FOREST INVESTMENT PROGRAM

BRAZIL INVESTMENT PLAN MONITORING AND REPORTING

Investment Plan Endorsement Date	**04-May-2012**
Lead MDB	**IBRD**
Other MDBs	**31-March-2023 IDB**
Reporting date	

Classification		Title	MDB Implementing Agency	Date of approval by FIP	World Bank approval date
Projects/Program	Government Projects	**FIP/ABC Project** Sustainable Production in Areas Previously Converted to Agricultural Use (based on the ABC Plan)	IBRD	29-Apr-2014	18-Jul-2014
		FIP CAR Project Environmental Regularization of Rural Lands in the Cerrado (based on the CAR)	IBRD	12-Jun-2014	21-Jul-2015
		FIP Coordination Project Brazil Investment Plan Coordination for the FIP	IBRD	12-Mar-2015	28-Nov-2017
		FIP/IFN Project Forest Information to Support Public and Private Sectors in Management Initiatives Focused on Conservation and Valorization of Forest Resources	IDB	29-Oct-2013	13-Dec-2013
		FIP Monitoring Project Development of Systems to Prevent Forest Fires and Monitor Vegetation Cover in the Brazilian Cerrado	IBRD	17-Jul-2015	28-Mar-2016
		FIP Rural Landscapes Project Integrated Landscape Management in the Cerrado Biome	IBRD	19-Jun-2018	29-Oct-2018
	Special window	**FIP/DGM Project** Dedicated Grant Mechanism for Indigenous Peoples and Traditional Local Communities	IBRD	28-Jun-2014	03-Mar-2015
	Private Sector	**FIP Macauba Project** Development of Silvopasture System and Value Chain based on Macauba	IDB	01-Jul-2017	26-07-2017

List of Acronyms

ABC Plan – Sector Plan for Climate Change Mitigation and Adaption for the Consolidation of a Low Carbon Economy in Agriculture
BIP – Brazil Investment Plan
CAA/NM – Center of Alternative Agriculture from the North of Minas
CAR – Rural Environmental Registry
CIF – Climate Investment Funds
CONAQ – National Coordination for the Articulation of Black Quilombola Rural Communities
CRA – Environmental Reserve Quotas
DETER – Real Time Deforestation Detection System
EAD – Distance Education
Embrapa – Brazilian Agricultural Research Corporation
FINEP – Funding Authority for Studies and Projects
FIP – Forest Investment Program
FIP Coordination Project – Coordination of the Brazil Investment Plan for the FIP
FIP ABC Project – Sustainable Production in Areas Previously Converted to Agricultural Use (based on the ABC Plan)
FIP CAR Project – Environmental Regularization of Rural Lands (based on the CAR)
FIP DGM Brazil Project – Dedicated Grant Mechanism for Indigenous Peoples and Traditional Local Communities
FIP IFN Project – Forest Information to Support the Public and Private Sectors in Managing Initiatives to Conserve and Value Forest Resources
FIP Macauba Project – Integrated Production of Sustainable Vegetable Oil with Family Farmers in the Cerrado
FIP Monitoring Project – Development of Systems to Prevent Forest Fires and Monitor Vegetation Cover in the Brazilian Cerrado
FIP Rural Landscapes Project – Integrated Landscape Management in the Cerrado Biome
FNDCT – Fund for Scientific and Technological Development
Funatura – Pro-Nature Foundation
GHG – Greenhouse Gases
GIZ – German International Cooperation Agency
IBGE – Brazilian Institute of Geography and Statistics
IBRD – International Bank for Reconstruction and Development
ICMBio – Chico Mendes Institute for Biodiversity Conservation
IDB – Inter-American Development Bank
IEF – State Institute of Forests
IEU – Indicator Evaluation Unit
IFN – National Forest Inventory
IICA – International Institute for Cooperation on Agriculture
Incra – National Institute for Colonization and Land Reform
Inocas – Soluções em Meio Ambiente S.A, implementing agency of the FIP Macauba Project
INPE – National Institute for Space Research
IPTC – Indigenous Peoples and Traditional Communities
ISA – Sustainability Indicators in Agroecosystems
LCA – Low Carbon Agriculture
MAPA – Brazilian Ministry of Agriculture, Livestock and Food Supply
MCTI – Ministry of Science, Technology and Innovation
MDB – Multilateral Development Bank
ME – Ministry of Economy
MIQCB – Interstate Movement of Babassu Coconut Breakers
MMA – Ministry of Environment

NEA – National Executing Agency
NSC – National Steering Committee
OEMA – State Environment Agency
PCTAFs – Traditional Peoples and Communities and Family Farmers
PES – Payment for Environmental Services
PIQCTs – Indigenous Peoples, Quilombolas and Traditional Communities
Planaveg – National Plan for the Recovery of Native Vegetation
PMU – Project Management Unit
PRA – Environmental Regularization Program
PRA – Environmental Regularization Program
RDA – Degraded Area Recovery Project
REDD+ – Reducing Emissions from Deforestation and Forest Degradation
SDI – Secretariat for Innovation, Sustainable Development, Irrigation and Cooperativism
Senar – National Service for Rural Learning
SFB – Brazilian Forest Service
Sicar – Rural Environmental Registry System
SisATeG – Technical and Managerial Assistance Management System
SNIF – National Forest Information System
Sobre – Brazilian Society for Ecological Restoration
SPSabc – sustainable systems, practices, products, and production processes
TCP – Technical Cooperation Project
TMA – Technical and Managerial Assistance
UF – State
UnB – University of Brasilia
UNFCCC – United Nations Framework Convention on Climate Change

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Brazil Investment Plan – Key results in 2022

This section highlights the main results and actions of the Brazil Investment Plan in 2022, by FIP project. The **FIP Rural Landscapes**, **FIP CAR**, **FIP Macauba** and **FIP Coordination** projects present results related their effective implementation, considering that all four projects were fully executed in 2022. Despite having ended in 2019, the **FIP ABC Cerrado** project continues to contribute by providing information to advance the ABC+ Plan and producing knowledge through scientific publications. **FIP DGM Brazil** and **FIP National Forest Inventory (IFN)** took steps to enter a second phase and **FIP Cerrado Monitoring** coordinated a project with the Funding Authority for Studies and Projects (Finep) to make sure that the main monitoring systems supported by FIP in the Cerrado region continue in place.

FIP Rural Landscapes

As regards the Brazil Investment Plan (BIP) for the Forest Investment Program (FIP), 2022 can be considered as the year when the FIP Rural Landscapes was upscaled. In addition to multiplying its results, the project advance taking care to strike a gender balance among its beneficiaries and execution partners, generating multiple co-benefits in income generation, environmental services and climate adaptation. The project was very important for the continuity of FIP Monitoring actions. Synergetic actions embedded in the projects' design made it possible to develop the TerraClass Cerrado for 2020, building on the FIP Monitoring's legacy and supported by the FIP Landscapes. The data collected now make it possible to identify and quantify the main activities developed in the region's anthropized areas. By incorporating data from 2020 to the mapping series initiated in 2018 it is also possible to analyze the land occupation dynamics between those periods.

Direct results

- 5,978 properties received Technical and Managerial Assistance (TMA), of which 1,438 received it in 2022.
- 3,897 farmers adopting landscape management use and planning instruments. Of these, 77% are male and 23% are female. This means an increase of 955 landowners over the previous year (238 female and 716 male landowners[1]).
- an area covering 520,847 hectares where land use planning for landscape management was adopted, which means an increase of 212,919 hectares over the previous year.
- 2,912 landowners (2,234 male and 678 female landowners) adopted low-carbon agricultural practices on their rural landholdings. In 2002, there were 2,201 new landowners in comparison with the previous year, with 1,675 men and 576 women.
- 72,642 hectares where low carbon emission (ABC) agricultural practices were adopted, which accounts for an increase of 60,337 hectares over the previous year.
- 992 landowners (742 male and 250 female landowners) adopted environmental conservation and restoration practices. There were 152 new landowners in 2002, with 115 men and 37 women.

[1] For one record data for gender is missing.

- 14,185[2] hectares with conservation and restoration practices in place in 2022.
- 13,642 landowners who received agricultural assets or services through various distance education (EaD) actions, in-person training sessions, field days or one-to-one assistance. Of these, 9,457 are male and 4,185 are female. This mean an addition of 12,101 beneficiaries in comparison with the previous year.
- 325 people employed in agricultural services and/or restoration practices as a result of the Project, which means an increase of 182 over the previous year.
- 2022 Prodes Cerrado Mapping published[3].
- 2022 Deter Cerrado daily Mapping published.
- 2020 TerraClass Cerrado mapping completed.
- TerraClass Portal updated.

Institutional strengthening of Brazilian government agencies

- Federal Government, Ministry of Agriculture, Livestock and Food Supply, Secretariat for Innovation, Sustainable Development, Irrigation and Cooperativism (MAPA/SDI)
    - MAPA technicians were enabled to participate in negotiation meetings associated to the United Nations Framework Convention on Climate Change (UNFCCC), such as the ministry's participation in COP27 (supporting the UNFCCC cross-sector project), thus boosting Brazil's leading role in the global climate agenda.
    - Consultants were hired to prepare State Action Plans for the Center-West, Southeast and Northeast regions.
    - A company was recruited to proofread and typeset the book on the 10the anniversary of the Low Carbon Agriculture Plan (ABC).
    - MAPA's implementation of the ABC Plan was supported, as was its evolution for 2020-2030.

Federal Government, Ministry of Agriculture, Livestock and Food Supply, Brazilian Forest Service (MAPA/SFB), for Environmental Regularization – Rural Environmental Registry (CAR)

- Support for the management of environmental regularization commitment agreements and institutional articulation with the 7 State Environment Agencies (OEMAs) that cover areas where the Project operates, to prioritize the CAR analysis for rural landholdings participating in the FIP Rural Landscapes, under the Environmental Regularization Module.
- Dynamized Analysis Module training course coordinated and overseen with the Minas Gerais State Forest Institute team.
- Environmental Module of the Technical and Managerial Assistance Management System (SisATeG) updated to include polygons when registering intervention areas.

[2] There was a change in the indicator accounting method in the intervention area. While the previous method considered the total area of the property, the new one considers the area where conservation and environmental restoration practices are planned to be adopted, registered in the SisATeG Environmental Module as "intervention area for conservation and restoration".

[3] Deter and Prodes data are published on the Terrabrasilis platform.

- Training activities for field technicians working in OEMAs in the states of Bahia, Minas Gerais, Tocantins and Maranhão.
- Thematic mapping (land cover, river basins, terrain and administrative easements) in the river basins serviced by the Project, to inform the CAR analyses done by the states.
- Technological evolution of the National Rural Environmental Registry System (Sicar) supported for the states to prepare the cartographic base maps under the dynamized analysis module.

- Federal Government, National Institute for Space Research (INPE) and Brazilian Agricultural Research Corporation (Embrapa), for Land Use and Land Cover Monitoring
  - Improvements in the qualification and refinement of TerraClass Cerrado mapping details by migrating analyses from Landsat satellite images (30m spatial resolution) to Sentinel images (10m spatial resolution) for the entire Cerrado, which made it possible to:
    - Develop classification automation processes based on time series analyses.
    - Identify and differentiate two classes of pastures (maps used to contain a single category for “pastures”, now there are two: pastures with predominantly herbaceous vegetation and pastures with predominantly shrub-tree vegetation).
    - Automatic generation of maps (previously manual) with more details for the classes "annual single cycle agriculture" and "more than one cycle agriculture".
  - Group of full-time professionals hired for TerraClass.
  - Negotiations with the Brazilian Institute of Geography and Statistics (IBGE) to expand TerraClass to all Brazilian biomes.
  - Updates and improvements in the WebAmbiente platform[4], one of the main tools for environmental regularization used to diagnose and plan the restoration of native vegetation.
  - Advances in developing WebPasto (under construction), a new interactive information system for recovery of degraded pastures, to start the platform's conceptual design.
  - Advances in landscape analysis, making it possible to compare accumulated burned areas in landholdings serviced by the Project with random control points.
  - Analysis of vegetation class, land use and land cover in areas serviced by the Project.
  - Analysis of landscape ecology metrics in areas serviced by the Project, including fragment size, total edge, total central area and cohesion (connectivity).

[4] WebAmbiente is an interactive system developed by Embrapa and the MMA Secretariat for Extractivism and Sustainable Rural Development that makes it possible to identify the most suitable conservation and restoration strategies and techniques for each area according to their characteristics and/or degradation stage. Available at: https://www.webambiente.cnptia.embrapa.br.

- Advances in establishing a method that integrates landscape analysis at the local or rural landholding scale (proposed by Embrapa Cerrados) and at the biome and water basin scale (in operation at INPE and Embrapa using TerraClass Cerrado), including:
    - Methodology advances to identify the predominant production system at the biome scale.
    - Definition of a new landscape analysis methodology at the local scale to observe how the adoption of agricultural practices and strategies to restore native vegetation are evolving in pasture lands.
    - Document proposing a "Methodology to Diagnose and Monitor Indicator Evaluation Units (IEUs[5])" in the Project.
    - Field data collection in indicator evaluation units, identifying degradation stages and comparing areas with and without project interventions.
    - Tests of the integrated landscape analysis methodology to be employed in indicator evaluation units, establishing approximately 40 locations as examples of the various strategies used to restore native vegetation, including economic and time-based analyses.
- Four full-time professionals recruited to work at Prodes Cerrado for a period of 12 months.
- Update of the 2000-2021 Prodes mask time series according to the new boundaries of the Cerrado, as redefined by IBGE in 2019.
- Renovation of the Embrapa Cerrados auditorium.

Management and provision

- Production of the Project's social and environmental compliance safeguard and monitoring plan.
- Provision of inputs (fertilizers, correctors, etc.) and equipment (scales, greenhouses, computers, etc.) with project funds for the Project's four Technological Reference Units.

Communication, academic production and publications

- Four short videos are being produced on the following subjects: The importance and influence of native vegetation remnants for the climate, rain formation, water resources and soil composition"; "What are landscapes?" "Forest products: what non-timber forest products can I sell?"; "Payment for environmental services and carbon sequestration".
- Production of communication pieces for events, such as: advertising banners, ribbons, folders and gifts.
- Press releases for articles about training courses and events for the SFB, Mapa and BIP/FIP websites.

[5] Indicator Evaluation Units are rural landholdings, or parts of them, selected for diagnosis and monitoring of indicators in intervention areas of the TMA, with strategies to recover or renew degraded pastures and restore the native vegetation in the Legal Reserves and/or Permanent Protected Areas.

- WhatsApp broadcast list created with contacts of male and female rural producers.
- Monthly newsletter created and distributed as of August. Throughout 2022, 4 newsletters were produced and sent to a mailing list of around 350 members, including managers, donors, field technicians, and civil society and government representatives at the local, state and federal levels.
- Eight panels were presented during the Brazilian Society for Ecological Restoration event (About) at the IV Brazilian Conference on Multifunctional Restoration and Climate Change, held in Vitória, ES, from 26 to 2/12/2022.
- Presentation of the Strategy to Restore the Cerrado's Native Vegetation at the Sketching Portfolio Workshop.

FIP CAR

The Technical Cooperation Project developed with the Inter-American Institute for Cooperation on Agriculture (IICA), foreseen under the Loan Agreement that considerably expanded the Project's operational capacity, enabling the execution of **11.27 million per year in 2022**, against a total amount of BRL 11.53 million executed directly by SFB from May 2017 to December 2022.

Direct results (Institutional strengthening of Brazilian government agencies)

- **Acquisition of thematic maps for the 11 states covering 3,647,973km2.** Thematic mappings form the basis for analyzing entries in the Rural Environmental Registry, thereby expediting the validation of environmental assets and liabilities and advancing environmental regularization. This validated information help to understand the dynamics of rural areas and plan activities to minimize deforestation events and encourage environmental restoration and conservation. Once the Georreferenced Information System contracted, the Project was able to map the features of the 11 states covered by the Project. This may actually be considered the most strategic result delivered by the Project, as it will help to eliminate one of the main bottlenecks for large scale regularization in Brazil: the CAR validation stage. Now that the maps are ready, the states and Federal District are equipped to use the dynamized analysis. The tool will help to upscale the analysis and validation of CAR registrations, which in turn paves the way for the rural landholding environmental regularization stage. The implementation of public policies, such as the National Plan for the Recovery of Native Vegetation (Planaveg and the ABC Plan), already signaled by the current government as priorities for sustainable rural development, will drive advances in the Environmental Regularization Program (PRA), pursuant to the Law for the Protection of Native Vegetation.

Direct results

- The Project helped to enter in the CAR the properties of **16,388 families** from TPC territories in the states of Bahia, Goiás, Maranhão, Minas Gerais and Piauí, **totaling 25,288 persons**. By promoting actions that facilitate access to the CAR registration of rural properties and territories of Traditional Peoples and Communities and Family Farmers (PCTAFs), the FIP CAR contributes to improving the legal frameworks for the protection of forest property rights and access for all forest stakeholders, including indigenous peoples, quilombola and traditional communities.

FIP Macauba

FIP Macauba reached its target of 2,000 hectares in the regeneration process with macauba planting and continues to prospect for new areas. Establishment of more than 100 vegetation corridors in Permanent Preservation Areas and Legal Reserves contributed to the sequestration of around 45 thousand tons of carbon. The Inocas seed germination laboratory[6] achieved a success rate above 80% in germination and is now able to meet the Project's requirements.

Direct results

- Almost 300 hectares planting Macaúba under agrosilvopastoral systems. A total of 2,300 hectares accumulated across the entire Project.
- 45 families of family farmers covered, in a total of 344 families throughout the Project
- Six areas belonging to medium-sized rural producers were leased.
- 32 extractive harvesters benefited from harvesting and selling Macauba nuts.

Training courses

- 100 former inmates by the Association for the Protection and Assistance to Convicts (APAC) trained in Macauba nut breaking and seed extraction, as well as sapling production[7].

Actions to upscale, continue and/or replicate the initiative

- Macauba plantations included in the São Paulo State Government Atlantic Rainforest Connection Program, an initiative that encourages small producers to reforest Atlantic Rainforest biome areas against payment for environmental services.
- Expansion and consolidation of the Inocas sapling production sector.
- Implementation of the third Inocas project in Northeast Pará, to plant macauba in 5,000 hectares by 2025.
- Advanced negotiations for new plantations with new investors.

FIP DGM Brazil

Activities developed by FIP DGM Brazil in 2022 had the purpose of ending Project activities, upscaling its impacts by joining the Global DGM network in learning and exchange programs and consolidating its continuity through FIP DGM Brazil - Phase 2.

Management and provision

- External financial audit for 2021 and first semester of 2022 (January to May) to check (on-line, due to the pandemic) the subprojects, inspecting facilities and analyzing financial executions.
- Appointment of four names for the Global Learning Scholarship 2022, with the appropriate letters of recommendation from the National Steering Committee (NSC) and supported by the National Executing Agency (NEA). Three scholarship holders

[6] Inocas is a private company, a startup, responsible for the FIP Macauba project, that performs it as a pilot action with the potential to be (and is being) replicated in other regions and other biomes in Brazil.

[7] After serving their sentence, some recovered convicts may be temporarily hired by Inocas to work in germination labs.

were selected: Wagner Katamy Ribeiro da Silva Krahô-Kanela, Antonio Fagno Braga da Silva and Laura Ferreira da Silva.

Meetings, technical gatherings and events

- Virtual meeting held in January on the overall project outlook, finalization and challenges to close it.
- Integrating Seminar held in April 2022 in Brasilia.
- Presentation of Phase 1 results, new composition of the NSC and approval of the DGM phase 2 proposal (Systematization of the Integrating Seminar).
- NSC meeting at the National Coordination of Quilombola Articulation (Conaq) held in Brasilia (May 2022) to examine the NSC statute and deliberate on DGM Phase 2.
- Participating in the Impact Assessment Workshop for FIP Projects in Brazil that was offered by the FIP Coordination project in Brasilia, DF.
- A knowledge exchange visit was made to DGM Mozambique with the participation of three NSC members.
- Participation in the 27th United Nations Climate Conference (COP 27) in November 2022 in Egypt, with the participation of representative Anália Tuxá.

Communication, academic production and publications

- The "Guia de Direitos de Povos do Cerrado", [Guide on the Rights of Cerrado Peoples] was published in print and digital format (see the FIP DGM Brazil website).
- The Environmental and Social Commitment Plan was prepared to implement the DGM/FIP/Brazil Project - Phase 2. To see the English version, go to the FIP DGM Brazil website.
- A publication was prepared on the "Capacitação do DGM no Brasil para Povos Indígenas, Comunidades Tradicionais e Quilombolas" [DGM Brasil training course for Indigenous Peoples, Traditional and Quilombola Communities] and is available on the FIP DGM Brazil website.
- There was also a publication about DGM – Brazil learnings and achievements "Aprendizados e Conquistas do DGM – Brazil" to be found on the FIP DGM Brazil website.
- Publication about Fagno Moreno (FIP DGM Brazil), Brazilian participant of theGlobal Learning Scholarship 2022, on theDGM Global website.
- An article and video were prepared about FIP DGM Brazil NSC member Lucely Pio and International Women's Month 2022. Both are available on the DGM Global website.
- Participation of Brazilians participating in theGlobal Learning Scholarship 2022 in the video "Vozes da Juventude Indígena" [Voices of Indigenous Youth], about the World Day of Indigenous Peoples. Available on the DGM Global channel on Youtube and its website.

Actions to upscale, continue and/or replicate the initiative

- Planning actions for FIP DGM - Phase 2.

FIP Cerrado Monitoring

Closed in December 2021, the FIP Cerrado Monitoring project produced essential information to understand how the Cerrado biome is occupied and expanded the Prodes/Deter initiatives that operate in the Amazon to the Cerrado with notorious success. Its results promoted and subsidized actions for environmental oversight and assessments of carbon emissions resulting from forest cover changes in the Cerrado region. The development of information systems on fire risks and GHG emissions estimates made it possible to understand the deforestation dynamics and count biome-wide carbon emissions more precisely, in addition to providing fundamental support for the Cerrado fire fighting and prevention agenda. FIP Monitoring actions continued In 2022 supported by the FIP Rural Landscapes project, whose actions are described in the subsection “Land Cover and Land Use Monitoring". Since this project is closed, there are no further execution reports for it in the next section. However, thanks to new actions planned in 2022 an official partnership was established for it to continue through a new project. During the next three years the Cerrado biome will be monitored with the support of the Biomas BR MCTI Project, with a planned investment of BRL 15 million in the Crosscutting Action of the National Scientific and Technological Development Fund (FNCDT) managed by Finep, a public entity that finances studies and projects under the Ministry of Science, Technology and Innovation (MCTI).

FIP National Forest Inventory (IFN)

Closed in December 2021, the FIP National Forest Inventory (IFN) produced, systematized and generated biophysical and socioenvironmental information on the Cerrado region. Among others it identified species, analyzed tree health, conducted physical-chemical soil analyses, quantified carbon, identified how the population used the land and forests, and mapped areas of high conservation value. The project included the discovery of new plant species, new species occurrence records and information on uses of timber and non-timber forest products by local peoples and populations of the Cerrado region. It also developed its own set of methodologies to guide analysis of the biophysical data collected. This collection contributed to improving the country's ability to inventory its natural and socioenvironmental resources and forms the basis for public and private sector policies and projects. Despite facing obstacles in its financial execution that lie outside of its sphere of governance, the project presented an excellent cost-benefit: the team collected, processed and analyzed more than 75 per cent of the planned biophysical and socioenvironmental data, covering 83 per cent of the Cerrado biome while using only 32 per cent of its budget. Since the project did not execute any activities of its own in 2022 it is not addressed in the following section. Negotiations to renew and continue the project advanced in 2022, leading to the consolidation of a new cooperation agreement signed with the Strategic Climate Fund (a CIF donor). Initiated in March 2022, the new project counts with a USD 9.7 million investment to conclude the Cerrado's inventory and expand its coverage to other biomes (Pampa, Caatinga, Mata Atlantica and Pantanal) during a period of 48 months.

FIP ABC Cerrado

The FIP ABC Cerrado Project, which is now closed, delivered positive impacts from its effectiveness in the case of Brazil’s public policies and knowledge production.

Institutional strengthening of Brazilian government agencies

- Publication of MAPA Ordinance No. 471, dated 10 August 2022, establishing the Sectoral Plan for Climate Change Adaptation and Low Carbon Agriculture - ABC+ for the period of 2020-2030.

Communication, academic production and publications

- Publication of two scientific articles on the ABC Plan (click on the article title to read it):
    - Souza, G. D. S.; Gomes, E. G.; Freitas, A. C. R. D.; Fernandes, P. C. C.; & Camboim, C. E. (2021). Assessing the impact of the ABC Cerrado project. Pesquisa Agropecuária Tropical, 51.
    - Bragança, A.; Newton, P.; Cohn, A.; Assunção, J.; Camboim, C.; de Faveri, D.; et al. (2022). Extension services can promote pasture restoration: Evidence from Brazil's low carbon agriculture plan. Proceedings of the National Academy of Sciences, 119(12), e2114913119.
    - Souza, P.; Oliveira, W.F.; Stussi, M.; Bragança, A. (2022). The Challenges in the adoption of sustainable practices by small ranchers: the case of ABC Cerrado. Climate Policy Initiative.

