



Effectiveness Evaluation of
Projects focused on the

Amazon Fund / BNDES Sustainable Productive Activities

Sustainable Settlements
in the Amazon (IPAM)

Julho de 2024





**EFFECTIVENESS EVALUATION OF PROJECTS FOCUSED ON THE
AMAZON FUND/BNDES SUSTAINABLE PRODUCTIVE ACTIVITIES**

PRELIMINARY EVALUATION REPORT

Project evaluated

Sustainable Settlements in the Amazon

Evaluators

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July, 2024



Report on the Effectiveness Evaluation of Projects focused on the Amazon Fund/BNDES Sustainable Productive Activities

This report presents the ex post effectiveness evaluation results of the Amazon Fund/BNDES Sustainable Productive Activities. The referred to evaluation was performed by a team of women, who are independent consultants, under the coordination of the German Cooperation for Sustainable Development through *Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH* (GIZ), as part of the technical cooperation with BNDES on the Amazon Fund. All opinions expressed herein are the sole responsibility of the authors, and do not necessarily reflect the position of GIZ and BNDES.

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Por meio de:



MINISTÉRIO DO
DESENVOLVIMENTO,
INDÚSTRIA, COMÉRCIO
E SERVIÇOS

MINISTÉRIO DO
MEIO AMBIENTE E
MUDANÇA DO CLIMA





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Acronyms

ADAI	Interstate Agricultural Development Association
ANATER	National Agency for Technical Assistance and Rural Extension
APP	Permanent Preservation Area
APS	Sustainable Productive Activities
ATER	Technical Assistance and Rural Extension
BNDES	Brazilian National Bank for Economic and Social Development
FA	Amazon Fund
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</i>
INCRA	Brazilian National Institute of Colonization and Agrarian Reform
IOV	<i>Duro Verde</i> Institute
IPAM	Amazon Environmental Research Institute
MAB	Movement of People Affected by Dams
MMA	Brazilian Ministry of Environment and Climate Change
OECD	Organisation for Economic Co-operation and Development
PA	Settlement Project
PAA	Food Acquisition Program

PAB	<i>Alimenta Brasil</i> Program
PAS	Sustainable Settlements Project
PNAE	Brazilian National School Feeding Program
PPCDAM	Action Plan for the Prevention and Control of Deforestation in the Legal Amazon
PSA	Payment for Environmental Services
QL	Logical Framework
RAE	Effectiveness Evaluation Report
REDD+	Reducing Emissions from Deforestation and Forest Degradation (+ conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries)
RSPA	Amazon Portal Seeds Network
SAFS	Agroforestry Systems
SISCOS	Solidarity Marketing System
SSP	Silvopastoral System
TDR	Terms of Reference
UFMT	Federal University of Mato Grosso
UNEMAT	State University of Mato Grosso
UNFCCC	United Nations Framework Convention on Climate Change



Sustainable Settlements in the Amazon Project

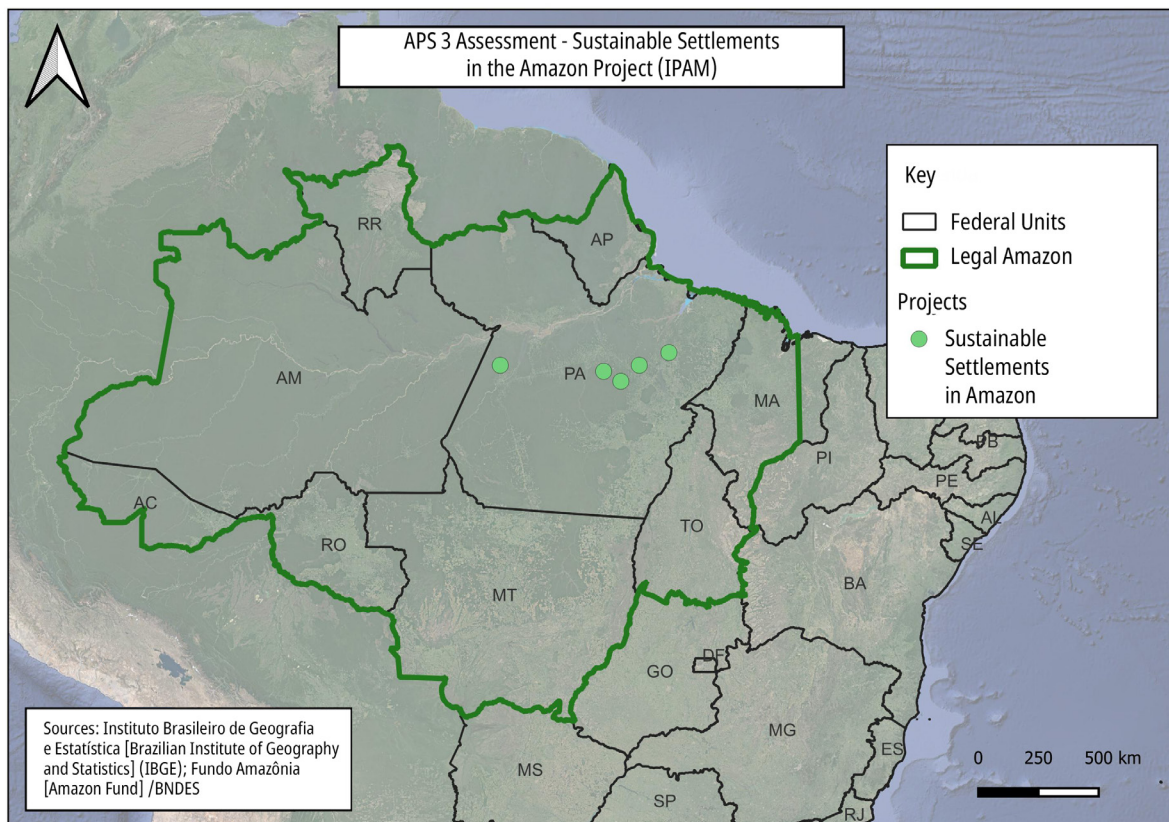
Project File			
Project Title:	Sustainable Settlements in the Amazon	Responsible organization:	Amazon Environmental Research Institute (IPAM)
Project Period:	14/Feb/2012 – 16/Aug/2022	Territorial Coverage:	Pará
Beneficiaries:	Agrarian reform settlers from the Brazilian National Institute of Colonization and Agrarian Reform (Incra) in the municipalities of Anapu, Pacajá, Senador José Porfírio, Mojuí dos Campos, and Aveiros.		
Goals:	To support, in Incra settlements in western Pará, the development of a demonstration experiment in sustainable production and the implementation of Payment for Environmental Services (PSA) for families committed to reducing deforestation.		
Deadline:	64 months		
Total value of the Project:	BRL 24,397,144.00	Amount of support from the Amazon Fund:	BRL 23,408,189.46
Hiring date:	14.Feb.2012	Date of completion:	16.Aug.2022

