22. Due to the same lack of data and the flexibility allowed by the Forest Code (APPs can be incorporated in RLs), these APPs were excluded from this calculation.

23. Despite the calculation of carbon removal values for each municipality, the total Project mitigation potential may have a lower value because the Forest Code permits the "sale" of surplus areas of native vegetation in landholdings as "environmental reserve quotas/offshore reserves" to the owners of other landholdings (in the same biome) in order to offset a deficit of RL areas.

24. However, these peculiarities will be effectively known only after completion of the CAR in these municipalities.

25. **Underlying data and emission factors: IBGE, Brazil's Second Communication and the Brazil Low Carbon Country Case Study**. The data from the Brazil Low Carbon Country Case Report (LCCCS Brazil) consider two carbon content values for forests in the Cerrado Biome, averaged in accordance with recommendations of the Intergovernmental Panel on Climate Change (IPCC). See Table 1.

Table 1. Carbon content values for the forest types in the Cerrado Biome. Data from the Second Brazilian Report.

Cerrado type	tCO2/ha
Arborized Savannah	172.86
Forested Savannah	285.53

26. In this report, the higher value (forested savanna, 285.53 tCO_2/ha) was selected because forest restoration activities in the Cerrado Biome typically lead to higher carbon sequestration rates due to soil correction and fire control.

27. On the other hand, data provided in the LCCCS Brazil contain spatial carbon values, aggregated per municipality. Although these values are higher than the values provided in the Brazilian Report, they are far more reliable from a modeling perspective (see Table 2).

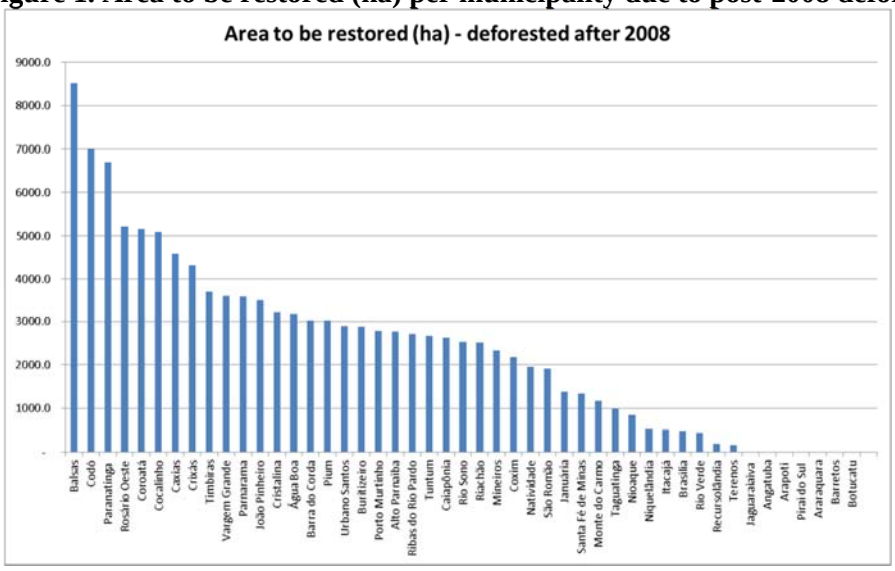
Table 2. Carbon values (tCO_2/ha) per municipality, according to the LCCS Brazil.

Municipality	tCO2	Municipality	tCO2	Municipality	tCO2
Água Boa	293.90	Coxim	295.05	Porto Murtinho	449.03
Alto Parnaíba	225.48	Cristalina	238.91	Recursolândia	246.07
Angatuba	382.94	Crixás	569.37	Riachão	225.48
Arapoti	464.04	Itacajá	246.07	Ribas do Rio Pardo	291.85
Araraquara	461.11	Jaguariaíva	464.04	Rio Sono	246.07
Balsas	225.48	Januária	222.08	Rio Verde	339.79
Barra do Corda	341.54	João Pinheiro	213.25	Rosário Oeste	349.68
Barretos	344.09	Mineiros	339.79	Santa Fé de Minas	217.25
Botucatu	399.95	Monte do Carmo	277.43	São Romão	217.25
Brasília	229.22	Natividade	237.41	Taguatinga	237.41
Buritizeiro	217.25	Nioaque	455.00	Terenos	302.96
Caiapônia	339.79	Niquelândia	270.33	Timbiras	378.21
Caxias	375.95	Paranatinga	344.17	Tuntum	341.54
Cocalinho	302.43	Parnarama	375.95	Urbano Santos	405.91
Codó	378.21	Piraí do Sul	464.04	Vargem Grande	451.56
Coroatá	378.21	Pium	349.07	**AVERAGE**	**328.12**

28. **Expected area to be restored due to CAR implementation.** According to the Forest Code, family farms are exempt from recovery of RL deforestation prior to 2008, so that only those landholdings that do not fit as such should perform the recovery. The municipalities that were most deforested after 2008 are: Balsas (MA), Codó (MA), Paranatinga (MT), Rosário Oeste (MT) and Coroatá (MA).

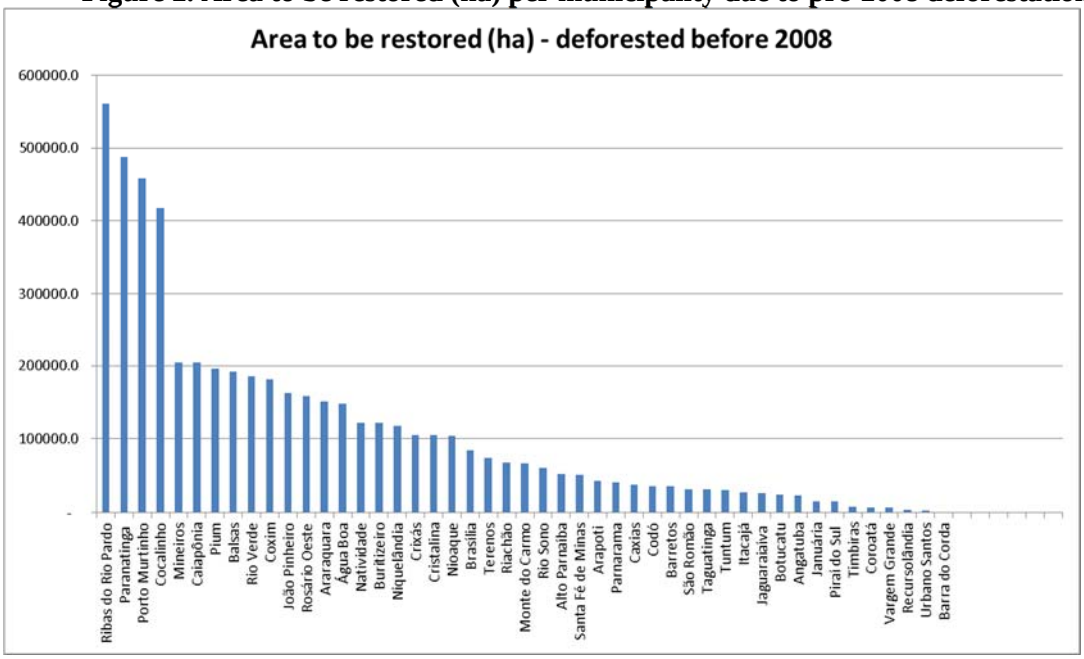
29. Overall, 114,000 hectares must be restored by the landholders (family-owned or not) that deforested them after 2008 (see Figure 1).

Figure 1. Area to be restored (ha) per municipality due to post-2008 deforestation.



30. In terms of deforestation conducted prior to 2008, only those landholdings with more than four fiscal modules area need to carry out forest recovery. Ribas do Rio Pardo (MS), Paranatinga (MT), Porto Murtinho (MS) and Cocalinho (MT) were the most deforested municipalities before 2008. Overall, deforestation during this period totaled 12.38 million hectares, of which 5.28 million will be restored in the legal scenario (low carbon). See Figure 2.

Figure 2. Area to be restored (ha) per municipality due to pre-2008 deforestation.



31. **Expected carbon removals due to forest preservation registered in the CAR.** As stated previously, two approaches were performed in order to estimate the Project's mitigation potential: using the carbon content for forest formations of the Cerrado Biome provided by Second Brazilian Report; and the spatialized factors developed for the LCCS Brazil, conducted by the World Bank.

32. The main difference is due to the fact that the emission factor for the Cerrado Biome contained in the Second Brazilian Report is averaged for the entire biome in accordance with IPCC recommendations, while the emission factors calculated by the LCCS Brazil are far more reliable because they take into account the spatial heterogeneity of the variables that influence the growth of forests, such as soil type, climate, topography, etc.

33. Overall, removals of carbon to be obtained in most selected Municipalities are greater when the LCCS emission factors are used. For example, the municipality of Porto Murtinho (MS) presents a potential removal of 207 million tons under this scenario, but when the calculations are performed with the emission factor from the Second Brazilian Report, this value drops to 131 million. In the municipality of Balsas (MA), the situation is reversed: the estimated removals calculated with the LCCS emission factors result in 45 million tons of CO_2 to be removed, while with the results obtained with the Second Brazilian Report emission factor this goes up to 57 million tons of CO_2, nearly 27 percent higher (see Figure 3 and 4).

