Climate Investment Funds

FOREST INVESTMENT PROGRAM

Brazil's FIP INVESTMENT PLAN MONITORING AND REPORTING

Investment plan endorsement date				May 04, 2012
Lead MDB	**IBRD**			
Other MDBs				IDB
Reporting date (mm/dd/yy)				Jun 29,2018
	Title	Implementing MDB	FIP funding approval date	MDB approval date
Projects/Programs	Environmental Regularization of Rural Lands in the *Cerrado* of Brazil – FIP/CAR Project	IBRD	Jun 12, 2014	Jul 21, 2015
	Sustainable production in areas previously converted to agricultural use project (under the low carbon emission agriculture plan) – FIP/ABC Project	IBRD	Apr 29, 2014	Jul 18, 2014
	Forest Information to Support Public and private Sectors in managing Initiatives – FIP/IFN Project	IDB	Oct 29, 2013	Dec 13, 2013
	Development of systems to prevent forest fires and monitor vegetation cover in the Brazilian *Cerrado* – FIP/FM Project	IBRD	Jul 17, 2015	Mar 28, 2016
	Investment Plan Coordination – FIP/Coordination Project	IBRD	Mar 12, 2015	Nov 28, 2017
	Integrated Landscape Management in the Cerrado Biome – FIP/Landscape Project	IBRD	Jun 19, 2018	

Summary

List of Figures

List of Acronyms

ABC - Low Carbon Agriculture Program;
ABEMA - Brazilian Association of State Entities of the Environment;
ANAMMA - National Association of Municipal Organs of the Environment
APP - Permanent Protected Area;
BNDES - National Bank for Economic and Social Development
CAA/NM - Alternative Agriculture Center of the North of Minas
CAR - Rural Environmental Register;
CIMAN - Integrated Multiagency Center for Operational and Federal Coordination in Brasilia, aiming to the field fighting the fire in real time
CNPCT - National Council of Traditional Peoples and Communities;
CONAQ - National Coordination of Articulation of Quilombola Rural Black Communities
DEFRA - Department of Environment and Food and Rural Affairs (United Kingdown);
DETER - Deforestation Detection System in Real Time;
EAD - Online Education;
EMBRAPA - Brazilian Agricultural Research Corporation;
FAO - Food and Agriculture Organization of the United Nations;
FIP/ABC Project - Sustainable production in areas previously converted to agricultural use project (under the low carbon emission agriculture plan)
FIP/CAR Project - Environmental Regularization of Rural Lands in the *Cerrado* of Brazil
FIP/Coordination Project - Investment Plan Coordination
FIP/FM Project - Development of systems to prevent forest fires and monitor vegetation cover in the Brazilian *Cerrado*
FIP/IFN Project - Forest Information to Support Public and private Sectors in managing Initiatives
FIP/Landscape Project - Integrated Landscape Management in the Cerrado Biome
FREL - Forest Reference Emissions Level;
FUNAI – National Foundation for Indigenous People
FUNATURA - Pro-Natureza Foundation;
FUNDEP - Research Development Foundation;
GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit;
IADB - Inter-American Development Bank
IBAMA - Brazilian Institute for the Environment and Renewable Natural Resources;
IBGE - Brazilian Institute of Geography and Statistics
IBRD - International Bank for Reconstruction and Development
ICMBio - Chico Mendes Institute for Biodiversity Conservation;
IFN - National Forest Inventory;
IIEB - International Institute of Education of Brazil
INCRA - National Institute for Colonization and Land Reform;
INESC - Institute of Socioeconomic Studies
INPE - National Institute of Space Research;
KFW - Kreditanstalt für Wiederaufbau (German Bank);
MAPA - Ministry of Agriculture, Livestock and Food Supply;
MATOPIBA - Region composed by the States of *Maranhão, Tocantins, Piauí* and *Bahia*;
MCTIC - Ministry of Science, Technology, Innovation and Communication;
MDA - Ministry of Rural Development
MF - Ministry of Finance;
MIQCB - Movement of *Babaçu* Coconuts Breakers;
MMA - Ministry of the Environment;
OEMA - State Environment Agency;
PCT – Traditional Communities and People
PMABB - Environmental Monitoring Program of the Brazilian Biomes;
PPCerrado - Plan to Prevent and Combat Deforestation in the *Cerrado*;

PRA - Environmental Regularization Program;
PREVFOGO - National Center for Prevention and Combat of Forest Fires;
RL - Legal Reserve;
SENAR - National Service for Rural Training;
SFB - Brazilian Forest Service;
SICAR - Rural Environmental Registration System;
SNIF - National Forest Information System;
UFG - Federal University of *Goiás*;
UFLA - Federal University of *Lavras*;
UnB - University of *Brasilia*;
UNFCCC - United Nations Framework Convention on Climate Change.

THE FIVE LARGEST RESULTS OF THE BRAZILIAN FIP INVESTMENT PLAN IN 2017

- Deforestation mapping of 27% of the *Cerrado* biome;
- Mapping and sampling of plants and soil at 1,112 points covering an area of 44.52 million hectares of the *Cerrado* Biome, about 23% of the biome;
- Recovery of 84 thousand hectares of degraded pastures;
- Training of 8,244 people;
- Creation of a new project - FIP / Landscapes - which adds strategies of two other projects (FIP/CAR and FIP/ABC) to change the reality of rural landscapes degraded by livestock activity in the *Cerrado* Biome.

FIP TABLE 1.1 - THEME 1.1: GHG EMISSION REDUCTIONS OR AVOIDANCE/ENHANCEMENT OF CARBON STOCKS

Brazil	**Lead MDB:**	**IBRD**			
	Other implementing MDBs:	**IDB**		**Level: Investment Plan (IP)**	
	Endorsed FIP funding (million USD):	**70**			
	Co-financing (million USD):	**65**			
	Reporting period	**From:** 01/01/2017			**To:** 12/31/2017
Table 1.1	Unit	Reference emissions level/baseline (if applicable)	Target 1[1] *(Expected results after the financial closure of the last project/program under the investment plan)*	Target 2[2] *(Lifetime projection of expected results of projects/programs under the investment plan)*	Reporting year Actual annual
Total Land area where sustainable land management and low carbon agriculture technologies were adopted as a result of the Investment Plan	hectares	---	7,553,472	---	3,275,008
Area of landholdings registered in the Rural Environmental Register as a result of the Project FIP/CAR	hectares	---	6,653,472	---	2,541,133[3]
Area where Low Carbon Agriculture Technologies were adopted as a result of the Project FIP/ABC	hectares	---	900,000	---	733,875
Type of forest(s)		Savana			
Area covered		hectares	203,644,800	Area corresponding to the Cerrado Biome	
Investment plan lifetime		years	4		

[1] **Target 1**: Target achieved during the implementation of the investment plan (ending with the financial closure of the last project supported under the investment plan)

[2] **Target 2:** Projection of the target taking into account the lifetime of the results achieved through the implementation of the investment plan.

[3] Area for rural properties under to 4 Fiscal Modules (around 250 hectares) registered in SICAR, in the municipalities selected until 2017 (counterpart resources invested in the development, integration, training for the use and dissemination of the SICAR and of structuring activities that allowed the farmers or States governments trough technical assistance to promote the registration of the farmland in the CAR).

Please specify methodology/ies used for GHG accounting (e.g., by project/program), including the start year and period for the Reference Emissions Level

The REDD+ results will be reported by the Brazilian Government on a national scale, in accordance with UNFCCC decisions.

Funding for REDD+ can occur ex ante, that is, while developing countries prepare to achieve these outcomes (readiness). Cerrado Biome and other Brazilian biomes are under preparation and demonstration of activities for REDD+.

The only project that may be able to provide results on GHG emission reductions is the Sustainable Production in Areas Previously Converted to Agricultural Use, but setting a target for that purpose was not possible and the methodology to be adopted for calculating such indicator will be developed during the execution of the project.

As a substitute for this indicator, the Brazilian Government can offer estimated targets for the **areas** to be registered under the Environmental Rural Register and for areas adopting Low Carbon Agricultural technologies supported by the 'Sustainable Production in Areas Previously Converted to Agricultural Use Project'. A sub-indicator, "Land area where sustainable land management and low carbon agriculture technologies were adopted", will be reported for that purpose.

The total area where Low Carbon Agriculture Technologies are adopted as a result of the Sustainable Production in Areas Previously Converted to Agricultural Use project activities; and

The total area of landholdings registered in the Rural Environmental Register (CAR) as a result of the environmental regularization of rural lands (based on the CAR) project activities;

Will be considered areas where sustainable land management practices were adopted as a result of the Investment Plan.

The BIP Coordination Project is going to promote an annual event dedicated to Evaluation and Planning for the BIP. During these events, Evaluation Workshops will take place. The projects teams, executing agencies, local environmental agencies (OEMAs), members of the DGM-Brazil Steering Committee and MDBs teams will have the chance to discuss and evaluate the results attributable to the BIP for each reporting Theme, other relevant actors may be invited to take part in the workshops. In addition to that, the results assessed during these evaluations will be submitted to the CONACER for validation.

The Climate Change Policies Program - PROMUC (MMA-MF-GIZ) provides for the development of the fundamentals of a National GHG Emission Reporting Program at the level of economic agent.

Please provide a brief description of the interventions (context and objective).

In the scope of the FIP/CAR Project, Area for rural properties under to 4 Fiscal Modules (around 250 hectares) registered in SICAR, in the municipalities selected until 2017, with investment of counterpart resources invested in the development, integration, training for the use and dissemination of the SICAR and of structuring activities that allowed the farmers or States governments trough technical assistance to promote the registration of the farmland in the CAR.

For the case of the FIP/ABC Project, activities were carried out to raise awareness of stakeholders, training rural producers in low carbon technologies, technical assistance to rural producers and field days. The total area presented in the above indicator (733,875 ha) was calculated based on the area of the 1,957 rural properties and considers that the areas not recovered by the Project or with environmental assets (forests and water bodies) had lower anthropic pressure.

What have been key contributions (successes) of FIP regarding GHG emission reductions/avoidance/enhancement of carbon stock in your country context during this reporting year?

The key contributions of the Brazilian FIP Investment Plan in 2017 was mapping of deforestation of 27% of the Cerrado biome; mapping sampling of plants and soil at 1,112 points covering an area of 44.52 million hectares of the Biome Cerrado, about 23% of the biome; and Recovery of 84 thousand hectares of degraded pastures.

What have been your key challenges and what opportunities for improvement do you see?

The great challenge is to be able to measure the effect of FIP investments in the Cerrado Biome regarding GHG emission reductions or avoidance/enhancement of carbon stocks. The identified opportunities refer to the possible synergies between the actions of the different projects.

FIP FORM 1.1 - THEME 1.1: GHG EMISSION REDUCTIONS OR AVOIDANCE/ ENHANCEMENT OF CARBON STOCKS

Level: Investment plan

Please answer the following question with a narrative description of the results achieved by the FIP investment plan in your country in the reporting year. If data is available, you may also compare progress made in the reporting year to the previous one (i.e., number of hectares reforested). GHG emission reductions or carbon stocks enhancements are reported at start, mid-term, and end of investment plan implementation.

1. **Which actions were taken by your country to bring areas under sustainable practices (sustainable forest management or sustainable land management practices) or to reduce GHG emissions/enhance carbon stocks? Please describe tree species planted, benefitting populations, ecosystems, and other relevant information.**

The FIP Investment Plan in Brazil operates exclusively in the *Cerrado* biome (figure 01), the second largest biome in the country, with 203,644,800 hectares, which still has about 50% of native vegetation. In this biome are concentrated a large part of the agricultural activities of the country, with emphasis on livestock, soy, sugar cane, eucalyptus and subsistence agriculture.

Figure 01 - Map of the Brazilian´s biomes. Source: IBGE

The Cerrado is considered as a global biodiversity hotspot and shelters the springs of the three largest hydrographic basins in South America (Amazon, *Sao Francisco* and *Prata*), which results in a high aquifer potential and favors its biodiversity. Besides the environmental aspects, the Cerrado has great social importance. Many populations survive from their natural resources, including indigenous ethnic groups, *geraizeiros*, riverine, *babaçueiras*, *vazanteiros* and *quilombola* communities, besides the urban populations and typical agribusiness farmers. These characteristics make the Cerrado an important biome in the context of GHG emissions.

The FIP Investment Plan has actions that indirectly act to reduce GHG emissions in this biome, through the recovery of degraded areas, control and deforestation control instruments, as well as the collection of forest assets and mapping the loss of vegetation cover.

The FIP/FM Project has a component to estimate GHG emissions in the *Cerrado*, arising from forest fires and deforestation. In this project, some systems developed by INPE to calculate forest emissions in the Amazon biome are being adapted to the *Cerrado* biome. The GHG estimation system will use data from deforestation and forest fires in the *Cerrado* produced in this Project. This system has completed some steps in 2017 and is expected to calibrate the models in 2018.

