



# EFFECTIVENESS EVALUATION REPORT

## AMAZON PORTAL SEEDS PROJECT

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This report presents the effectiveness evaluation results of the project supported by the Amazon Fund, called "Amazon Portal Seeds", which was concluded in 2013. This evaluation was carried out by a team of independent consultants, under the coordination of technical cooperation between BNDES and German Cooperation for Sustainable Development through GIZ. All opinions expressed herein are the sole responsibility of the authors, not necessarily reflecting the position of GIZ and BNDES. This document has not been subject to editorial review.

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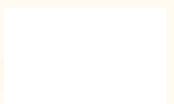
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# 1. Executive Summary

Among the 85 projects supported by the Amazon Fund (FA) / National Development Bank (BNDES), this document is the result of the independent subsequent evaluation of the Amazon Portal Seeds Project, executed by the Instituto Ouro Verde (IOV), based in Floresta / MT, between 2010 and 2013, having received R\$ 5,397,778.87 financial support from the Fund.

The evaluation was carried out under technical cooperation between the BNDES and the German Cooperation for Sustainable Development through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, by a team of two GIZ technicians and two independent consultants.

This evaluation responds to multiple issues involving Amazon Portal Seeds Project stakeholders. It was carried out the municipalities of Alta Floresta, Apicás, Carlinda, Nova Canaã, Nova Guarita, Terra Nova do Norte, as well as on the Terena Indigenous Land, in the municipality of Matupá, all located in the extreme north of Mato Grosso (MT).

## Relevance

The Amazon Portal Seeds Project developed solutions consistent with Plan of Action for Prevention and Control of Deforestation in the Legal Amazon (PPCDAM) and the Plan for Prevention and Control of Deforestation and Forest Fires of Mato Grosso, giving relevance to the Amazon Fund/BNDES mission. In addition, planting 1,246 hectares of Agroforestry Systems (SAFs), contributing to the reduction of forest degradation and to the effective increase of carbon stocks. This spread new values by which the farmer, the forest and production could coexist, while generating the basis for regional expansion of food security. By the year 2015, of the 1,246 ha planted, there was an increase of 72% of forest cover observed in the orbital images, considered, therefore, to be in recovery.

The direct benefits reached 518 families participating in the project. It also brought food quality and variety to the market and schools of some of these cities to supply local/regional consumers. The appreciation of the Permanent Protection Areas (APPs) adds to the relevance of this project. There was direct perception of the improved: i) thermal comfort around the recovered APP; ii) water quality and quantity; iii) availability of fruit and other foods to families and; iv) economic value.

This experience can effectively help reforest the Amazon, provided there are appropriate incentives, integrated public policies and environmental awareness in the face of climate change.

## Impact

One can measure some of the project's direct impacts to farmers:

- Recovered degraded areas by family farmers, including Permanent Protection Areas (APPs), by planting forest seeds and green manure, recuperating Amazonian native forest;
- The structuring of a forest seed market;
- Greater socio-environmental awareness, strengthening the social capital of those involved and opening opportunities for a new agroforestry culture among family farmers.
- Another important impact was the increase in the quantity, diversity and quality of the local product supply to the population, assuring greater food security.



# 1. Executive Summary

The following indirect impacts were also identified:

- Relatively low levels of deforestation in the supported municipalities were maintained. This was achieved by previous PPCDam actions, continuing downward deforestation trend in the Project region, showing that the Project made a good contribution.
- Deforestation in municipalities fell 78.3%, from a cumulative 548km<sup>2</sup>, in the previous four years, to 118.7km<sup>2</sup> in the project period. Although in the last two years (2015-2016), overall Amazon deforestation has increased, the downward trend in the Amazon Portal da Amazônia region has continued.

To make the impacts more relevant, the challenge is to scale up the results by working with local, state and federal public authorities present in the region, to find allies with the ability to spread knowledge and benefits.

## Sustainability

The project strengthened an important social capital base significant for sustainability. The project made rich knowledge and exchange of experience possible, working with family farmers, technicians and management. This led to the creation of a farmer cooperative, laying the groundwork for organization and social involvement over the long term, generating income from sustainable production. Product sales already occur in local, regional and even national markets using the IOV website's marketing portal.

## Effectiveness

With FA/BNDES support, important regional results were obtained towards achieving the project's general and specific objectives:

- 1) SAF recovery activities reached 1,246.8 ha. An orbital analysis verified that there was a 139.5% increase in forest covered area and a decrease of 47.23% in the exposed soil areas.
- 2) 9% of the regional universe of 5,935 settled families were reached directly, or 518 families. Out of 1,916 beneficiaries, 45% were women.
- 3) A network was set up to collect, process, store and market forest seeds, leading to the installation of 10 seed stores in operation in 2016.
- 4) It was not possible to measure the gross annual income of the beneficiaries, but the purchase of seeds alone injected almost one million reais in additional income, plus the sale of other agroforestry products.
- 5) Interest in reforestation processes through productive SAFs has grown because, as they brought prospects for income generation, especially in reserve areas close to homes.

The challenge posed is to scale up project benefits and fully adopt SAFs as a sustainable way of life by including a larger number of settlers and family farmers. Systematic measurement of the income obtained from the SAFs can become its most important tangible argument.

# 1. Executive Summary

## Efficiency

With the Amazon Portal Seeds Project FA support, 1,246 ha will be recovered at a cost of R \$ 4,432 / ha, including implementation and monitoring with IOV's extension service. It is below the average cost of up to R\$ 5,000, which normally does not include extension (Resende, 2015). This project efficiency is partly due the use of advisors from the region.

Beneficiary families showed significant (moderate or high) involvement in the project: (i) 81% participated in meetings, (ii) 85% met deadlines, (iii) 73% participated in training workshops; and iv) 55% carried out field management practices designed and prescribed by IOV.

Shared management has led to efficient use of the project's financial resources, in coherence with its objectives, goals and local partner needs. The monthly meetings of the local management councils for monitoring and planning, the quarterly regional meetings of the council representatives and staff, the periodic monitoring bulletins and the use of social networks and the IOV website helped to achieve this efficiency.

Management transparency and efficiency were high. This helped to balance the programming and reprogramming of budget lines, disbursement flows and financial reporting, as well as interim and final reports.

## Recommendations

The main recommendations are:

**A) To Project executors:**

- To support beneficiaries in their search of legal compliance of the properties, both land and environmental, with the National Institute of Colonization and Agrarian Reform (INCRA), municipalities and the state of Mato Grosso.
- Strive to work more with public agencies, seeking common points of interest and indicate a focal point for these activities.

**B) To donors and managers of FA/BNDES:**

- Whenever possible, forest recovery initiatives with FA support should be carried out in synergy with the instruments of the Environmental Regularization Program (PRA), from enrollment in the Rural Environmental Registry (CAR) to full environmental regularity.
- To seek to scale up the spread of models to recover environmental deficits, such as those carried out in the Amazon Portal Seeds Project, in order to reach the all family farmers and maximize Amazon recovery / reforestation, by launching public notices with the cooperation of public agencies.

**C) To the Ministry of the Environment (MMA):**

- To seek strategies to scale up Amazon Portal Seeds Project impacts, this report suggests that a meeting be held and planned with clear objectives, with the participation of MMA, state and national extension, management environmental, research and credit agencies. of MAPA and the FA, among others.
- Promote with MAPA and the Brazilian Agricultural Research Corporation (EMBRAPA) that they give priority to research and adoption of "muvuca" seed practices and SAFs, already adopted in the Xingu Basin in Mato Grosso.



## 2. Background

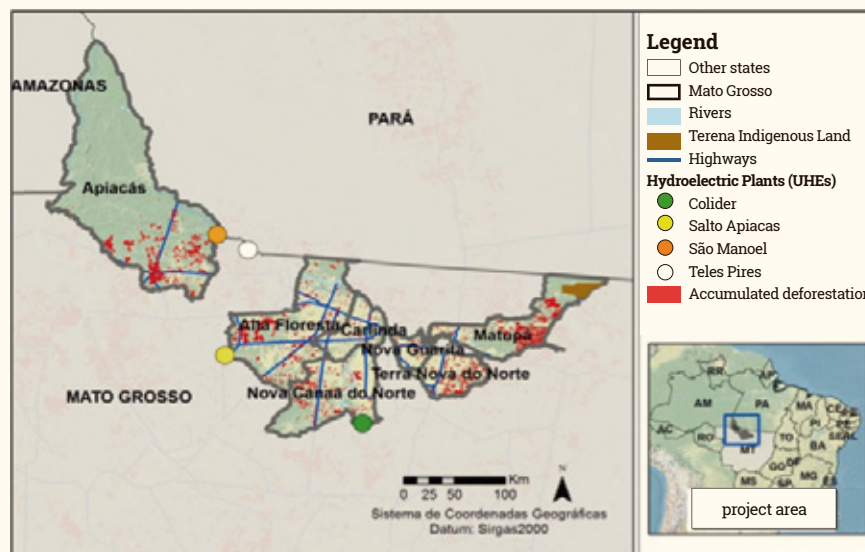
The Amazon Portal Seeds Project is in the northern part of Mato Grosso state, in the area called the Amazon Portal, between the cerrado and the Amazon forest. It covers seven municipalities, totalling an area of 46,238km<sup>2</sup>, with a population of approximately 78,735 inhabitants (IBGE, s.d.).

The project was carried out between 2010 and 2013, supported by the Amazon Fund, and implemented by the Ouro Verde Institute (IOV)<sup>1</sup>, in the municipalities of Alta Floresta, Apiacás, Carlinda, Nova Canaã do Norte, Nova Guarita and Terra Nova do Norte, as well as the Terena indigenous community, in the municipality of Matupá (Figure 1). Throughout its execution, the IOV project received R\$ 5,397,778.87 in FA financial support.

The region's economy is based on logging Gold mining, soybean and cattle raising are the main deforestation vectors, in addition to the current exploration of its hydroelectric potential (Figure 1).

According to the Brazilian Institute of Geography and Statistics (IBGE), the Amazon Portal is one of the regions with the highest concentration of land and income in Brazil, despite progress in the average economic indicators. Family agriculture accounts for 84% of rural establishments, but occupies less than 20% of the area, with dairy farming (IOV, 2012b) as its main production chain.

**FIGURE 1.** Municipalities covered by the Amazon Portal Seeds project



Source: IBGE, PRODES/INPE (2005-2013), FUNAI.

Legal Amazon Deforestation Prevention and Control of Plan (PPCDAm) was a policy relevant to project success, contributing to the reduction of regional deforestation. In 2008, Alta Floresta was placed on the priority list of municipalities to combat deforestation, which defined the importance of combating deforestation and provided control and incentive interventions, achieving relatively low deforestation. However, the environmental liabilities resulting from deforestation made the actions to recover the forest necessary. After applying environmental regulation efforts, Alta Floresta reduced deforestation and fires, and in 2012, it left the list, reflecting the municipality's increased environmental awareness of, also influencing the surrounding municipalities (MMA, 2013 and field observations).

1) In the 1990s, the Community Center for Integrated Environmental Management in Carlinda / MT was created to articulate environmental with economic and social issues. It had the support of the MMA through type A demonstration project (PDAs) and IOV technicians. It was from the creation of this space for discussion that agroforestry systems (SAFs), the recovery of springs and the introduction of pasture management techniques began. It was an embryo for reforestation initiatives, social organization and search for sustainable alternatives to family agriculture in the Amazon Portal region (IOV, 2012b and field observation).

2) Decree No. 6,321 of December 21, 2007, which aimed at reducing deforestation in the Amazon, established, among other things, a list of priority municipalities for combating and monitoring deforestation. The inclusion of the municipalities in this list was made based on three criteria: 1) total area of deforested forest in the municipality; 2) total area of deforested forest in the last three years; and (3) an increase in the rate of deforestation by at least three of the five years prior to listing.

## 2. Background

While carrying out environmental policies is difficult, public policies for road and hydroelectric infrastructure have important environmental impacts (MMA / PAS, 2008).

The project provided the basis for sustainable production activities, with seed collection consolidated as a new source of family income; contributing to the recovery of degraded areas through the SAFs, with the re-establishing of APPs and Legal Reserves (RLs).

Its specific objectives were to promote the environmental recovery of 1,200 ha through SAFs, contributing to income generation, legal compliance and environmental quality of the small properties it benefited. The other objective was to create and increase value of forest product chains by setting up a forest seed market.

The IOV provided support to 518 families, bettering their income and living conditions. It reported that 1,246.78 ha of agroforestry are in the process of recovery, improving farm environmental management. A forest seed market was structured, which proved to be very feasible, and was therefore expanded in the second phase.

## 3. Introduction

The Amazon Portal Seeds Project was the result of consolidating IOV's partnership with social movements and farmers' associations that had already built social capital, unusual for the Amazon.

Its essential base was the training and qualification of family farmers, further increasing this existing capital. The farmers who show interest are free to take part in the activities, in order to increase access to information and opportunities for interaction among the farmers themselves.

In this context, this evaluation, carried out through technical cooperation between the BNDES and the German Cooperation for Sustainable Development through GIZ, was aimed to support the FA to: (i) report to its donors; (ii) enable institutional learning, contributing to improving project quality and prioritization of investments, as well as decision making; (iii) to verify compliance with the Cancun safeguards agreed within the UNFCCC for REDD+ actions; and (iv) verify project alignment with the PPCDAm and other policies. According to the main objectives of the project, the results achieved and the implementation challenges that still exist have been verified.

In March 2012, one year before the completion of the project's phase I, IOV submitted to the FA a preliminary request for phase II. At the time of this evaluation, it was in full implementation. From the stage I learning, the scope was expanded with support to improve produce yielding agroforestry techniques and product marketing.

At the end, the evaluation makes recommendations for actors with specific interests, such as the implementing organizations, direct and indirect beneficiaries, MMA and FA.



## 4. Methodology

The evaluation sought to analyze whether the objectives and goals of the Amazon Portal Seeds project were fulfilled. To this end, it relied on the OECD criteria of relevance, effectiveness, efficiency, impacts and sustainability, as well as poverty reduction, gender equity and REDD+ safeguards, set out by the Amazon Fund in its conceptual framework for evaluating project effectiveness

In the preparation phase, data were collected from secondary sources. From this survey, an initial memorandum was prepared as reference and knowledge base, with information regarding the project to be evaluated. This source contains project documents and public data, and was fed until the end of the assessment, including the information obtained in the field. In addition to the project information available on the BNDES and IOV websites, including IOV's 2011, 2012 and 2013 reports, institutional information later made available by the responsible organizations was analyzed.

The main forms of data collection were i) non-reactive (secondary sources); ii) interviews with key actors, iii) observation (during visits, whether, participatory or individual), and iv) georeferenced maps (in .jpeg image format).

The purpose of the field mission was to collect data locally and carry out visits to the project area. Thus, interviews were carried out with the implementers, municipal project management councils, and direct beneficiaries (Annexes 11.6 of municipal observations and 11.8: List of Interviewees).

It was not possible to verify the recovery of areas of all farm projects in loco, which would require more field time than available. The results obtained with the recovery of degraded APPs were analyzed according to the project farms' geographic data , comparing the project period with the current one.

At the end of the field mission, the SWOT methodology (Strengths, Weaknesses, Opportunities and Threats) workshop was held with implementers and beneficiaries, from which reflections were obtained for a group vision of the project. This workshop took place at the Alta Floresta Experimental Theater with 29 participants (Annex 13.4).

To verify the impact of the implemented SAFs, printed or virtual copies of individual farm level project's baseline photos were shown to some farmers, confirming the vegetation coverage in the picture and comparing this with farmer information on current coverage. A few field observations were made in loco.

## 4. Metodologia

**FIGURE 2.** An owner of Jacamimin Alta Floresta locates the areas of his property in the georeferenced image of 2007.



**Author:** Heliandro Maia, GIZ.

The difficulties and limitations of this evaluation are due to the lack of more in-depth studies on the areas recovered and the applied agroforestry techniques. In addition, some external factors, whether economic, social or political, that may have influenced the results, should be analyzed.

A counterfactual analysis was applied to understand and serve as comparison with the Amazon Portal Seeds Project area. A municipality in the Amazonia Portal was selected with similar characteristics. Family farmers at a Settlement Project (PA) were interviewed to compare the effectiveness levels of activities promoted by the Amazon Portal Seeds Project with an area not included in the project.

The RoTI (Review of Outcomes to Impacts), from the Global Environment Facility (GEF, 2009), a project evaluation method developed by the GEF evaluation office, was also applied. RoTI uses a "Theory of Change" (ToC) approach to assess the overall performance of GEF projects. It aims to help the evaluators identify and then evaluate the component result chains, through an in-depth analysis of project documentation, along with on-site data collection, wherever possible. Thus, it proposes to guide the performance of the project and, finally, to contribute to the achievement of the intended impacts. (Annex 13.2).

Using the DoView software and based on prior review of the project documentation, the evaluators set up and designed a provisional TDM, defined by GEF as

A theory-based evaluation tool that maps the logical sequence of links between means and ends underlying a project, thus explaining both the expected project results and the actions or strategies that should promote the achievement of results. (GEF, 2009)

After consolidating the preliminary evaluation report, a consultation workshop was held (Annex 13.5), with the participation of the project implementer, IOV, MMA, BNDES, and a similar project of the Instituto Socioambiental (ISA). The two specific objectives of the logical framework were presented, a topic on management and monitoring, and another about the context. At the end of each panel, a session began for questions, analysis and report contributions. The evaluation team then presented positive aspects, the main challenges faced, lessons learned and recommendations. From these discussions, the team of evaluators consolidated the analyses to finalize this project evaluation report.

## 5. Results

The report presents results referring to the fulfillment of the general objective, the two specific objectives, and to the management and monitoring of the project. It analyzes the expected and achieved results, highlighting the positive aspects and the challenges in each of the mentioned topics.

### 5.1. General objective (achieve sustainable production activities in the Amazon Portal)

The main objective of the Amazon Portal Seeds Project was to promote sustainable production activities to be carried out to: i) recover the environment of 1,200 ha of degraded areas with agroforestry systems; ii) restore permanent protection areas and legal reserves; iii) set up a forest seed market, enhancing family farming in six Amazon Portal municipalities, combining sustainable forest use with income generation. A "virtuous cycle of degraded areas recovery and income generation" was created (IOV, 2012b). Additionally, it enabled the Terena indigenous community of Matupá to collect forest seeds.

The project's general objective is a part of the FA's "Sustainable Production Component", whose focus is economically attractive activities that would keep the forest standing. The indicator decided for this project objective was the reduction of deforestation in the chosen municipalities.

The indicators used for the specific objectives were reforested and recovered area, the people involved in seed collection and the revenue obtained from their sale. Local training sessions and exchanges designed to deepen knowledge on SAFs and the number of management councils, to support local project implementation, were also observed.

In 2013, 57% of the native vegetation in the area covered by the project remained (Table 1). Apicás still maintains a large part of its native vegetation, where there was a small increase in this area from 2009 to 2013. Alta Floresta has about 41% remaining area, while Carlinda and Nova Canaã do Norte have about 30% each. Nova Guarita and Terra Nova do Norte are the areas with the highest rate of deforestation, with an average forest remnant of 15%.