Figure 3. Carbon removals (t) due to reforestation activities triggered by the CAR process calculated in accordance with the emission factors of the World Bank LCCS Brazil.

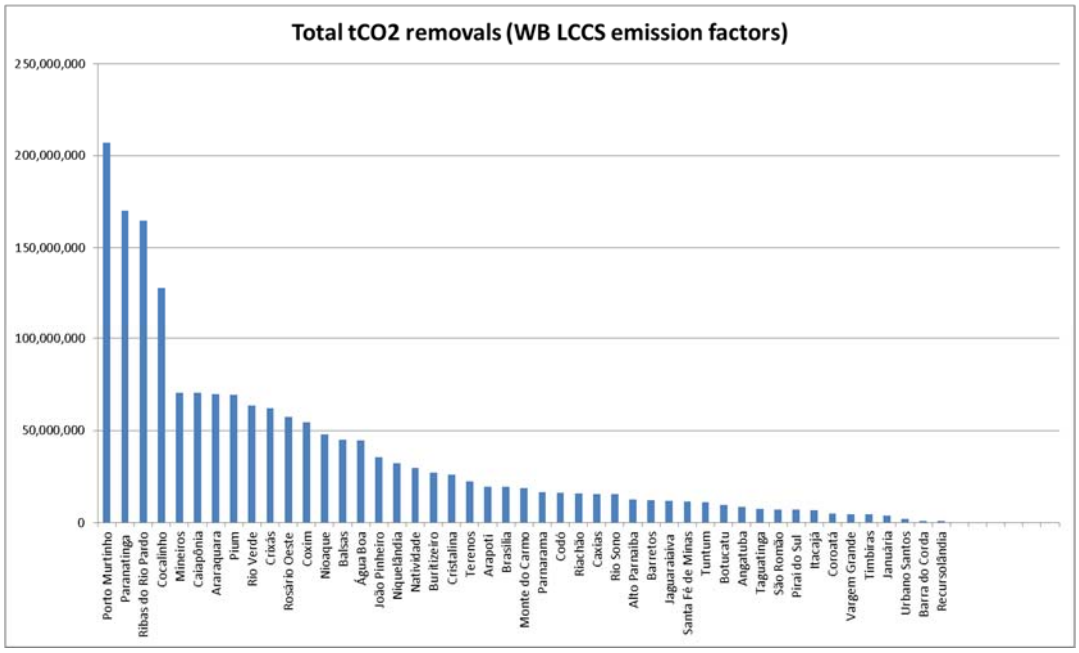
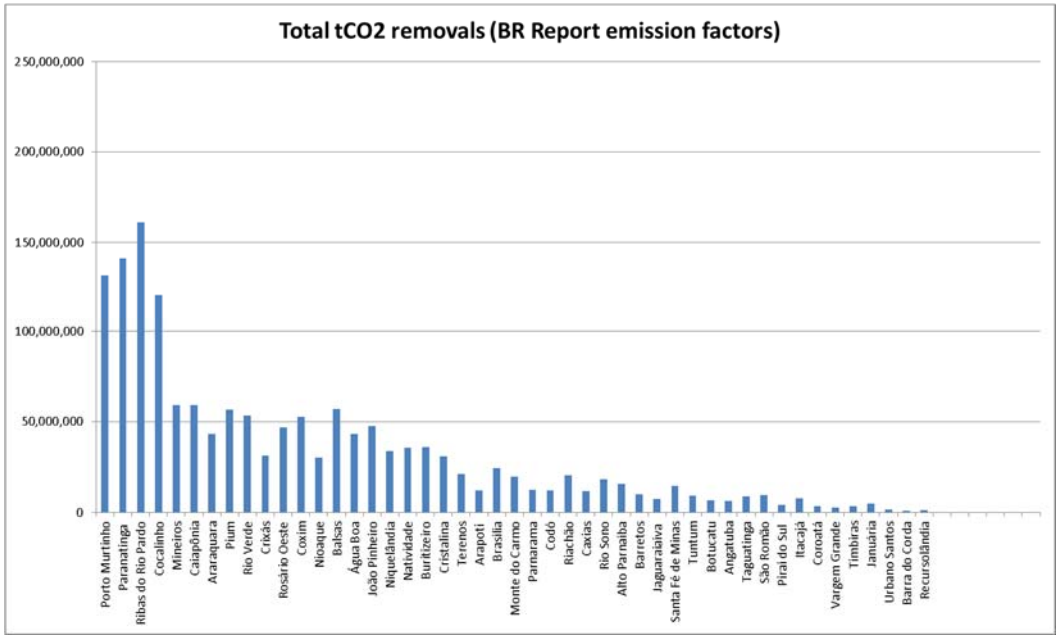
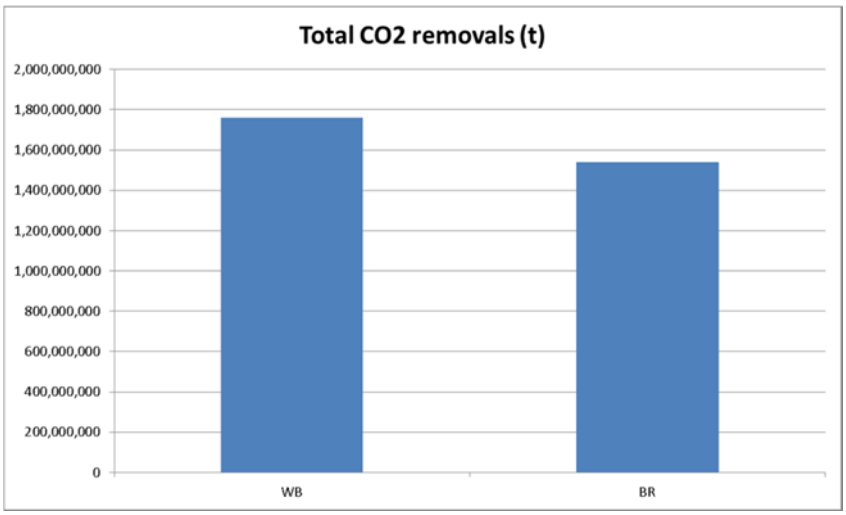


Figure 4. Carbon removals (t) due to reforestation activities triggered by the CAR process calculated in accordance with the emission factors contained in the Second Brazilian Report.



34. In general, when the spatialized emission factors of the LCCS Brazil are used, total removals totaled 1.76 billion tons of CO_2, 14 percent higher than the estimate using the average emission factor contained in the Second Brazilian Report (see Figure 5).

Figure 5. Differences between the spatial approach (WB) and average value approach (Second Brazilian Report).



35. **Considerations about the Project's actual mitigation potential.** The forest restoration activities triggered by the CAR process are expected to remove at least 1.54 billion tCO_2 from the atmosphere. This mitigation potential may be considered extremely high, since carbon emissions from deforestation in the Cerrado Biome in 2005 were no more than 275 million tCO_2, less than 20 percent of the carbon removals to be achieved by this Project.

36. However, these calculations were made based on the assumption that no further deforestation activities would occur.

37. Analyses performed by the GIS laboratory at the Socio-Environmental Institute (*Instituto Socio Ambiental*, ISA) regarding deforestation data during the 2012–2013 period show that 46 percent of the deforestation occurred in the Xingu River Basin (PA) within landholdings already included in the CAR program. A sad example is that of São Félix do Xingu, in which about 80 percent of the territory is already registered[34] and 83 percent of the deforestation has occurred within landholdings registered in the CAR. In Gaúcha do Norte (MT), 64 percent of 2,342 hectares deforested in the 2012–2013 period are in landholdings also registered in the CAR. This shows that, so far, the CAR has not yet achieved its main purpose: to avoid deforestation in farms registered in the program.

38. One could state that this Project would have the same end result. However, the following components are crucial for the Project to have much greater success:

- **Component 1: Strengthening State Environmental Agencies' Capacity to Implement the CAR**: By empowering the 47 selected Municipalities as well as the state governments, this component will enable the proper conditions to implement the SICAR in terms of legislation and standards, staff training, electronic systems, maps, imagery and thematic databases, infrastructure services for the target audience, information technology (IT), and operational infrastructure.
- **Component 2: Registration of Landholdings in Selected Municipalities**: By providing proper geo-data collection, communication campaigns, and mobilization and engagement of local stakeholders, institutional arrangements will be sought with local partners to help create legitimacy for the Project and secure the active support of local governments, especially by enabling logistical support by Municipalities.
- **Component 3: Project Management, Monitoring and Evaluation:** By supporting the Project's effective and efficient management and administration (in close coordination with other projects that support the CAR within MMA), monitoring and evaluation, this component is crucial in order to prevent deforestation activities in the farms that took part on the CAR program.

(B) Demonstration potential at scale

39. The CAR system and registration to be developed and then deployed in the nine Federative Units and 47 Municipalities will be field tested, and could be deployed in the other 16 Federative Units, thus creating a true national CAR. The CAR's implementation in the Cerrado Biome will enable all state agencies involved in environmental management to acquire know-how on CAR implementation. The Project will also enable the establishment of the CAR, which will continue after the Project's lifetime.