With the support of some international agencies, Brazil has built the reference level of forest emissions of the *Cerrado* biome (FREL *Cerrado*) based on the 2000-2010 maps. Through the Ministry of Foreign Affairs, the FREL *Cerrado* was submitted for payment of emission reduction by deforestation in February 2017. The maps of anthropic areas of 2013 and 2015 were also produced, and the map of 2015 (figure 02) the reference to build the annual deforestation maps for the years 2016-2019, with the support of the FIP.

The FIP/FM Project has a component aimed to estimate GHG emissions for the *Cerrado*. For such purpose, some systems already developed by INPE for the calculation of emissions to the forest were adapted in 2017. Its calibration is planned for 2018. This system will use deforestation mapping data from the *Cerrado* under development by INPE, which mapped 27% of the biome area in 2017, together with fire data.

The FIP/ABC Project works with the recovery of degraded pastures in order to increase their productivity, generating less pressure on the native vegetation for new pastures. Also included in the strategy is the consortium of pastures with forest crops, which generate carbon sequestration. This initiative uses as a strategy the training of rural landowners and technical assistance for the change of land use and management through the implementation of techniques developed by EMBRAPA. The Project has already recovered more than 84,000 hectares of degraded pasture in about 1,957 properties in the Brazilian *Cerrado* region.

The FIP/IFN Project is carrying out the forest diagnosis of the entire *Cerrado* biome in order to generate information about diverse characteristics, including the amount of carbon stored below and above the ground. The 1,112 collected points made in 2017 are in the data systematization phase and correspond to an area of 44.52 million hectares (figure 03). Allometric equations are also being developed to improve the estimation of the amount of carbon for each type of vegetation in the Cerrado biome. In 2018 these allometric equations will be used throughout the Biome.

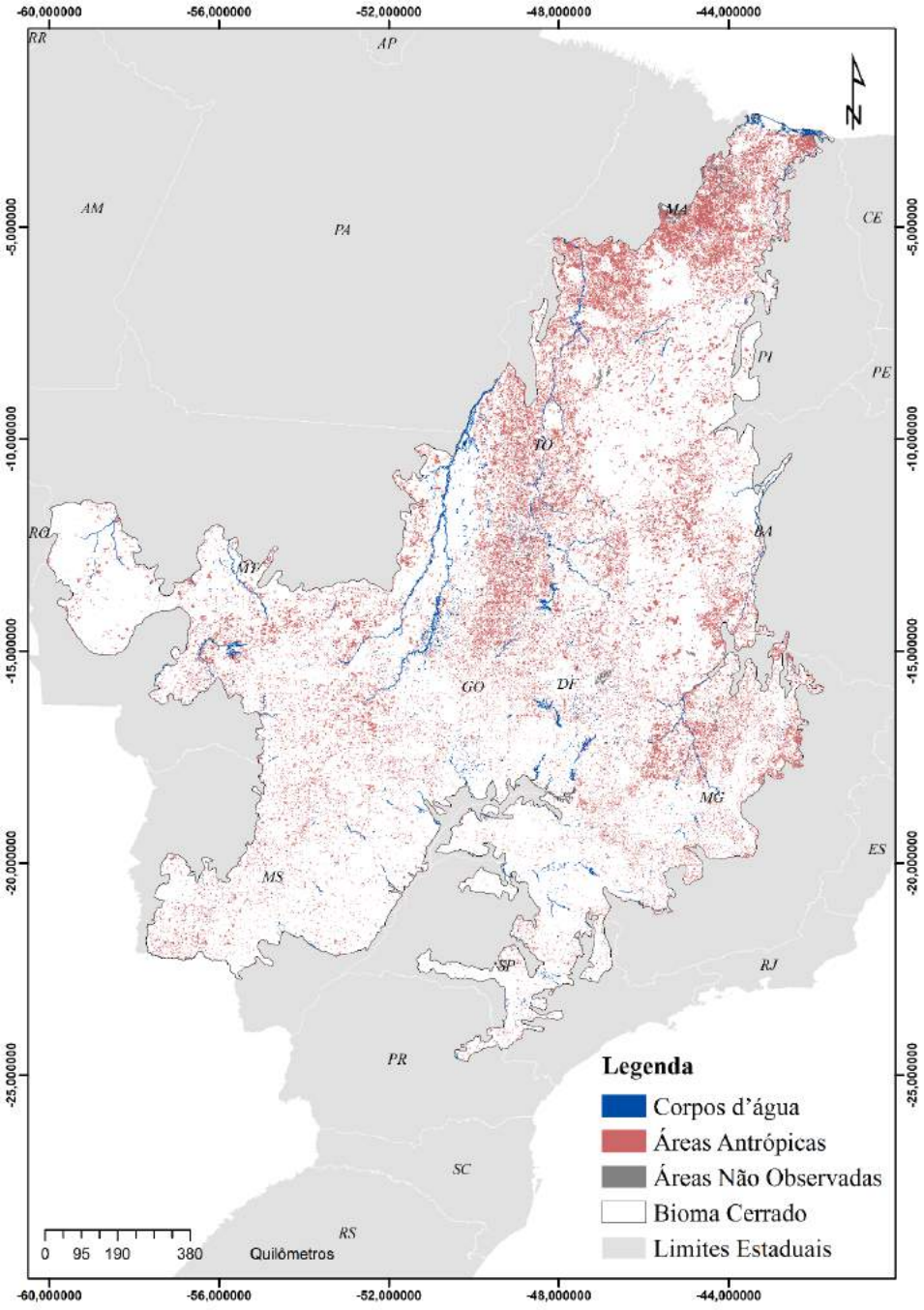

Figure 02 - Mapping of anthropic areas in the Cerrado in 2015.

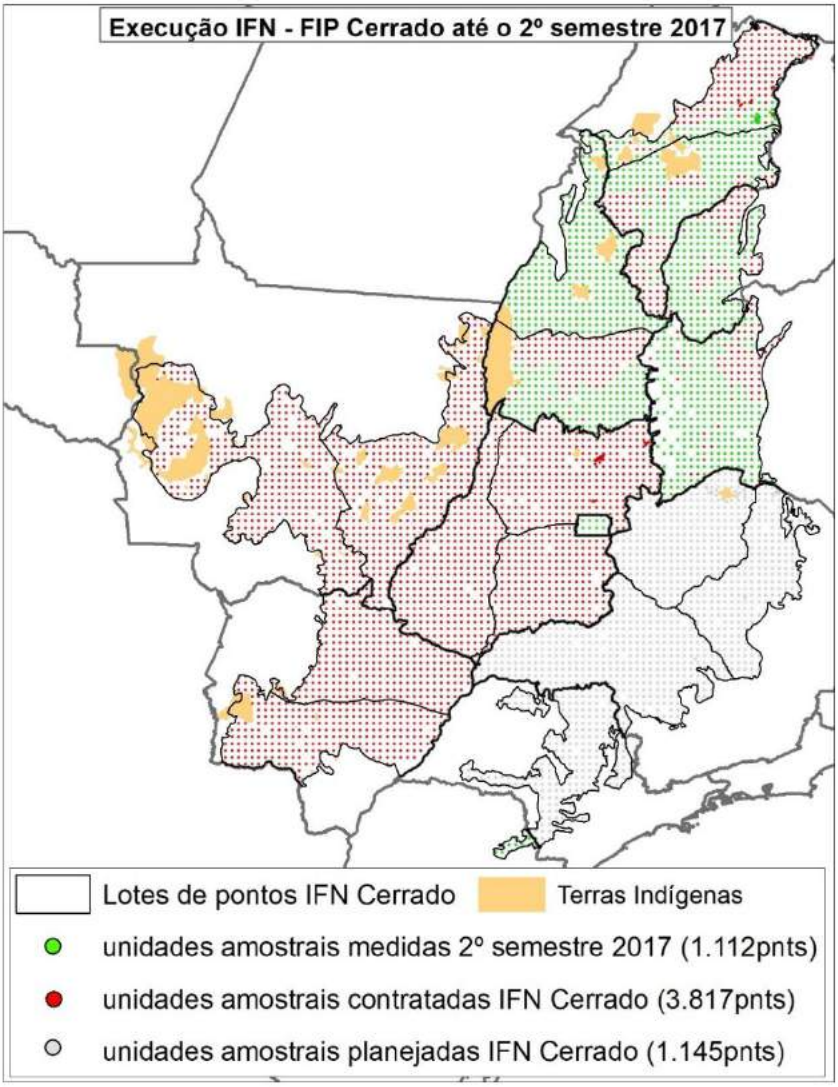

Figure 03 - Points collected in 2017 (green), points contracted for 2018 (red) and points planned for the next years (gray)

The initiatives of the Rural Environmental Registry (CAR), which work with detailed georeferenced and standardized information of the land use of each rural property in Brazil, enables the identification of forest assets and liabilities, as well as monitoring the implementation of the agreements for the recovery of liabilities. The Cerrado biome already has some 770,000 rural properties with CAR, with a declared area of 114 million hectares[4], with a forest liability of about 1.4 million hectares of APP and 8.3 million hectares in RL declared in rural properties registered in the CAR until December 2017[5].

[4] The whole country (Brazil) already has 479 million hectares with CAR.

[5] Data calculated exclusively by interpretation of the information declared in SICAR. The declarations are not yet validated by States Environmental Agencies. The undisclosed RL and APP areas were not accounted for in the liability calculations.

The FIP/CAR Project, contracted in 2017, has carried out CAR in small properties in the Brazilian *Cerrado* region, making it possible to identify its forest liabilities and support its recovery through a formal agreement between government and rural landowners. The methods of execution and identification of this type of action in the field have recently been the object of a successful technical assistance project, also in the *Cerrado* Biome, between 2016 and 2017. Through the *Cerrado Federal* Project, financed by the British Government, were registered 5,600 families of family farmers and 2,500 families of Traditional Peoples and Communities of quilombolas and babaçu coconut breakers, totaling around 400,000 registered hectares, which showed an average of 79% of the area covered by remnants of *Cerrado* native vegetation (when the legal obligation in the region is to hold 35% reserves). This indicates the importance of this public for the monitoring of *Cerrado* remnants and induction of actions to promote sustainable use for native vegetation conservation, as well as to identify relevant biodiversity sources for the establishment of connectivity plans and expansion of native vegetation in the Cerrado biome.

The current target of the FIP/CAR Project includes registering 58,000 smallholdings or family farm holdings[6], which would correspond, according to the estimate provided in the Project Appraisal Document, around 1.1 million hectares of rural properties registered and monitored by of geoprocessing and remote sensing tools in the Cerrado biome. However, since the goal of the Project was established between the years 2012-2013, there will be a need to adjust the targets. In this adjustment, the actions and beneficiaries will be expanded to fit the current phase of implementation of the environmental regularization policy. Among the adjustments, we highlight the inclusion of actions related to the recovery of degraded areas in APP[7], as well as the reorganization of liabilities in RL[8].

[6] According to Law 12.651, Art. 2, item V - small landholdings are who exploited through the personal work of the family farmer and rural family entrepreneur, including settlements and land reform projects and (considering the sole paragraph of the same article) all buildings up to 4 fiscal modules (around 250 hectares) are entitled to the same benefits provided for family farming. Fiscal module, according to INCRA, is a unit of measure, in hectares, whose value is fixed for each municipality taking into account the type of exploitation and rural use predominant in the municipality, the average income obtained in the predominant type of exploitation; other holdings existing in the municipality that, although not predominant, are expressive according to the income or the area used. The size of a fiscal module varies according to the municipality where the property is located. The value of the fiscal module in Brazil ranges from 5 to 110 hectares.

[7] Permanent Preservation Area - Areas required by law for the preservation of native vegetation. They include areas such as riparian vegetation, sloping lands, mangroves, wetlands, hilltops, among others.

[8] Legal Reserve - Area required by law, ranging from 20% to 80% of rural property (depending on the Biome) where native vegetation must be conserved, allowing sustainable management of its assets.

FIP Table 1.2 - THEME 1.2: LIVELIHOODS CO-BENEFITS

Brazil	**Implementing MDB:**	IBDR	**Level:** Project
	Executing agency:	Brazilian Forest Service	**Project title:** Environmental Regularization of Rural Lands in the *Cerrado* of Brazil – FIP/CAR Project
	Amount of FIP funding (million USD):	32,48	
	Co-financing (million USD):	17,50	
	Date of MDB approval:	Jul 21, 2015	**Reporting date** Jun 29, 2018

Table 1.2B		Baseline	Target at the time of MDB approval	Reporting year Actual annual	Additional information
*Please use livelihood co-benefits indicators identified in your project/program. Use only **the number of beneficiaries** or households as your metric. If households are used, please indicate the average number of people per household and the source for that information.* *Please also disaggregate for each indicator the number of beneficiaries by gender*					
1. Income Indicator:	Total				
	Men				
	Women				
2. Employment Indicator:	Total				
	Men				
	Women				
3. Entrepreneurship Indicator:	Total				
	Men				
	Women				
4. Access to finance Indicator:	Total				
	Men				
	Women				
5. Education Indicator: Number of people trained in online system - EAD (CAR)	Total		200	126	Data of the training activities for the use of the analysis module - CAPCAR Analysis - in the EAD system (online distance education - 85 people) and classroom course (41 people) during the activities of implantation in the OEMAs of the states of the *Cerrado* Biome. Data relating exclusively to the year 2017 and to the Cerrado Biome States using SICAR. In the World Bank report this indicator is quoted as "Staff in
	Men			58	
	Women			68	

					targeted SEAS trained to use SICAR and to analyze and validate data".
6. Health Indicator:	Total				
	Men				
	Women				
7. Other relevant benefits Indicator: Number of rural properties enrolled in the CAR in the municipalities selected until 2017		--	57,942	43,000	43,000 family farms were registered in the selected municipalities. Although they are not the result of hirings financed by the project, these registrations were made possible by the existence of the SICAR System, communication campaigns and other initiatives supported by the Brazilian government. In the World Bank report this indicator is quoted as "Direct project beneficiaries".