**TABLE 1.** Municipal area and total forest area in 2009 and 2013, and remaining forest in 2013, in six municipalities of the Amazon Portal Seeds Project.

Municipality	Area of municipality (km <sup>2</sup> )	Forest areas in 2009 (km <sup>2</sup> )	Forest areas in 2013 (km <sup>2</sup> )	Forest remnant in 2013 (%)
Alta Floresta	8.986	3.779	3.762	41,86%
Apicás	20.401	16.432	16.854	82,62%
Carlinda	2.417	670	665	27,51%
Nova Canaã do Norte	5.975	1.907	1.896	31,74%
Nova Guarita	1.087	163	158	14,55%
Terra Nova do Norte	2.551	431	410	16,08%
<b>TOTAL</b>	<b>41.417</b>	<b>23.382</b>	<b>23.745</b>	<b>57.33%</b>

Source: PRODES/INPE.



## 5. Results

Table 2 compares the annual deforestation increment in the 4 years prior to the project with the 4 years of project implementation, as well as with the increase in deforestation during and after the project (2012 to 2015).

The total annual deforestation in the six municipalities decreased from 548 km<sup>2</sup> in the 4 years prior to the project to 118.7 km<sup>2</sup> during the four-year project period. Based on this comparison, deforestation was reduced by 429.3 km<sup>2</sup> in the 2010-2013 period. We conclude that the sum of deforestation in the last 4 years (2012 to 2015) remained at a level below the period previous to the project, totaling 152.3 km<sup>2</sup>.

Apiacás, a municipality where the project managed to implement few SAFs and where there was still more than 80% of forest remnants, presented the largest increase in deforestation during implementation, but also recorded an increase in forest areas. Nova Guarita averaged just over 1km<sup>2</sup> increase in deforestation in the two periods between 2006 and 2013, although historically it was most affected by deforestation (and, therefore, had less forest to clear).

Among the possible causes of reduced deforestation in the region are the regional dissemination of the crackdown on deforestation and the credit restriction introduced by the PPCDAm in Alta Floresta. This may have influenced land-owner decisions throughout the region. In addition, the reforestation carried out by the project on area occupied by family agriculture, approximately 20% of the total land area (IOV, 2012b). Thus, the Amazon Portal Seeds Project contributed to maintaining the relatively low level of deforestation in the supported municipalities.

**TABLE 2.** Sum of annual municipal deforestation increases during the Amazon Portal Seeds Project, compared to an equal period before the project, and trends between 2006 and 2015.

Municipality (km <sup>2</sup> )	Period prior to the project (2006 - 2009)	Deforestation totals during the project (2010 - 2013)	Final and post-project period (2012 - 2015)
Alta Floresta	181,1	17,1	26,9
Apiacás	182,8	60,1	59,5
Carlinda	13,5	5,4	8,4
Nova Canaã do Norte	90,8	10,4	33,1
Nova Guarita	5,6	4,7	7
Terra Nova do Norte	74,2	21	17,4
<b>TOTAL</b>	<b>548</b>	<b>118,7</b>	<b>152,3</b>

Source: PRODES/INPE.

During project implementation, the Amazon Fund also supported the Amazon's Water Springs Project, in partnership with the Alta Floresta municipal government. This project also contributed to the reduction of deforestation in that municipality. In 2012, the FA started to finance small agroindustrial projects such as fruit pulp and honey, through the Small Ecosocial Projects in the Amazon (PPP-Ecos) Project, in cooperation with the Institute for Society, Population and Nature (ISPN).

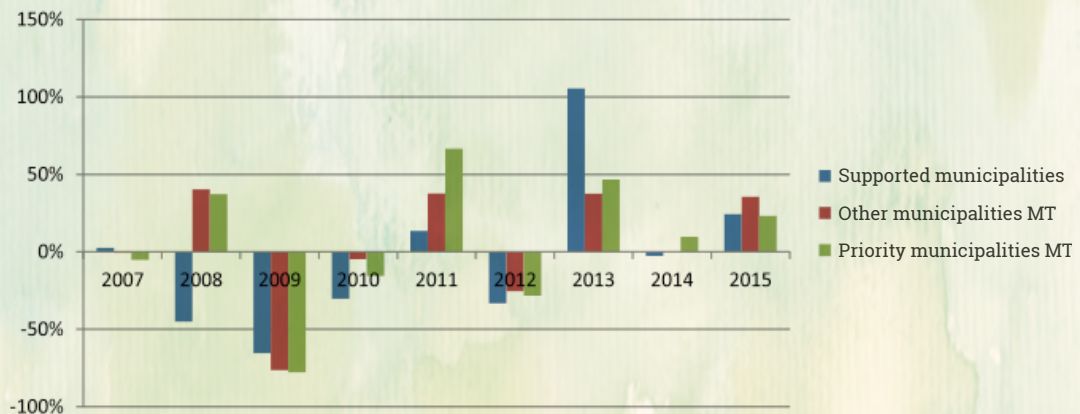
## 5. Results

### Box 1. The decrease in deforestation in the municipalities supported by the Amazon Portal Seeds project.

The Amazon Fund Program aims to support actions to monitor and combat deforestation and to promote conservation and sustainable use in the Amazonian biome.

In this context, the Amazon Portal Seeds Project contributes not only to the development of sustainable production activities in the Amazon Portal, but also to the low levels of deforestation in the municipalities in which it operated, except for the year 2013 when 18.7km<sup>2</sup> deforestation was registered in Apiacás, which contributed to a considerable increase in deforestation compared to the previous year.

Graph 1 . Percent increase in deforestation.



Source: PRODES/INPE.

The annual increase in deforestation in the supported municipalities is low in comparison with MMA's list of priority Mato Grosso municipalities, as well as the rest of the state's municipalities.

The Amazon Portal Seeds Project can also be seen as an initiative that contributes to relatively low levels of deforestation, maintaining decreasing deforestation trends in the Amazon Portal.

## 5. Results

### Positive Aspects

The Amazon Portal Seeds Project has influenced the sustainable use of forest resources and contributed to biodiversity, through reforestation and the adequate use of water resources protected by the recovery. The interviewees unanimously agreed that the project generated socio-environmental awareness among those involved and that the introduction of a new agroforestry culture among family farmers opened new opportunities .

This awareness arose from the impacts generated by deforestation on most farms, mainly before 2008. Partly as a result, water became scarce. This was one of the reasons which motivated farmers to recover degraded areas, notably the APPs.

SAFs with economic and environmental potential were used, aiming at increasing the value of the forest, in terms of quality of life (thermal comfort, water quality and quantity of, food security and economic value).

Reforestation began a new process of enhancing the economic and environmental value of the standing forest, beginning with joint learning existing traditional and scientific knowledge together, mainly through training, exchanges and shared experience. Project participants, Federal University of Mato Grosso (UFMT) botanists and Ouro Verde Institute technical staff participated.

The project carried out reforestation with some species of economic value. This allowed for the beginning of an increase in the forest economy, the recovery of degraded areas through the community strengthening and the adoption of technologies that enabled the family farmers involved to promote environmental recovery.

The Amazon Portal Seeds Project was aligned with the PPCDAm, which began in 2004. No specific actions were identified within the Prevention and Control of Deforestation and Burning Action Plan of the State of Mato Grosso (PPCDQ). These plans fight deforestation in the Amazon and promote the transition to a sustainable model based on three axes: (i) land use planning and tenure(ii) monitoring and control, and (iii) promotion of sustainable production. The project objective relates mostly with the latter PPCDAm axis.

In order to understand the complementarity between the PPCDAm and the project, this plan's activities carried out in the region deserve special mention. Through Decree No. 6,321 / 2007, at a time of water shortage, Alta Floresta was the only municipality in the project area, given priority for inspection and control, due to its high rate of deforestation. Inspection and control operations were launched, based on technical criteria and territorial priorities. Such actions may have contributed to the responsiveness and success of the project.

The Rural Environmental Registry (CAR) was among the public instruments that were most strengthened through project implementation. Participating producers became aware and began to register by georeferencing their properties.



## 5. Results

The project led to significant interchange among the municipalities involved, highlighting local experience. The hiring and training of local technicians to provide technical assistance and support in local project implementation were key to the results achieved. The project did not deal with gender issues nor did data collection for planning and monitoring separate by gender. However, most of those involved in the project considered the importance of local labor fundamental. Nevertheless, the participation of women was very relevant. They made up about 46% of the members who worked in the seed collection network and product marketing. In addition, there was considerable participation of these women in the project management councils.

The project also assisted the National Rural Education Policy, with some activities to empower, professionalize and raise environmental awareness of young people for rural environment work. Also, work-study alternation programs have begun. Many of these young people were part of the project's technical team and are family members of the beneficiaries. There are also several young people who in the past decade were active in the environmental area through a project of the Ministry of Social Development and Fight against Hunger (MDS) with the Pastoral of Rural Youth in Alta Floresta, and now work on the Amazon Portal Seeds Project.

Amazon Portal Seeds helped to keep small farmers in the Portal region, helping to avoid the sale of their land due to the existing pressures of large and medium farmers.

The most relevant effects of the project were reforested areas undergoing recovery; the creation of a seed collector network; the marketing of products such as seeds, honey and fruit and vegetables; and, in the second phase, the formalization of groups to deal with the strategies of continuous training, marketing and farmer microcredit, from the funds generated with the sales of the cooperative. This made possible the sale of produce to government programs such as the National School Feeding Program (PNAE) and the Food Acquisition Program (PAA) of Companhia Nacional de Abastecimento (CONAB).

# 5. Results

## Challenges

The Amazon Portal region, located in the north of Mato Grosso, is one of the regions under great pressure from expanding cattle and grain production. These activities grew considerably in the 2006-2015 decade in the supported municipalities (Table 3). This is pushing mining, cattle raising and logging activities further north, entering the states of Pará and Amazonas. This shows how important it is not only to reclaim degraded areas, but also to develop land-use models that can conserve forests and generate income.

The cattle declined in Alta Floresta and Nova Guarita. On the other hand, there was a very significant increase in the area planted in soybeans in all municipalities, except Apicás. Logging and farming represent pressures for land use conversion, encouraging small farmers to sell. In addition, the increase in the fish farming chain has resulted in the use of APPs, which leads to the conversion of land use in areas where there should be reforestation.

**TABLE 3.** Municipal increases of the cattle herd and area planted in soybeans (ha), 2006-2015.

Municipality		2006	2015	Herd increase from 2006 o 2015		2006	2015	Increase in Soybean Area (ha) from 2004 o 2015
Alta Floresta	<b>Cattle herd no. heads</b>	732.246	716.438	-2,16%	<b>Soy area (ha)</b>	1.015	9.920	877%
Apicás		199.950	220.097	10,08%		-	-	-
Carlinda		220.403	230.180	4,44%		-	4.500	100%
Nova Canaã do Norte		386.629	399.295	3,28%		4.220	31.660	650%
Terra Nova do Norte		257.627	268.272	4,13%		2.324	14.200	511%
Nova Guarita		134.439	131.547	-2,15%		2.000	5.608	180%
<b>TOTAIS</b>		1.931.294	1.965.829	1,79%		9.559	65.888	589,28%

**Source:** Municipal Livestock Agricultural Production Surveys. SIDRA/IBGE.

It is still a challenge to reach the world of family agriculture in the region. According to Incra, in 2010, there were 35 settlements with 5,935 settled families. That is, in the first phase, the project reached about 9% of this universe (Incra, 2016).

The project, through local participants, had little articulation with the public and private sector, limiting itself to specific support from two municipal governments. Nova Canaã do Norte and Terra Nova do Norte supported the project by donating seeds or offering transportation for training sessions and other project events. The state government, especially the state environmental and extension agencies, were not directly involved in the project activities.

Public policies have not followed project efforts. PPCDAm faces challenges such as limited resources, verification and combat of deforestation in polygons that are smaller than 6.5 ha, and especially the need to seek strategies that enable the promotion of sustainable production activities to keep the forest standing.

The Low Carbon Agriculture (ABC) credit line and the National Program to Strengthen Family Agriculture (PRONAF) mainly finance livestock and large crop projects, while failing to use existing credit lines for environmentally orientated programs such as the SAFs and the protection of APPs.

## 5. Results

Products from family agriculture need to strengthen their marketing arrangements, through processing and creating viable markets. Selling is still a limiting factor for small farmers. A farmer cooperative was created from the seed collection network. This was a good initiative, but it is only the beginning of a process that will have to overcome structural issues, so as to increase family farm income from SAF products and other services.

### 5.1.1. Specific objective I: Area of 1,200 ha recovered through SAFs, contributing to income generation, legal compliance and environmental quality of the small farm beneficiaries.

The objective was to recover APPs and reserves by implementing SAFs in areas of springs, streams and creeks, and in areas of agricultural use on rural land owned by family farmers (with size below four fiscal modules), contributing to income generation, legal compliance and environmental quality. The beneficiaries were family farmers, settled in areas of INCRA and the Mato Grosso Land Institute (INTERMAT), and private owners.

At the beginning of phase I, a team of 8 advisors was hired and trained, to set up a service base for the entire region. Training, organization and consolidation materials were prepared and used to spread the technique called "muvuca" (no-tillage of seed mixing) to family farmers. Community training and organization was carried out, and a network for income generation was started. These processes led to effective farmer training, participation in planning and monitoring, and the establishment of community seed houses.

Three different ecological and socio-political landscapes influenced project results: In Apiacás, Alta Floresta and the 4 other municipalities (see table 4). While in Apiacás the settlements still had considerable native vegetation, the socio-political environment was unfavorable, with opposition from logging, mining and the municipal government. In other municipalities, most of the land had already been converted to pasture or crops. In Alta Floresta, as in Apiacás, despite previous IOV experience, there was low social organization. In the other municipalities, the process was made easier because there was social organization prior to the project and government did not directly oppose the purposes of family farming.

TABLE 4. Different landscapes and political and social aspects affecting beneficiaries

Municipality	Prevailing landscape	Socio-political reality for the beneficiaries of the project	Previous social organization
Apiacás	Native Vegetation	Unfavorable	Low
Alta Floresta	Livestock	Favorable	Low
Carlinda	Livestock	Neutral	Established
Terra Nova	Livestock	Neutral	Established
Nova Canaã	Livestock	Neutral	Established
Nova Guarita	Livestock	Neutral	Established

Source: Field observations checked with the IOV



# 5. Results

## Positive Aspects

The IOV served 518 families. It published the results of a survey carried out by its technicians on family involvement in activities, available in its quarterly publication *Jornal Muvucando* and its annual technical reports.

Participation helped project success. Adding up the families with moderate and good involvement levels, 81% participated in meetings, 85% met deadlines, 73% participated in training workshops, and 55% carried out management practices at these levels (IOV, 2013). That is, the remainder had little involvement in these activities.

The managing councils meet monthly and are responsible for defining the project's performance, the inclusion of new communities and financial control. Council members and seed collectors have increased their self-confidence due to their socially recognized duties. It is generally noted that council members and other participants are familiar with the *muvuca* and SAF concepts and can explain them to neighbors. Some have learned from visits to successful SAFs in Bahia and Pará. Thus, they are likely to have the ability and motivation to continue without the project, especially when there are still APPs that require it.

The project and the SAFs improved conditions in the supported areas, such as water bodies going through the properties, vegetation and soil, and the quality of family life of the vast majority of participants. One can thus understand the importance of IOV's activities for building environmental awareness and strengthening communities.

According to geoprocessing orbital analysis, there was a 139% increase in forest cover and a decrease of exposed soil areas of 47.23% in the areas covered by the project. (See Box 2 and Annex 11.3). Of these areas in recovery, 52% of the farms planted SAFs with income producing species, seen as a factor which favored success. Harvesting products motivates management practices, such as green manure, weeding and mowing.

The increase in the beneficiaries' income was even greater than the R\$ 1 million estimated by the IOV. Despite forest recovery being priority and not production, the SAFs provided other income, such as consumption and sale and/or exchange of annual farm products, such as tubers, grains and pineapple; And also of perennials, which generated products such as urucum, pequi, fruit, fruit pulp; as well as honey. In Phase II, beneficiaries sell these products directly to consumers, in addition to eggs and vegetables, in fairs organized by the IOV, and begin to enter the institutional market (PAA and PNAE).

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Although the CAR is not a precondition for recovery and was not prioritized in phase 1, the project was directly involved in the recovery of degraded APPs, which facilitated beneficiaries' access to environmental registration of their lands.

In phase 2, the contract with the Amazon Fund / BNDES established that the project must work with CAR in 50% of the private properties, while no requirement was set for farmers in settlement projects. The IOV reports that this goal was exceeded. At the time of the field mission, , 80% of all beneficiary properties have filed their CARs.

## 5. Results

### Box 2. The environmental recovery of areas carried out by Amazon Portal Seeds

The environmental recovery through the introduction of agroforestry systems was one of the objectives of the Amazon Portal Seeds Project. In order to verify this contribution, an orbital analysis was carried out of the recovery of areas from the first project year (2011) compared with 2015 (Altieri, 2016). Geographic boundaries were vectorized (Annex 13.3), according to maps in digital format provided by the IOV, corresponding to 924 properties supported by the Amazon Portal Seeds da Amazônia (Figure 3). Images of the RapidEye sensor were used. This data was thus processed based on the Normalized Difference Vegetation Index (NDVI).

APPs margin areas of 30m were considered, so, according to the NDVI methodology, areas designated as soil were identified, which correspond to exposed fields where there are no tree species; vegetation 1 (Veg-1), with characteristics of recomposition due to the introduction of plant species or naturally from fencing; and vegetation 2 (Veg-2), related to older types of vegetation that already existed in the APP area in 2011 and which also underwent forest enrichment.

Based on the results of the analysis, there was an increase of 139.5% (Veg-1 + Veg-2) of forest cover in the project's areas of activity. In this context, there was a decrease of the areas of exposed soil of 47.2% (Table 5)

**Figure 3:** Geographical location of the areas destined for recovery by the Amazon Portal Seeds Project



**Table 5. Evolution of areas of exposed soil and vegetation in 2011 and 2015.**

Areas/Total	2011	2015	Variation between 2015 - 2011
Solo	512,66	270,56	-47,23%
Veg 1	121,48	199,24	64,02%
Veg 2	51,99	216,25	315,94%
Veg 1+Veg 2	173,47	415,49	139,52%

**Source:** Field observations verified with IOV.

The diagnosis made based on the orbital data indicates that in fact the recovery process is taking place; in addition to pointing out that 415.49 ha of these areas, including those of APP, were in the process of recovery in 2015.

This result does not mean that only the aforementioned value is the real size of these areas. Several factors intervene in this type of orbital sensor analysis, among which: the short time between the intervention and the geographic analysis; the distance of 30m used for the measurement of buffered areas, which does not always cover the total of the areas that are in recovery; and the reduced dimensions of the areas of the properties analyzed in relation to the spatial resolution conditions of the RapidEye sensor images, which made a more precise visual interpretation of the changes that occurred over the period difficult.