[34] http://bit.ly/ORQbTt

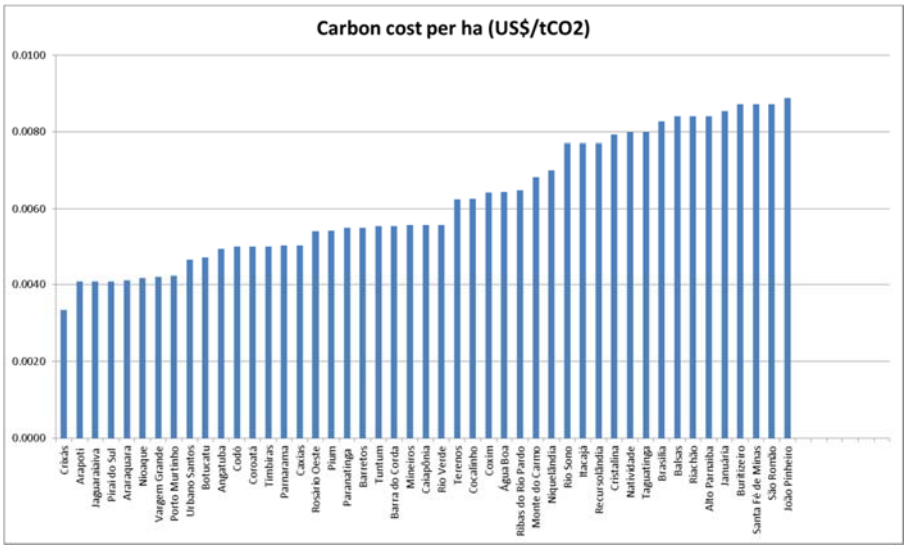
40. This section provides a summary of the Project's economic and financial analysis[35]. The aim of cost-effectiveness analysis is to achieve a certain benefit at minimum cost. In this type of analysis, the benefits or externalities (such as the damage costs of not removing carbon from the atmosphere) are not considered. If externalities were taken into account, a social cost-benefit analysis would be performed[36].

41. In order to perform the calculations, the following assumptions were made: (i) forest restoration costs were not considered, since they involve expenditures that are not covered by this funding; (ii) cost-effectiveness based on the potential of CO_2 retention/removals in terms of the total carbon content of forests per hectare according to the World Bank LCCS and the Second Brazilian Report; (iii) the CAR process successfully triggered forest restoration activities in the farms, and no further deforestation activities will be carried out; and (iv) only the funding provided by the FIP Program was considered (US$32.48 million).

42. Therefore, a simple assessment was based exclusively on carbon removals due to forest restoration activities to be conducted by landholders and triggered by the CAR registration process, funded by this Project, without consideration of other impacts. In this analysis, ancillary factors were stripped out in order to arrive at a pure "cost of carbon" related to Project funding.

43. By performing the calculations using the LCCS emission factors, the price of carbon per hectare shows wide variation, ranging from only US$0.0033 in Crixás (GO) to US$0.0089 in João Pinheiro (MG). The average value is US 0.0062 (see Figure 6).

Figure 6. Carbon cost per hectare in each selected municipality



44. Under a climate approach, these municipalities with a lower carbon price should be prioritized in this Project.

[35] Report: Economic/financial and cobenefits analysis, and mitigation potential analysis of the Project: Environmental Regularization of Rural Lands in the Cerrado of Brazil. Consultant: Magno Botelho Castelo Branco, 2014. 49 pg.
[36] NAO (2007) Cost-effectiveness analysis in the 2006 Climate Change Programme Review.

45. On the other hand, the price of carbon per hectare calculated according to the emission factors contained in the Second Brazilian Report is the same across all municipalities (US$0.0066). Under this approach, a climate-oriented cost-effectiveness analysis is not possible, because there is no difference in the price of carbon across municipalities, and the costs to develop the Project (cost per CAR and per hectare) in each municipality are not known.

Table 1. Carbon content per hectare (tCO2/ha), area to be restored (ha), total CO_2 to be removed and carbon cost per hectare in the selected Municipalities

State	Municipality	tCO2/ha (WB)	Overall area to be reforested (ha)	Overall CO2 to be removed (WB)	Carbon cost per ha (WB)
DistritoFederal	Brasília	229	84,467	19,361,437	0.0083
Goiás	Caiapônia	340	207,117	70,377,265	0.0056
Goiás	Mineiros	340	207,146	70,387,010	0.0056
Goiás	Cristalina	239	108,023	25,808,242	0.0079
Goiás	Rio Verde	340	186,478	63,364,087	0.0056
Goiás	Niquelândia	270	118,375	32,000,715	0.0070
Goiás	Crixás	569	109,224	62,189,039	0.0033
Maranhão	Alto Parnaíba	225	54,737	12,342,037	0.0084
Maranhão	Riachão	225	70,304	15,852,048	0.0084
Maranhão	Balsas	225	199,985	45,092,583	0.0084
Maranhão	Tuntum	342	32,601	11,134,484	0.0055
Maranhão	Codó	378	42,458	16,058,216	0.0050
Maranhão	Parnarama	376	43,835	16,479,528	0.0050
Maranhão	Timbiras	378	11,856	4,484,043	0.0050
Maranhão	Caxias	376	41,443	15,580,415	0.0050
Maranhão	Coroatá	378	12,495	4,725,696	0.0050
Maranhão	Barra do Corda	342	3,024	1,032,827	0.0055
Maranhão	Urbano Santos	406	5,048	2,049,163	0.0047
Maranhão	Vargem Grande	452	10,001	4,516,140	0.0042
Mato Grosso	Água Boa	294	151,362	44,485,845	0.0064
Mato Grosso	Paranatinga	344	494,068	170,044,630	0.0055
Mato Grosso	Cocalinho	302	422,499	127,775,107	0.0063
Mato Grosso	Rosário Oeste	350	163,771	57,266,868	0.0054
Mato Grosso do Sul	Terenos	303	73,635	22,308,066	0.0063
Mato Grosso do Sul	Ribas do Rio Pardo	292	564,011	164,605,488	0.0065
Mato Grosso do Sul	Coxim	295	183,745	54,213,364	0.0064
Mato Grosso do Sul	Nioaque	455	104,823	47,694,573	0.0042
Mato Grosso do Sul	Porto Murtinho	449	461,114	207,055,381	0.0042
Minas Gerais	João Pinheiro	213	166,445	35,494,008	0.0089
Minas Gerais	Buritizeiro	217	124,865	27,127,363	0.0087
Minas Gerais	São Romão	217	33,066	7,183,762	0.0087
Minas Gerais	Santa Fé de Minas	217	52,087	11,316,150	0.0087
Minas Gerais	Januária	222	16,771	3,724,559	0.0085
Paraná	Piraí do Sul	464	15,033	6,975,892	0.0041
Paraná	Arapoti	464	41,919	19,452,187	0.0041
Paraná	Jaguaraiaíva	464	25,762	11,954,759	0.0041
São Paulo	Barretos	344	34,922	12,016,245	0.0055
São Paulo	Araraquara	461	150,949	69,603,417	0.0041
São Paulo	Botucatu	400	23,932	9,571,801	0.0047
São Paulo	Angatuba	383	22,125	8,472,612	0.0049
Tocantins	Monte do Carmo	277	67,759	18,797,995	0.0068
Tocantins	Itacajá	246	27,053	6,656,934	0.0077
Tocantins	Rio Sono	246	63,195	15,550,498	0.0077
Tocantins	Pium	349	198,697	69,358,864	0.0054
Tocantins	Recursolândia	246	4,182	1,029,110	0.0077
Tocantins	Taguatinga	237	31,392	7,452,917	0.0080
Tocantins	Natividade	237	124,050	29,451,312	0.0080

(C) Implementation potential

46. The Project is fully in line with Brazil's National Climate Change Policy (NPCC), which guides domestic policy operations with regard to climate change. The Action Plan to Prevent and Control Deforestation and Fires in the Cerrado Biome (PPCerrado) is one of the sector plans stipulated by the NPCC. As such, it is expected to make a positive contribution to the country's current REDD+ efforts[37].

(D) Integrating sustainable development (co-benefits)

47. The co-benefits analysis of policies related to the environment, specifically climate change, usually takes into account only the relative cost-effective policies and actions taken. Thus, the co-benefits are rarely considered in the design and implementation of these policies, and have little influence on the decision-making process[38].

48. In strict economic terms, the co-benefits analysis requires both a negative and positive quantification of what people value. These values are then monetized in some form of currency so that a direct comparison of benefits can be made[39]. However, although this technique is useful for comparing and quantifying the positive and negative effects of policies, not all impacts can be quantified and monetized.

49. Some co-benefits models are well developed and mature, but none is related to land use, land use change and forestry (LULUCF) activities, such as the COBRA model, developed by the United States Environmental Protection Agency (EPA)[40]. The COBRA model, which quantifies and monetizes several impacts and benefits related to air quality policies, is a tool widely used in the decision-making process.

50. With these limitations in mind, only the qualitative aspects of the co-benefits generated by the Project are accessed. The Project's main co-benefits are:

- **Environmental**: (i) conservation of greater biodiversity and increase in genetic flows in the forested areas of APPs and RLs, as well as in the remaining forests; (ii) removals of large amounts of CO_2 from the atmosphere due to the native forest restoration activities that will be performed after CAR registration; (iii) protection of soils and water resources; (iv) protection of headwaters of the rivers that form the Pantanal and are located in the Cerrado of the Central Plateau, which are vital for the continued existence of large floodable areas, their biodiversity and sustainable use; and (v) assistance to landholders and special beneficiaries (including family farmers and traditional communities) to comply with environmental requirements in order to enable them to access financial resources and other types of support for adopting the sustainable technologies included in the ABC Plan. Moreover, the CAR will likely have limited impact on reducing habitat fragmentation in the Cerrado Biome, and will thus have positive impacts on biodiversity through increased connectivity, thus ensuring that gene flows are likely to be limited.