FIP Coordination

As its highlight, the Project presents the consolidated monitoring and evaluation of the 8 projects that form the BIP. The systematized information includes lessons learned and recommendations, providing a solid base for discussions and decision-making on the continuity or development of public policies, programs and projects capable of advancing the transformational change under the BIP/FIP. In particular in the Climate Investment Fund (CIF) Meeting to be held in Brasilia, Brazil, with a tentative date set for 26-30 June 2023.

Meetings, technical gatherings and events

- Weekly ordinary internal meetings to discuss progress of FIP Coordination actions, attended by representatives from the Ministry of Environment (MMA) and Pro-Nature Foundation (Funatura) and external guests, when necessary.
- Ad hoc meetings whenever requested, with the participation of representatives from other institutions on some occasions.
- Coordination Meeting in virtual format attended by eighteen participants, including project managers and representatives of the World Bank, MMA, Ministry of Agriculture (MAPA), Ministry of Economy (ME) and Ministry of Science and Technology (MCTI), held on 10 May 2022.
- Impact Assessment Workshop, with the participation of 80 people from ten Brazilian states and the Federal District. The meeting brought together representatives of the MMA, MCTI, ME, MAPA and World Bank; male and female managers, technicians and beneficiaries of the eight FIP projects in Brazil, including rural producers from FIP ABC Cerrado, FIP Rural Landscapes and FIP Macauba, technicians and analysts from various environmental agencies that use FIP Monitoring and FIP IFN data and systems, and representatives of indigenous peoples, traditional peoples and communities on behalf of FIP DGM Brazil.

- Communication and support materials prepared for the Impact Assessment Workshop (management of list of attendance and invites for close to 80 guests; recruitment of professional facilitators to conduct the group work; photographic records of the event; testimonials from ten beneficiaries of six different projects; graphic art planning and design for communication pieces; recruitment of professional mediators for group work.
- Coordination meeting in hybrid format (in-person and on-line) held on 13 October 2022 to plan the celebration of the BIP/FIP's 10th anniversary together with the other FIP project managers.
- Coordination meeting held on 8 December 2022, with the participation of FIP project managers and World Bank representatives, to communicate updates on project actions and provide feedback on the previous meeting and the celebratory event, present a synthesis of the evaluation process, present the main points of the performance evaluations and results of the projects and impact of the Program.
- Participation in Meetings of the FIP DGM Brazil National Steering Committee (NSC).
- Participation in the Brazil DGM – Phase 2 Seminar held in April 2022 in Brasilia. Phase 1 results and the new composition of the NSC were presented and the proposal to continue the project with a second phase was approved.

Management and provision

- Logistics support, issuance of airline tickets (round trip), and payment of lodging, per diem and travel expenses for participants of the BIP/FIP Impact Workshop.

Technical production: Monitoring and Evaluation

- Production of reports assessing the results of the eight FIP projects in Brazil. The document was shared with all project managers to support the implementation of actions, aiming to optimize their execution and achieve results.
- Preparation of a BIP Results and Impacts Evaluation Report for the FIP.
- Synthesis of the evaluation process of the BIP/FIP and the projects that form it, to be shared with managers, facilitating information sharing with the administration and public at large.
- Annual BIP/FIP M&R 2021 Reports, in Portuguese and English.

Communication, academic production and publications

- Creation a BIP/FIP Instagram profile to make it easier to share information with project managers and the public at large.
- Creation and management of a senior managers WhatsApp group with 37 members.
- Maintenance and constant updating of the BIP/FIP Coordination website fip.mma.gov.br, publishing news on the most impacting happenings in FIP Brazil projects.
- Production of communication pieces to support the BIP/FIP Impact Workshop; printed banners, windbanners and custom badges; BIP/FIP logo promotional giveaways for participants (ecobag, mug, notepad with pen and tote).
- Cerrado products kit sent to approximately 100 participants of the eight BIP/FIP projects (managers, technicians and beneficiaries) as a strategy to communicate with them and thank them for their contributions throughout the year.

Actions to upscale, continue and/or replicate the initiative

- Extension of the Project deadline from December 2022 to November 2024.

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

Country:	**Brazil**	**Level:**			**Investment Plan**	
Lead MDB:		**IBRD**				
Other implementing MDBs:		**IDB**				
Endorsed FIP funding (million USD):		**100.3**				
Co-financing (million USD):		**26.0**				
Reporting Period:		**From:**	**1-Jan-2022**		**To:**	**31-Dec-2022**
Table 1.1		**Unit**	**Reference Emissions Level/ baseline (if applicable)**	**Target 1[8] (Expected results after the financial closure of the last project/program under the Investment Plan)**	**Target 2[9] (Lifetime projection of expected results of projects/programs under the Investment Plan)**	**Reporting year Actual year (Cumulative until 31-Dec-2022)**
Total land area where sustainable land management and low carbon agriculture technologies were adopted because of the Investment Plan		ha	---	7,353,472		309,490,818.00
Area of landholdings registered in the Rural Environmental Registry because of the FIP/CAR Project in the 11 states covered by the Project		ha	---	6,653,472		267,321,984[10]
Area where low carbon agriculture technologies were adopted because of the FIP/ABC Project[11]		ha	---	300,000		378,513[12]
Area where low carbon agriculture practices were adopted because of the FIP/Rural Landscapes Project[13]		ha	---	87,500		72,642

[8] 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).

[9] Target 2: Target projected taking into account the lifetime of the results achieved through the implementation of the Investment Plan.

[10] The area registered in the CAR matches the area indicator where sustainable land management practices were put in place as a result of the Investment Plan. In 2022, the land area was smaller that for 2021 (309,490,818 ha). This shortfall is due to revisions and removals of registrations caused, for example, by duplicated and overlapping registered areas.

[11] There was no FIP/CAR financial execution in 2022.

[12] Considers the impact assessment forecasts, which includes the properties benefiting from technical and managerial assistance + training and properties receiving training only.

[13] During discussions to revise the Midterm Review the following change in the area indicator was agreed with the Project Management Unit: areas to be reported are those with direct interventions to conserve and restore the vegetation registered in the Technical and Managerial Assistance Management System (SISATeG). The total area of properties covered are now considered planning areas for the adoption of environmental conservation and restoration practices.

Area where conservation and restoration practices were put in place because of the FIP/Rural Landscapes Project[14]	ha	---	6,000		14,185

Type of forest(s)	Forest, savanna and pasture		
Area covered	ha	198,301,700[15]	Area corresponding to the Cerrado Biome (IBGE/2019)
BIP implementation period	years	10	Considers the approval date of the FIP/IFN Project (13-Dec-2013) and closure date of the FIP Rural Landscapes Project (29-Dec-2023).

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

REDD+ results will be reported by the Brazilian Government at the 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). The Cerrado Biome and other Brazilian biomes are in the phase of REDD+ readiness and demonstration activities. As a substitute for this indicator, the Brazilian Government will consider areas where sustainable land management practices were adopted because of the Investment Plan:

- Total area of landholdings registered in the Rural Environmental Registry (CAR) because of FIP CAR activities.
- Area with low carbon agriculture technologies adopted because of the FIP ABC Project.
- Area where low carbon agriculture practices were put in place because of the FIP Rural Landscapes Project, which includes areas where practices were adopted to manage and recover degraded pasture lands, and to recover and conserve native vegetation.

Provide a brief description of the interventions (context and objective)

- The FIP/CAR project aims to contribute to environmental regularization in rural landholdings of the Cerrado. The CAR is the first step towards a rural property's environmental regularization, which in turn provides landholders with access to rural credit. On a large scale, this information helps to inform public policies that contribute to GHG emissions reductions and sustainable land use, such as: Legal Reserves Quotas (CRAs), Environmental Regularization Program (PRA) and Payment for Environmental Services, among others.
- The FIP Cerrado/National Forest Inventory (IFN) project contributes to generating and managing information on forest resources. During its implementation period, forest information was collected and systematized and institutions were strengthened. Information was made available and its use encouraged to achieve results that can be used to inform proper management of the Cerrado biome and assist in mitigating greenhouse gas emissions. Large-scale data on plant and soil structure, biomass and carbon will make it possible to increase knowledge on the variability of carbon stocks in Brazilian forest ecosystems and reduce uncertainties regarding estimates of carbon stocks and emissions. Better estimates will have a strong impact on the commitments made under the United Nations Framework Convention on Climate Change (UNFCCC) for Measurement, Reporting and Verification (MRV) of GHG emissions. Project actions focus on gathering and processing national forest inventory data, among others by collecting and identifying exsiccates and botanical matter, and collecting and analyzing soils (e.g. carbon content). The project also includes activities to improve the National Forest Information System (SNIF) and to select and promote species for the bioeconomy.

[14] During discussions to revise the Midterm Review the following change in the area indicator was agreed with the Project Management Unit: areas to be reported are those with direct interventions to conserve and restore the vegetation registered in the Technical and Managerial Assistance Management System (SISATeG). The total area of properties covered are now considered planning areas for the adoption of environmental conservation and restoration practices.

[15] According to the IBGE publication Biomas e Sistema Costeiro-Marinho do Brasil (IBGE/2019) the updated area of the Cerrado biome corresponds to 198,301,700 hectares https://biblioteca.ibge.gov.br/visualizacao/livros/liv101676.pdf

- Information systems developed under the FIP Cerrado Monitoring project provide support for actions to reduce and prevent GHG emissions. The purpose aims to increase Brazil's institutional capacity to monitor deforestation (Component 1) and to provide information on forest fire risks, improving models to estimate fire ignition, fire spread routes and GHG emissions associated to forest fires in the Cerrado (Component 2).
- Under the FIP Landscapes project, investments are geared to recovering degraded pastures (100 thousand ha) and native vegetation (7 thousand ha). The method developed by Embrapa targets six levels of pasture degradation and involves technologies with different funding and labor requirements. The simplest method uses fertilization only. The the most complex one involves the complete removal of native grass, construction of terraces, limestone, fertilization, planting/harvesting corn/soybean crops in the first year, planting new grass for four years and planting trees to sell in about seven years. To rehabilitate the native Cerrado vegetation, Embrapa also has a roster of methods ranging from plain isolation of an area to planting saplings with fertilizers. All the methods developed by Embrapa are tested in test areas also used for visitation and training.

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?

FIP Rural Landscapes

In the FIP Rural Landscapes project part of the field activities consist of recovering degraded pastures and native vegetation. Both activities contribute to carbon capture, be it by increasing soil organic matter or by increasing plant biomass. In addition to increasing bovine yield, recovering pastures decreases the demand for new cleared lands and reduces deforestation. Recovered pastures also provide more food for livestock, making beef cattle grow faster. This results in less carbon emissions per animal, which reach culling size earlier. Milk production follows the same line, with recovered pastures increasing milk yield per cow, and hence producing less carbon emissions per liter. Low carbon emission (ABC) agricultural practices were adopted in 72,642 hectares, which accounts for an increase of 60,337 ha over the previous year. Most of this area underwent Degraded Pasture Recovery techniques (these were adopted by the Project, and they are key to promote actions to mitigate GHG emissions by increasing soil resilience to respond to the harmful effects of invasive pests and diseases that lead to the advanced degradation of natural resources due to inadequate management.

FIP CAR

The CAR is the first step towards a rural property's environmental regularization, and this is a legal requirement pursuant to the Brazilian Forest Code. This process includes several steps, the main ones being the registration of properties in the Rural Environmental Registry (CAR), validation of the information submitted and accession of landowners to the Environmental Regularization Program (PRA). Completion of the various steps of the environmental regularization process is the responsibility of states. In its objective of strengthening Brazil's capacity to review and approve registrations, a relevant contribution was made by the Project in 2022 by delivering the thematic mappings for the 11 states in the Cerrado, reaching an area of 3,647,973 km2. These maps form the basis for analyzing entries in the Rural Environmental Registry, thereby expediting the validation of environmental assets and liabilities. Once established the environmental liabilities of the properties, the landowners undertake and implement their restoration and compensation commitments based on the PRA. This will generate GHG removals directly through restoration in Legal Reserve areas (RL) and recovery of Permanent Preservation Areas (APP). In addition, environmental regularization is a necessary step for rural properties to become eligible for capitalized investments to support conservationist agricultural practices.

Regarding the registrations themselves, in 2022, the FIP CAR pushed ahead with the registration of more than 16,388 families (including 25,288 people) from territories of Traditional Peoples and Communities (TPCs). The Cerrado is home to over 80 indigenous ethnicities, in addition to 40 Quilombola territories, in addition to extractive harvesters, geraizeiros, vazanteiros, coconut breakers, riverside dwellers, artisanal fishers, barranqueiros, fundo e fecho de pasto, sertanejos, gypsies and so many others. By promoting actions that facilitate access to the CAR registration of rural properties and territories of TPCs and family farmers, the FIP CAR contributes to improving the legal frameworks for the protection of forest property rights and access for all forest stakeholders, including indigenous peoples, quilombola and traditional communities.

This action indirectly contributes to mitigating Brazil's emissions since traditional occupation modes provide barriers against deforestation and support forest regeneration, as shown by a recent Brazilian study (Oviedo and Doblas, 2022[16]).

The information validated in the CAR help to understand the dynamics of rural areas and plan activities to minimize deforestation events (the primary source of GHG emissions in the country) and encourage environmental restoration and conservation. In addition to the PRA, the FIP CAR is a prerequisite for accessing Legal Reserve Quotas (CRAs), Payments for Environmental Services (PES) and other public policies related to the environment that focus on reducing illegal deforestation, conserving natural resource and managing forest fragments appropriately, thereby reducing GHG emissions.

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

FIP Rural Landscapes

In the FIP Rural Landscapes project the main challenges for adoption of environmental conservation and restoration practices were: convincing farmers of the importance and benefits of conservation and restoration, their low investment capacity, the low economic yield of their activity, the fact that farmers are wary, the difficulty in raising their awareness, cultural issues, low schooling and ignorance of environmental law.

Farmers are mainly concerned with the low productivity of their pastures. If on the one hand this favors the uptake of practices to manage and recover their pastures, on the other interest in restoration and environmental conservation is low, taking a secondary position. As such, the main challenge is convincing farmers conservation and restoration will have beneficial effects on their landholdings that in the middle and long terms—that they will be investing, not spending their money. One powerful argument lies in the possibility of increasing the amount of water available, enhancing biodiversity conservation in their lands and making them environmentally compliant.

The positive results achieved by recovering degraded areas—which made them considerably more productive (and increased animal stocking)—showed farmers that it is not necessary for them to produce livestock in conservation and preservation areas. This has contributed to conservation and preservation actions.

FIP CAR

In FIP CAR, the main challenges are associated with the continuity of public policies after the registration phase of the Rural Environmental Registry (CAR), which is the first phase. Since the data is entered by the landowners themselves, the CAR needs to be revised during a validation stage by state agencies. This has been one of the main bottlenecks for large-scale regularization to progress in Brazil, as pointed out in the previous report (M&R 2021). Back then, implementation of a streamlined analysis was just starting in some states. In 2022, FIP CAR delivered thematic maps to the 11 states, in a total area of 3,647,973km2. Now that their maps are ready, the states and Federal District can use the dynamized analysis tool to upscale the analysis and validation of CAR registrations, thereby paving the way for the rural landholding environmental regularization stage. In the next step in the Environmental Regularization Program (PRA), landowners/landholders sign a commitment term regarding the recovery of liabilities identified. Support activities then begin for the environmental regularization of properties with environmental liabilities through plans for the recovery of degraded areas.

Another major challenge facing the FIP/CAR project is associated with the operationalization of the Project according to the rules of the General Federal Budget, considering the impacts of the Budgetary Ceiling. Opportunities were associated with measures for operational progress, such as expansion of the budget to accommodate the Project's funds, execution of an International Technical Cooperation Project between SFB and the Inter-American Institute for Cooperation on Agriculture (IICA), which significantly expanded operational capacity to implement the activities and, as a result, maximized results

A third challenge is associated with information about the procedures, objectives and benefits of registration. The investment in communications with the production of informative videos and other pieces raised the profile of the link between environmental regularization of properties and its potential participation in public policies to support rural development.

[16] Oviedo, Antonio Francisco Perrone; Doblas, Juan. Forests need people. São Paulo, Brazil, 2022.

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 stock 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, benefiting populations, ecosystems, and other relevant information.**

FIP Rural Landscapes

The FIP Rural Landscapes project aims to strengthen the implementation of environmental conservation, recovery/reconstitution practices and low carbon agriculture in selected basins of the Cerrado. The project is divided into three lines of implementation. The first one, already completed, consisted of selecting the priority river basins. The second one involves systematizing information about the recovery of degraded areas, providing training and technical and managerial assistance (TMA) to over 4000 rural landowners. The third concerns an assessment of how the landscape is changing under the project, monitoring land use change using the TerraClass system.

Project actions promote sustainable practices to reduce greenhouse gas emissions (GHG) and increase carbon stocks through low carbon agriculture (ABC) practices and technologies, recovery of degraded pastures (Figure 1 and Figure 2) and recovery of native vegetation in degraded areas of Legal Reserves and Permanent Protection Areas.

Figure 1 – Pasture land in Minas Gerais recovered by the Rural Landscapes project.

Figure 2– land in Mato Grosso reformed by the Rural Landscapes project.

Change in the area indicator accounting methodology

Following a series of discussions fostered by the Project Management Unit (PMU) on how to qualify reporting on project area indicators, it was agreed that reporting will cover direct intervention areas registered in the Technical and Managerial Assistance Management System (SISATeG). The total area of properties covered are now considered planning areas for the adoption of environmental conservation and restoration practices.

Technical and Managerial Assistance

The Brazilian Agricultural Research Corporation (Embrapa) developed technology packs to manage and recover pastures, and to recover degraded areas in RLs and APPs and has trained extentionists to provide Technical and Managerial Assistance (TMA) in properties covered by the project (Figure 3 and Figure 4).

In 2022, 1,438 new properties received TMA, in a total of 5,978 over the course of the entire Project (Table 1).

Table 1 – Properties that received Technical and Managerial Assistance, annual registrations and Project total.

State	2020	2021	2022	Grand total
Bahia	406	660	317	1,383
Goiás	39	145	81	265
Maranhão	255	127	87	469
Minas Gerais	1,051	808	783	2,642
Mato Grosso do Sul	112	173	4	289
Mato Grosso	33	82	16	131
Tocantins	116	533	150	799
Total	**2,012**	**2,528**	**1,438**	**5,978**

Figure 3 – Use of management tools among rural producers assisted by the Rural Landscapes project in the center-west basin of Tocantins.

Figure 4 – Supervised visits in properties assisted by the Rural Landscapes project in the center-west basin of Tocantins.

Adoption of low carbon agriculture technologies

Sustainable systems, practices, products, and production processes (SPSabc) adopted in FIP Rural Landscapes properties are aligned with the ABC Cerrado Plan and include the following reference strategies: recovery of degraded pastures, no-till farming, integrated crop-livestock-forest system, agroforestry systems, planted forests, biological nitrogen fixation, adaptation to climate change and animal waste treatment. A survey conducted in 6,605 intervention areas (registered by June 2022) showed a predominance of recovering degraded pastures in 81% of the total (

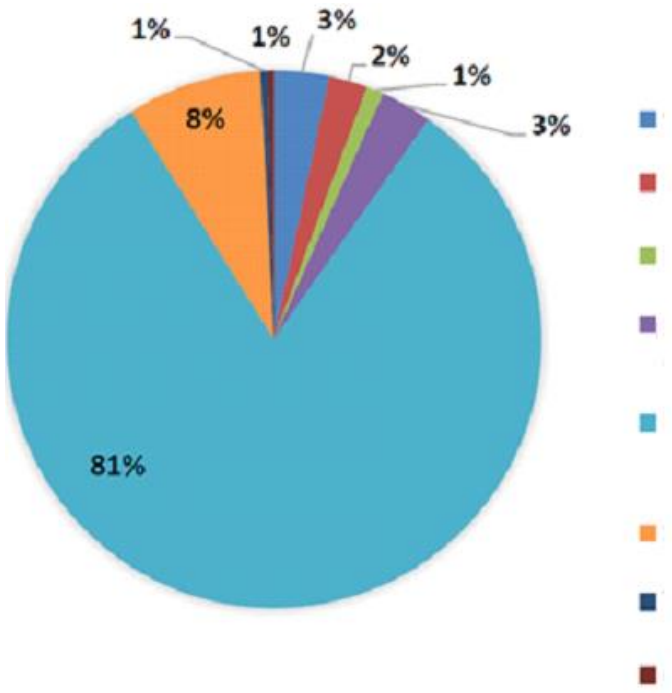


Figure 5).

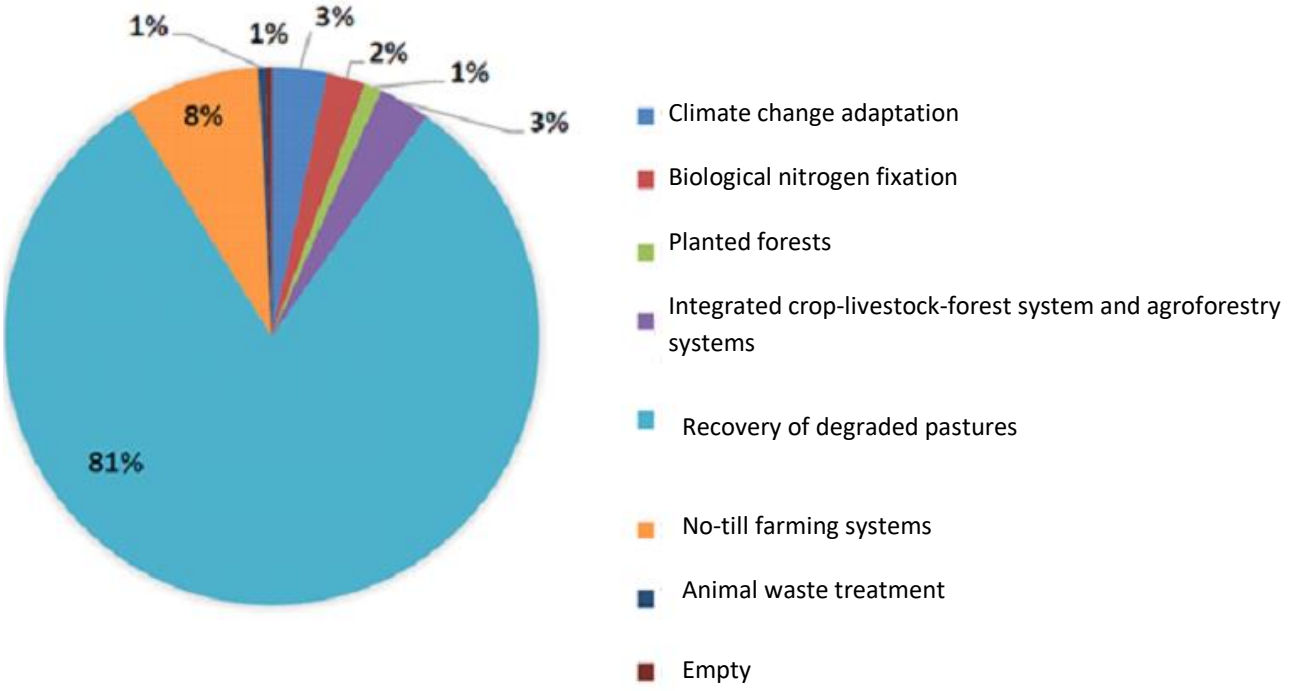


Figure 5 – Adoption of sustainable systems, practices, products, and production processes (SPSabc) by reference technology in FIP Rural Landscapes intervention areas. The "empty" class refers to fields not yet filled in by field technicians responsible for registering intervention areas.

Techniques used to manage and recover pastures include: soil analysis, soil correction and fertilization, terracing, contour lines, switching forage and introducing new cultivars, increasing the animal stocking rate, adjustments according to support capacity, control of pasture entrance and exit height, rotational grazing system, dividing pastures into paddocks, pasture maintenance and cultural practices, weed control, crop-livestock integration, no-till farming and animal forage alternatives such as palm trees (Figure 6) and preserving grass as silage to feed animals in the dry season (Figure 7).

Figure 6 – Palm trees planted to supplement animal feed in properties covered by the Rural Landscapes project.

Figure 7 – elephant grass silage (Pennisetum purpureumSchumach) to feed animal and sustain animals during the dry season. Elephant grass grown on a recovering degraded pasture land in a property covered by the Rural Landscapes project in Brejolândia, Bahia.

From project inception to December 2022, 34,897 landowners/farmers had put in place land use and planning instruments for landscape management. This result means an addition of 955 beneficiaries in comparison with the previous year. The area under land use planning for landscape management totaled 520,847 ha as of December 2022, which means an addition of 212,919 ha over the previous year.

As of December 2022, 2,912 farmers had adopted ABC technologies, which accounts for an increase of 2,201 farmers over the previous year. In 2022, the land area in which ABC technologies were effectively adopted totaled 72,642 ha, which means an increase of 60,337 ha in comparison with 2021.