What have been key contributions (successes) of FIP regarding livelihoods co-benefits in your country context during this reporting year?

The key contributions identified in the project implementation relate to the number of technicians from the OEMAs trained to use the CAR records analysis module, as well as the number of rural properties registered in the CAR in the selected municipalities as a counterpart.

What have been your key challenges and what opportunities for improvement do you see?

Since the project is not fully operational, it has not yet been possible for the Brazilian Government to identify challenges and opportunities related to co-benefits.

FIP TABLE 1.2 - THEME 1.2: LIVELIHOODS CO-BENEFITS

Brazil	**Implementing MDB:**	IBDR	**Level:** Project
	Executing agency:	MAPA/SENAR	**Project title:** Sustainable production in areas previously converted to agricultural use project (under the low carbon emission agriculture plan) – FIP/ABC Project
	Amount of FIP funding (million USD):	10,62	
	Co-financing (million USD):	0,51	
	Date of MDB approval:	Jul 18, 2014	**Reporting date** Jun 29, 2018

Table 1.2B		Baseline	Target at the time of MDB approval	Reporting year Actual annual	Additional information
*Please use livelihood co-benefits indicators identified in your project/program. Use only **the number of beneficiaries** or households as your metric. If households are used, please indicate the average number of people per household and the source for that information.* *Please also disaggregate for each indicator the number of beneficiaries by gender*					
1. Income Indicator:	Total				This indicator cannot be measured in the project.
	Men				
	Women				
2. Employment Indicator: Number of contracted field technicians (ABC5)	Total	0	81	246	This indicator had a great growth in 2017, up to the target specified in 2016, since the challenges in the field demanded the hiring of a greater number of field technicians, as well as the need to make new contracts to replace technicians.
	Men		66	193	The 2016 target was repeated for 2017.
	Women		15	53	The 2016 target was repeated for 2017.
3. Entrepreneurship Indicator:	Total				This indicator cannot be measured in the project.
	Men				
	Women				
4. Access to finance Indicator:	Total				This indicator cannot be measured in the project.
	Men				
	Women				

5. Education Indicator: Number of people attending training courses on Low Carbon Agriculture Technologies (ABC1)	Total	--	6,000	4,488	This indicator had its target decreased from 12,000 to 6,000 due to a lower demand for courses than expected. In the World Bank report this indicator is reported as "Producers and technicians trained".
	Men	--	--	3,709	
	Women	--	--	779	
5. Education Indicator: Number of people attending the Field Days at the Technical Reference Units (ABC2)	Total	--	1,280	3,284	This indicator had its target diminished from 6,000 to 1,280 due to difficulties faced in the implementation of field days. However, after some adjustments in the employed method, there was an increase in the participation of the field days, exceeding the second target of this indicator. In the World Bank report this indicator is reported as "Number of persons visiting the URT during field days". Why does the WB ISR have as a target 3,800 for this indicator? Why was it not revised too to 1,280? Project managers adjusted the target to 1,280 in agreement with the WB. However the WB maintained the previous goal in its report. The official goal is 1,280.
	Men	--	--	--	
	Women	--	--	--	

5. Education Indicator: Number of trainers attending training courses on Low Carbon Agriculture Technologies (ABC3)	Total	--	43 This information was generated exclusively to meet the Tool kit. There is no target for this activity. However, if the report	53	In 2016 the number of 160 people trained was reported, but this number in fact was for training enrollments. In 2017 only the people who actually completed the training were reported.

			requires a target, we can suggest the value of 45.		
	Men	--	--	42	
	Women	--	--	11	
5. Education Indicator: Number of Field Technicians trained to provide technical assistance (ABC4)	Total	--	150	179	This indicator exceeded the target in 2017.
	Men	--	--	137	
	Women	--	--	42	
6. Income Indicator:	Total				
	Men				
	Women				
7. Other relevant benefits					

What have been key contributions (successes) of FIP regarding livelihoods co-benefits in your country context during this reporting year?

The major advances in the period were the hiring and training / training of technicians who will act in the implementation of activities in the FIP-ABC Project.

What have been your key challenges and what opportunities for improvement do you see?

One of the challenges faced was the slow adherence of the rural landowners to the new techniques of pasture recovery and management. In order to reduce the resistance of the rural owners, "field days" were created showing the results achieved within a rural property that had already adhered to the new techniques.

What is the equivalent indicator to the **"direct beneficiaries"** reported in the World Bank ISR with 12,000 as a target, and 10,317 achieved by 10th Feb 2017, and 13,606 achieved by 24th may 2018?

What the WB calls "**direct beneficiaries**" is the sum of all project beneficiaries, including targets that have been readjusted to 50% of the original value.

FIP TABLE 1.2 - THEME 1.2: LIVELIHOODS CO-BENEFITS

Brazil	**Implementing MDB:**	IDB	**Level:** Project
	Executing agency:	Brazilian Forest Service	**Project title:** Forest Information to Support Public and private Sectors in managing Initiatives – FIP/IFN Project
	Amount of FIP funding (million USD):	16,45	
	Co-financing (million USD):	8,00	
	Date of MDB approval:	Dec 13, 2013	**Reporting date** Jun 29, 2018

Table 1.2B		Baseline	Target at the time of MDB approval	Reporting year Actual annual	Additional information
*Please use livelihood co-benefits indicators identified in your project/program. Use only **the number of beneficiaries** or households as your metric. If households are used, please indicate the average number of people per household and the source for that information.* *Please also disaggregate for each indicator the number of beneficiaries by gender*					
1. Income Indicator:	Total				
	Men				
	Women				
2. Employment Indicator: Number of contracted field technicians (IFN2)	Total	--	176	108	
	Men	--	--	97	
	Women	--	--	11	
2. Employment Indicator: Number of contracted taxonomists (IFN3)	Total	--	28	14	
	Men	--	--	5	
	Women	--	--	9	
3. Entrepreneurship Indicator:	Total				
	Men				
	Women				
4. Access to finance Indicator:	Total				
	Men				
	Women				
5. Education Indicator: Number of trained people in skills and techniques related to the National Forest Inventory (IFN1)	Total	--	260	154	This indicator was reported with the result of 361 people trained in 2016. In 2017, 154 trained people were reported. Values reported annually are not cumulative.
	Men	--	--	119	
	Women	--	--	35	

6.	**Health** Indicator:	Total				
		Men				
		Women				
7.	**Other relevant benefits**					

What have been key contributions (successes) of FIP regarding livelihoods co-benefits in your country context during this reporting year?
The major advances in the period were the hiring and training of technicians who will work on the FIP-IFN Project.
What have been your key challenges and what opportunities for improvement do you see?

FIP TABLE 1.2 - THEME 1.2: LIVELIHOODS CO-BENEFITS

Brazil	**Implementing MDB:**	IBDR	**Level:** Project
	Executing agency:	MCTIC/FUNDEP	**Project title:** Development of systems to prevent forest fires and monitor vegetation cover in the Brazilian *Cerrado* – FIP/FM Project
	Amount of FIP funding (million USD):	9,25	
	Co-financing (million USD):	0,0	
	Date of MDB approval:	Mar 28, 2016	**Reporting date** Jun 29, 2018

Table 1.2B		Baseline	Target at the time of MDB approval	Reporting year Actual annual	Additional information
*Please use livelihood co-benefits indicators identified in your project/program. Use only **the number of beneficiaries** or households as your metric. If households are used, please indicate the average number of people per household and the source for that information.* *Please also disaggregate for each indicator the number of beneficiaries by gender*					
1. Income Indicator:	Total				
	Men				
	Women				
2. Employment Indicator: Number of contracted specialists (FM)[9]	Total	0	60	27	This indicator was created to exclusively serve the M&R FIP 2017 report.
	Men	--	--	14	
	Women	--	--	13	
3. Entrepreneurship Indicator:	Total				
	Men				
	Women				
4. Access to finance Indicator:	Total				
	Men				
	Women				

[9] The professionals contracted in the Cerrado FIP / FM Project received training to learn the methodologies and technologies of interpretation of satellite images to identify the areas of deforestation and degradation in the Cerrado. These professionals are having improvement of their professional capacity, with a better preparation for the job market.

5. Education Indicator: Number of people trained in the use of Fire Risk	Total	--	303	334	Training, lectures and technical meetings were held in the TERRAMA2Q system: - trainings with about 30-40 hours (33 institutions, 128 people); - lectures with about 4 hours and the launching workshop (45 institutions, 175 people); - technical meetings with the institutions to train and receive feedback (13 institutions, 31 people). This indicator was created to exclusively serve the M&R FIP 2017 report.
	Men	--	--	--	
	Women	--	--	--	
6. Health Indicator:	Total				
	Men				
	Women				
7. Other relevant benefits					
What have been key contributions (successes) of FIP regarding livelihoods co-benefits in your country context during this reporting year?					
What have been your key challenges and what opportunities for improvement do you see?					

FIP FORM 1.2 - THEME 1.2: LIVELIHOODS CO-BENEFITS

Level: Investment plan

Please answer the following questions with a narrative description of the results achieved by the FIP investment plan in your country in the reporting year. Explain the progress made in the reporting year, compared to the previous one. Please provide one narrative for each relevant aspect, such as income, employment, entrepreneurship, access to finance, education, health, or others.

1. Number of beneficiaries:

Due to the different types and projects of the FIP Investment Plan in Brazil there is a range of different beneficiaries that stood out in 2017. For example, there are 7,772 rural landowners (4,488 trained and 3,284 participants in field days of the FIP/ABC Project) and 400 technicians hired by companies (246 from FIP/ABC and 154 from FIP/IFN). Figure 04 indicates the location of the training courses carried out by the FIP/ABC Project in Brazil.

Figure 04 - Location of the training courses of the FIP / ABC Project. Source: www.senar.org.br

2. Which actions were taken to provide livelihood co-benefits (monetary or non-monetary benefits) that beneficiaries received?

Rural landowners with degraded pastures received training and technical assistance, through the FIP/ABC Project, to recover their pastures, boosting their income increase, by increasing livestock production in the same area.

At least 154 private sector technicians were trained by the FIP/IFN Project to carry out the forest survey. These technicians were then hired by the companies that carried out the forest inventory.

With regard to the FIP / FM Cerrado Project, the beneficiaries are the institutions and actors involved in the monitoring and conservation of the Cerrado biome, including INPE, PREVFOGO, OEMAs, the Federal Police, municipal governments and their firefighting brigades, IBAMA, MMA, MDA, MAPA, ICMBio, the FUNAI, SFB, IBGE, managers of protected areas, academic and educational institutions, civil society organizations and producers and landowners associations. More than 3,000 clients consult regularly (some daily) the sites of the entities that participate in the Project.

3. Who was involved? Were any partnerships established?

Partner institutions: Institutions representing the traditional populations (MQCB), EMBRAPA, FAO, UFG, UFG, UNB, INPE, herbariums (Botanic Garden of Rio de Janeiro, UFG and UnB), UFLA, ICMBio, IBAMA OEMAs of the 11 states of the *Cerrado* Biome, rural producers and traditional communities

Institutions executing: GIZ, FUNATURA, FUNDEP, SENAR and SFB.

Coordination: MMA, MAPA, MCTIC, MF.

These institutions have a formalized agreement or in the final stage of formalization, with or without transfer of funds, through specific instruments, and in some cases, counterpart funds have been invested.

4. Why did it make a difference?

In addition to assist the implementation of already established public policies, it also potentiated the income improvement of some beneficiaries such as rural landowners who had their pastures recovered or local technicians who were hired by forest inventory companies.

Recovering pastures also reduced the vulnerability of these landowners to climate change, such as prolonged drought periods, since recovered pastures have deeper roots due to fertilization and soil organic matter conservation. It is also estimated the increase of the water reserve in the water table due to the implantation of techniques that increase the infiltration of water in the soil during the rainy season.

Federal and State Governments are increasing their capacity to plan actions, as they are increasing their socio-environmental database through the actions of the FIP/IFN, FIP/ABC, FIP/CAR and FIP/FM Projects. This situation may be oriented to benefit certain strategic groups as more vulnerable populations.