[37] For detailed information on REDD-plus background in Brazil, refer to Annex 6.
[38] Nemet et al. (2010) Implications of incorporating air-quality cobenefits into climate change policymaking. Environ. Res. Lett. **5** 014007
[39] Murray, C. (2013). An assessment of cost benefit analysis approaches to mangrove management. Auckland Council technical report, TR2013/006
[40] http://www.epa.gov/statelocalclimate/resources/cobra.html

- **Socioeconomic**: (i) enabling landholders to access the resources and other assistance services provided under the ABC Plan; (ii) assurance to landholders (including property owners, squatters, land reform settlers, family farmers and traditional communities) that they are fulfilling part of the environmental legislation requirements, thus enabling them to undertake investments in agricultural products that will allow them to access a range of markets which require such compliance; (iii) establishment of enabling requirements for landholders (including land reform settlers and traditional communities) to access targeted rural credit such as PRONAF; and (iv) increase in both employment and income for landholders (including land reform settlers and traditional communities) and other partners in the business chain generated by farming activities, thereby contributing to poverty alleviation. There are an estimated 100,098 landholdings in the selected Municipalities, 80,619 of which (81 percent) are smallholdings or family farms, the Project's main target population. For small landholders, MMA and the SEAs will provide technical assistance in their cadastral statements, and the records will be based on simplified procedures and documentation.

- **Institutional**: (i) development or enhancement of policies, standards, methodologies and protocols for implementing the CAR at the national, state and municipal levels; (ii) strengthening of support to IBAMA and ICMBio to act in accordance with their mandate under the CAR; (iii) enhanced efficiency in project management, including monitoring and evaluation of its implementation and results; and (iv) alliances between government and rural workers' representative institutions to promote effective environmental law compliance in agribusiness and productive chains.

(E) Safeguards

51. The CAR has benefits both for the government and for landholders. For landholders, the benefits of registration with the CAR (besides fulfilling a legal obligation) include the following: (i) greater legal certainty: the ability to demonstrate environmental compliance; (ii) suspension of fines (in some cases); (iii) access to credit: after five years; i.e., in 2017 the official credit cannot be extended to landholdings not registered in the CAR; (iv) access to programs that promote environmental regulation (loans, grants and technical assistance for planting and restoring APPs and RLs); and (v) input for better planning of a landholding's land use.

52. The Project will work directly with the SEAs, small landholders and selected Municipalities. Benefits will accrue to rural landholders, directly or indirectly, from the environmental regularization promoted by the Project. In the CAR process, the rights of current occupiers of landholdings must be respected, provided they are not in violation of legal provisions.

53. The Project is expected to have a positive environment impact because it seeks to promote the rural environmental cadastre of holdings by landholders, thus officially determining the APP and RL areas of each holding. The nature and scale of the proposed investments in environmental regularization will not have significant adverse impacts. Despite these positive impacts, the Project will be working in various sensitive biodiversity and dry-forest areas. Since 1965, the Brazilian Forest Code has required landholders to retain natural vegetation on steep slopes, along watercourses (up to a given distance from riverbanks) or in the vicinity of springs. These are called Permanent Preservation Areas (APPs). The holdings must also set aside Legal Reserves (RLs). In this context, the CAR has been introduced by the Forest Code (Law 12.651/2012) as an additional

tool to monitor and control deforestation. Registration of landholdings in the CAR is a first step toward bringing them into compliance with Brazil's Forest Code.

54. The Project will comply with the current safeguards required by Brazilian regulations as well as with those of the Bank.

55. MMA prepared the Project's Environmental and Social Management Framework (ESMF). The ESMF raised the positive and negative impacts of the environmental regulation process, considering the current Forest Law, state laws and Bank safeguards. The ESMF also defines a number of preventive and mitigating actions in the ten most relevant municipalities, and seeks to present alternatives to prevent or minimize the diagnosed impacts. Such measures do not represent direct actions of the CAR–FIP Project; instead they indicate strategies to be adopted in order to complement actions and more effectively achieve the goals set out by the Project.

56. The Project will be implemented in 47 selected Municipalities of the Cerrado Biome and will benefit private landholders. There are 19 Indigenous Lands in nine of these selected Municipalities:

- In the State of Maranhão: Canabrava/Guajajara, Rodeador, Porquinhos and Kanela Indigenous Lands (Barra do Corda municipality);
- In the State of Mato Grosso do Sul: Kadiwéu (Porto Murtinho), Nioaque (Nioaque), Buriti and Buritizinho (Sidrolândia), and Jatayvari and Pirakua (Ponta Porã);
- In the State of Mato Grosso: Bakairi and Marechal Rondon (Paranatinga); and
- In the State of Tocantins: Palmas and Funil (Tocantínia), and Kraolandia (Itacajá and Goiatins).

57. However, OP 4.10 is not triggered because:

- The provisions in the Forest Code establish special treatment for Indigenous Lands and quilombola territories, which have not been regulated yet. Thus, CAR procedures do not fully apply to Indigenous Lands yet.
- The project will not interfere with Indigenous Lands, the cadastre of these Indigenous lands will not be supported by the Project.
- .

58. The ESMF includes a summary assessment of Indigenous Peoples found in the selected Municipalities and the potential impacts of implementing the CAR in areas surrounding or near Indigenous Lands. These impacts are deemed positive because the CAR will contribute to the maintenance and/or recovery of APPs and RLs, the protection of watercourses and the recovery of the vegetation cover around Indigenous Lands.

59. The ESMF has also established the screening process to identify and avoid overlaps between landholdings and Indigenous Lands, as well as the procedures to be followed when landholdings overlapping Indigenous Lands are found. In these cases, FUNAI will be notified and the landholding will not be registered in CAR until the information provided by the landholder is checked, and unless the land tenure issues regarding the overlapping areas are resolved. In short: no landholding will be registered in CAR if it is found to overlap with land claimed by Indigenous Peoples, even in cases where such land is not yet declared or registered as Indigenous Land.

FUNAI will also have access to all the information and tools produced by the CAR system (SICAR).

Annex 7: Selected Project Municipalities

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil Project

Federative Unit	Municipality	Area km^2	Population	Rural Population	No. of small landholdings	Area of small landholdings (ha)
DFederal	Brasília	5,780	2,570,160	87,950	17,095	11,936
Goiás	Caiapônia	8,638	16,757	4,488	836	47,102
	Cristalina	6,162	46,580	8,159	809	22,569
	Crixás	4,661	15,760	3,442	889	63,182
	Mineiros	9,060	52,935	4,649	962	43,867
	Niquelândia	9,483	42,361	9,018	1,837	279,477
	Rio Verde	8,380	176,424	12,884	2,108	45,409
Maranhão	Aldeias Altas	1,940	23,952	10,318	1,265	11,734
	Barra do Corda	5,203	6,773	31,182	3,005	114,197
	Buriti	1,474	27,013	18,615	2,611	22,646
	Caxias	5,151	155,129	36,595	5,161	40,830
	Codó	4,361	118,038	36,993	5,818	25,703
	Coroatá	2,264	61,725	16,668	2,710	36,394
	Parnarama	3,439	34,586	21,056	3,392	20,974
	São Benedito do Rio Preto	932	17,799	6,749	1,370	12,171
	Timbiras	1,487	27,997	10,526	2,679	19,799
	Tuntum	3,390	39,183	21,256	2,174	62,788
	Urbano Santos	1,208	24,573	7,199	1,999	22,892
	Vargem Grande	1,958	49,412	22,725	3,052	20,890
Mato Grosso	Água boa	7,481	20,856	4,097	929	52,911
	Cocalinho	16,531	5,490	1,843	86	36,832
	Paranatinga	24,166	19,290	4,475	645	59,724
	Rosário Oeste	7,476	17,679	7,025	1,071	81,514
Mato Grosso do Sul	Coxim	6,409	32,159	3,014	373	18,101
	Nioaque	3,924	14,391	7,334	1,925	35,252
	Porto Murtinho	17,744	15,372	5,313	143	12,484
	Ribas do Rio Pardo	17,308	20,946	7,981	1,052	53,734
	Terenos	2,845	17,146	9,871	1,938	29,200
Minas Gerais	Buritizeiro	7,218	26,922	3,292	599	26,766
	Januária	6,662	65,463	24,141	220	49,579
	João Pinheiro	10,727	45,260	8,499	478	99,874
	Santa Fé de Minas	2,917	3,968	1,677	367	27,449
	São Romão	2,434	10,276	3,807	2,974	18,002
Paraná	Arapoti	1,360	25,855	4,077	662	11,065
	Jaguaraiaíva	1,453	32,606	4,565	884	7,795
	Piraí do Sul	1,403	23,424	7,322	917	11,283
São Paulo	Angatuba	1,028	22,210	6,257	1,371	10,453
	Araraquara	1,004	208,662	5,932	913	15,540
	Barretos	1,566	112,101	3,415	939	12,296