Conservation and reconstitution of degraded areas

As of December 2022, the area under conservation and restoration practices totaled 14,185 ha. The project advanced conservation and reconstitution of Permanent Preservation Areas (APPs) (Figure 8 and Figure 9) and Legal Reserves (RLs) in the landholdings covered. It raised awareness and increased the adoption of minimum environmental conservation practices by farmers, and field teams provided training and continued instruction. Actions included: adjusting animal management and restricting animal access in Permanent Preservation Areas and Legal Reserves with fencing, identifying and protecting springs (removing wastes, cleaning around the springs and fencing them), producing and planting saplings in Legal Reserves and Permanent Preservation Areas, conserving and protecting the soil (erosion control), deploying firebreaks and installing watering troughs (to prevent animals from entering the APPs).

Figure 8 – Permanent Protection Area conserved in a rural landholding supported by the Rural Landscapes project in the center-west water basin of Tocantins.

Figure 9 – Permanent Preservation Areas fenced in properties covered by the project in Uberaba, Minas Gerais.

Environmental Regularization

Thematic mapping in river basins covered by the project

Thematic mapping conducted on land cover, river basins, relief and administrative easements of river basins covered by the project in the states of Tocantins, Bahia, Minas Gerais, Goiás, Maranhão and Mato Grosso do Sul, with the following specifications:

- 2021 land use and land cover classification (scale 1:50,000);
- mapping of administrative easements (scale 1:25,000);
- river basins and associated APP mapping (scale 1:25,000);
- terrain and associated APP mapping (scale 1:50,000).

These mappings correspond to the features/classes referred to in the Law 12.651/2012 on the Protection of Native Forests and will inform the states' analyses of registrations, particularly by identifying consolidated uses (areas converted before 22-Sep-2008) and anthropized areas (converted after 22-Sep-2008), thus forming the reference base of the National Environmental Registry Information System (Sicar).

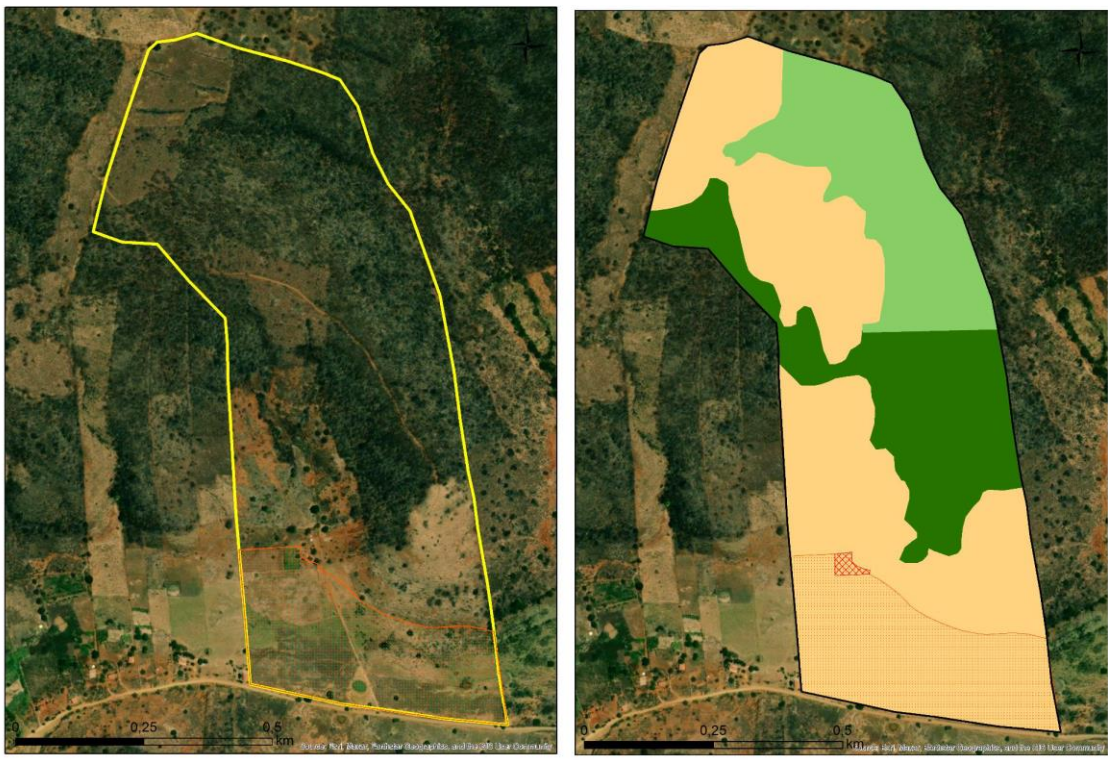
Registrations and corrections in the Rural Environmental Registry

In 2022 technicians visited 584 rural landholdings to register them in the Rural Environmental Registry (Figure 10 and Figure 11 –), 189 of which refused the service. 395 visits were completed successfully, 47 of them resulting in new registrations and 348 in CAR corrections (Table 2 –). The focus of technical visits was the river basins of Brejolândia, Bahia (Figure 12), and the Triangulo Mineiro region, Minas Gerais (Figure 12Figural 13).

Table 2 – Registrations and corrections in the Rural Environmental Registry (CAR) in landholdings serviced by the Project in Bahia and Minas Gerais in 2022.

State	Completed successfully			Completed unsuccessfully (technical assistance refused)	Total properties visited
	Registrations	Corrections	Total		
Bahia	12	153	165	36	201
Minas	35	195	230	153	383
Total	**47**	**348**	**395**	**189**	**584**

Figure 10 – Technical visits to register or correct CAR registrations in properties covered by the FIP Rural Landscapes project in 2022.



Productive area with intervention (IA)

Productive area where interventions are possible

Legal Reserve (RL)

Recovery of Native Vegetation (RVN)

Consolidated area

Boundary of rural landholding

Figure 11 – Example of a CAR registration in a property located in the basin of Brejolândia. Data declared/not corrected. A. Property perimeter. B. CAR Features. C. Photo of productive area.

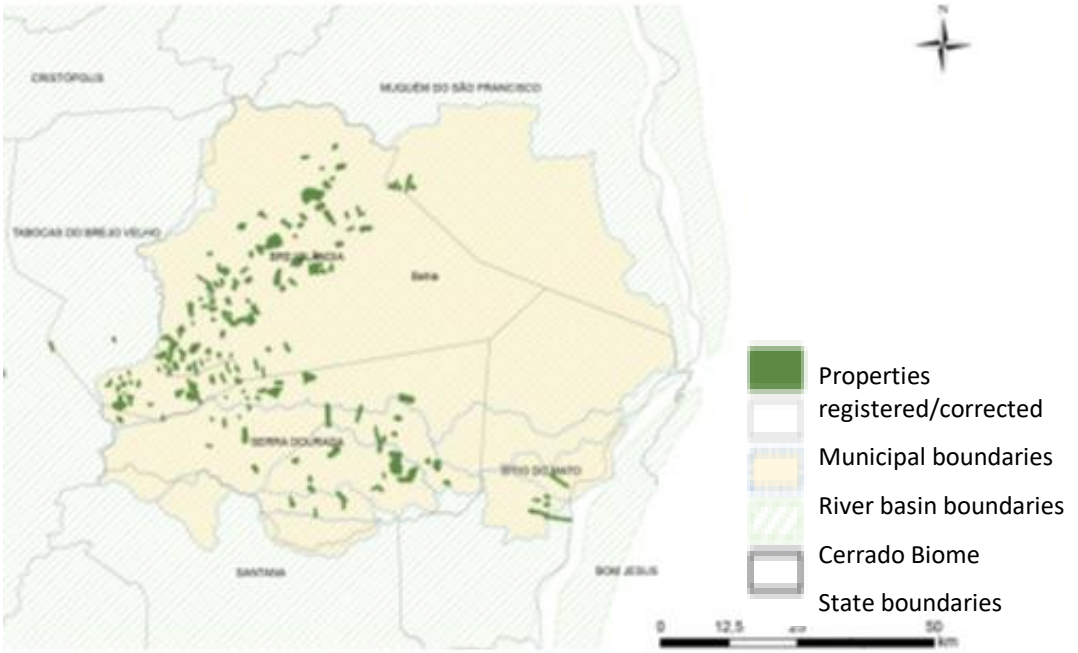
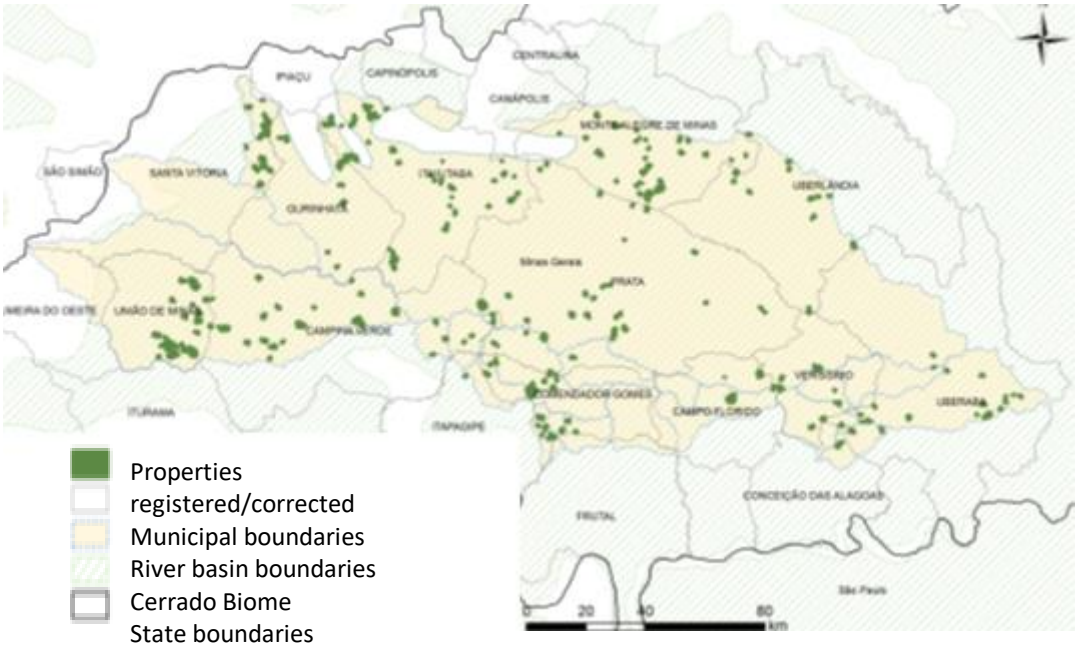


Figure 12 – Rural properties that received assistance to register or correct their registrations in the Rural Environmental Registry (CAR) in the river basin located in the region of Brejolândia, Bahia, in 2022.



Figural 13 – Rural properties that received assistance to register or correct their registrations in the Rural Environmental Registry (CAR) in the river basin located in Triangulo Mineiro, Minas Gerais, in 2022.

Institutional coordination with the states for the environmental regularization agenda

In relation to institutional coordination with the states to advance the environmental regularization agenda, continuous dialogs were held with the states of Bahia, Minas Gerais and Tocantins to align understandings and guidelines among project partners involved in the work front, preparing field actions and expediting analysis of CAR registrations/corrections.

In view of the COVID Omicron variant peak from January to March 2022, several training activities and workshops that had been planned for the first semester were postponed.

FIP CAR

As of December 2022, the area of properties registered in the Rural Environmental Registry as a result of the Project in the 11 states covered was 267,321,984 ha. Key achievements were in the sense of improving the capacity of the state environmental agencies (OEMAs) during the registration review and validation stage, with training and technological advances, which include thematic mapping of the 11 states, in a total of more than 3,647,973 km2 covered.

The actions by FIP CAR to recover the actual degraded areas did not started. These are planned under the Project – after the registration validation phase, where the environmental assets and liabilities in the properties are inventoried. Properties with environmental liabilities will now receive assistance in developing recovery plans for degraded areas.

FIP DGM Brazil (1.1b)

The goals of and DGM Brazil (Phase 1) included improving the livelihoods of its target audience, land use and and sustainable forest management in their territories. With regard to the area where sustainable land management practices were put in place, the contribution of FIP DGM Brazil was 659 ha of area recovered and under sustainable management of natural resources, which includes the protection of 73 springs and production of 38,503 seedlings.

FIP Macauba (1.1b)

FIP Macauba completed around 2,300 ha of macauba planted in agrosilvopastoral systems in partnership with family farmers with the goal of regenerating degraded pastures. The Project also contributed to the production of oil, animal feed, food, carbon credits, etc.

TABLE FIP 1.2 - THEME 1.2: LIVELIHOODS AND CO-BENEFITS

Country:	Brazil		**Level:**	Investment Plan	
Country:	Brazil		**Level:**	Project	
Implementing MDB:	IBRD and IDB		**Project Title:**		
Amount of FIP funding (million USD):	100.3				
Co-financing (million USD):	26.0				
Reporting date:	**From:**	1-Jan-2022	**To:**	31-Dec-2022	

Table 1.2[a] **(Include project/program level data in this table)**		**Baseline**	**Target at the time of MDB approval**	**Reporting year** **Actual year** **(Cumulative until 31-Dec-2022)**	**Additional Information**
Use livelihood co-benefit indicators identified in your project/program. Use only the number of beneficiaries or households as your metric. If households are used, indicate the average number of people per household and the source for that information. For each indicator disaggregate the number of beneficiaries by gender.					
1. Income Indicator:	Total	--	--	--	
	Men	--	--	--	
	Women	--	--	--	
2. Employment (PSG)	**Total**		230	325	The cumulative amount considers people with active and inactive contracts (i.e., closed contracts) as of December 2022.
	Men		172	225	
	Women		58 (25% of total)	100	
3. Entrepreneurship Indicator:	Total	--	--	--	
	Men	--	--	--	
	Women	--	--	--	

4. Access to finance: Indicator:	Total	--	--	--	
	Men	--	--	--	
	Women	--	--	--	
5. Education (CAR1) + (PSG1)	Total	--	8,276	727	Considers the sum of project indicators: **CAR1 + PSG1**
	Men	--		417	
	Women	--		310	
5. Education (CAR1)	Total	--	200	451	FIP CAR considers 451 professionals from state environmental agencies (OEMAs) trained to use the National System for Rural Environmental Registry and to review and validate registrations.
	Men	--	--	241	
	Women	--	--	210	
5. Education (PSG1)	Total	--	--	276	FIP Rural Landscapes considers training technicians and field supervisors hired by the National Service for Rural Learning.
	Men	--	--	206	
	Women	--	--	70	
6. Health	Total	--	--	--	
Indicator:	Men	--	--	--	
	Women	--	--	--	
7. Other relevant benefits Indicator: Number of rural landholdings registered in the CAR in municipalities selected by 2022 (CAR)	Total	--	160,612	3,617,191*	FIP CAR: data extracted from the CAR database, with 05-Jan-2023 as the cut-off date. *This number includes CAR registrations effected under the FIP Rural Landscapes project.
8. Other relevant benefits Indicator: farmers that received Technical and Managerial Assistance (TMA) visits. (PSG)	Total	--	4,000	5,978	Rural Landscapes

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

Under the FIP Rural Landscapes project 5,978 direct beneficiaries received technical and managerial assistance (TMA) by 2022. This coverage corresponds to an area of 723,952.6 hectares, of which 520,847.7 hectares are under land use planning and landscape management.

In 2022, 1,438 properties were covered by the Project. TMA contributes to improving farming systems in the landholdings covered. It ensures environmental gains, improves management processes (administrative and financial) and has a direct impact on the productivity, income and quality of life of rural producers.

3,617,191 smallholders farms were registered under the FIP CAR. These are small rural properties (with areas of up to 4 fiscal modules), families from traditional peoples and communities (TPC) and agrarian reform settlements in the 11 states cumulatively covered by the project. The data were extracted from the CAR database using 05-Jan-2023 as the cut-off date. There are 489,197 more registrations than reported in the previous year (3,127,994). In 2022 there were 16,388 families from TPC territories in the states of Bahia, Goiás, Maranhão, Minas Gerais and Piauí, totaling 25,288 persons. In addition, 451 professionals from state environmental agencies (OEMAs) were trained to use the Sicar and analyze and validate registrations. 210 of them are women.

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

FIP Rural Landscapes:

One of the main challenges regarding the adoption of low-carbon agriculture (ABC) practices was resistance by farmers, which due to cultural factors and traditional values are wary of using new technologies. Opportunities should be found to demonstrate positive results to farmers (such as how restoring pastures increases yields) and urge them to share this information with their peers and neighbors. Showing cases of success is important to increase local buy-in and overcome resistance, as reported by field technicians.

> "... the best way to solve this situation would be to show farmers the results they can obtain through practices that are mostly quite simple, but when done correctly can generate visible and impacting results." Wagner Frota, Project field technician in the state of Bahia.
>
> "Our solution was to show them how to do things correctly. After a year some of the farmers were still afraid to follow our recommendations, but some of them decided to try when they saw the results of other farmers we were helping through soil analysis and correct management interventions. We also convinced them to begin with small well-managed areas." Pilar Alves Dias, project field technician in the state of Minas Gerais.

Other challenges include low investment capacity due to high input costs, difficulties accessing credit and operational challenges such as lack of specialized labor and machinery for when activities are planned, as reported by a field technician:

> "Having machines available for the period when we have activities planned. We can either rent machinery by the hour or borrow it from the local government. We solved the problem by constantly looking for other alternative machines in the region, or by waiting for town hall machines to be available. As to lessons to share with farmers, I would say to plan in advance what machines will be needed for the entire operation. And whenever possible to purchase at least part of the machinery and agricultural inputs, either alone or with partners." Milene Rodrigues Dias, project field technician in the state of Mato Grosso.

One of the main constraints for vegetation conservation and restoration practices to be adopted in Legal Reserves and Permanent Preservation Areas is that farmers are not very interested in environmental conservation and restoration because they do not consider them profitable. As such, the main challenge is convincing farmers that conservation and restoration will have beneficial effects on their landholdings in the middle and long terms—that they will be investing,

not spending their money. One powerful argument lies in the possibility of increasing the amount of water available, enhancing biodiversity conservation in their lands and making them environmentally compliant. Using forest species of economic interest is also fundamental to encourage restoration, especially if there is a consolidated production chain to sell the products.

Another significant challenge concerns evasion by farmers participating in the project. The entry and exit dynamics of project beneficiaries during the years when TMA was provided showed more relative evasion in the first two years om relation to entries (35% in 2022 and 29% in 2021). In 2022, on the other hand, evasion remained low in the first semester (17%). This fluctuation can be attributed to different factors ranging from COVID-19 pandemic effects to a greater consolidation and maturity of the project and its concepts in the areas covered.

FIP CAR:

2022 came to an end with the project having overcome an important bottleneck to the public policy's implementation thanks to the thematic maps delivered using the GIS system contracted. Now that the maps are ready, the states and Federal District are equipped to use the dynamized analysis. Improved dynamized analysis together with institutional strengthening of the competent state agencies and Brazilian Forest Service tend to expedite environmental registration analyses and hence to environmental regularization in the country.

As mentioned in Section 1.1, the FIP CAR's main challenge consists of operating the project in the face of budget constraints imposed by the federal government's spending cap. A number of public administration procedures were not completed before the project deadline of 31-Dec-2022, making some planned actions unfeasible.

FIP FORM 1.2 - THEME 1.2: LIVELIHOODS AND 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 this 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:

FIP Rural Landscapes

Direct beneficiaries are a total of 5,978 rural producers receiving technical and managerial assistance (TMA), of which 1,438 received it in 2022. These farmers adopted low-carbon agriculture (ABC) and/or conservation/restoration practices, and/or received some type of planning assistance for landscape management, and also those who received only a TMA visit in their properties. Among those who received TMA, there was an increase of 955 landowners over the previous year (23% of whom were women) who adopted land use planning tools for landscape management, and 2,201 who adopted ABC technologies (26% of whom were women). A total of 992 landowners adopted environmental conservation and restoration practices.

The indirect beneficiaries are 13,642 people who received agricultural assets or services through various distance education (EaD) actions, in-person training sessions, field days and assistance to rural producers (women accounted for 31%), which meant an increase of 12,101 over the previous year. During these events participants learned techniques to restore degraded pastures and native vegetation remnants. They also answered questions about agricultural production and environmental issues with state and federal institutions. Among these beneficiaries, 395 farmers in the states of Bahia and Minas Gerais were assisted in registering and revising their entries in the Rural Environmental Registry (CAR) (53 females and 342 males) in 2022.

In December 2022, the project had 164 employees (30% females), including field technicians and supervisors hired by the National Service for Rural Learning (Senar) and professionals from other partner institutions (Table 3). The cumulative figures can be found on Table 4.

Table 3 – Cumulative figure and gender of people hired by FIP Rural Landscapes and number of people with active contracts as of December 2022.

Institution/ Number of people	**With an active contract in December 2022**					**With an active contract + closed contract (inactive)**				
	F	%	M	%	Total	F	%	M	%	Total
Senar	29	22	100	78	**129**	70	25	206	75	**276**
GIZ	3	60	2	40	**5**	3	50	3	50	**6**
SFB	4	67	2	33	**6**	4	71	2	29	**6**
SDI	4	100	0	0	**4**	4	57	3	43	**7**
Embrapa Cerrados	4	67	2	33	**6**	5	71	2	29	**7**
Embrapa Digital Agriculture	2	50	2	50	**4**	5	71	2	29	**7**
INPE	4	40	6	60	**10**	9	56	7	44	**16**
TOTAL	50	30	114	70	**164**	100	31	225	69	**325**

Note: F = females, M = males, GIZ = German International Cooperation Agency, SFB = Brazilian Forest Service, SDI = Secretariat for Innovation, Sustainable Development, Irrigation and Cooperativism, Embrapa = Brazilian Agricultural Research Corporation

Table 4 – FIP Rural Landscapes indicators, final targets and accumulated results by November 2022.

Benefit description	Number of beneficiaries				Final target	
	Men	Women	Total			Description
Number of farmers that received TMA			5,978*			
Number of farmers that have adopted landscape management use and planning instruments	3,003	893	3,897		4,200	Properties applying agroecosystem sustainability indicators (ISA) by the fourth visit or planning by the sixth visit or having more than five visits (which would place them in the planning/Sustainability Indicator in Agroecosystems).
Number of farmers that have adopted sustainable systems, practices, products, and production processes (SPSabc)	2,234	678	2,912		4,000	Number of farmers that have adopted any number of SPSabc (restoration of degraded pastures, no till farming, Integrated crop-livestock-forest system and agroforestry systems and climate change adaptation techniques).
Number of farmers that have adopted practices for conservation and reconstitution of degraded areas.	742	250	992		3,500	Farmers that have adopted at least one conservation and restoration practice (e.g., spring fencing, natural regeneration, assisted regeneration, terracing, etc.).
Number of farmers that received agricultural assets or services	4,185	9,457	13,642		6,919	The agricultural assets or services provided by the Project can be field days, lectures, in-person or on-line training (Distance Education), registration and revision of the Rural Environmental Registry entries.
Number of farmers assisted in CAR registration or correction.	342	53	395			This number was already computed under the previous indicator – agricultural assets/services.
Number of people employed in agricultural services and/or restoration practices as a result of the Project	100	225	325		230	The cumulative amount considers people with both active and inactive contracts (i.e. Closed contracts) as of December 2022 from the following institutions: National Service for Rural Learning (276); German Agency for International Cooperation (6); Brazilian Forestry Service (6); Secretariat for Innovation, Sustainable Development, Irrigation and Cooperativism (7); Brazilian Agricultural Research Corporation (Embrapa) Cerrados (7); Embrapa Digital (7); INPE (16). Professionals from partner institutions hired for various roles who also perform Project tasks are not included here.

Note: *The number of farmers that received Technical and Managerial Assistance (TMA) includes those that applied landscape management planning and use instruments, adopted SPSabc, or adopted practices for conservation and reconstitution of degraded areas. Since one farmer can apply more than one technique, the total does not correspond to the total number of farmers.

FIP CAR

The FIP CAR beneficiaries are 3,617,191 small rural landowners, including landowners with up to 4 fiscal modules, families from Traditional Peoples and Communities (TPC) and families from agrarian reform settlements. In 2022 there were 489,197 new registrations, 16,388 from traditional peoples and communities (Figure 14).

Figure 14 – Beneficiary from the Buriti do Meio Quilombola community in Minas Gerais holding his CAR registration receipt. Photo: Evie Negro / SFB

As regards training and capacity-building, CAR Dynamized Analysis Module courses were offered in 16 states. Refresher courses were also offered to analysis teams in 4 states. In all, 451 professionals from State Environment Agencies (OEMAs) were trained to use the National System for Rural Environmental Registry (Sicar) to review and validate registrations, 210 of them being women.

2. What measures were taken to provide livelihood co-benefits (in cash or in kind) to the beneficiaries?

FIP Rural Landscapes

Actions include training and technical assistance, overseeing use of technologies taught and deployed in the properties. Most technologies applied have to do with restoring degraded pastures and native vegetation remnants, but also with improving administrative and financial management of the properties. Also important is the support provided for environmental regularization through CAR registration/correction.

FIP CAR

Actions included CAR registrations and corrections for small farmers and traditional peoples and communities. There was also training for OEMA professionals.

3. Why did it make a difference?

FIP Rural Landscapes

TMA provided under the FIP Rural Landscapes project fostered and increase in agricultural production associated to environmental gains. In addition, Improvements in production and administrative and financial management systems in rural landholding had direct impacts on farmers' productivity and income.