Source: Amazon Fund website, accessed on 28/Feb/24, available at <https://www.fundoamazonia.gov.br/pt/projeto/Assentamentos-Sustentaveis-na-Amazonia/>

1. Project Summary

The *Sustainable Settlements in the Amazon* (PAS), aimed to develop and implement a demonstration model of sustainable family agricultural production in the west of the state of Pará, associated, in one of the target territories, with Payment for Environmental Services (PSA) to families who maintained their commitment to reducing deforestation.

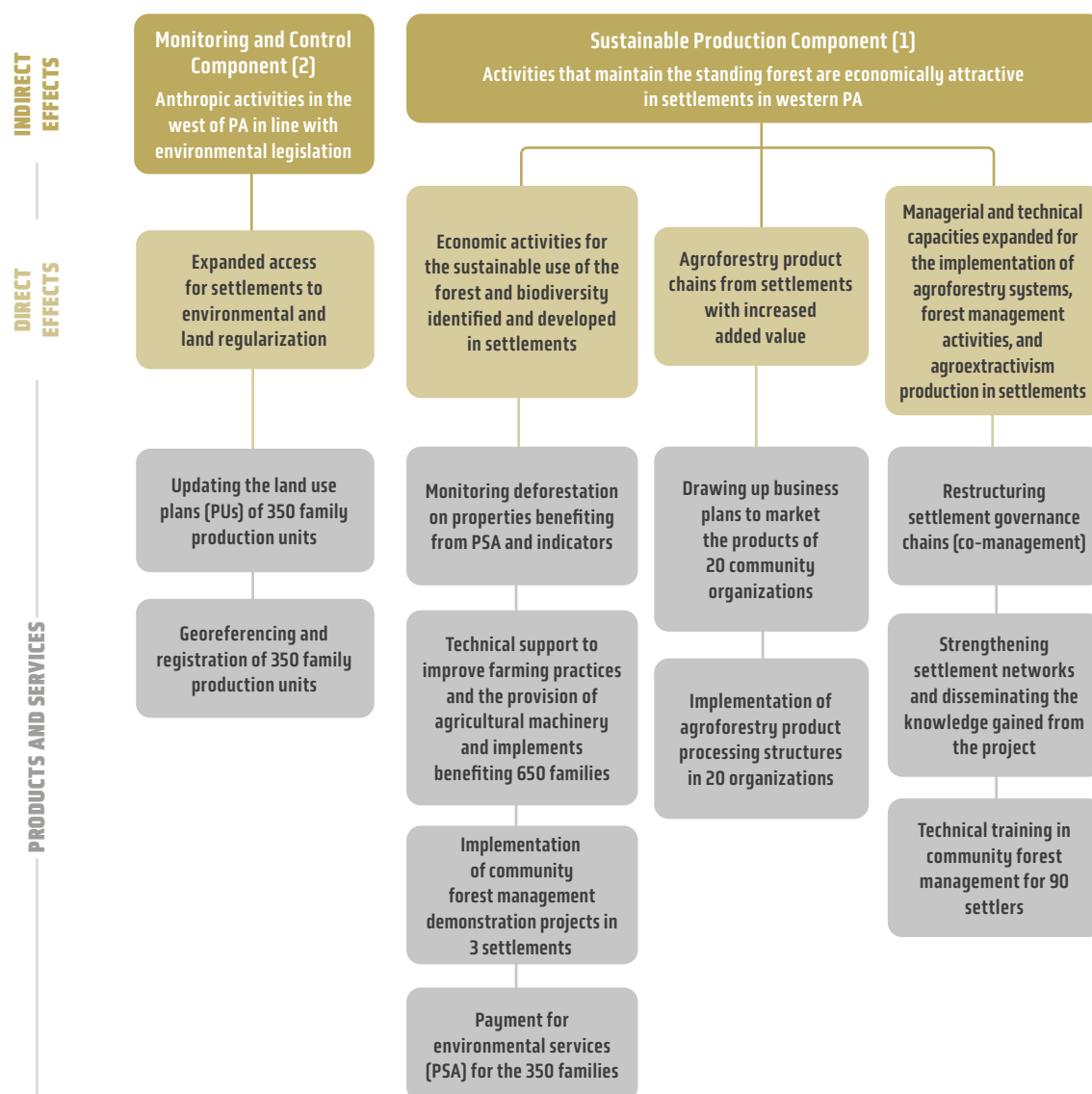
To achieve this goal, the project was structured into two components: (i) development and implementation of a sustainable production model on small rural properties located in three agrarian reform Settlement Projects (PAs); and (ii) payment for avoided deforestation for 350 families around the BR-230 – Transamazon Highway. The work also included preparatory stages for the Environmental Regularization of these family properties.




2. Intervention Logic

The project *Sustainable Settlements in the Amazon* was initially included in the Sustainable Production Components (1), Monitoring and Control (2) and Science, Innovation and Economic Instruments (4) of the Amazon Fund's Logical Framework. Over the course of its implementation, however, the component of expanding the areas of land with a regular land situation around BR-230 was reformulated into environmental regularization actions in the same territory, and was integrated into the environmental regularization component. In the end, the project, agreed with the funder, presented the Logical Framework shown in Figure 1.

