



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

Débora Almeida  
Monika Röper

May / 2022

# Report on the Effectiveness Evaluation of Sustainable Productive Activities (APS) Projects within the scope of the Amazon Fund/BNDES

This report presents the results of the ex-post effectiveness evaluation of sustainable productive activities (APS) projects within the scope of the Amazon Fund/BNDES. The evaluation was carried out by a team of independent consultants under the coordination of the German Cooperation for Sustainable Development through Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), within the scope of technical cooperation with BNDES on the Amazon Fund. All opinions expressed here are the authors' sole responsibility, not necessarily reflecting the position of GIZ and BNDES.

---

## Evaluation Team

Débora Almeida

Monika Röper

## Evaluation Coordination

**(Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ GmbH)**

Alicia Spengler

Christina Tirlir

Pedro Bremberger Pássaro

Rhuan Sartore

## Visual Identity and Layout

Barbatão

---

All photos used in this publication were made available by the projects

Reproduction of this text and the data contained therein is permitted, provided the source is cited. Reproductions for commercial purposes are prohibited.

---



Por meio da:



MINISTÉRIO DA  
ECONOMIA

MINISTÉRIO DO  
MEIO AMBIENTE

# Summary

LIST OF CHARTS _____	7
LIST OF FIGURES _____	8
LIST OF ABBREVIATIONS AND ACRONYMS _____	10
<b>Executive Summary</b>	<b>14</b>
<b>1. Background</b>	<b>21</b>
<b>2. Introduction</b>	<b>28</b>
<b>3. Methodology Applied</b>	<b>30</b>
<b>4. Aggregated Results</b>	<b>35</b>
4.1. Evaluation's Levels of Analysis _____	35
4.2. General Theory of Change developed for the Thematic Evaluation _____	37
4.3. Results on the theme of sustainable production/extraction _____	45
4.4. Results on the theme of processing and value-adding _____	49
4.5 Results on the theme of commercialization and access to markets _____	52
4.6. Results on the theme of management of community organizations _____	57
4.7 Results on the theme of recovery of deforested areas _____	60
4.8. Contributions to the indirect effects of income generation and increased economic attractiveness of activities _____	63
4.9. Contributions to additional effects of territorial governance and food security _____	66
4.10. Contributions to the Amazon Fund's General Deforestation Reduction Goals _____	68
4.11. OECD Evaluation Criteria and Cancun Safeguards _____	73
4.12. Analysis of Cross-Cutting Criteria _____	80
<b>5. Conclusions and Lessons Learned</b>	<b>82</b>
<b>6. Recommendations</b>	<b>87</b>

## ANNEX I – Individual Project Evaluations



<b>1. APL Babassu</b>	<b>90</b>
1. Project Fact Sheet _____	90
2. Project Summary _____	91
3. Project Intervention Logic _____	91
4. Specific Methodology of Individual Evaluation _____	96
5. The Project in the Organization’s Trajectory _____	97
6. Results Evaluation _____	102
7. Conclusions and Lessons Learned _____	128



<b>2. Sustainable Fishing</b>	<b>129</b>
1. Project Fact Sheet _____	129
2. Project Summary _____	130
3. Project Intervention Logic _____	130
4. Specific Methodology _____	132
5. The Project in the Organization’s Trajectory _____	133
6. Results Evaluation _____	137
7. Conclusions and Lessons Learned _____	162



<b>3. Amazon Backyards</b>	<b>163</b>
1. Project Fact Sheet _____	163
2. Project Summary _____	164
3. Project Intervention Logic _____	165
4. Specific Methodology of Individual Evaluation _____	167
5. The Project in the Organization’s Trajectory _____	168
6. Results Evaluation _____	172
7. Conclusions and Lessons Learned _____	199



<b>4. Forest Sentinels</b>	<b>200</b>
1. Project Fact Sheet _____	200
2. Project Summary _____	201
3. Project Intervention Logic _____	201
4. Specific Methodology _____	204
5. The Project in the Organization’s Trajectory _____	204
6. Results Evaluation _____	206
7. Conclusions and Lessons Learned _____	227



<b>5. Productive Sociobiodiversity in the Xingu</b>	<b>228</b>
1. Project Fact Sheet _____	228
2. Project Summary _____	229
3. Project Intervention Logic _____	229
4. Specific Methodology of Individual Evaluation _____	234
5. The Project in the Organization’s Trajectory _____	234
6. Results Evaluation _____	239
7. Conclusions and Lessons Learned _____	272
<b>ANNEX II – Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund</b>	<b>274</b>
<b>ANNEX III – Analysis of Land Use Evolution, Degradation, and Restoration of Vegetation in the Amazon Backyards Project</b>	<b>291</b>
<b>Annex IV – Evaluation Criteria</b>	<b>298</b>
<b>Annex V – List of Interviews Conducted</b>	<b>303</b>
<b>Annex VI – Terms of Reference (ToR)</b>	<b>307</b>

## List of Charts

Chart 1: Basic information about the projects evaluated _____	25
Chart 2: Achievement of the targets of the Amazon Fund's standard indicators for in natura production volume of the projects evaluated _____	46
Chart 3: Achievement of the targets of the Amazon Fund's indicators for volume of processed products in the projects evaluated _____	50
Chart 4: Achievement of the targets of the Amazon Fund's standard indicators for sale value of in natura and processed products of the projects evaluated _____	55
Chart 5: Achievement of the targets of the Amazon Fund's standard indicators for recovered area used for economic purposes of projects addressing this theme _____	60

### Annex I

Chart 1: Components and products under the proposal of the APL Babassu project _____	94
Chart 2: Components and products under the proposal for the Sustainable Fishing project _____	132
Chart 3: Details of production and commercialization volumes and values _____	190
Chart 4: Partner organizations and support for the Forest Sentinels project _____	212
Chart 5: Partner organizations and support for the Forest Sentinels project _____	216
Chart 6: Executing organizations and actions _____	232
Chart 7: Strengthened chains and activities in the Indigenous Park and in the Cabeceiras do Xingu _____	238

### Annex II

Chart 1: Sustainable Productive Activities Projects (APS) of the Amazon Fund analyzed _____	275
Chart 2: Areas of activity of the analyzed projects _____	276
Chart 3: Deforestation data (in km <sup>2</sup> ) for the five projects analyzed _____	280
Chart 4: Analysis of Deforestation for the APL Babassu project _____	281

## List of Figures

Figure 1: Synthetic representation of the evaluated projects _____	15
Figure 2: Components of the Amazon Fund Logical Framework _____	21
Figure 3: Expected levels of analysis for thematic evaluations _____	35
Figure 4: Levels of analysis in the Thematic Evaluation of Sustainable Productive Activities (APS) _____	37
Figure 5: Simplified diagram of the organization of a value chain _____	40
Figure 6: Direct and indirect effects of the Sustainable Production Component in the Logical Framework of the Amazon Fund _____	41
Figure 7: Representation of the General Theory of Change _____	42
Figure 8: Products and ways of using priority natural resources in the projects _____	44

### Annex I

Figure 1: Logical Framework of the APL Babassu project agreed with the Amazon Fund _	92
Figure 2: Location map of the municipalities of Lago do Junco, Lago da Pedra, and Bacabal in the Médio Mearim region _____	100
Figure 3: Institutional arrangement proposed for the project _____	102
Figure 4: Logical Framework for the Sustainable Fishing project agreed with the Amazon Fund _____	132
Figure 5: Logical Framework for the Amazon Backyards project agreed with the Amazon Fund _____	165
Figure 6: Coverage area of the Amazon Backyards project _____	171
Figure 7: Evolution of vegetation on a farm with AFS implemented by the project ____	191
Figure 8: Logical Framework for the Forest Sentinels project agreed with the Amazon Fund __	202
Figure 9: Area covered by the Forest Sentinels project _____	206
Figure 10: Logical Framework of the Productive Sociobiodiversity in the Xingu project agreed with the Amazon Fund _____	230
Figure 11: Mosaic of protected areas of Terra do Meio _____	236

### Annex II

Figure 1: Areas of activity of the analyzed projects and accumulated deforestation between 2008 and 2020 (in red) _____	277
----------------------------------------------------------------------------------------------------------------------------	-----

Figure 2: 2007 Image of the implementation area of the APL Babassu project _____	283
Figure 3: Areas of activity of the Forest Sentinels project and accumulated deforestation between 2008 and 2020 (in red) _____	286
Figure 4: Areas of activity of the Productive Sociobiodiversity in the Xingu project and accumulated deforestation between 2008 and 2020 (in red) _____	287
Figure 5: Areas of activity of the Amazon Backyards and accumulated deforestation between 2008 and 2020 (in red) _____	288
Figure 6: Areas of activity of the APL Babassu project and accumulated deforestation between 2008 and 2020 (in red) _____	289
Figure 7: Areas of activity of the Sustainable Fishing project and accumulated deforestation between 2008 and 2020 (in red) _____	290

### **Annex III**

Figure 1: Location area of the analysis _____	292
Figure 2: Classification for exposed soil and other uses _____	294
Figure 3: Classification for Moderate Regeneration _____	294
Figure 4: Classification for Dense Vegetation _____	295



## List of Abbreviations and Acronyms

<b>AASFLO</b>	Forest Seeds Agroforestry Association ( <i>Associação Agroflorestal Sementes da Floresta</i> )
<b>ABC Plan</b>	Low Carbon Agriculture Plan ( <i>Plano Agricultura de Baixa Emissão de Carbono – Plano ABC</i> )
<b>ACAIM</b>	Community Association of the Mayrob Indigenous Village ( <i>Associação Comunitária da Aldeia Indígena Mayrob</i> )
<b>ACAEP</b>	Estrela da Paz Agroecological Community Association ( <i>Associação Comunitária Agroecológica Estrela da Paz</i> )
<b>ADERJUR</b>	Juruena Rural Development Association ( <i>Associação de Desenvolvimento Rural de Juruena</i> )
<b>AERIM</b>	Association of Extractive Dwellers of the Iriri Maribel River ( <i>Associação dos Moradores Extrativistas do Rio Iriri Maribel</i> )
<b>AFS</b>	Agroforestry Systems ( <i>Sistemas Agroflorestais - SAFs</i> )
<b>AMOMEX</b>	Association of Dwellers of the Xingu Extractive Reserve ( <i>Associação de Moradores da Resex do Xingu</i> )
<b>AMORA</b>	Association of Dwellers of the Riozinho do Anfrísio Extractive Reserve ( <i>Associação de Moradores da Resex do Riozinho do Anfrísio</i> )
<b>AMORERI</b>	Association of Dwellers of the Iriri River Extractive Reserve ( <i>Associação de Moradores da Resex do Rio Iriri</i> )
<b>AMTR</b>	Association of Female Rural Workers of Lago do Junco ( <i>Associação das Mulheres Trabalhadoras Rurais do Lago do Junco</i> )
<b>AMCA</b>	Cantinho da Amazônia Women's Association ( <i>Associação de Mulheres Cantinho da Amazônia</i> )
<b>ANSA</b>	Our Lady of the Assumption Education and Social Assistance Association ( <i>Associação de Educação e Assistência Social Nossa Senhora da Assunção</i> )
<b>APP</b>	Permanent Protection Area ( <i>Área de Proteção Permanente</i> )
<b>APL</b>	Local Productive Arrangement ( <i>Arranjo Produtivo Local</i> )
<b>APS</b>	Sustainable Productive Activities ( <i>Atividades Produtivas Sustentáveis</i> )
<b>ARPA</b>	Amazon Protected Areas Program ( <i>Programa de Áreas Protegidas da Amazônia</i> )
<b>ASKAPA</b>	Association of Kaxinawá Producers and Breeders of Praia do Carapanã ( <i>Associação dos Produtores e Criadores Kaxinawá da Praia do Carapanã</i> )
<b>ASPAKNO</b>	Association of the Kaxinawá People of the Nova Olinda Village ( <i>Associação do Povo Kaxinawá da Aldeia Nova Olinda</i> )



<b>ATER/ ATERF</b>	Technical Assistance and Rural / Forestry Extension ( <i>Assistência Técnica e Extensão Rural/Florestal</i> )
<b>ATIX</b>	Xingu Indigenous Land Association ( <i>Associação da Terra Indígena Xingu</i> )
<b>ATV</b>	Terra Viva Association of Alternative Agriculture and Environmental Education ( <i>Associação Terra Viva de Agricultura Alternativa e Educação Ambiental</i> )
<b>ASSEMA</b>	Settlement Association in the State of Maranhão ( <i>Associação em Áreas de Assentamento no Estado de Maranhão</i> )
<b>AXA</b>	Xingu Araguaia Articulation ( <i>Articulação Xingu Araguaia</i> )
<b>BNDES</b>	National Bank for Economic and Social Development ( <i>Banco Nacional de Desenvolvimento Econômico e Social</i> )
<b>CAD</b>	Development Assistance Committee ( <i>Comitê de Ajuda ao Desenvolvimento</i> )
<b>CAR</b>	Rural Environmental Registry ( <i>Cadastro Ambiental Rural</i> )
<b>CEPLAC</b>	Executive Committee of the Cocoa Crop Plan ( <i>Comissão Executiva do Plano da Lavoura Cacaueira</i> )
<b>COOPAVAM</b>	Vale do Amanhecer Farmers' Cooperative ( <i>Cooperativa dos Agricultores do Vale do Amanhecer</i> )
<b>COPAESP</b>	Cooperative of Small Agroextractive Producers of Esperantinópolis ( <i>Cooperativa dos Pequenos Produtores Agroextrativistas de Esperantinópolis</i> )
<b>COPAF</b>	Feijó Fishing Colony ( <i>Colônia de Pesca de Feijó</i> )
<b>COPPALJ</b>	Cooperative of Small Agroextractive Producers of Lago do Junco and Lago dos Rodrigues ( <i>Cooperativa de Pequenos Produtores Agroextrativistas do Lago do Junco e Lago dos Rodrigues</i> )
<b>DAP</b>	Declaration of Aptitude for the National Program for Strengthening Family Agriculture ( <i>Declaração de Aptidão ao Programa Nacional de Fortalecimento da Agricultura Familiar</i> )
<b>EFAs</b>	Agricultural Family Schools ( <i>Escolas Família Agrícola</i> )
<b>FUNAI</b>	National Indigenous Foundation ( <i>Fundação Nacional do Índio</i> )
<b>GMP</b>	Pirarucu Management Group ( <i>Grupo de Manejo de Pirarucu</i> )
<b>IBAMA</b>	Brazilian Institute of Environment and Renewable Natural Resources ( <i>Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis</i> )
<b>ICMBio</b>	Chico Mendes Institute for Biodiversity Conservation ( <i>Instituto Chico Mendes de Conservação da Biodiversidade</i> )
<b>IMAC</b>	Environmental Institute of the State of Acre ( <i>Instituto de Meio Ambiente do Acre</i> )



<b>IMAFLORA</b>	Forest and Agricultural Management and Certification Institute ( <i>Instituto de Manejo e Certificação Florestal e Agrícola</i> )
<b>INPA</b>	Amazon National Institute for Research ( <i>Instituto Nacional de Pesquisa da Amazônia</i> )
<b>ISA</b>	Socio-Environmental Institute ( <i>Instituto Socioambiental</i> )
<b>MMA</b>	Ministry of Environment ( <i>Ministério de Meio Ambiente e Mudança do Clima</i> )
<b>NTFPs</b>	Non-timber forest products
<b>OSCI</b>	Civil Society Organization of Public Interest ( <i>Organização da Sociedade Civil de Interesse Público</i> )
<b>OECD</b>	Organization for Economic Cooperation and Development ( <i>Organização para a Cooperação e Desenvolvimento Econômico</i> )
<b>PAA</b>	Food Acquisition Program ( <i>Programa de Aquisição de Alimentos</i> )
<b>PES</b>	Payments for Environmental Services ( <i>Pagamento por Serviços Ambientais – PSA</i> )
<b>PNAE</b>	National School Feeding Program ( <i>Programa Nacional de Alimentação Escolar</i> )
<b>PPCDAm</b>	Action Plan for the Prevention and Control of Deforestation in the Legal Amazon ( <i>Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal</i> )
<b>PGTA</b>	Territorial and Environmental Management Plan for Indigenous Lands ( <i>Plano de Gestão Territorial e Ambiental de Terras Indígenas</i> )
<b>PGPMBio</b>	Minimum Price Guarantee Policy for Sociobiodiversity Products ( <i>Política de Garantia de Preços Mínimos para os Produtos da Sociobiodiversidade</i> )
<b>PRADAs</b>	Plans for the Recovery of Degraded or Altered Areas ( <i>Projetos de Recuperação de Áreas Degradadas ou Alteradas</i> )
<b>PRONAF</b>	National Program for Strengthening Family Farming ( <i>Programa Nacional de Fortalecimento da Agricultura Familiar</i> )
<b>PRODES</b>	Project for Satellite Monitoring of the Brazilian Amazon Forest ( <i>Projeto de Monitoramento da Floresta Amazônica Brasileira por Satélite</i> )
<b>REDD+</b>	Reduction of greenhouse gas emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable forest management, and increased forest carbon stocks ( <i>Redução de emissões de gases de efeito estufa provenientes do desmatamento e da degradação florestal, conservação de estoques de carbono florestal, manejo sustentável de florestas e aumento de estoques de carbono florestal</i> )
<b>RPA</b>	Autonomous Payment Receipt ( <i>Recibo de Pagamento Autônomo</i> )
<b>SEAPROF</b>	Production Secretariat of the Government of the State of Acre ( <i>Secretaria de Produção do Governo do Estado do Acre</i> )

<b>SEDAM</b>	State Secretariat for Environmental Development <i>(Secretaria de Estado do Desenvolvimento Ambiental)</i>
<b>UNIR</b>	Federal University of the State of Rondônia <i>(Universidade Federal de Rondônia)</i>
<b>WWF</b>	World Wildlife Fund

# Executive Summary

---

The Thematic Evaluation of “Sustainable Productive Activities (APS)” projects includes an individual and a combined view of five projects allocated to the Sustainable Production Component of the Amazon Fund. This is one of the four components of the Logical Framework of the Amazon Fund<sup>1</sup>, which connects the components to the general objectives of reducing deforestation and promoting sustainable development in the Legal Amazon. The Logical Framework, in turn, links with the axes of the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm), which constituted the public policy that gathered initiatives under this theme at the federal level until 2020.