In the case of the FIP/FM Project, the first stages of information and warning systems on deforestation and forest fires in the *Cerrado* were built in 2017. These systems will continue to provide information to civil society and government in an open way, via Internet, if there is a financial investment of the Brazilian government. The collection of information on deforestation and forest fires, generated by the Project, are official government data and will be used to prevent and combat deforestation and degradation of the *Cerrado* biome, according to the technical cooperation agreement between INPE and IBAMA.

In the case of the FIP/CAR Project, the partnership with UFLA, as a counterpart in 2017, developed computerized systems to implement the public policy of environmental regularization, with SICAR as a major product. SICAR is the national electronic system for the integration and management of environmental information on rural properties throughout the country. This information is intended to subsidize policies, programs, projects and activities for control, monitoring, environmental and economic planning for the promotion of sustainable productive activities, management of the *Cerrado*'s native vegetation and the fight against deforestation. State environmental agencies use SICAR as their systems for the realization of CAR, enabling the decentralization of environmental management, combined with the standardization of data that make management feasible at the federal level.

5. Will benefits last after the project is completed? Explain.

Yes, all projects of the FIP Investment Fund in Brazil leave data assets and capacities that will give continuity to the consolidated public policies, such as monitoring and control of the *Cerrado* deforestation, registration of rural properties and traditional communities, forest survey and emission reduction of GHG.

In the case of the FIP/FM Project, the first stages of information and warning systems on deforestation and fires were built in 2017. These systems will continue to provide information to civil society and government in an open manner via internet.

In the case of the FIP/CAR Project, the need for continuity of the implementation of the public policy of environmental regularization in rural property, through CAR and PRA, will maintain partnerships between federal, state governments and UFLA, as well as the use of SICAR and data generated by the Project.

In the case of the FIP/IFN Project, the technicians trained in forest surveys may be hired for other inventories and surveys in the Cerrado. The information obtained from the forest surveys, as well as those disseminated in the Forest Information Systems - SNIF, may be used by researchers and students, consultants, agricultural producers and technicians.

In the case of those benefited by the FIP/ABC, the implemented technologies should be maintained after the Project since it will maintain the income gain obtained.

6. How do they impact vulnerable groups?

Vulnerable groups and their constituencies will have access to information that is systematized and available through public and transparent data systems. The information available is related to: products resulting from the sustainable use of *Cerrado* species, the evolution of deforestation, fire places,

environmental assets and liabilities in rural properties, floristic composition, wood volume, biomes and forest carbon stocks and techniques for reducing greenhouse gas emissions.

The information systematized from the FIP/IFN socio-environmental surveys will also support public policies aimed at vulnerable groups, as well as the monitoring of the evolution of these policies by civil society.

FIP FORM 2.1 - THEME 2.1: BIODIVERSITY AND OTHER ENVIRONMENTAL SERVICES

Level: Investment plan

Please answer the following questions with a narrative description of the results achieved by the FIP investment plan in your country in the reporting year. Explain the progress made in the reporting year, compared to the previous one.

1. Which activities have been conducted in the reporting period to reduce the loss of habitats and other environmental services?

The FIP Investment Plan in Brazil has initiatives related to the monitoring of *Cerrado* deforestation, fire places, forest survey, identification of environmental assets and liabilities in rural property and adoption of low carbon technologies (recovery of degraded pastures, integration crop-livestock-forest, no-till system and planted forests). All these initiatives affect the conservation and/or restoration of habitats and environmental services, as well as the implementation of public policies.

The FIP/FM Project developed the first steps of the information system on deforestation and fire places (Figure 05), which will assist the Brazilian government in the environmental monitoring of the *Cerrado*, through more precise data. Consequently, it is expected that these actions will reduce deforestation and illegal burning. The fire forest risk and propagate models to be developed in this Project (figure 06) will be applied in 3 protected areas (*Chapada dos Veadeiros* National Park, *Serra do Cipó* National Park, *Serra da Canastra* National Park), which when consolidated will contribute to the management and monitoring of preventive fire in protected area.

The FIP/CAR Project produced the ToRs that will carry out the registrations of small properties and traditional comunities territories. This register will allow to identify where the environmental assets and liabilities of each rural property are and guide the recovery of these, increasing the area of native vegetation, creating corridors for the fauna and conserving areas of water production.

The FIP/IFN Project carried out 4,158 soil sample collections and 3,545 botanical tree collections for scientific identification of species. The information generated from these collections will subsidize public policies aimed at the conservation of areas with relevant importance for biodiversity and the sustainable use of forest resources in the *Cerrado*.

The FIP/ABC Project increased the productivity of pastures and agricultural crops through fertility techniques and soil management and conservation, as well as the improvement of infiltration of rainwater made possible by the installation of terraces, level planting techniques, among other conservation techniques. As an indirect consequence we have the decrease of pressure on areas with native vegetation.

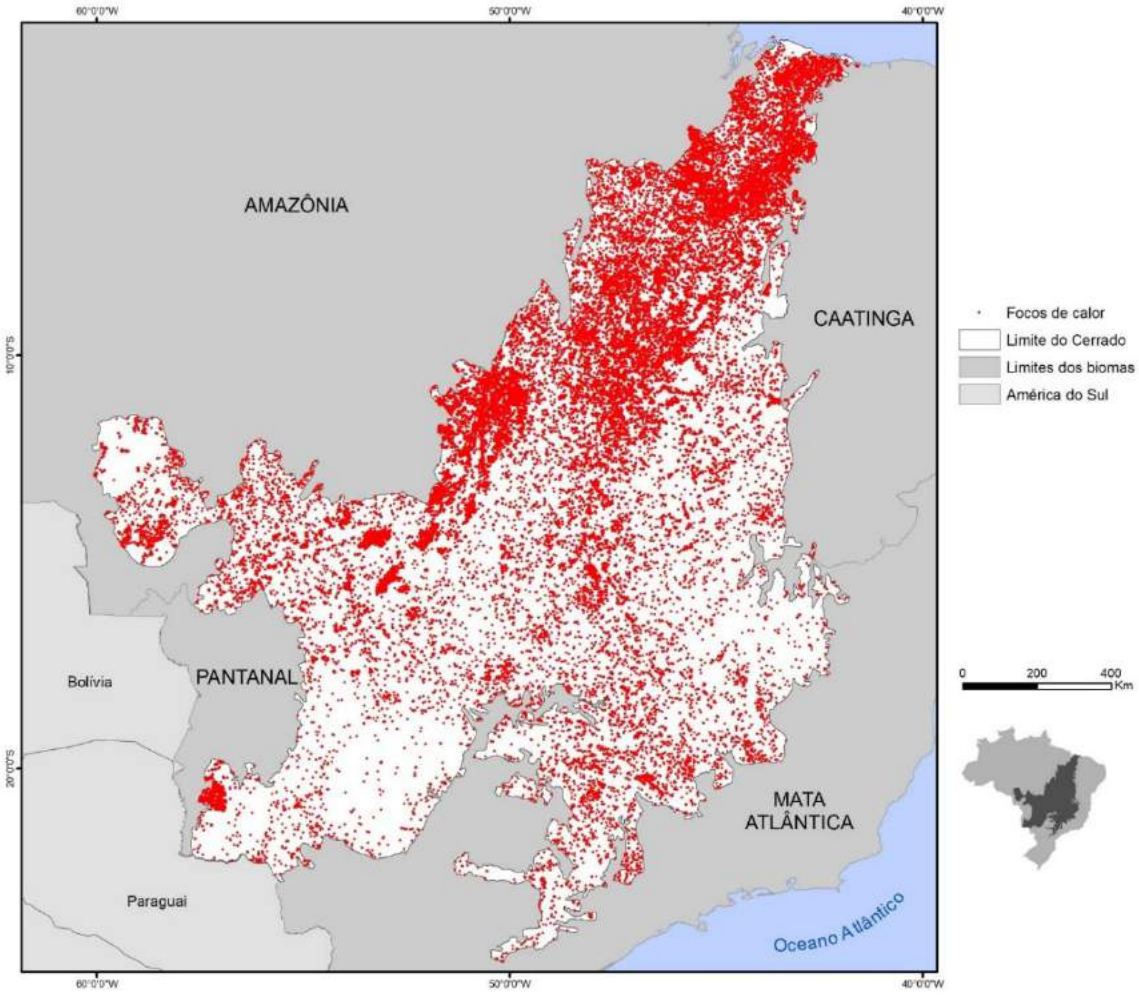

Figure 05 - Heat Spotlights (1998-2017), updated every 3 hours. Data available at http://www.inpe.br/queimadas.

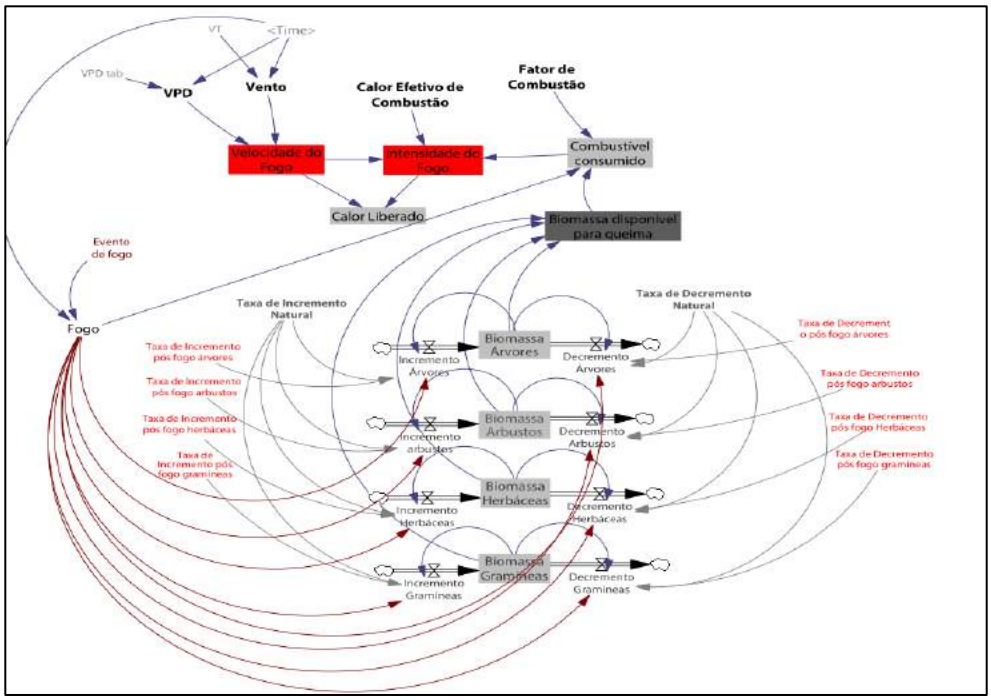

Figure 6 - Fire propagation model. Information on http://csr.ufmg.br/fipcerrado/

2. What have been key contributions (successes) of FIP interventions regarding biodiversity and environmental services in your country context during this reporting year?

The 84,000 ha of reclaimed pastures are located in 1,957 rural properties, which occupy an area around 733,000 ha. In these properties, the areas not recovered or with environmental assets (forests and water bodies) had lower anthropogenic pressure, which allowed an improvement in environmental services.

The data collected by FIP/IFN will allow the identification of botanical species (Figure 07), their distribution, as well as their usefulness to local communities and landowners. In this way, it will be possible to monitor the level of conservation of the species and the type of environmental service they provide.

The mapping of *Cerrado* deforestation by the FIP/FM Project started in the main expansion region of the Brazilian agricultural frontier, where the highest deforestation rates of the Cerrado, called MATOPIBA, are currently found. The data on annual deforestation of the *Cerrado* for the years 2016 and 2017 will be announced in June 2018. In parallel, the Project is developing a system to produce daily alerts of changes in the natural vegetation of the *Cerrado* called DETER *Cerrado*. These alerts are intended to guide the monitoring and control of deforestation by IBAMA. This system will start operating in the second half of 2018.

Figure 07 - Images of botanical species collection, submission for laboratory study and archival in herbarium.

3. What have been your key challenges and what are opportunities for improvement?

One of the challenges faced was the slow adherence of the rural landowners to the new techniques of pasture recovery and management. In order to reduce the resistance of the rural owners, "field days" were created (see figure 08), showing the results achieved within a rural property that had already adhered to the new techniques.

Figure 08 - Field day photo of the FIP / ABC Project

Another challenge has to do with the construction of digital technologies for the development of a mobile application (tablets) for recording data (botanical species, geographical coordinates, satellite images, photos, information of residents, among others) by the activities of FIP/IFN Project.

Finally, the mapping of *Cerrado* deforestation, carried out by the FIP/FM Project, had as its main technical challenge the physiognomic characteristics of native vegetation and its similarity to some deforested areas. The use of satellite images makes it difficult to distinguish between artificial grassland and native grasses. These situations require complementary activities, such as the use of other satellite images and field visits. Some areas with native vegetation also present challenges in their classification, since they present a level of environmental degradation that affects the density of native trees and shrubs, making it difficult to classify the category of native vegetation to which it belongs.

4. Other criteria:

FIP FORM 2.2 - THEME 2.2: GOVERNANCE

Level: Investment plan

Please answer the following questions with a narrative description of the results achieved by the FIP investment plan in your country in the reporting year. Explain the progress made in the reporting year, compared to the previous one.