Figure 1 Logical Framework of the Project Sustainable Settlements in the Amazon



Source: Own elaboration based on project monitoring plans



In this way, the project has helped to make productive activities that maintain the standing forest economically attractive, encouraging models that preserve the forest, as well as sequestering carbon by recovering the vegetation cover of deforested areas.

With regard to the Monitoring and Control Component, the project expanded access for rural producer families to environmental regularization of their properties in the state of Pará, by supporting their registration in the Rural Environmental Registry (CAR).

Finally, by using economic instruments aimed at the conservation and sustainable use of biodiversity, by paying small farmers for avoided deforestation, the project contributed to the Amazon Fund's general objective of "reducing deforestation with sustainable development in the Legal Amazon".


3. Specific Methodology

This evaluation sought to analyze if the results achieved during the implementation period of PAS continued in force, as well as the outcome of these results and their impacts, years after its completion.

In the preparation phase of the analysis, data was collected from secondary sources, including project documents shared by the BNDES, public data and institutional materials made available by the institution responsible. For active collection of primary data, a field mission was carried out in April 2024, in the state of Pará, in the municipalities of Altamira, Anapu, and Pacajá. During the mission, members of the project's technical team were interviewed, as well as the project's main implementation partner, *Fundação Viver, Produzir e Preservar (FVPP)*, *Casa Familiar Rural* in Anapu, COOPROPAC Fair in Pacajá, the current Secretary of Administration and former Secretary of the Environment in Anapu, and the project's beneficiaries on their properties. A total of eight families were visited, four in each municipality.

4. Project Implementation Context

The disorganized expansion of the agricultural frontier in the Amazon has historically been considered the main vector of environmental degradation in the region. This challenge is also present in family farming. Small farmers, many of whom are settlers under agrarian reform, still practice agriculture based on the "slash and burn" system of native vegetation. In most



cases, this is due to the poor quality or lack of Technical Assistance and Rural Extension (ATER) services they receive, or the absence of infrastructure for transporting production. In addition to these factors, there is a lack of land and environmental regularization that would give them the security to remain on the land and difficulties in accessing rural credit that would allow them to change their production model.

The result of this historical model of occupation in the region has been the advance of deforestation and the subsequent abandonment of already open areas, the reconcentration of land and, in particular, the perpetuation of low profitability agriculture. As in the past, production remains dependent on clearing the forest, followed by burning, as a tool for agricultural cultivation.

Profitable and sustainable family farming, however, is feasible and can be the basis of an Amazonian development model free of deforestation and social conflicts.

In this context, the fundamental objective of the *PAS* was to provide subsidies for building a profitable, socially inclusive and Deforestation-free family farming model. The project was conceived based on the knowledge accumulated in more than a decade of scientific work and experience by the Amazon Environmental Research Institute (IPAM) with numerous partners, in particular the Fundação Viver, Produzir e Preservar (FVPP) and the Brazilian National Institute of Colonization and Agrarian Reform (INCRA).


5. Evaluation of the Results

The following analyses consider the permanence and outcome of the results achieved around 10 years after the end of the field activities. The analyses are organized according to the structure of the indicator framework of the project agreed with the Amazon Fund.

It should be noted that in the *Sustainable Settlements in the Amazon* project, specifically, the indicators are reported globally for the three target territories. The comments, however, are based on interviews carried out during the field mission to the Altamira/Anapu/Pacajá region and with the project coordination in Santarém.

5.1. Results Achieved

The *Sustainable Settlements in the Amazon* project set out to contribute to reducing deforestation by making activities that maintain the standing forest



economically attractive to settlers in western Pará. To this end, the project **i)** developed and implemented a sustainable production model; **ii)** implemented a payment for avoided Deforestation (PSA) program; and **iii)** supported producers in their environmental regularization.

However, this evaluation shows that the project had broader effects, validating not just a production **model with environmental regularization**, but a model for promoting rural development for settlers in the Amazon. This model consists of a qualified and frequent **ATER** service; actions to encourage production, processing and marketing; processes of social organization, engagement and capacity building among young people; and coordination to resolve socio-structural bottlenecks, such as access to drinking water, access to lighting, occupational organization of settlements, opening of roads, among others.

PAS today is a roadmap with all the elements for the development of family farming, applicable throughout Brazil.
— Project coordination.

The results generated by this broad combination of actions can be seen in detail in the book *Sustainable Settlements in the Amazon: family farming and environmental sustainability in the world's largest rainforest*, published by IPAM in 2022 with the aim of contributing to the dissemination and construction of this new model. An in-depth discussion of the project's results can also be found in the reports submitted by IPAM to the Amazon Fund, in particular the Effectiveness Evaluation Report (RAE) and the Results Evaluation Report (RAR), available online on the Amazon Fund's website. The reports show, for example, an increase in the value traded of around 246% and an increase in gross income of 135%, while at the same time achieving a 79% reduction in deforestation. These figures are among the most significant found among finalized Amazon Fund projects and suggest that the **combat against deforestation** via family farming in the Amazon is more effective when it goes **beyond the promotion of Sustainable Production chains** and works on the **social, economic and environmental development of communities** as a whole, as will be seen below.

INDIRECT EFFECT 1

Activities that maintain the standing forest are economically attractive in settlements in western Pará State

DIRECT EFFECT 1.1 Economic activities for the sustainable use of the forest and biodiversity identified and developed in settlements.