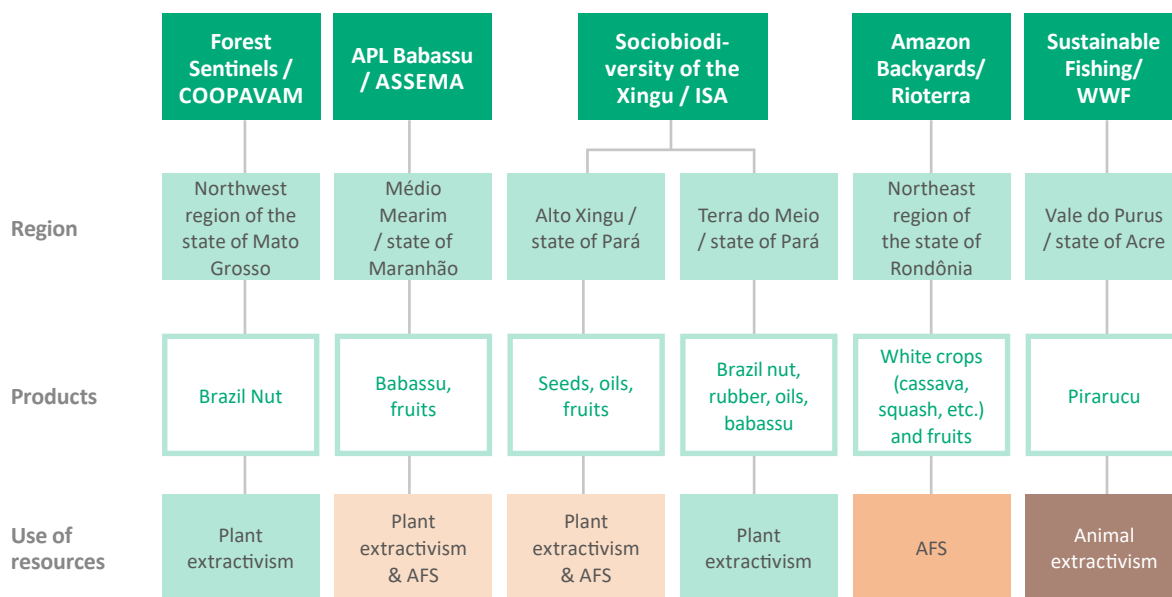
The selection of projects for this evaluation follows the chronological sequence in which they were concluded. Two selected projects had been planned and presented in the initial phase of the Amazon Fund (via spontaneous demand), and three resulted from the first Public Call for Sustainable Productive Projects, held in 2012<sup>2</sup>. Ranging from BRL 3.2 million to BRL 8.8 million, the projects amount to a total of BRL 30.1 million, which corresponds to about 6.1% of the Sustainable Production Component project portfolio in 2020 (BRL \$476.4 million). The evaluated projects covered a complex combination of territories, social groups, execution arrangements, products, productive activities, and land uses, which posed a challenge for the aggregation of results and joint thematic analysis (Figure 1).

---

1 AMAZON FUND. 2020 Activity Report. Rio de Janeiro: BNDES, 2021. p. 35.

2 Check out the Public Call for Sustainable Productive Projects at: [http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada\\_Publica\\_APS\\_04\\_2012.pdf](http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada_Publica_APS_04_2012.pdf).

Figure 1: Synthetic representation of the evaluated projects



Source: Authors

According to the established evaluation criteria, the main findings are presented below.

## Relevance

The projects evaluated were highly relevant as they covered regions, products and activities, organizations and beneficiary groups that reflect the diversity and potential for sustainable uses of natural resources in the Amazon. Important results were generated for the understanding of the productive structuring of representative chains of plant extractivism (Brazil nuts, babassu, oils, etc.) and animal extractivism (*pirarucu*) associated with the concept of sociobiodiversity, and the implementation of agroforestry systems (AFS). These activities are part of the productive activities that keep forests standing or contribute to their restoration and the recovery of degraded areas.

Some experiences stood out for their impact on different links in the value chains, associated with robust governance and execution arrangements, contributing to the design of more effective approaches to strengthen the inclusion of community organizations in the chains. There were, in all projects, important learning processes under these themes, which contributed to the results achieved. These experiences can also be used to develop new projects and public calls, as well as to develop the Amazon

Fund and overall related initiatives.

In addition to the objectives of the Sustainable Production Component, part of the projects generated additional results and impacts under themes such as governance and territorial protection and food security.

### Effectiveness

Different levels of effectiveness have been found for the projects. A considerable number of objectives and goals were achieved. There were cases in which the indicators were reached or even largely exceeded, but there were design and input issues that limited their interpretation as effectiveness indicators. Likewise, in some cases, non-achievement of indicators did not necessarily indicate failure of the action, whose effectiveness could be confirmed through interviews and project documentation.

In some projects, relevant results were achieved in terms of increasing production and revenue. But, especially in cases of more incipient productive activities and organizations with less connection to the markets, the initiatives require a continuation of support and development to achieve more significant results. The interviews indicate income generation results for the beneficiaries, but the monitoring and evaluation information available is still fragile to support more assertive conclusions about the effectiveness of the projects in this regard.

The projects were effective in implementing arrangements that involved a relevant number of community organizations and beneficiaries. The differences between spontaneous demand and Public Call projects, on this theme, are more qualitative than quantitative: the Public Call projects had more active governance structures, for example, with the holding of forums between organizations. The strategy of creating resource capillarity in these projects was more effective, and there were clearer efforts towards integration among the organizations.

### Efficiency

In general, the available documentation and project records provide few elements for a more qualified evaluation of the efficiency criterion. As a rule, the projects carried out their work plans, that is, the available resources were used to carry out the planned activities, with the performance of some projects exceeding what had been initially planned.

### Impact

With the diversity of approaches and contexts, it is not possible to arrive at a uni-

fied evaluation of this criterion. More specific analyzes are carried out within the scope of each individual project evaluation.

Based on the proposed General Theory of Change, it was possible to systematize the major areas of the projects' positive impacts and challenges along the main links in the value chains (production, processing, and commercialization) and organizational strengthening as direct impacts and the contribution to income generation and reduction of deforestation as indirect impacts. Important additional positive impacts were found in terms of food security and territorial management. The expected generation of impacts in the area of public policies to support sustainable production, present in some projects, was limited to a few specific contributions, falling short of the projects' initial expectation.

Several initiatives left lessons learned that can support the design of new projects, whether in the Amazon Fund or in related initiatives. Important lessons learned, especially about supporting value chain approaches, were incorporated into the designs of later Amazon Fund public notices.

## Sustainability

The evaluation of the sustainability criterion proved to be challenging for all projects, considering the pandemic and political-economic instability.

The governance and execution arrangements followed different paths, with cases of maintenance, with emphasis on the *Productive Sociobiodiversity in the Xingu* and *APL Babassu* projects, of disintegration (*Sustainable Fishing* project), and combinations of continuity and weakening (*Amazon Backyards* and *Forest Sentinels* projects).

Most of the executing organizations submitted proposals for the continuity of the projects evaluated here, in part within the scope of the second Public Call in the context of the Sustainable Production Component. On the other hand, the executing organizations had or sought other sources of support for the continuity of strategic actions.

Organizations with more robust governance arrangements and market insertion, such as the *Forest Sentinels*, *APL Babassu*, and *Productive Sociobiodiversity in the Xingu* projects, were in a better position to face the impacts generated by the Covid-19 pandemic than organizations with weaker market structures and relationships and support. The preparation of management plans, in addition to contributing to environmental sustainability in the *Sustainable Fishing* and *APL Babassu* projects, also provided inputs for the development of community agreements, supporting the stability of territorial governance results.

Although the projects, except for the *APL Babassu* and *Productive Sociobiodiversity in the Xingu*, did not foresee specific initiatives on the theme of youth and generational succession, this was discussed in several interviews as being highly relevant to communities and their organizations. The case of the Agricultural Family Schools, which are part of the *APL Babassu* arrangement, shows that successful initiatives in

the field of education for rural youth do not necessarily ensure widespread permanence of young people in the countryside.

### Cross-Cutting Criteria

#### **(i) Poverty Reduction**

The systemic indicators proposed by the monitoring methodology of the Sustainable Production Component that are associated with this criterion are revenue increments from the commercialization of *in natura* and processed products. All projects reported such increments in different dimensions, albeit with differences related to the degrees of maturity of the value chains and the commercialization arrangements involved. Therefore, in general, it is understood that the actions of the projects resulted in income generation for the people and communities involved. However, these indicators have limitations for conclusive analysis in relation to income generation and thus to the contributions to poverty reduction through these project actions. Additionally, it is understood that poverty reduction can be analyzed from more than just the point of view of income. In the evaluation, other effects on poverty reduction were found, such as food and territorial security.

#### **(ii) Gender Equity**

The projects did not envision systemic integration of gender issues in their original approaches. The only indicators collected with this focus were the systemic indicators of the Sustainable Production Component (individuals directly benefiting from the supported activities – women). However, in all projects, it was possible to identify gender approaches in the organizations' institutional strategies.

Among the projects, it is worth mentioning the *Productive Sociobiodiversity in the Xingu/Seed Network*, in which women support collection on indigenous lands, and APL Babassu, in which the role of women in the activity of babassu harvesting and breaking is one of the driving forces of the social and political movement that gave rise to the organizational arrangement. However, a relevant share of the project's actions was directed towards the implementation of agroforestry systems (AFS) as a source of complementary income to extractivism, without much direct involvement of women.

### Main Conclusions

- The Amazon Fund's investments in the initial stage of the Sustainable Production Component cover a **diversity of organizations, activities, social groups, regions and conservation and deforestation dynamics**. We consider this strategy to be adequate and positive insofar as it works with the context of diversity present in the Amazon in these areas. It is an approach that requires considering several layers of complexity. However, we understand that the Amazon Fund, and any other initiative with a similar scale and scope, needs to incorporate these diversity elements.
- Organizations representing vulnerable and small populations and territories, which on their own would not have been able to comply with the requirements of the proposals to the Amazon Fund, participated in all the execution arrangements, whether in the Public Call or the spontaneous demand proposals. Thus, the projects contributed to the results of **expansion of the capillarity of the Amazon Fund**. The executing organizations emphasized that the projects were the most significant initiatives captured by each one at the beginning of the projects, demonstrating this capillarity with the operation on a scale compatible with the procedures of the Amazon Fund.
- Both the spontaneous demand projects and the Public Call projects generated results and impacts and were characterized by **solid learning elements**. This also applies to projects anchored in robust preexisting experiences and arrangements with long implementation histories.
- **Several lessons learned were incorporated into subsequent related public calls** (especially the Public Call for Consolidation and Strengthening of Sustainable and Inclusive Value Chains, 2017, and the Public Call for Projects Aimed at Supporting Territorial and Environmental Management Plans in Indigenous Lands, 2014), as well as guidelines for project monitoring<sup>3</sup>.
- Considering the aspect of income generation as a central element for achieving the effects of increasing economic attractiveness of the supported activities, it is recognized that more specific concepts and measurement methods need to be developed to verify the **effective impacts of support**

---

<sup>3</sup> GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit. *Guide for Monitoring the Effectiveness of Sustainable Production Projects Supported by the Amazon Fund*. Rio de Janeiro: GIZ, 2020.

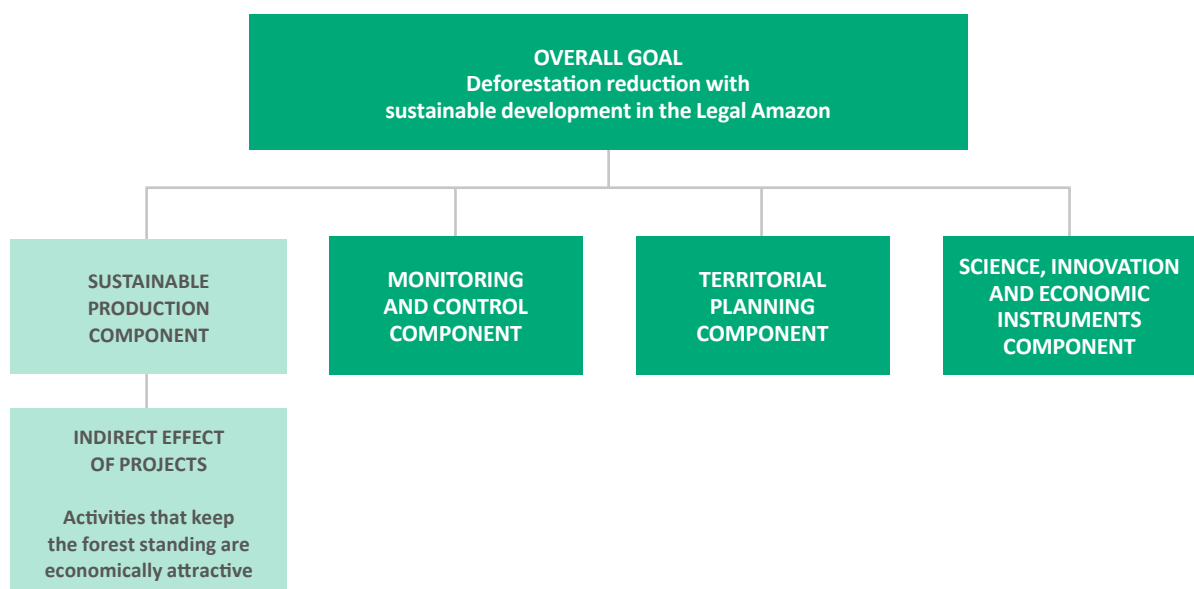
**on the income of beneficiaries.** The evaluation also showed that the attractiveness of sustainable productive activities for communities and families is associated with economic issues and monetary income. Other factors related to improved quality of life, food, and territorial security, and cultural aspects, are also crucial.