## 5. Results

### Challenges

Many beneficiaries are already retired or elderly. This fact, in some cases, may limit continuation in future projects, for most young people migrate to the cities, without seeing or valuing the rural professional perspective.

Dairy farming remains the main activity of most beneficiaries, although the project does not include the promotion of sustainable pasture and livestock techniques, such as those offered by other organizations. There are properties close to those benefited by the project that have opened all their areas for natural pasture, which causes greater degradation of areas and growth in environmental deficits.

The Forest Code does not require the recovery of legal reserves converted before 2008, which represent the bulk of the reserve conversions in the project area. Therefore, this law does not induce the recovery of areas that should be considered reserves.

Strengthening value chains remains a major obstacle to making projects more feasible. Many of the products generated in SAFs do not yet have an adequate local marketing arrangement. The bottlenecks range from product processing to the lack of markets, transportation and marketing.

In areas where deforestation is expanding, such as in Apiacás, there is still great resistance to the important themes of family farming, environmental and land regularization. The use of fire and aerial spraying threatens several communities involved in the project.

### 5.1.2. Specific objective II: forest product chains with expanded aggregate value through the structuring and development of a forest seed market

The design of the project ensured a demand for forest seeds to meet the implementation of SAFs carried out with family farming. Thus, it promoted the supply of seed from collectors trained in the project and acquired these seeds. This made possible the implementation of the planned SAFs and the structuring of a seed market.

In the beginning, 350 collectors were trained and harvested seeds on third-party lands with permission. Later, seed harvesting began on the SAFs themselves. Forest and agricultural species with economic value also added income to the beneficiaries, increasing their interest in the success of the activity.

### Positive Aspects

The project increased the use of native seeds with the reforestation for the recovery of degraded areas. For this, ten seed stores were established in the project municipalities



## 5. Results

Recognizing that it had created a limited market in which structures and marketing channels for SAF products were lacking, the IOV envisaged the expansion of this activity in phase II by:

- Consolidating the collectors' network;
- integrating, by the collectors, of the scientific and traditional knowledge on seed processing, incorporated in the guide prepared by the project;
- Improving seed stores;
- Strengthening marketing; and
- standardizing seeds, regarding species identification, cleaning and storage.

Currently, 110 collectors take part in continuing education courses, to improve processes and train new technicians and young people. Thus, many of the project collectors have become professionalized, acquiring knowledge, skills and income that value the category.

In 2016, participants in charge of the seed network were working with a seed stock and ordering system, selling the surplus through the Internet, on the IOV site. Thus, the project accessed new regional and national markets.

Many farmers make use of other SAF products, such as bananas, fruit pulps, pequi, urucum, honey and handicrafts. In the second phase, priority was given to income generating SAFs, achieving higher economic values, without exceeding the standard for SAFs of at least 50% native species.

The IOV is elaborating economic data – productivity, prices and growth periods - on 65 of the species planted in SAFs.

This data can be used in the future to set priorities for species and plan SAFs, making them more productive and profitable.

### Chanlleges

The areas of forest seed collection have decreased since the increase of livestock areas, the construction of hydroelectric power plants (UHEs) such as TelesPires, Colider, São Manoel and the Apiacás Complex (UHEs Salto Apiacás, Cabeza de Boi and Fazenda), and the start of intensive grain production in the region. While some of the selected seed-bearing trees are being mapped for management, others are being eliminated through deforestation.

**FIGURE 4:** Products of SAFs of New Guarita / MT Farmers



**Author:** Heliandro Maia, GIZ.



## 5. Results

Some seed collectors have left the activity. There is a need to identify market prospects, increase collection capacity, strengthen the profession and expand the supply to meet eventual growing demand. However, the size and potential of the forest seed market is unknown. Besides the NGOs that today collect and sell them, there are already companies that do so.

There are beneficiaries who do not use SAF products, due to lack of knowledge or the small importance attributed to them, partly due to other family incomes. In some municipalities, it is still not easy to reach the institutional market, due to the lack of greater local organization and contact with public agencies.

The organization lacked specialization to work with indigenous populations. This highlights the challenge for Terena Indians to participate in seed collection, leading to a smaller result than otherwise expected. This was the first time the IOV had included indigenous people in a project, and although Terena collectors met the initial seed demand as planned, the project team had difficulty understanding their culture and way of life, and the best way to continue their participation.

Because of this, and also because of lack of support from responsible government agencies, indigenous collectors sold seeds only during the initial phase.

## 6. Project management and monitoring

In a review of project management and monitoring, resource management and capacity, as well as in the implementation bottlenecks, evaluation and involvement of partners were considered.

The IOV, through its technical staff, was directly responsible for financial logistics and project activities. To carry out a collaborative and decentralized management, management councils were defined in the 6 municipalities covered, with farmer participation. At least one IOV technician participated in each council, helping with contacts and discussions. The councils identified needs and strategies to carry out activities and use project resources in the communities.

### Positive Aspects

The IOV developed tools and instruments for a horizontal management of the project, with a minimum of hierarchy, to integrate technical staff and the local councils, accounting and evaluating activities month by month. It decided to hire technicians with knowledge of the regional reality, including young people from family farms, many with appropriate qualifications.

It was considered a model project of good governance consistent with FA and MMA objectives, maintaining transparent and fluid communication from start to finish and meeting agreed deadlines. The financial management of the project was carried out using instruments such as protocols and electronic spreadsheets previously used by the Institute in the management of other projects with federal partners, such as the Ministry of Agrarian Development (MDA). Thus, only a few adaptations were needed to match the reporting models proposed by the FA. All this management was linked directly to an IOV focal point, responsible for the finance and accountability.

One of the project's management and monitoring strategies was holding monthly meetings with the local management councils, which discussed the local technician's accounting and the evaluation of the activities carried out during the month, as well as planning of the next activities to recover degraded areas and income generation. The management team also held meetings to plan activities and monitoring, as well as quarterly meetings between this team and council representatives, where general project issues were discussed and technicians exchanged experiences towards further mutual improvement.

The IOV prepared two annual reports on the monitoring of the SAF implementation quality and developed the Agroforestry Planning Support System(SISAPA), the Muvucando publication and the Seeds Network.  
(<http://www.sementesdoportal.com.br/sementes/>)

Sisapa was created to support project planning for the recovery of degraded areas in the APPs. Technicians can enter and access Sisapa information. With it, calculations were made to check the number of seeds, seedlings and wooden chips for fencing to be delivered to recover a certain area. In this way, the system gathers information about the planted areas, directly supporting their monitoring.

## 6. Project management and monitoring

Muvucando, in turn, was a quarterly publication that reported on project advances, on events and activities that occurred in the supported municipalities. This vehicle was important for the transparency and the strengthening of farmer identification with Amazon Portal Seeds, which helped communication among participating communities.

The seeds network website: (<http://www.sementesdoportal.com.br>) was also developed to manage the harvest and sale of project seeds. In the second phase, the project created seed marketing staff positions and improved spreadsheets on seed stocks and demand, so surpluses could be sold to new markets through the internet.

### Challenges

The IOV communicated well with its staff, partners and beneficiaries, but its external communication could have been better. It sought to observe the principle of decentralization; therefore, local limitations and resistance often prevailed.

Despite IOV's positive experiences in working with public agencies on previous projects, in this case, there was less. Contacts with INCRA and IBAMA were not fruitful and there were few partnerships with public authorities.

## 7. Counterfactual analysis

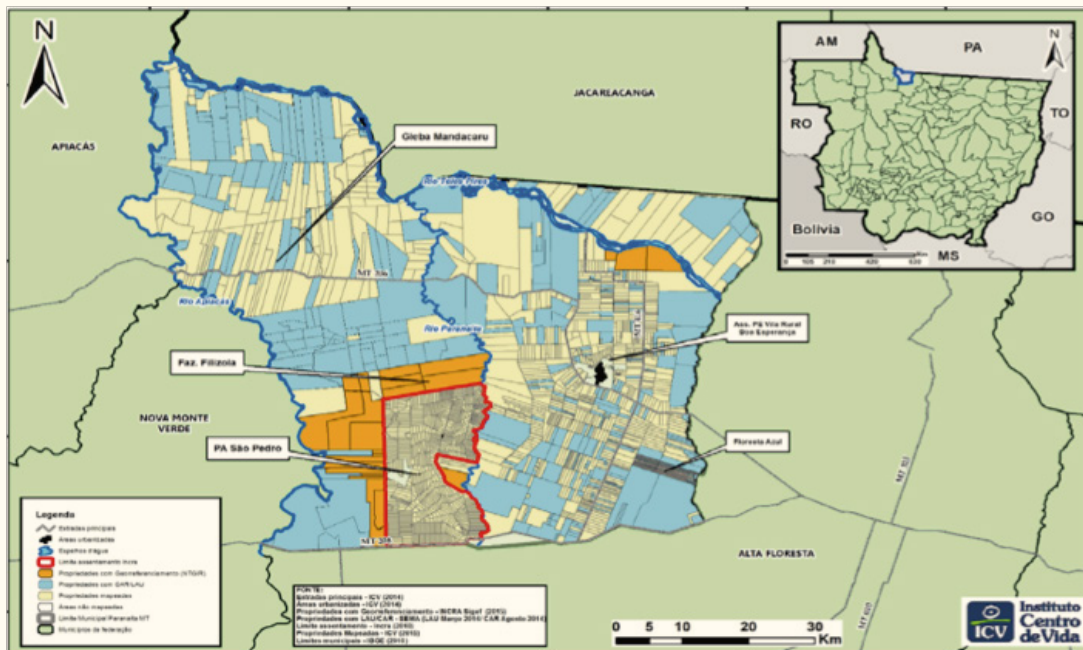
To apply a counterfactual methodology to understand and compare with the Amazon Portal Seeds Project, a municipality with similar characteristics was selected in the Amazon Portal, to find out what differences the Amazon Portal Seeds Project may have caused when compared to a site without the project. For this, a field analysis was carried out in the São Pedro Settlement Project (PA) in the municipality of Paranaíta/MT.

### The case of São Pedro PA in Paranaíta/MT

Paranaíta is located north of Mato Grosso, about 80km from Alta Floresta, bordering the state of Pará, and is part of the Amazon Portal. The municipality has 4,796km<sup>2</sup>, with 2,182 rural properties (ICV, 2015). The main economic activities are beef and dairy cattle. Before, its strongest activities were gold mining and coffee planting. Both still occur on a smaller scale. The municipality is not among the most deforested in the Amazon, with a remnant of forests of 2,398km<sup>2</sup> (or 50%) and total deforestation over the last 4 years (2012-2015) of 76.7km<sup>2</sup>.

## 7. Counterfactual analysis

**FIGURE 5.** Highlight of São Pedro PA, 35 thousand hectares. Settlement started in 1997 by Incra. Fonte: Instituto Centro Vida (ICV), 2015.



São Pedro PA has 776 lots, where there are 556 families that practice family farming. The main activity is dairy farming and, to a lesser extent, coffee production, as well as banana, corn, cassava and pineapple. There are 16 active associations in PA, spread along and adjacent to the roads. In most of these associations milk is sold, disputed by the region's three dairies. Beef cattle is sold to the existing regional JBS Meatpacking Plant. Incra carried out the CAR for the total settlement [1]. A non-governmental organization in the region, Instituto Centro Vida (ICV), has mapped 1,340ha of APPs along streams and around springs, identifying 232 hectares of deficits that must be recovered. According to the settlement CAR, 12,200 ha of native vegetation remain, which represents only 34.85% of forests remaining in the settlement. These numbers already show that there is a much higher total liability to be recovered in the São Pedro PA. Currently, the existing associations' greatest wish is that land tenure be regularized and that CAR can serve as the basis for this.

The Teles Pires River forms the region's key basin. The Teles Pires Hydroelectric Plant, in the area of influence of the settlement, is scheduled to be inaugurated in 2017. Since the beginning of construction, some compensation measures have enabled two regional NGOs to carry out surveys with compensatory measures to improve environmental quality and human well-being in the region. As a result, São Pedro PA received some of these initiatives, among them a training seminar on forest restoration, for teachers and students of the public-school system and some leaders of the settlement, carried out by the ICV, with the support of The Sustainable Trade Initiative (HDI). The participants practiced some restoration techniques, planting in two municipal schools in settlement areas.



## 7. Counterfactual analysis

The Arco Iris Association, located on the São Pedro PA Espírito Santo State line, has 34 members. Mr. Francisco da Costa is a small farmer and president of the association whose main activity is small-scale cattle ranching. With a total of 100 head in an area of 79 ha, he sells his cattle to the JBS Meatpacker and other farmers for fattening. He made the CAR to meet the legal requirement and sell his production. In his property there are two creeks, both largely deforested of their riparian forest. Enthusiastic and encouraging reforestation, Mr. Francisco has been increasing forest cover in his pastures (by natural regeneration), but he has not yet started recovering APPs. In association meetings, he discusses with members about how to start recovery processes, but still has many questions.

**Photo 1.** Mr. Francisco da Costa (President of Arco Íris Association–São Pedro PA) and his APP area to be recuperated: “How to fund it? What to do? Will there be monitoring and guidance? How can we do it in a joint way through the Association?”.



The D. Pedro II Association, in turn, has 63 members and is located on roads LO1 and LO2 of São Pedro PA. Its president, Mr. José Nunes, is known as Biro. He has been in the settlement since its inception, has a lot of 40 ha, which he manages along with his neighbor's 40 ha lot. Biro's main activity is dairy farming, he has 72 head and sells to the region's dairies in. The lots under his responsibility are in different situations: during the occupation of the first, Biro sought to maintain the banks of the APPs and was advised to create corridors for the cattle to access the stream water. In the second, the deforestation was total and the APPs are currently in degradation, with droughts in the springs and the water bed. Most of his Pedro II associates live similar problems and are waiting for guidance and support to begin their recoveries. There are still many doubts about how to make the recovery plans, what the technical guidance will be, where the necessary support will come from, etc.

## 7. Counterfactual analysis

The same area, two different examples of management:

**Photo 2.** São Pedro PA, Mr. José Nunes (President of the Dom Pedro II Association), example of initiative: a fenced corridor for herd access to water in the APP: "Ibama guided me 10 years ago."



**Photo 3.** São Pedro PA, Sr. José Nunes: two springs on his property APPs with springs silted and lacking water, with impact in the water source.



In both associations there are isolated farmers, who are testing initiatives to fence APP areas for natural regeneration. However, there are still many difficulties to carry out this enclosure and receive guidance and support to reforest and manage these areas.

In the view of the of the association's leaders, one key challenge, is how to generate income from these recovered areas. Farmers may be convinced to recover forest when they can expect to achieve economic value. Another challenge is how to obtain guidance and support to fence pastures and implement rotational grazing to improve yields and reduce pressure to deforest in new areas. Leaders are anxious to begin recovery processes together. However, when asked how to do it, few people show knowledge, and there is no exchange of experiences with other communities that are already recovering. The Amazon Portal Seeds Project, only about 80km from the São Pedro PA, with its network of seed collectors and the Muvuca methodology for reforestation with SAFs, could be a good way to share experiences for the settlement farmers.

# 7. Counterfactual analysis

**Table 1.** Counterfactual of the small farm activities supported by the Amazon Portal Seeds Project compared to the São Pedro settlement project in Paranaíta / MT

Promoted activities	Portal Seeds			Pedro PA			Situation Analysis
	no	partial	effective	no	partial	effective	
Raising awareness and stimulating CAR		X			X		Incra performed only the settlement CAR of, it will still be necessary to carry out the CAR per lot. Although the Amazon Portal Seeds did not carry out CAR, the project was required to promote it.
Community organization (associativism, cooperativism, council)		X			X		In São Pedro PA associations were very widespread, very similar to the Amazon Portal Seeds Project experience with local management councils. The associations that exist in the PA manage and do community organizing.
Promote recovery methods and management of APPs / RL with farmers			X		X		Some leaders of PA associations already receive sporadic information about the need to recover. Random initiatives begin to occur. But there is little knowledge of the existing alternatives, greatly enhanced by the Amazon Portal Seeds.
Participatory planning to recover deficits in APPs			X	X			Unlike the Amazon Portal Seeds Project, there are still no organized and participatory initiatives to carry out the recovery of deficits, there is only the wishes of some farmers and association leaders.
Training of rural producers			X	X			The Amazon Portal Seeds strongly emphasized farmer capacity (learning-by-doing methods). In São Pedro, recovery processes have not yet begun.
Local extension for follow-up			X	X			There is still no extension in the São Pedro settlement on themes such as recovery and reforestation.
APP recovery inputs			X	X			In São Pedro PA, the lack of knowledge about recovery options and alternatives to obtain inputs is the limiting factor for recovery.
Fencing of recovery areas			X		X		Even the occasional initiatives of settlement producers face another important limiting factor, the high cost of fencing.
Development of sustainable production activities with income generation and environmental quality.		X		X			In São Pedro PA they are very incipient, lack more clarity and extension in this regard.
Forest seed Market with added value			X	X			The farmers interviewed are not aware of seed networks initiatives in the region.



## 8. Conclusions

As seen throughout the report, the Amazon Portal region has an economy based on timber and agriculture, key deforestation vectors.

Public policies to control deforestation, such as the PPCDAM and its Arco Verde Operation, played an important role in the context of the IOV intervention, as they both acted with repressive sanctions and economic incentives. In this context, the project provided the basis for sustainable production activities, in addition to contributing to the recovery of degraded areas with SAFs. The Project demonstrated that even with strong pressure on environmental resources, it was possible and feasible to:

- Introduce family farmers to seed mixing practices (muvuca), plant forest seeds and green manure to recover the native Amazon forest;
- Set up a forest seed market
- Strengthen the social capital of family farming communities.

There is still a need to scale up the experience to meet the world of family farming and adapt it to large and medium-sized properties.

Giving priority to productive SAFs, within the framework of the Forest Code, can make them economically profitable, provided there are appropriate incentives, integrated public policies and environmental awareness in the face of climate change.

Thus, this experience can effectively help reforest the Amazon. The prospects for the permanence of the recovered areas are excellent.

However, in order to increase the effects of the project in other areas, it is necessary to build in integrated public policies of research, extension, credit, environmental management and climate change.

## 9. Recommendations

### **To municipalities, indirect project beneficiaries:**

- Identify means of to provide technical assistance to beneficiaries in the region to make pasture and dairy farming more sustainable, in cooperation with extension organizations;
- Strengthen the process of implementing plans to recover degraded areas in the municipalities, guided by IOV's approach to hiring trained technicians.

### **To the IOV, the organization responsible for the project:**

- To support beneficiaries in their search for legal properties, both land and environmental, with Inra and municipal governments;
- To continue to select, protect and expand seed trees and species, for seed collection, according to species priorities, and to think how to protect the most threatened;



## 9. Recommendations

- As it broadens the market for forest seeds, making collection more attractive; promote exchanges about the marketing of other SAF products in other markets, to expand income potential;
- Use the economic data by species to estimate future income and set priorities for seed collection and planting;
- Strive to work more with public agencies, such as extension, Incra and the Bank of Brazil, seeking points of common interest and even indicating a focal point responsible for these activities.