	Botucatu	1,483	127,328	4,650	900	43,158
Tocantins	Almas	4,013	7,586	1,577	265	13,801
	Goiatins	6,409	12,064	7,115	576	61,582
	Itacajá	3,051	7,104	2,831	425	38,211
	Monte do Carmo	3,617	6,716	3,835	463	39,895
	Recursolândia	2,217	3,768	1,778	348	13,600
	Rio Sono	6,354	6,254	3,847	635	50,129
	Taguatinga	2,437	15,051	4,424	903	43,305

Annex 8: Forest Investment Program, Brazil Investment Plan, Dedicated Grant Mechanism for Indigenous Peoples and Local Communities, Private-Sector Set-Aside and Other Programs: Implementation, Management, and Synergies

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil Project

A. Forest Investment Program, Brazil Investment Plan, Dedicated Grant Mechanism for Indigenous Peoples and Local Communities, and Private-Sector Set-Aside: Implementation Management

1. **The Forest Investment Program (FIP).** The FIP is a targeted program of the Strategic Climate Fund (SCF), a multi-donor Trust Fund established in 2009, which is one of two funds under the framework of the Climate Investment Funds (CIF). The FIP supports developing countries' efforts to reduce deforestation and forest degradation and to promote sustainable forest management that leads to emission reductions and the enhancement of forest carbon stocks (REDD+)[41] by: (i) providing up-front bridge financing for readiness reforms and public and private investments identified through national REDD+ readiness strategy-building efforts; (ii) identifying opportunities to help them adapt to the impact of climate change on forests; and (iii) contributing to a range of beneficial activities such as biodiversity conservation, protection of the rights of Indigenous Peoples and Local Communities, poverty reduction and improvement of rural livelihoods. The FIP finances efforts to address the underlying causes of deforestation and forest degradation and to overcome barriers that have hindered past efforts to do so in eight FIP pilot countries (Brazil, Burkina Faso, Democratic Republic of the Congo, Ghana, Indonesia, Lao People's Democratic Republic, Mexico and Peru).

2. The FIP was designed to achieve four specific objectives: (i) to initiate and facilitate steps toward transformational change in developing countries' forest-related policies and practices; (ii) to pilot replicable models to generate understanding and learning of the links among the implementation of forest-related investments, policies and measures, and long-term emission reductions from REDD+; (iii) to facilitate the leveraging of additional financial resources for REDD+, including a possible UNFCCC forest mechanism; and (iv) to provide valuable experience and feedback in the context of the UNFCCC deliberations on REDD+.

3. In its efforts to achieve these objectives, the FIP will support and promote, *inter alia*, investments in the following areas: (i) institutional capacity, forest governance and information; (ii) investments in forest mitigation measures, including forest ecosystem services; and (iii) investments outside the forest sector that are needed to reduce the pressure on forests.

4. The FIP is under implementation in the abovementioned eight countries with support from Multilateral Development Banks (MDBs).

5. **Dedicated Grant Mechanism for Indigenous Peoples and Local Communities (DGM).** The DGM is a global initiative that was conceived and developed as a special window under the Forest Investment Program (FIP) to provide grants to Indigenous Peoples and Local Communities (IPLCs), with the intention of enhancing their capacity and supporting initiatives to strengthen their participation in the FIP and other REDD+ processes at the local, national and global levels.

[41] REDD+ stands for "Reducing Emissions from Deforestation and forest Degradation, and the role of conservation, sustainable management of forests, and the enhancement of forest carbon stocks in developing countries". It is a policy mechanism being negotiated under the UNFCCC.

The DGM is under implementation in these eight countries.

6. This financial stream is additional to the resources allocated under the FIP Investment Plans for each pilot country. It will promote and extend participatory governance, transparency and accountability in pilot countries by providing IPLCs with the resources they need to meaningfully engage in REDD+ at the local and government levels.

7. The FIP Subcommittee approved the basic design of the Global Dedicated Grant Mechanism (G-DGM) on October 31, 2011[42]. IPLC representatives endorsed the final version of the basic DGM design and foundational documents, such as the Framework Operational Guidelines (FOG). The DGM's overall objective is to enhance the capacity and to support effective initiatives of IPLCs in the FIP pilot countries in order to strengthen their participation in the FIP and other REDD+ processes at the local, national and global levels. To achieve its objective, the program has two components: (i) a Country Component in each of the eight FIP pilot countries; and (ii) a Global Component for knowledge sharing, capacity building, and strengthening of networks and partnerships among IPLC organizations in the pilot countries and beyond.

8. The Country Component supports two subcomponents. Subcomponent I supports grants to IPLC organizations on a competitive basis for investments of the IPLCs' choice and within the overall framework of the DGM. Subcomponent II supports capacity-building activities for IPLC organizations. The overall program criteria state that the country projects must be: (i) aligned with the objectives of the DGM and the FIP; (ii) aligned with one or more thematic areas of the DGM (capacity development, promotion of rural livelihoods, or investments in sustainable management of forest landscapes); (iii) complementary to the country's FIP investment plan and projects supported under it; (iv) designed and implemented under the initiative of IPLCs and must directly benefit them; (v) based on inclusive and accountable processes; and (vi) compliant with the relevant operational and safeguard policies of the corresponding MDB. Activities to be financed under Subcomponent I may fall under two broad thematic areas: (i) promotion of economic activities and rural livelihood practices that enhance climate change mitigation and adaptation and are consistent with the values of IPLCs; and (ii) investments in sustainable management of forest landscapes that maintain high carbon stocks and conserve biodiversity.

9. **The DGM in Brazil.** The Brazil DGM will act in synergy with other projects under the Brazil Forest Investment Plan (BIP) (see below). To promote these synergies and to address the challenges posed by the geographic dispersion of IPLCs, the Brazil DGM will prioritize its actions in the Cerrado Biome.

10. The Brazil DGM follows the framework guidelines and the set of activities covered under the components designed for the G-DGM. The Project will support capacity building and finance the demand-driven provision of grants to IPLC organizations in Brazil to strengthen their participation in the FIP and other REDD+ processes at local, national and global levels, as well as to increase their capacity to adapt to climate change through no-regret initiatives[43].

11. The DGM in Brazil has an indicative funding envelope of US$6.5 million in grant

[42] The DGM Design Document (link).

[43] "No-regrets" actions are actions by households, communities, and local/national/international institutions that can be justified from economic, and social, and environmental perspectives whether natural hazard events or climate change (or other hazards) take place or not. "No-regrets" actions increase resilience, which is the ability of a "system" to deal with different types of hazards in a timely, efficient, and equitable manner. Increasing resilience is the basis for sustainable growth in a world of multiple hazards (see Heltberg, Siegel, Jorgensen, 2009; UNDP, 2010).

resources. This funding from the DGM will finance activities that are to be determined by the National Steering Committee (NSC) of the DGM in Brazil in accordance with the DGM Project for Brazil, the Brazil DGM Operational Manual and the Framework Operational Guidelines mentioned above. The Project will be executed by a national executing agency (NEA) with the oversight of the National Steering Committee, the Coordination Unit of the Brazilian Investment Program under the FIP (BIP), and the World Bank. The World Bank will enter into an agreement to provide funding to the NEA and, in compliance with DGM Guidelines, will act as an observer in the NSC. The NEA will report back to the World Bank on the progress, safeguard and fiduciary aspects of the program.

12. **FIP and the Private Sector**. In 2012, the FIP Subcommittee agreed that over US$50 million in concessional funds should be set aside for allocation to private-sector programs and projects, selected on a competitive basis, that promote innovative approaches to engage the private sector in the pilot countries. Such programs and projects should be aligned with the endorsed investment plans and should serve to encourage interest from a broad range of private-sector actors.

13. At its meeting on October 30, 2013, the FIP Sub-Committee endorsed one Brazilian concept that will be further developed for FIP funding approval: Brazil: Macaúba Palm Oil in Silvicultural Systems (implementing MDB: IDB), (US$3 million) [44].

14. **The Brazil Investment Plan (BIP).** The BIP, which was endorsed by the FIP Subcommittee on May 18, 2012, represents an important step in the implementation of the FIP in Brazil. The BIP seeks to promote sustainable land use and forest management improvement in the Cerrado, the second-largest biome in Brazil and South America, and contribute to reducing pressure on the remaining forests, reducing GHG emissions and increasing CO_2 sequestration.

15. The Cerrado is a strategic biome for economic and environmental reasons as well as for food security. It covers a large area with significant carbon stocks and water resources, and with substantial biodiversity.

16. The BIP clearly complies with the FIP's four specific objectives. It builds on existing climate change-related policies and practices in Brazil and supports the instruments that guide federal and state financing policies in the land use sector, particularly the Forest Code and PPCerrado, and thus overcomes key barriers to their implementation. As such, the BIP invests in replicable models that will catalyze transformational changes in the Agriculture, Forestry and Other Land Use (AFOLU) sector in the Cerrado Biome, generate new knowledge and build the foundations to leverage additional financial resources for an eventual future REDD+ mechanism under the UNFCCC.

17. The BIP comprises coordinated actions by three Ministries (Environment; Science, Technology and Innovation; and Agriculture, Livestock and Food Supply). These actions are focused on building synergies in order to maximize the impact of a larger set of policies aimed at reducing deforestation in the Cerrado Biome by: (i) improving environmental management in areas previously anthropized; and (ii) producing and disseminating environmental information at the biome scale.