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
Revenue from sustainable use economic activities	30% increase	135% increase	450%
Area reforested with SAF	90 ha	198 ha	220%
Recovered area used for economic purposes	900 ha	1.011 ha	112%

Product Indicator	Goal	Indicators at the end of the project	Change
Product 1.1: Technical support to improve farming practices and the provision of agricultural machinery and implements benefiting 650 families			
Properties with effective technical support	650	638	98%
Graduates	24	30	125%
Records of productive experiences	9	9	100%
Product 1.2: Implementation of community forest management demonstration projects in three settlements			
Storage and drying structures built	3	1	33%
Community nurseries built	7	7 (6 active)	100%
Records of productive experiences	3	3	100%
Product 1.3: Payment for Environmental Services (PSA) for the 350 families			
Financial mechanism for PSA developed	1	1	100%
PSA contracts signed	350	385	110%
PSA carried out	100% disbursed	75% disbursed	75%
Product 1.4: Monitoring deforestation on properties benefiting from PSA and indicators			
Forest cover area for PSA	Reducing average deforestation by at least 50%	Reduction of 79%	158%

Product Indicator	Goal	Indicators at the end of the project	Change
Matrix of sustainability indicators drawn up	indicators drawn up and agreed	Matrix drawn up	100%
Matrix of sustainability indicators applied to communities	indicators implemented	Available on SIMPAS	100%

Technical Assistance


In order to promote the economic activities that keep the forest standing, PAS devised and implemented a model of **Technical Assistance and Rural Extension (ATER)** of high scope and quality, which carried out regular and individual visits to all the families benefiting from the project throughout its implementation period (**Product 1.1**).

During the visits, the technicians supported the producers in various actions, starting with the preparation of their production diagnoses and **Land Use Plans** for the property, including technical guidance for the adoption of agroecological practices, the distribution of inputs and the provision of machinery for use in production, the management of cultivated areas, the preparation of the CAR, guidance on the construction of processing structures and support for marketing processes and social organization. The technical team also accompanied the producers in the construction of community and individual nurseries (**Product 1.2**) and guided the students from the Rural Family Schools in their field internships (**Product 1.1**).

During the field mission, the beneficiaries of the project unanimously agreed that the service provided by the ATER team was unique and differentiated because it was always present and because it didn't tell the producers what to do on their plots. On the contrary, they supported the producers in adopting new practices, respecting their wishes and visions for the property, in accordance with the Land Use Plan drawn up (**Product 2.2.1**).

The IPAM project was the best ever to appear here in the region, because they respected us and favored the worker. The other projects want to tell us what to do without listening to our will".

— Beneficiary, family farmer.



The accompaniment of the ATER team was so extensive and so present that it can be said that they acted as **agents of rural development**, having been crucial to the results achieved and their long-term effectiveness. This has allowed the IPAM team to build a local identity worthy of the trust of its beneficiaries, with enough ballast to have an impact on public ATER policies and the potential to gain scale at a national level.

At the time the project was finalized in 2017, IPAM had been contributing to the preparation of INCRA's technical contracting notices, bringing elements of its lessons learned from the PAS.

— Project coordination

Since 2023, relations with INCRA have become closer and the two institutions are currently in the process of formalizing a cooperation agreement with the aim of bringing these lessons to INCRA's operations nationwide. Another **important partnership to bring scale** to the PAS ATER model is being designed with the National Agency for Technical Assistance and Rural Extension (ANATER), with which IPAM is currently drawing up a project to make technical assistance along the lines of PAS viable in the municipalities with the highest rates of Deforestation in the Amazon.

At state level, IPAM is a member of the ATER Technical Chamber of the State Council for Sustainable Rural Development and has been taking the lessons learned from implementing the project to this level, contributing to discussions and the construction of state public policies.

The continued provision of technical assistance is also crucial, even if in a hybrid and more spaced out manner, to guide producers in the best practices, with the aim of guaranteeing income that is not linked to deforestation.

The ATER model developed by IPAM, however, faces a financial bottleneck, with high implementation costs (especially in terms of logistics) that make it difficult to gain scale. To reduce costs, IPAM is betting on its current hybrid service strategy, which is part face-to-face and part virtual. To this end, it has developed an app that will begin its testing phase in the second half of 2024. The next step will be to formalize this type of service in public ATER institutions.

Adoption of New Practices

In its 2022 Effectiveness Evaluation Report (era), IPAM reported that five years after the end of the project's activities, even with 88% of the beneficiary families not receiving technical support, 98% were still carrying out productive activities in the recovered areas supported by the PAS and 9% had expanded their areas of Agroforestry Systems (SAFs). Observations during this evaluation's field mission confirmed this data, indicating the **effective adoption of the productive transition**.

Respect for the individual aspirations of the beneficiaries, through the drafting and implementation of **Land Use Plans**, may have been a key element in the effective adoption of the new practices. As the producers have put into practice the vision they have built for their property, they tend to maintain the new practices and production systems.

Some areas, however, have been **losing productivity** due to management failures because, with the end of the project, came a reduction in technical assistance and the free supply of inputs. In addition, the **difficulty in accessing credit** to invest in production in a more sustainable model, such as agroecology and SAFs, has also made it difficult to properly maintain productive areas.

Payment for Environmental Services (PSA)

The payment for environmental services offered to 350 PAS beneficiaries (**Product 1.1**) in the Transamazon region led to an 83% reduction in deforestation on the benefited properties, as reported. The funds received were used to invest in the productive transition, thus also contributing to the effective adoption of the new practices, as seen above.



Photo: Cecilia Simões

Area of cocoa SAF implemented with support from the Sustainable Settlements Project.

The PSA resource made a difference, it paid to stop deforesting in order to receive this money and invest in production.
 – Project beneficiary

During the project, some producers benefiting from the PSA opened up new areas of forest and were therefore disconnected from the program. In an interview during the field mission, one of these producers reported that he had cleared the forest to prevent monkeys from coming to eat the cocoa grown in the SAF. Difficulties like these have led to important lessons, such as the proper allocation of PSA areas.

We were losing our entire production, so I had no choice but to cut down the trees. – Project beneficiary.

Currently, all the family farmers interviewed reported having opened up new areas to expand their production, indicating that the PSA needs to be of longer duration in order to be effective.

A highly relevant outcome of the project was its contribution to the formulation of the **National PSA Law** - Law 14.119 dated January 13, 2021, which regulates compensation for those who protect nature and keep environmental services functioning. IPAM was one of the leading institutions in the working group that built the PSA Law.

We used much of what we learned from the Payment for Environmental Services in the PAS to contribute to the drafting of the PSA Law.
 – Project coordination.