### **To donors and to the FA/BNDES:**

- Whenever possible, FA support for reforestation recovery initiatives should be carried out in line with the of the Environmental Regularization Program (PRA) instruments, from enrollment in the CAR to complete environmental regularity;
- To seek to scale up the spread of models to recover environmental deficits, such as those carried out in the Amazon Portal Seeds Project, in order to reach all family farmers, and maximize recovery / reforestation in the Amazon, with the cooperation of public agencies and by FA public notices;
- FA supported SAF projects should promote the participation of traditional populations in forest seed collection, with technicians sensitized and trained to work with these communities through public and third sector entities;
- Considering project results, the FA, IOV and other partners should develop a program to spread and train other actors to carry out similar activities, with or without Fund participation;
- Include support for strengthening gender equity as a theme to be addressed in projects supported by the Amazon Fund.

### **To the Ministry of the Environment (MMA):**

- Identify and promote production innovations compatible with sustainable development, crucial to streamlining axis 3 of the PPCDAm;
- To seek strategies to scale up Amazon Portal Seeds Project impacts, this report suggests that a meeting be held and planned with clear objectives, with the participation of MMA, state and national extension, management environmental, research and credit agencies; of MAPA and the FA, among others;
- Consider the possibility of a specific action to control and prevent deforestation in Apicás / MT;
- Continue to work with MAPA to comply with Normative Instruction No. 56/2011, which deals with the regulation of the production, sale and use of native and exotic seeds and seedlings; and to improve the National Seed and Seedlings Registry (RENASEM);
- Research the forest seed market and plan its expansion together with other relevant public actors, such as MAPA and MDA.

## 9. Recommendations

### To the Fundo Amazônia Steering Committee(COFA):

- The Amazon Fund already supports the strengthening of sustainable production through public notices and spontaneous demand. Several projects are underway in the Amazon to this end. As a complementary strategy, COFA is invited to discuss launching public notices with federal agencies working to strengthen value chains (MDA, MMA, MAPA) to promote sustainable use of the standing forest, through SAFs. The private sector and the third sector should be involved to support the execution of these projects, together with families and extractivist farmers;

## 10. Lessons Learned

- There should be partnerships with federal agencies working to strengthen value chains (MDA, MMA, MAPA) to promote the sustainable use of the standing forest through SAFs, especially when involving the private sector and third sector in the implementation of these projects, together with family farmers and agroextractivists.
- Participation, empowerment with concrete responsibilities, and environmental awareness of local social organizations facilitate recovery of degraded areas. In addition, these factors are important to increase self-confidence and strengthen leadership.
- Applying participatory methods such as shared management, demonstration units, and tools such as "learning-by-doing" are more efficient and effective ways of achieving faster results, and can influence new support for the project proposal.
- Most farmers already realize that environmental deficits hamper their activities. The lack of access to good quality water and public policies restricting development and credit were factors which reinforced this perception.
- Interest in reforestation increases when its products bring prospects for income generation, especially in easily accessible reserve areas.
- Climate change issues affect and make farmers aware. The variations and intensities of the most cited climatic factors were: water scarcity, extreme temperatures and rainfall outside normal periods.
- Youth rural education activities, in collaboration with public education, increase the long term prospects for consolidating family farming.

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## 12. Glossary

- Low Carbon Agriculture (ABC)
- Permanent preservation area (APP) areas required by the Forest Code to protect springs, water bodies and some hills
- Legal Reserve (RL) – Proportion of the Farm to be kept in forest set by the Forest Code Technical Assistance and Rural Extension (ATER)Regional Community Association of Northern Mato Grosso(ACRNM)
- National Development Bank (BNDES)
- Rural Environmental Cadaster (CAR)
- Pastoral Land Commission (CPT)
- Amazon Fund Steering Committee (COFA)
- National Food Supply Company(CONAB)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
- Difference in differences (DID)
- Strengths, Weaknesses, Opportunities and Threats (SWOT)
- Amazon Fund(FA)
- Greenhouse gases (GEE)
- Global Environment Facility (GEF)
- Brazilian Institute of Environment and Renewable Resources (IBAMA)
- Brazilian Institute of Geography and Statistics (IBGE)
- Life Center Institute (ICV)
- National Institute of Colonization and Agrarian Reform (INCRA)
- Society, Population and Nature Institute (ISPN)
- Socio-environmental Institute(ISA)
- Unified Environmental License (LAU)
- Synthetic Control Method (SCM)
- Ministry of Agrarian Development (MDA)
- Ministry of Social Development and Fight against Hunger (MDS)
- Movement of Peasant Women (MMC)
- Normalized Difference Vegetation Index (NDVI)
- Organization for Economic Cooperation and Development (OCDE)
- Small Ecosocial Projects in the Amazon (PPP-Ecos)
- Plan of Action for the Prevention and Control of Deforestation and Burnings of the State of Mato Grosso (PPCDQ)
- Plan of Action for Prevention and Control of Deforestation in the Legal Amazon (PPCDAm)
- Food Acquisition Program(PAA)
- Environmental Regularization Program(PRA)
- National School Feeding Program (PNAE)
- National Program to Strengthen Family Agriculture (PRONAF)
- Settlement Project (PA)
- Reducing Emissions from Deforestation and Forest Degradation (REDD+)
- National Seeds and Seedlings Registry (RENASEM)
- Review of Outcomes to Impacts (RoTI)
- Agroforestry Planning Support System (SISAPA)
- Theory of Change (TdM)
- The Sustainable Trade Initiative (IDH)
- Demonstration Units (UDs)
- United Nations Framework Convention on Climate Change(UNFCCC)
- Mato Grosso State University (UNEMAT)
- Mato Grosso Federal University (UFMT)
- Hydroelectric Power Plants (UHEs)





# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">1. Actions that are complementing or consistent with the objectives of national forest programs and other relevant international conventions and agreements</p>	<p><b>Has the project been aligned with the PPCDAM and state plans for the prevention and control of deforestation?</b></p> <p>The Plan for the Prevention and Control of Deforestation in the Amazon (PPCDAm) and the Plan for the Prevention and Control of Deforestation and Burning of Mato Grosso provide for, in the axis of command and control, the implementation of the CAR to identify, among other things, legal reserve areas and permanent preservation; and, in the axis of sustainable production, the valorization of the standing forest, through sustainable activities of economic value that make a forest economy feasible. The Amazon Portal Seeds project carried out reforestation activities of Permanent Preservation Areas (PPAs), mainly in the areas of springs, streams and creeks and in areas of agricultural use in the rural properties of family agriculture (below 4 fiscal modules - MFs). The areas to be recovered were identified through georeferencing of properties and the use of orbital images, as well as in properties that made the CAR. The recovery model was based on SAFs with native species of economic value, creating an economical alternative for these recoveries. Therefore, the project was in line with the policies foreseen in the PPCDAm.</p> <p><b>Which other federal public policies or international agreements has the project been aligned to? In what aspects?</b></p> <p>The project showed alignment with the Forest Code (Law 12.651 / 2012) in relation to environmental regularity and recomposition of degraded areas and also with the National Policy on Climate Change (Law 12,187 / 2009). In addition, it aligned itself with the Brazilian policies of the National School Feeding Program (PNAE) and the Food Acquisition Program of the National Food Supply Company (PAA / CONAB), through the involvement of family farmers in the programs of school meals for CONAB, the products generated in the reforested areas have created a marketing channel for several products produced.</p> <p><b>Has the project contributed or could it contribute directly or indirectly to reducing emissions from deforestation or forest degradation? In what way?</b></p> <p>The project is already contributing to the reduction of forest degradation and effectively the increase of carbon stocks by the recovery, through the planting of 1,246 hectares of forests, since 2010, being that a large part of these recoveries is in an advanced stage of growth and recovery. This reforestation contributed to an increase in carbon stocks and to mitigation of the emissions generated by deforestation in the region, since most of the region's properties have significant forest deficits. (See table of forest remnants per municipality in the Portal da Amazônia region).</p>



# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
<p>2. Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation</p>	<p><b>To what extent has the project promoted the articulation between different actors (public sector, private sector, third sector or local communities)? Have instances of shared governance been used? Which?</b></p> <p>The project worked little with the public and private sector, it was limited to the occasional support of two municipal governments of the seven municipalities involved. In the case of the third sector, participation was very active, since the institute in charge of the project was a third sector organization. The involvement of local communities was very significant, as the project helped to create decision-making processes for the project's actions, through Local Management Councils, which were decisive for engaging small farmers in the project (&lt;4 Fiscal Modules).</p> <p><b>To what extent has the project contributed to strengthening public instruments and forest and territorial management processes?</b></p> <p>Although the project did not have direct articulation with local public authorities and its activities were not articulated with public management instruments (e.g. municipal councils), other forms of management were important, such as management councils formed in different localities. It is important to note that although these councils have no formal role, many of their members have also become part of local councils as representatives of their communities. The participatory management used allowed for a new process of valorization of the standing forest, from the economic and environmental valuation. The planning and instruments for participatory land use management are still weak focal points in the project intervention areas.</p>



# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
<p>3. Respect for the knowledge and rights of indigenous peoples and members of local communities, taking into account relevant international obligations, national circumstances and laws and noting that the UN General Assembly adopted the UN Declaration on the Rights of Indigenous Peoples.</p>	<p><b>To what extent has the project influenced the constitutional rights associated with the possession and formal destination of land in its area of activity?</b></p> <p>Although the project was not directly involved in the ownership and regularization of properties, the formation of local management councils, as well as the project's contribution to legal compliance (incentive for CAR and recovery of PPAs), led to greater debate among these producers about their rights and needs, leading to the organization of joint demands related to land tenure. But in fact, little has happened in the Portal region, in relation to formal ownership of land by small producers. The land tenure agencies in this region are basically INCRA and the Land Institute of Mato Grosso, which do not have a program aimed at regularization and tenure of these small producers, although this greater clarification of the producer has led, in some specific cases, to initiatives to obtain precarious instruments of land tenure, such as Use Concession Contracts (CCUs).</p> <p><b>To what extent has the project influenced the sustainable use of natural resources in its area of activity?</b></p> <p>As the general objective of the project was the development of sustainable production activities in the region of the Portal of the Amazon, Amazon Portal Seeds positively influenced the sustainable use of forest resources, from reforestation and adequate use of protected water resources through recovery of APPs. Among others, training sessions on reforestation and economic use of the forest and measures for water resources adequate management were carried out.</p> <p><b>If the project had indigenous peoples, traditional communities or family farmers as direct beneficiaries: were their socio-cultural systems and traditional knowledge considered and respected throughout the project?</b></p> <p>The project had as main audience the family farmers who in this region are mostly from the southern and southeastern regions of Brazil. As far as possible, their knowledge was respected, based on a process of joint learning between traditional knowledge and science that exists in the Amazon, through training, exchange and experience sharing. In the case of the indigenous people, there was the participation of a Terena community that participated through the collection and supply of seeds for reforestation carried out by the rural producers. In this sense, it was a new experience for the organization responsible for the project, which had difficulties in understanding Terena culture and way of life and which the best way to act would be. As a result, the project only used indigenous seed collectors in the initial phase.</p> <p><b>What kind of effects: in the social organization, economic or the use of available spaces and resources? In what way do they interfere: positively, negatively, or both?</b></p> <p>In the case of the family farmers involved in the project, the effects were positive, there were improvements in social organization, mainly through the management councils, in the economic organization (creation of the Cooperativa do Portal and the Seed Network) and in the adequate use of space, through the organization of production activities and recovery of degraded areas. In the case of the Terena, there were possibly positive effects (generation of temporary income with seed collection), as well as negative effects, but for its measurement it would be necessary to interview them, which was not possible during the field mission, due to the time and distance to reach the Indigenous Land.</p>



# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
<p>4. Full and effective participation of stakeholders, indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of Decision 1 / CP 16</p>	<p><b>How did the project guarantee prior consent and the local / traditional way of choosing the representatives of its beneficiaries (especially indigenous peoples and traditional communities)?</b></p> <p>In the case of the Terena, local meetings were held with the organization responsible for the project (IOV) and indigenous leaderships (attendance list in the IOV). After the approval and acceptance of the Indians, the indigenous organization in the village signed the agreement and practically 100% of the Indians participated in the activities: seed collection training was done and quantity and deadlines for their delivery to the project were defined.</p> <p><b>What participatory planning and management tools did the project apply during planning and decision making?</b></p> <p>Meetings were held for clarification and preparation of proposals in a participatory manner. These participatory planning workshops were held in each municipality. Local Management Councils played a key role in decision-making and project monitoring.</p> <p><b>In case of projects with economic purposes: were any benefits arising from the project accessed in a fair, transparent and equitable way by the beneficiaries, avoiding a concentration of resources?</b></p> <p>The project defined the ways to distribute the resources generated with the guidance and follow-up of the local Managing Councils. In addition, it disseminated through the communication tools used by the project (Muvucando newspaper and website) the form and values that were distributed among the beneficiaries. No divergent points on the subject were detected in the interviews with the participating members of the Councils or of the participating producers of the project, which they thought was done in a fair and equitable way. In the case of the purchase of Terena seeds, in the previous negotiations, a price was set to be paid to the indigenous organization and payments were made through the Terena Indigenous Association.</p> <p><b>To what extent has the project provided the general public and its beneficiaries with free access and easy understanding of information related to project actions?</b></p> <p>The project created the Local Managing Councils that defines the expenses in a participatory way, following the acquisition of the inputs and the investments made. In addition, the technicians hired by the project in each location provided the general information and supported the council. The responsible organization has a website <a href="http://www.iov.org.br/">http://www.iov.org.br/</a> that provides information about the project and other initiatives generated, such as: quarterly Muvucando newspaper, seeds network, monitoring, among others.</p> <p><b>Has the project set up a good monitoring system for results and impacts? Has the project monitored and systematically disseminated the results and their effects?</b></p> <p>It has a monitoring system of the results <a href="http://www.sementesdoportal.com.br/monitoramento/">http://www.sementesdoportal.com.br/monitoramento/</a> for the entire project area, but it does not yet have impact monitoring. Although it has built a good baseline, it did not prioritize this type of monitoring because of the high costs (monitoring the process of recovery of all areas and the effects of its activities in the seven municipalities). However, this system is under development.</p>





# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
<p>5. Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 Decision 1 / CP 16 are not used for the conversion of natural forests, but rather to encourage the protection and conservation of natural forests and their ecosystem services and to improve other social and environmental benefits.</p>	<p><b>How did the project contribute to the expansion or consolidation of protected areas?</b>  <b>The project did not work in protected areas.</b></p> <p>How did it contribute to the recovery of deforested or degraded areas?            By reforesting 1,246 hectares of degraded areas in the property of family farmers (&lt;4 MF), either in APPs or in areas of agricultural use. There was an increase of 139.52% in forest cover and a decrease of the areas of exposed soil of 47.23% in the areas covered by the project, according to the orbital analysis.</p> <p><b>In case of areas restoration and reforestation activities, did the methodologies used prioritize native species?</b></p> <p>Since at the beginning of project implementation there were no native seed suppliers in the region and most of the rural producers involved knew little of the native species, there was some difficulty in identifying native species with potential for reforestation. As a result, indigenous seeds from other sites, such as the Xingu Collector's Network and the Terena village were acquired at the beginning to guarantee the percentage of native species required to recover APPs. In the course of the work, local options were created, with the creation of the Seeds Collectors Network. About 55% of the species used for reforestation are native, according to the Forestry Code for the recovery of APPs. (Minimum of 50%).</p> <p><b>To what extent has the project helped to establish recovery models with an emphasis on economic use?</b></p> <p>The methodology used for reforestation, through SAFs, was the muvuca (seed mix in line planting), with forest enrichment by seedlings from the second year. A survey of the forest species with economic potential was made to allow the economic valuation of the recovered areas and a balance was sought between exotic and native species, although the ideal balance for this is not certain yet. The methodology used, the guidelines and the best ways of applying them are documented on the website of the Agroforestry Planning Support System - SISAPA  <a href="http://www.sementesdoportal.com.br/sisapa/acesso.php?accesscheck=%2Fsisapa%2Findex.php">http://www.sementesdoportal.com.br/sisapa/acesso.php?accesscheck=%2Fsisapa%2Findex.php</a></p>



# 13. Annexes I. Salvaguardas de REDD+

Criteria	Guiding questions
6. Actions to address the risks of reversals in REDD + results	<p><b>What factors constitute risks to the permanence of REDD + results? How did the project address them?</b></p> <p>The Amazon Portal Seeds project aimed to valorize the forest recovery of degraded areas and APPs, using the SAFs, with economic and environmental potential, aiming to value the forest as an instrument of quality of life (thermal comfort, quality and quantity of water resources and economic value). The risks verified for permanence of the results were: - The project started before the new Forest Code (2010), then an average of 30-50 meters were recovered from the banks of the streams and springs, with the new Code requiring only 5 meters for small areas (up to 1 MF). As most of the areas recovered are from producers with up to 1 MF, there is the possibility of some producers clearing part of the recovered area. The project seeks to enhance the economic value these areas so that it does not occur. Grain (soybean) entry in the region leads to pressure to convert land use, large-scale use of herbicides and pesticides, including spraying airplanes (there have been reports of reforested areas losses due to this spraying). The project supports producers to negotiate via MPF and MPE, to have better control and rules for herbicide use by these large producers. The increased income of the recovered areas of the small producers strengthens their settlement on the land, ultimately not selling them.</p> <p>The entry of the fish farming chain that has been used in areas of APPs for tanks construction leads to the conversion of land use in degraded areas where there should be reforestation. The project does not work on this topic.</p>
7. Actions to reduce the shift of carbon emissions to other areas	<p><b>Has there been a shift in the emissions avoided by the project actions to other areas?</b></p> <p>The project contributed to the settlement of the small farmers in the Portal region, avoiding the sale of their lands due to existing pressures from large and medium farmers. The Amazon Portal Region, located in the north of Mato Grosso, is located in the so-called Amazonian Deforestation Arc and is one of the regions of great pressure for expansion of livestock and grains activities, which has been growing rapidly in the municipalities of SIDRA / IBGE, sd). This is moving mining, cattle-raising and timber extraction activities more and more to the north (Apiacás, Cotriguaçu and Colniza are today the main fronts of this expansion in that region), entering the States of Pará and Amazonas. This is due to the conversion of land use in this region of Mato Grosso, which has been expanded to the soybean chain since paving the BR 163, as well as the construction of three new hydroelectric plants in this region.</p>

## 13. Annexes II. Theory of Change applied to Amazon Portal Seeds Project

### 13.2. Theory of Change applied to Amazon Portal Seeds Project

RoTI (Review of Outcomes to Impacts) of the Global Environment Facility (GEF) was applied, a project evaluation method developed by the GEF Evaluation Office. RoTI uses a "Theory of Change" (ToM) approach to assess the overall performance of GEF projects. Its goal is to, through an in-depth analysis of the project documentation, where possible, with data collection in place, help assessors to identify and then evaluate the component result chains, guiding project performance, and finally, contributing to the achievement of its intended impacts.