18. The BIP covers two thematic areas and includes four interrelated projects, as shown in Figure 1 below. Theme 1: Management and use of previously anthropized areas, aims to promote

[42] //www.climateinvestmentfunds.org/cif/node/11389

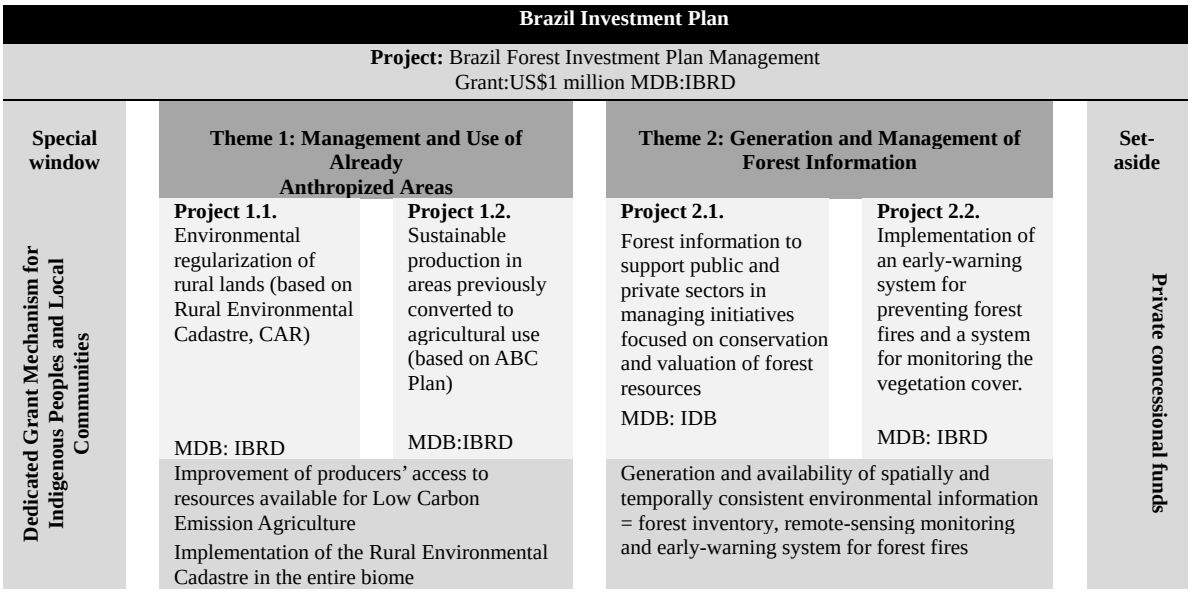
sustainable use on privately run farms. Better land use will result in reduced emissions and improved carbon sequestration, and will ease pressures for deforestation on the remaining forests. Theme 2: Production and Management of Forest Information, aims to generate and make available spatially and temporally consistent environmental information for the biome.

19. The BIP also proposes coordinated and synergic actions by different actors in order to improve the sustainability and efficiency of forest resource management and land use in the Cerrado, in particular on the privately run landholdings that are prominent in this biome.

20. Therefore, a BIP coordination component provides a platform for knowledge sharing among BIP projects, the Brazil FIP DGM, FIP Private Sector projects, and beyond.

21. The BIP comprises two projects with complementary approaches (forests and land use): (i) generation and promotion of new, updated and accurate information on forest resources and their use, with a view to assisting public- and private-sector policy makers and enabling the environment for forest management best practices that may contribute to valuing forest resources as an important socioeconomic and environmental asset; and (ii) generating information on deforestation, forest degradation and land use in a systematic and ongoing manner, as well as developing an early-warning system for preventing forest fires and a system for monitoring vegetation cover.

Figure 1. Brazil Investment Plan: Context and Intervention Strategy



22. The table below summarizes the financing plan for the BIP projects, DGM and private-sector projects to date.

T**able 1. Financing Plan for the BIP**

	Project	MDB	Govt. Agency	FIP Grant	FIP Loan	Others	TOTAL US$ Million
Brazil IP	Environmental regularization of rural lands	IBRD	MMA		32.48	17.50	50.98
	Sustainable production in areas previously converted to agricultural use	IBRD	MAPA	10.62	--	0.50	11.12
	Forest information to support public and private sectors in managing initiatives	IDB	MCTI	16.55	--	8.00	24.55
	BIP Coordination	IBRD	MMA	1.00	--	--	1.00
	Implementation of an early-warning system for preventing forest fires and a system for monitoring	IBRD	MMA/ Forest Service	9.25	--	6.50	15.75
	Total (1)			37.52	32.48	32.50	103.40
DGM	Brazil Development Grant Mechanism	IBRD	--	6.50	--	--	6.50
	Total (2)			6.50			6.50
Private set-aside	Brazil: Macaúba Palm Oil in Silvicultural System	IDB	--	--	3.00	3.00	6.00
	Total (1+2+3)			44.02	35.48	35.50	**115.9**

23. In parallel, the Government of Brazil will continue to support the initiatives, programs and projects related to its national policies and plans through annual budget allocations, grants and loans (see below).

24. **BIP coordination, monitoring and reporting.** At the national level, the Secretariat of International Affairs of the Ministry of Finance (MF/SEAIN) plays the role of FIP National Focal Coordinator. MMA will act as the BIP's National Coordinator. The National Commission for the Sustainable Cerrado Program (CONACER), which promotes the integration of programs, projects and sector policies related to the Cerrado Biome, will also act as the Advisory Committee for the BIP. The BIP Executive Committee will be responsible for the coordination of the various ministries involved in implementing the program as well as for coordination with other government programs. The Executive Committee will have representatives from MMA, MAPA and MCTI. It will be in charge of aggregating information (including project and BIP indicators); informing CONACER on implementation progress and results; and providing feedback to all implementing agencies. This arrangement will ensure that the various project activities under the BIP will build on each other and are mutually synergistic. It will also ensure a coordinated M&E approach, including BIP-level reporting, information sharing and knowledge management. The following table and diagram[45] illustrate the responsibilities and the relationship among all institutions.

Table 2. Partners and Responsibilities under BIP

	Responsibilities
CONACER National Commission for the Sustainable Cerrado Program	CONACER will act as the consultative committee for the Investment Plan. It will monitor and review the BIP's progress and results and will advise the BIP Executive Committee on how to improve execution. CONACER is composed of representatives from: (i) MMA; (ii) ICMBio; (iii) MDA; (iv) EMBRAPA; (v) SBPC; (vi) ABEMA; (vii) civil society organizations (including representatives of network NGOs of Indigenous Peoples and local Communities); and (viii) the rural productive sector.
BIP Executive Committee	The BIP–EC will be responsible for the monitoring and evaluation of the BIP, the coordination of actions by the different ministries involved, and the interaction of FIP projects with other government programs. The BIP-EC should promote synergies among FIP projects and the involvement of different stakeholders. The BIP–EC will have representatives from MMA, MAPA and MCTI. The BIP–EC will report periodically to

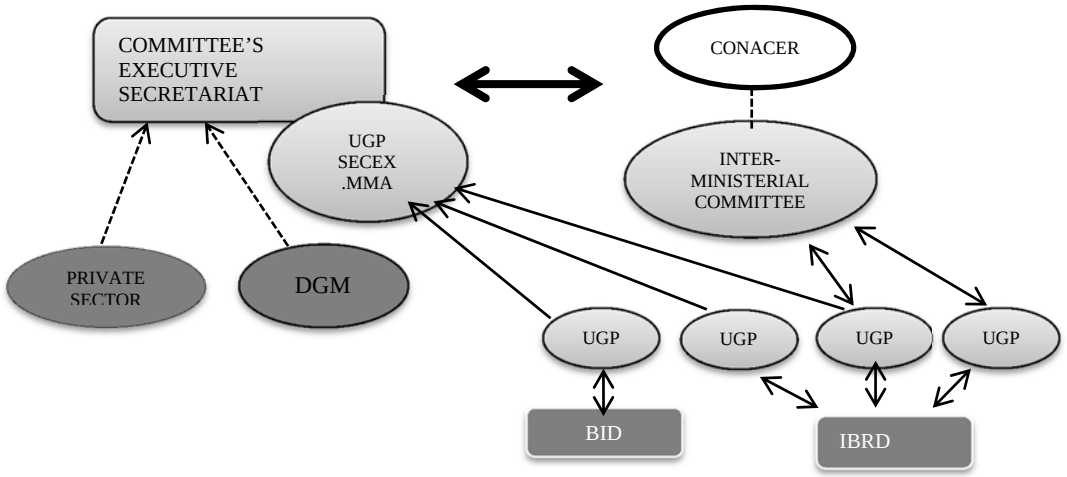
[45] The diagram is still under discussion. Definitive arrangements will be incorporated in the BIP Coordination Project (under preparation).