1. How has FIP contributed to ensuring that stakeholder processes allow the participation of marginalized or vulnerable groups, such as women and indigenous or traditional groups, in forest-related decision-making processes?

The FIP Investment Plan in Brazil has in its planning the inclusion of marginalized groups as direct beneficiaries.

The FIP/CAR Project has, as an implementation strategy, the CAR enrollment activity of small landowners and squatters, as well as communities of traditional peoples, who make use of land as a way of life and subsistence. The environmental regularization process, through the CAR, of these publics includes guidance on the use or limitations of their forest assets, as well as the need to recover forests in areas required by law. During 2017, a strategy was established for the registration of the territories of traditional peoples and communities according to the CNPCT, which includes leaders from 23 segments, represented by indigenous people, *quilombolas*, pickers of evergreens, *geraizeros*, *babaçu* coconut breakers, among other traditional peoples of the *Cerrado*. The dialogue established in 2017 according to the CNPCT resulted in the improvement of the specific SICAR module for registration of the territories of traditional peoples in an environment of wide debate and learning for the appreciation of culture and environmental conservation and traditional knowledge of these peoples.

The FIP/IFN Project is carrying out a socio-environmental survey through interviews (2,534 conducted up to 2017) with rural dwellers to understand the use and importance of forest resources for these communities, in order to subsidize policies that favor vulnerable groups. Workshops were held with the participation of representatives of traditional communities to identify information demands for the sustainable management of the Cerrado.

In the FIP/ABC Project, the 1,957 cattle ranchers with areas of degraded pastures, which were more vulnerable to climatic extremes, were able to advance to higher levels of production.

2. How has FIP contributed to the quality, timeliness, comprehensiveness, and accessibility of forest-related information available to stakeholders, including public notice and dialogue on pending actions?

The FIP Investment Plan in Brazil has a wide diversity of public and the technologies to access various information were scaled according to their profile.

The FIP/FM Project developed the first steps of the system of dissemination of the *Cerrado* deforestation data and fires, in order to disseminate official data in a regular and transparent manner to civil society and government. The information on deforestation in the *Cerrado* will be disseminated through the *TerraBrasilis* platform (www.dpi.inpe.br) via a Webservice. Managers, as mayors and

governors, as well as journalists, students, researchers and the general population, will be able to access the data of their interest compiled, updated and presented in an easier way, directly in the Web environment. The information of risk and forest fires are also available in a web portal, in the page of INPE (http: //www.inpe .br / burned / portal / risk-of-fire-meteorology).

The FIP/IFN Project, whose public has a more technical profile, has released the first information in the form of regional reports (eg IFN of the Federal District, link: www.florestal.gov.br/publicacoes/574-report-inventario-florestal-nacional -df), in addition to constructing a forest information system - the SNIF (link: www.florestal.gov.br/snif/), with modules to disseminate information relevant to several stakeholders in the *Cerrado*.

The FIP/CAR Project, with counterpart resources, has improved SICAR, allowing it to work with a greater diversity of publics (example: traditional peoples and communities), including module for recovery of degraded areas and application for recovery of "*Plantadores de Rios*"), as well as carried out training of technicians of the OEMAs.

3. What have been key contributions (successes) of FIP regarding forest governance in your country context during this reporting year?

The results obtained by FIP/IFN Project are unpublished in the *Cerrado* biome. Systematized information on botanical species, type of vegetation used by local populations, laboratorial analysis of soil fertility and measurement of carbon stocks can be made available to the public and decision makers and can subsidize the formulation of public policies in different areas.

Improving pastures, in theory, reduces pressure on forests. The CAR computerized system received improvements by increasing the government's ability to monitor and intervene in the face of existing environmental liabilities or created in each country's rural property.

The mapping of deforestation carried out in 2017 covered about 27% of the Cerrado area. In June 2018 the biome will have 100% mapping of deforestation. This mapping, when added to the mapping of Amazonian deforestation, will ensure a baseline of information on deforestation in 73% of Brazilian territory starting in 2018. These data will support government actions to combat deforestation and land use policies such as monitoring, climate change and connectivity to biodiversity.

4. What have been your key challenges and what are opportunities for improvement?

One of the major challenges refers to the Brazilian budget laws and the standards of the Development Banks, generating some conflicts in the management of the projects. The first reduces the amount of donation resource that can be used annually and the second pressures for a better financial performance. The solution could include a flexibilization or adjustment of financial performance goals in the face of constraints imposed by factors that the executors have no control over.

Another challenge, in the FIP/FM Project, would be the non-guarantee of the use of the deforestation data and reported fire outbreaks. It would be necessary to promote the dissemination of data availability as well as to evaluate the existing demand for this type of data and to use it according to the demand of different user groups (government, academy, civil society, private sector). The workshops envisaged in the project will enable beneficiaries to be train on the use of tools to access, generate

analyzes from primary data to produce information useful for implementing public policies and combating deforestation and forest fires.

In the FIP/CAR Project, the governance challenge includes the complexity of constructing a system that harbors environmental data from all states, taking into account the differences in each region. This required a great effort in the creation of the SICAR system, with all the standards for communication between the state systems and SICAR, among other operational issues. For that, two meetings per year were held with all those involved to present the proposals, results and suggestions for adjustments.

An opportunity for improvement and synergy includes making available the CAR liabilities data of the properties worked by FIP/ABC, in order to identify how the adoption of low carbon technologies influenced the change in land use and adjustment of forest liabilities.

5. Other criteria:

The integration of the actions developed by the FIP Investment Plan in Brazil in 2017 illustrates the capacity of government agencies to promote the complementarity of their actions, in support of the common objective of mitigating the effects of climate change on the country's second largest biome. Regarding governance, the work was carried out throughout the year in partnership between several Ministries and government agencies, with face-to-face meetings and ongoing dialogue between the institutions involved in the projects, in order to foster synergy among the projects of the Investment Plan. For example, CAR's progress is a clear example of how cooperation tends to benefit the country both economically and from the perspective of climate change mitigation, as it will make it possible to strengthen the implementation of the Brazilian Forest Code, as well as to promote economic instruments to fight against deforestation. On the other hand, the FIP/Landscape Project tends to further strengthen these synergies, as it will strengthen the integration between FIP/CAR and FIP/ABC actions.

FIP FORM 2.3 - THEME 2.3: TENURE, RIGHTS, AND ACCESS

Level: Investment plan

Please answer the following questions with a narrative description of the results achieved by FIP investment plan in your country in the reporting year. Explain the progress made in the reporting year, compared to the previous one.

1. Which actions have been taken to improve the legal frameworks to protect forest-related property rights and access for all forest stakeholders, including women and indigenous peoples?

The FIP Investment Plan in Brazil does not have actions that act on issues that directly influence land tenure and benefit sharing with the populations served. The best contribution of the projects to the theme refers to the systematization of primary data on the situation of land tenure in the region worked, which can subsidize related public policies. Through the systematization of SICAR data, it is observed that:

a) Smallholders own 92% of the number of properties, but occupy 31% of the territory;
b) Medium-sized properties hold 6% in the number of properties, but occupy 18% of the territory;
c) Large properties hold 2% in the number of properties, but occupy 51% of the territory;
d) PCT enrollment in the Cerrado, until the end of 2017, indicates a larger number of families in the states of *Maranhão* and *Piauí*, with approximately 3,533 and 1,955 families respectively. A pilot initiative developed in 2017 by the SFB in *Maranhão* identified a large demand for PCT families not yet registered, which could triple the current number of families registered in that state.

2. What have been key contributions (successes) of FIP regarding forest tenure, rights, and access in your country context during this reporting year?

The FIP Investment Plan in Brazil has no contributions in this area.

3. What have been your key challenges and what opportunities for improvement do you see?

About 140 territories of PCT of the *Cerrado* Biome, with about 21 thousand families were registered by CAR, through previous initiatives to the FIP/CAR Project. Even with the documentary precariousness regarding land ownership and the difficulty of accessing the roads, the CAR made it possible to identify and locate these communities for the first time. According to institutions representing these communities there are still many areas not registered in the CAR making the FIP/CAR project a great opportunity to meet this demand.

4. Other criteria:

FIP FORM 2.4 - THEME 2.4: CAPACITY DEVELOPMENT

Level: Investment plan

Please answer the following questions with a narrative description of the results achieved by the FIP investment plan in your country in the reporting year. Explain the progress made in the reporting year, compared to the previous one.

1. Which actions enhanced institutional capabilities to develop and implement forest and forest-relevant policies at the national, regional, and local Level?

FIP's investment plan in Brazil has supported the construction of systems for data storage and analysis, as well as enabling the collection of primary data related to deforestation, fires, assets and liabilities in rural properties, botanical information and GHG emissions from the forest. This information enhances the government's ability to make forest policy based on systematized scientific data and analyzed on demand.

Some products that make up the fire risk system have already been produced (figure 09). The Observed Fire Risk product (figure 10), as well as others, is available on the Burned Program portal and can be accessed at http://www.inpe.br/queimadas/portal/risco-de-fogo-meteorologia, on the Observed Fire Risk tab. These products support the activities of important government institutions such as CIMAN, ICMBio, ONS, PrevFogo, which are responsible for the implementation of forestry policies.

The FIP/CAR Project aims to strengthen the capacity of the Ministry of the Environment and State Environmental Entities (OEMA) to implement the CAR as a mandatory tool for the environmental regulation of rural properties.

SFB improved SICAR and trained OEMAs technicians through resources accounted for as counterpart (figure 11). The FIP/CAR Project resources will also allow, among other benefits: (1) the creation of conditions necessary for the nine selected States of the *Cerrado* biome to implant CAR, including technical, legal and financial assistance to support institutional and operational improvements; (2) the purchase of equipment and materials; (3) provision of training for the actors involved, and; the improvement of the logical network and the expansion of capacities for the operation of SICAR.

The FIP/IFN Project collected data from representative sample units of about 23% of the *Cerrado* area and has already signed contracts to cover another 44% of the area of the biome. The data is in the process of systematization and initial analysis. The report on Cerrado areas in the *Distrito Federal* has already been launched. The report systematizes data and enables government and civil society to access data and thus interact in the implementation of data-driven public policy.

The FIP/ABC Project implemented training and technical assistance actions for rural producers. The results achieved are being evaluated to understand the effectiveness of the ABC Plan and so use it strategically for forest policies.

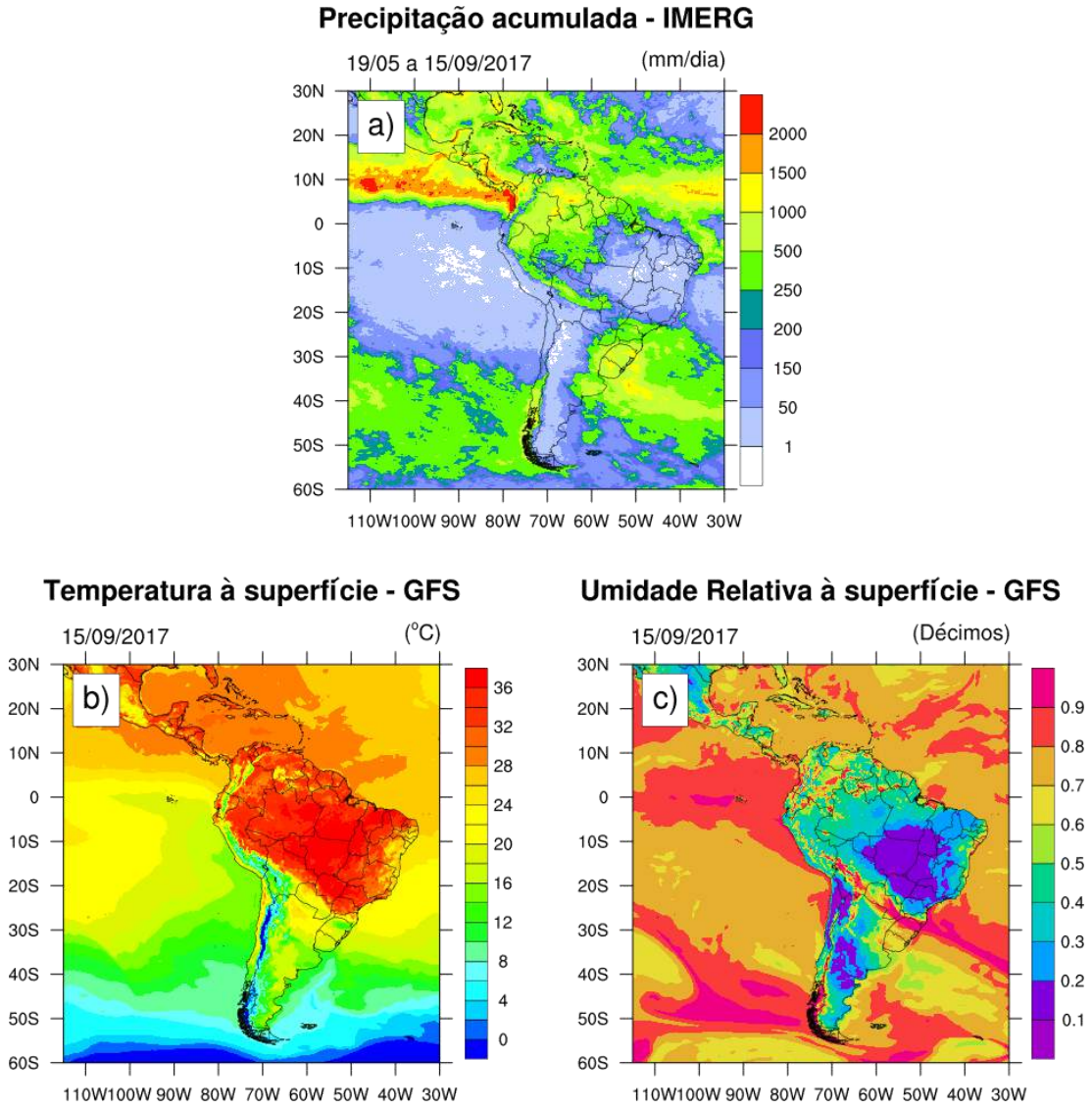

Figure 09 - Meteorological fields used in the calculation of Fire Risk (http://www.inpe.br/queimadas/portal/risco-de-fogo-meteorologia).