- The connections between **market access, commercialization, and understanding of the specificities and different maturity levels of the sustainable productive activities** are themes that need to evolve in the approaches of the projects. These aspects were addressed generically without much detail in the Public Call, which proposed the promotion of "densification of APS" without further guidance on the objectives and activities that would lead to this result. There were considerable variations in the interpretation of this perspective across projects. More effective documentation and systematization of these processes can expand the learning possibilities of subsequent or future projects.
- About **perspectives of projects after their conclusion**, it should be highlighted that the evaluation was carried out at a critical moment of the Covid-19 pandemic, alongside a broader context of weakening public policies and an economic crisis, with repercussions for the execution of the evaluation, among others. We verified the impacts of this scenario in the evaluation, albeit with different prevalences. Some organizations were hit hard, with initiatives that came to an end. In contrast, others reported they could adapt and become more resilient. Some implementing organizations have accessed new support mechanisms, including new formats for entering markets in times of crisis. The continuity of the Amazon Fund's actions would keep adding to the initiatives that make a difference in promoting the activities that maintain and restore the forest. However, the contribution and legacy of the results generated were not lost after the conclusion of the projects.

# 1. Background

The Thematic Evaluation of "Sustainable Productive Activities (APS)" projects includes an individual and a combined view of five concluded projects allocated to the Sustainable Production Component of the Amazon Fund. This is one of the four components of the Logical Framework of the Amazon Fund<sup>4</sup>, which connects the components to their general objectives of reducing deforestation and promoting sustainable development in the Legal Amazon (Figure 2). The Logical Framework, in turn, is connected to the axes of the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm).

Figure 2: Components of the Amazon Fund Logical Framework



Source: Authors, based on Amazon Fund (2021): 2020 Activity Report. Rio de Janeiro, p. 35.

4 AMAZON FUND. 2020 Activity Report. Rio de Janeiro: BNDES, p. 35.

The PPCDAm was in effect from 2004 to 2020, guiding the design and implementation of federal actions to prevent and control deforestation in the Amazon and serving as a reference for the corresponding state plans prepared by the nine states of the Legal Amazon. Therefore, the national plan and the state plans represented the main guidelines for public policies in force during the implementation of the projects considered here.

Based on experiences and lessons learned since 2004, the axes of the PPCDAm and the components of the Amazon Fund express a systemic and comprehensive approach to fighting deforestation. The underlying logic establishes that the reduction of deforestation with sustainable development is achieved through the coordinated implementation of command-and-control methods, territorial and land planning, and promotion of alternative activities to the main economic drivers of deforestation<sup>5</sup>.

The PPCDAm strategies in this agenda varied over the years, as initiatives by federal entities were formulated and improved. But, throughout all the phases, the axis of promotion of APS a diversified set of public policies and actions, which included a set of measures that supported activities of sustainable use that keep the forest standing, the introduction of sustainable practices to existing agricultural and forestry production and the recovery of degraded areas.

The Sustainable Production Component of the Amazon Fund, on the other hand, envisages, as an aggregated effect, that activities that keep the forest standing should be economically attractive, covering four of the seven thematic areas initially defined as lines of action of the Amazon Fund (sustainable forest management, economic activities developed based on sustainable use of the forest, conservation and sustainable use of biodiversity and recovery of deforested areas)<sup>6</sup>. By 2020, around BRL 476.4 million of the total BRL 1,825.4 million disbursed by the Amazon Fund contemplated projects in this component, leading to a 26% share concerning the full amount. This percentage has remained practically unchanged since 2013.

During the implementation of the PPCDAm, the particularities of the effectiveness of the interventions in the different axes were increasingly recognized. Monitoring and control actions, especially inspections, are the ones that have the most immediate and short-term impact on reducing deforestation. On the other hand, territorial planning initiatives and the promotion of sustainable economic activities are essential for the sustainability of reductions and the effective establishment of an economic model not based on deforestation. The measures in these fields have a more structuring nature, and their

---

5 The fourth phase of the PPCDAm (2016 to 2020) incorporated a specific axis to highlight a set of economic and regulatory instruments. In the Amazon Fund, this focus was included in the Science, Innovation, and Economic Instruments Component (MMA. Ministry of the Environment. *Plan for Prevention and Control of Deforestation in the Legal Amazon. Operating plan 2016-2020*. 2016. p. 9 et seq).

6 See Decree 6,257/2008.

effectiveness occurs in the medium to long term. Thus, the successive evaluations of the PPCDAm credited most of the plan's success in substantially reducing deforestation by 2012 to the effectiveness of the Monitoring and Control axis. The advances and results in the Fostering APS axis were considered more incipient. However, the relevance of this axis to the sustainability and long-term results of the plan was never questioned.<sup>7</sup>

Considering the additionality criterion, the Amazon Fund projects should constitute a portfolio complementing the public policy actions gathered in the PPCDAm and the corresponding state plans. The Sustainable Production Component encompasses projects with a wide range of approaches, from collection, storage, and processing of extractive products, family farming production, and activities related to food security to handicrafts and fishing. These activities are linked to a wide variety of products associated with forest conservation, including rubber, cocoa, babassu, acai berry, *pirarucu*, wood, honey, resins, soaps, oils, seeds, and fibers, among others, but also include services such as community tourism.

In the history of the Amazon Fund, implementation strategies have gone through different stages, which are also reflected in the evolution of the Sustainable Production Component projects:<sup>8</sup>

- **Initial phase (2008 to 2011):** it encompasses intense work to develop the Amazon Fund's design, operating strategies, and operating structure. The amounts disbursed were still low, and there were few projects, mainly concentrated in civil society organizations with previous experience in project implementation. Projects could be submitted spontaneously, and the approval process took place individually. This dynamic generated a series of reflections on the importance of supporting smaller projects and proponents, which more directly target the most vulnerable populations and territories whose organizations were not able to respond to all the BNDES' requirements for the admissibility of their proposals<sup>9</sup>. During this period, initial discussions were held on priorities, approaches, and organizational arrangements regarding APS<sup>10</sup>.

---

7 GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit GmbH. *Mid-Term Evaluation Report on the Effectiveness of the Amazon Fund 2008-2018*. 2019. p. 118.

8 GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit GmbH. *Mid-Term Evaluation Report on the Effectiveness of the Amazon Fund 2008-2018*. 2019. p. 89.

9 These issues were intensively discussed in the Amazon Fund Steering Committee (COFA), composed of representatives of the federal government, state governments, and civil society.

10 GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit GmbH. *Opportunities to Support Sustainable Productive Activities (APS). Inputs for the debate*. Rio de Janeiro: GIZ, 2012.

- **Structuring phase (2012 to 2015):** characterized by targeting larger projects with greater territorial scope, more resources, and diversification of social actors. Support for projects in the Amazon states was expanded, with emphasis on the environmental regularization agenda, with the implementation of the Rural Environmental Registry after the approval of the new Forest Code (Law 12,651/2012). At the same time, an approach to public calls was structured with specific thematic focuses, aiming to expand the inclusion of the most vulnerable social actors in the Amazon region. The first of these calls was made to support "Sustainable Productive Projects." The call required the proponents to design execution arrangements in which "agglutinating" organizations with greater administrative management capacity would aggregate organizations from local communities that do not have the means to access the Amazon Fund independently. Subsequently, in 2014, the Public Call for the design and implementation of "Projects Aimed at Supporting Territorial and Environmental Management Plans of Indigenous Lands (PGTAs)" was carried out, targeting indigenous peoples in the Amazon.
- **Implementation acceleration phase (2016 to 2018):** the Amazon Fund focused on the application of resources in large, structured projects, primarily focusing on public policies and proposals from state governments. A new Public Call for "Consolidation and Strengthening of Sustainable and Inclusive Value Chains" was also implemented through agglutinating projects, with expanded amounts and a more precise focus on strengthening value chains. However, at this stage, the impacts of the economic crisis and government budget restrictions also worsened, leading to channeling a greater volume of resources from the Amazon Fund to the maintenance of inspection actions.

The selection of projects for this evaluation was carried out by the Amazon Fund team at the BNDES and followed the chronological sequence in which the projects were concluded. Two selected projects had been planned and presented in the initial phase of the Amazon Fund (spontaneous demand), and three resulted from the first Public Call for Sustainable Productive Projects, held in 2012<sup>11</sup>. **Chart 1** presents initial basic information about each project.


---

11 Check out the Public Call for Sustainable Productive Projects: [http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada\\_Publica\\_APS\\_04\\_2012.pdf](http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada_Publica_APS_04_2012.pdf).

Chart 1:  
Basic information about the evaluated projects

Project name	Region	Executing entity	Validity	Amount (millions of BRL)	Public	Main activities
Forest Sentinels	Northwest region of the state of Mato Grosso	COOPAVAM	2014 to 2018	5.2	Indigenous people and settlers	Brazil nuts
Productive Sociobiodiversity in the Xingu	Xingu River Basin in the states of Mato Grosso and Pará	Socio-Environmental Institute	2014 to 2019	8.0	Indigenous people, extractivists, and family farmers	Forest seeds and seedlings, rubber, Brazil nuts, pequi, and fruits
Amazon Backyards	Northeast region of the state of Rondônia	Rioterra	2014 to 2019	8,8	Family farmers and settlers	AFS
Sustainable Fishing	State of Acre	WWF	2014 to 2017	3,2	Indigenous people and riverside dwellers	<i>Pirarucu</i>
APL Babassu	Médio Mea- rim Region / Maranhão	ASSEMA	2016 to 2020	4,9	Extractivists	Babassu and AFS

 Project developed in the context of the Public Call for “Sustainable Productive Projects” (2012)

 Project presented in the form of spontaneous demand

Source: Amazon Fund/BNDES

The Public Call for Sustainable Productive Projects introduced the modality of execution by “agglutinating” organizations, defined as “an enterprise managed by one entity and composed of subprojects of other organizations, aimed at the development of value chains related to the foreseen categories”<sup>12</sup>. The agglutinating organization could be a civil association, cooperative, or foundation under private law with proven performance in community projects, production arrangements, or value chains.

12 AMAZON FUND. *Public Call for Sustainable Productive Projects*. 2012. p. 2. Available at : [http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada\\_Publica\\_APS\\_04\\_2012.pdf](http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/chamada-publica/Chamada_Publica_APS_04_2012.pdf).

The productive activities prioritized by the five projects include non-timber forest products originating from plant and animal extractivism and agroforestry systems (AFS). The main products promoted by the projects were Brazil nuts, babassu, forest seeds and seedlings, rubber, pequi, and fruits, in addition to managed pirarucu and the planting of AFS combined with registration in the Rural Environmental Registry (CAR) and payment for environmental services (PES).

With individual amounts between BRL 3.2 million and BRL 8.8 million, the projects add up to a total BRL 30.1 million, corresponding to about 6.1% of the Sustainable Production Component project portfolio in 2020 (BRL 476.4 million).

Three of the executors responsible for the projects are civil society organizations. The others are a cooperative and a regional association, to which other cooperatives and productive associations are connected. The projects were implemented in five states of the Legal Amazon – Acre, Maranhão, Mato Grosso, Pará, and Rondônia – inserted in the so-called arc of Amazon deforestation, which corresponds to the southern belt where agricultural expansion towards the north begins, alongside illegal timber extraction and mining operations. The projects had, as beneficiary social groups, indigenous peoples, family farmers, settlers, riverside dwellers, and extractivists.

The effective execution of the projects started in 2014 (only the APL Babassu project began in 2016). Due to different validity periods, the projects were concluded between 2017 and 2020.

The five projects represent a significant sample of the diversity of productive activities, beneficiary groups, and execution arrangements covered by the Sustainable Production Component. For the evaluation, that diversity was a challenge to the execution, aggregation, and joint analysis of results and impacts, which this report will address. On the other hand, the same diversity contributed to broader reflections on the Amazon Fund's support for the sustainable production agenda.

The effectiveness evaluation was carried out throughout 2021, covering the second year of the Covid-19 pandemic, representing another layer of complexity for the evaluation team.<sup>13</sup>

The evaluation interacts with the findings of the effectiveness analysis of the component within the scope of the Mid-Term Evaluation Report of the Amazon Fund, carried out in 2019. This report also highlights the complexity related to the challenge of designing alternative economic models that allow adding value to the region's natural wealth. While underscoring the necessary political will and long-term investments, it also emphasizes the role of communities and populations in the region as key construction elements. The Amazon Fund's Mid-Term Evaluation Report considers that projects concluded by 2019 contribute to reducing deforestation in the areas covered by

---

<sup>13</sup> In the interviews, the impacts of the pandemic were divided into themes in the context of each project. The respective findings were synthetically incorporated into the individual reports.

the projects, improving quality of life, and increasing income, but highlights the fragility of the available information about their social and economic impacts<sup>14</sup>.

Therefore, understanding the effectiveness and contributions of the projects allocated to the Sustainable Production Component continues to be a demand and a necessity in the programmatic context of the Amazon Fund, and these are the main lines of discussion to which this evaluation intends to contribute.

---

<sup>14</sup> GLZ. Deutsche Gesellschaft für internationale Zusammenarbeit GmbH. *Mid-Term Evaluation Report on the Effectiveness of the Amazon Fund 2008-2018*. 2019. p. 124.

## 2. Introduction

---

Within the Amazon Fund, effectiveness evaluation is defined as the analysis of the scope of the project's objectives and desired results (effects and impacts), of the sustainability of either individual or aggregated changes generated by its implementation, and of the benefits towards the objectives of the Amazon Fund.

The evaluation has the following primary purposes:

- (i) to assist the Amazon Fund in rendering accounts to its donors about the type of project supported and its effects;
- (ii) to enable institutional learning for the Amazon Fund itself, contributing to improving the quality of projects and prioritizing investments, thus supporting decision-making;
- (iii) to verify compliance by projects supported by the Amazon Fund, of the Cancun Safeguards agreed under the UNFCCC for actions to reduce greenhouse gas emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable forest management, and increasing forest carbon stocks (REDD+); and
- (iv) to verify the alignment of the projects with the PPCDAm and the state plans for deforestation prevention and control.

A thematic evaluation is expected to generate significant inputs for identifying

joint contributions to the achievement of the Amazon Fund's objectives, producing a broader discussion on the support strategy for the Sustainable Production Component. Furthermore, it is expected to broaden the understanding of the projects' contribution to the desired aggregated results within the scope of this component, in addition to generating recommendations and lessons learned for the component drawing from the set of projects evaluated. Thus, there are also specific objectives:

- To generate specific recommendations for APS that could be strengthened;
- To analyze the strengths and weaknesses of project interventions;
- To evaluate the effectiveness of the Amazon Fund's support on the issue of sustainable production;
- To identify challenges and lessons learned that can also be used for national and international dissemination.

# 3. Methodology Applied

---

Effectiveness evaluations of projects supported by the Amazon Fund are guided by the five criteria defined by the Organization for Economic Cooperation and Development (OECD) in 1991 through its Development Assistance Committee (DAC). The criteria are Relevance, Effectiveness, Efficiency, Impact, and Sustainability.

In addition to the OECD criteria, the extent to which the financed projects promote gender equity and contribute to poverty reduction is evaluated (cross-cutting criteria). Due to the inclusion of the Amazon Fund in the context of international efforts to financially reward developing countries for their REDD+ results, projects are also evaluated according to the REDD+ Safeguards (also called “Cancun Safeguards”).

The methodology used was based on the logical frameworks of the projects and the criteria and objectives contained in the document "Evaluation of the Effectiveness of Projects Supported by the Amazon Fund – Conceptual Framework," prepared in the scope of the Technical Cooperation between Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ GmbH and the Amazon Fund/BNDES in 2016, and in its respective addendum, prepared in 2020.

Briefly, the evaluation is divided into the phases of (i) preparation and writing of the design report; (ii) implementation, including carrying out data collection and a field mission, preparing a preliminary report and conducting a consultation round; and, finally, (iii) the writing of the effectiveness evaluation report and its dissemination.

### *(i) Preparation Stage*

In the preparation phase, secondary data were collected and processed, such as studies, performance and final reports of the projects and other documents made available by the Amazon Fund team<sup>15</sup>. These materials supported drafting the evaluation design report, defining objectives, and indicating the evaluation methodology. The Amazon Fund team at BNDES validated the project report that guided the implementation of the evaluation.

### *(ii) Implementation Stage*

The first phase of data analysis aims to characterize the logic of the intervention, identify the projects' deliverables and results achieved, as well as refine the focus of the Thematic Evaluation.