The logical framework of the project was the starting point. Also making a previous analysis of the documentation, a flow chart was elaborated that reflects the Theory of Change indicated by the project (see below). Using the DoView software, the evaluators set up and designed a Provisional Theory of Change (TdM). The Theory of Change is defined by the GEF as "a theory-based evaluative tool that maps the logical sequence of means-end links underlying a project, thereby explaining both the expected outcomes of the project and the actions or strategies that should promote the achievement of results" (<http://beta.gef.io/sites/default/files/ieo/ieo-documents/ops4-m02-roti.pdf>). This theory was then presented to project managers and technicians at the initial IOV meeting. One of management's comments, for example, was that among the effects, relatively minor importance was attributed to legal compliance; On the other hand, training and participation (building social capital) were considered even more important than the impacts themselves. In the field and data analysis, we sought to relate the findings to the outlined ToC and to unravel the real logic of the program. Then, in order to draw lessons learned and make recommendations for future programs and projects, the development of an optimal program theory was proposed. The main thesis of the Amazon Portal Seeds Project is that agroforestry systems (first specific objective) promote sustainable development (general objective). Was this thesis valid when the project started? Is it still valid today (guiding question regarding the relevance criterion)?

In order to evaluate the main thesis of the Project and to propose an optimal program theory, it will be necessary to relate to science. Donaldson (2007, p.9) presents the following definition: "The Science of Evaluation Driven by Program Theories is the systematic use of substantive knowledge about the phenomenon being investigated and of scientific methods to improve, produce knowledge and feedback about it, and to determine the merit, value, and significance of evaluation objects, such as social, educational, health, community, and organizational programs "[and, we would add, environmental].

What will the optimal program theory be for the Amazon Portal Seeds project, its successors, and other such programs? To answer this question, one must resort to specialized literature.

Costa (2011) calls the agroforestry paradigm, with dominance or strong presence of non-timber products extraction, as "Peasant Trajectory T2", which preserves, at some level, the original nature. For Costa, sustainability "requires strengthening of the Camponesa T1 trajectories [" with dominance of permanent crops and milk production] and Camponesa T2 ... ". It also identifies the Peasant Trajectory T3 (beef cattle) and the Patron Trajectory T4 (also beef cattle). The peasant trajectories T1, T2 and T3 make up for two-thirds of the Gross Value of Rural Production in the Amazon.



## 13. Annexes II. Theory of Change applied to Amazon Portal Seeds Project

Today the IOV seems to be resuming the idea of adding at least the path T1 to T2, which prevailed in phase 1 of the project and continues, in theory, until the present moment. Three levels of results are defined (in the presentation, designated R1, R2 and R3): products, effects and impacts. The following are the definitions offered by the GEF and we exemplify each one for the project. We further incorporate the subsequent comments of the IOV.

From the social point of view, we observe that agroforestry systems occupy 26.6% of the people employed in the rural sector in the region, vs. only 10.5% in the case of beef cattle breeding systems; this phenomenon aggravates the problem of rural exodus and its harmful consequences in cities (see Almeida, 2011, page 38, citing United Nations Food and Agriculture Organization projections).

### • **Impact:**

"A fundamental and lasting change in the condition of people and their environment resulting from the project."

- Environment: An area of 1,200 ha recovered.

1) Replacement of pasture areas by agroforestry systems, and

2) Prevention of deforestation / degradation of forest fragments still existing.

- People: Average income increased and poverty decreased.

### • **Outcomes:**

"The behavioral or systemic effects to which the project contributes, and which are intended to help achieve the impacts of the project."-

Behavioral:

1) Capacities of farmers and indigenous community are developed;

2) Participation in planning and monitoring (and evaluation, through monthly meetings).

### • **Systemic:**

1) Established Community Seed Houses, and

2) Legal compliance ensured.

### • **Outputs:**

"The goods and services that the project must deliver to achieve the effects of the project. The delivery of the products is under direct control of the project".

1) Goods: Training / organization / awareness materials made available. Note: there were also materials produced by the communities (Muvucando magazine), with the support of the communication advisor.

2) Services: Base of technical and managerial services to support the implementation of the Forestry Systems and participatory management made available.

Actions or strategies were specified as intermediate processes.





## 13. Annexes II. Theory of Change applied to Amazon Portal Seeds Project

Connecting the products and effects, we have the following:

- 1) Disseminate / consolidate the technique among family farmers;
- 2) Carry out community training and organization (including through exchanges: visits to other places and receiving visits, community workshops and regional meetings); and
- 3) Organize the Network for income generation. It is added
- 4) Conduct monthly evaluation meetings.

Connecting the effects and impacts, we have:

- 1) Develop sustainable production activities;
- 2) Add value to forest product chains; and
- 3) To consolidate the seed network of the Portal da Amazônia, through education and training of seed collection groups (not only in indigenous land, but in other municipalities as well).

Each result and action was broken down into subordinate flowcharts. The theory indicated by the project and the real logic have to do with the consistency of activities, the immediate results and the impacts (second and third guiding questions concerning relevance).

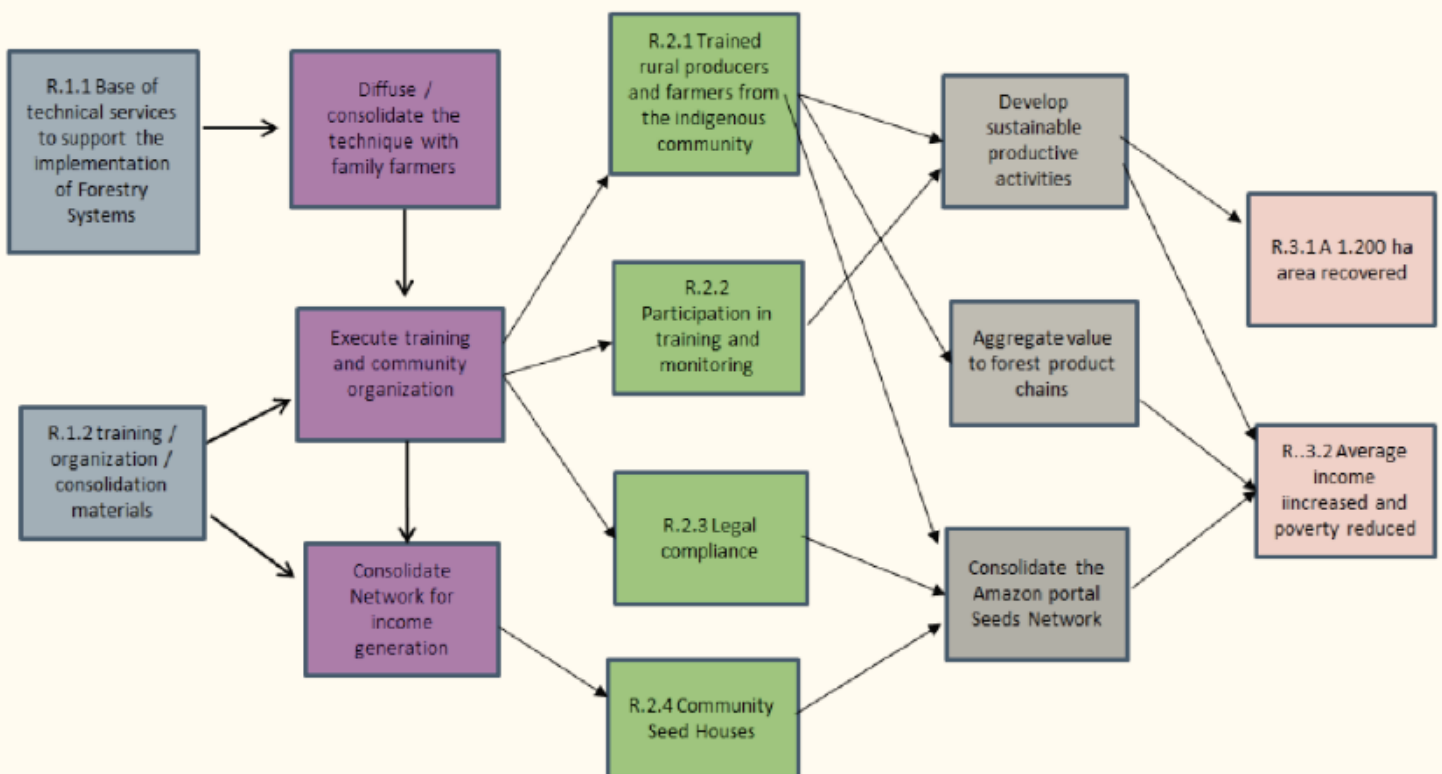


Figure 1: Theory of Change (first page minute)  
Portal Seeds Project

Key:  
 Blue: type 1 results (Products / outputs)  
 Purple: Processes  
 Green: type 2 results (Effects / outcomes)  
 Grey: intermediate processes  
 Pink: type 3 results (Impacts)

# 13. Annexes III. Analytical report of the results obtained in the analysis of the forest recovery situation

## 13.3. Analytical report of the results obtained in the analysis of the forest recovery situation

Author: Flavio Augusto Altieri dos Santos

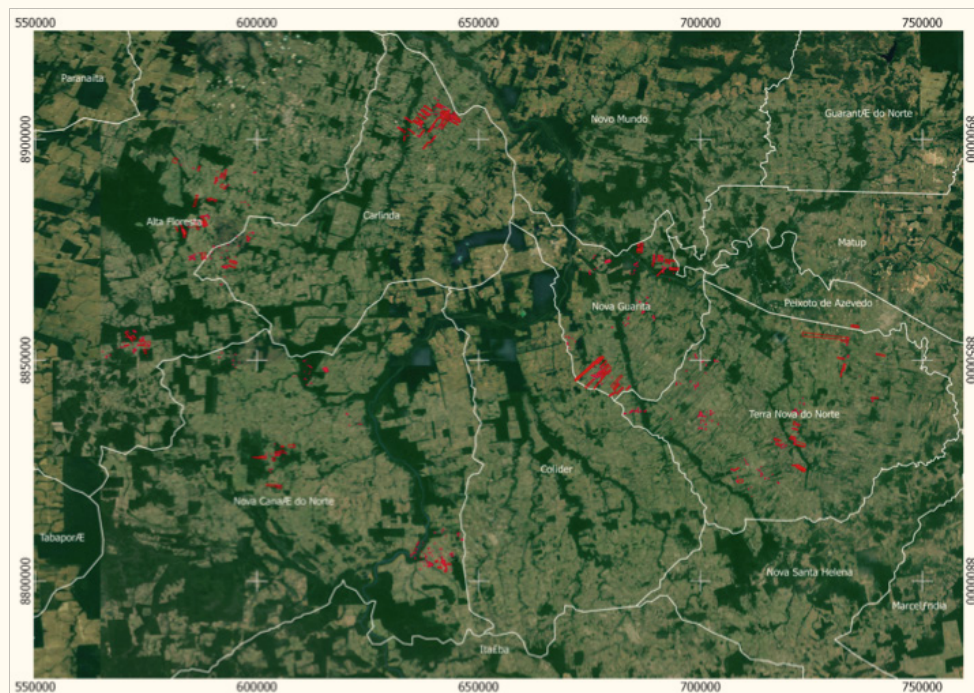
### 1. Objective

Identify and evaluate the vegetable recovery process of the areas destined to this end in the Amazon Portal Seeds Project.

### 2. Study Area

The study area comprises the rural properties of the Amazon Portal Seeds Project, located in the state of Mato Grosso (Figure 1), which is characterized as vegetation transition from forest to cerrado.

**Figure 1.** Geographical location of the areas for recovery belonging to the Amazon Portal Seeds da Amazônia Project. In highlight, a set of areas in detail.



### 3. Materials and Method

For the development of this task, a cartographic base was used in digital format, composed of vectorial cartographic data of the geographical limits of the properties corresponding to 924 properties of the Amazon Portal Seeds Project. Digital maps corresponding to each of the Project properties were also used (Figure 2). The analysis of the behavior of the vegetation recovery process of the areas of each property was made based on the images generated by the RapidEye Satellite System, in a total of 64 scenes for the two periods (Figure 3). The images were selected so as to allow the analysis of the temporal variation of these areas, aiming to enable an analysis of the variations of the soil and vegetation features identified in the images of the year 2011, which portrays the situation before the project intervention, and the year 2015, post-execution of the recovery activities of the vegetation areas delimited to reestablish their recovery.



# 13. Annexes III. Analytical report of the results obtained in the analysis of the forest recovery situation

Figure 2. Map in digital format used for extraction of areas for recovery.

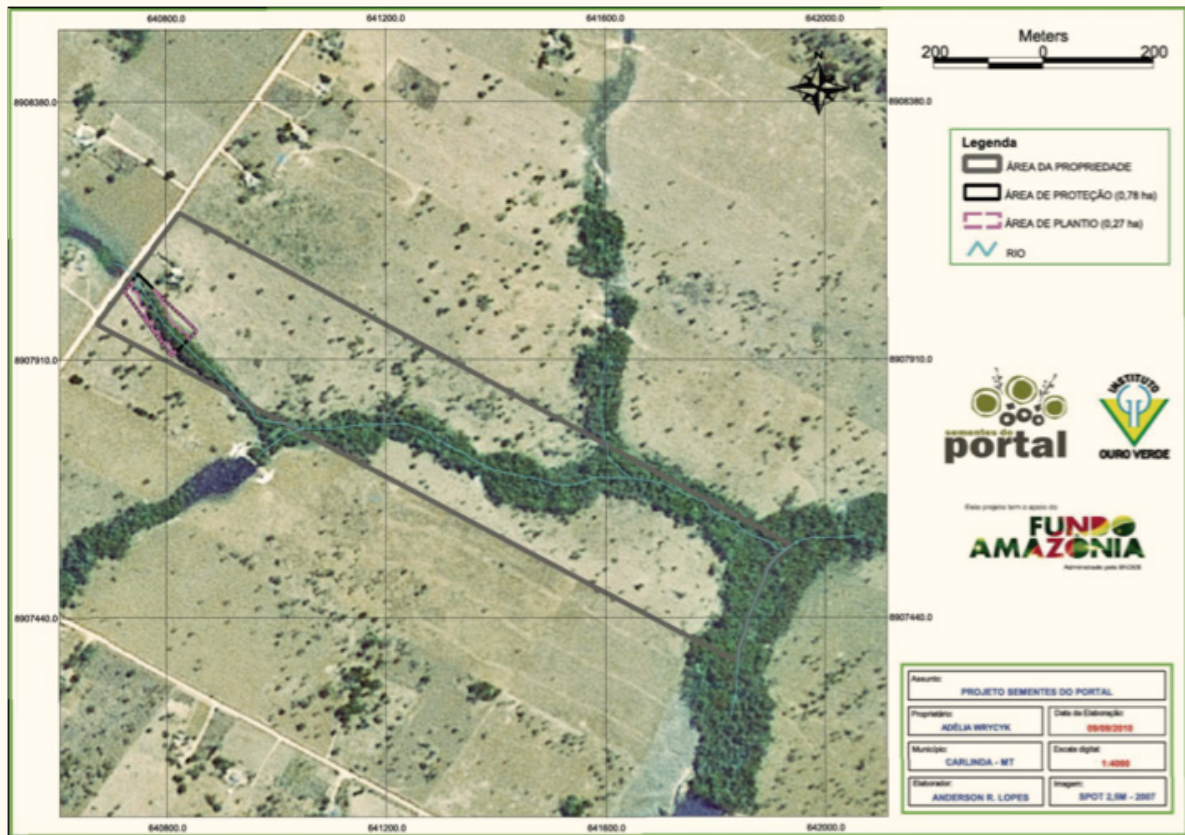
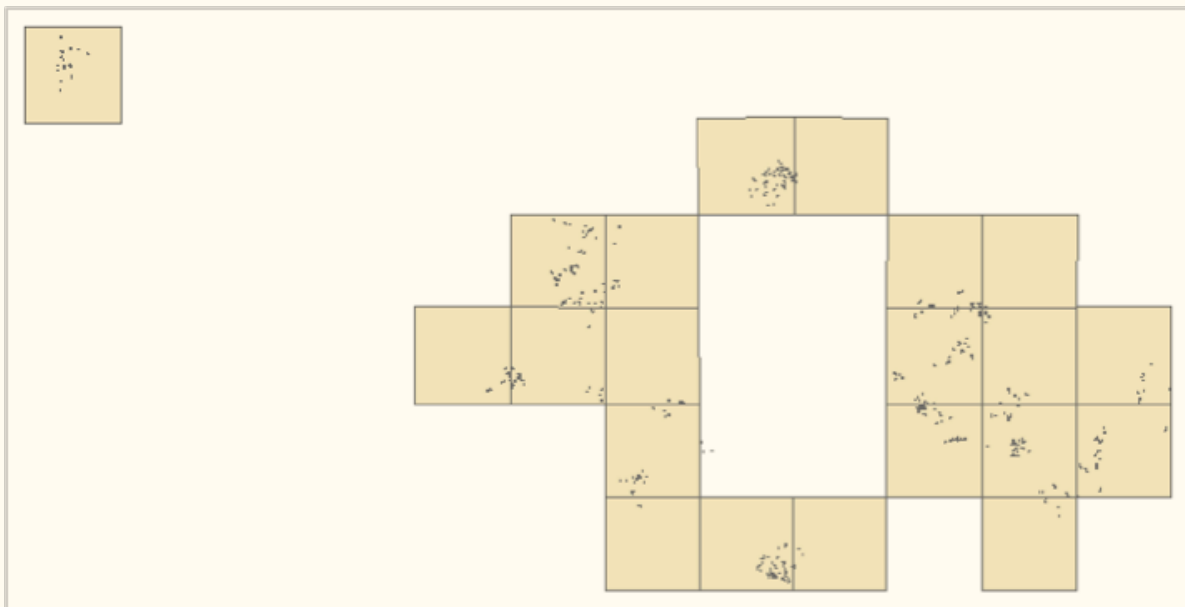


Figure 3. Distribution of scenes from RapidEye images used in the analysis of Amazon Portal Seeds Project.



RapidEye is a system composed of five remote sensing satellites, all located in the same orbit. Its range of image collection is 77 km wide and 1,500 km long (RapidEye, 2012). Table 1 presents the main characteristics of the satellite and its sensors, as well as their spatial and spectral resolutions.



# 13. Annexes III. Analytical report of the results obtained in the analysis of the forest recovery situation

**Table 1.** General technical characteristics of RapidEye satellites.

Characteristic	Information
Number of Satellites	5
Orbit	Heliosynchronous with 630 km of altitude
Equator crossing	+/- 11:00h local time
Type of sensor	Multispectral pushbroom imager
Spectral bands	Blue, Green, Red, Red-Edge, Near-infrared
Pixel Spacing	6,5 in nadir
Pixel size (orthorectified)	5,0 m
Image Size	Approximately 77km wide with length between 50 and 300 km, 462 Mbytes/25 km along the orbit for 5 bands
Satellite life span	7 years
Revisiting time	Daily out of nadir / 5,5 days (in nadir)
Horizontal Datum	WGS84
Quantization bits	12 bits

The images of the year 2011, due to problems of displacements in relation to the limits of properties, river locations, as well as in relation to the images of 2015, were adjusted using georeferencing techniques executed in ARCGIS 10.3 software, applying a model of linear polynomial correction with ten control points and adjusted to Universal Transverse Mercator Projection System (UTM) and WGS84 ellipsoid reference system. The control points were obtained in the orthorectified images of the RapidEye of 2015.