	Responsibilities
	CONACER about BIP progress and results and will also receive feedback and guidance for the improvement of BIP execution.
BIP Coordination	The BIP Coordination Unit will be responsible for the development and implementation of the BIP monitoring system; coordination of activities among the projects, DGM and the private sector, with the aim of strengthening the coordination and synergies among projects throughout the implementation phase; preparation of progress reports; monitoring and evaluation; and outreach of the BIP.
Project Executing Agencies	The executing agencies will be responsible for coordinating project implementation; technically supervising the development of project activities, including effective coordination of research and activities at the project level, with other government institutions; coordinating the project's different actors; reporting on tasks; Project monitoring and evaluation. In the case of this Project, MMA is the executing agency and the Borrower.
Borrower or Grantee	The Borrower/Grantee should be responsible for financial and administrative management; procurement operations and reporting; financial management; financial reporting; annual budget and project planning; preparation of terms of reference (ToRs), technical specifications for project activities; and technical reports for submission to the MDB and BIP Coordination Unit.

25. **BIP Implementation and Management.** The territorial size and environmental complexity of Brazil's Cerrado Biome and the need to ensure the consistency of the various instruments to be employed, to coordinate efforts and to share timely and relevant information are all challenges that require the building of synergies among the various actors and activities with the aim of securing cost-effective solutions.

26. As a response to these challenges, the BIP will act in synergistic manner by coordinating efforts and activities in the various implementing agencies. The BIP will also promote synergies among the BIP's projects, DGM and private projects under the FIP, as shown in Figure 2.

Figure 2. Brazil Investment Plan, Dedicated Grant Mechanism, and Private Set-aside Flows



B. National Policies, Programs and Projects related to REDD+: Synergies and Financing

27. As presented in the BIP, the BIP projects are included in broader policies and national plans that are considered priority areas by the GoB. In parallel with the FIP, the GoB continues to support the initiatives related to its national policies and plans through annual budget allocations and other international funds.

28. It is important to highlight that the BIP was designed to enable the development of a strategic approach to promote synergies not only among its projects, but also with ongoing Cerrado government plans and policies already under implementation at federal, state and municipal levels.

29. This section is a brief summary of the MMA's strategy, programs and projects for the Cerrado Biome, their synergies and financing sources that contribute to GHG emission reductions by reducing deforestation and forest degradation.

30. The following policies guide the MMA's Cerrado Biome approach:

- Through the National Policy on Climate Change (Law 12.187/2009 and Decree 7.390/2010), the GoB made a voluntary commitment to reduce the annual rates of deforestation in the Cerrado Biome by 40 percent, based on average deforestation between 1999 and 2008.
- Launched in September 2010, the aim of the Action Plan to Prevent and Control Deforestation in the Cerrado Biome (PPCerrado; Decree 5.577/2005) is to promote sustained reductions in the rates of deforestation and forest degradation, as well as in the incidence of burnings and forest fires in this biome.
- The Forest Code (Law 12.651/2012) requires landholders to ask the State`s Environmental Agencies for prior authorization to use fire on vegetation in locations or regions whose characteristics justify its use in agro-pastoral or forestry practices. It also states that Federal, State and Municipal environmental agencies, which comprise the National Environmental System (Sistema Nacional do Meio Ambiente, SISNAMA), will update and deploy contingency plans for fighting forest fires and that the Federal Government should establish a National Policy for Prevention and Control of Deforestation and Forest Fires.

31. The PPCerrado guidelines include: the integration and improvement of monitoring and control activities by federal agencies, aimed at the environmental regulation of rural landholdings, sustainable forest management and firefighting; land use planning for conserving biodiversity, protecting water resources and encouraging the sustainable use of natural resources; the promotion of environmentally sustainable economic activities, maintenance of natural areas, and restoration of degraded land.

32. In addition to the BIP, the following programs or projects are under MMA's Cerrado Biome approach:

- The **Sustainable Cerrado Initiative**, supported by the Global Environment Facility (GEF), aims to enhance biodiversity conservation and improve environmental and natural resource management in the Brazilian Cerrado through appropriate policies and practices.
- The **Brazil Cerrado Climate Change Mitigation Trust Fund** (BCCMTF) (ProCerrado Program), launched in January 2012, is a single-donor trust fund with Bank- and recipient-

executed components from the Department for Environment, Food and Rural Affairs of United Kingdom (DEFRA). The objective of the program is to assist Brazil in mitigating climate change in the Cerrado Biome and in improving environmental and natural resource management in this biome through appropriate policies and practices. The following projects are part of the program:

- **Rural Environmental Cadastre and Fire Prevention in Piauí Project, under implementation by the Secretariat of Environment and Water Resources of Piauí.** The Project's main activities are to: (i) assist rural landholders in adequate their land to the Forest Code and in implementing the CAR; (ii) promote sustainable productive activities; and (iii) strengthen municipal governments' capacity to prevent and control forest fires. The Project is currently under implementation.
- **Rural Environmental Cadastre and Fire Prevention in Bahia Project, to be implemented by the Secretariat of Environment of Bahia (SEMA-BA).** The Project's main activities are to: (i) assist rural landholders in adequate their land to the Forest Code and in implementing the CAR. In the State of Bahia, the system is called CEFIR and was developed by the State; it is a broader system than the CAR and covers other environmental aspects; (ii) promote sustainable productive activities; and (iii) strengthen municipal governments' capacity to prevent and control forest fires. The Project is currently under implementation.
- **Platform of Monitoring and Warning of Forest Fires in the Brazilian Cerrado, a Project to be coordinated by National Institute of Spatial Research (*Instituto Nacional de Pesquisas Espaciais,* INPE).** The project's objective is to develop a system to monitor, analyze and produce wildfire and burning warnings, to be implemented in the priority municipalities of the Cerrado Biome as a pilot system. The Project foresees the reconfiguration of the structure of INPE's Burning System, both internally in INPE as well as in users' Internet access, adapting the burning system to state-of-the-art remote sensing, geoprocessing, information technology, and decision intelligence. The Project is currently under implementation. This project will act complementarily with the Implementation of an Early-Warning System for Preventing Forest Fires and a System for Monitoring the Vegetation Cover Project, under the BIP.
- **ProCerrado Federal Project,** to be coordinated by the Department of Policies to Combat Deforestation of the Ministry of Environment, in partnership with its operational agencies. The project's main activity will be to build capacity in federal agencies to coordinate and execute actions to reduce deforestation and fires in the Brazilian Cerrado. The project will support the PPCerrado's coordination unit, the development of state strategies to recover degraded areas, and the development of the National Policy for Fire Management, Burning Control, and Combating and Preventing Forest Fires. It will also strengthen ICMBio's capacity to prevent and combat forest fires in critical protected areas within the Cerrado Biome. Project preparation is ongoing. The expected effectiveness date is July 2015.

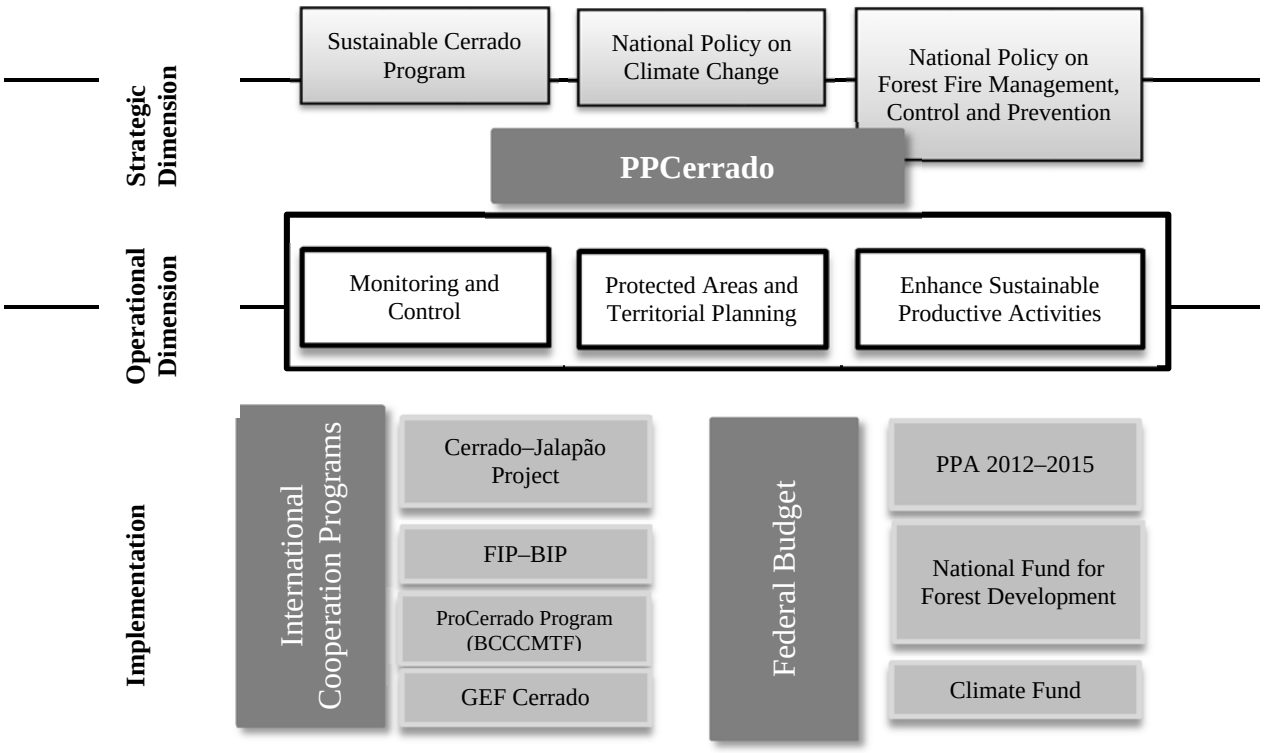
- **Cerrado Jalapão Project.** Through the German Development Bank (KfW), Germany's financial cooperation seeks to support the implementation of the CAR in the municipalities of the Cerrado located in two states of the Legal Amazon: Maranhão and Mato Grosso. This cooperation does not include the strengthening of environmental agencies for the CAR, but rather the landholdings' registration in the CAR in selected Municipalities.