Considering the specificities of a thematic evaluation based on the projects' logical frameworks, the team of evaluators conducted a matrix crossing of these logical frameworks, seeking to group the direct effects of the projects in the intervention logic of the components. Based on this matrix crossing, the evaluation team drafted a proposal for an initial Theory of Change for the set of projects<sup>16</sup>, creating logical aggregated connections between the aggregated results and the objectives of the component and the Amazon Fund, as envisaged in the Conceptual Framework of the evaluation. Thus, thematic evaluation criteria were identified and validated with the Amazon Fund team to define guiding questions. This procedure aimed to assess the effectiveness and, mainly, the aggregated impacts of the set of projects from a thematic perspective. Throughout the evaluation, the Theory of Change developed for the Thematic Evaluation guided the visualization of both expected and unexpected contributions of the projects, showing their results for achieving the direct and indirect effects of the Sustainable Production Component and the objectives of the Amazon Fund.

A survey of the relevant actors to be involved in the execution of the evaluation was carried out, which made it possible to refine and prioritize the list of interviewees<sup>17</sup>. Subsequently, a set of general guiding questions on the key cross-cutting aspects common to all projects was prepared (Box 1), then complemented and adapted for the interviews on each project's specific issues.

---

15 Basic information about each project can also be accessed on the Amazon Fund's website: <http://www.fundoamazonia.gov.br/pt/home>.

16 There is a vast literature on the concept and application of the Theory of Change, for instance at: <https://www.rbaval.org.br/article/10.4322/rbma201509002/pdf/rbaval-9-4.pdf>.

17 Check the List of Interviewees in Annex 3.

### Box 1:

#### Cross-cutting guiding questions for the evaluation interviews

1. **Allocation of the project in the trajectory of the organization:** What did the project represent for the organization? When was it designed and started? What were the expectations; were they met? What happened after completion?
2. **Income generation and chain approach:** How did the interviewees understand the concepts and objectives? How were they addressed in the project's implementation?
3. **Execution arrangements:** How were the execution arrangements implemented in the projects submitted via spontaneous demand? In the case of projects approved by the Public Call, what did acting as an agglutinating organization mean for the executing organization? What did it mean for the agglutinated organizations or community organizations in the spontaneous demand projects?
4. **Territory and public policies:** What was the scenario of fighting deforestation and promoting sustainable development in the region at the time of project implementation? Were other important actions underway, and was there contact with these initiatives? How did they relate to public policies to promote APS (through federal public procurement policies or minimum prices and related state policies)? What is the current scenario?

In the data collection, secondary sources, such as the available project documentation, the public data available on the projects' themes, and the critical documents organized in the preparation phase, were used.

The possibility of carrying out a counterfactual analysis, as recommended by the Conceptual Framework, was also evaluated<sup>18</sup>. However, the great diversity in the composition of the projects selected for evaluation, in addition to the different execution modalities, made it difficult to identify a counterfactual scenario that was minimally comparable to the set of projects evaluated. Furthermore, undertaking an analysis of an additional project would have added another layer of complexity to an already challenging thematic analysis.

The possibility of making a comparison with other projects focused on income

---

18 Under the conceptual framework, counterfactual is "an approach that includes in its analysis the comparison of what would have happened if the project had not been implemented."

generation based on secondary data was also evaluated, but it was decided to focus the comparative exercises on the projects selected by the first Public Call for APS and on the projects presented by spontaneous demand, as well as on the different income-generation approaches of the projects (what we call “internal counterfactual”).

The stage of survey missions with individual projects was preceded by a sequence of exploratory meetings held with the Amazon Fund team and with each project executing entity. These meetings combined interviews and preparation and coordination of specific interviews.

Due to the increased incidence of the Covid-19 pandemic in the first half of 2021, it was not possible to carry out individual evaluation missions with in-person visits to the projects. Thus, all missions were carried out remotely through individual interviews and in the few cases where it was compatible with the sanitary isolation measure, collective interviews were conducted.

Each mission to the individual projects was concentrated in a week of surveys, starting with an opening meeting with representatives of the executing agency of each project, three to four days of specific interviews and feedback meetings at the end of the week, in which first impressions were discussed, and additional inputs were collected. The interviews were mainly carried out through videoconferencing applications and, in some cases, by telephone<sup>19</sup>.

On this basis, the individual evaluations ([Annex 1](#)) and the Thematic Evaluation addressed in this preliminary report were prepared.

### ***Consultation Round***

The consultation round was held as a virtual workshop on December 17, 2021, with the participation of the evaluation team, the Amazon Fund team, key people involved in the projects, and representatives of the organizations evaluated, in addition to peer specialists who are responsible for topics related to the projects evaluated.

The workshop was organized into panels, followed by a session of questions, analysis, and contributions to the report. The panels included the contextualization of the projects and presentation of the elements of the General Theory of Change. Positive aspects, main challenges faced, lessons learned, and recommendations identified by the evaluation team were presented.

---

<sup>19</sup> Check the List of Interviewees in Annex 3.

### *(iii) Analysis and Dissemination Stage*

The evaluation team received additional feedback and comments from the Amazon Fund teams and the projects were evaluated until January 7, 2022. These contributions, together with the discussions and inputs from the consultation round, were analyzed by the evaluators, and those that were considered coherent and verifiable were incorporated in this final report. The project effectiveness evaluation report and its executive summary will be published on the [Amazon Fund website](#).

The remote execution of the field mission entailed some limitations and added opportunities compared to the in-person mode ([Box 2](#)).

#### Box 2:

#### Considerations for carrying out remote missions

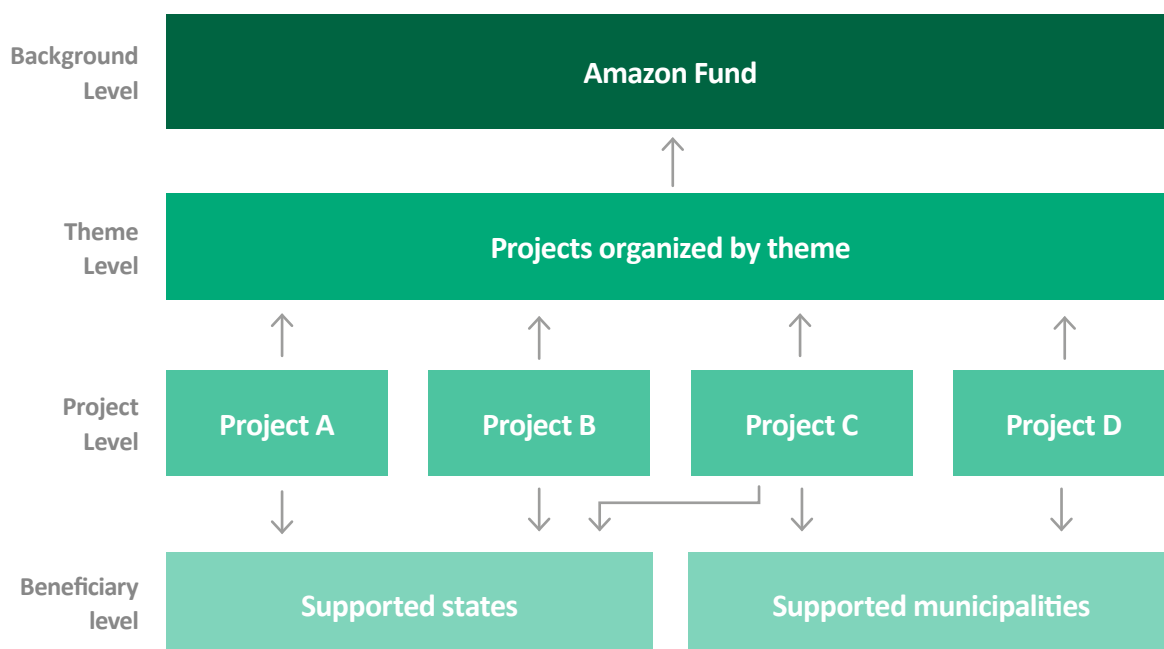
- A positive aspect of remote evaluations is the reduction of costs and travel and logistics. Interviews were also conducted with participants in remote locations in the project regions, which is generally less feasible in the context of in-person field missions.
- In some cases, the interviews were affected or impossible to be conducted due to restrictions on contact with interlocutors in remote areas.
- It was important to provide frequent moments of conversation between team members in the mission schedule, to align and share findings throughout the process.
- Considering that the evaluation covered projects that had been completed for some time, the difficulty in mobilizing participants was worsened by the loss of contact due to social isolation measures during the pandemic in some cases. However, in cases where there was continuity of actions through other initiatives or subsequent projects, this difficulty did not arise.
- Due to the lack of face-to-face impressions, the documentation made available gained greater relevance in the context of the evaluation. However, this may also have generated some limitations for the evaluation.
- The team was aware of the possibility of a loss of contextual information with remote interviews. It was possible to obtain complementary impressions through communication products such as videos, photographs, podcasts, etc., that were accessible.

# 4. Aggregated Results

## 4.1. Evaluation's Levels of Analysis

The joint thematic analysis of the results of the selected projects required an adjustment of the general design of analysis levels provided for in the conceptual framework to specific aspects of this thematic evaluation (Figures 3 e 4).

Figure 3: Expected levels of analysis for thematic evaluations



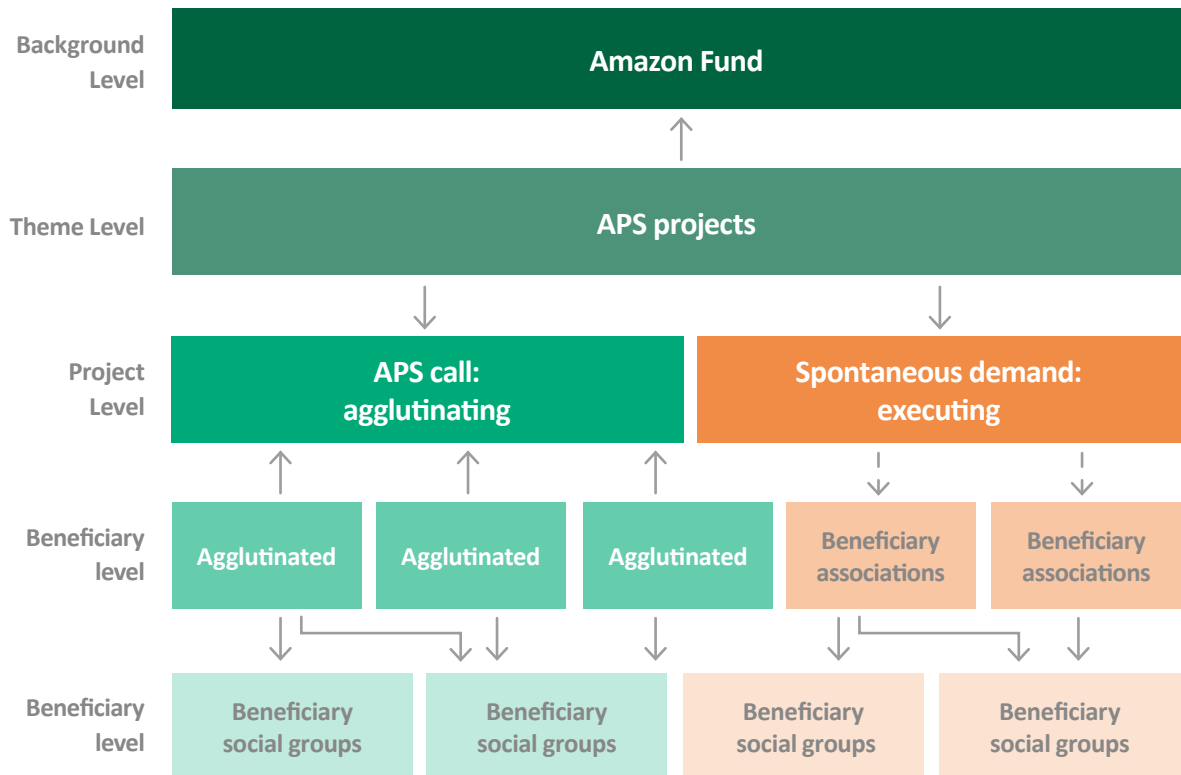
Source: Addendum for Thematic Evaluations.

## Aggregated Results

- It was necessary to consider, in the same evaluation, the two modalities of access to the Amazon Fund, which entailed different project structures and arrangements.
- The level of beneficiaries was not formed by states or municipalities but by the different beneficiary social groups. However, there were different compositions of these groups in each project.
- In the projects approved in the Public Call, the agglutinated organizations formed an additional layer between the executing entity and the beneficiary groups. The Call's design provided subprojects for each agglutinated organization, but in practical terms, there were varied designs. In some cases, the subprojects were relevant for the implementation of the projects. In others, they were just formats for organizing the activities. In addition, there were cases with cross-cutting subprojects, which covered actions with various organizations or actions of the agglutinating organizations.
- In the spontaneous demand projects, there was also an intermediate layer of organizations from the beneficiary groups; however, their formal role and effective involvement in the project had a different nature, generally not associated with the execution of activities by these organizations.
- Due to health restrictions and contact difficulties, including the beneficiaries' perspectives in the evaluation was seen as a challenge. There was an initial expectation of conducting interviews only with representatives of the agglutinated or grassroots organizations. However, in several cases, it was possible to carry out interviews with the beneficiaries of the projects on the ground.

The adjusted design of the effective analysis levels in the present evaluation is presented in [Figure 4](#).

Figure 4: Levels of analysis in the Thematic Evaluation of Sustainable Productive Activities (APS)



Source: Authors.

## 4.2. General Theory of Change developed for the Thematic Evaluation

To obtain an intervention logic alignment that would allow a joint analysis of the projects, a matrix crossing of the individual logical frameworks was initially carried out, grouping the direct effects of the projects in the intervention logic of the Amazon Fund components<sup>20</sup>. Next, as provided for in the Conceptual Framework, a General Theory of Change was outlined based on constructing a network of aggregated project results. To enable an effective understanding of the set of contributions, during the evaluation, the representation of this General Theory of Change was simplified while maintaining basic compatibility with the direct effects of the Sustainable Production Component in the

<sup>20</sup> In general, all projects were allocated to the Sustainable Production Component, with only the *Amazon Backyards* project envisaging a contribution to the Science, Innovation, and Economic Instruments Component (See Individual Project Report in Annex 1).

Logical Framework of the Amazon Fund.

There are variations in the denominations of the Thematic Evaluation field between the concepts used in the Sustainable Production Component, in the Public Call, and in the evaluation's terms of reference (Box 3).

### Box 3: Conceptual alignments

- The **Thematic Evaluation** establishes, in its title, the focus on "sustainable productive activities (APS) projects" and, subsequently, uses the terms "sustainable productive activities" and "value chains" associated with the concepts of "sustainable production," "sociobiodiversity," and "bioeconomy products." A brief description of the challenges faced by these sustainable productive activities and specific value chains in the context of the Amazon is provided; however, the terms are used interchangeably.
- The **Logical Framework** of the Amazon Fund calls the component contemplated here "Sustainable Production," emphasizing that the focus of the activities covered is on the "production chains of sociobiodiversity."
- The **Public Call**, which included three of the individual projects evaluated, was launched with the title "Sustainable Productive Projects" and characterized its object as "non-reimbursable financial support for the development of economic activities for the sustainable use of the forest and biodiversity," including timber and non-timber forest management, aquaculture and fishing arrangements, and agroecology and agroforestry systems. The guidelines for defining the elements of the proposals mention the need to indicate the productive activities to be addressed and the promotion of "densification of sustainable productive activities."

Thus, the application of a chain reference in the analysis of projects needs to be clearly defined. It is worth noting that even the projects presented in the context of the Public Call do not adopt the concept of productive activities or value chains in the structuring of their proposals<sup>21</sup>. The projects presented in the spontaneous modality incorporate this perspective differently: the chain approach is present in the *Sustainable Fishing* project but is not addressed in the *Amazon Backyards* project<sup>22</sup>.

---

21 On the other hand, the proposal of the APL Babassu project is structured as a "Local Productive Arrangement" (APL), adopted by the Ministry of the Environment in actions to promote socio-biodiversity products; however, in practice, it adopts a concept of "integrated systems" in its implementation (See the project's Individual Report in Annex 1).