Due to the reduced dimensions of the areas of the recovered properties to be analyzed in relation to the spatial resolution conditions of the RapidEye image, which hinders a visual interpretation of the changes occurred during the period 2011 and 2015, the images were processed in order to generate the Normalized Difference Vegetation Index (NDVI). Due to the high energy absorption of the plants being recorded in the red spectrum range (Red), while the near-infrared band (NIR) is recorded the behavior of the plant cell structure (Figure 4), the NDVI is quite used for environmental context analysis involving vegetation. The NDVI has values that range from -1 to 1, values closer to 1 identifying vigorous vegetation area and values of zero and below being related to water. The vegetation variations of NDVI above zero to approximately 0.5, are precisely the vegetation with less vegetative vigor. The determination of NDVI is obtained by the following equation:

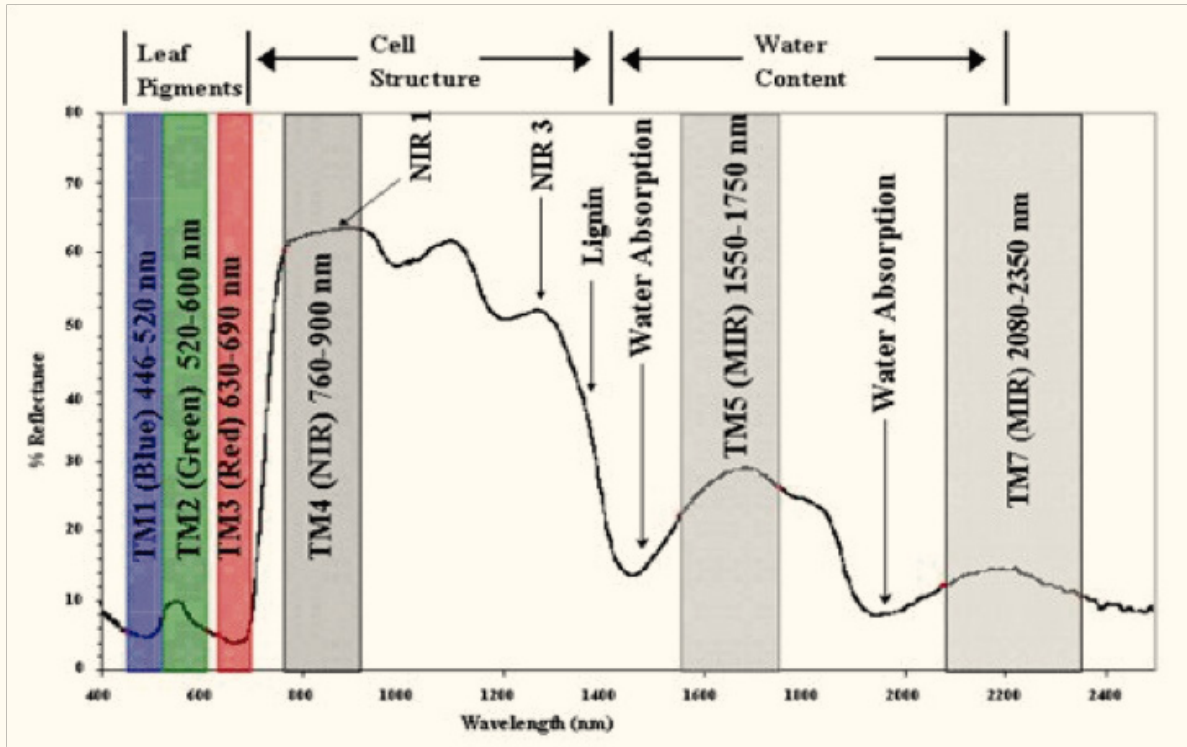
$$NDVI = \frac{(NIR-Red)}{(NIR+Red)}$$





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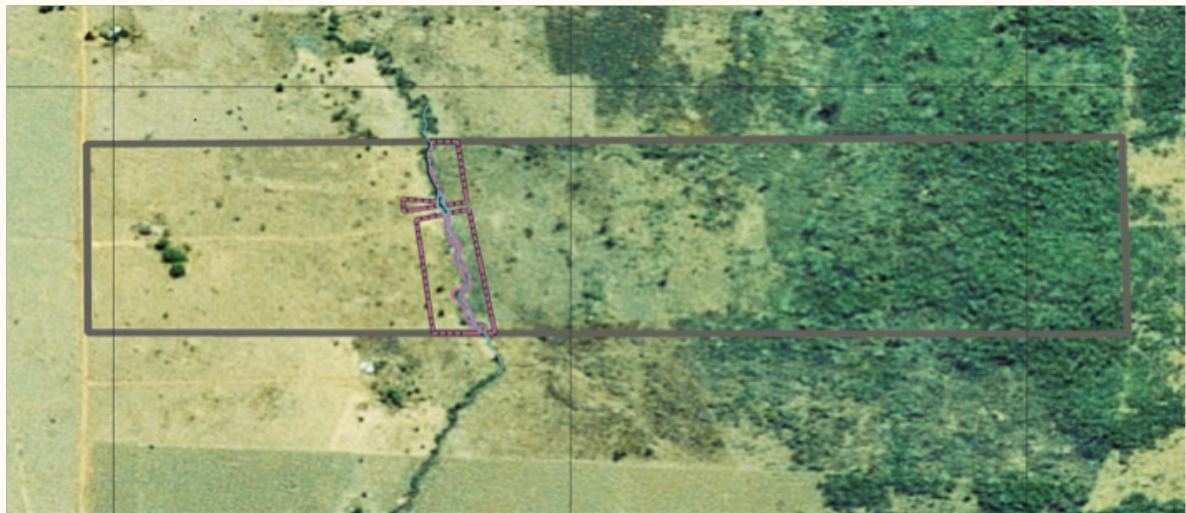
Figure 4. RapidEye Spectral Bands



The matrix (image) and vector data processing were all performed in an ARCGIS geodatabase database structure, where they were systematized for a single projection system, the UTM, and WGS84 reference ellipsoid. The NDVI images were sliced into classes and evaluated individually to identify those that best corresponded to soil and vegetation classes.

The achievement of the boundaries of the vegetation recovery areas in each property of the Amazon Portal Seeds Project were made based on the maps in digital format, where they were georeferenced based on the coordinates of the existing vertices, and later the areas of interest were vectorized (Figure 5).

Figure 5. Delimitation of the analyzed areas of each property extracted from the maps.



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It should be emphasized that all processes of georeferencing and vectorization of data embeds errors that are inherent to the technique used, the visual acuity of the responsible technician and the instruments used by him in this process. However, these errors do not invalidate the proposed work, since they are within acceptable values for the proposal of this study.

The evaluation of the recovery process of the reforested areas was carried out based on the comparison of the increase or decrease of the classes of soil (solo) and vegetation (vegetação) exclusively, based on the difference of the results found in the year 2015 and 2011 according to the following equations:

$$\text{VariaçãoSolo} = \text{Solo2015} - \text{Solo2011}$$

$$\text{VariaçãoVegetação} = \text{Vegetação2015} - \text{Vegetação2011}$$

The **VariaçãoVegetação** works as a confirmation of the **VariaçãoSolo**, that is, if the result is positive, it implies a probable vegetation recovery, being negative, it can be affirmed that a probable suppression of vegetation occurred in the analyzed period. The entire analysis was performed by property and then consolidated to get an overall value of the project.

For areas of the Amazon Portal Seeds Project, three classes were considered, the first being called Soil, which corresponds to an area with no characteristic of any kind of shrub or taller plant species, and which presents soil exposure as its main characteristic.

The second class, called Veg-1, most likely presents an area with characteristics of a vegetal recomposition resulting from the artificial introduction of plant species or from a naturally occurring recomposition from its abandonment and introduction of species by means of bird or wind. The third and last class, Veg-2, is related to old vegetation types, which already existed in the base year of the analysis (2011).

### 4. Result

#### 4.1. Amazon Portal Seeds Project

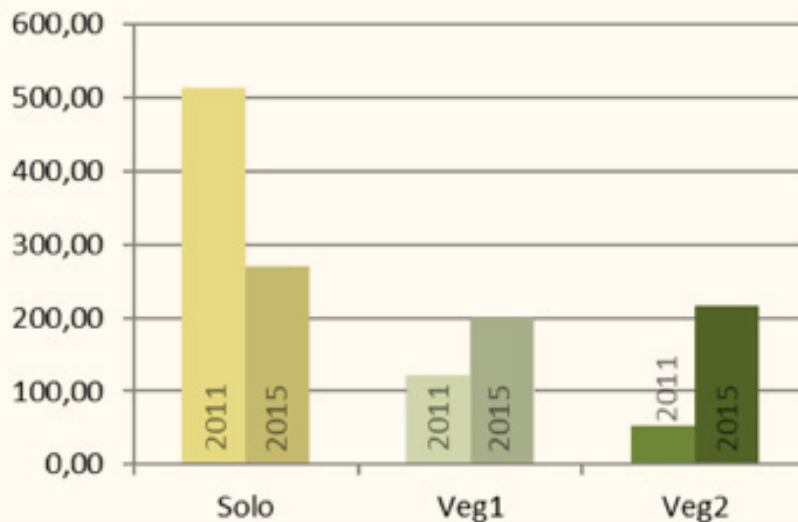
In total, 924 properties were distributed throughout seven municipalities, totaling an area of approximately 686.13 ha destined to recovery. The results obtained from the analyzes of the NDVI images are presented in full in Annex 3 and summarized in Table 3. Based on this data, it can be observed that a positive process of vegetation area recovery was generally observed as shown in Table 3. The Veg-1 class had an increase of approximately 77.77 ha (64,02%) the Veg-2 class increased 164.26 ha (315.94%), while the exposed soil area was reduced in 242.11 ha (-47. 23%). The variations occurring in the Amazon Portal Seeds da Amazônia Project during the period 2011 to 2015, can also be observed in the graphs of figure 6.



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**Figure 6 .** Graph demonstrating the variations registered in the Amazon Portal Seeds Project from 2011 to 2015.

	Solo	Class Veg1	Veg2
<b>Analysis 2011</b>	512,66	121,48	
<b>Analysis 2015</b>	270,56	199,24	51,99
<b>Evolution Analysis</b>	<b>-242,11</b>	<b>77,77</b>	216,25
<b>Percentage</b>	-47,23%	64,02%	<b>164,26</b>
			315,94%



The analysis of the evolution of the Veg-1 and Veg-2 classes shows that there was in fact an increase of vegetation of approximately 242.02 ha.

## 5. Conclusion

### 5.1. Of Data and Methods

Regarding the methodology used, it was the most adequate due to the conditions of the available data, the time planned for the execution of the task and the absence of field activities to check the results obtained.

In relation to the data, we observed that the main problem is restricted to the satellite image available for the execution of the analyzes, which presents a resolution of 5 meters, making it impossible to determine greater distinction between the elements investigated, such as vegetation, soil and water, which would be possible with images of better spatial resolution, as is the case of the GeoEye satellites with spatial resolution of 43 cm. However, regardless of the image of any satellite optical sensor, it is impossible to measure the development of the vegetation from the point of view of its growth (height) and bole diameter. Regarding the results obtained for the Amazon Portal Seeds Project, it is accepted that the large increase of the area of the class Veg-2 may have been influenced by the definitions of the bands defined for the classification. However, the improvement of the vegetation area in the analyzed period is perfectly clear.

The areas that were selected and delimited areas for recovery have left out flooded areas (lakes and tanks). Therefore, in general, the analysis was not influenced by these areas, that is, in fact they were not computed.



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### 2. Dos Resultados

In general, the result found should be evaluated not only by the quantitative obtained, of 242.02 ha, but mainly, by the indication that a process of vegetation improvement in these areas is actually occurring.

Another important issue to consider is related to the time elapsed between the base year (effective start of the project in 2010) and the year of the comparative analysis (2015). It is certainly not such a long period to observe significant changes in a process of reforestation, mainly from the point of view of analysis by satellite image, since it is known through the literature that at least 30 years are necessary for the altered area to have its forest recomposition near its natural condition.





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## 13.4. Workshop Results Framework on Strengths, Weaknesses, Opportunities,

STRENGTHS: Has the project objective been achieved? What were the main reasons or strengths for this?	OPPORTUNITIES: Which new opportunities in the municipality has the project generated or can generate?	WEAKNESSES: What are the difficulties to achieve the results?	THREATS: Is there anything that threatens the sustainability of the results? What are the main risks for the continuity and / or effectiveness of the actions?
<b>Involvement of farmers through shared management</b>	Developed CAR enables the project to support recovery (reforestation)	EMPAER defines its priorities at the state level in a not very participatory way	Deforestation, mining around the areas (lack of enforcement of existing laws)
<b>Decentralization factors</b>	Articulation of communities to discuss recovery of areas through councils / meetings (general) provide exchange of experience	EMPAER is not involved with the topics (reforestation, social organization)	Increase in grain cultivation and mining
<b>Exchanges of actions between municipalities</b>	Building a new development logic	Advanced stage of degradation in areas	Rural exodus and migration (mainly of young people)
<b>Valuing local experience</b>	Qualification / deepening of actions for phase II	Low commitment to SAFs when farmer was involved only by "legal obligation"	Increased use of herbicides and spraying for grains crops in the surroundings
<b>Valuing local seeds (Creole)</b>	Through organization, opportunity to access other actions (ex: agroindustry)	Presence of wild animals attacking SAFs	Climate change, variations and intensity of climatic factors
<b>Valuing local knowledge (young people, farmers)</b>	Access to public policies (PNAE, PAA)	Little knowledge of native species	Current environmental policies in TM do not favor the project
<b>Transparency</b>	Opportunity to strengthen new generations, "local protagonism"	Little appreciation of the Amazon rainforest	Lack of guarantees for continuity of ATER
<b>Articulation and participation of local partners (CPT, MMC) strategic / occasional (Municipal governments)</b>	Approximation of universities to the actions of the "Research Center "project		University faculty not dedicated to issues of sustainable production / Little diffusion and formal training in municipal, state and university schools of the themes approached.
<b>Preference of local technicians to execute the project</b>	Organization and formalization of marketing channels (fairs)		
<b>EMPAER supports for PRONAF access</b>	Improvements in food security in communities		Hydroelectric plants led to the displacement of fauna to producing areas
<b>EMPAER makes DAP farmers</b>	Greater political-social involvement of small farmers		Position of the state government towards the actions of the project
	Organize groups for regularization in accordance with current legislation Present project to official ATER (EMPAER) Develop strategies for greater participation of ATER EMPAER can improve care and participation in the actions involved		

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### 13.5. Participants in the consultation round

Name	Organization	Position / Function	Purpose
1. Monique Ferreira	DPCD/MMA	Director	Deforestation and REDD+
2. Mauro Pires	DEX/MMA	Director	Deforestation and Sustainable Production
3. Alexandre Olival	Instituto Ouro Verde	Project coordinator	Reference Group
4. Rodrigo Junqueira	Projeto Xingu ISA	Coordinator	Project partner
5. Leonardo de Oliveira Santos	Monitoring and Evaluation Management BNDES		Reference group
6. Renato L. Proença de Gouvea	Monitoring and Evaluation Management BNDES		Reference group
7. Juliana Santiago	Management Department of the Amazon Fund BNDES		Reference group
8. Angela Albernaz	Management Department of the Amazon Fund BNDES		Reference group
9. Bernardo Braune	Management Department of the Amazon Fund BNDES		Reference group
10. Pedro Ivo Guedes	Management Department of the Amazon Fund BNDES		Reference group
11. Helmut Eger	GIZ	Project Director	Reference group
12. Janina Budi	GIZ	Advisor	Reference group
13. Magna Cunha	GIZ	Advisor	Projeto PRAna GIZ
14. Joseph Weiss	Advisor	-	Report presenter
15. Robert Walker	Advisor	-	Report presenter
16. Bernardo Anache	Advisor	-	Report presenter
17. Heliandro Maia	Advisor	-	Report presenter

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### 13.6. Observations by landscape and by municipality

“We must pay for our sins against nature”  
-- João Petry, Carlinda

General comments on the reality of the project area are made to then deal with aspects from three ecological and socio-political landscapes and make some comments about the municipal visits. The beneficiaries are family farmers, settled or private. In the beginning, seeds were collected on third-party lands with permission, selling them to the project.

The project and the SAFs improved the conditions of the water, the forest and family life of successful participants. The family income can be measured by the sum of forest seed sales, according to IOV data, in addition to agricultural products in the first two or three years of maintenance, their own consumption and even product gifts.

At the end of project I, of the SAF areas of both reserves and riparian forests, forest seeds, urucum, pequi, tubers, fruits, honey, etc. were sold. Sales in the second phase represent, in the first Project phase, potential future income. In Project II, seeds are sold via the internet, eggs and produce at fairs, fruit pulps through the co-op, and food for school lunches.

The councils meet monthly. Counselors and seed collectors have increased their self-confidence by holding these positions. It is noted that, in general, the councilors know the concepts of the muvuca and SAF and can explain them to the neighbors. Some have learned from visits to successful SAFs in Bahia and Pará. Thus, they will have the capacity and the motivation to continue without the project, especially while they still have APPs that require it.

On the other hand, many are already retired or are elderly, which in some cases may limit continuation in future projects. Most young people migrate to cities. Many have nonparticipating neighbors who have opened up all their areas for natural pasture. Comments are made on three ecological and socio-political landscapes identified in the six municipalities visited: Apicás, Alta Floresta and the other municipalities (see Table 4). While in Apicás the settlements still have a lot of native vegetation, in the others, the majority has already been converted into pasture or crops. Three landscapes or socio-political environments were still identified. In Apicás, there was great opposition from the dominant activities of logging and mining, and the municipal government, while in Alta Floresta, the population worries about water shortages and the municipal government and even some employers see the importance of the environment.

In other municipalities, there was more social organization prior to the project and government was not directly opposed to the purposes of family agriculture projects. According to informants, in addition to the sale of lots to cattle ranchers, land conflicts remain, in a general way, latent, being only explicit through sabotages carried out by a few owners in New Guarita.

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### a. Apiacás

In this municipality, with extensive forest, wild animals represent a major challenge for the productive success of SAFs. Despite Jurena Park and TI Kayapi, there are significant recent deforestations, largely resulting from mining, logging and PCHs. It may deserve a specific control action.