FIP CAR

Registering in the CAR is the first step for environmental regularization and a pre-requisite to access agricultural credit and other rural development policies. With a CAR receipt in hand, beneficiaries can participate in public policies that encourage sustainable development. They can also provide evidence of their rural activity to access agricultural loans. Having attested that their products come from environmentally compliant properties they can also obtain incentives to process their raw materials and add value to their products. By presenting their CAR certificate, women such as coconut breakers—who had thus far been unable to provide evidence of their activity—can access rights like maternity leave.

4. Will benefits last after the Project is completed? Please explain.

FIP Rural Landscapes

The FIP Rural Landscapes project works by transferring technology through technical and managerial assistance. Knowledge transferred is long lived, benefiting its holders well beyond the project's formal end. Moreover, whether for restoration or production these techniques remain in place in the long run, increasing productivity, management capacity and income in rural landholdings. These are gains that persist in the properties and can be expanded to other areas.

FIP CAR

The CAR is a state policy, and it is a requirement pursuant to Law No. 12.651/2012. By providing access to the CAR and creating conditions for smallholders and the most vulnerable groups to register, the FIP CAR consolidates permanent benefits.

5. How do they impact vulnerable groups?

FIP Rural Landscapes

Vulnerable groups that benefit from the FIP Rural Landscapes project include smallholders and farmers, some of them living in rural settlements (without deeds to the land) or Quilombola territories. Most project beneficiaries are small farmers. Mini farms (*minifundios*) and smallholdings make up 54% and 31.6% of the rural properties covered, respectively (

Table 5). Beneficiaries from rural settlements of the National Institute for Colonization and Agrarian Reform (Incra) represent 40% of the farmers.

Table 5 – Type de property covered the FIP Rural Landscapes project, by size and number of fiscal modules[17].

Type of property, by fiscal module size	Share (%)
Mini farm	54.0
Small farm	31.6
Medium farm	10.0
Large farm	3.2
Inconsistent information	1.1

In relation to the CAR, under the FIP Rural Landscapes project the registration of vulnerable groups such as Quilombola communities involves specificities that may require alternative project interventions. In 2022 there were four beneficiaries in the Quilombola territories of Barro Vermelho and Mangal located in Sitio do Mato in the state of Bahia. During an environmental regularization visit the team discovered that the territory is already registered in the CAR-PCT module of Sicar under a collective CAR[18]. However, it contained a polygon of the territory but lacked the environmental features declared. Nor did not include the names of any traditional community members. Hence, the project will correct this registration to include all members over 18 years old that live in the territory (close to 150 persons) in addition to the 4 beneficiaries already registered, as approved by the Quilombo leaders and authorized by Incra.

FIP CAR

The FIP CAR project considers vulnerable groups to be small landowners, family farmers, families from settlements in agrarian reform projects, indigenous lands, Quilombola communities and extractive harvesters. The project contributes to strengthening the communities' local governance by increasing their ability to organize politically (obtaining important information and documents for them to claim their rights) as well as to manage their lands and environment. Once they register in the CAR, beneficiaries can participate in public policies that encourage sustainable development and prove their rural activity to

[17] A fiscal module is a measurement unit that varies (from 5 to 110 hectares) depending on the municipality. Incra defines the number of hectares according to the municipality's main type of land use and level of income, other significant land uses in the area (judging by area or income generated). and taking into account the concept of "family property".

[18] Instead of individual housing areas the collective CAR considers the entire territory and must take into account the area traditionally used by Quilombola families.

access agricultural loans. By proving that their products come from an environmentally compliant property, they can also obtain incentives to process their raw materials and add value to their products. By presenting their CAR certificate, women such as coconut breakers—who had thus far been unable to provide evidence of their activity—can access rights like maternity leave.

FIP DGM Brazil (1.2c)

FIP DGM Brazil (Phase 1) helped to strengthen the involvement of indigenous peoples, quilombola and traditional communities (PIQCTs) from the Cerrado (and their representative entities); to promote the sustainable management of natural resources and livelihoods within their territories; and to support recovery from the negative impacts of the COVID-19 pandemic.

The Project assisted 64 community subprojects in the Cerrado (13 of which were led by women) meant to improve natural resource protection and production systems, as well as to expand marketing networks for biodiversity products. The direct beneficiaries were as follows:

- 34,780 people (9,145 families), including 11,041 women, by strengthening the community's food sovereignty and promoting healthy eating, generating and increasing income among community families (especially for women), and improving work conditions and quality of life.
- Helping 2,786 families from 59 PIQCT communities by providing emergency assistance to address the negative impacts of COVID-19 on their livelihoods, health and food security.
- Conducting 22 training programs that benefited 188 community organizations, or 2,140 participants (including 1,212 women). It also offered workshops on project planning and development, introduction to climate change and Reducing Emissions from Deforestation and Forest Degradation (REDD+), female empowerment, restoring degraded areas and sociobiodiversity agroindustry entrepreneurship, in addition to a course on socioenvironmental sustainability and advocacy given in partnership with the University of Brasilia (UnB).

FIP Macauba (1.2c)

Throughout the FIP Macauba Project, 45 small and 6 medium-sized rural producers (with leased areas) were directly benefited. They received support to recover degraded pastures, to produce macauba oil and to produce animal feed and food, with the potential for carbon credit certification. The Project also covered 32 extractive harvesters from the harvesting and selling of Macauba nuts in 2022. In addition, the Project assisted 100 inmates in the prison system by providing jobs that involved breaking coconuts to produce seedlings. The inmates were trained to break coconuts and extract the seeds and, after serving their sentence, they can be temporarily hired by Inocas to work in germination labs.

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 this 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?

FIP Rural Landscapes

Cumulatively, the FIP Rural Landscapes project supported the adoption of conservation and environmental restoration in 992 rural properties, covering over 14 thousand hectares of land. Another 152 landholdings joined the project in 2022. To conserve native vegetation remnants, springs and veredas the main strategy consisted of fencing areas to keep animals from crossing them. Such practices are fundamental to restore and protect critical habitats in private properties, and include reestablishing biological and hydrological processes, reconnecting fragmented habitats and restoring multiple ecological processes.

In 2022 more than 60 thousand hectares were restored by applying low carbon practices. By increasing the adoption of low carbon agricultural practices and implementing practices to restore the Cerrado biome's natural vegetation the project contributed directly to maintaining several environmental services, such as nutrient cycling, regulating rainfall, improving water quality and stream flow, maintaining habitats and conserving rivers. Recovering pastures and native vegetation also reduces the pressure to clear new areas, which contributes indirectly to reducing deforestation, maintaining habitats and preserving biodiversity.

In addition, in order to observe the qualitative evolution achieved through the agricultural practices adopted in pasture lands and strategies to recompose native vegetation, the project launched a study about a new landscape analysis methodology. The study will be developed in 40 selected properties of TMA beneficiaries referred to as indicator evaluation units (IEU). A set of indicators will be applied to observe various landscape components, including habitat fragmentation.

The project also contributed to environmental compliance (CAR registrations and corrections), updating important monitoring systems in the Cerrado (Prodes, Deter and TerraClass). By strengthening environmental governance it contributed to protecting environmental services.

FIP CAR

The FIP CAR project works extensively to strengthen environmental governance and hence contributes indirectly to reducing habitat loss and maintaining ecosystem services. Efforts to expand the CAR system's capacity and strengthen state environmental agencies are essential to validate environmental assets and liabilities in rural properties. This step will enable mapping of the rural environmental scenario, supporting policies that reduce deforestation and foster environmental recovery and conservation, and fostering positive impacts on natural habitats.

2. What were the main contributions (success cases) of FIP interventions regarding biodiversity and environmental services in your country during this reporting year?

The contributions of the FIP Rural Landscapes and FIP CAR projects to biodiversity and environmental services were described in the previous section.

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

FIP Rural Landscapes

The main challenges faced by the FIP Rural Landscapes project concern the high costs of deploying the new ABC technologies in pasture lands. Also, under capitalized rural producers found it very expensive to restore and conserve Legal Reserves and Permanent Preservation Areas. In addition, field technicians indicate mainly that investment capacity is low, inputs are expensive and hard to find, machinery and specialized labor are unavailable, credit is difficult to access, and cultural issues and traditional values interfere.

Opportunities to improve the situation involve building partnerships with private or third sector institutions with financial support, particularly for the rehabilitation of environmental protection areas. Considering the field experience amassed at a large scale, generating knowledge and solutions and sharing results should also be considered an opportunity. If on the one hand resistance to new practices poses a challenge to changing the paradigm of rural producers, on the other increased productivity (i.e., increased animal stocking rate and reduced time to culling) sets an example and helps to make sustainable systems, practices, products, and production processes (SPSabc) known and adopted.

FIP CAR

The project's operationalization was limited by the federal government's spending cap, which made some actions planned for 2022 unfeasible.

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 this reporting year compared to the previous one.

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

In Brazil, the investment plan has contributed to including excluded and vulnerable groups in decision-making processes through a set of specific actions for this target group. The plan also relies on FIP DGM Brazil actions designed specifically for this profile

FIP Rural Landscapes

One of the project's commitments is to ensure the participation of marginalized and vulnerable groups in forest-related decision-making processes. Women represent close to 23% of the total rural properties serviced. The project is also providing TMA to rural producers in a Quilombola territory whose collective CAR registration was corrected to include 150 persons. In addition, agrarian reform settlers represent approximately 40% of the rural registration project's beneficiaries.

As regards the area under land use planning for landscape management (520,847.69 ha), in most states it belongs to landowners/holders of mini and small farms (*minifundios*) (Table 6).

Table 6 – Percentage of beneficiaries by property type and state, considering the land area under land use planning for landscape management.

Type of property	BA	GO	MA	MG	MS	MT	TO
Mini farm	84.6	29.2	46.8	42.8	5.5	50.8	62.3
Small farm	13.5	44.2	44	41.2	10.2	46.1	25
Medium farm	1.8	21.2	8.3	12.8	33.3	3.1	9.7
Large farm	0.1	5.4	0.9	3.2	51	0	3
	100	**100**	**100**	**100**	**100**	**100**	**100**

Throughout the project, women accounted for:

- 33.9% of rural landowners or producers registered in training and capacity-building events;
- 48.9% of TMA beneficiaries;
- 23.2% of beneficiaries responsible for the properties serviced by TMA technicians;
- 11.39% of beneficiaries that adopted ABC technologies;
- 30.7% of employees, considering active and closed contracts;

FIP CAR

The FIP CAR project services small rural producers and TPC communities. Just by registering in the CAR rural producers are able to prove their activity and gain access to rural credit and incentives, hence guaranteeing their rights. The impact of registering in the CAR goes much beyond the environmental agency and its regulations. It consists of an environmental education process in which beneficiaries learn about concepts, rules, rights, obligations and opportunities. Recognizing and registering their protected areas (Permanent Preservation Areas and Legal Reserves), consolidated areas and forest assets is an important step for planning and management of rural properties. All of these things help to empower landowners/holders and improve their ability to make decisions about how to manage their forest and environmental resources. Additionally, the project makes TPCs and minorities more visible to the federal government, giving them access to socio-environmental policies that strengthened local TPC governance.

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

FIP Rural Landscapes

To improve the production and availability of environmental and forest information, the project contributed mainly by increasing the country's installed capacity (described in more detail in the next section) to optimize and update the Cerrado landscape monitoring systems (TerraClass[19], Prodes e Deter[20]); Improving the WebAmbiente[21] platform that helps plan the reconstitution of vegetation cover; and developing the WebPasto platform that will help to plan the restoration of pastures. At the regional level, the Rural Landscapes project held Field Day events with rural producers to mobilize them and sensitize them about the importance of environmental regularization to enforce the Forest Code.

FIP CAR

Among the most important contributions of the FIP CAR to improve access and increase access to environmental and forest information are consolidating the CAR (registration, correction, analysis and validation) and making its information available through the Sicar [22].

As regards local actions, a communication campaign was conducted to raise awareness about the CAR and promote a broad participation of its target audience (small rural producers and TPCs). Technical assistance provided its beneficiaries with direct information about landscapes in their properties and how to achieve environmental compliance, in addition to strengthening community management through participatory actions. There is also a central contact platform for landowners/landholders that provides direct contact between those registered in the CAR and the agencies responsible for receiving, analyzing and approving Projects for the Recovery of Degraded Areas.

[19] Available at: https://www.terraclass.gov.br/geoportal-cerrado/portal
[20] Available at: http://terrabrasilis.dpi.inpe.br/
[21] Available at: https://www.webambiente.gov.br/
[22] Available at: https://car.gov.br/

3. What were the FIP's main contributions (success cases) to forest stewardship in your country during this reporting year?

FIP Rural Landscapes

At the local level, TMA for landscape planning, use and management; recovery of degraded pastures and recovery of native vegetation led to better forest resources management in the properties serviced. Moreover, CAR registrations and/or corrections among rural properties serviced contributed to advancing the environmental regularization process.

FIP CAR

As mentioned above, the CAR has the purpose of incorporating environmental information from rural properties and landholdings into databases for environmental planning, monitoring and control, as well as to fight deforestation. In terms of environmental monitoring and governance, the main contributions were the consolidation of environmental regularization in the Cerrado and actions that contribute to environmental management in properties and local governance of TPCs and family farmers.

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

FIP Rural Landscapes

The main challenges include the costs incurred by under capitalized rural producers to recover and/or protect Legal Reserves and Permanent Preservation Areas (such as purchasing and putting up fences and the acquiring saplings). Opportunities to improve the situation involve building partnerships with private or third sector institutions with financial support, particularly for the rehabilitation of environmental protection areas.

FIP CAR

One of the challenges consisted of reorganizing field activities and raising awareness in these communities after two years of pandemic in order to operationalize the registrations. Another considerable challenge was to operationalize the project under the federal budget rules, considering the impacts of the spending cap. A number of public administration procedures were not completed before the project deadline of 31 December 2022, making some planned actions unfeasible. Partnerships like the one with the Inter-American Institute for Cooperation on Agriculture (IICA) provide opportunities to overcome this challenge.

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 the FIP investment plan in your country in the reporting year. Explain the progress made in this 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 people?

FIP Rural Landscapes

Not applicable.

FIP CAR

Although the CAR is not directly linked to land regularization, registration is the first step towards environmental regularization. As such, the FIP CAR provides an indirect contribution by making it easier to access and register rural properties and territories of traditional peoples and communities and family farmers in the CAR. As mentioned before, registering in the CAR allows rural producers to prove their rural activity and access agricultural credit and incentives for processing raw materials. It also enables them to ensure their rights, as is the case for women such as coconut breakers, who were able to access rights like maternity leave.

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

FIP Rural Landscapes

Not applicable.

FIP CAR

The FIP CAR project contributed to the registration of territories of 16,388 families of TPCs in five Brazilian states: Bahia, Goiás, Maranhão and Minas Gerais.

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

FIP Rural Landscapes

Not applicable.

FIP CAR

The main challenge consisted of reorganizing field activities and raising awareness in these communities after two years of pandemic in order to conduct the registrations.

4. Other criteria:

Not applicable.

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 this 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 levels?

FIP Rural Landscapes

The Rural Landscapes project develops integrated actions with other FIP BIP projects, such as the ABC Plan, FIP CAR and FIP Monitoring, working in synergy with different institutions. In 2022, the following actions were particularly effective in strengthening institutions to implement relevant policies in the environmental, rural and forest sectors.

Land Use and Land Cover Monitoring

Improvements in TerraClass Cerrado Mapping

A number of investments were made in the Brazilian Forest Service (SFB), particularly to hire technical advisors that helped to develop protocols and actions related to environmental compliance and forest restoration. The National Institute of Space Research (INPE) and the Brazilian Agriculture Research Corporation (Embrapa) received support for the TerraClass Cerrado mapping process that resulted in the publication of the 2018 and 2020 maps.

During the first semester teams from Embrapa Digital Agriculture and INPE worked to qualify and refine the TerraClass Cerrado mapping details by migrating Landsat image analyses (30m spatial resolution) to Sentinel (10m resolution) for the entire biome. Progress was also made in automating classifications by analyzing time series, with significant gains in mapping performance. The pastures category was further detailed with subclassifications (pastures with predominantly herbaceous vegetation and pastures with predominantly shrub-tree vegetation). A new feature was added for the automatic generation of maps (previously manual) with more details for the classes "annual single cycle agriculture" and "more than one cycle agriculture".

Prodes Cerrado and Deter Cerrado

Procurement processes conducted under the FIP Rural Landscapes in January 2022 enabled the maintenance of two other deforestation monitoring systems coordinated by INPE: Prodes Cerrado and Deter Cerrado. Prodes generates annual deforestation rates and Deter issues daily alerts to support law enforcement against illegal logging and burning.

In addition to mapping deforestation in the Cerrado biome, the 2000-2021 time series was updated (with the new biome boundaries defined by IBGE in 2019) and a mapping process was conducted to define daily native vegetation suppression, guaranteeing the daily alerts issued by Deter that guided the law enforcement teams combating environmental crimes in the 1st semester of 2022.

It should be noted that the maintenance of the mapping systems for the suppression of native vegetation, forest fire risk, fire spread potential, and estimates of GHG emissions (including the maintenance and improvement of these platforms through the Biomas BR - Cerrado MCTI Project) was

approved under the National Fund for Scientific and Technological Development (FNDCT) and began at the end of 2022. Thus, the funding of the FIP Landscape project allowed the maintenance of the historical series and the transition between the costs incurred by the FIP Cerrado Monitoring project, which ended in December 2021, and the new project executed by the Foundation for Science, Technology and Space Applications (Funcate/Inpe) through the Funding Authority for Studies and Projects (Finep)/FNDCT.

Advances in integrated landscape analysis

During the Midterm Review Meeting held in December 2021 the Project Management Unit (PMU) submitted and approved a methodology to integrate landscape analysis at the local or rural property levels (proposed by Embrapa Cerrados) with water basin and biome review (currently conducted by the National Space Research Institute (INPE) and Embrapa Digital Agriculture using TerraClass Cerrado). The goal was to establish an integrated method between the different scales of landscape analyses to optimize monitoring and management of actions carried out under the FIP Rural Landscapes project.

Meetings and field missions were held with teams from Embrapa Cerrados, Embrapa Digital Agriculture, INPE, National Service for Rural Learning (Senar), Brazilian Forest Service (SFB) and German Agency for International Cooperation (GIZ) to align the strategy with the methodology. This joint work made to it possible to advance in designing the local analysis methodology and integrating the work done by the different institutions. In addition, building on the positive results achieved with classification systems in the Amazon, Embrapa Digital Agriculture made progress in identifying predominant production systems at the biome scale in the Cerrado.

At the local scale in rural properties, Embrapa Cerrados proposed a landscape analysis methodology to be deployed in selected properties among TMA beneficiaries referred to as Indicator Evaluation Units (IEUs). IEUs are rural properties or parts of them selected to diagnose and monitor indicators in TMA intervention areas. The methodology was designed to show the qualitative evolution of pasture lands after agricultural practices and native vegetation reconstitution strategies are adopted. To this end Embrapa Cerrados together with SENAR selected 40 IEUs, a sample equivalent to approximately 1% of the rural properties receiving TMA.

In these units, it will be possible to assess changes in the environment since the adoption of sustainable practices in production systems through indicators used in different scales of analysis. The intention is to observe the qualitative evolution of these changes, both in pasture lands and in Legal Reserves and Permanent Preservation Areas. Among the components monitored are soil and terrain, forage plants and animal performance, original physiognomies, morphology and habitat fragmentation, in addition to other landscape parameters and an economic assessment.

Throughout 2022 the main landscape analysis activities at local scale consisted of selecting rural properties to be IEUs in the Minas Gerais triangle; characterizing and integrating geomorphological and Technologie data as support for environmental studies; finding and selecting indicators and recommendations for recovery of native vegetation and recovery of degraded pastures in IEUs; aerial photographically mapping of areas undergoing reconstitution of native vegetation cover and degraded pastures on properties selected as IEUs, with spatial resolution of less than 4 cm; quantifying and monitoring possible local changes in the development and structure of native vegetation in Permanent Preservation Areas/Legal Reserves through panoramic field images (Red Green Blue digital camera); quantifying and monitoring the recovery of production capacity in degraded pastures through large-scale vertical images (RGB digital camera); and evaluating the indicators related to the native vegetation reconstitution process and pasture recovery process through multi spectral orbital images (Sentinel-2 Satellite) in rural properties selected as IEUs.

By integrating the methods the project seeks to achieve more efficient and precise landscape monitoring and analysis (aligning celestial images with ground truth). This will allow the results obtained by different institutions to be better measured, checked and reported. The intention is to generate the following products with this integrated analysis: set of maps, layers and images (isolated, interpolated and integrated); technical reports on the evolution of native vegetation and pasture reconstitution indicators (T_0, T_1, ... T_n); and an integrated landscape analysis report at different scales.

To define this integrated methodology, various meetings were held from May to June with the participation of representatives from Senar, Embrapa Cerrados, Embrapa Digital Agriculture, INPE, GIZ and SFB to establish the indicators that would be assessed and criteria to select the properties. The final version of the document with the proposed "Methodology for Diagnosis and Monitoring of Indicator Evaluation Units (IEUs)" of the Rural Landscapes project was prepared at the end of June 2022.

Field work consists of evaluating indicators supported by a Senar field technician responsible for the rural property. The data began to be collected in August 2022 by sampling soil cover, litter and soil (Figure15), estimating forage mass, pasture height and simulated grazing (Figure 16) and conducting interviews (Figure 17).

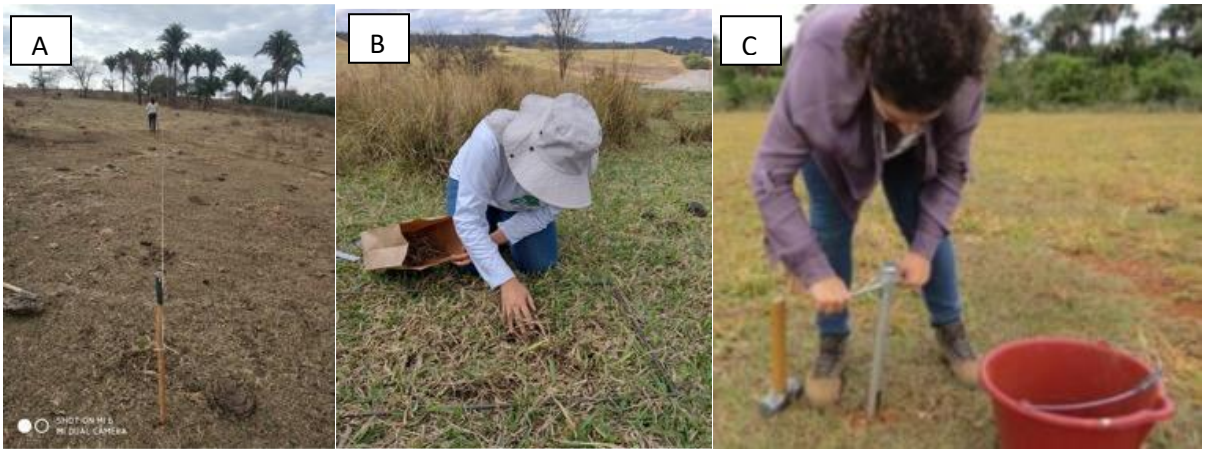


Figure15 4 – Sampling plant cover and collecting soil and plant litter at a Rural Landscapes IEU.

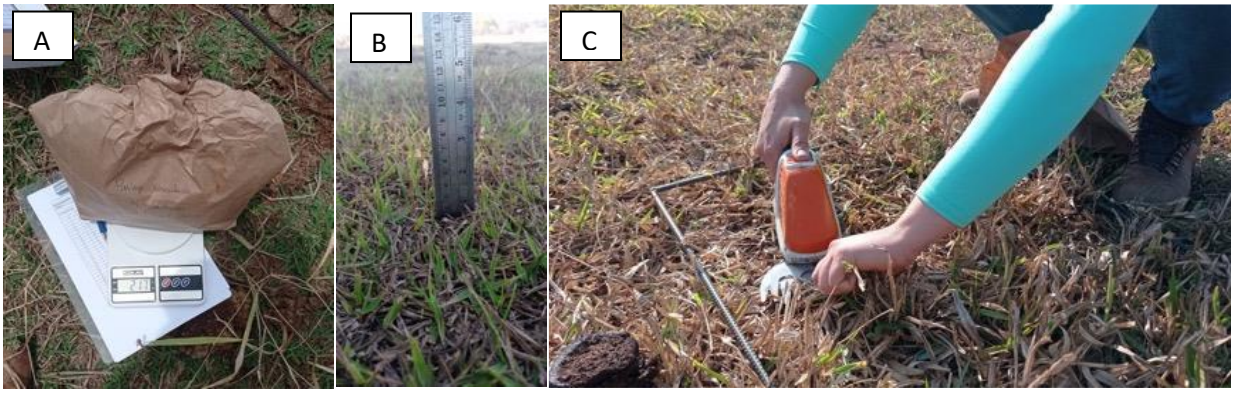


Figure 16 - Estimating forage mass (A), pasture height (B) and simulated grazing at an Indicator Evaluation Unit under FIP Rural Landscapes.


Figure 17 – Interviews with rural producers conducted at FIP Rural Landscapes IEU.