22 It is worth mentioning that the insertion of the *Amazon Backyards* project in the Sustainable Production Component took place under specific circumstances, which are detailed in item 5.2. of the Individual Report

### Box 4:

## The concepts of sustainable use of the moving forest and the emergence of bioeconomy

Over the last few decades, several names have been coined for the modalities of economic use that contribute to keeping the forest standing or promoting its restoration. These concepts include sustainable timber and non-timber management, extractivism or agro-extractivism, sustainable or agroecological production, biodiversity economy, socio-biodiversity value chains, or alternative or APS. They have specific emphasis, but the definitions also have significant overlaps. The most recent of the terms under discussion in this field is bioeconomy, which is increasingly found in public policy proposals and national and international approaches to development and financing in the last five years.

Bioeconomy still requires an explicit or unified definition. The concept can cover different areas, and only one of them – called "bioecology vision" by some authors (COSTA et al, 2021)<sup>I</sup> – is directly associated with this evaluation. The discussion about the focus and the distinctions that this debate adds in comparison to the previous ones is still ongoing, but efforts are being made to specify the economic bases and the need for their strengthening in order to tackle deforestation and the loss of biodiversity effectively.

There is an important discussion on inclusion and sustainability underway in this context. In many cases, these terms are added as adjectives to the concept of bioeconomy (FAVARETO et al, 2022)<sup>II</sup>. The risk of appropriation of the term for the promotion of a cycle of business opportunities without appreciation and effective participation of people and communities that work in the forest bioeconomy chains is the object of initiatives such as the "Amazon Meeting of Sociobiodiversity," organized by leaders of indigenous peoples, extractivists and quilombolas, as a parallel event to the World Bioeconomy Forum held in Belém in 2021. Proposing the

term "Sociobioeconomy," the deliberations of this group were sent as a "Letter from the Amazon" to the participants of the COP 26 of the United Nations on Climate Change<sup>III</sup>.

The prospect is that, in the coming years, bioeconomy and its associated concepts will become the main guides for the formulation of related public policies at the national level and in the Amazon states, with several initiatives already underway. The value chains supported by the Amazon Fund projects remain within the scope of these efforts so that the lessons learned, and recommendations identified in this evaluation constitute contributions that interact with the advancement of these discussions.

<sup>I</sup> COSTA, F. A. et al. *Bioeconomia da sociobiodiversidade no estado do Pará*. Brasília: Executive Summary, DF: The Nature Conservancy (TNC Brazil), Inter-American Development Bank (IDB), Natura, 2021. Available at: [https://www.tnc.org.br/content/dam/tnc/nature/en/documents/brasil/sumario\\_executivo\\_bioeconomia.pdf](https://www.tnc.org.br/content/dam/tnc/nature/en/documents/brasil/sumario_executivo_bioeconomia.pdf)

<sup>II</sup> FAVARETO, A. et al. *Relatório Inclusão Produtiva no Brasil Rural e Interiorano 2022*. São Paulo: Cebrap, Arymax Foundation, Tide Setubal Foundation, Humanize Institute. 2022. Available at: <https://arymax.org.br/novosite/wp-content/uploads/2022/02/relatorio-inc-produtiva-af-05.pdf>

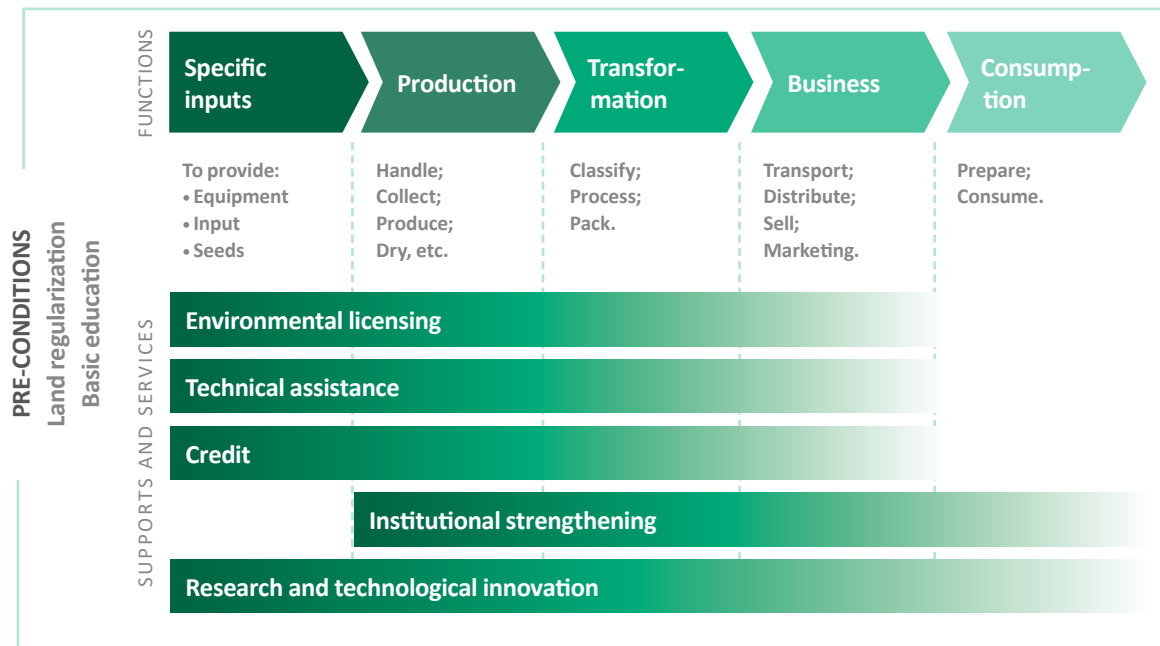
<sup>III</sup> Available at: <https://iieb.org.br/carta-amazonia-2021>

found in Annex 1. In the perception of the executing organization Rioterra, the project's main focus was on implementing public policies related to the Forest Code, which explains the lack of focus on chains.

## Aggregated Results

In the context of the evaluation, we chose to adopt a simplified value chain approach as a reference to create a joint framework for thematic analysis. We use as a guideline a simplified representation of the value chain as applied in the “Value Links”<sup>23</sup>, approach widely used in actions to promote sociobiodiversity chains in the Amazon in the context of the German Cooperation initiatives (Figure 5).

Figure 5: Simplified diagram of the organization of a value chain

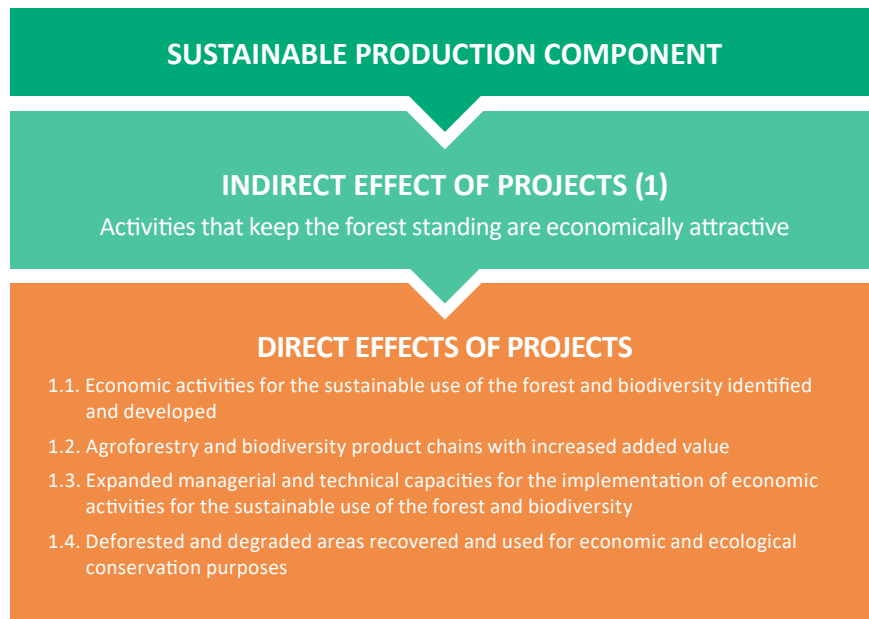


Source: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (2012): Oportunidades de Apoio a Atividades Produtivas Sustentáveis na Amazônia, p. 92.

For the construction of the General Theory of Change adopted in the evaluation, the key concepts for representing the value chain were associated with the characterization of the direct effects of the projects under the Sustainable Production Component of the Amazon Fund's Logical Framework (Figure 6) and completed by additional elements necessary for the connection with the Amazon Fund's indirect effects and impacts.

23 Check out the Value Links Methodology at: <https://ipam.org.br/wp-content/uploads/2020/07/Methodologia-Value-Links.pdf>.

Figure 6: Direct and Indirect Effects of the Sustainable Production Component on the Amazon Fund's Logical Framework



Source: Amazon Fund (2021): 2020 Activity Report. Rio de Janeiro, p. 35.

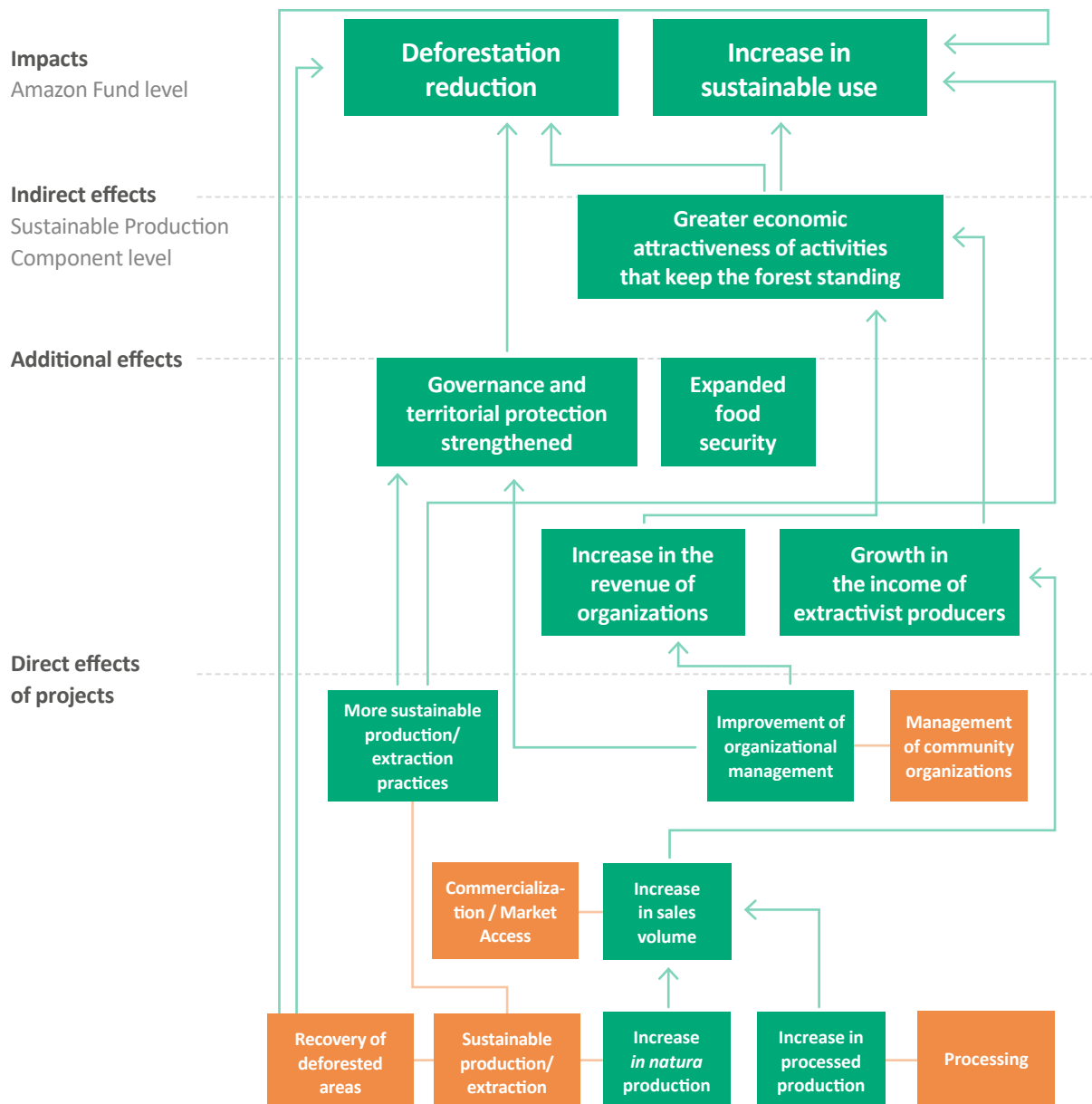
We adopt the following correspondences:

- **Sustainable production/extraction:** corresponds to the direct effect "Economic activities for the use of the forest and biodiversity developed."
- **Processing:** corresponds to the direct effect "Agroforestry and biodiversity product chains with increased added value."
- **Commercialization/access to markets:** in the Logical Framework, it is also associated with the direct effect "Agroforestry and biodiversity product chains with increased added value."
- **Organization management:** corresponds to the direct effect "Expanded managerial and technical capacities for the development of economic activities for the sustainable use of the forest and biodiversity."
- **Recovery of deforested/degraded areas:** corresponds to the direct effect "Deforested and recovered areas used for economic and ecological conservation purposes"

## Aggregated Results

In addition to this association of the key concepts of the value chain with the direct effects of the component, additional elements of results and impacts identified as fundamental in the analysis of projects were added to the General Theory of Change, thus generating a representation that associates the results and project effects at the level of impacts (or indirect effects) of the component and, at a higher level, to the general objectives of the Amazon Fund (Figure 7).

Figure 7:  
Representation of the General Theory of Change



Source: Authors.

The logical threads of the General Theory of Change can be summarized as follows:

- All evaluated projects developed actions related to **increased production or extraction** of the products prioritized by the projects. These activities aimed to increase *in natura* production and/or quality improvement and/or sustainability issues. They were associated with the **recovery of deforested areas** (e.g. through agroforestry systems – AFS).
- There were lines of action associated with transformation activities leading to **an increase in production processing** in four of the five projects (except for the *Amazon Backyards* project, due to the context mentioned earlier).
- The increase in both *in natura* and processed production created the basis for an increase in sales volume, either by community production organizations or by the producers themselves. A series of activities were directed to generate results in terms of **commercialization and access to markets** in the projects.
- However, in most cases, the actions were not exclusively aimed at market access. Although this effect was not directly part of the objectives of the Amazon Fund, the increase in production also generated relevant contributions towards **the expansion of food security** of the benefited communities.
- Both the projects selected by the Public Call and the spontaneous demand modality provided for institutional strengthening and **improved management of community organizations** involved.
- In some projects, management improvement and economic strengthening of organizations were also associated with expanding their importance in **strengthening governance and territorial protection**. These projects, in turn, contributed to the conservation and reduction of deforestation in the territories managed by the communities, thus being directly related to the Amazon Fund's general objectives.
- Together, the increase in sales and improvement of organizational management enable an **increase in the revenue of organizations or individual incomes**. Insofar as the organizations' sales are based on the acquisition of production and the transfer of surplus to their members, this increase converts into **income increase** for the producers and/or extractivists who are beneficiaries of the projects, helping to improve their living conditions.
- Income generation is a critical element for the economic feasibility and attrac-

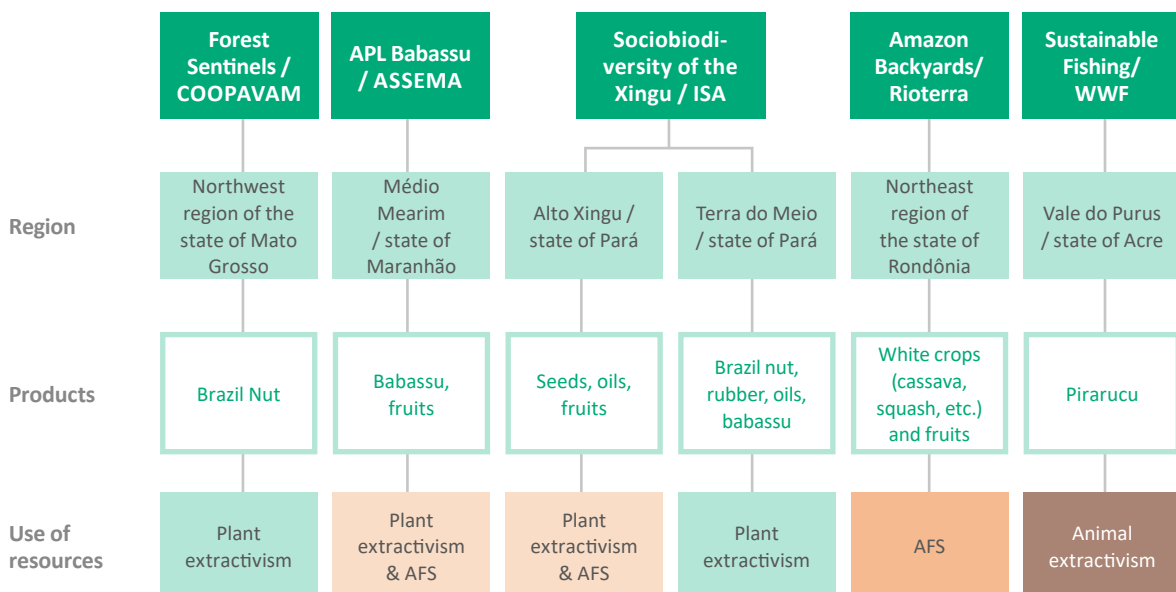
## Aggregated Results

tiveness of the activities that keep the forest standing, thus contributing to the achievement of the **indirect effect of the Sustainable Production Component**.