DIRECT EFFECT 2.1 Agroforestry product chains from settlements with increased added value.

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
Revenue from sustainable use economic activities	30% increase	135% increase	450%

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
Product 2.1: Drafting business plans to market the products of 20 community organizations			
Community management organizations trained in business management	20	20	100%
Business plans drawn up	20	20	100%
Partnerships established to market products	8	39	487%
Product 2.2: Implementation of agroforestry product processing structures in 20 community organizations			
Processing structures assembled	20	19	95%

Marketing

To measure the increase in the added value of agroforestry chain products at the end of the project, IPAM mapped a **135% increase in the gross income** of the beneficiary families over the four years of activities and, **five years after its completion, a 79% increase** in this income, according to the 2022 RAE. This significant increase is directly linked to the commercial planning and processing work provided by the project, which allowed producers to diversify their commercial partners, especially including institutional markets such as the Food Acquisition Program (PAA), the Alimenta Brasil Program (PAB) and the Brazilian National School Feeding Program (PNAE).

In the 2022 RAE, IPAM points out that an effect not foreseen by the project was an increase in the level of entrepreneurship among families, who previously didn't know about programs such as PAA, PAB, or PNAE and didn't know what the Brazilian National Supply Company (CONAB) was doing, for example. They also didn't know how to organize themselves in order to compete for tenders and take part in bidding processes, either individually or collectively. Today, even after the end of the project, the **institutional markets continue to be one of the main marketing channels** for the settlers, either individually or through associations.

Through the project, two **direct marketing** channels have also been formed with consumers who are still active. In the Transamazon region, the Pacajá Family Production Fair was started at the instigation of the IPAM team, which supported the formation of its cooperative, the Pacaja Rural Family Producers' Cooperative (COOPROPAC), which today has 36 members. The cooperative underwent a gradual process of growth **based on strong partner-**

ships: it began with tents in the street, in partnership with the town hall, until it received a donation of land from the municipal government. With resources from BNDES, the cooperative built a shed to house the permanent market, which is open daily to the community. In the middle of 2018/19, they also received a donation of a truck from Eletrobrás to transport their production. During the covid-19 pandemic, the fair was closed, but reopened with the end of social restrictions. After the pandemic, there was a reduction in attendance and also in production, but the organizers have seen a slow recovery since the beginning of 2023.




Photo: Cecília Simões

The Coopropac Market Shed in Pacajá.

COOPROPAC also sells its produce to institutional markets, which represented an income of around BRL 10,000 per family in 2023. With more than half of its members being women, this marketing has generated effective results in terms of **women's empowerment and autonomy**.

Traditionally, the man looks after the cattle and the woman looks after the fields and the yard. So what they sell here stays for them, who are empowering themselves and seeking financial independence from their husbands.
— Coordination of the fair.



In the Tapajós region, the Tapajós Solidarity Marketing Network was formed. As a result of the covid-19 pandemic, several of the network's producers have demobilized, but sales have continued to date, with some families selling through PAA. Furthermore, participation in the **institutional markets led** some women of Tapajós to create the so-called **Women's Agroecological Group**. To this day, they sell their produce through a WhatsApp group, making weekly deliveries in the city of Santarém. The group also participates in two fairs in the region: the Agroecology Fair at the Federal University of Western Pará (UFOPA) and the Tapajós Organic Fair.

IPAM also reports that, as a result of the pandemic, the **market for differentiated products** (organic and agroecological) has strengthened for establishments such as restaurants, bakeries and supermarkets, especially for the products of the agroindustries supported by the project in the fruit pulp and cassava flour chains.

Processing

The project initially planned to invest in 20 processing units allocated to community organizations spread across the project's three target territories. During implementation, however, there was a low level of institutional maturity in these organizations and, in agreement with the Amazon Fund team, it was decided to invest in only one milk agroindustry for a cooperative (*Cooperativa dos Produtores de Leite da Vila Bom Jardim* - Cooperlight) and another 18 agroindustries for individual producers who already worked with the chosen value chains (fruit and manioc) and had a good commercial relationship with the market.

The field mission made it possible to verify that the **processing structures** built during the project **remain active** on most of the properties, and have increased **access to different markets**, especially institutional ones, such as PAB and PNAE, and contributed to the **increase in income** of several families in the settlements (**Product 2.2**). These small family agroindustries would hardly have been built without the presence of the project, as they depended on financing that is rarely accessed by family producers in the region, due to various bottlenecks in access to credit.

One of the producers visited in 2024 reported that he had stopped using his pulp agroindustry because he found it difficult to manage production due to his advanced age, indicating the need for prior planning before donation, considering succession aspects. This was the case, for example, on another proper-



Photo: Cecília Simões

A beneficiary of the Sustainable Settlements Project in Pacajá.

ty we visited, where the son of the deceased beneficiary continued to produce fruit pulp and is now looking to expand the agroindustry and diversify the marketing channels, including exports.

Before PAS we only produced cocoa, cattle and açaí. PAS gave us the pulper, the freezer and the structure for the industry, and today our biggest source of income is the pulper.
— Project beneficiary.



Photo: Cecília Simões

Products from the pulping machine financed by the project, in the process of being expanded in 2024.

DIRECT EFFECT 3. Managerial and technical capacities expanded for the implementation of agroforestry systems, forest management activities, and agroextractivism production in settlements.