According to the IOV and the interviewees, the project suffered strong initial resistance from public and private sectors. The work was started with a previous CNPq project. Four participants were interviewed, one of Igarapé de Bruno PA, with around six alqueires and three of the Chácaras dos Idosos (Elderly Cottage), with about one alqueire (2.42 ha). Two of these farms were visited. Many of them are already retired and some live part of the time in the urban area. Among their activities, they produce milk and sell calves; the ones from the SAFs sell forest seeds, sell and consume manioc, urucum, açaí, buriti, banana, cupuaçu, pequi and honey. They manufacture handicrafts of seeds and forest fibers. Many lands are already registered or titled and some have already enrolled in CAR with the municipal government.

### b. Alta Floresta

The rural area of Alta Floresta differs from the other municipalities in the area by: Overlapping, in some cases, of the Olhos D'Água project operated by the municipal government and low prior social organization. According to the technicians, of the 13 sites sampled, 7 fulfilled the programming well. Of these, two were sold later.

As for the others, 2 had poor management, 2 did not carry out the project or abandoned it, and no information was obtained on 2.

A council meeting was held, with six councilors, three from Jacamim and three from Santa Lucia. There was previous IOV work with the Jacamim community that facilitated the start of the project, but there was little community organization prior to the project. It is a community that was colonized in the 1980s, without the participation of INCRA, and that continues without land documentation.

There are participants who paid to file the CAR. Today, SAF products are sold at a local bi-weekly trade fair with cultural activities and food.

Two Jacamim farmers who have dairy cattle were interviewed. They made their SAFs (one of riparian forest and one of reserve) in project I, from which they harvested rice, maize and beans, and later sold forest seeds. Other activities include fruits, tubers and greens. There are limitations due to age (one is retired) and water (one without stream, the well dried).

The community of Santa Lucia tried to organize groups of young people and women; a cooperative was not successful. In communities near Santa Lucia, three farmers were interviewed, two of whom had no contact with the project, with the intention of analyzing the counterfactual reality. One, with three alqueires, works off the farm, sells calves, milk and coffee. He has an orchard, but the monkeys eat most of the fruit. He indicated that he did not know the projects and CAR. The second enrolled in CAR and SAF in ½ ha in 2011 with the Municipal government. He delivers milk to the cooperative and sells calves, produces coffee, cane molasses and planted guarana. CEPLAC / SEBRAE offered support to the planting of 1000 coffee trees. He has 800 pineapple plants for consumption and gifts. The third participated in both the project and Olhos D'Água. He enrolled in CAR with the municipal government and surrounded the APP through the project.



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### c. Carlinda

In the 1990s, the Community Center for Integrated Environmental Management was created to discuss how to articulate environmental with economic and social issues, with support from the Ministry of Environment / PDA / GESTAR (2006 to 2008) and IOV technicians.

From the creation of this space of discussion came the work of recovering springs, the introduction of techniques of ecological management of pastures, the beginning of the structuring of the agroforestry systems (SAFs) as an environmental recovery strategy, and several other technologies conceived and / or reedited by the residents. From this initiative, the Amazon Portal Seeds project was born.

In 1999, 160 threatened springs were identified. Currently, the sector has almost all of its water sources in the process of recovery, 21 demonstration units for rotational management of pasture, more than 50 units of SAFs, a community seed store and a produce marketing system (SISCOS - Solidarity Marketing System).

Participants have more access to public policy, perhaps because they are located only 12 to 15 km from the city.

According to information from the technician, since the beginning of phase I, of the 11 farmers sampled, 10 fulfilled the plan, and one only fenced his area, and two lacked adequate management. There were challenges of wild animals in 4 and of ants in 1. The drought and lack of water are other present challenges, attributed to the various environmental pressures.

Accompanied by the technician, the team visited four farmer families and visited the pulps cold storage later funded by the PPP-Ecos, where, from storage fruit pulp are transported to the factory in Styrofoam boxes.

Properties of 4 to 5 *alqueires* are predominant, one being managed by a widow; many already have land titles. All use collective coolers, deliver milk to the cooperative and sell calves. Three fulfilled their commitments to the project and filed a free CAR through the local union.

From the SAF areas, both reserves and riparian forests, forest seeds, urucum, tubers, fruits, honey, cocoa and cupuaçu are sold. In project II, eggs, vegetables and pulps are also sold through the cooperative, for school meals and through the internet. A lady sells her produce at the fair, along with breads and pastries. The beginning of the operation of a biodigester from corral manure was observed.

The last fire was in 2002. Of the SAFs, beans, peanuts, firewood, seeds, bananas, pineapples were sold or consumed. Cassava and corn are also sold. They have enrolled with CAR with the project or the union.

A participant has had four hectares of reserve in SAF since the demonstration projects, from where he extracts cupuaçu, cashew, papaya, banana, pineapple, *ingá*, coconut, *seriguela* and many others, besides *itaúba*, *copaiba*, *aroeira*, mahogany, coffee. Also, they serve as food for *tapirs*, *agoutis* and wolves. He offers free ecotourism services.

One member of the association decided not to participate in the project. Of his 50ha, he planted 1ha of coffee shaded by teak, which did not prove to be feasible. He delivers milk to the association and produces fruit for consumption. He wants to finish fencing the existing forest. One retired participant planted 1.7 ha in 2000. He made terraces on the pasture with his own tractor. He raises beef cattle, enrolled in CAR through the union. Another planted 0.9ha of SAF in a reserve for production purposes.

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### d.. Nova Guarita

The technician organized a meeting with the Council. The partnership with the Regional Community Association of Northern Mato Grosso, created in 2007, was essential to the results of the project in this municipality. The council began with the Board of the settlement association. As other communities entered, they chose a representative. Today there are still eight of the early participants. There is a renewal of cadres, with a young man who takes courses and intends to continue contributing.

It was found that, in phase I, SAF restoration projects predominated, which required management effort. There were already some sales. In phase II, it began to formally sell to the market. The Association could organize the Seeds Collectors Cooperative, with 28 members in Nova Guarita and 105 in total. It increased the sale of pulp, coffee, pequi and honey. Agreements were established for the sale of products with CONAB and school meals. Seeds are sold even to interested parties that are not project members

In partnership with local school, project II produces the Muvucando quarterly newspaper, which also brings consumption balances of the project. Thus, students take part in the communication task. It also publishes a newsletter every two weeks, which provides information on events and activities that occur in the municipality.

There is also a partnership with the Municipality of Nova Guarita. The municipal truck picks up the production and takes it to social services and the schools, except for Novo Horizonte, where their own car is used.

One of the challenges is the settlement CAR. About 90% of the settlers registered. Two families, not yet. Incra would have to emancipate them to enable the general CAR.

We also talked to two counselors. They have milk and beef cattle. They obtained the CCU from INCRA. They have a good income from the SAFs, with coffee, cassava, lemon, seedlings, and buriti. In project II, they made fish farming and beekeeping with the support of PPP-Ecos. They would continue even if there was no support.

According to informants, land conflicts were only made explicit through sabotage or errors, such as aerial herbicide, carried out by few owners.

### e. Terra Nova do Norte

The Pastoral Land Commission (CPT), here at least since 2003, has supported the project. The technician, who is also a volunteer of the CPT, organized the meeting with the council that meets every month, facilitating communication between farmers and technicians.

The initial occupation of the region was promoted by the MT land commission. The majority of participants have 42 to 100 ha. A part has access to credit. Some are settlers while others have only possession. There were many communities. Some were extinguished or have merged, forming even agrovilas.

At the beginning of the project there was suspicion. Before, Incra told them to open up the land (deforest) and plant. Today they look at nature from a different perspective. There has been growing interest in the lack of water and in fish mortality. While the small farmers protected the woods, the big ones did not. They were fined, arrested and released.

In the search for seeds, they were obtained from seed trees in the farms with permission. They're being taken down today.

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People knew about technology-type projects without market access. They thought Amazon Portal Seeds was another one of those. Today they see that the IOV has organization and technical criteria, with competent and balanced professionals, with long-term perspectives. In year 2, seeing the results, the neighbors began to join. Today, project II cannot meet the demand.

Collectors were trained to collect seeds with the permission of the owners. SAFs of riparian forest were predominant, by the pressure of the legislation. Reserve ones are highly productive. Two used tractors to do the muvuca and others, animal traction.

All have enrolled in CAR via the municipal government, but many processes are stopped. The authorization of community radios is controlled by interests.

Marketing is small, but it is already consolidating as an income alternative. Pequi has good acceptance. The cooperative only started in 2016, it still does not sell through it.

Challenges include lack of development, wild animals competing for food, and the choice in degraded areas with sauva ants, acidity and aluminum, unsuitable for demanding species such as mahogany and cupuaçu. They plant sesame and tamarind as sauva repellents.

The technician was also initially in charge of preparing the participation of the Terena from Matupá. The CPT participated in the Territory of the Portal.

### f. Nova Canaã

The partnership with the Peasant Women's Movement was important to achieve the results of the project in this municipality. Women participate in project implementation in communities, in seed collection and in marketing.


Before the project, there were those who had already started their SAF, even without fencing. On the other hand, some properties only carried out the enclosure to recover degraded areas and left the project.

The technician arranged the meeting with the council. Most of the projects were to protect the APPs, which resulted in the return of water in the areas of SAFs, already in phase I. It was necessary to plant appropriate species in swamp areas.

Hydroelectric plants have reduced the forest and the wild animals' access to food, but the recovery of areas and springs has also made it possible to recompose the local flora and fauna.

In project II, reserve areas close to family backyards have already been added and began commercialization, including the sale of handicrafts and seeds at the local fair. Today there are already three fairs established. Others see recovery as an obligation and only consume what they produce. Marketing should be stimulated by already developed channels, to gain scale and meet demand.

The project seeks only those who want to participate. Every farmer knows what he wants to plant and does not have to take orders. The management board controls the financial part well. The challenge is to spread, adopt and involve other settlements.



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There is a lack of mobilization among settlements to recover of degraded areas. The capacity and technical resources of the team are still limited, in addition to the difficult logistics of the municipality, which demonstrates the need to enlarge staff. The goal of recovering areas for the municipality was 200 ha, but 251 were recovered. Even if some have given up, with one more technician, he/she could have reached another 150 ha.

Local exchanges were organized by the managing council and the technical team. These visits were made to degraded areas in recovery processes to understand the importance of these activities, including to avoid the silting of watercourses. The project's technical team also received training from Embrapa for agroforestry production.

The municipality supported the project only with transportation for exchange events and the purchase of stakes and wire for the enclosure of degraded areas.

A PA Rondon counselor was interviewed. He came from Rondonópolis in the 80's. He has 42 ha, with CCU from INCRA. He has enrolled in CAR with third parties to guarantee credit. He made about 3 ha of SAF in phase I, continuing in phase II. He has milk and beef cattle. He recovered forest because he felt obliged. He sells seeds, produces urucum, cashew, jackfruit, mango, cassava. Much of the production is destined for consumption and wild animals such as maritacas, tapirs and capybaras. He wants to remove itaúba and aroeira. With the project, everything has improved. His land was hit by soybean aerial herbicide. There are no more fires.





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### 13.7. List of interviewed persons

Name	Institution	Function
Marcio Santilli	Instituto Socioambiental	Specialist
Rodrigo Junqueira	Instituto Socioambiental	Coordenador, Rede de Sementes do Xingu
Adriana Ramos	Instituto Socioambiental	COFA member
Mauro Pires	Ministério do Meio Ambiente	DRS Director
Alexandre Olival	Instituto Ouro Verde	General Coordinator
Vinicius Teixeira Arantes	Instituto Ouro Verde	Acting Coordinator
Antônio Francimar de Souza	Instituto Ouro Verde	Technician, Carlinda
Bruna Scalsavara da Silva	Instituto Ouro Verde	Technician, Nova Guarita
Dorvalino Savi Veronezi	Instituto Ouro Verde	Technician, Terra Nova
Anderson Rogério Lopes	Instituto Ouro Verde	Rede de Sementes
Aline Nava	Instituto Ouro Verde	Commerce
Luciano Scalsavara da Silva	Instituto Ouro Verde	Technician, Nova Canaã
Sílvio Martins Sardinha	Instituto Ouro Verde	Vivarium
Renato Anderson Felito	Instituto Ouro Verde	Technician, Alta Floresta
Joseane de Lorenço Petry	Instituto Ouro Verde	Technician, Apiacás
Vinicius Silgueiro	Instituto Centro de Vida	Coordinator Geotecnologias
Interviewed agriculturists		
Name	Municipality	
Edeson Schreiber	Carlinda	
Josimar Petry	Carlinda	
Sebastiana Gomes de Souza	Carlinda	
Nilson José Miller	Carlinda	
Agnelo Geraldo Berrião	Carlinda	
Ana Maria Santi	Alta Floresta	
Hélio Tasso	Alta Floresta	
Pedro Lopes	Alta Floresta	
Tamires Gomes da Silva	Alta Floresta	
Alaide Pereira da Silva	Alta Floresta	
Eva Moreira	Apiacás	
José Morali	Apiacás	
Dejairo Luiz Fianette	Ouro Verde	
Jose Domingos Nunes	Paranaíta (Contrafactual)	
Francisco da Costa	Paranaíta (Contrafactual)	

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### 13.8. Attendance list in the Strengths, Weaknesses, Opportunities and Threats (SWOT) workshop.

GIZ	
Name	Title
Heliandro Torres Maia	Coordinator and Valuer
Joseph Samuel Weiss	Consultant valuer
Robert K. Walker	Consultant valuer
Ana Paula Rabelo	Consultant
Helmut Eger	valuer
Bernardo Anache	valuer
Sementes do Portal	
Name	Municipality
Aline Olívia Paglioco Nava	Alta Floresta
Anderson Rogério Lopes	Alta Floresta
Sílvio Martins Sardinha	Alta Floresta
Pedro Marques Mendonça	Carlinda
Luciano Scalsavara da Silva	Nova Canaã do Norte
Bruna Scalsavara da Silva	Nova Canaã do Norte
Joseane de Lorenço Petry	Apiacás
Dorvalino Savi Veronezi	Nova Guarita
Emerson de Aguiar Cavíchia	Nova Canaã do Norte
Márcio José de Sousa	Núcleo Santa Helena
Almerinda da Cruz	Colider
Edison Fernando Tamanini	Nova Guarita
Hézio Silvino de Camargo	Núcleo Santa Helena
Enor Montovani	Terra Nova
Vanderson Eliel Meira	Terra Nova
Débora Fiametti	Alta Floresta
Vinícius Teixeira Arantes	Alta Floresta
Renata Felito	Alta Floresta
Clarice Ap. da Silva	Nova Guarita
Bruna Natalia Gonçalves	Apiacás
Rafael Pereira de Paula	Alta Floresta
Aline Candido de Paula	Alta Floresta
Jeferson Sampaio da Silva	Alta Floresta
Alexandre Olival	Alta Floresta



## 13. Annexes IV. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

### 13.9. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

#### 1. Introduction and general information

##### 1.1. Project description

Project title: **Amazon Portal Seeds**

Responsible Organization: **Instituto Ouro Verde (IOV)**

Project period: **1° trimester of 2010 to 3° trimester of 2013**

The Amazon Portal Seeds project was developed in seven municipalities that make up the region known as Portal da Amazônia in the extreme north of Mato Grosso. These are: Apicás, Alta Floresta, Carlinda, Nova Guarita, Nova Canaã do Norte, Terra Nova do Norte and Matupá, under the responsibility of The Instituto Verde (IOV).

The objectives were: to promote the environmental recovery of 1,200 hectares of degraded areas (restoration of permanent protection areas and legal reserve) and the revaluation of family agriculture in the seven municipalities of the Portal of the Amazon Territory, through the diffusion of agroforestry systems, which combine the sustainable use of the forest with income generation. In addition, the Terena indigenous community was trained to collect forest seeds used in agroforestry systems.

Throughout its execution, the project received the total amount of R\$ 5,397,778.87 and had as main result the planting in degraded areas of legal reserve and APPs involving 1,246 hectares (in the process of recovery) of 518 properties. A total of 1,916 people (518 families) benefited directly from the project, with 1,053 men (55%) and 863 women (45%), in addition to the activities and training of farmers to implement SAFs and the creation of a forest seeds collection network.

##### 1.2. Context of the project

The region of Portal da Amazônia in the extreme north of Mato Grosso covers seven municipalities that together possess a total territory of 46,238 km<sup>2</sup> and an approximate population of 78,735 inhabitants. This region encompasses important hydrographic basins on the border between Mato Grosso and Pará, and, therefore, has large areas of permanent preservation, including areas of springs, rivers and forests with high biodiversity. The region has an economy characterized by a disorderly occupation process, with mineral (gold) and forestry extractivism and cattle raising as drivers of this occupation. Currently, the predominant economic activities - livestock and logging - are the main vectors of deforestation.

The deforestation resulting from this process is responsible for large impacts in the areas of legal reserve and permanent preservation, with damages to the environmental services rendered, especially with regard to water resources. Another important issue in the region is rural settlements where, in general, there is a lack of socio-environmental and physical-biotic information of the occupied areas, as well as the low technical and credit support that would allow farmers to adopt more appropriate agricultural practices in the region and also to learn to value and manage forest resources.

One of these municipalities is part of the list of priority municipalities for deforestation monitoring and control actions, except for Alta Floresta, which, in 2008, due to its high rates of annual deforestation, was included by the Ministry of the Environment in the list of priority municipalities, but being removed in 2012 due to having reached the targets foreseen for its exit.

The Amazon Portal Seeds Project aimed at the recovery of degraded areas through the structuring of social and technological bases that would enable the family farmers involved to promote environmental recovery. This action was developed in line with the State Plan to Combat Deforestation and Burning in the state of Mato Grosso.

The use of agroforestry systems (SAFs) to carry out this recovery contributed to make farmers aware of the need to comply with environmental legislation; protect and enhance the environmental services provided by these areas, particularly in the maintenance of watercourses; develop an alternative economic activity in the property; and strengthen family food security.

In the long term, the project sought to strengthen another way of linking farmers to land by valuing the forest, introducing concepts and techniques such as *muçuca* (agroforestry implementation technique) and discussing alternatives to adopt practices that are harmful to the environment, such as burning and intensive use of pesticides and fertilizers. In a complementary way, the project also aimed to encourage the collection of native seeds, with involvement of the indigenous Terena community, as an economic alternative for indigenous populations.

The Ouro Verde Institute, based in Alta Floresta-MT, coordinated the actions, counting on the partnership of three institutions: the Pastoral Land Commission, the Peasant Women's Movement and the Regional Community Association of Northern Mato Grosso. These organizations have fulfilled the important role of mobilization agents in their respective municipalities of influence (Terra Nova do Norte, Nova Canaã do Norte and Nova Guarita, respectively), as well as supporting the general coordination process of the project and the dialogue with other institutions.

The Managing Councils, formed by the communities benefited by the project, sought to establish partnerships with local municipalities. Partnerships have played an important role in certain phases of the project, such as the feasibility of transportation for events and the supply of seedlings.

## 2. Purpose and objectives of the evaluation

The main purpose of the project evaluation is to measure the results achieved, their effects and the sustainability of the changes caused by their implementation.