- At the **level of increased indirect effect (impact)**, this increase in attractiveness supports the transition from activities associated with deforestation to activities that are not. In this way, the projects contribute to reducing deforestation and increasing the sustainable use of forests, which are part of the **general objective of the Amazon Fund**.

Next, the simplified General Theory of Change framework will be used to discuss the results of projects at the aggregated level. It is worth emphasizing how much this aggregated analysis demands synthesizing the complexity of territories, social groups, execution arrangements, products, activities, and land uses, which are addressed in more detail in the individual evaluations. It is also important to consider the intersections between these elements in the projects, in addition to considering that the *Productive Sociobiodiversity in the Xingu* project contemplates such distinct fronts that it becomes two specific projects (Figure 8).

Figure 8: Products and ways of using priority natural resources in the projects



Source: Authors

### 4.3. Results on the topic of sustainable production/extraction

As mentioned, all projects included actions aimed at strengthening production or extraction of *in natura* products. However, the projects worked with various compositions of products and ways of using natural resources, so these compositions cannot be compared or aggregated (Figura 7). The projects' use of natural resources encompassed different forms of plant or animal extractivism (in the case of the project *Sustainable Fishing*) and AFS, which combine the cultivation of agricultural products and forest management. In addition, some projects worked with product baskets, making it impossible to identify specific key products (exceptions: projects *Forest Sentinels*, with Brazil nut, and *Sustainable Fishing*, with a focus on *pirarucu*), corroborating that the use of multiple products is common in many communities in the Amazon.

Among the projects evaluated, it is possible to distinguish two types of approach concerning the level of production/extraction:

- Projects that invested in the expansion of **products already in the scope of action** of the communities and organizations that had participated previously, such as the *Forest Sentinels* and *Productive Sociobiodiversity in the Xingu* project and, in part, the *APL Babassu* project. But the value chains to which these products belong were in **different stages of maturity**: both Brazil nut and babassu are products that have markets and chains operating in the project region, which absorb *in natura* production and, in part, processed products. In the case of seeds, the *Productive Sociobiodiversity in the Xingu* project worked with introducing or expanding products that create bases for the development of markets and chains that are still incipient, such as the forest restoration chain.
- Projects that introduced **uses of new resources and products in the context of participating communities and organizations**, such as those generated by implementing AFS in projects *Amazon Backyards* and *APL Babassu*. This also applies to the management of *pirarucu* in the *Sustainable Fishing* project. Despite the existing market for these products, the corresponding chains are not yet structured in the regions where the projects are in operation.

With these considerations, it is clear that the results of the production and extraction of forest products **address different scales and degrees of maturity between projects**. For several products, the length of the projects represented an investment, development, and learning stage, and an increase in production should be expected after implementation. In other cases, for example, in the implementation of AFS, there were production losses in the initial years due to an experimentation and adjustment stage that the systems had to go through, as they were innovative initiatives in the project regions.

## Aggregated Results

The same happened in the case of the development of new management techniques, such as for *pirarucu*, which also included the development of fishing agreements as a preparatory stage for the production itself. In general, investments in this initial link in the chain resulted in a significant production increase.

One aspect to be considered in relation to the products of both extractivism/fishing and AFS is the seasonality and natural variability of production, which can lead to considerable annual variations in the results. A relevant influencing factor is climate variability, with several interviewees associating particularly dry years with climate change.

Quantitatively, the Amazon Fund seeks to capture production results through the standard indicators of the Sustainable Production Component directed at production volume. This information was collected in all projects and is discussed in detail in the individual reports (Annex 1). At an aggregated level, most projects achieved the targets agreed upon with the Amazon Fund. However, targets were not defined for all indicators. In addition, approaches and methodologies for setting targets varied considerably between projects, so simply adding figures would not ensure methodological consistency.

Briefly, the scope of the quantitative results is represented in [Chart 2](#).

Chart 2: Achievement of the targets of the Amazon Fund's standard indicators for *in natura* production volume of the evaluated projects

Project	Achievement of production volume targets (Quantities, generally in tons)
Productive Sociobiodiversity in the Xingu	Seeds: 77% Brazil Nut: 147% Rubber: 182%
APL Babassu	Babassu nuts: 94.8%
Amazon Backyards	Volumes were measured for seven products, which presented both positive (above 90% for watermelon and banana) and negative variations (reductions of 30 and 85% for cupuaçu and guarana) between the initial and final years of measurement.
Forest Sentinels	Brazil nut: 434%
Sustainable Fishing	Fresh <i>pirarucu</i> : 167%

Source: Authors, based on project monitoring plans.

## Aggregated Results

In addition to the quantitative aspects, it is possible to highlight a set of qualitative results generated in the projects:

- *Projects Sustainable Fishing* and *APL Babassu* addressed issues of production sustainability through the design of **participatory management plans**. As part of the preparation of the plans, products to guide sustainable practices were also generated, such as good practice manuals. Educational and communication products were also developed by the other projects.
- All projects employed **technical assistance** approaches, usually through the hiring of permanent teams or consultants by the organizations executing the project, who provided advice on production, processing, management of properties and community organizations. In several cases, issues of productive insertion and governance of production and commercialization arrangements were also addressed, including cultural and linguistic aspects, especially in projects that worked with indigenous communities (*Forest Sentinels*, *Productive Sociobiodiversity in the Xingu*, and *Sustainable Fishing*). The projects included different indicators for monitoring these actions in their monitoring plans, in part by measuring the teams' performance in field visits and support to production units, in part by counting trained individuals. In addition, the projects also held training, experience exchange, and integration events, recorded in indicators related to the number of these events.
- Especially in AFS projects, **new production practices were developed, tested, and disseminated** among the groups participating in the projects. In the *APL Babassu* project, the involvement of Agricultural Family Schools in implementing AFS stands out, both that of the schools themselves and the properties of the students' families. In the *Sustainable Fishing* and *Productive Sociobiodiversity in the Xingu* projects, management practices were developed and applied with a multicultural approach to the indigenous participants.
- The significant increase in production in the case of the *Forest Sentinels* project stands out for its consistent "loyalty" strategy with the producing communities, through the definition of contracts, the establishment of transport and logistics infrastructure, including the mapping of Brazil nut groves, which made it possible to optimize collection, reduce costs and increase scale; and, mainly, through price regulation, to increase the value of production concerning the price practiced by brokers in the region.

### *Positive aspects*

- The selected projects represent a significant sample of the diversity of forestry and agroforestry products considered in developing economic alternatives that maintain the forest's standing or promote its restoration.
- The projects depict the initial design phase of approaches to developing sustainable economic activities. Thus, it is optimistic that the Amazon Fund has supported experiments with different degrees of maturity.
- Initiatives with incipient products and uses were relevant for generating knowledge and innovation at the regional level.
- The initiatives with more consolidated products and activities contributed to an effective increase in production.
- Some projects stood out for their implementation experience and cultural sensitivity in interacting with audiences to enhance the traditional mode of production, introducing new practices that combined adaptation to the culture and real production gains.
- In several interviews, the presence in the field and the performance of the technical assistance teams were highlighted as very important for achieving the results.

### *Challenges*

- Monitoring weaknesses limit more qualified analyses of quantitative contributions. In addition to the variation in survey approaches and methodologies, there were weaknesses in implementation. There are indicators without targets and baselines and several cases of poor surveys (small samples, divergent interpretations of standard indicators between projects, changes in interpretation during implementation, etc.).
- Several innovative products and production practices require longer implementation to generate effective results. In this sense, some projects supported by the Amazon Fund, or by other sources, were significantly harmed by discontinuity, or even by the change in the performance strategy of organizations and partners, as in the case of the *Sustainable Fishing* project.

### 4.4. Results on the theme of processing and value-adding

Both the Sustainable Production Component and the Public Call for Sustainable Production Projects envisaged that the projects would promote the processing of prioritized products as mechanisms for adding value and more effective insertions in value chains, contributing to the expansion of economic results. Almost all projects generated results under this theme. However, the scope and approaches varied considerably, again limiting the possibilities for aggregation.

Thus, each project interpreted the theme differently in the development of its actions:

- The *Productive Sociobiodiversity in the Xingu/Terra do Meio* project made several investments in the processing of products, primarily through small plants located directly in the communities and managed by them. For the project's duration, the small plants were prepared for the production of Brazil nut, babassu mesocarp, and vegetable oils, with the prospect of consolidating the processing of multiple products at the end.
- In its branch in the state of Mato Grosso, the *Productive Sociobiodiversity in the Xingu* project implemented seed houses to classify and store production, significantly expanding the Seed Network. In addition, two fruit processing units were modernized.
- The *APL Babassu* project invested in improving the processing of babassu oil, including equipment and process improvements necessary for the production of edible oil and crude oil. Renovations were also implemented, and equipment was purchased to improve the production of artisanal babassu soaps. Their effective use, however, was delayed by changes in regulations and the licensing of the enterprise, so the increase in production began to materialize after the project was concluded. In addition, several investments were made in equipment and structures for processing AFS products, for example, fruit pulp production.
- The *Forest Sentinels* project modernized the drying of Brazil nuts. Two processing plants were installed. One plant is managed by the Vale do Amanhecer Farmers' Cooperative (COOPAVAM), with a focus on nut oil and cereal bars, while the other is managed by the Cantinho da Amazônia Women's Association (AMCA), for production of pasta and sweet meal (paçoca) made of Brazil nut.
- The *Sustainable Fishing* project trained fishermen in the artisanal processing of pirarucu. The cutting and salting are carried out immediately after

## Aggregated Results

capture, and the production is stored in better sanitary conditions, at a lower cost, until the end of the usually long fishing expeditions.

- As already mentioned, due to its specific focus, the *Amazon Backyards* project did not adopt production processing.

In quantitative terms, the Amazon Fund monitors the processing aspects through the standard indicator of increased volume of processed product (Chart 3). Again, approaches to measuring these indicators varied greatly between projects, covering aspects so different that the aggregation of values would not be consistent. In part, the executing organizations carried out more detailed and continuous monitoring through their follow-up activity<sup>24</sup>.

Chart 3: Achievement of the targets of the Amazon Fund's standard indicators for the volume of processed products in the evaluated projects

Project	Achievement of production volume targets (quantities, generally in tons)
Productive Sociobiodiversity in the Xingu	Oils: 49% The project worked with cumulative indicators (targets referred to as the sum of annual values).
APL Babassu	Babassu Oil: 98.18% Handmade babassu soaps: 33% The project defined annual targets for the indicators.
Forest Sentinels	The project verified processing only based on revenue from the processed products without expressing the processed volumes.
Sustainable Fishing	Processed <i>pirarucu</i> : 200%

Source: Authors, based on project monitoring plans.

In general, the projects found it more difficult to reach the indicators for the volume of processed products. In some cases, this is related to the duration of the projects.

<sup>24</sup> Check, for example, the Individual Project Report *APL Babassu* (Annex 1) and the Origens Brasil seal annual report (<https://origensbrasil.org.br/media/relatorio-origens-brasil-2020.pdf>).

## Aggregated Results

The period of implementation of the projects was taken up by preparation and execution of investments, whose production results only materialize after the end of the project. For instance, there is the modernization of a soap factory and the facilities for processing pulps in the *APL Babassu* project.

### *Positive aspects*

- Most projects developed processing initiatives through investment (acquisition of equipment, renovation, and modernization of facilities) and improvement of processes and product innovation, which contributed to the increase in the volume of processed products.
- In the case of the *Productive Sociobiodiversity in the Xingu* project, the installation of processing structures was tried out directly in the communities of Terra do Meio.
- The *APL Babassu* project has already invested in processing the still incipient fruit production of the AFS. It also expanded the range of processed products through investments in the production of refined babassu oil.

### *Challenges*

- There were difficulties and delays in the acquisition and installation of equipment, hindering the generation of results (for example, the soap factory in the *APL Babassu* project).
- In the AFS projects, production of fruit pulp processing was too low for more structured and effective commercialization.
- Local processing at the Terra do Meio small plants faced challenges after the project was completed.
- In the *Forest Sentinels* project, the use of the investments made in the AMCA factory was compromised due to management issues that the organization recently faced, leading to the ending of activities.

### 4.5 Results on the theme of commercialization and access to markets

An approach guided by value chain concepts should have made commercialization and improving access to markets one of the projects' main themes. However, the relevance of the theme and the results achieved varied, depending on the different insertion levels in the respective chains discussed in item 4.3 of this report.

The highlights are:

- The *Productive Sociobiodiversity in the Xingu/Terra do Meio* project worked on the aspects of adding value and expanding markets in the most comprehensive way, primarily through the Origens Brasil Seal initiative, which was one of its 13 subprojects<sup>25</sup>. At the core of the actions of the Origens Brasil Seal, there was direct coordination of the extractivist communities of Terra do Meio with various medium to large companies buying products prioritized by the communities. The number of business partnerships in this arrangement grew from two to six during the project's lifetime. The companies committed to good trading and investment practices and guidelines, participating in the chain's governance arrangements initiated by the project. The development of the seal aimed to identify products sold to retail, promoting awareness and identification of consumers with the initiative. In this way, the Origens Brasil initiative was the one that most effectively coordinated the links in the value chains from the extraction of forest raw materials to industrial processing and presentation to final buyers.
- Another value-adding mechanism on the ground supported by the same project was the establishment of a network of canteens in Terra do Meio, which made it possible for the communities themselves to organize commercialization based on a decentralized product storage system and a working capital fund, which made it possible to reduce the communities' dependence on brokers.
- In the state of Mato Grosso, the *Productive Sociobiodiversity in the Xingu* project modernized the Seeds Network's control system by implementing a database that guided the Network's strategic decisions. Two subprojects related to fruit pulp had lower-than-expected results in inserting products into the institutional market. In the private market, freezers were installed for direct

---

<sup>25</sup> Check the more detailed description in the Individual Project Report (Annex 1) and on the [Origens Brasil Seal website](https://www.origensbrasil.org.br) (<https://www.origensbrasil.org.br>).

commercialization in the local market. However, the strategy was not maintained after the project's conclusion, as it demanded work that was outside the scope of action of the agglutinated organization.

- The *APL Babassu* project had an arrangement of agglutinated organizations that already had varying degrees of insertion in markets before the beginning of the project, with emphasis on the commercialization of babassu oil for cosmetic purposes in the national and international markets. Among other purposes, the babassu sustainable management plan complied with a stage of organic certification of oil production, thus integrating value-adding mechanisms. The communities associated with the *APL Babassu* project also adopted the canteen system for local commercialization, which did not receive specific support from the project. The commercialization of the initial products generated by the AFS was not addressed in the project.
- The *Forest Sentinels* project invested in the identity of the processed products, creating a logo for COOPAVAM's products and pointing out the indigenous origin of the raw material. Through the project, organic certification inspections were carried out to certify good management and collection practices. The project's investments had repercussions on the commercial promotion of the new processed products. This project is probably one that most benefited from the insertion in an institutional market. Through the Food Acquisition Program (PAA), the project's revenue reached approximately BRL 1 million, helping more than 800 organizations through simultaneous food donations.
- In the *Sustainable Fishing* project, the *pirarucu* production was easily absorbed locally. Furthermore, the traditional practice of fishermen is immediate commercialization. Changing this logic requires a medium-term process. Thus, we sought to improve commercialization by strengthening the Municipal Cultural Festival and making the activity more visible. The results varied each year due to fluctuations in production and the fishermen's organization. More structured strategies were tested, but they came up against public registration (Federal Inspection Seal – SIF). The project's primary strategy to gain access to differentiated markets was certification. The project developed a pioneering certification standard based on the guidelines of the Marine Stewardship Council (MSC), the international certifier of maritime fishing activity, but during the project period, it was not possible to meet all the criteria and complete the certification.
- Again, due to its unique approach, the *Amazon Backyards* project has not adopted a commercialization strategy. In terms of monitoring, it accounted for

the revenue from products sold *in natura* individually, collected from a small sample of families. It began to consider the insertion in chains only in the next project supported by the Amazon Fund (Plantar Amazônia project).