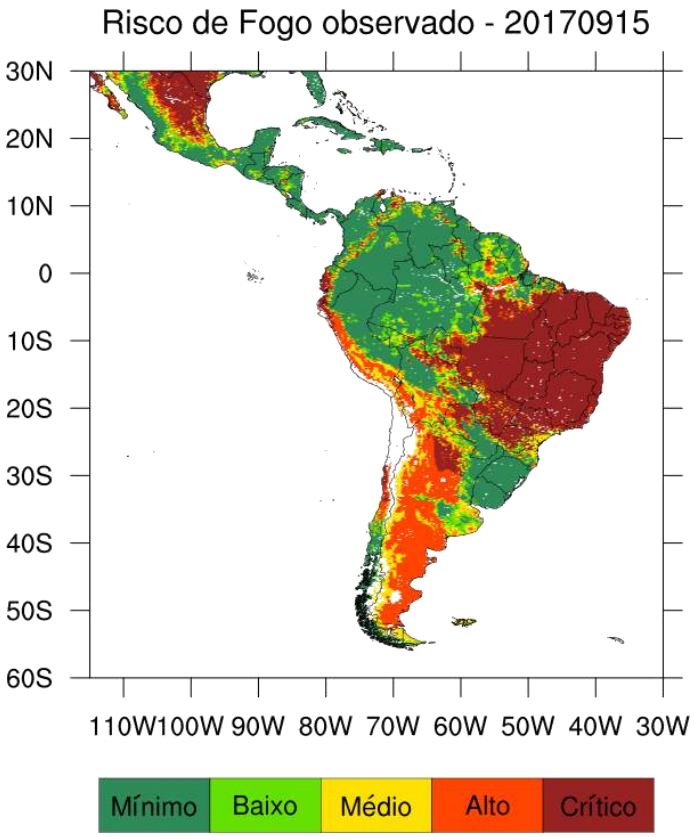

Figure 10 - Map on Fire Risk on 15 / Sep / 2017
(http://www.inpe.br/queimadas/portal/risco-de-fogo-meteorologia).

Figure 11 - 4th Meeting of Implementation of CAR - August 2017 (103 participants, 26 state environmental agencies).

2. Through which actions did FIP improve capacities of stakeholders in forest and land use planning and management?

FIP's investment plan in Brazil improved the performance of the different institutions involved, as it allowed specific systems in their areas of activity to be built and improved, as well as the collection of primary data.

The FIP/FM Project adapted a methodology for measuring Amazon deforestation for the *Cerrado*, creating PRODES/*Cerrado* and DETER *Cerrado*. The same occurred with the method of measurement of GHG and fire risk for the Cerrado. With this, the institutions involved significantly expanded the territory in Brazil, generating strategic information for planning and forest management and land use, as well as compliance with international commitments by the Government.

The FIP/CAR Project will enable the registration actions carried out by the *Cerrado Federal* Project, implemented in the years 2016 and 2017 in *Maranhão*, to gain scale for the entire *Cerrado* region, including actions with traditional communities such as *quilombolas* and *babaçu* coconut breakers. OEMAs are also benefiting from the first actions of the Project (counterpart resources) through the improvement of SICAR, as well as the development of new technical capacities, such as the analysis of the CARs and orientation for the recovery of the degraded areas in the registered properties.

The FIP/IFN Project has completed the construction of the IFN's specific data storage system for the *Cerrado*, which will be country-wide. Primary data from more than 1,000 conglomerates have already been inserted into the corporate system maintained by the SFB, as well as the database of the SNIF. The publication of the report on the forest survey of the *Distrito Federal* (Figure 12) has already provided information for the planning and management of forests.

The FIP/ABC Project implemented training actions for a public of 4,488 people and provided technical assistance to 1,957 rural owners. Discussions with different actors encouraged the construction of a methodology for evaluating the impact of project interventions, using three groups: a) without training and without technical assistance (control group), b) with training and without technical assistance, c) with training and technical assistance. The results will be used for policy discussions that use the ABC Plan as a strategy to reduce pressure on native vegetation and reduce GHG.

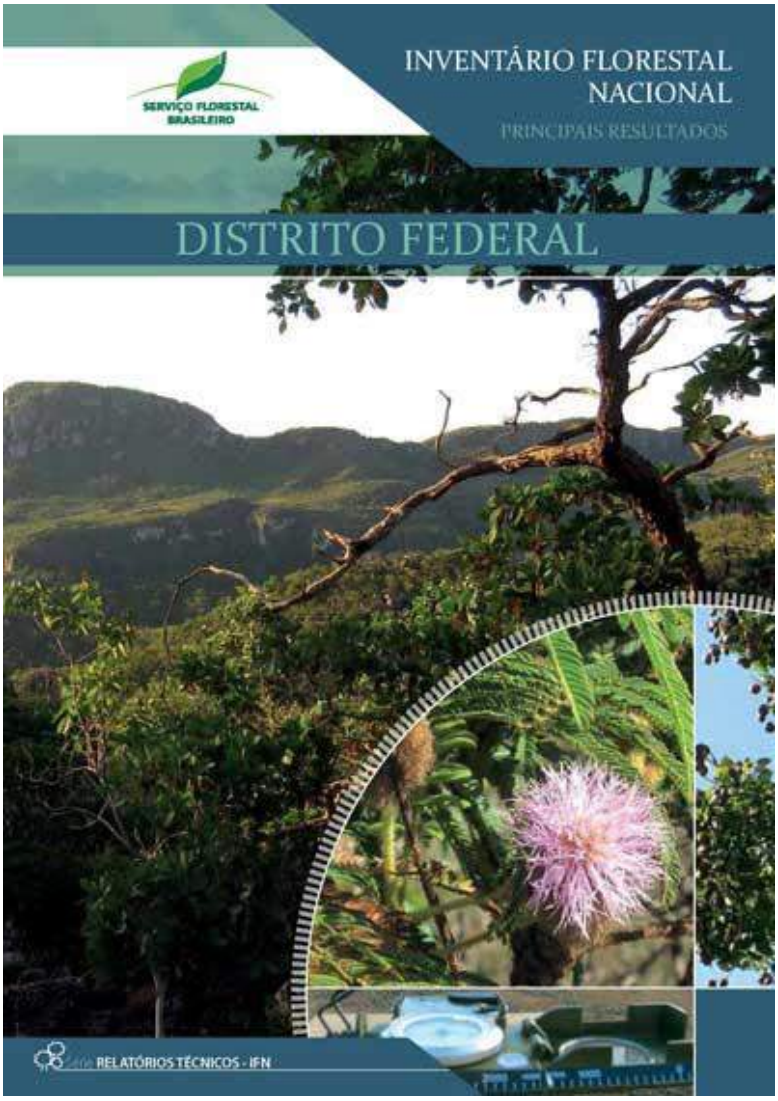

Figure 12 - Cover of the publication on the Forest Inventory of the *Distrito Federal*.

3. What have been key contributions (successes) of FIP regarding capacity development in your country context during this reporting year?

FIP's investment plan in Brazil has developed new capabilities both at the institutional level and the different actors involved. At the institutional level, the incorporation of the *Cerrado* biome into the routine activities of some institutions (FIP/FM), construction of new information systems (FIP/IFN) and, in addition to the development of a training strategy in large numbers through partnership with strategic institution (FIP/ABC).

Capacity development at the individual level is related to the courses promoted by the different institutions for the different actors, such as self-employed technicians and civil servants of OEMAs (FIP/CAR), rural producers (FIP/ABC) and forest technicians (FIP/IFN).

In addition, the FIP / CAR Project contributed with activities related to the development of SICAR, which provides access to a significant amount of information for various public policies in rural areas, as well as progress in the stages of the environmental regularization process.

4. What have been your key challenges and what are opportunities for improvement?

The challenges of the FIP Investment Plan in Brazil can be divided into two groups: a) the challenge of incorporating project information and results into public policies; b) difficulties in empowering people to incorporate new knowledge into their actions available.

In the first group the quantity and quality of unpublished information provided by the projects present details of the forest reality of the country that challenge the managers in glimpsing the use of information in the short and medium term. There is also the challenge of building synergies between different institutions in building joint actions to systematize information in accordance with specific demands to implement forest policy.

In the second group the challenges are the large number of people to be trained, diversity in the educational level, as well as the great distances that different groups meet.

In FIP FM Project, the hiring of specialists in remote sensing to execute the project, involved the training of these professionals on the methodologies and procedures adopted for the interpretation of information on deforestation and degradation in the *Cerrado*, in satellite images. Training was also carried out to train stakeholders interested in the products developed in the project and to use the tools and products generated. The technical group of the Fire Risk component carried out several training and courses for the use of the Fire Risk information dissemination platform (TerraMA2): *Mato Grosso* OEMA, INPE (figure 13), *Cantão* State Park (figures 14 and 15), RedLatif (Mexico), Cemaden, Emergency Management Center of the City of *São Paulo*, OEMA of *Tocantins*, Funtac (*Rio Branco*), Military House of the State of São Paulo. Details on http://www.inpe.br/queimadas/portal/informacoes/eventos-realizados.

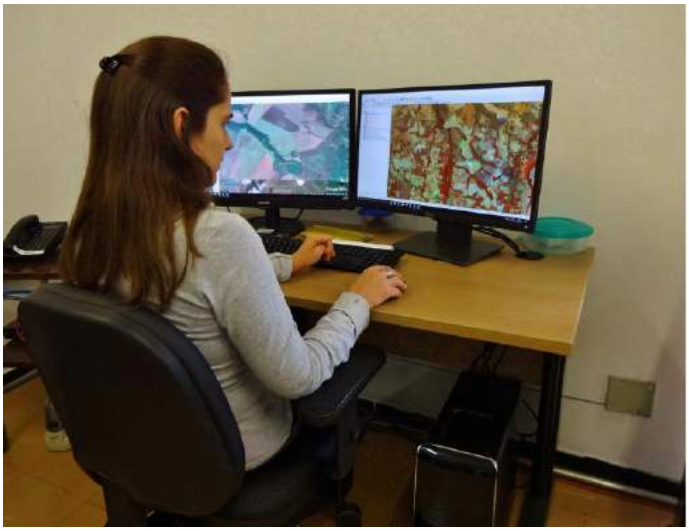

Figure 13 - Training of the use of remote sensing technologies to identify deforestation in the Cerrado biome, carried out at INPE in September 2017.

Figure 14 - Training in the Canton National Park, Tocantins, about Fire Risk system, developed by the FIP/FM Project, July 4 to 12, 2017

Figure 15 - Training in the *Cantão* National Park, *Tocantins*, on Fire Risk system, developed by the FIP/FM Project, July 4 to 12, 2017.

In FIP/CAR Project, the challenge related to the complexity of constructing a standardized system and reflecting all the applicable legal aspects is highlighted again, given the numerous and relevant specifications of each interested group.

In FIP/ABC Project, the reduced number of technicians to execute the Project requires a great demand of effort to deal with the different fronts that need to be met (technical, administrative, financial) for a good execution of the Project. Trained technicians will work on the new FIP/Landscape Project.

At FIP/IFN Project, training was given to some universities. In this way they will be able to train new teams for future inventories.

5. Other criteria:

FIP FORM 3.1 - THEME 3.1: THEORY OF CHANGE AND ASSUMPTIONS

Level: Investment plan

Please explain how the implementation of the FIP investment plan is contributing to transformational changes in addressing the drivers of deforestation and forest degradation in your country. Please report progress on the theory of change and assumptions at mid-term and end of the investment plan. If projects start at different points in time, the FIP country focal point may decide which point in time best represents the mid-term of the investment plan.

1. Please briefly describe how FIP contributed to transformational changes in addressing the drivers of deforestation and forest degradation in your country as presented in the endorsed FIP investment plan. What is the value added of FIP?