All the projects supported by the Amazon Fund follow an individualized logical framework in which results are defined (products and services to be delivered or outputs), direct effects of the intervention (specific objectives or outcomes) and indirect effects (general objectives or impacts) to be achieved. It is the intervention logic of the project, also called the theory of change because it represents a thinking model that explains how the project is expected to cause a desired change. The logical framework of the project is available on the Amazon Fund website.<sup>3</sup>

3) [http://www.fundoamazonia.gov.br/FundoAmazonia/fam/site\\_pt/Esquerdo/Projetos\\_Apoiados/Lista\\_Projetos/IOV](http://www.fundoamazonia.gov.br/FundoAmazonia/fam/site_pt/Esquerdo/Projetos_Apoiados/Lista_Projetos/IOV)





The main objectives of the evaluation are:

- Assist the Amazon Fund in rendering accounts to its donors about the type of project supported and its effects;
- Facilitate the institutional learning of the Fund itself, contributing to improve the quality of the projects and the prioritization of investments, thus subsidizing decision-making;
- Verify compliance of the projects supported by the Amazon Fund with the Cancun safeguards agreed under the UNFCCC for REDD+ actions;
- Check alignment of projects with PPCDAm and state plans for prevention and control of deforestation;
- Analyze the strengths and weaknesses of project intervention; Identify challenges and lessons learned; and

### 3. Description of the task

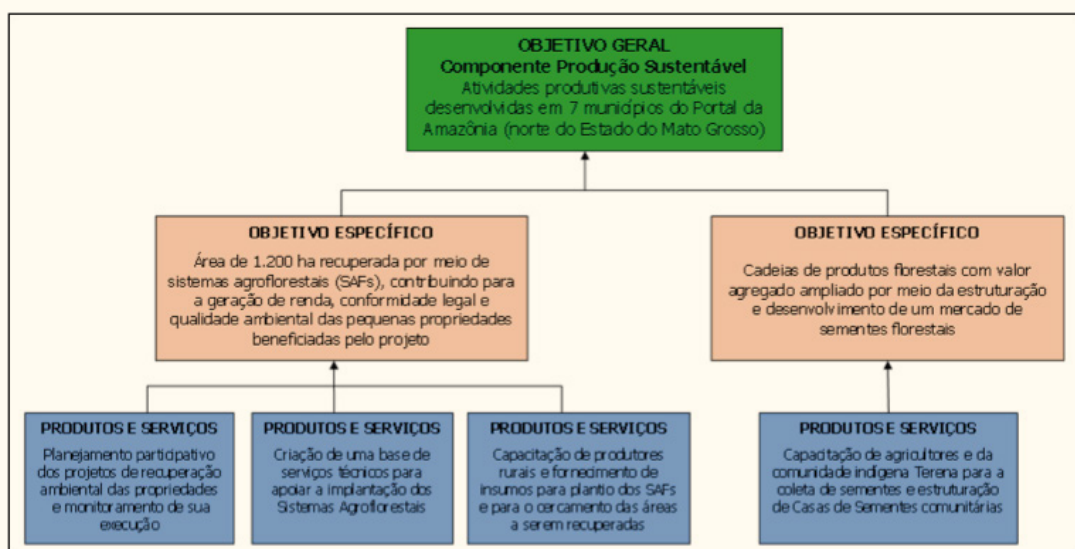
#### 3.1 Description of the task

The Project was implemented in the years 2010 to 2013, working mainly in areas of forest liabilities (APPs and Legal Reserve) of small farmers in the seven cities targeted. In this way, the focus of the evaluation are the areas in which the project had intervention, with the following pursued results:

- Promote the environmental recovery of 1,200 hectares of degraded areas (restoration of permanent protection areas and legal reserve);
- Re-evaluate family farming in six municipalities in the Portal da Amazônia Territory, through the diffusion of agroforestry systems, which combine the sustainable use of the forest with income generation; and
- Empower the indigenous Terena community to collect forest seeds that are used in agroforestry systems.

#### 3.2 The intervention logic

Logical Framework Objectives Tree Portal of the Amazon Portal Seeds Project





# 13. Annexes IV. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

## 3.3 Key questions and evaluation criteria

The effectiveness evaluation of the Amazon Portal Seeds Project will obey the guidelines and criteria specified in the document "Evaluation of Effectiveness of Projects Supported by the Amazon Fund -7Conceptual Framework". These criteria are based on the OECD, the REDD + safeguards defined by the Framework Convention (Annex I of Decision 1 / CP 1641 and the guidelines of Decision 12 / CP 17) and the selected cross-cutting criteria. For each criterion, a basic script of guiding questions to be applied and answered in the evaluation of the Project is presented and should be complemented in the design report of the project (1st Product to be presented by the evaluation team), as judged by the evaluation team. Below is the summary table of criteria and respective guiding questions:

### 3.3.1 OECD Criteria, Cross-cutting Issues and Evaluation questions

Criteria	Guiding Questions
Relevance	<ul style="list-style-type: none"> <li>To what extent are project objectives still valid at the time of finalization?</li> <li>Are the immediate activities and outcomes of the project consistent with the achievement of the objectives set for the project?</li> <li>Are the immediate project activities and outcomes consistent with expected effects and impacts?</li> </ul>
Effectiveness	<ul style="list-style-type: none"> <li>Have the project's (specific) objectives been or will be met?• What are the main factors that influence whether or not direct goals are met?</li> </ul>
Efficiency	<ul style="list-style-type: none"> <li>What is the cost-effectiveness of the activities carried out?• Are the means applied in a reasonable relation to the results obtained?• Were goals met within the deadlines?• Are there alternative ways to get the same results with less cost / means?</li> </ul>
Impact	<ul style="list-style-type: none"> <li>What were the main changes generated as a result of the project?• What were the main effects that contributed to the achievement of the objective?• What actions or events outside the project contributed to the achievement of the observed changes?• Did the project make any difference to the beneficiaries?• Does the project have scale in the region or influence other initiatives?</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>To what extent do project benefits last after the end of Amazon Fund funding?</li> <li>What were the main factors that influenced the sustainability of the project?</li> <li>What risks should be monitored to ensure the sustainability achieved?</li> </ul>
<b>Cross-cutting criteria</b>	
Poverty reduction	<ul style="list-style-type: none"> <li>To what extent has the project contributed effectively to economic alternatives that value the standing forest and the sustainable use of natural resources?</li> <li>To what extent has the project had a positive impact on reducing poverty, social inclusion and improving the living conditions of beneficiaries living in its area of activity?</li> <li>Has the project succeeded in promoting and increasing production in value chains of timber and non-timber forest products originating from sustainable management?</li> </ul>
Gender equity	<ul style="list-style-type: none"> <li>Has the project succeeded in integrating gender issues into its strategies and interventions or addressed the issue in an independent way? How?</li> <li>Was there separation by gender in data collection for project planning and monitoring?</li> <li>How did the project contribute to gender equity?</li> </ul>



# 13. Annexes IV. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

## 3.3.2 REDD+ Safeguards and Evaluation Issues Criteria Guiding questions

Criteria	Guiding questions
1. Actions complementing or consistent with the objectives of national forest programs and other relevant international conventions and agreements	<ul style="list-style-type: none"> <li>• Is the project aligned with PPCDAM and the state plans for deforestation prevention and control?</li> <li>• To what other federal public policies or international agreements is the project aligned to? In what aspects?</li> <li>• Has the project contributed or may come to contribute directly or indirectly to the reduction of emissions from deforestation or forest degradation? In what way?</li> </ul>
2. Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation	<ul style="list-style-type: none"> <li>• To what extent has the project promoted the articulation between various actors (public sector, private sector, third sector or local communities)? Have instances of shared governance been used? Which?</li> <li>• To what extent has the project contributed to strengthening public instruments and forest and territorial management processes?</li> </ul>
3. Respect for the knowledge and rights of indigenous peoples and members of local communities, taking into account relevant international obligations, national circumstances and laws and noting that the UN General Assembly adopted the United Nations Declaration on the Rights of Indigenous Peoples	<ul style="list-style-type: none"> <li>• To what extent has the project influenced the constitutional rights associated to the possession and formal destination of land in its area of activity?</li> <li>• To what extent has the project influenced the sustainable use of the natural resources in its area of activity?</li> <li>• If the project had as direct beneficiaries indigenous peoples, traditional communities or family agriculturists: were their socio-cultural systems and traditional knowledge considered and respected throughout the project?</li> <li>• Are there any effects that interfere with the traditional way of life of these groups? What kind of effects: in the economic or social organization, or in the use of available space and resources? In what way do they interfere?</li> </ul>
4. Full and effective participation of stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of Decision 1 / CP 16	<ul style="list-style-type: none"> <li>• How did the project guarantee prior consent and local / traditional choice of representatives of its beneficiaries (especially indigenous peoples and traditional communities)?</li> <li>• Which participatory planning and management tools did the project apply during planning and decision making?</li> <li>• In case of projects with economic purposes: were any benefits arising from the project accessed in a fair, transparent and equitable way by the beneficiaries, avoiding a concentration of resources?</li> <li>• To what extent has the project provided the general public and its beneficiaries with free access and easy understanding of information related to project actions?</li> <li>• Was the project able to set up a good monitoring system for results and impacts? Has the project monitored and systematically communicated the results and their effects?</li> </ul>
5. Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 Decision 1 / CP 16 are not used for the conversion of natural forests but rather to encourage the protection and conservation of natural forests and their ecosystem services and to improve other social and environmental benefits	<ul style="list-style-type: none"> <li>• How did the project contribute to the expansion or consolidation of protected areas?</li> <li>• How did it contribute to the recuperation of deforested or degraded areas?</li> <li>• In the case of restoration and reforestation activities, did the methodologies used prioritize native species?</li> <li>• To what extent has the project contributed to establishing recovery models with an emphasis on economic use?</li> </ul>
6. Actions to address the risks of reversals in REDD + results	<ul style="list-style-type: none"> <li>• Which factors constitute risks to the permanence of REDD + results? How did the project address them?</li> </ul>
7. Actions to reduce the shift of carbon emissions to other areas.	<ul style="list-style-type: none"> <li>• Have there been a shift of emissions prevented by the project to other areas?</li> </ul>

## Methodology

The methodology to be applied in the evaluation should be based on the criteria and objectives contained in the document "Evaluation of Effectiveness of Projects Supported by the Amazon Fund - Conceptual Framework".

It is expected that the following products will be generated: The Evaluation Design Report and the Effectiveness Evaluation Report of the Amazon Portal Seeds project. And also, in an intermediate stage, a Preliminary Evaluation Report of Effectiveness, product to be used in the consultation round.

Below is the methodology proposed for each phase and its respective stages:

### 4.1. Preparation phase:

At this stage, one must define the objectives and carry out the planning of the evaluation of the Amazon Portal Seeds Project. After preparing the ToR and contracting the team of evaluators, the key documents should be organized. To this end, the documents, data and reports that will be used to carry out the evaluation shall be identified, together with the BNDES and the organization responsible for the execution. The Evaluation team will systematically carry out a collection of data from secondary sources, which aims to compose a "memorandum" that will serve as a source of reference, leveling and memory-help of all information related to the project to be evaluated.

### 4.2. Implementation Phase:

- Evaluation design and tools. The Evaluation Design Report to be prepared by the team of evaluators should present the roadmap of the evaluation work, the detailed methodology and the tools that will be used during the evaluation work. This report should have the following roadmap: (a) Basic project data; (B) Introduction; (C) TdR analysis; (D) Division of tasks, Work Plan and Logistics; (E) Design / Methodology; And (f) Attachments.
- Data collection and analysis. The methodology should be diversified, using three forms of data collection: i) Non-reactive (secondary sources: project documentation, public and scientific data available in the project area, in addition to the key documents already organized in the preparation phase ); ii) Survey (field research: it can be by standardized questionnaires, interviews with individuals or groups and by the use of analysis tools such as SWOT); And iii) Observation (during the visits, participatory or individual; a counterfactual approach can be used, that is, comparing with similar cases outside the project). This is the first phase of data analysis, which aims to analyze the logic of the intervention, the products and services performed by the project and the results achieved. At this stage, it is important to raise doubts and questions that need to be answered by the executors and beneficiaries, as this will serve as input for the next stage, the Field Mission.
- Field mission. Its objective is to perform part of the data collection, in person, in a visit to the region where the project operates. The Evaluation Team will conduct a field visit for the time deemed necessary (to be detailed in the Evaluation Design Report), up to a maximum of 8 days.
- Preliminary report. After the field mission, the evaluation team should complement the analysis of the data collected. Therefore, a preliminary report of the project effectiveness evaluation should be generated. The assignment and task division of each evaluation team member should be detailed in the evaluation design report.





## 13. Annexes IV. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

- Consultation round. At this stage, a workshop will be held with the participation of the Evaluation Reference Group, the Ministry of Environment, key people of the Project evaluated and some peers, who are the specialists who hold responsibilities under themes related to those of the evaluated project. The workshop methodology should be described in the Evaluation Design Report.

### 4.3. Analysis and dissemination phase

- Consolidation of data analysis. Along with the complementary inputs of the Consultation Round, there should be a new analysis based on the comments and justifications presented by the project participants and the participating peers.
- Final report. The methodology and composition of the Effectiveness Evaluation Report of the Amazon Portal Seeds Project are in the document "Evaluation of Effectiveness of Projects Supported by the Amazon Fund - Conceptual Framework".
- Dissemination of results. The Effectiveness Evaluation Report of the Amazon Portal Seeds Project and its executive summary will be published on the Amazon Fund page ([www.fundoamazonia.gov.br](http://www.fundoamazonia.gov.br)).



# 13. Annexes IV. Terms of Reference for the Effectiveness Evaluation of the Amazon Portal Seeds Project

## 5. Activities, products and deadlines

The following schedule presents the basic road map for the evaluation of the Amazon Portal Seeds project. The table contains the activities, services and products and deadlines of the effectiveness evaluation process.

	Activities	Leader	Workdays	Deadlines	Products
1	Disclose TdR, receive and organize proposals from consultants	GIZ (responsible for hiring)	15	10/06/2016	Proposals from consultants received and organized
2	Hire consultants and form assessment team (consultants + GIZ)	GIZ	10	18/07/2016	Contracted consultants and trained team
3	Prepare an initial meeting of the team with Amazon Fund / Contact the organization responsible for the project evaluated / Analyze relevant documents / Prepare proposal of evaluation report	GIZ	15	28/07/2016	Proposal for evaluation design
4	Comment on draft evaluation report	GERAV/BNDES DEFAM/ BNDES Organization responsible for the project	3	02/08/2016	Proposal of evaluation design report with comments
5	Review evaluation design report	Evaluation Team	3	08/08/2016	Revised evaluation design report
6	Approve revised report	GERAV/BNDES DEFAM/ BNDES	3	11/08/2016	Evaluation design report (final)
7	Implement evaluation / Carry out field mission / Systematize results, etc. Prepare and submit preliminary evaluation report	Evaluation Team	25	20/09/2016	-
8	Display results (Consultation Round)	Evaluation Team	1	04/10/2016	Preliminary evaluation report with considerations reported in the round
9	Comment Preliminary evaluation report	GERAV/BNDES DEFAM/ BNDES Organization responsible for the project	5	10/10/2016	Preliminary evaluation report with comments sent post-round
10	Prepare final evaluation report	Evaluation Team	5	20/10/2016	Effectiveness Evaluation Report
11	Incorporate supplementary presentation, preface and summary content to the final report	Evaluation Team	3	25/10/2016	Effectiveness Evaluation Report in format for dissemination
12	Translation of the final evaluation report and its annexes	Translator/ Evaluation Team	10	15/11/2016	Effectiveness Assessment Report in format for dissemination (English)
13	Disseminate and distribute the Effectiveness Assessment Report	Fundo Amazônia Team	-	25/11/2016	Upload to the BNDES website
<b>TOTAL of work days</b>			<b>98</b>	<b>--</b>	<b>--</b>

## 6. Team of Evaluators

O Projeto Sementes do Portal será avaliado por uma equipe composta por quatro pessoas, sendo dois (2) peritos da GIZ e dois (2) consultores externos a serem contratados pela GIZ após chamada de contratação divulgada na Rede Brasileira de Monitoramento e Avaliação. Os peritos da GIZ terão o seguinte perfil: um (1) sênior com experiência em avaliação de projetos e políticas públicas nos temas tratados e um (1) júnior para apoiar o levantamento de dados e elaboração de diagnósticos temáticos sob orientação da equipe. Os consultores externos deverão ter o seguinte perfil: um (1) consultor sênior ou pleno, com experiência em avaliação de projetos, conhecimento nos temas de fortalecimento organizacional e gestão florestal, e um (1) consultor pleno com experiência em avaliação de projetos, conhecimento nos temas de economia florestal e em recuperação de florestas em áreas degradadas com passivo florestal. Em relação às qualificações dos avaliadores, incluem as seguintes exigências:

- Technical knowledge. The team of evaluators, in a multidisciplinary way, should have knowledge about public policies in the area of sustainable development and environment, on the elaboration, monitoring and evaluation of socio-environmental projects and on the themes addressed by the project, mainly: institutional strengthening, degraded forest areas recovery and training in forest issues.
- Methodological knowledge. The team of evaluators should be aware of the methodologies that will be used to evaluate the project, especially those related to methods for collecting and analyzing data, measuring the achievement of results and qualifying effects achieved. In addition, it is important to know instruments that allow the combination of methods to triangulate the data collection, in order to increase the reliability of the results.
- Regional expertise. The team of evaluators should be aware of the regional issues of the Amazon that are dealt with under the projects supported by the Amazon Fund. It is desirable that they have professional experience in the Amazon.

Consultants may not have any previous involvement or private link with the project to be evaluated. The evaluation team will work without external interference, will have access to the data of the projects to be evaluated and will obtain support to gather all the necessary information. GIZ experts and consultants should treat all documentation of the Amazon Fund and the project to be evaluated with confidentiality and secrecy, except for the information that should be included in the Effectiveness Evaluation Report.

## 7. Reports

Two reports will be produced during the evaluation process: the Evaluation Design Report and the Evaluation Report on the Effectiveness of the Amazon Portal Seeds Project. The content of these reports will comply with what is established in item 8.1.7 of the document "Evaluation of Effectiveness of Projects Supported by the Amazon Fund - Conceptual Framework".

### 8. Coordination / Responsibilities

The effectiveness evaluation of the Amazon Portal Seeds Project will be accompanied by a Project Reference Group, with the following composition:

- a) Representatives of the Monitoring and Evaluation Management of the BNDES Planning Area;
- b) Representatives of the Management Department of the BNDES' Amazon Fund;
- c) Representatives of GIZ, within the framework of the Technical Cooperation Project in force;
- d) Representatives of the Ouro Verde Institute, responsible for the execution of the project to be evaluated; and
- e) Evaluation team members.

Coordination of the evaluation work will be carried out by GIZ. The responsibilities of each part that make up the Reference Group are defined in item 5.1 of the document "Evaluation of Effectiveness of Projects Supported by the Amazon Fund - Conceptual Framework".





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November 2016

# EFFECTIVENESS EVALUATION REPORT

## AMAZON PORTAL SEEDS PROJECT

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