Plan ABC+

In the first semester of 2022, the Ministry of Agriculture, Livestock and Food Supply (Mapa) began implementing the ABC+ Plan—an advanced version of the ABC Plan—for the period of 2020-2030, with substantial support from the Rural Landscapes project for strategic actions. The first one was a partnership to hold an in person national meeting of ABC+ state management groups in which state-level stakeholders were updated on the plan's new phase for the 2020-2030 decade. This meeting allowed the national ABC coordination unit to make state managers aware of the need to update their ABC plans and update the institutions participating their collegiate bodies.

Next – and as result of the national meeting – the FIP Rural Landscapes project supported the recruitment of consultants to help restructure the state management groups. A recruitment process was launched in the first semester of 2022 for three consultants to support the states of the Center-West, Northeast and Southeast regions. Also during this period, selection processes were prepared for consultancies to deliver the ABC+ Management System and to produce a book about the 10 years of the ABC Plan. This will make it possible to gather and disseminate information about the first decade of the Plan and improve ABC monitoring in the coming years. In the second semester of 2022 a company was hired to proofread and diagram said book.

In addition, the FIP Rural Landscapes project enabled Mapa technicians to participate in negotiation meetings for the United Nations Framework Convention on Climate Change (UNFCCC). This included the ministry's participation in COP27 (supporting the UNFCCC cross-sector project) which helped to enhance Brazil's leading role in the global climate agenda.

Rural Environmental Registry and Environmental Regularization Program

In 2022, the Brazilian Forest Service (SFB) participated in the technology update of the Sicar, the national data collection and management platform for the Rural Environmental Registry. The professionals assigned to support this technology update worked by providing validation and technical support to prepare the reference cartographic databases, with the purpose of installing the SIcar's dynamized analysis modules in the states.

In the Environmental Regularization Module it supported the internal operational environment for state environmental agencies (OEMAs) and rural producers – authenticated by the central contact platform for landowners/landholders – for the management of environmental regularization commitment agreements. There was also institutional coordination with the 7 OEMAs of states that have project operation areas to prioritize analysis of CAR registrations of properties assisted by the project.

WebAmbiente and WebPasto

Another important advancement concerns the ongoing updates and improvements to the WebAmbiente platform. As one of the main tools for environmental regularization, the platform is being used to diagnose and plan the reconstitution of native vegetation by technicians who provide TMA to rural producers benefiting from the FIP Rural Landscapes project.

A new interactive information system on rehabilitation of pastures similar to the WebAmbiente is also being developed under the name of WebPasto. Meetings were held between the Embrapa Cerrados and Embrapa Digital Agriculture teams for the initial structuring and selection of basic information to start the new platform's conceptual.

Capacity-building and Technology Transfer

Several activities developed in 2022 helped to increase institutional capacity for forest-related environmental policies, including capacity building, alignment workshops, participation in agribusiness fairs and an evaluation workshop for FIP projects in Brazil. There were also regular meetings with regional managers and weekly checkpoint meetings at the SENAR national coordination center, coordination meetings with three leveling workshops attended by OEMA and INCRA-MG representatives, and training courses for field technicians from the company BRASPLAN and OEMAs (BA, MG, TO, MA).

A total of 13,642 rural producers benefited from distance education actions, face-to-face training, field days and assistance to rural producers (4,185 female and 9,457 male), 12,101 more than the previous year. The following section provides details of these activities.

- Alignment Workshop for Integrated Landscape Management with field technicians, environmental analysts and representatives from SFB, GIZ, SFB and Embrapa Cerrados held in Brejolândia, Bahia (24 January 2022) (Figure 18).
- Two introductory webinars offered by Embrapa Cerrados (21 January 2022 and 08 March 2022) for recently hired TMA teams.
- On-line event to answer questions (“Plantão de Dúvidas”) offered by Embrapa Cerrado (24 February 2022).
- On-line training courses offered in Goiás and Maranhão (11 February 2022), Tocantins (18 February 2022), Bahia (24 February 2022), Mato Grosso do Sul (04 March 2022), Minas Gerais and Mato Grosso (11 March 2022) as part of the Environmental Module.
- Initial module of the On-line Training Course on Agroecosystem Sustainability Indicators (March 2022) for 50 TMA technicians and supervisors operating in the various states, with a 32-hour course load.
- In person training on agroecosystem sustainability indicators offered in Mato Grosso do Sul and Maranhão (15-17 March 2022), Bahia and Tocantins (18-20 April 2022), Goiânia and Minas Gerais (19-21 May 2022).
- Technical support visits and on-site monitoring with regional managers held in Minas Gerais (3-5 May 2022) and Tocantins (29-30 June 2022 and 1 July 2022).
- Training course for technicians held in Salvador, Bahia (28-29 April 2022).
- Field technicians dialog event to plan the next steps (Figure 19), with the participation of local leaders, trade unions and representatives of local government bodies (05 May 2022).

Figure 18 – Alignment Workshop for Integrated Landscape Management held in Brejolândia - BA on 24 January 2022.

Figure 19 – Field technicians dialog event to plan the next steps under the FIP Rural Landscapes project, held in Serra Dourada, Bahia, on 05 June 2022.

- Events "Gatherings with male and female rural producers: dialogs on managing rural properties and environmental regularization" held in the municipalities of Sítio do Mato, Brejolândia and Serra Dourada, Bahia (on 07, 08 and 09 June 2022, respectively) with close to 340 rural producers.
- Events "Gatherings with male and female rural producers: dialogs on managing rural properties and environmental regularization" with the participation of 245 rural producers (117 female and 128 male) held in Minas Gerais (July 2022).
- Alignment Workshop for Integrated Landscape Management for field technicians (Figure 20), with the presence of environmental analysts, with representatives from SFB and Embrapa Cerrados held in Campina Verde, Minas Gerais (25 June 2022).
- Training course for field technicians to share experiences related to environmental regularization in rural properties located in the area impacted by the Mariana dam breach, held in Bel SharePoint (14-15 June 2022) (Figure 21).

Figure 20 – Integrated Landscape Management Alignment Workshop for field technicians in Campina Verde, Minas Gerais, on 25 June 2022.

Figure 21 – Training for field technicians held in SharePoint (MG) on 14-15 June 2022.

Figure 22 – Training for field technicians held in Palm's (TO) on 27-28 June 2022.

- Training course for field technicians (Figure 22) to support project execution, held in Palm's, TO (27-28 June 2022).
- On-line course on recovery of degraded areas and pastures during the "Meeting with rural producers in Ituiutaba and Uberaba" offered by SFB in Minas Gerais (July 2022).
- SFB participation in Senar Field Days in August 2022.
- Development and follow-up of the on-line course on the Dynamized Analysis Module with the State Forestry Institute team of Minas Gerais (IEF/MG) with 50 participants (5-9 September 2022).
- Training course on environmental regularization for Senar field supervisors participating in Field Days (November 2022).
- Event "Dialogs on the Environmental Regularization Program (PRA) and monitoring challenges in the FIP Rural Landscapes states," held in Brasilia, DF (25-26 October 2022 - Figure 23). The event was attended by 50 people from various institutions and segments, including executors, partners, teaching/research institutions and state government agencies.
- Liaison and participation in the "CAR and Settlements Alignment Workshop" held in Minas Gerais (November 2022).
- Technical Alignment Workshop held in São Luís (Maranhão) (18 November 2022).

Figure 23 – Images of the event "Dialogs on the Environmental Regularization Program (PRA) and monitoring challenges in the FIP Rural Landscapes states" held on 25-26 October 22 in Brasilia, DF.

FIP CAR

The project contributes to increasing the installed capacity of partner institutions that work with environmental regularization at the federal and state levels. SFB has been holding CAR deployment meetings with all the states for many years (the 9th meeting took place in 2022), having found them extremely relevant to strengthen ties with the states and help them as needed.

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

FIP Rural Landscapes

The above-referred support to environmental regularization and TerraClass influences issues related to forest areas inside rural properties. As noted in the prior sector, support was also provided for studies to evaluate the ABC Plan (2010 to 2020) and for the launch of the ABC+ Plan (2021 to 2030).

FIP CAR

The project is an important initiative in the CAR analysis and validation process, contributing significantly to environmental management and sustainable development in the beneficiary states. One of the most important advancements was the acquisition of thematic mappings for the 11 states, covering over 3,647,973 km^2. These maps form the basis for analyzing CAR registrations, thereby expediting the validation of environmental assets and liabilities and advancing environmental regularization. By investing in high quality cartographic maps the project ensures that the states involved can advance in CAR registration and analyses and make decisions building on precise and up-to-date information, improving natural resources management and implementing more effective public policies. Having their CAR declarations analyzed is a prerequisite for landowners/landholders to have access to rural credit, environmental regularization programs (PRAs), environmental reserve quotas, and payment for environmental services. Furthermore, this validation will make it possible to understand the dynamics of rural areas and plan activities to minimize deforestation and encourage environmental restoration and conservation.

Other relevant actions financed from the National Treasury and through international technical and financial cooperation, include:

Technical and operational advancements

- Corrective, adaptive and evolutionary maintenance of the Sicar, allowing the continuity of CAR data integration services between the 27 federated entities and the federal database, in addition to several improvements in the functionalities available to the public.
- Launch of the Dynamized Correction Module, improvements in the Team Analysis Module of the Dynamized Analysis Solution.
- Update of the municipal IBGE and Sicar teams.
- Update of the CAR Off Module, in accordance with the deadline to join the Environmental Regularization Program.
- Launch of the Environmental Regularization Module.
- Migration of the Sicar platform to cloud computing infrastructure under the Digital Government Strategy (2020), pursuant to Decree No. 10.332/2020, aiming to increase the system's performance.
- Communication plan for the environmental regularization policy (CAR, Analysis, PRA, Landowner/Landholder Central) prepared and implemented with educational materials for all the environmental regularization stages.

Regulatory advancements

- Enactment of MAPA Ordinance No. 121 of 12 May 2021 establishing general supplementary procedures to review CAR data and incorporate the results of the Sicar, among other measures.
- Institution of the National Plan for the Environmental Regularization of Rural Properties by means of Decree No. 11.015, of 29 March 2022.

Support and capacity-building

- Implementation of the CAR by the states was supported by making the Sicar platform available for local use and management. There were also training courses, thematic meetings, technical meetings, information-sharing, production of thematic maps and assessments of the implementation of local policies by the states, to help define the best way to support the individual states.
- States that use the federal Sicar received support to deploy the dynamized analysis solution.
- Four national CAR implementation meetings and 1 thematic meeting were supported with technical cooperation from GIZ, as were a series of workshops (stages) known as Jornadas do CAR nos Estados designed to strengthen technical cooperation between SFB and state managers.
- Training was provided for SICAR users from partner institutions, such as the National Council of the Public Prosecution Service (CNMP), Chico Mendes Institute for Biodiversity Conservation (ICMBio) and Embrapa.

3. What were the FIP's main contributions (success cases) to capacity development in your country during this reporting year?

FIP Rural Landscapes

The Rural Landscapes project contributed to the adoption of sustainable systems, practices, products, and production processes (SPSabc) as well as restoration and conservation of native vegetation cover by training over 200 rural technicians in techniques for the recovery of degraded pastures and native vegetation.

Regarding monitoring, land use and land cover, improvements were made to TerraClass Cerrado mapping (detailing and updating) with the publication of the 2018 and 2020 maps. The time series was preserved and the Prodes Cerrado and Deter Cerrado were updated until the point of transition between the funding provided the FIP Cerrado Project that ended in December 2021, and the new FINEP/FNDCT project that started end 2022.

As to integrated landscape analysis, progress was made in identifying production systems using remote sensing, producing a methodology to analyze landscapes, and selecting and collecting data from 40 IEUs.

With regard to the ABC Plan, the project made it possible for MAPA technicians to participate in COP 27 (supporting a project at the UNFCCC intersection) so that Brazil might play a greater role in the global climate agenda.

In relation to the CAR, the project contributed to the preparation of reference cartographic bases for the Sicar dynamic analysis modules and fostered institutional articulation with the OEMAs to prioritize the analysis of CAR registrations of properties assisted by the project.

FIP CAR

Specialized consultancies were recruited to support CAR analysis in the Federal District. In a period of three months this led to a 100% increase over the number de analyses done between 2018 and 2022.

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

FIP Rural Landscapes

The opportunities lie in deepening and forming new arrangements and partnerships. INPE and Embrapa Digital Agriculture are engaging with the Institute of Geography and Statistics (IBGE) to engage the institution in TerraClass mapping. The experience acquired in mapping the Amazon and Cerrado biomes is being used as reference to design the TerraClass Brazil project with IBGE.

SFB in turn observed an intense engagement agenda with the state environmental agencies of Bahia, Minas Gerais and Tocantins, in addition to the National Institute for Colonization and Land Reform (Incra) – Minas Gerais, and municipal agriculture and environment secretariats of the municipalities located in the project's priority basins in these three states. The purpose was to refine strategies to enable environmental regularization in properties served with TMA.

As regards field work with rural producers, SENAR is continually in touch with trade unions, associations, cooperatives and local leaders of rural producers to raise awareness and mobilize the properties. These partners are essential for the project's communication strategy and to reach the largest possible number of beneficiaries.

In relation to other partners and/or stakeholders, according to SENAR the lesson learned is that examples like these could be replicated if stakeholders were engaged during the project's design, and especially when discussing the criteria used in selecting basins. The target audience and project execution dynamics should be considered with a view to implementing integrated landscape management by applying the Native Vegetation Protection Forest Code and ABC Plan.

Coordinating actions among the various institutions of the states involved in the project requires political institutional coordination and a national strategy that is structured and continuous. The agendas with the states need to be part of the project's action plan, with well-defined steps and a joint effort to effectively mobilize the bases of each institution and/or thematic areas involved in FIP Rural Landscapes project.

FIP CAR

The main challenge in CAR validation consists of staffing and operational capacity limitations in the state management bodies that are responsible for analyzing over 6.9 million CAR registrations of rural properties nationwide. As such, hiring and training teams, and expanding the CAR dynamized analysis module are essential steps for environmental regularization to continue advancing in the Cerrado.

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.

FIP's transformational objective in Brazil is to fund specific projects in order to support broader national strategies and initiatives aimed at reducing GHG emissions and increasing carbon sequestration in forests. In addition, FIP is intended to generate environmental, socioeconomic and institutional co-benefits.

Throughout 2022, the FIP Coordination project conducted an impact assessment of the Brazil Investment Plan (PIB) for the Forest Investment Program (FIP). This assessment has been ongoing since 2021 and, in addition to impacts, includes an assessment of the performance and results of the eight Projects in the portfolio and an assessment of the Program's results. In this process, 29 environmental, institutional and socioeconomic impacts of the Brazilian Investment Plan for the FIP were identified, which contribute to the reduction of greenhouse gas (GHG) emissions, biodiversity conservation and poverty reduction. Since this assessment was based on the August 2014-December 2020 time frame (and therefore does not include the year 2022), its results were not described in this report. The assessment process is still ongoing, and results will be announced as soon as it is complete.

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?

FIP Rural Landscapes

FIP Rural Landscapes helped to build the country's institutional capacities for environmental monitoring and governance. The project contributed to the production of knowledge and technology transfer for recovery actions and integrated landscape management on a large scale (Figure 24). The field actions were far-reaching, and the monitoring of the landscape will bring to light the impacts (medium and long term impacts) on the dynamics of land use and land cover in the selected river basins.

The Project supported the institutional strengthening of three major public policies: Rural Environmental Registry (CAR), Low Carbon Agriculture Plan (ABC) and TerraClass. Over the past 4 years, there have been advances such as improvements in the Sicar review module, evaluation of the ABC Plan, launch of the ABC+ Plan and TerraClass Cerrado mapping (2018 and 2020). The funds from the Rural Landscapes Project were also used to improve four Technological Reference Units (URTs) in the Brazilian Agricultural Research Corporation (Embrapa) Cerrados and to develop Prodes Cerrado 2022.

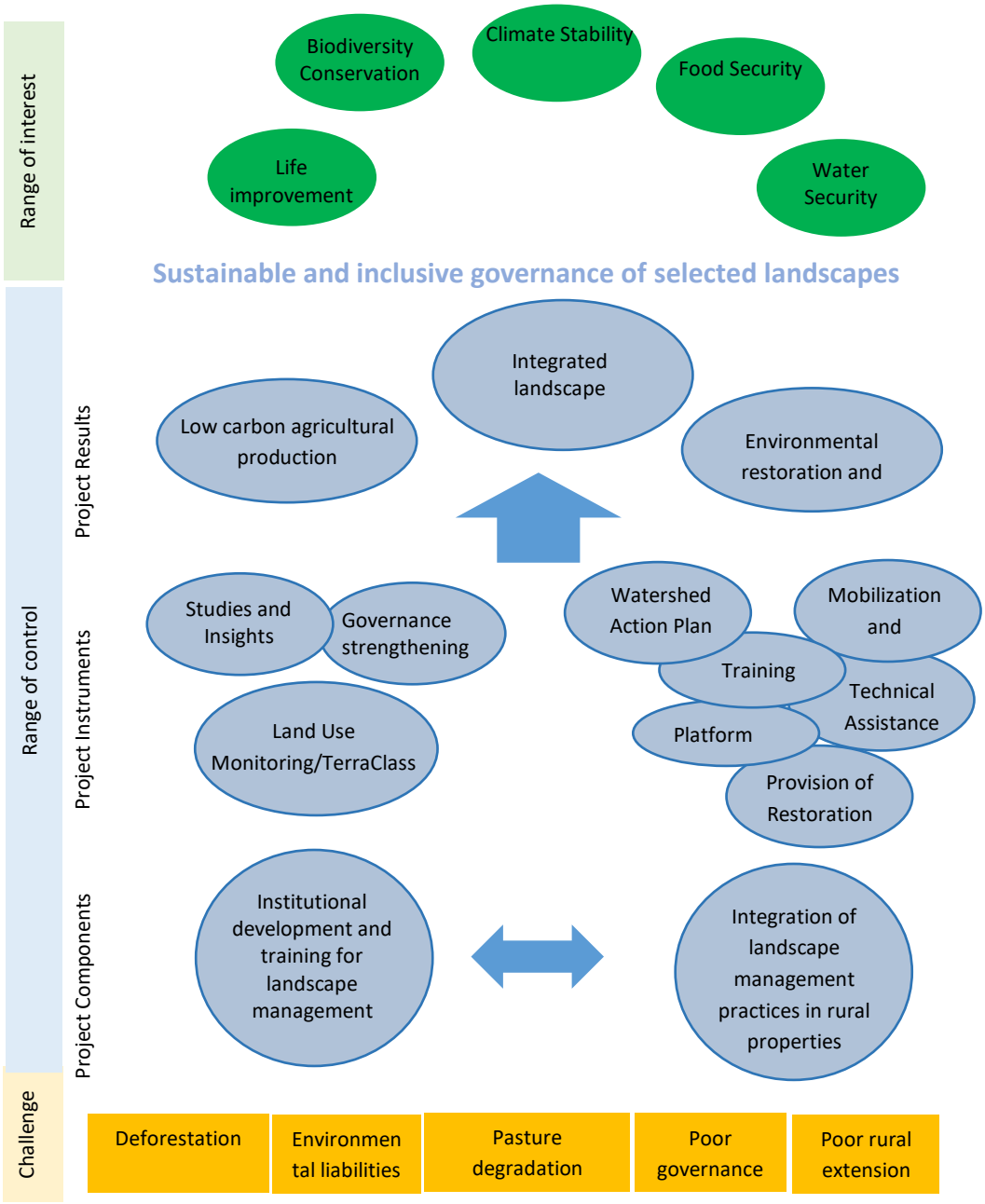


Figure 24 – Flowchart of activities and outputs for the Rural Landscapes Project. Adapted from *Project Appraisal Document*, IBRD (2017).

FIP CAR

FIP CAR helped to boost the operational capacity of state agencies during the review and validation stage of the Rural Environmental Registry (CAR), with progress being made in thematic mapping for the streamlined review module of the rural environmental registry (Figure 25). This is a key step to ensure a continued environmental regularization process.

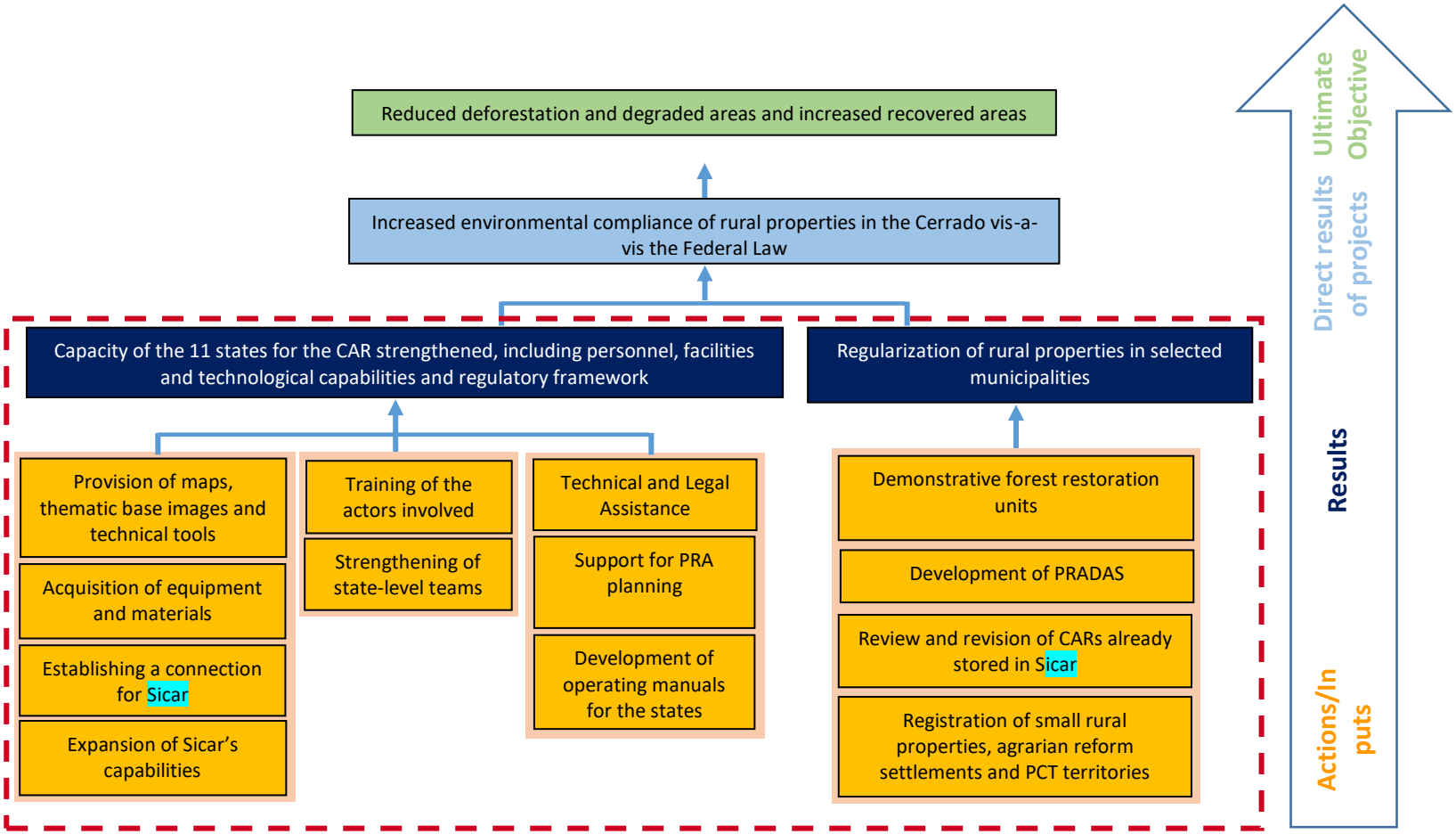


Figure 25 – FIP CAR's theory of change flowchart.

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.

FIP Rural Landscapes

When considering the result indicators related to the number of landowners and area with sustainable systems, practices, products, and production processes (SPSabc) in place, the results achieved by 2022 were close to the target (83%) for Year 5 (Figure 26).

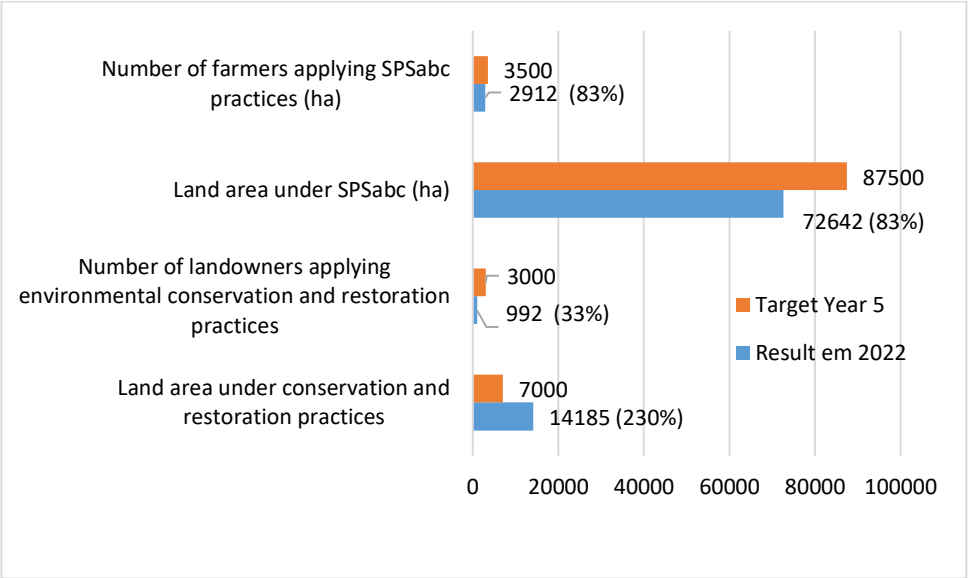


Figure 26 – Results of intermediate indicators as of December 2022 and target for Year 5.