The FIP Investment Plan in Brazil operates with different fronts that interfere with the conservation and degradation dynamics of the *Cerrado* biome. The actions involve mapping of deforestation and fires, calculation of GHG emissions, detailed survey of primary data on vegetation, georeferencing of rural properties allied to its forest assets and liabilities, and technical assistance for recovery of productive areas.

INPE, through the FIP/FM Project, is developing a deforestation monitoring system to help environmental monitoring agencies prevent illegal deforestation and produce annual deforestation maps and statistics for carbon balance accounts, deforestation policies, evaluation and decision-making and academic research. The *Cerrado* biome has never had such a monitoring system in the level of detail that it adopted (spatial resolution of 20 m to 60 m). A series of deforestation maps for the period 2000 to 2017 is awaiting the announcement of MMA and MCTIC to be made public and in use. Mappings for the years 2016 and 2017 are being produced with support from the FIP. In 2018, the deforestation alert system for deforestation control will be launched by IBAMA.

The FIP/CAR Project provided the training of technicians of the OEMAs in 2017 to enroll in the CAR and use the analysis module, so that by 2018 these technicians can better follow the signings for more than 50 thousand new small rural properties and areas with traditional communities, as well as for rectification of registries with eventual inconsistencies identified by the OEMAs. In this way, the forest assets will be identified and guidance on their conservation will be identified, as well as the identification of the forest liabilities and orientation for their recovery, leading to the environmental regularization strategy.

The FIP/ABC Project trained 4,488 people and provided technical assistance to 1,957 landowners, focusing on the recovery of degraded pastures. It is believed that the recovery of these pastures contributes to reduce the pressure on forest area.

The FIP/IFN Project has already collected detailed forest data of about 33% of the Cerrado biome in 2017. Work continues through 2018. Systematization of the data will enable understanding the value of the forest and thus change the view of government and society on the appropriate use of the natural resource. In addition, the main demands of forest information for the SNIF were identified, in order to favor the sustainable use of the *Cerrado* and to reduce the deforestation and degradation of the *Cerrado*.

The promising results of some of these projects have contributed to synergistic actions among some institutions in the elaboration of the FIP/Landscape Project, which integrates the successful actions of some projects making them complementary and focused in regions of the *Cerrado* with high levels of environmental degradation.

2. Please assess how well the theory of change and underlying assumptions described in the endorsed investment plan are playing out in practice, what can be learned, and whether corrective measures need to be taken.

The construction of the FIP/Landscape Project can be considered one of the most important changes in the architecture of FIP projects in Brazil, since the execution will integrate the successful actions of the FIP/ABC and FIP/CAR Projects executed in 2017.

In the case of the FIP/CAR project, it is important to note that due to the time lag between the elaboration of the Project and the beginning of its execution, there has been an extremely significant change in the context and status of the process of environmental regularization of rural properties in the country. Thus, to date, much of the success of policy implementation has come from other sources of investment and the dedication of the institutions involved in the process. Despite this, the FIP/CAR Project remains extremely relevant for the country, and there is still significant demand for the registration and rectification of small rural properties, as well as for post-registration stages, such as monitoring, regularization and negotiation.

FIP FORM 3.2 - THEME 3.2: CONTRIBUTION TO NATIONAL REDD+ AND OTHER NATIONAL DEVELOPMENT STRATEGIES AND UPTAKE OF FIP APPROACHES

Level: Investment plan

Please describe how FIP enhanced and/or advanced the national REDD+ process (including REDD+ readiness and performance-based mechanisms) and relevant development strategies.

The FIP Investment Plan in Brazil has some actions related to REDD +. Data collected by the IFN will substantially improve estimates of forest carbon stocks. The calculations on GHG emissions and the mapping of deforestation and fires of the FIP/FM Project provide quality information for emission reduction policies in the *Cerrado*, such as the ABC Plan contributions at the property level.

FIP FORM 3.3 - THEME 3.3: SUPPORT RECEIVED FROM OTHER PARTNERS INCLUDING THE PRIVATE SECTOR

Level: Investment plan

1. Please describe how bi- and multilateral development partners supported the interaction of FIP and other REDD+ activities.

The *Cerrado* biome deforestation monitoring program, to be launched in 2018 with the support of the FIP/FM Project, is based on previous deforestation maps produced with the support provided under bilateral agreements. A proposed Forest Reference Emission Level submitted to the UNFCCC was based on biennial activity maps (deforestation) for the period 2000 to 2010. This series was funded by the German Government (BMU Ministry) and the implementation was brokered by GIZ and by the MMA and led by INPE that coordinated the consultants contracted for this matter. Other deforestation maps for the years 2013 and 2015 were produced with the support of the British government (DEFRA) which funded the FUNCATE Foundation to produce the maps under the coordination of INPE. The data generated by the FIP/FM Project will complement the historical series of deforestation data for the period 2001-2020.

The FIP/IFN Project has built partnerships with private company - Votorantin - and the UFG for the development of allometric equations for biomass and carbon calculation in the *Cerrado*. The company ceded an area with preserved native vegetation, the UFG made the measurements and adjusted the equations. Partnerships with the state governments (Mato Grosso do Sul and São Paulo) were developed in order to implement the IFN in other biomes, in the respective states.

2. Please describe how the (formal and informal) private sector actors have taken up good practices demonstrated through FIP. Please describe challenges encountered in involving the private sector in FIP.

The FIP/ABC Project is aimed to the private sector - cattle ranchers with degraded pastures. The disseminated techniques were adopted in 84 thousand hectares. For every $ 1 invested by the FIP/ABC project in technical assistance actions, the landowners invested $ 8 in stock to recover their pasture.

3. Please describe how civil society organizations and other stakeholders have been involved in FIP implementation.

Regarding to the FIP/FM Project, the initiative to implement a program to monitor deforestation in the *Cerrado* has been closely monitored by two sectors, soy producers and beef producers. Both sectors have established compliance rules for the entire production chain and major buyers of these commodities intend to use the cartographic information on the deforestation process to exclude from their suppliers those that are not complying with national environmental rules such as the Forest Code. The use by these sectors of deforestation data for this purpose has already been done for some years in the Amazon biome and there is a clear intention that they will extend this practice to the *Cerrado* biome as soon as the data is available.

The FIP/IFN Project has built partnerships with the private sector and the university for the development of allometric equations as well as herbariums and research center for botanical identification.

In the FIP/ABC Project, partnerships were held with the rural producers' union to mobilize the rural owners to participate in the training. The sectoral institution responsible for the dissemination and training of topics related to the agricultural sector - SENAR - assumed all stages of the training of the landowners, as well as the provision of technical assistance.

In the FIP/CAR Project, the long-standing partnership with UFLA in the development of SICAR and the training of environmental technicians of the OEMAs in the enrollment of CAR and in the use and implementation of the analysis module, carried out both in EAD platform classes.

FIP FORM 3.4 - THEME 3.4: LINK OF DEDICATED GRANT MECHANISM FOR INDIGENOUS PEOPLES AND LOCAL COMMUNITIES (DGM) TO INVESTMENTS FROM GOVERNMENT'S POINT OF VIEW

Level: Investment plan

Please provide comments on the complementarity of DGM and its contribution to the FIP investment plan. What have been the collaboration and synergies between the FIP focal point office and DGM?

The FIP Investment Plan in Brazil has actions divided into two groups: a) Actions related to strengthening the institutions of social movements; b) Actions related to the environmental recovery of the territory, containment of emergency threats and market-oriented production.

Institution strengthening actions include leadership participation in national and international events, as well as exchanges with Latin American, African and Asian countries.

The 41 projects related to DGM are spread across different regions of the *Cerrado* biome (see Figure 16), all of which are being implemented in 2017. Indigenous peoples have benefited from 26 projects, 8 projects with *Quilombolas* and 9 projects with other traditional communities.

Figure 16 - Location of DGM projects in Brazil

The collaborations and synergies between the DGM and the FIP projects are:

a) Rural Environmental Registry (CAR) by the SFB of traditional communities, mainly *quilombolas* and *babaçu* coconut breakers;
b) The DGM initiated conversations with the FIP/IFN Project to increase integration between traditional communities and the Forest Inventory for the *Cerrado*;
c) Incorporation at the national level of indigenous, *quilombolas* and other traditional communities in the dialogue for the implementation of public environmental policies, projecting the governance of these communities, favoring the social control of government actions.

FIP FORM 3.5 - THEME 3.5: HIGHLIGHTS/SHOWCASES OF PARTICULARLY OUTSTANDING ACHIEVEMENT(S) TO SHARE

Level: Investment plan

1. Please provide examples of particularly outstanding achievements or key successes.

The FIP Investment Plan in Brazil, due to the portfolio of 5 projects, has different remarkable results in 2017.

The Cerrado deforestation information (PRODES 2016 and PRODES 2017), to be released in 2018 by the FIP/FM Project, will complement the historical series of deforestation mappings from 2000 to 2015 (figure 17) produced by other projects with different sources of financing: MCTIC, MMA, KfW and GIZ German agencies and British Government through DEFRA. This project will produce maps of deforestation and degradation of the *Cerrado* for the years 2016-2020. This will be the first time we will have maps of the *Cerrado* deforestation with transparent, reliable and consistent information in a series history covering the period 2001-2020. Products can be accessed at http://www.dpi.inpe.br/fipcerrado/, on the products tab.

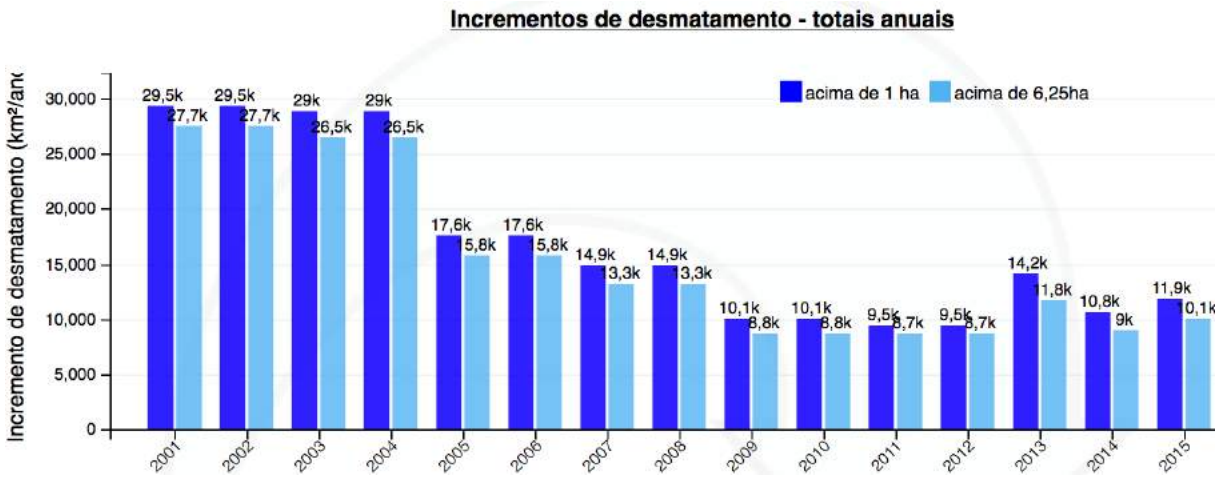

Figure 17 - Increases in deforestation in the *Cerrado* in the period 2001-2015.
(http://www.dpi.inpe.br/fipcerrado/dashboard/cerrado-rates.html).

The FIP/CAR Project expanded the capacity of the geo-referenced system of environmental assets and liabilities of rural properties compatible with 27 OEMAs (Figure 18 and 19). In addition, it trained technicians for the CAR enrollment and analysis module. Also included in the Project were the best lessons learned from the *Cerrado Federal* Project funded by DEFRA, making the funded initiative gain scale and favor of vulnerable populations such as smallholders and traditional communities.

Figure 18 - Implementation of the CAR Analysis Module in *Goiás state*, held in December 2017.