The Amazon Fund monitored market access through standard indicators of increased revenue from the sale of *in natura* and processed products. As already discussed in connection with the production, there was not only a wide variety of products and sustainable productive activities covered in the projects but also a considerable variation in the maturity of the activities and the insertion or strengthening approaches developed in each project. Thus, the aggregated representation addresses the achievement of targets in each project, with exceptions to the quality of indicators and measurements performed (Chart 4).

It draws attention that, in the projects that involved the establishment of AFS (*Amazon Backyards* and *APL Babassu*), no commercialization targets were defined, and few surveys were carried out<sup>26</sup>. This is partly explained by the fact that the project implementation period, from three to four years, covers only the initial years of the systems' implementation. In this period, the preparation of the areas and the planting of seedlings and seeds take place. Generally, the preparation and fertilization of the areas are aimed at planting short-cycle crops and white crop products (cassava, pumpkin, etc.) and short-cycle fruits (watermelon, banana, etc.). The production of these areas generates the initial income at the beginning of implementation, which is key to raise and maintain producers' interest in the systems. However, the first results of medium-cycle fruit production (cupuaçu, cocoa, acai berry, guarana, etc.) are generated 3 to 4 years after the implementation of the AFS, reaching their full potential after five to six years. Forest species can generate their first revenues after a minimum period of 6 to 8 years, through the commercialization of seeds and oils, but most timber production occurs only after 20 years. Thus, these initial productions and revenues must be understood as characteristics of the initial stage of agroforestry production, but cannot be used as a reference for calculating its full economic potential. Subsequent monitoring of the evolution of the generated revenues would be feasible only in cases where the following projects make it possible to continue the monitoring.

It should be noted that the *Productive Sociobiodiversity in the Xingu/Terra do Meio* and *Forest Sentinels* projects were the only ones to establish an indicator to monitor access to public procurement policies for family farming and socio-biodiversity

---

<sup>26</sup> See previous comments on the approach of the *Amazon Backyards* project. The project measured the revenues generated by the sale of products from some properties where the AFS were implemented. However, the sample of beneficiaries needed to be bigger, and the amounts surveyed were multiplied by average market prices rather than by the prices actually paid to the beneficiary producers.

Chart 4: Achievement of the targets of the Amazon Fund's standard indicators for sale value of *in natura* and processed products of the projects evaluated

Project	Achievement of value targets for commercialized <i>in natura</i> production (revenue in BRL\$)	Achievement of value targets for commercialized processed products (revenue in BRL\$)
Productive Sociobiodiversity in the Xingu	Seeds: 136% Other extractivism products: 242% Revenue obtained through commercialization via government purchases or subsidies: 381%	Total revenue obtained from economic activities: 105%
APL Babassu	Babassu nuts: 120%	Babassu Oil: 183.48% Handmade babassu soaps: 35%
Forest Sentinels	The project did not set a revenue target for <i>in natura</i> production. But during its execution, the project reported an increase from BRL 559 thousand (2013) to BRL 1.1 million (2018)).	Coopam (nut oil and cereal bar) <ul style="list-style-type: none"> <li>• Business market: 1800%</li> <li>• Institutional market: 163%</li> </ul> AMCA (sweet meal (paçoca) and paste made of Brazil nut) <ul style="list-style-type: none"> <li>• Business market: 263%</li> <li>• Institutional market: 223%</li> </ul>
Sustainable Fishing	<i>Pirarucu</i> : 7.6% reduction in total income and 24% increase in average family income	--

Source: Authors, based on project monitoring plans.

products<sup>27</sup>. In the case of Terra do Meio, although exceeding the quantitative target seems to indicate this initiative's success, this figure was reached only with the sales of one year of the project and by the cumulative calculation of the indicator. In the following year, sales dropped drastically. In addition, the number of producers inserted in institutional markets, also monitored by the project, reached only one-third of the target. In this and other projects, interviews show that the feasibility of access to institutional markets, despite its attractiveness for community organizations, is a challenge in many respects. Challenges involve the formalization and organizational structuring

<sup>27</sup> In addition to the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPMBio), which currently establishes subsidies for approximately 30 sociobiodiversity products, attention is drawn to the National School Feeding Program (PNAE) and the Food Acquisition Program (PAA), which have legally defined 30% quotas for the acquisition of products from family farming and socio-biodiversity.

## Aggregated Results

issues, coordinating and raising public managers' awareness (in the case of the National School Feeding Program - PNAE), which require specific actions that were not prioritized by the projects.

### *Positive aspects*

- Most of the projects developed actions and generated results on commercialization and access to markets based on individual approaches.
- There were significant commercialization increases in several projects, and, in general, the sale of *in natura* production evolved more favorably than that of processed products. Projects with previous commercialization arrangements established and operated in structured chains (Brazil nut, babassu) had more significant results.
- The Origens Brasil Seal initiative represented an outstanding pilot in the chain approach theme, as it effectively pursued coordination with the private market, prospected buyers, and opened new commercialization channels for the extractivist communities of Terra do Meio.

### *Challenges*

- The opportunities to work on access to the mechanisms that institutional markets offer to the projects' beneficiary groups were not fully seized. In general, these institutional markets are of great importance to many community organizations, but for that, it is necessary to plan decisive actions to deal with the challenges related to these markets. Notably, the final stage of the projects coincided with the weakening of relevant policies, especially the PAA with simultaneous donation and the PNAE, which enabled the commercialization of a "basket" of products. This context made it even more complex to coordinate commercialization through the institutional route.
- Certification is one of the most sophisticated market access strategies. Its feasibility is related to the chain's maturity level. The case of the Sustainable Fishing project showed that investments in the certification of incipient chains tend to generate few effective results and can provide a ballast for projects that need to focus efforts on strengthening the initial links of the chain.

### 4.6. Results on the theme of management of community organizations

The results achieved in the management of community organizations need to be distinguished between the proposals approved in the spontaneous demand modality and those selected from the Public Call for Sustainable Productive Projects. Both modalities envisaged the involvement of community productive organizations in the implementation of projects as a capillarity mechanism for the Amazon Fund<sup>28</sup>. In the Public Call projects, this involvement was to be explicit in the proposal, stating that the subprojects would be directed to production or commercialization cooperatives or to community or producers' civil associations. It should be noted that three of the five projects evaluated were selected within the scope of the first Public Call carried out in the context of the Sustainable Production Component, in which the arrangement of proponent "agglutinating" organizations associated with a set of "agglutinated" organizations was tested for the first time. The guidelines of the Public Call for the forms of involvement of the agglutinated organizations were generic, leaving room for the projects to flexibly shape the participation of productive organizations.

Thus, each project worked with different arrangements, reporting to the Amazon Fund's standard indicator for strengthening community organizations. However, during the project implementation period, the format for measuring this indicator was not yet clearly defined<sup>29</sup>, so the projects interpreted the contributions differently. Thus, the *APL Babassu* and *Productive Sociobiodiversity in the Xingu* projects considered that the actions developed within the scope of the subprojects were aimed at strengthening the agglutinated organizations, and so monitored their participation in the project activities. Other projects only monitored the number of strengthened organizations (*Sustainable Fishing* and *Forest Sentinels*).

The *Amazon Backyards* project was presented in the spontaneous demand modality and, therefore, was not arranged with agglutinated organizations. Even so, it estab-

---

<sup>28</sup> The increase in capillarity and greater direct access to the Amazon Fund's investments for communities and beneficiaries has been a relevant topic since the beginning of the Fund's operations. An initial proposal for the arrangement of agglutinating and agglutinated organizations can be found at: GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit. Oportunidades de Apoio a Atividades Produtivas Sustentáveis na Amazônia. 2012. p. 179 et seq.

A detailed analysis of the COFA discussion processes that led to the implementation of the model can be found at: KADRI, Nabil Moura. A busca da capilaridade por meio de parcerias em políticas públicas. A experiência do Fundo Amazônia. Rio de Janeiro, 2018. p. 144 et seq.

<sup>29</sup> Currently, a monitoring guide is available that defines a management quality methodology based on a list of guiding questions on planning, accountability and governance to calculate the project's contribution to this indicator (GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit. Guia de monitoramento de efetividade de Projetos de Produção Sustentável apoiados pelo Fundo Amazônia. 2020. p. 38 et seq).

lished a target of strengthening community organizations, but considered the participation of representatives of organizations in three project activities as a criterion for the achievement of the indicator.

In addition to these formal results, what would be the objectives of strengthening community organizations in the context of developing sustainable productive activities? The organizational development context of these organizations in the Amazon is mostly characterized by great fragility. Few organizations stand out in terms of organizational maturity, business development capacity, and market penetration. Among the organizations participating in the evaluated projects, attention should be drawn mainly to COOPAVAM, the proponent of the *Forest Sentinels* project, and the Cooperative of Small Agroextractivist Producers of Lago do Junco and Lago dos Rodrigues (COPPALJ), which is part of the arrangement of the *APL Babassu* project. Both organizations already operated diversified commercialization circuits and channels before the implementation of the projects, reaching companies in the national and international markets. The other agglutinated organizations are mostly productive associations, which still face significant structuring challenges to effectively act as agents for the commercialization of their members' products.

There was not, in the Public Call, a formulated expectation regarding actions and results on this topic. However, it was stated that the subprojects should integrate the selected value chains and the technical assistance actions should envision management training and strengthening within the scope of the subprojects. It is therefore possible to identify the logical connection, incorporated into the Theory of General Change, that institutional strengthening and support for organizational development would generate improvements in the management of community organizations, putting them in a position to expand their participation and autonomy in promoting sustainable economic activities.

All projects developed actions to support the structuring and management of community organizations, primarily through training and technical assistance. However, the objectives and results of these actions cannot be easily identified in the projects. It is necessary to distinguish between projects that operated more structured execution and governance arrangements (for example, *Productive Sociobiodiversity in the Xingu* and *APL Babassu*), in which the focus was on maintenance or improvement of these arrangements, and projects in which community organizations functioned only as a means of access to beneficiaries (as in the case of the *Amazon Backyards* project<sup>30</sup>). In the arrangements of the *Productive Sociobiodiversity in the Xingu* and *APL Babassu* projects, the topics of production organization and commercialization were strongly linked to issues of governance and territorial protection, and they addressed participatory management processes of projects and economic activities in a more precise and more coordinated way.

---

30 Project *Amazon Backyards* is the only one that monitored the number of individuals trained in association management and cooperativism as a means of accessing markets. However, the interviews revealed a context in which the organizations were at very incipient stages and did not evolve as market access mechanisms during the project.

The only case in which the agglutinated organizations clearly made up a productive arrangement was that of the *Forest Sentinels* project, which also stands out for being the only one in which a cooperative played the role of agglutinating organization. However, the organizational arrangement between COOPAVAM and indigenous associations has been debated for some years. Other financial supporters of this arrangement question the fact that indigenous people represent 90% of the cooperative's raw material supply base, but do not participate in COOPAVAM as cooperative members<sup>31</sup>. A proposal is being developed to transform the associations into indigenous cooperatives and include them as members of COOPAVAM. Another situation that affected the organizational arrangement after the end of the project was the interruption of the partnership between COOPAVAM and AMCA, due to a loss of confidence in the management of the association's new board. Despite the positive economic results obtained, the factory has been deactivated and there are plans to lease the shed for other purposes.

### *Positive aspects*

- The arrangements of agglutinating and agglutinated organizations contributed to the expected expansion of capillarity of the Amazon Fund's projects, benefiting community organizations that would not have been able to access the Fund on their own.
- The projects developed actions for institutional strengthening and training of members in management, governance, and organizational arrangements.
- Preexisting arrangements that combined economic action with territorial governance proved to be more robust and took better advantage of strengthening opportunities through the projects.

### *Challenges*

- The incipient focus on chain concepts and the performance of community organizations as economic agents in the public call and spontaneous demand projects led to poor results in terms of improving the management of these organizations.
- It was not clear in the results of the projects what was the actual role of strengthening community organizations in achieving the commercialization results.

---

<sup>31</sup> This situation also has accounting and tax implications, as there are specific legal provisions for acquiring products through so-called "non-cooperative acts" by the cooperatives.

### 4.7 Results on the theme of recovery of deforested areas

Observing the effects of projects on the recovery of deforested areas is not directly connected with the objective of the Sustainable Production Component, which is to increase the economic attractiveness of activities that keep the forest standing. However, the prospect of using deforested and degraded areas for economic purposes creates connections at the level of the Amazon Fund's general objectives: the recovery of deforested areas contributes to reducing the need to open new production areas through deforestation and increases the area used in a sustainable way.

Among the projects evaluated, contributions under this theme occurred in projects that worked with the implementation of AFS. Their results were generated by actions developed within the scope of production. The Amazon Fund monitors these contributions through the standard indicator of “Recovered area used for economic purposes” (Chart 5).

Chart 5: Achievement of the targets of the Amazon Fund's standard indicators for recovered area used for economic purposes of projects addressing this theme

Project	Achievement of recovered area targets (hectares)
Productive Sociobiodiversity in the Xingu	Area recovered and used for economic purposes: 109% (60 ha) Area reforested with seeds and seedlings commercialized by the Xingu Seeds Network: 333% (200 ha)
APL Babassu	Area under recovery and used for economic purposes: 100% (500 ha)
Amazon Backyards	Area recovered and used for economic purposes: 148.54% (742.7 ha)

Source: Authors, based on project monitoring plans.

The projects that contributed to these results exceeded the defined area targets, however, they faced many challenges in the implementation of the AFS, especially in cases where the systems were implemented in a new way with the groups operating in the project regions (Annex 1).

As mentioned in the previous item of this report, the generation of production and revenue, which characterizes the effective economic use of the areas, was still in the

initial stages upon completion of the projects, demanding more extended deadlines for developing its potential. The same goes for the idea of "recovering" the areas during the length of the projects. The *Amazon Backyards* project, which clearly linked actions to implement the AFS to an agenda for compliance with the Forest Code, prioritized areas for the recovery of environmental liabilities. The evaluation team attempted to obtain geospatial information that would allow monitoring the recovery stage of the areas targeted by the project, which are still being monitored in its successor project, *Plantar Amazônia*. However, despite Rioterra's expertise in geoprocessing technologies, it was only possible to obtain specific samples of the monitored areas, which continue to indicate the initial stages of recovery of the areas (Individual Project Report in Annex 1).

The *APL Babassu* project addressed the implementation of AFS with diversified strategies, which were aimed both at creating protection belts for the managed babassu groves as well as areas for the development of alternatives to generate income on the properties of the beneficiaries and areas for pedagogical uses and expansion of school meals in the Agricultural Family Schools. There were no specific monitoring actions throughout the project, but it should be noted that the executing entity, Association in Settlement Areas in the State of Maranhão (ASSEMA), adopts a concept of "area in recovery" for the indicator, which is more consistent with the effectiveness of the results than "recovered area."

In the state of Mato Grosso branch of the *Productive Sociobiodiversity in the Xingu* project, multiple approaches were used to recover areas: implementation of agroforestry backyards, a commercial consortium of *pequi* with livestock and forest restoration (Individual Project Report in Annex 1). Throughout the length of the project, the Xingu Seeds Network operated in the initial link of the restoration chain as a supplier of this important input. Currently, it has expanded its activities: it is offering restoration services aimed at the implementation of areas; it has hired a specialized commercial representative; and it has been more proactive in offering its products and services. The methodology of "muvuca (mix) of seeds"<sup>32</sup> has been improved and is now provided in two compositions: for agroforestry systems and forest restoration.