Note: The percentage values in parentheses denote the percentage of achievement in relation to the target.

Of the total number of rural producers covered by the Project (5,978 producers), 48.7% adopted ABC technologies. The poor uptake may be related to the scarce funds of the beneficiary rural producers who do not have enough funds of their own and credit available to allocate primarily to pasture reforms, purchase of inputs and construction of fences for paddocks. It makes sense to conduct a study of new drivers to gain insight into which ones would be related to this poor uptake.

Most of the 72,642 hectares with ABC technologies in place used Degraded Pasture Recovery techniques (86.14%). This activity has a direct impact on productivity, income and improvement of the lives of dairy and beef cattle raisers. The dairy cattle farms have a total production area of 43,642.46 hectares. In these, the area where the ABC technology was put in place covers 15,229.61 ha (34.9%). The dairy cattle farms have a production area of 210,873.53 ha. In these, the area with ABC technology in place corresponds to 57,412.80 ha (27.22%). In addition, 49.2% of the properties covered have not implemented any ABC technologies yet. This reflects the high potential for expanding the areas in the properties already covered by the Project. In addition to financial incentives, publicizing the positive impacts on productivity is important to boost uptake.

The number of landowners who adopted environmental conservation and restoration practices was much lower than expected (33%), which reflects resistance to this practice. Among the total number of producers covered, only 16.6% have adopted conservation and restoration

practices. The poor uptake may be related to the scarce funds of the small rural producers covered (who are a total of 85.1%) and who often do not have enough funds of their own or access to credit available to allocate to the construction of fences and planting of seedlings. Incentives in this sense, including the use of species with an economic potential, are important to bolster uptake.

On the other hand, the area with vegetation conservation and restoration (14,185 ha) in place exceeded the target by twice (Figure 27). The most employed type of intervention was natural regeneration with/without management, such as plain fencing to keep off animals. A recommendation is made to look into, together with rural producers, the reasons for the poor uptake of interventions in conservation and restoration areas, considering drivers such as area size, business activities, communication processes.

The Institutional Development and Capacity Building component for Landscape Management made significant progress. The training target in five institutions was met (Table 7). In addition, the Project has also been working with state agencies responsible for environmental policies, on issues involving environmental regularization and with a focus on CAR, review and compliance with PRA. States include Bahia, Tocantins, Minas Gerais, Mato Grosso do Sul, Maranhão and Goiás. A number of other institutions involved are the Rural Unions, encouraged by the work carried out by Senar, and whose role is to engage rural producers in the areas covered by the Project.

Table 7 – Contributions of FIP Rural Landscapes in terms of institutional capacity building for governance and integrated landscape management

Institution	**Contributions**
SDI/MAPA	Institutional strengthening of the ABC+ Plan, in addition to supporting the participation of technicians in relevant conferences.
SFB	Recruitment of a technical team to deliver hands-on workshops, assess maps, review and adjust protocols for environmental regularization and contract with Brasplan for revisions/development of CAR.
Embrapa Cerrados	Recruitment of professionals to prepare publications, deliver training (both classroom-based and in the field), maintenance of experimental fields with techniques for recovering native vegetation, as well as collecting data in the field to assess the recovery of pastures and native vegetation in the Indicator Evaluation Units (IEUs).
Embrapa Digital	Support for TerraClass by hiring specialists, renting an office and purchasing equipment for the technical team, hiring a company to set up a storage and data query system within Terra Class.
Inpe	Support for TerraClass mapping by hiring specialists and purchasing equipment for the technical team. Support was also provided to recruit specialists to map out Prodes Cerrado.

The 2020 TerraClass mapping of the Cerrado was conducted by the National Institute for Space Research (Inpe) and the Brazilian Agricultural Research Corporation (Embrapa), and it was completed and launched in December 2022. New features in comparison to the 2018 version include the higher spatial resolution (10 meters for the Sentinel Image) and drilling down on the pasture class in “pastures with a predominance of herbaceous vegetation” and “pastures with a predominance of shrubby vegetation”. The section of these maps for the river basins is now available and allows comparisons on land use change between 2018 and 2020. INPE also performed the mapping of Prodes Cerrado 2022.

There was extensive training and engagement activity. This contributed to the result of the indicator for the number of farmers who received agricultural assets or services," which corresponded to 303% of the target (Figure 27). The National Service for Rural Learning (Senar) provided agricultural services to 13,642 people through Distance Education (EaD) actions, in-person training sessions, field days and assistance to rural producers. The Brazilian Forest Service (SFB) also carried out activities with farmers related to environmental regularization, with a focus on revising the Rural Environmental Registry (CAR). 584 producers attended meetings held by SFB to engage and raise awareness of rural producers in Minas Gerais and Bahia. The number of people hired also exceeded the expected target.

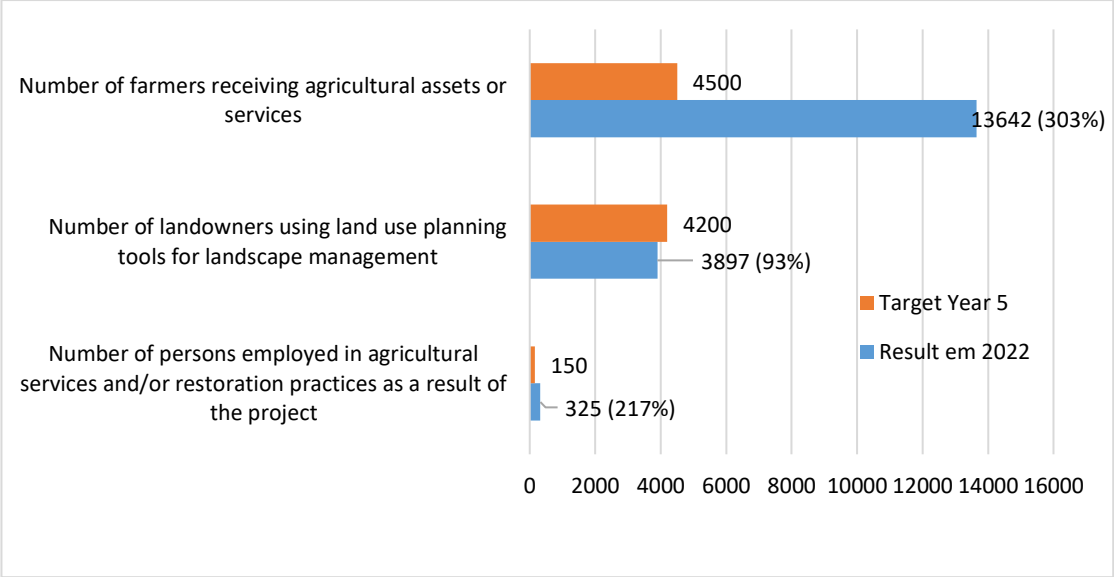


Figure 27 – Indicator results as of December 2022 and targets set for Year 5 of the Rural Landscapes Project.

The number of landowners who adopted land use planning and landscape management[23] reached 93% of the target. The number of rural producers who decided to adopt a planning tool accounts for 65.2% of the total number of producers covered by the project (a total of 5,978 producers). The properties covered by the Project cover a total of 723,952.59 ha, of which 520,847.69 ha are "land area under land use planning and landscape management". This is considerably below the target of 1,050,000 ha expected by the end of the Project and has already been discussed in several meetings with the World Bank, with an emphasis on discussions on the Mid-Term Review. Its justification is associated to an assumption for the Project that did not hold up. The Project considered that the average area of the properties to be covered by the Project would be 300 ha. For the target of covering 4,000 properties, an area of 1,200,000 ha was reached. However, most properties covered by Technical and Managerial Assistance (TMA) are represented by mini farms (*minifundios*) and small properties.

[23] This is the sum of properties applying agroecosystem sustainability indicators (ISA) by the fourth visit or planning by the sixth visit or having more than five visits not excluded and associated to the Project, which would place them in the ISA registration planning phase of the Project.

FIP CAR

Key contributions of FIP CAR in 2022 include the development of thematic mappings for the 11 states covered by the project. This will help to address the most significant bottleneck for large-scale regularization in Brazil: the CAR validation stage. Now that the maps are ready, the states and Federal District are equipped to use the dynamized analysis. In addition, the updated cartographic mapping may be used by the states covered by the Project to improve environmental management by identifying priority areas for the conservation and recovery of ecosystems, as well as areas of interest for sustainable rural development. Maps also contribute to the monitoring and surveillance of rural areas, helping to prevent and fight deforestation and environmental degradation.

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

Level: Investment Plan

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

The transformational impact of the Forest Investment Program (FIP) derives from integrated actions between four institutions (Ministry of the Environment (MMA); Ministry of Agriculture, Livestock and Food Supply (Mapa); Ministry of Science, Technology and Innovation (MCTI); and Brazilian Forest Service (SFB)), which spearhead the five major projects aimed at strengthening policies for sustainable rural development (FIP ABC, FIP Rural Landscapes) and improving environmental and land governance (FIP CAR, FIP Monitoring and FIP National Forest Inventory). This synergy drove a significant boost in institutional capacities and progress in the collection, systematization and transparency of strategic information about forest resources, deforestation, land cover and land use change, and environmental regularization in the Cerrado region. This legacy will place Brazil back in the position of a relevant actor towards its leading role in the global climate agenda.

FIP Rural Landscapes

The Rural Landscapes Project contributed to INPE's monitoring tools (Prodes, TerraClass and Deter Cerrado), which play a key role in supporting information gathering on greenhouse gas (GHG) emissions and reductions. In addition, it contributed with integrated actions for sustainable landscape management by producing and transferring knowledge and by encouraging practices such as recovery of degraded areas and conservation and recovery of vegetation.

FIP CAR

Advancement of the environmental regularization agenda will help to enhance transparency on environmental liabilities and assets. One of the pillars of this project is hiring companies specializing in cartographic mapping, which play a crucial role in generating accurate and up-to-date data on rural areas. The maps help make sure that the data are accurate and reliable; they are fundamental for reviewing the CAR; they contribute to the monitoring and surveillance of rural areas, thereby helping to prevent and combat deforestation and environmental degradation; they make it possible to integrate various databases while supporting transparency and information sharing between public agencies and civil society. This integration facilitates access to information and encourages citizen participation in the environmental management process.

In addition, progress being made in the environmental regularization agenda will allow forest asset owners to access incentive policies such as payments for environmental services (PES) and Legal Reserve Quotas (CRAs).

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

Level: Investment Plan

1. Please describe how bilateral and multilateral development partners supported interaction between the FIP and other REDD+ activities.

FIP Rural Landscapes

Project implementation relies on seven institutions. Senar is responsible for implementing the TMA in 4,200 rural properties. The SFB/MMA, a member of the Project Management Unit (UGP), is responsible for implementing the Law for the Protection of Native Vegetation and the Forest Code, with a focus on environmental regularization and forest restoration. The Secretariat for Innovation, Sustainable Development, Irrigation and Cooperativism (SDI)/Mapa, also a member of the UGP, is responsible for strengthening the ABC Plan. Embrapa Cerrados is responsible for providing Technical and Management Assistance (TMA) to more than 200 technicians in recovery techniques for degraded pasture lands and native vegetation. INPE and Embrapa Digital are responsible for the three-year TerraClass mapping (2018, 2020 and 2022) of the Cerrado biome, in addition to analyzing the landscape in the areas served by TMA. Finally, the German Technical Cooperation Agency (GIZ) is responsible for the financial and administrative implementation of the Project.

OEMAs, Incra Superintendencies in the seven states where the Project operates are also involved in some of the Project's actions, in addition to rural unions in municipalities with properties receiving TMA.

In the first half of 2022, discussions were initiated for new partnerships with a view to encouraging and strengthening environmental conservation and restoration actions, such as the engagement with Cargill. Cargill resorted to Senar – MG in order to establish a partnership for the benefit of the rural properties covered by the TMA programs conducted by the Federation System of Agriculture and Livestock of the State of Minas Gerais/Senar, in particular those beneficiaries of the FIP Rural Landscapes Project. Cargill is a multinational agribusiness company in the food production and processing industry. Its programs include an action to support farmers in productivity, sustainable land use and restoration of areas, in addition to encouraging the environmental regularization of rural properties.

FIP CAR

The main partners involved in the project implementation arrangement were the state bodies managing the CAR and the family farmer unions in the municipalities covered. The involvement of these partners made all the difference, as they are familiar with the local settings, in addition to knowing and working directly with the target audience, which brings a feeling of belonging and close relationship, which helps discussions. IICA – another key partner – helped to fast-track the tender process in support of all the administrative and bureaucratic work.

2. Please describe how (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.

FIP Rural Landscapes

The rural producers covered by the Project have adopted degraded pasture and native vegetation recovery practices.

FIP CAR

The FIP/CAR Project relies on the participation of state agencies responsible for environmental policies from 11 states located in the Cerrado Biome, in addition to the support of rural producers' unions, a rural workers' union, municipal secretariats for the environment and agriculture in the municipalities covered by the Project.

The FIP/CAR Project is supported by the Interstate Movement of Babassu Coconut Breakers (MICQB) in the state of Piauí. The MICQB assists in the identification of traditional territories, and provides support during the stages of awareness and engagement of traditional peoples and in public hearings on the importance of the CAR. The registration of traditional territories of Traditional Peoples and Communities (TPCs) in the state of Piauí was largely successful due to the partnership between the FIP CAR Project and the MICQB.

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

FIP Rural Landscapes

The rural producers assisted by the project have adopted recovery practices for degraded pasture lands and native vegetation. In the Triângulo Mineiro River Basin, in the state of Minas Gerais, partnerships were established with local governments and private companies to supply inputs as an incentive for the adoption of conservation and restoration practices. In addition, the project relied on the participation of rural workers' unions in mobilization and training campaigns with rural communities.

FIP CAR

The Project relied on the cooperation of local organizations, as in the case of the MICQB of Piauí, which contributed to the location of traditional territories, awareness and mobilization of traditional peoples.

FIP FORM 3.4 - THEME 3.4: LINK OF DEDICATED GRANT MECHANISM FOR INDIGENOUS PEOPLES AND LOCAL COMMUNITIES (DGM) AND 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?

FIP DGM Brazil (Phase 1) began its activities in the first semester of 2015 and ended in January 2022. The project and its actions were strongly linked to the FIP's objectives in Brazil, in terms of a) strengthening the involvement of Quilombola and indigenous peoples and traditional communities (PIQCTs) of the Cerrado (and their respective representative entities) in FIP programs, REDD+ and other similar programs targeting climate change at the local, national and global levels, and b) contributing to improving the livelihoods of its target audience, land use and sustainable forest management in their territories.

Since FIP DGM Brazil ended in January 2022 it was not formally active during this reporting period. Its activities throughout the year had the purpose of ending Phase 1, upscaling its impacts by joining the Global DGM network in learning and exchange programs and consolidating its continuity through FIP DGM Brazil - Phase 2.

Considering that the previous report (M&R 2021) was delivered before the end of all the subprojects (Component 1) supported by FIP DGM Brazil (Phase 1), we organized this section to highlight the main results of Phase 1 before presenting specific actions for 2022.

FIP DGM Brazil (Phase 1) – Completed

DGM Brazil (Phase 1) complemented the FIP Investment Plan and contributed to it by: strengthening the connections between Indigenous Peoples, Quilombolas and Traditional Communities (PIQCTs) and the institutional capacity of its representative organizations; increasing knowledge about climate change and Reducing Emissions from Deforestation and Forest Degradation (REDD+); fostering sustainable natural resources management and livelihoods within their territories; and supporting recovery from the negative impacts of the COVID-19 pandemic. Project beneficiaries on the whole gained greater autonomy to protect their natural resources in an area covering over 6 million hectares.

The FIP DGM Brazil project is organized into two components. Component 1 supports the local development of indigenous peoples and traditional communities through community activities proposed by the communities themselves (subprojects). Component 2 finances capacity-building and institutional strengthening activities in community organizations of PIQCTs, in addition to the subprojects supported in Component 1.

In Component 1 the FIP DGM Brazil (Phase 1) supported 64 community-led subprojects in the Cerrado. 13 or 20% of them were led by women. Projects vary by thematic line and in response to specific needs of the communities. Their purpose is to improve natural resource protection and production systems, as well as to expand marketing networks for biodiversity products.

The most recurrent activity in FIP DGM Brazil subprojects is processing fruits, nuts and non-timber forest products of the Cerrado. These initiatives add value to other productive activities, generating income for local communities. The second most recurrent community subproject consists of recovering native vegetation, springs and water bodies in degraded areas.

When classified by ethnic identity, 56% of community subprojects benefited indigenous peoples, 25% Quilombola communities and 19% other traditional communities.

The FIP DGM Brazil management team conducted 93 technical assistance visits to support the implementation of community subprojects.

Component 1 contributed by:

- Benefiting 34,780 people (9,145 families) directly – including 11,041 women – by strengthening the community's food sovereignty and promoting healthy eating, generating and increasing income among community families (especially for women), and improving work conditions and quality of life.
- Protecting 73 springs, producing 38,503 saplings and recovering 659 hectares of native forest.
- Placing 659 hectares under sustainable natural resources management.
- Helping 2,786 families from 59 PIQCT communities by providing emergency assistance to address the negative impacts of COVID-19 on their livelihoods, health and food security.

As regards Component 2, although COVID-19 restrictions caused delays and affected some of the training and technical assistance activities planned, it contributed by:

- Conducting 22 training programs that benefited 188 community organizations, or 2,140 participants (1,212 women). It also offered workshops on project planning and development, introduction to climate change and REDD+, female empowerment, restoring degraded areas and sociobiodiversity agroindustry entrepreneurship, in addition to a course on socioenvironmental sustainability and advocacy given in partnership with the University of Brasilia (UnB).
- Supporting PIQTC representatives to participate in 38 national and international information sharing events.
- Supporting five young PIQCT representatives to join the UnB master's program.

For more information about the project see the FIP DGM Brazil website at: dgmbrasil.org.br.

FIP DGM Brazil in 2022

Activities throughout 2022 involved finalizing Phase 1, participating in events and publications, and preparing for Phase 2. Among others, this involved:

- Nominating and supporting the selection of Scholars for the Global Learning Scholarship 2022 under the Global Learning and Knowledge Sharing component. In addition to adding global visibility to the local narrative, this event gave FIP DGM Brazil a chance to share knowledge and exchange experiences through the DGM network. Four names were nominated and received letters of recommendations from the National Steering Committee (NSC) and support from the National Executing Agency (NEA). Three of them were selected. Details about the participation of Fagno Moreno — Global Learning 2022 scholarship holder by DGM Brazil — are available on the DGM Global website. Another suggestion is to watch the video “Vozes da Juventude Indígena” [Voices of Indigenous Youth] filmed for the World Day of Indigenous Peoples that can be found on the DGM Global channel on YouTube channel and its website.
- Participating in the Impact Assessment Workshop for FIP Projects in Brazil that was offered by the FIP Coordination project in Brasilia, DF. This event was attended by members of the NSC, NEA, World Bank and beneficiaries. The workshop provided an opportunity to share experiences with other organizations that implement projects with FIP BIP investments.
- FIP DGM Brasil participated in the 27th United Nations Climate Conference (COP 27) in November 2022 in Egypt with the presence of representative Anália Tuxá. This participation

was announced in theFIP BIP profile Instagram profile.

- A knowledge exchange visit was made to DGM Mozambique with the participation of three NSC members. Brazil's participation was announced in DGM Global's Instagram profile and can be accessed here. It was also posted on the FIP BIP website.
- The “Guia de Direitos de Povos do Cerrado”, [Guide on the Rights of Cerrado Peoples] was published in print and digital format (see the FIP DGM Brazil website).
- The Environmental and Social Commitment Plan was prepared to implement the DGM/FIP/Brazil Project - Phase 2. To see the English version, go to the FIP DGM Brazil website.
- A publication was prepared on the “Capacitação do DGM no Brasil para Povos Indígenas, Comunidades Tradicionais e Quilombolas” [DGM Brasil training course for Indigenous Peoples, Traditional and Quilombola Communities] and is available on the FIP DGM Brazil website.
- There was also a publication about DGM – Brazil learnings and achievements “Aprendizados e Conquistas do DGM – Brazil” to be found on the FIP DGM Brazil website.
- An article and video were prepared about FIP DGM Brazil NSC member Lucely Pio and International Women's Month 2022. Both are available on the DGM Global website.

FORM FIP 3.5 - THEME 3.5: HIGHLIGHTS/SUCCESS CASES TO SHARE

Level: Investment Plan

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

FIP Rural Landscapes

The TerraClass Mapping of the Cerrado improved the TerraBrasilis Portal that serves the entire Brazil. This upgrade in TerraClass encouraged negotiations with IBGE with the purpose of expanding TerraClass across the country, making it the official land use map. Negotiations are still at the initial phase. TerraClass data was also used by the Ministry of Agriculture, where they were able to observe the changes dynamics of agricultural production in the Cerrado biome.

Partnerships with state environment agencies (OEMAS) and INCRA superintendencies to support environmental regularization mainly in the CAR analysis stage, impacting not just the beneficiary rural properties and settlements, but also other rural properties outside the project.

FIP CAR

The Technical Cooperation Project signed with the Inter-American Institute for Cooperation on Agriculture (IICA) as provided under the Loan Agreement significantly expanded the project's operational capacity, enabling the execution of 11.27 million in the year 2022, compared to a total amount executed directly by SFB, between May 2017 and December 2022, of R$ 11.53 million.

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

What were the most important achievements? were achievements and shock most important in terms of incorporation gender investments, holdings FIP?

FIP Rural Landscapes

FIP Rural Landscapes an action plan Gender, with actions and indicators related gender.

Considering Result Indicator 1 (Proportion of female landowners or rural producers registered in training and capacity-building events offered by the project), participation in training courses offered through the project[24] included 2,903 women (33.9%) and 5,660 men (66.1%), of which 5 did not report their gender, totaling 8,568 people participating in the courses (Table 8).[25]

[24] Data reported by Senar and SFB.

[25]The same data can be considered for Result Indicator II (Proportion of women landowners or rural producers among those completing the training and qualification events offered by the project).

Table 8 – Participation training courses offered by the project, by gender

Description	H	M	Not informed	Total
Professional Qualification and Social Promotion	3952	1772	5	5729
Distance Education	1268	908	-	2176
Course on Springs	44	35	-	79
Field activities for environmental regularization – SFB	396	188	-	584
Total	**5660**	**2903**	**5**	**8568**

Rural properties led by women assisted by TMA technicians since the start of the project represented 23.2% of the total (Result indicator III) (Table9).

Table9 – Rural properties benefiting from TMA, by producer gender and area

Gender	Number of rural properties	%	Area (ha)	%
Women	1387	23.2	140284.1	19.5
Men	4590	76.8	577975.3	80.5
Not informed	1	0	63.2	0
Total	**5978**	**100**	**718322.6**	**100**

The percentage of women among those who adopted new technologies or agricultural practices is 11.39% of the total TMA beneficiaries (Table 10) and 48.9% of the female TMA beneficiaries (**impact indicator III).** Regarding the adoption of sustainable systems, practices, products, and production processes (SPSabc), no difference was observed in relation to the gender of the producer assisted. The percentage of men covered by the project that adopt ABC techniques is 48.66% of the total.

Table 10 – Number of producers applying sustainable systems, practices, products, and production processes, by gender.

Description	BA	GO	MA	MT	MS	MG	TO	Total
Without records showing SPSabc use	609	126	217	89	130	1,332	563	**3,066**
Women	94	33	41	16	29	360	136	**709**
Men	515	93	176	73	101	972	427	**2,357**
With records showing SPSabc use	774	139	252	42	159	1,310	236	**2912**
Women	159	21	79	5	27	349	38	**678**
Men	615	118	173	37	132	961	198	**2,234**
Grand total	**1,383**	**265**	**469**	**131**	**289**	**2,642**	**799**	**5,978**

The number of women with active contracts totals 30.5% at FIP Landscapes (

Table 11) executing agencies and 30.7% considering all accumulated contracts (active and not active) (

Table 12). Note should be made of the participation of women in actions developed by SENAR, since a total of 1,387 female rural producers were assisted directly or indirectly by a team consisting of 2 technical coordinators, 3 supervisors, 56 field technicians and another 63 women working inside the regional SENAR administrations participating in the project.

Table 11 – Persons with active service delivery contracts in 31 December 2022, by gender.

Institution	**W**	**%**	**M**	**%**	**Total**
Senar	29	22.48	100	77.52	129
GIZ	3	60.00	2	40.00	5
SFB	4	66.67	2	33.33	6
SDI	4	100.00	0	0.00	4
Embrapa Cerrados	4	66.67	2	33.33	6
Embrapa Digital	2	50.00	2	50.00	4
INPE	4	40.00	6	60.00	10
Total	**50**	**30.49**	**114**	**69.51**	**164**

Table 12 – Accumulated value of persons hired by the project, including active and inactive contracts.