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
Settlers participating in the project's dissemination activities	500	1,633	327%
Settlements with participation in Municipal Council meetings	3	3	100%

Product Indicator	Goal	Indicators at the end of the project	Change
Product 3.1: Restructuring the governance chains of three settlements (co-management)			
Leaders involved in the working groups	60	96	160%
Management training courses for leaders	3	16	530%
Settlements with a constituted Settlement Council	3	3	100%
Settlements with basic infrastructure	3	3	100%
Settlements with management guidelines and strategies drawn up	3	3	100%
Product 3.2: Strengthening settlement networks and disseminating the knowledge gained from the project			
Sensitized producers	270	559	207%
Exchange participants	15	233	1,553%
Organized seminars	4	4	100%
Participation in events	50	164	328%
Published newsletters	8	10	125%
Documentary video, final book and project closing event	1 of each product	Closing event held, documentary video made. Published book.	100%
Product 3.3: Technical training in community forest management for 90 settlers			
Sustainable management workshops	9	10	111%
Settlers trained in sustainable management practices	90	275	305%
Management plans drawn up	3	3	100%

Social Organization and Rural Development


In order to bring greater representation to local communities in their own territory and promote **more sustainable results that could be institutionalized**, PAS worked to include representatives of the settlements in pre-existing governance structures (**Product 3.1**), such as the Municipal Councils. After the end of the project, leaders from the Moju Settlement Project (PA) in Santarém, who received training during the project, still occupy positions in the Municipal Agriculture, Health, and Education Councils. In the Bom Jardim and Cristalino PAs, in the Altamira region, there are currently no leaders from the settlement taking part in municipal councils.

The project coordinators believe that representation has been maintained in Santarém because the **leaders are associated with a community governance structure that predates the project**, the Central Association of Agrarian Reform Settlers in the State of Pará (CAAREAPA). Although some of CAAREAPA's members have been demobilized during the pandemic, the Central Association continues to meet at least once a year. In addition, it was reported that the associations participating in the Central Association began to gain momentum of their own and, like CAAREAPA itself, began to act on the social control component.

The great legacy of PAS was that it was a project for social organizations to strengthen their actions. — Project coordination

With the support and training offered by the project, these organizations, including CAAREAPA, approached government bodies such as INCRA, city halls, the Brazilian Forestry Service (SFB), and began to act as articulators of public policies on water, electricity, land titling and Rural Environmental Registry (CAR). Social organizations in Tapajós have also recently begun talks on carbon credit projects, discussing opportunities and evaluating the implementation of private projects that are already taking place in the region. The training of leaders and capacity building of these associations by PAS, therefore, has effective impacts on the construction and implementation of new strategies to control deforestation in the Tapajós.

PAS also worked to form new structures, such as Settlement Councils and Settlement Networks. The new structures formed, however, were encouraged by IPAM's work and by the end of the project ended up being deactivated in the Transamazon region. The period coincided with changes in the man-



agement of municipal and federal governments, including the extinction of the INCRA office in Altamira and a drastic reduction in dialogue with government agencies. The absence of a clear advocacy purpose, as well as the low expectation of a real impact, may have affected the members' willingness to continue meeting.

The action of these **governance bodies** during the implementation of the PAS, however, was very effective, generating **collective results** that remain to this day. Through advocacy in councils and liaison with public authorities, the leaders have brought **rural development** tools to the settlements, improving their infrastructure through, for example, access to drinking water, installing electricity posts, opening roads and opening schools and health centers (**Product 3.1**). These improvements contribute to the resilience of families, increasing their quality of life and promoting their desire to stay on the land.

Women

The issue of gender in PAS was addressed by encouraging the participation of women in all meetings, workshops and training sessions. At these events, **at least 30% of the participants were required to be women** and, as a result of a great effort to mobilize and engage the technical team, **they often represented 50% to 60%** of those present.

The direct result of this engagement was a **sense of belonging** generated in women: in different links of value chains, in leadership positions and in environments of discussion and collective construction. The same effect could be seen among the **young people who accompanied their parents** during the implementation of the project and today are at the head of farms, social organizations, councils and municipal secretariats, especially in Tapajós. **Women are now the majority of leaders** in the Tapajós associations, and are also in the presidency of CAAREAPA.

The women's participation in the training also led to their greater involvement in marketing the products. Because they are responsible for the so-called "roça" (countryside fields), where the agroecological and organic food is planted, it is also the **women who have led sales** to institutional markets and participation in fairs and other marketing channels. The **increased income** generated by this greater participation in the market was generally **used to improve production or processing**.

Where women occupy a place in production, they also have a different re-investment logic to men. Women are able to look at the business in the long term, deciding when to buy, when to invest, who to sell to, etc.

— *Project coordination.*

Strengthened in their sense of belonging, the women of Tapajós have participated in the March of the Daisies and see their contribution to political achievements, such as Law 14660/2023, which determines that formal and informal groups of women from family farming will have priority in the sale of food destined for PNAE.

Community Forest Management

After the project had been approved, at the start of implementation it was realized that the minimum conditions for forest management were not in place in the Transamazon. The three plans drawn up were in Tapajós, where there was continuity after the completion of PAS through a partnership signed with the Tapajós Flona Mixed Cooperative (COOMFLONA), an organization of Flona residents that has been working with timber and non-timber community forest management. The Cooperative drew up the management plans and, in the years following the end of the project, achieved results such as the issue of two permits for community forest management areas issued by INCRA, the issue of two Prior Authorizations for the Technical Analysis of Sustainable Forest Management Plans (APATs) and two Annual Operational Plans (POA), by the Pará State Department for the Environment and Sustainability (SEMAS).

Through companies outsourced by COOMFLONA, the São Miguel community in PA Moju is currently implementing its Management Plan and extracting timber products in its territory. Two other communities, Princesa Isabel and Santa Rita, have also approved their community management plans with SEMAS, and the latter has also been implementing its plan independently of third-party companies.

Also in PA Moju, the Management Plan provided for the exploitation of non-timber products. Today, women continue to extract, process, and sell andiroba oil and kernels, especially to cosmetics companies. Exploitation, however, has only been carried out on an individual basis, rather than collectively through the management plan.

INDIRECT EFFECT 2: Human activities in Western Pará comply with environmental legislation.