33. Figure 3 shows the strategic arrangement adopted by MMA to implement the PPCerrado. Each of the programs and projects will contribute to the coordination effort by funding investments and activities designed to support actions of the various executors and their working relationships with the governmental and no-governmental entities involved.

34. Furthermore, MMA and the World Bank are coordinating the BIP, the Sustainable Cerrado Initiative, and the Cerrado Climate Change Mitigation Program, and are working in an integrated manner to avoid duplication, maximize synergies, and guide the resource allocation activities that effectively contribute to the achievement of goals established in the PNMC and PPCerrado.

35. For example, in addition to the 47 Municipalities included in the scope of this FIP Project, other funding sources will support the implementation of the CAR in other municipalities of the Cerrado, including the States of Piauí and Bahia, which are not part of this CAR–FIP Project. In efforts to avoid duplication and to distinguish the programs' and projects' performance, each selected municipality will be financially supported by only one specific program or project. In the same way, each activity under one program or project will be financially supported by only one specific program or project.

Figure 3. Strategic Arrangement of PPCerrado



*Other international institutions may donate resources to the funds mentioned above.

36. Table 3 provides an estimate of the international financing resources to fund the PPCerrado approach to date.

Table 3. PPCerrado international resource financing plan

Programs/Projects	Amount (US$ million)	Type	Donor
Sustainable Cerrado Initiative	13.00	Grant	GEF
Brazil Investment Plan	37.50	Grant	FIP–SCF–CIF
	32.48	Concessional Loan	
Cerrado–Jalapão Project	15.90	Grant	Germany
Cerrado Climate Change Mitigation Program	16.80	Grant	DEFRA
TOTAL	**115.70**		

Annex 9: Brazil Investment Plan Summary

BRAZIL: Environmental Regularization of Rural Lands in the Cerrado of Brazil Project

A. Description of the Investment Plan

1. The Brazil Investment Plan (BIP) seeks to promote sustainable land use and forest management improvement in the Cerrado, the second-largest biome in Brazil and South America, thus contributing toward reducing pressure on the remaining forests, reducing GHG emissions and increasing CO_2 sequestration.

2. The Cerrado is a strategic biome for economic and environmental reasons as well as for food security. It covers a large area with significant carbon stocks and water resources, and with substantial biodiversity.

3. The BIP comprises coordinated actions by three Ministries (Environment; Science, Technology and Innovation; and Agriculture, Livestock and Food Supply). These actions are focused on building synergies in order to maximize the impact of a larger set of policies aimed at reducing deforestation in the Cerrado Biome by: (i) improving environmental management in areas previously anthropized; and (ii) producing and disseminating environmental information at the biome scale. Therefore, it is essential to take these actions forward in a joint effort to avoid the conversion processes that could occur if the command and control actions are not accompanied by incentives in order to promote sustainable productive activities.

4. The BIP comprises two projects with complementary approaches (forests and land use): (i) generation and promotion of new, updated and accurate information on forest resources and their use, with the aim of assisting public- and private-sector policy makers and enabling the environment for forest management best practices that may contribute to valuing forest resources as an important socioeconomic and environmental asset; and (ii) generating information on deforestation, forest degradation and land use in a systematic and ongoing manner, as well as developing an early-warning system for preventing forest fires and a system for monitoring vegetation cover.

5. It is important to highlight that, since the beginning of the design phase, the successful collaboration among the three Ministries has enabled the development of a strategic approach to promote synergies not only among the BIP and its projects, but also with ongoing Cerrado government plans and policies already in implementation at federal, state and municipal levels.

Key challenges regarding the implementation of the REDD+ equivalent program

6. It is vital to ensure the continuity of the significant progress made by the GoB in mobilizing its capacities in various sectors of the federal, state, and municipal governments, as well as in developing collaboration and working with the private sector, civil society and traditional communities, to reduce deforestation and forest degradation and improve land use. Brazil's continental size and environmental complexity, and the need for ensuring the consistency of the various instruments employed, coordinating efforts in the regions, and sharing timely and relevant information, are all challenges that call for the building of synergies among the various actors and activities with the aim of securing cost-effective solutions. Each of the projects in the BIP will contribute to this coordination effort by funding investments and activities designed to support the actions of the various executors and their working relationships with the other government entities

involved. In addition to addressing the different aspects of interagency coordination, the Plan will contribute to the resolution of operational, regulatory and management challenges.

7. Nature conservation, respect for traditional communities, and the reduction of GHG emissions arising from land use changes in the Cerrado are challenges related to improving the use and management of land and natural resources in landholdings, including the use of regular and consistent environmental information. The agricultural boom in the Cerrado, which has contributed to making Brazil a global leader in food production, is based on a model of mechanized production and the intensive use of agricultural inputs. The challenge now is to ensure that agriculture, especially in the Cerrado, can continue to develop while responding to incentives to adopt more sustainable practices that can maintain or increase productivity and profitability while preserving natural resources and reducing GHG emissions. This BIP therefore seeks to contribute to the GoB's efforts to meet this challenge and improve the use and management of land and of natural resources on private lands.

8. It is important to note that Brazil has a consistent public land management policy, which includes designating legally protected areas for the use of Indigenous Peoples or traditional communities and for nature conservation and sustainable production. Brazil's public forest lands under protection, including Indigenous Lands, account for around 200 million ha, with very low rates of deforestation or degradation. In the specific case of the Cerrado Biome, Protected Areas represent 8.2 percent of the area, while Indigenous Lands occupy 4.4 percent of the biome.

9. Due to the amount of resources available under the FIP, the need to undertake additional and transformational actions, and ongoing support from other sources, Protected Areas and Indigenous Lands will not be the main focus of this BIP. Indigenous Peoples and Traditional Communities will nevertheless benefit from the various elements of the BIP, in terms of access to information about the respective lands, fire alerts, support for environmental compliance, and assistance with the adoption of best practices for low-carbon farming in and around their lands.

Intervention areas: sectors and issues

10. The Brazil Investment Plan strategy mainly targets the following FIP investment areas: investments outside the forest sector that are necessary to reduce the pressure on forests; and institutional capacity, forest management and information. As a complementary measure, the Plan also focuses on the third FIP investment area by supporting mitigation actions related to forests, such as encouraging forest recovery of Legal Reserves (RLs) and Permanent Preservation Areas (APPs) in landholdings. The BIP covers two thematic areas and four projects, as listed below:

Theme 1. Management and Use of Previously Anthropized Areas

1.1 Environmental regularization of rural lands;

1.2 Sustainable production in areas previously converted to agricultural use (based upon the ABC Plan[46]).

Theme 2. Production and Management of Forest Information

2.1 Forest information to support public and private sectors in managing initiatives focused on conservation and valorization of forest resources;

[46] The ABC Plan is the Sectoral Plan for the Mitigation and Adaptation of Climate Change for a Low Carbon Emission Agriculture.

2.2 Implementation of an early-warning system for preventing forest fires and a system for monitoring the vegetation cover.

Expected results from the implementation of the Brazil Investment Plan

The Brazil Investment Plan has developed a management arrangement, which can ensure that the synergies among the different institutions will not be lost during the implementation phase. Furthermore, a monitoring and evaluation plan will be developed to measure the achievement of the expected results.

Result	Success Indicator
• **Sustainable management adopted in previously converted areas**	• Changes in the acreage of deforested area in RLs and APPs registered in the CAR in the Cerrado; • Changes in the acreage of degraded areas in RLs and APPs registered in the CAR in the Cerrado; • Identification of investments outside the forest sector to address the drivers of deforestation and forest degradation in the Cerrado; • Hectares of restored pasture land; • Hectares of Crop-Livestock-Forest integration; • Hectares of no-tillage system; • Hectares of biological nitrogen fixation; • Hectares of planted forests.
• **Environmental information produced and disseminated, and forests and forest landscapes managed in a sustainable manner, in order to address the drivers of deforestation and forest degradation**.	• Cerrado forest inventory results publicly available; • National Forest Information System (NFIS) accessible to everyone, providing information on different topics related to forest resources and forest management; • Official annual reports on vegetation cover and land use in the Cerrado publicly available; • Official annual reports on the extent of burned areas publicly available; • Number of state and municipal entities trained and organized to receive forest-fire alerts; • Integration of natural forest conservation in the land use planning process; • Identification of legislation linked to the CAR and its instruments for detecting and processing violations; • Official annual reports on size of APPs and RLs publicly available.
• **Capacity for tackling the immediate and underlying causes of deforestation and increased degradation.**	• Number of technical assistance providers, producers and financial agents trained in forestry, agricultural and livestock-raising best practices.
• **New and additional resources for forests and forest-related projects.**	• Leveraging of funding from other international sources (bilateral and multilateral).
• **Incorporation of learning through the development of stakeholders thoroughly familiar with REDD+.**	• Number of different types of knowledge-disseminating instruments created and shared.