Institution	**W**	**%**	**M**	**%**	**Total**
SENAR	70	25.36	206	74.64	276
GIZ	3	50.00	3	50.00	6
SFB	4	71.43	2	28.57	7
SDI	4	57.14	3	42.86	7
Embrapa Cerrados	5	71.43	2	28.57	7
Embrapa Digital	5	71.43	2	28.57	7
INPE	9	56.25	7	43.75	16
Total	**100**	**30.77**	**225**	**69.3**	**325**

The data include the contracts of TMA technicians and formal contracts under the Brazilian CLT regime, as well as individual consultant hired with project funds. As concerns compensation, SENAR reported that the amount given to men and women hired as TMA field technicians is not equal.

There is still no information for some of the indicators, either for lack of actions or because the data collected is insufficient (Table 13).

Table 13 – Impact indicators without consolidated information.

Indicator	Status/justification
Result indicator IV Proportion of female landowners or rural producers satisfied with the access and quality of the rural extension services offered by the project).	The satisfaction survey is being prepared and should be ready in the 2nd semester of 2023.
Impact indicator I Proportion of rural establishments registered in the CAR that are owned by women.	The data entered in Sisateg are insufficient.
Impact indicator II Proportion of rural establishments developing Projects for Recovery of Degraded and Altered Land - PRADA that are owned by women.	There are currently no ongoing Pradas registered in the project.
Impact indicator IV Proportion of women among project beneficiaries with access to ABC Plan lines of credit for the adoption of low carbon agriculture technologies.	The project has not developed any actions of systematized activities to that end yet.

Tribute to Rural Women's Month

In October 2022 SENAR produced and disseminated materials in honor of Rural Women's Month. Women involved in the project were selected on the occasion: rural producers, field technicians, supervisors and coordinators from different states. Each woman was asked to give a statement that was used to produce a card. Bellow are some examples of materials produced and shared with the field team with a view to inspiring and valuing the work done by women in the project (Figure28).

Figure28 – Material in honor of Women's Month produced by the FIP Rural Landscapes project.

FIP CAR

The percentage of women among OEMA professionals trained to use the Sicar to analyze and validate registrations totaled 47%.

Sicar does not provide information on the gender of those responsible for the rural properties registered. However, it is important to note that a large part of the target audience is formed by women.

One notorious example is the MICQB, which supports the FIP CAR in Piauí. A large part of the success in registering traditional PCT territories in the state of Piauí lies in the partnership between the FIP CAR project and MICQB, which helps in locating traditional territories and helps in raising awareness and mobilizing traditional peoples to participate in public hearings on the importance of the CAR. The project had a direct impact on female coconut breakers, who by registering were able to access rights such as maternity leave

IFP FORM 4.1 - CATEGORY 4: OTHER TYPES OF REPORTING

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?

In Brazil FIP projects are coordinated by the FIP Coordination project, which is responsible for strengthening FIP BIP actions. The goal is to strengthen Brazil's ability to coordinate (supervise, plan, monitor, assess and report) FIP projects in Brazil.

In addition to preparing this annual monitoring report, the FIP Coordination project holds events and activities to encourage BIP projects to identify and implement synergetic actions with each other, thereby helping them to achieve their objectives.

Throughout 2022 the FIP Coordination project held monthly ordinary meetings to advance its activities. In addition, several activities were conducted in partnership with different ministries and government agencies, with online meetings, and ongoing dialogues to promote the implementation of FIP BIP projects, namely:

Coordination Meeting held on 10 May 2022

- The meeting was held online with the purpose of discussing the FIP BIP projects outlook and agenda for 2022. Among its eighteen participants were project managers and representatives of the World Bank, MMA, MAPA, Ministry of the Economy (ME) and MCTI (Figure29).

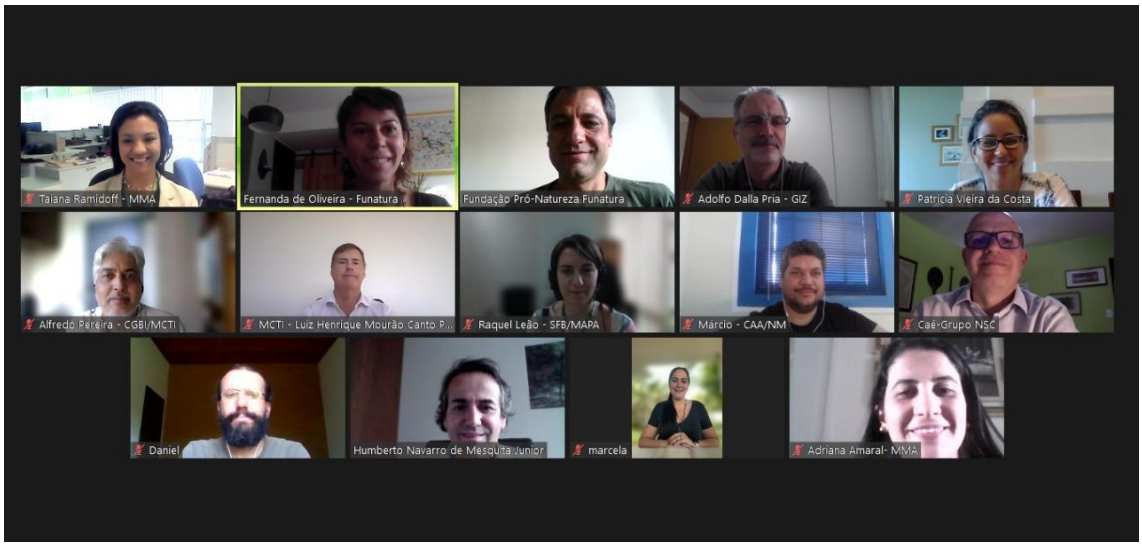


Figure29 – Screenshot of the virtual coordination meeting held on 10 May 2022.

Impact Assessment Workshop held on 29-30 June 2022

The workshop was held in person at the MMA in Brasilia (Figure 30) with the purpose of involving all the program's segments in the impact assessment. It brought together close to 80 persons from ten Brazilian states and the Federal District, including beneficiaries, technicians, managers and representatives from MMA, MCTI, ME, MAPA and the World Bank.

The participation of male and female rural producers from the FIP ABC Cerrado, FIP Rural Landscapes and FIP Macauba projects; technicians and analysts from various environmental agencies that use FIP Monitoring and FIP IFN data and systems; and representatives of indigenous peoples and traditional peoples and communities from the FIP DGM Brazil project consolidated the participatory nature that has been the hallmark of the ongoing evaluation process.

The FIP Coordination project was responsible for planning the entire event, among others by:

- Holding meetings to plan online and in person activities
- Preparing support materials for the workshop (cards, posters, mural exhibits, etc.)
- Issuing round trip airline tickets for 14 participants
- Providing accommodation for 16 participants
- Per diem for 18 participants
- Managing the list of attendance for nearly 80 guests
- Hiring a catering service with lunch for event participants and coffee breaks
- Planning, designing and hiring suppliers for welcome kits consisting of an ecobag, mug and notepad with pen, all of them produced with sustainable materials
- Planning, designing and hiring graphic services for communication pieces, namely: header, banners, windbanners and personalized badges
- Preparing a photographic record of the entire event, a collection of almost 800 images
- Obtaining testimonials from ten beneficiaries of six different projects
- Recruiting and overseeing the work of professional group work facilitators

Figure 30 – Impact Assessment Workshop held on 29-30 June 2022 in Brasilia.

Attendees rated the workshop very highly and it generated important results. In addition contributing significantly to systematizing the results and impacts perceived by participants, the workshop offered an important sharing space for FIP Coordination members and stakeholders from other FIP projects, between the projects and stakeholders from inside and outside the projects, and among all three segments.

Coordination Meeting held on 13 October 2022

In order to plan the celebration of the FIP BIP's 10th anniversary together with managers of the other FIP projects, FIP Coordination held a meeting with 25 attendees (Figure 31). Held in hybrid format (in person and online), the meeting discussed the advantages and disadvantages of holding the event in 2022 and the possible agenda.

Most participants recommended for the celebration to take place in 2023, and instead of having a seminar to have a festive demonstration focused on celebrating the plan's 10 years and contributions to Brazil and the Cerrado. This meeting was followed by internal FIP Coordination alignment meetings in which it was decided to follow the managers' recommendations.

Figure 31 – Coordination meeting held in hybrid format on 13 October 2022

Coordination Meeting held on 8 December 2022

The meeting was held virtually on 8 December 2022 (Figure 32). It brought together senior FIP project managers and World Bank representatives for the last coordination meeting of the year. The event offered an opportunity for the projects to give updates and feedback about the prior meeting and celebration event, but especially to present a synthesis of the evaluation process conducted until then. The main points of the performance evaluation, project results and program impacts were presented.

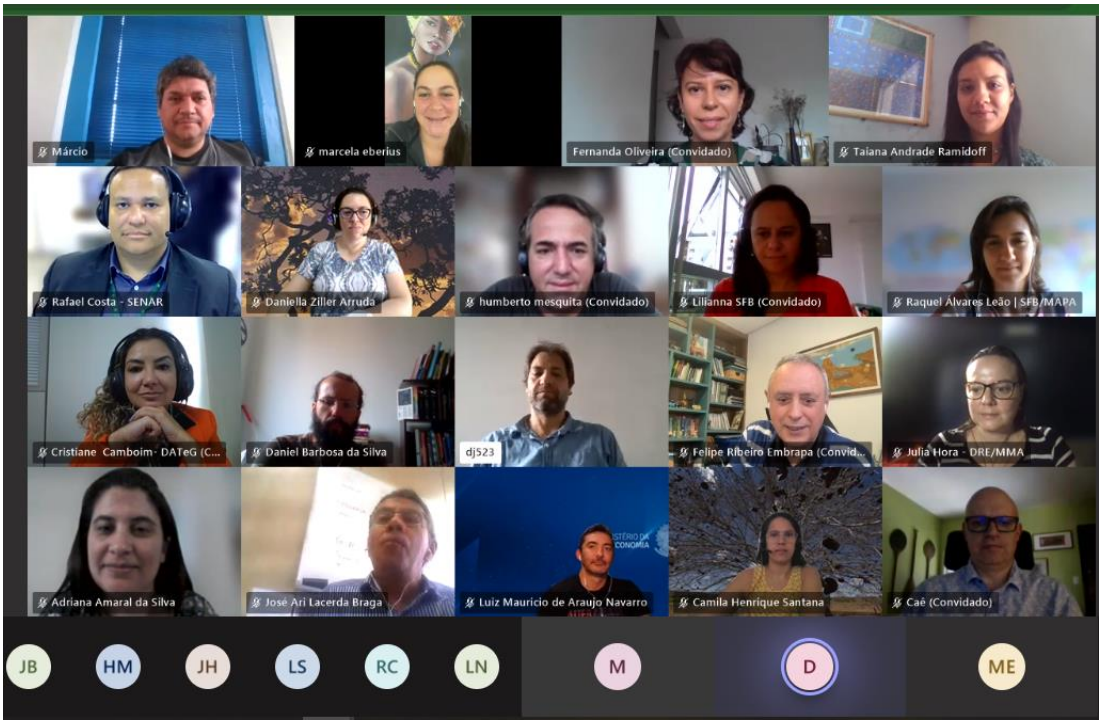


Figure 32 - Coordination Meeting held virtually on 8 December 2022.

Evaluation of FIP/BIP Performance, Impacts and Results

In compliance with its role of proving support for FIP projects in Brazil to achieve their goals, the FIP Coordination project has been conducting and independent external evaluation focused on measuring the progress of different projects, identifying strengths and weaknesses, reinforcing positive aspects, making necessary adjustments, and assessing the impacts of the program as a whole.

All the FIP projects in Brazil were evaluated during 2021 and the results were shared with their managers. In 2022, the evaluation process advanced to the following deliveries:

Results Evaluation of Forest Investment Program projects in Brazil.

The purpose of the Results Evaluation is to analyze to what point the objectives of each of the eight projects that form the Forest Investment Program's (FIP) Brazil Investment Plan (BIP) were or are being achieved.

The Results Evaluation Report contains a Presentation, Objectives and Methodology. For each project there is a section on General Data, Components, Expected Results and Indicators, Results of Statistical Analysis, Balance of Results, Project Contribution to GDP, Key Points, Conclusions and Recommendations.

The managers received the document with results evaluation of their respective projects and access to the complete document and were given a chance to propose adjustments and contributions.

Results and Impacts Evaluation of the Brazil Investment Plan for the Forest Investment Program

The evaluation had the purpose of: 1. Analyzing the extent to which the FIP BIP objectives were achieved, considering results achieved by the end of 2020; and 2. Using these results (environmental, institutional and socioeconomic) as a reference to assess their impacts, with a view to understanding the transformations and changes effected by the results achieved and evidence thereof.

The document is organized into two major sections: FIP BIP Results Evaluation and FIP BIP Impacts Evaluation Each section contains the Methodology, Results and Conclusions. The Objectives and Recommendations are presented in single sections at the beginning and end of the document, respectively. There is also an Executive Summary

Although the report was delivered in December 2022, it went through a series of revisions until reaching its latest version in January 2023. It consists of a volume with 248 pages that can be consulted here.

Evaluation Summary for the Brazil Investment Plan (BIP) of the Forest Investment Program (FIP) and the projects that comprise it.

To make it easier to share the information produced in the evaluation being conducted since 2021, the FIP Coordination project prepared a synthesis with the information generated taking as reference the period of August 2014 to December 2020.

The document was designed to share the results of the plan and projects to a broader audience beyond its management body. As such, an objective and direct text was prepared with images and a professional layout. The report is structure in two sections. The first contains the Performance and Results of FIP Projects. The second includes (A) the Results Evaluation of the Brazil Investment Plan for the Forest Investment Program, and (B) the Impacts Evaluation of the Brazil Investment Plan for the Forest Investment Program.

The full report is 82 pages long and will be adapted into an e-book for future sharing. The evaluation summary report can be accessed here.

Communication Actions

FIP Coordination communication initiatives are also important to foster synergies between the various FIP investments in Brazil. Annex 1 contains the main communication initiatives of the FIP Rural Landscapes and FIP CAR projects.

SUMMARY OF THE 2022 FIP/BIP STAKEHOLDER MEETING

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.

There were 84 persons on the guest list, including managers (from executing agencies and government bodies), technicians and beneficiaries of the eight FIP projects in Brazil, development bank representatives (World Bank and Inter-American Bank of Development - IDB), representatives of the four ministries responsible for managing the program (Ministry of Environment and Climate Change, Ministry of Agriculture and Livestock, Ministry of Science, Technology and Innovation, Ministry of Finance) and civil society representatives.

The list of attendance has 26 participants and is attached to this report. (Annex 3)

2. How did you guarantee stakeholder participation in the workshop? What methodologies were used to incorporate the opinions of all the stakeholders during the workshop? (For example, did you divide the stakeholders into groups to discuss topics according to their areas of expertise? Did you reach a consensus about the data reported?)

The meeting was held virtually on the Teams platform on 5 May 2023. Pedro Bruzzi, FIP Coordination project manager, presented the main results of the projects and gave the other managers a chance to add to or correct this information. Each of the managers was asked to contribute. Their suggestions were written down and taken into account when drafting the final document.

While the 2022 M&R report was being prepared, managers were called on to clarify issues that arose when reading the reference documents. The most recent version of the M&R report was sent to all managers and executing agencies by email before the meeting. Moving forth with the 2022 M&R approval process, Pedro asked the managers to review the report and either sign it off or propose any adjustments by 10 May. Since the document is quite long, Pedro recommended for them to limit themselves to their own projects in order to be able to meet the deadline.

FIP Coordination received an email from managers requesting an adjustment that was incorporated to the final document. After having done so, FIP Coordination considered this document to be validated.

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

Since the 2022 M&R report is very long and could not have been addressed in the meeting, FIP Coordination presented the main results arranged by project with a proposal to define the next steps aiming to approve the full document. In this context the main interventions sought to show the complementarity of the information presented, together with some details and explanations.

Below are a few sections of the meeting minutes that show some of the managers' most relevant participations:

Marcela Eberius Mendonça, FIP CAR manager for SFB/MMA, explained that SFB provided a dynamic analysis to hasten the validation of the nearly 7 million registrations in the database. Throughout the process it became clear that CAR registrations would need to be analyzed using thematic mapping based on a reliable and up-to-date database. She regretted that the thematic maps had only been delivered in 2022, which delayed the project's support to the PRA. She further noted that data generated by the FIP CAR have also been used by other government agencies for environmental planning and licensing. She pointed to the CAR's benefits for traditional communities and investments in communication that produced materials (printed, video classes, podcasts, etc.) for all the states of Brazil. Finally, she noted that 16 states have been trained to conduct dynamized analysis and that the project ended in December 2022.

Sidney Medeiros, focal point for FIP ABC Cerrado and FIP Rural Landscapes at the Ministry of Agriculture and Livestock (MAPA), talked about the importance of the FIP ABC Cerrado project. Besides being a seed for future partnerships with international cooperation, the project was important for the implementation of the ABC Plan. In relation to the FIP ABC Cerrado, Sidney noted that one of the project's big challenges was to convince rural landowners to use technical assistance. He described the considerable leverage potential of TMA, as once producers realize the economic advantage brought by changing the production model they do not return to the traditional one. He therefore concluded that the environment is not central for producers, it is practically a co-benefit. Finally, he reported on the evaluation results, which revealed that producers invested R$ 7.00 in agricultural inputs, machine hours and other investments for each R$ 1.00 invested by the project, showing that the is appropriate and sustainable. He explained that FIP Landscapes is the result of the fusion between FIP ABC Cerrados and FIP CAR to promote an integrated landscape approach that goes beyond crops and pastures. Finally, he added that funds left over from the FIP ABC project were invested in a consultancy to monitor the first decade (2010-2020) and that the project had been fundamental in building the foundations of the ABC+ Plan.

Luiz Henrique Canto, FIP Monitoring Cerrado manager by the Ministry of Science, Technology and Innovation (MCTI), explained that despite the project's closure in 2021 FIP Monitoring actions continue thanks to the 15 million reais invested by the Science, Applications and Special Technologies Foundation (Funcate). He noted that the project received the Best Practice in International Fundraising Award from the Brazilian Development Association (ABDE) in the federal government category. Finally, he added that the project's evaluation concluded that each dollar invested by the project returned five dollars to society.

Humberto Navarro de Mesquita Junior, FIP NFI project manager for the Brazilian Forest Service SFB/MMA, reported that the project had managed to cover 83% of the Cerrado biome in its first phase. He considered this significant progress in view of the spending cap in place during its implementation. Having recovered its financial endowment the project moved into Phase 2, which aims to finish collecting data from the Cerrado and expand its activities to neighboring

biomes. Data collected by FIP NFI formed the basis for several workshops on Cerrado fruits with cooperatives, expanding the possibilities to manage and use forest resources. A second phase was negotiated when the project ended, since part of its funds had to be returned due to the limitations imposed by the spending cap in place at the time. The project intends to complete the inventory of all non-Amazonian biomes in the next two years. He finished by saying the project bore many fruits, such as the forest information collected and progress made in the SNIF.

FIP DGM Brazil representative Márcio Antonio Vieira commented on the various subprojects supported in the first phase of the project and on the current financial commitment for Phase 2. At the moment a selection is taking place for proposals that will receive execution funds, with visits for the management team during May and June to verify them. He mentioned the possibility of leveraging funds from BNDES to expand the number of visits.

FIP Macauba project manager Vitor Salomão Ferreira Franco highlighted the enormous potential of Macauba, since 100% of the nuts' components can be used. It also has potential for capturing carbon and producing biofuel. He explained the change in metrics in relation to how carbon sequestration by Macauba is measured. He noted that even though the project was officially closed in 2022 it played a fundamental role by serving as a pilot that prospered, considering that Inocas initiatives are expanding at full speed.

Annex 1 – Communication and Links

FIP Rural Landscapes

In 2022 the FIP Rural Landscapes' communication initiatives consisted mostly of in person events. As support, promotional materials such as banners, ribbons and gift kits were prepared to distribute to participants. Articles were also prepared to be published in various spaces. Particularly important among the many results of these meetings were the creation of a WhatsApp community with rural producers, and the application of an evaluation questionnaire whose results are in the process of being compiled.

The main communication actions were:

- Video with the step-by-step process of environmental regularization. Four more videos are planned covering various environmental education subjects to raise the awareness of rural producers and field technicians.
- Dissemination, in partnership with Senar, of videos recorded by field technicians.
- Launch of the Newsletter in July 2022 with the purpose of improving communication between institutions, sharing an agenda to strengthen actions, giving more publicity to activities and creating a unique and regular space to showcase the project among its target audience. The newsletter is sent to partner institutions, donors, regional superintendencies, state agriculture and environment agencies and civil society. The mailing includes close to 350 emails.
- Support and guidance given to the project's partner institutions and launch of the Guia de Plantas do Cerrado para Recomposição da Vegetação Nativa [Guide on Cerrado Plants to Reconstitute the Native Vegetation Cover] Edited by Embrapa Cerrados and published on Cerrado Day, on September 11.
- Publication of TerraClass Cerrado 2020 data.

Links:

MAPA Portal
TerraClass shows land cover and land use in the Cerrado biome
TerraClass shows land cover and land use in the Cerrado biome — Ministry of Agriculture and Livestock (www.gov.br)

Embrapa Portal
TerraClass shows land cover and land use in the Cerrado biome
https://www.embrapa.br/busca-de-noticias/-/noticia/77150778/terraclass-mostra-a-cobertura-e-o-uso-da-terra-no-bioma-cerrado

INPE Portal
TerraClass shows land cover and land use in the Cerrado biome
TerraClass shows land cover and land use in the Cerrado biome — National Institute for Space Research (www.gov.br)

Embrapa Portal
National Cerrado Day: productive environmental management is the central theme of a video with lectures and publication launches
https://www.embrapa.br/busca-de-noticias/-/noticia/73667834/dia-do-cerrado-gestao-ambiental-produtiva-e-tema-central-de-video-com-palestras

MAPA Portal
SFB brings states together to discuss the Environmental Regularization Program
SFB brings states together to discuss the Environmental Regularization Program — Ministry of Agriculture and Livestock (www.gov.br)

MAPA Portal
Environmental regularization is the subject of a workshop in Minas Gerais
Environmental regularization is the subject of a workshop in Minas Gerais — Ministry of Agriculture and Livestock (www.gov.br)

CNA Portal
FIP Rural Landscapes Project trains technicians in Minas Gerais and Tocantins
FIP Rural Landscapes Project trains technicians in Minas Gerais and Tocantins | Brazilian Agriculture and Livestock Confederation (CNA) (cnabrasil.org.br)

FAEMG/SENAR System Portal
Ten Field Days for rural producers of the Triângulo Mineiro
Ten Field Days for rural producers of the Triângulo Mineiro - SENAR (senarminas.org.br)

Maranhão State Government
FIP Rural Landscapes: Technicians from Maranhão participate in a leveling and preparation workshop for environmental regularization
https://www.ma.gov.br/noticias/fip-paisagens-rurais-tecnicos-do-maranhao-participam-de-oficina-de-nivelamento-e-preparacao-para-regularizacao-ambiental

Maranhão State Government - SAF
SAF participates in leveling and preparation workshop for environmental regularization - FIP Rural Landscapes
https://saf.ma.gov.br/noticias/saf-participa-de-oficina-de-nivelamento-e-preparacao-para-a-regularizacao-ambiental-fip-paisagens-rurais

MG - IEF Environment Portal
Workshop seeks initiatives for environmental regularization settlements
State Forest Institute - IEF - Workshop seeks environmental regularization actions in settlements

Media – Highlights

Canal Agro+
TerraClass Cerrado releases data on land use and land cover in the biome – YouTube
TerraClass Cerrado releases data on land use and land cover of the biome - YouTube

Nosso Agro Program
FIP Rural Landscapes takes TMA, environmental conservation and restoration to producers
NOSSO AGRO - FIP Rural Landscapes takes TMA, environmental conservation and restoration to procuders - YouTube

Portal MundoGEO
TerraClass releases new mapping data for land use and land cover in the Cerrado
https://mundogeo.com/2022/12/21/terraclass-lanca-novos-dados-do-mapeamento-do-uso-e-cobertura-da-terra-no-cerrado/

Portal Mundo AgroBrasil
TerraClass exhibits land cover and land use in the Cerrado biome
https://agro2.com.br/agrotech/mapeamento-mostra-uso-e-cobertura-da-terra-no-bioma-cerrado/

Portal Agro2
Mapping shows land use and land cover in the Cerrado biome
Mapping shows land use and land cover in the Cerrado biome (agro2.com.br)

DBO Portal
TerraClass shows land cover and land use in the Cerrado
https://www.portaldbo.com.br/terraclass-mostra-a-cobertura-e-o-uso-da-terra-no-cerrado/#gsc.tab=0

Balde Branco magazine – July issue
Forage palm — at Triângulo Mineiro project encourages use by small rural producers
https://digital.baldebranco.com.br/sumario-edicao-687/

Agência Brazil
ABC Plan becomes effective in September to reduce carbon emissions
ABC Plan becomes effective in September to reduce carbon emissions | Agência Brazil (ebc.with.br)

Portal G1 Faemg System promotes Field Day for rural producers in Uberlândia and 8 other cities in the region
Faemg System promotes Field Day for rural producers in Uberlândia and 8 other cities in the region | Triângulo Mineiro | G1 (globo.com)

Read Now Project assisted by the World Bank helps properties in eastern MT to restore degraded areas
Project assisted by the World Bank helps properties in eastern MT to restore degraded areas :: Leiagora | Playagora | Entretê

Hoje Cidades Sustainability: Mato Grosso do Sul is the largest state in land area under integrated agricultural production systems
https://hojecidades.com.br/sustentabilidade-mato-grosso-do-sul-e-o-maior-estado-em-area-de-sistemas-integrados-de-producao-na-agropecuaria/

Diário Digital - MS
Clean cattle ranching, a cause championed by rural producers, the government and science
https://www.diariodigital.com.br/economia/pecuaria-limpa-uma-causa-do-campo-do-governo-e-da-ciencia-em-m

Portal da Cidade – MT
Rural properties restore pastures and degraded areas in MT
Rural properties restore pastures and degraded areas in MT (portaldacidade.com)

Agência Minas Gerais
Workshop seeks initiatives for environmental regularization settlements
Agência Minas Gerais | Workshop seeks environmental regularization actions in settlements (agenciaminas.mg.gov.br)

JM Online
FIP Rural Landscapes program trains senior managers
FIP Rural Landscapes program trains senior managers in Uberaba (jmonline.com.br)

Municipal Government of Campina Verde Portal - MG
Mayor receives visit from Rural Landscapes technician
Municipal Government of Campina Verde

Videos - Highlights

Embrapa
National Cerrado Day: Productive Environmental Management of Rural Properties
National Cerrado Day: Productive Environmental Management of Rural Properties - YouTube

Video recorded by field technicians, produced in partnership with Senar.
(638) FIP Rural Landscapes - Controlling Revenues and Expenditures - Produced by Renato Conceição Almeida (BA) - YouTube

CNA/SENAR System - YouTube
Rural Landscapes - FIP
Rural Landscapes - FIP - YouTube

FIP CAR

The FIP CAR project conducted a communication campaign that included the production of social media content, press releases, printed materials, podcasts, radio spots, institutional videos and informational video classes. The campaign focused on the stages of environmental regularization, emphasizing the central platform for landowners/landholders that provides direct contact between those registered in the CAR and the agencies responsible for receiving, analyzing and approving environmental regularization programs. It responded to OEMA and SFB demands to support mobilization and information sharing initiatives about the CAR and other environmental regularization stages.