Indirect Effect Indicator	Goal	Indicators at the end of the project	Change
Number of properties with georeferenced mapping, suitable for Rural Environmental Registry (CAR) purposes	1,300	1,300	100%
No. of rural properties georeferenced	650	2,710	417%
Area of georeferenced rural properties	58,955 ha	268,985 ha	456%
Number of rural landowners with environmental regularization processes underway	650	1,300 CAR	200%
Area of rural properties with environmental regularization processes underway	58,955 ha	101,657	172%

DIRECT EFFECT 2.2.1 Expanded access for settlements to environmental regularization

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
Number of properties with georeferenced mapping, suitable for Rural Environmental Registry (CAR) purposes	1,300	1,300	100%

Product Indicator	Goal	Indicators at the end of the project	Change
Product 2.2.1: Updating the land use plans (PUs) of 350 family production units			
PU elaborated at the property level	350	650	186%
Community agreements signed	15 community groups with 350 landowners with a signed community agreement	-	-

DIRECT EFFECT 2.2.2 Areas of land with environmental regularization expanded in settlements around BR-230 – Transamazon Highway

Direct Effect Indicator	Goal	Indicators at the end of the project	Change
No. of rural properties georeferenced	650	2,710	417%
Area of georeferenced rural properties	58,955 ha	268,985 ha	456%
Number of rural landowners with environmental regularization processes underway	650	1,300	200%
Area of rural properties with environmental regularization processes underway	58,955 ha	101,657 ha	172%

Product Indicator	Goal	Indicators at the end of the project	Change
Product 2.2.2: and registration of 350 family production units.			
Properties with georeferencing and forest boundary coverage georeferenced	650	2,710	417%
Properties with the plan and descriptive memorial per property	650	-	-

Rural Environmental Registry [CAR]

Initially, the project envisaged the environmental and territorial regularization of its beneficiaries' settlement plots. With the start of the activities and the process of liaison with the body responsible, INCRA, IPAM identified bottlenecks in land regularization that would prevent the achievement of the goals during the project's execution period. In agreement with the Amazon Fund, IPAM then chose to focus on the environmental regularization process, represented by the registration of settlers in the Rural Environmental Registry, CAR.

In this field, IPAM carried out the georeferenced mapping of all the plots in the settlements worked on in PAS and registered 1,300 plots in CAR (Products 2.1 and 2.2). To this day, PA Moju's CAR registry remains the most complete in the state, due to the high number of registrations with IPAM's support.

6. Analysis of the OECD Evaluation Criteria and REDD+ and Cross-Cutting Safeguards

6.1. Analysis of the OECD Evaluation Criteria

Evidence	Evaluation
RELEVANCE CRITERION	
<ul style="list-style-type: none"> The project developed and implemented a Rural Development model for settlements in the Amazon, with the potential to scale up to the whole of Brazil. Through this model, the project has promoted productive transition, an increase in the processing and marketing of sustainable products, a higher level of social organization, the engagement and training of young people and coordination to resolve bottlenecks, such as access to drinking water, access to lighting, the occupational organization of settlements, the opening of roads, among others. The project also developed an ATER model based on frequent individual visits and permanent high-quality follow-up, with the provision of inputs and various training opportunities. The lessons learned from this ATER model have been used in the formulation of public ATER policies currently being developed by INCRA and ANATER. Through PAS, IPAM also tested a Payment for Environmental Services program that paid families for their performance in reducing deforestation. The program achieved positive results and its learnings contributed to the formulation of Brazil's National PSA Law - Law 14.119 dated January 13, 2021. PAS also contributed to the implementation of the Forest Code, through CAR. The project registered 1,300 settlement plots and shared the lessons learned as part of the CAR Working Group in Settlements, coordinated by SEMAS/PA with the participation of INCRA, among others. 	Relevant
EFFECTIVENESS CRITERION	
<p>The project's objectives were achieved:</p> <ul style="list-style-type: none"> (i) families continue to adopt more sustainable and productive production systems; (ii) agroforestry products continue to be produced and sold, representing a significant increase in families' gross income; (iii) the capacities developed have made it possible to maintain production systems and commercial strategies with considerable autonomy by families and their partners; (iv) 1,300 settlers were registered in CAR, starting their environmental regularization process. Several families have opened up new areas since the end of the project, which should be identified by SEMAS and forwarded for regularization as the CAR analyses are carried out. 	Medium Effective
EFFICIENCY CRITERION	
<ul style="list-style-type: none"> The resources made available by the Amazon Fund were used to carry out the planned activities properly and efficiently. There were two main sources of expenditure in the project: most of the resources were used for the logistics of the technical assistance service, due to the long distances traveled by the project team. The project also invested in the purchase of inputs for the SAFs and machinery for the family agro-industries. 	Efficient



IMPACT CRITERION	
<ul style="list-style-type: none"> The main impacts generated by the project could be measured quantitatively through the following indicators: increase in the value marketed by the families of around 246%, increase in gross income achieved by the assisted settlers of around a reduction of 135% and 76% in deforestation on their plots. In qualitative terms, it can be said that the project's greatest impact was to promote a rural development model that demonstrated that family farming in the Amazon is possible, free from deforestation and with economic improvement. 	Quantitative impacts
SUSTAINABILITY CRITERION	
<ul style="list-style-type: none"> After the PAS, at least seven new projects were implemented that allowed the continuation of actions linked to part of the families served by the project, but also new projects that, inspired by the PAS, today benefit other family farmers in other regions. The sustainability of the results was also provided by the actions of the project's partners, such as the Rural Family Houses. Casa de Anapu, for example, maintains the seedling nursery set up by PAS, generating financial resources for the school and donating seedlings for the students' families to plant on their properties. The nursery is also considered an important teaching laboratory for the students. 	High sustainability

6.2 Analysis of the Cancun Safeguards

Safeguard	Attendance	Notes
Actions complementing or consistent with the objectives of national forest programs and other relevant international conventions and agreements	Yes	This project contributes more specifically to the expected result '1.1 Bioeconomy, socio-biodiversity, agroecology and agroecological transition expanded and strengthened in the Amazon' of the PPCDam (Objective 1: Stimulating Sustainable Productive Activities), by promoting cocoa production in SAFs and agroecological fruit and vegetable production. The project also contributed to the implementation of the Brazilian Forest Code by registering 1,300 farmers/settlers in its environmental regularization tool, the Rural Environmental Registry.
Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation	N/A	There were no specific contributions from the project in this respect.
Respect for the knowledge and rights of Indigenous Peoples and members of local communities, taking into account international obligations relevant national circumstances and laws and noting that the UN General Assembly has adopted the UN Declaration on the Rights of Indigenous Peoples	N/A	The project targeted land reform settlers and did not directly benefit traditional and Indigenous Peoples communities.
Full and effective participation of interested parties, in particular Indigenous Peoples and local communities, in the actions referred to in paragraphs 70 and 72 of Decision 1/CP 16	N/A	