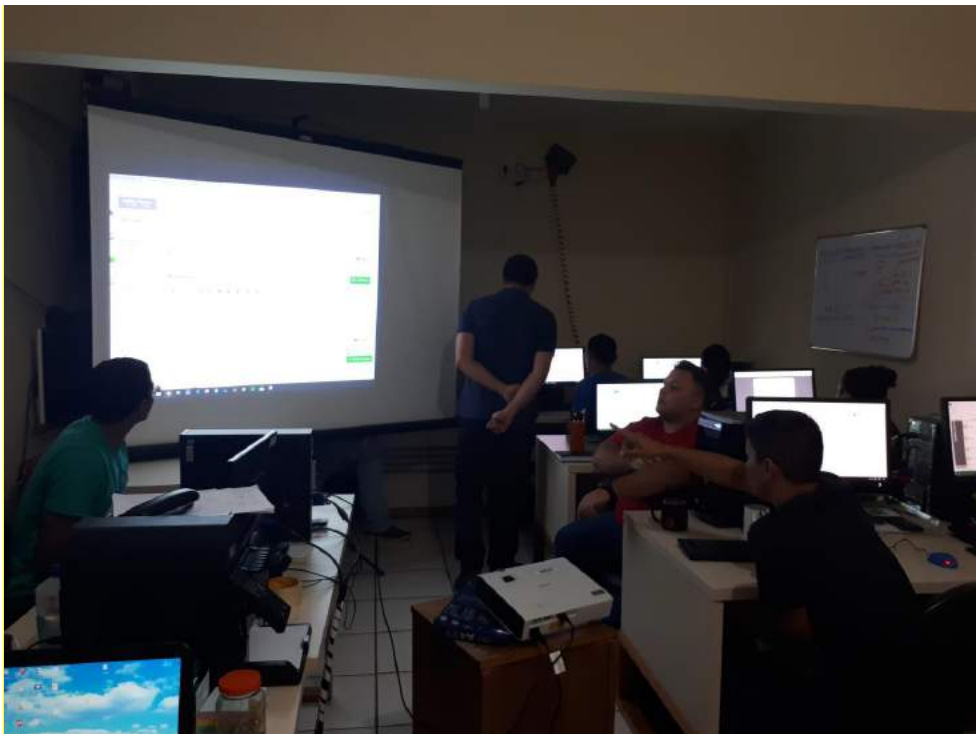

Figure 19 - Assisted Implantation of the CAR Analysis Module in the *Distrito Federal*, held in November 2017.

The FIP / ABC Project recovered 84 thousand hectares of pasture in 1,957 rural properties. The project also stimulated private investment in the recovery of its pasture in a ratio of 1: 8, that is, for every dollar invested by the Project in technical assistance, the landowner invested 8 dollars to recover their pastures. The Project also produced videos:

https://www.youtube.com/embed/6qgg7yaTk2w?feature=oembed
https://www.youtube.com/embed/IfHBnnZY4C4?feature=oembed
https://www.youtube.com/embed/vLEAqyD8ifo?feature=oembed

In 2017, the FIP/IFN Project carried out the detailed survey of primary vegetation data at 1,112 points (23% of the target), covering about 44.52 million hectares of the Cerrado biome and, in total, already contracted a survey of 3,817 points, which correspond to 77% of the total sample points expected to cover the Cerrado entirely. The Project also created the National Forest Inventory Information System (IFN-Web System) for the input of the data collected in the field and by the herbaria.

2. Please provide examples of outstanding achievements in gender mainstreaming:

- **What have been the most important achievements and impacts in terms of gender mainstreaming in FIP investments?**

The gender issue was highlighted in the FIP Brazil Investment Plan in the following ways:

a) In the FIP/IFN Project field interviews were conducted in order to obtain information on the use of forest services that can be disaggregated by gender.
b) In the FIP/ AR Project, a greater number of female technicians from the OEMAs were observed in the training courses and workshops.

- **Are there any lessons learned or good practices regarding integration of gender into these investments?**

A good practice observed refers to the FIP/IFN Project that controls the field interviews so that the number of women and men are the same.

FIP FORM 4.1 - CATEGORY 4: OTHER REPORTING TYPES

Level: Investment plan

Please attach or provide links to photos, videos, events, publications, and/or creative media and platforms, such as blogs, videos, or webinars, illustrating responses to the following questions:

1. What are the main achievements of the country program coordination and synergies between different FIP investments?

The FIP Investment Plan Coordination in Brazil organized a workshop in June 2017 with the participation of 20 institutions to discuss the 2016 report.

The FIP/Landscape Project, proposed in 2016, was supported by the Coordination for its development and submission to the FIP. The Project's architecture includes the synergy and complementation of actions between institutions that coordinate FIP/CAR, FIP/ABC and FIP/IFN.

2. What are the main achievements of the ongoing stakeholder participation/involvement?

At FIP/FM Project, all products are the enhancement of prior initiatives focused on the Amazon rainforest, and meet the expectations of government institutions, civil society and the private sector in the context of policies to combat deforestation, environmental monitoring, REDD + strategies and other environmental policies. The MMA, MCTIC and MAPA ministries are interested in deforestation data to design public policies related to land use and production of science and knowledge. Fire sources have diverse stakeholders, since the information responds to demands from the private sector (monitoring of fire in private properties), civil society (monitoring of fires near areas of relevant interest) and government (fire monitoring in protected areas, energy transmission and other strategic areas). Several courses were carried out to train the actors involved with environmental issues regarding the use of fire risk products and tools produced in the project (http://www.inpe.br/queimadas/portal/informacoes/eventos-realizados). There were also courses on modeling changes in land use and biodiversity related to the modeling of fire spreading, one of the project products (http://csr.ufmg.br/fipcerrado/).

In FIP/CAR Project, successful initiative replication is occurring for the registration of small rural properties.

In FIP/IFN Project, the Forest Inventory of the *Distrito Federal* was published. The Forestry Inventory of the state of Paraná is in the process of being completed.

In the FIP/ABC Project, leaflets (Figure 20) were developed by MAPA, EMBRAPA and SENAR for training courses in the following technologies: degraded pasture recovery, crop-livestock-forest integration, no-till system and planted forests.

Figure 20 - Leaflets and other materials used in pasture recovery training courses.

3. How is the investment plan implemented in the context of broader national policies?

The FIP/FM Project is mainly linked to the national *PPCerrado* policies, the PMABB strategy, the REDD + strategy and the international agreements to reduce GHG emissions.

The FIP/CAR Project will be one of the instruments for implementing the environmental regulation of rural properties, as set forth in the Forest Code, which requires the rural environmental registration of all landholding as a first step in the process and reminds the government of the responsibility to support the registration of small landholding and traditional communities. The CAR will be able to help distinguish between legal and illegal deforestation and will facilitate land use planning, thus integrating environmental regularization actions in compliance with current legislation in the country. In addition, it may subsidize policies, programs, projects and activities of control, monitoring, environmental and economic planning and combating illegal deforestation.

The FIP/IFN Project contributes to the implementation of some requirements of the Forest Code, such as the construction of a forest information system and the forest inventory of the biomes.

The FIP/ABC Project is part of the portfolio of ongoing initiatives of MAPA's Low Carbon Agriculture Plan.

4. What are the outstanding achievements in terms of knowledge exchange and management?

The FIP/FM Project will produce annual deforestation data for the years 2016 and 2017 in 2018, and by May 2020 we will have complemented the 2001-2020 historical series. This information will be publicly available (http://www.dpi.inpe.br/fipcerrado/) and may be used to enhance integrated actions between different governmental institutions and their respective public policies. As an example, we have the CAR

that can use the deforestation data to update its environmental liabilities monitoring actions on rural properties and the ABC Plan that can verify the changes in land use in the properties supported by the Plan.

The FIP/CAR Project has held a meeting with all OEMAs located in the *Cerrado* biome, providing support for the use of standardized system (SICAR) and data for the registration of rural property.

Considering the contracts already signed, the FIP/IFN Project already has 77% of the Cerrado biome in the field data collection phase. The Project supported the negotiations with states of *Mato Grosso do Sul* and *São Paulo* to finance the implementation of the National Forest Inventory in the other biomes present in these states.

The FIP/ABC Project conducted two workshops to map lessons learned (impact assessment on training strategies, dissemination videos and financial feasibility study). These lessons are being incorporated by the institutions involved in the Project and disseminated to the technical assistance providers.

5. Is there any analytical work or public communications (evaluative studies, evidence-based learning, articles, etc.) about your FIP Investment plan to share?

SUMMARY OF THE FIP ANNUAL STAKEHODER WORKSHOP

1. Which stakeholder groups were invited to the annual workshop (organizations and number of people for each)? Please attach the list of participants, including the name of the organizations they represent.

Nº	Organization	Number of people invited	Number of people in the workshop
1	ABEMA	2	
2	ANAMMA	2	
3	BNDES	4	1
4	BVRio Institute	2	1
5	CAA/NM	2	1
6	Climate Policy Initiative	1	1
7	CONAQ	2	
8	Delegation of the European Union	1	
9	DGM Management Committee	1	1
10	Embassy of Canada	1	
11	Embassy of Germany	1	
12	Embassy of Japan	1	
13	Embassy of Norway	1	1
14	Embassy of the United Kingdom	1	
15	Embassy of the United States	1	
16	EMBRAPA	6	4
17	FUNATURA	2	2
18	GIZ	3	1
19	IADB	2	
20	IBRAM-DF	2	2
21	IBRD	4	1
22	INCRA	1	
23	INPE	1	2
24	Institute of Socioeconomic Studies - INESC	1	
25	International Institute of Education of Brazil - IIEB	1	
26	Conservation International	1	
27	KFW	2	1
28	MAPA	4	2
29	MCTIC	2	
30	MDA	2	2
31	MF	3	2
32	MIQCB	2	
33	MMA	13	10
34	MOPIC	1	1
35	Rede Cerrado	2	1
36	SEAD/SFA/CGAPS	1	
37	OEMA of State of São Paulo	1	1
38	OEMA of the State of Goiás	1	1
39	OEMA of the State of Piauí	1	1
40	SENAR	3	1
41	The Nature Conservancy	1	
42	USAID	2	1
43	WWF	1	
	TOTAL	**89**	**42**

See attached the list of event participants (Annex 2).

2. How did you ensure stakeholder participation in the workshop? Which methodologies were used to integrate all stakeholders' views during the workshop? (For example, did you break down the stakeholders into groups to discuss a topic depending on their expertise? How did you reach a consensus for the reported data?)

Eighty-nine people, representing 43 institutions, were invited, who received formal invitations explaining the purpose of the workshop, the importance of participation as a stakeholder and informing that travel and lodging expenses would be covered by the FIP Coordination Project. However, only 42 people from 24 institutions were present.

The methodology used included presentations on the FIP, the Brazilian Investment Plan (BIP) for the FIP and the objectives and progress of each of the projects that make up the BIP/FIP (Figure 21).

Figure 21 - Presentation of the Projects that compose the BIP/FIP

The structure and objectives of the FIP M&R Report were presented below (Figure 22).

Figure 22 - Presentation of the FIP M & R Report

Participants were then divided into four groups, according to the project of most familiarity: CAR, IFN, ABC, FM (Figure 23).

Guiding questions were presented for the discussion that included:

- Does the group disagree with any of the information presented? Because? Please make an alternate proposal.
- How does the group envisage the possibilities of DGM's contribution to the project and vice versa?
- What information would the group add to enrich the report?

Figure 23 - Group dynamics for discussion of the M & R FY Report 2017

After the momentum, each group presented its general impressions on the report, which it disagreed with and what it suggests modifying.

Before closing, general comments about the report and about the event were made, as well as the following steps were presented.

3. What were the key issues raised during the workshop?

- Running the next workshop in December or beginning of the year can be more productive when information about the previous year is “recent”.
- It missed more contextualization about the importance of the report to enable more contributions.
- Take advantage of the momentum to go deeper in the issues and synergies with a view to broadening integration.
- Expand the number of stakeholders.
- Opportunity to know about the ongoing biome initiatives.
- Good opportunity to know and contribute.
- To think about the possibility of having an intermediate Seminar (not just an annual one), this can help in the engagement of the actors.
- Made the Report available on the MMA website, in Portuguese and English, to allow access by society.

- Stakeholder participation may have been underutilized because of the lack of time, lack of contextualization about the importance / expectation of / about the Report. If they had this information they would be able to contribute more and better.

Annex 1 - Link List

Link List

FIP/FM Project

- Training movie with drones to monitor fires:
https://mmagovbr-my.sharepoint.com/:v:/g/personal/28696735153_mma_gov_br/EUg6X3fUIO9KnPt5J5EPTLgB1_n-roSiSfjdj7L7TiNh-g?e=1yk3Aa
- Risk of forest fires:
http://www.inpe.br/queimadas/portal/risco-de-fogo-meteorologia
- Points of Heat (1998-2017):
http://www.inpe.br/queimadas
- Fire Spreading Model:
http://csr.ufmg.br/fipcerrado/
- TerraBrasilis Platform:
www.dpi.inpe.br
- INPE products:
http://www.dpi.inpe.br/fipcerrado/, products tab.
- Modeling of changes in land use and biodiversity related to the modeling of fire spreading:
http://csr.ufmg.br/fipcerrado/
- Annual deforestation data for the years 2016 and 2017:
http://www.dpi.inpe.br/fipcerrado/

FIP/IFN Project

- Report of the IFN of the *Distrito Federal:*
http://www.florestal.gov.br/documentos/publicacoes/1635-relatorio-ifn-df/file
- National Forest Information System (SNIF)
www.florestal.gov.br/snif/

FIP/ABC Project

- Vídeo of ABC *Cerrado - Peritoró / Maranhão*
https://www.youtube.com/embed/6qgg7yaTk2w?feature=oembed
- Vídeo of ABC *Cerrado - Alto Alegre / Maranhão*
https://www.youtube.com/embed/IfHBnnZY4C4?feature=oembed
- Vídeo of ABC *Cerrado - Bacabal / Maranhão*
https://www.youtube.com/embed/vLEAqyD8ifo?feature=oembed

Annex 2 - List of Workshop Participants