The target audience consisted of landowners and holders registered in the CAR, technicians from the competent state agencies, extension workers, consultants, members of associations, trade unions, confederations and other entities of the agricultural sector with activities related to the environmental regularization policy. Focal points of the competent state agencies were involved in producing the materials, having participated directly through interviews given to the podcast series CARCAST, as well as in the production of press releases.

Links:

Digital files of all materials produced by the campaign were uploaded to Drive, including a folder with open artwork that can be edited and updated for printing new editions, whose link was sent to the focal points of state executing agencies:
(https://drive.google.com/drive/folders/1zJzJ4qm2oQrNbomZz0twMlyZtg7g2MMA?usp=share_link)

The institutional video produced presents the main results achieved by the Project, the lessons learned and the next steps needed for environmental regularization of rural properties to continue in the Cerrado biome.
Full version: https://youtu.be/AZvCzfwV-3g
Short version: https://youtu.be/ogmk3WYBJtQ

Short video series titled “Por Dentro do CAR”
https://youtube.com/playlist?list=PLV1gW1Sb0AdH2eFa5UFnuSxwDQ3qu8DvL.

CARCAST series to publicize the stages of environmental regularization in rural properties, encouraging the use of the Landowners/Landholders Central to give visibility to actions by partners of the FIP CAR project.
https://open.spotify.com/show/7GsNsAn4l7WWqrY3QF0BiP?si=f18ddaf57dda4293.

20 Short spots to publicize specific content:
https://drive.google.com/drive/folders/1r0Gc0n-Dau6RTBiyeSnRMrKUoVFjZ0j?usp=share_link.

FIP Coordination

Instagram page. With a view to creating an agile channel to inform FIP BIP project managers of what is happening in the program as well as to upscale the reach of this information to the public in general, an Instagram profile was created for the FIP Brazil in May 2022 (Figure 33). In addition to FIP Coordination actions, the @fip_brasil page on Instagram reposts actions of the other seven FIP projects.

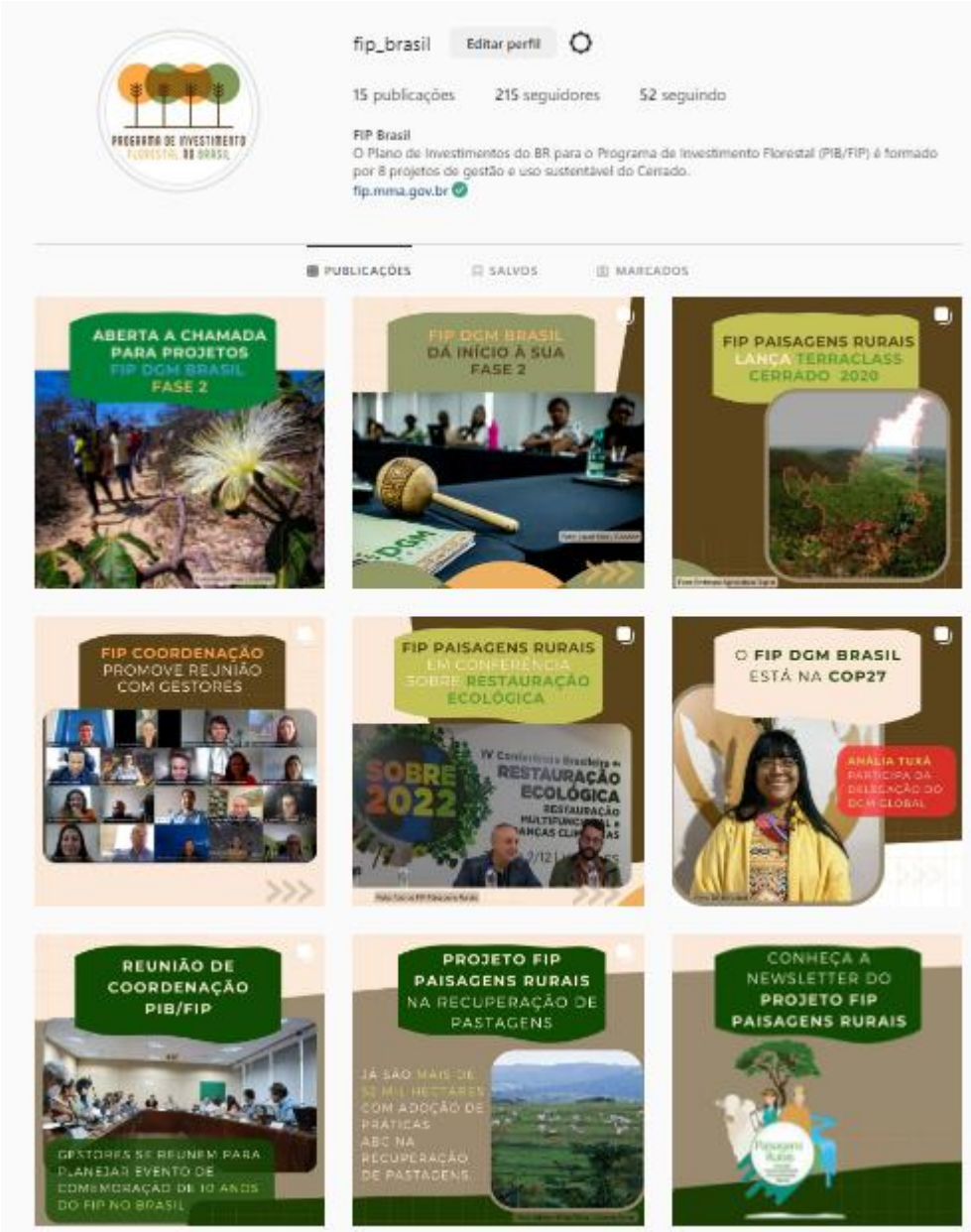


Figure 33 – FIP BIP Instagram profile.

Note: Available at www.instagram.com/fip_brasil. Accessed on 03 February 2023.

WhatsApp Group. FIP Coordination has a WhatsApp group with the main agents of the eight FIP projects in Brazil (Figure 34). It consists of 37 persons that share updates on their projects and relevant updates. In 2022, FIP Coordination kept the group active by sharing the program's main reports and news articles published on the website and Instagram.

Figure 34 – Screenshot of the WhatsApp group.

Website Program. The FIP Coordination project is in charge of the program's website fip.mma.gov.br since 2020 (Figure35). It brings information on every a dos projects e a Funatura publishes news para mantê-lo up to date, current.

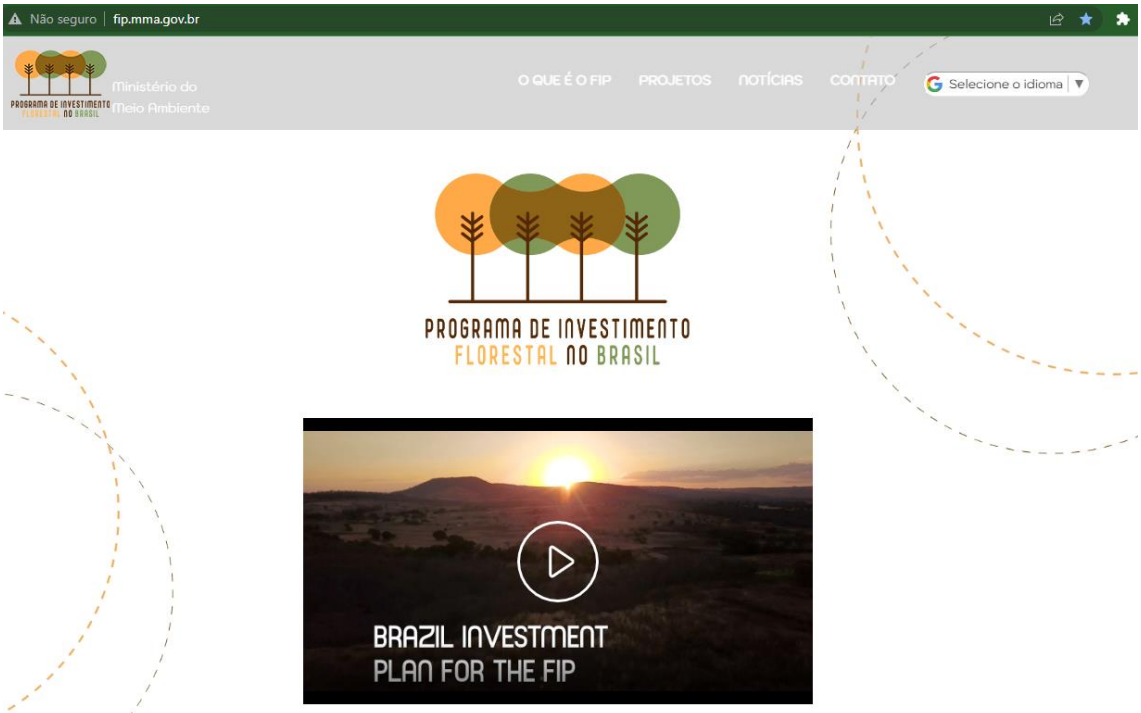


Figure35 – Main page of the FIP BIP website. Available at www.fip.mma.gov.br. Accessed on 22 January 2022.

Eight news items were published on the website in 2022:

1. Editorial: Going into 2022 after 10 years having the FIP Program in Brazil
2. 15/04: National Soil Conservation Day: FIP BIP projects in the context of soil conservation
3. FIP Rural Landscapes trains technicians for field work in Bahia
4. FIP Coordination Project gathers senior managers of FIP BIP projects
5. FIP BIP Participatory Evaluation gathers technicians, senior managers and beneficiaries of eight projects in Brasilia
6. World Bank and FIP CAR project teams come together in support and implementation mission
7. Forest Investment Program in Brazil has plenty to celebrate this September 11 on National Cerrado Day
8. FIP DGM Brazil visits DGM Mozambique to exchange knowledge

In 2022 the website faced some maintenance difficulties because it was hosted in an internet server of the Ministry of Environment that provides limited access to external users. FIP Coordination managers are advancing in negotiations to find a solution.

Communication pieces for the Impact Assessment Workshop. The Impact Assessment Workshop was the FIP Coordination project's biggest event in 2022. Several communication pieces were prepared to support the event, including giveaways and banners (Figure 36 e Figure 37).

Figure 36 – Communication pieces produced by the FIP Coordination project for the Impact Assessment Workshop held in June 2022.

Figure 37 – End of the year gifts

As a communication strategy to thank participants of the eight FIP BIP projects for their contributions and strengthen the ties with these stakeholders, in the end of 2022 the FIP Coordination project organized the sending of gifts to a list of 100 people including managers, technicians and beneficiaries.

Central do Cerrado, a cooperative that participates in FIP actions in Brazil through the project "Strengthening trade in Cerrado Products", one of the subprojects supported by FIP DGM Brazil, was hired to organize and send the gifts. As such, in addition to fulfilling its mission of gifting the project participants and valuing the Cerrado products--the FIP's reason for being in Brazil--, the initiative contributes to strengthening one of the program's own actions.

The gift chosen was a kit with ten Cerrado products, including soaps, nuts, sweets and sauces.

FIP DGM Brazil

- Publication of the Cerrado Peoples' Rights Guide", printed and digital version. Click here for the digital version:

  https://dgmbrasil.org.br/media/publicacoes/Guia_de_Direitos_de_Povos_do_Cerrado_nt77LlC.pdf

- Delivery of an Environmental and Social Commitments Plan for the execution of the DGM/FIP/Brazil Project - Phase 2. Click here for the English version:

  D:\fip\https:\dgmbrasil.org.br\media\ckeditor\2022\09\28\plano_de_compromissos_ambientais_e_sociais_-_versao_oficial.pdf

- Delivery of the publication "DGM Training in Brazil for Indigenous Peoples, Traditional Communities and Quilombolas", available here: https://dgmbrasil.org.br/media/publicacoes/Capacita%C3%A7%C3%A3o.pdf

- Publication of "Aprendizados e Conquistas do DGM – Brazil" [DGM – Brazil Learnings and Achievements] on the FIP DGM Brazil website.

- Publication about Fagno Moreno (FIP DGM Brazil), Brazilian participant of the Global Learning Scholarship 2022, on the DGM Global website. here: https://www.dgmglobal.org/blog/earthday-2022

- Publication of article and video about Lucely Pio, FIP DGM Brazil NSC member, and about International Women's Month 2022, on the DGM Global website. here: https://www.dgmglobal.org/blog/2022/4/womens-day

- Participation of Brazilians participating in theGlobal Learning Scholarship 2022 in the video "Vozes da Juventude Indígena" [Voices of Indigenous Youth], about the World Day of Indigenous Peoples. Available on the DGM Global YouTube channel and its website. See here: https://www.youtube.com/watch?v=wFcz9JiOl_M&t=6s

Annex 2 – FIP Macauba Project Monitoring Report

What were your project's main challenges and advances in relation to the BIP objectives in 2022?

The main challenges were raising funds to ensure the company's financial liquidity and providing quality technical assistance for rural producers. The main advances were the expansion and consolidation of Inocas' sapling production sector and advanced negotiations for new plantings with new investors.

Improvement of Carbon Stocks

What were your project's main contributions to reducing and preventing GHG emissions and improving carbon stocks during the period?

In 2022 we implemented agrosilvopastoral systems in almost 300 ha and the project continues prospecting new areas. Another important result concerns the creation of over 100 plant corridors in permanent protection areas and legal reserves. Inocas' seed germination laboratory achieved more than 80% success in germination and is already managing to meet the project's demand.

a) In the context of your contributions what have been your key challenges and what opportunities for improvement do you see?

Part of the project's funding is related to the certification of carbon credits from Macauba plantations. To be successful, planting has to be done very carefully. Plantings are done through an agricultural partnership where the rural producer is responsible for the crop treatments. Hence, ensuring a good relationship with producers and providing quality technical assistance remain challenging but essential for the project and certification to be successful.

Which actions were taken by your project to bring areas under sustainable practices (sustainable forest management or sustainable land management practices) or to reduce GHG emissions/enhance carbon stocks? Describe the initiatives, for example, technologies implemented, benefiting populations, ecosystems and other relevant information.

Approximately 2,300 hectares of Macauba have already been planted under agrosilvopastoral systems in partnership with family farmers with a view to regenerating degraded pastures and producing oil, animal feed, food, carbon credits, etc.

Benefits

Who were the direct and indirect beneficiaries of your project during the period? Provide a quantitative and qualitative description of the target audience (family farmers, medium and large rural landowners, gender and age). What actions did they benefit from (training, technical assistance, investments)?

Throughout the entire project, the FIP Macauba benefited 45 small rural producers (45 families) and 6 medium producers (on leased lands) supported to restore degraded pastures, produce Macauba oil and produce animal feed and food, with the possibility of certifying carbon

credits. Family farmers receive technical assistance for 20 years. The project also benefited 32 extractive harvesters who received training on good extractive practices and collected and sold Macauba nuts in 2022. In 2022, sales encompassed 402 liters of kernel oil and 54,000 kg of endocarp, 10,500 kg of pulp and 365 kg of Macauba kernel press cake.

In addition, the project benefited 100 recovering inmates of the Apac prison system by providing work breaking nuts to produce saplings. Their sentence is reduced by one day for every three days worked. These inmates were trained to break nuts and extract the seeds, and after serving their sentence Inocas provides the best ones with a temporary job working in the germination laboratory.

a) List the important partners involved in your project's execution arrangement and indicate their main participation or position. Did the engagement of these partners make a difference?

Apac – NGO connected to the MG justice system that participates in the production of sapling by recruiting inmates to extract and germinate Macauba seeds.

Acros – partner company in the germination of seeds and production of Macauba saplings in nurseries.

UFV – university that owns the patent for the germination of Macauba seeds that Inocas uses in its laboratories.

IAC – partner university in R&D and the place that hosts Inocas' germination laboratory in Campinas, SP.

Inter-American Development Bank (IDB) – main investor in the pilot project in MG.

Fundo Vale – investor in the MG pilot project and in the 1st expansion project in Vale do Paraiba, SP.

Impact Earth – main investor in the 2nd expansion project in Pará.

Amaz – investor in the 2nd expansion project in Pará.

Natura – partner company in the purchase of Macauba oils and development of new products and technologies.

b) Explain whether the benefits will last after the project ends and how they affect vulnerable groups.

The duration of agricultural partnership contracts and leases range from 20 to 30 years, the time it takes for the Macauba forest to develop and become able to restore degraded pasture areas.

The introduction of a second production floor in the pastures allows large amounts of vegetable oil to be produced without the negative impacts associated to the conventional production of vegetable oil, such as deforestation and land use change. These indirect benefits remain with the success of the project and contribute to increasing the supply of food without expanding the agricultural frontier over Brazilian biomes.

Biodiversity and Environmental Services

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

Conversion of degraded pastures into productive areas by planting Macauba and creating plant corridors.

What were the main contributions (success cases) of your project's interventions regarding biodiversity and environmental services in your country during this reporting year?

Planting Macauba in degraded areas contributes to preventing erosion, improving soil fertility and pasture microclimate, conserving water and regulating the local climate. Macauba plantations also form plant corridors, that is, connections between forest fragments (APP areas and legal reserves) that allow native animals to move from one place to another.

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

The main challenges were the measurement of some indicators, mainly regarding impacts on biodiversity (plants and animals).

Governance

How has your project contributed to ensure that stakeholder engagement processes allow the participation of marginalized or vulnerable groups, such as women and indigenous or traditional groups, in forest-related decision-making processes?

So far, the Macauba project have not had the opportunity to work with plantations in regions with traditional populations. We are starting plantations northeastern Pará, an area with a predominance of pastures that which may eventually involve consulting local indigenous peoples, riparian inhabitants and extractive harvesters. The Project mapped these populations in Para with the purpose of conducting consultations before starting to plant. This is also a prerequisite for certification of carbon credits in all the regions. In Minas Gerais and São Paulo, consultations are also extended to the rural producers involved, community associations, NGOs and government agencies.

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

Not applicable

b) What were the FIP's main contributions (success cases) to forest governance in your country during this reporting year?

Not applicable.

What have been your main challenges and what are opportunities for improvement?

Land property issues: most rural producers in northeastern Pará do not have ownership documents such as titles to the land, for instance, which creates insecurity for investors and the need for a stricter *compliance* process.

Rights

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 people?

Not applicable

a) What have been your project's main contributions (successes) in relation to forest tenure, rights and access in your country during this reporting year?

To join the project, producers need to prove their legal rights to the rural property or demonstrate that they are interested in and have the means to acquire such rights. In that sense, planting of Macauba has supported land title regularization in some regions, including with technical support from the INOCAS team.

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

Most small rural producers have pending issues related to the rural property, which makes the process of selecting areas to plant Macauba slower, more expensive and riskier.

Capacity development

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

Inocas was able to include Macauba plantations in the São Paulo State Government Atlantic Rainforest Connection Program, an initiative that encourages small producers to reforest Atlantic Rainforest biome areas against payment for environmental services).

Through which actions did your project improve stakeholder capacity in relation to forest and land use planning and management?

For producers who opt for an agricultural partnership, Inocas provides technical assistance throughout the life of the contract (20 years). We offer training in good property management practices and support to use the space between rows of Macauba to plant different products, aiming to diversify production and increase income for producers.

b) What were the FIP's main contributions (success cases) to capacity development in your country during this reporting year?

Not applicable.

What have been your main challenges and what are opportunities for improvement?

We have many partners and our plantations average 20 hectares, which creates a complex situation for the technical assistance team and a greater need for personnel.

Other Support

Has your project received support from other partners, including the private sector, to interact with the FIP and other REDD+ activities? Have there been any challenges in interactions with the private sector? How did civil society organizations contribute to your project?

As a company, Inocas partner with third sector institutions to produce the saplings, such as Apac in Patos de Minas, Minas Gerais and Irituia Cooperative in Pará. We also have partnerships with public universities for Research and Development and sapling production, including the Federal University of Viçosa and the Agronomic Institute of Campinas (IAC), as well as with companies for commercial development and for the Macauba production chain, such as Natura and Acros.

Success Cases

Are there any success cases or examples of particularly remarkable achievements in your project that you can share?

Inocas and Apac - A partnership for the extraction of Macauba seeds. Apac recovering inmates are hired and compensated to extract Macauba seeds that will be used in producing saplings. These seeds are then germinated in the laboratory and go to the nursery stage until they are ready to be planted in the field. A video was produced to present the partnership: https://www.youtube.com/watch?v=Cm6ZwXEwzYs

Annex 3 - List of Attendance for the Stakeholder Meeting

N	Name	Project	Organization
1	Adalberto José Ferreira de Sousa Alencar		Ministry of Finance/SAIN
2	Ana Luiza Champloni	FIP	IDB
3	Andréia de Oliveira Gerk	FIP ABC and FIP Rural Landscapes	MAPA/SDI/DEPROS/CGMC /COPRI
4	Bárbara Evelyn*	FIP Rural Landscapes	Senar
5	Bernadete Lange	FIP CAR / Rural Landscapes / DGM / Coordination	World Bank
6	Daniel Barbosa da Silva	FIP Coordination	MMA
7	Daniella Ziller Arruda Karagiannis	FIP CAR / Rural Landscapes / DGM / Coordination	World Bank
8	David Fagner de Souza e Lira	FIP NFI	Brazilian Forest Service
9	Eder Miguel Pereira	FIP NFI	University of Brasilia
10	Fernanda Santana de Oliveira	FIP Coordination	Funatura
11	Flavio Daniel Baran		SAIN/MF
12	Humberto Navarro de Mesquita Junior	FIP NFI	Brazilian Forest Service
13	Leonardo Bichara	Rural Landscapes	World Bank
14	Leonardo Job Biali	FIP NFI	University of Brasilia
15	Leonardo Queiroz Correia	FIP Coordination	SNPCT/MMA
16	Livia Farias Ferreira de Oliveira*		Ministry of Finance
17	Luiz Henrique Mourão do Canto Pereira	FIP Monitoring	MCTI
18	Marcela Eberius Mendonca	FIPCAR	Brazilian Forest Service/MMA
19	Márcio Antonio Antunes Vieira	DGM Brasil	CAA/NM
20	Pedro Bruzzi Lion	FIP Coordination	Funatura
21	Rafaela Oliveira Mangini	FIP Macauba	INOCAS
22	Raquel Álvares Leão	FIP NFI	Brazilian Forest Service
23	Renan Samir Dupont	FIP CAR e FIP Rural Landscapes	Brasplan
24	Ricardo Natal Goncalves	FIP	IDB
25	Sidney Almeida Filgueira de Medeiros	FIP ABC and FIP Rural Landscapes	MAPA
26	Vitor Salomão Ferreira Franco*	FIP Macauba	Inocas

* These were present but did not sign the list.