Safeguard	Attendance	Notes
Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 Decision 1/CP 1611 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	Yes	The project encouraged the protection and conservation of natural forests and their ecosystem services by promoting the restoration of deforested areas with SAFs and the adoption of agroecological production systems, by structuring nurseries to produce seedlings for forest recovery and by implementing a payment for environmental services program, namely avoided deforestation.
Actions to address the risks of reversals in REDD+ results	N/A	Not applicable.
Actions to reduce the shift of carbon footprint to other areas	N/A	Not applicable.

6.3 Analysis of Cross-Cutting Criteria

Criterion	Attendance	Notes
POVERTY REDUCTION		
<ul style="list-style-type: none"> - To what extent has the project contributed effectively to economic alternatives that value the standing forest and the sustainable use of natural resources? - To what extent has the project positively influenced the reduction of poverty, social inclusion and improvement of the living conditions of beneficiaries (in particular: traditional communities, settlements and family farmers) who reside in the area of the project activities? - Has the project succeeded in promoting and increasing production in value chains of timber and non-timber forest products originating from sustainable management? 	Yes	The project promoted an increase in food production through sustainable methods such as SAFs and Agroecology, generating greater food security in the target territories, and supported the expansion of marketing, bringing a gross increase of 135% in the income of the families benefited during the implementation of the project. The increase in income was effective and was seen again five years after the end of the project, when it reached a rate of 79%.
GENDER EQUALITY		
<ul style="list-style-type: none"> - Has the project succeeded in integrating gender issues into its strategies and interventions or addressed the issue in an independent way? How? - Was there separation by gender in data collection for project planning and monitoring? - How did the project contribute to gender equality? 	Partially	Gender issues were addressed by encouraging the participation of women in project activities (with a target of at least 30% female participation), as well as social protagonism. As a result, more than half of the social organizations supported by the project (associations and cooperatives) are currently led by women, and some are formed exclusively by women. In addition, women represent more than half of the institutional food sales contracts formalized with the project's support. At the COOPROPAC fair, which was formed during the project and currently has its own facilities in the municipality of Pacajá, again more than half of the members are women, as is the president of the cooperative.


7. General Evaluation

Positive Aspects

- The project was built using a “menu” of investments in various potential production chains. It was agreed with the Amazon Fund that the choice of the most suitable investments and value chains would be made during implementation, as conditions arose in the field. This brought **flexibility in implementation** that was crucial to the success of the project, which was able to adapt to reality, avoiding a waste of resources and increasing the engagement of beneficiaries.
- Through the project, IPAM established **partnerships** with key institutions in the region, which have been maintained to this day, perpetuating territorial impacts. Of particular note here is the partnership with the Viver, Produzir, Preservar Foundation (FVPP), with whom IPAM continues to work as a partner in the implementation of other projects; with the Rural Family Houses, which still maintain one of the community nurseries and continue to receive support through the dissemination of technologies and donations of inputs by IPAM; with INCRA, with whom IPAM has been building a cooperation agreement to scale up the ATER model developed in the project.
- The good results achieved leveraged the funding of at least seven new projects, which not only made it possible to continue serving the many families benefiting from the project, but also to expand the model developed by PAS to other regions of the country.
- The lessons learned during the project have fed into discussions and the construction of public policies that are crucial to the rural development of settlers in the Amazon and to forest conservation efforts, such as the PSA Law, ANATER and INCRA’s ATER model and the implementation of CAR. These effects have the potential to scale up and bring greater effectiveness to the results obtained by PAS.

Challenges for Effectiveness

- During implementation, it became apparent that the social organizations in most of the target territories were weakened, and it was decided to focus part of the project’s investments on individual producers. Although the change generated positive results at an individual level and



made sense in terms of effectiveness, it was not possible to act in a more structural way, with greater scale and long-term sustainability.

- The high cost of the ATER model made it impossible to continue providing the service to all the beneficiary families at the end of the project. The high cost is also the biggest bottleneck for the model to gain scale, even though it has great merits, with the potential to generate rural development in settlements across the country.
- The absence of ATER, accompanied by the withdrawal of INCRA from Altamira and the weakening of command and control structures at the end of the project, contributed to the increase in deforestation and reduced the effectiveness of the results.
- Social organizations formed by the project (councils of the settlements), as well as the participation of leaders in municipal councils, were not sustained after the end of the activities, with the exception of the Santarém region, where the leaders were associated with a cooperative of organizations pre-existing to the project. This indicates that more time may be needed to consolidate the formation of social organizations and that ideally they should be associated with pre-existing structures.

8. Conclusion and Lessons Learned

- The transition to sustainable production models (agroecological, SAFs and community management) was successful and effective, and has continued to this day.
- The project has contributed directly to reducing carbon emissions through its PSA program and indirectly to increasing the resilience of family farming in regions where predatory agribusiness is expanding. With the end of the project, however, deforestation rates rose again, following the national trend during the period.
- Reducing deforestation requires an advocacy strategy that covers not only the promotion of sustainable activities, but also the promotion of rural development as a whole, including social and structural improvements.
- In order to offer an ATER service capable of promoting rural development in the territories, it is necessary to think of alternative strategies that reduce costs. The hybrid ATER system, proposed by IPAM and based on the lessons of the project, could be one of these alternatives, with the



potential for rapid gains in scale throughout Brazil.

- The partnerships made by IPAM to implement PAS proved essential, both for carrying out the activities and for the **sustainability and effectiveness of the results** in the long term. Good partnerships guarantee greater engagement, ease of implementation and greater chances of the strategy continuing.



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