---

32 RIBEIRO, Tatiane. Muvuca que vira floresta. Blog do Xingu. Socio-Environmental Institute. 3 Aug. 2018. Available at: <https://www.socioambiental.org/pt-br/blog/blog-do-xingu/muvuca-que-vira-floresta>.

### *Positive aspects*

- The projects generated lessons learned in developing and implementing AFS with economic purposes for social groups and regions with no previous experience in the subject.
- In several interviews, project beneficiaries confirmed the development potential of AFS as a source of income that complements family farming and/or extractivism, emphasizing the ability to generate initial income in the short term.
- The projects *Productive Sociobiodiversity in the Xingu/Seed Network* and *Amazon Backyards* contributed with elements for the structuring of the restoration of productive activities that, although still incipient, have potential for development in the context of advances in the agenda of environmental regularization.

### *Challenges*

- Mechanisms to monitor the effective recovery of areas under restoration have not been developed. The equivalence between the area with planted forest seedlings and the recovered area is problematic and incompatible with the time frame envisaged in the scope of the Forest Code, which provides for a time horizon of 20 years for the effective recovery of environmental liabilities.

### 4.8. Contributions to the indirect effects of income generation and increased economic attractiveness of activities

The General Theory of Change and the Logical Framework of the Amazon Fund assume that the results or direct effects generated by the projects contribute to the achievement of the indirect effects of the Sustainable Production Component, which, in turn, promotes the achievement of the Amazon Fund's general objectives. The possibility of generating income from APS is the main economic argument for increasing the economic attractiveness of these activities compared to activities that promote or are associated with deforestation.

It is important to emphasize that the analysis of this evaluation prioritizes the generation of income from the products and productive activities supported by the projects. But there are key elements of the discussion referring to the composition of monetary and non-monetary income and the relative importance of monetary income for the different realities and demands of communities, which are not explored in depth by this evaluation.

The most relevant logical connection in the context of the Amazon Fund projects is the expectation that an increase in commercialization based on the promotion of production and processing of prioritized products, together with improvements in the management of community organizations, aiming to improve them as market access mechanisms, leads to an increase in the income of the beneficiaries involved. As previously mentioned, in the projects supported via Public Call, the expectation was that commercialization would be carried out by the productive community organizations involved in the execution arrangements. The revenue increase measurements, commented on in item 4.5. of this report, feed the respective standard indicators of the Amazon Fund, and are interpreted as indicative of the income increase provided by the projects to the beneficiaries<sup>33</sup>.

The interviews in this evaluation mention income generation figures for families, as presented in detail in the individual reports. Therefore, even though the projects did not carry out surveys on individual income evolution, verifying the beneficiaries' perception of generated income was possible.

On the other hand, the revenues from the invoicing of community organizations or production units, monitored by the projects and by the Amazon Fund as income in-

---

<sup>33</sup> As a rule, the revenues monitored by the projects refer to the organizations' revenue in the commercialization of *in natura* or processed products. The *Forest Sentinels* project was the only one that included income indicators per family in the monitoring plan, expressing the amount received by extractivist families as a result of the sale of *in natura* Brazil nuts to Coopavan and AMCA.

dicators, could be more precise about the actual increase in the beneficiaries' income. The following factors should be considered for a more effective assessment of income generated by the projects:

- When estimating income from invoicing, production and processing, costs should be subtracted.
- Likewise, the incidence of inflation should be computed in gross annual values.
- A distribution of the *per capita* invoicing of organizations could create a more precise approximation of the values that actually reach the beneficiaries. To this end, a correlation should be made between revenues and the number of associates or cooperative members who sold their products via community organizations, since this figure may vary over the period of implementation of the projects.

Without considering these elements, the hypothesis that the increase in revenue actually translates into increased income for community members may be weakened. However, their inclusion in surveys is often affected by the fragility of community organizations as economic enterprises. In many cases, these organizations still face basic formalization and operational challenges, affecting their own documentation and the ability to issue invoices and keep accounting and financial data organized. Nevertheless, this should have been the focus of the organizational strengthening and management improvement actions envisaged in the projects.

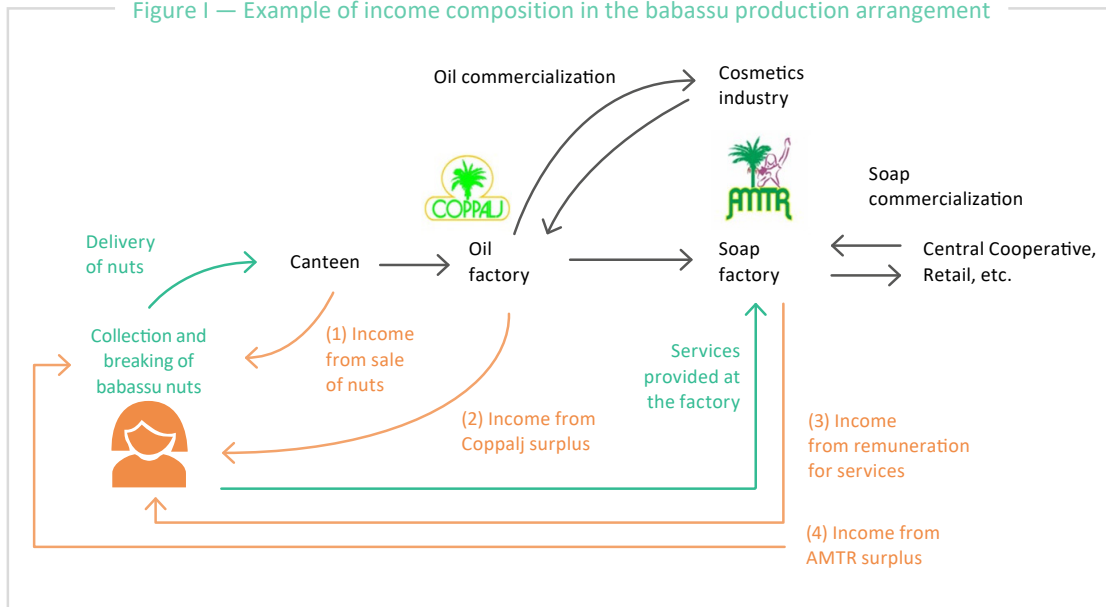
On the other hand, examples from the evaluation also indicate the potential that robust arrangements of community organizations with effective connections to markets can develop to expand revenue and income generation prospects for the organizations' members (Box 5).

### Box 5: Revenue composition from integration into organizational arrangements

An example from an interview in the evaluation of the *APL Babassu* project shows that structuring a set of community organizations that operate in specific niches and links in the babassu value chain can lead to the composition of multiple revenues, expanding the potential for income generation.

The interviewee was a babassu nut breaker who is a member of the Association of Rural Workers of Lago do Junco, and Lago dos Rodrigues (AMTR) and a member of the Cooperative of Small Agroextractivist Producers of Lago do Junco (COPPALJ). Initially, the nuts that she and her family collect are delivered to the canteen, where she receives the amount paid by COPPALJ for the purchase of the product (1). The nuts are processed by COPPALJ, and the filtered oil is marketed for cosmetic use. The surpluses generated by COPPALJ (equivalent to the cooperative's "profit") are annually distributed among the cooperative members (2). At the same time, COPPALJ supplies babassu oil for the manufacturing of handmade soap by AMTR. The nut breaker participates in the soap production process, being paid for the services provided (3). And, finally, it also earns part of the surplus generated by AMTR with the sale of soap, which is passed on to its members (4) (Figure 1).

Figure 1 — Example of income composition in the babassu production arrangement



In this way, its income is made up of a set of sources, fed both by its productive activities and by the economic returns generated by the activities of community organizations.

### *Positive aspects*

- In the interviews, cases of perception of income generation by the beneficiaries were verified, especially in extractivist activities, during the operational period of the projects.
- The evolution of revenues, used as an indicator of income generation in the context of the projects, was positive in most cases, considering the differences in the commercialization of in natura and processed products, discussed in item 4.5
- In some cases, this has attracted an increasing number of families to sustainable productive activities

### *Challenges*

- It is still necessary to measure more accurately the income generated for the beneficiaries and overcome weaknesses in calculating income based on the income of community organizations.
- There are still no approaches or studies that allow a comprehensive analysis of the elements that influence the attractiveness of certain activities in the decision processes related to elements that have the most impact and their effects on land use within the scope of beneficiaries and projects.

## 4.9. Contributions to additional effects of territorial governance and food security

The diversity of projects is reflected not only in the productive activities they operate but includes multiple understandings about the "value" of strengthening sociobiodiversity chains. For some agglutinating and agglutinated organizations, income generation strategies are a "means" to promote strengthening the social fabric that sustains the standing forest. In the view of these organizations, the feasibility of an activity is measured beyond its economic gain and includes social gains, which can be understood quite broadly as the "right to existence," the possibility of bringing people together to inform them about rights, the exercise and development of speaking/expression and participation skills, reflection and appreciation of the role of social groups in the face of threats to their territories.

This guiding vision expanded the action strategies of some projects, which became

more permeable to absorb the limits and capacities of the social groups and contexts in which they were inserted, providing space for the expression of latent potentials in people and in their organizations and communities. Economic feasibility has not lost importance, but it has been relativized, and other results, previously not envisaged, were achieved by the projects and, therefore, incorporated into the General Theory of Change of this evaluation.

In the *Sustainable Fishing* project, an action that began with the aim of drawing up fishing agreements for some lakes evolved into an innovative "General Regiment of Huni Kui Fishing of the Praia do Carapanã Indigenous Land" as a result of the mobilization of political leaders, teachers and young people involved in *pirarucu* management. The objective that guided the community and supported the project's focus on that indigenous land was to guarantee food security and protection of the territory, in a context of significant increase in deforestation in the municipality of Tarauacá (AC) and high pressure on the lakes of the indigenous land. Richly illustrated teaching materials were produced in the indigenous language and are being effectively used as teaching materials in schools.

In the *Productive Sociobiodiversity in the Xingu* project, in its Seeds Network sub-project, many collectors believe that the biggest "gain" is not the income from seeds, but their "rescue" from isolation, their healthier eating habits and their sense of belonging and responsibility for defending the territories that participation in the Seed Network has awakened. The pricing of seeds has attempted to distinguish between "seed cost" and social investment. In Terra do Meio, the project focused on connecting the productive path and income generation to people's way of life, culture, education and management potential. The complexity of the chain was shaped to match the "pace of the communities," avoiding sophisticated value-adding strategies and early formalization (as in the case of the Canteen Network, which remains informal).

In several projects, technical meetings and training were also opportunities for social meeting, coordination and organization. In the *Forest Sentinels* project, Solidarity Economy events provided a new space in the municipality of Juruena (MT) for coexistence between indigenous and non-indigenous people, with resulting increase in the appreciation of cultural diversity and knowledge about indigenous culture. A series of reports with leaders on the local television network was broadcast due to the events, increasing the appreciation of indigenous peoples previously invisible in the northwest region of the state of Mato Grosso.

In the *APL Babassu* project, the aspect of food security associated with the implementation of AFS was as important as the perspective of income aggregation that the AFS will provide as they consolidate. In the case of the AFS implemented in the Agricultural Family Schools, alongside the pedagogical objectives, issues of food security and qualitative improvement of school meals prevailed over the economic goals.

### *Positive aspects*

- The themes of governance and territorial protection, and food security expanded the results of the projects and should be considered as additional effects.
- The complementary effects of strengthening the social fabric of organizations contributed to more effective ownership of innovations and sustainable productive activities.
- There were also positive impacts on strengthening the identity of traditional peoples and communities participating in the projects.

### *Challenges*

- The integration of the social logic and economic aspects can be challenging in the management of projects with the Amazon Fund.
- There are doubts as to whether, in the medium term and without continuous support from projects, the potential economic results of the initiatives will generate sufficient resources to maintain the effects of territorial protection and maintenance of the social fabric that support the functioning of community organizations.

## 4.10. Contributions to the Amazon Fund's General Deforestation Reduction Goals

The monitoring plans of all projects included mechanisms to measure the evolution of deforestation in their respective areas of operation to indicate the attractiveness and possible contributions of the economic activities that keep the forest standing. However, in most projects, these surveys were not carried out<sup>34</sup>. This situation is consistent with the perception that the effects of projects on reducing deforestation, regardless of the regional context, are in fact indirect, with long chains of impacts. Creating logical connections between project results and the deforestation behavior in

---

<sup>34</sup> In the plans, it was foreseen that this monitoring would be carried out by the Amazon Fund. The *Sustainable Fishing* project was the only one that carried out the surveys. However, the information was systematized by the executing organization, in this case, the WWF.

the regions where the projects operate is complex and cannot be measured directly.

The Logical Framework of the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm), which constitutes the main reference for the operation of the Amazon Fund at the level of public policies, establishes that reductions in deforestation result from the integration of monitoring and control, land and territorial planning and promotion of sustainable production activities, complemented by economic instruments. In this logic, it is not expected that consistent and sustainable reduction in deforestation will result from acting in only one of the lines of action. This is even more true when analyzing the level of project implementation in extremely diverse regional contexts regarding the evolution of deforestation.

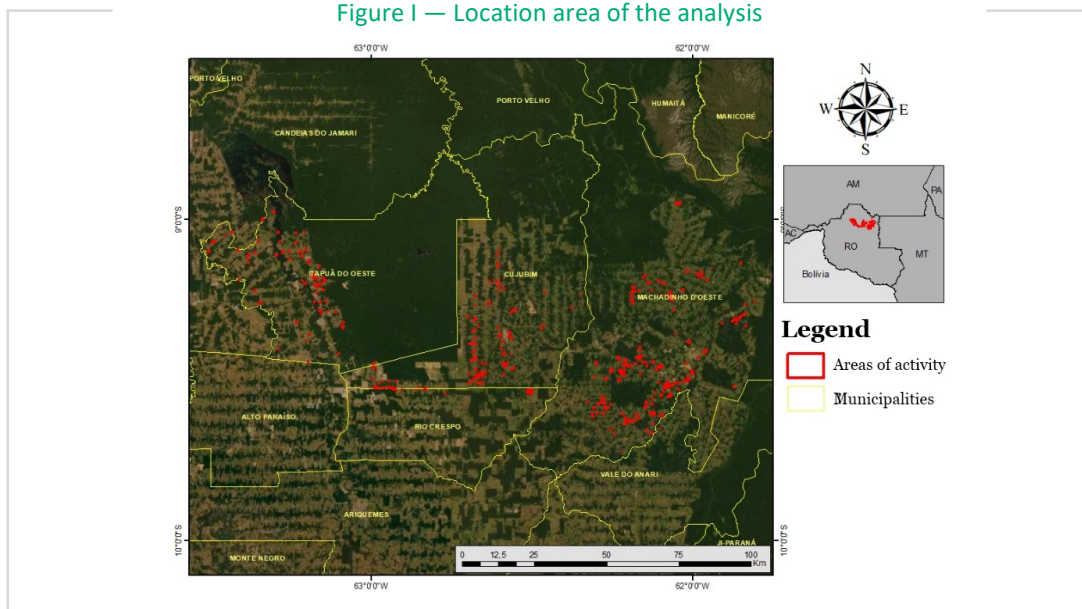
Although the advance of deforestation has been referred to as a threat in interviews in all projects, its incidence and intensity varies greatly between regions, with projects located on active fronts of advancing deforestation (*Amazon Backyards and Sustainable Fishing*), projects that operated mostly in protected areas (*Productive Sociobiodiversity in the Xingu and Forest Sentinels*) and projects located in regions with challenges in restoring secondary forests (*APL Babassu*). The effectiveness of the set of public policies to fight deforestation at the regional and local level was discussed in the evaluation interviews and included in the analyzes of the Cancun Safeguards of each individual evaluation. The findings coincide with the temporal analyzes of deforestation, carried out in a complementary way to this evaluation by an external team (Box 6). In general, the interviews point to a weakening of these policies, including the Monitoring and Control pillar that covers inspection actions. This scenario raises concern since effective inspections are proven to inhibit deforestation in the short term. Implementing actions to promote sustainable use without their concurrent actions and without structuring actions for land and territorial planning can weaken these initiatives and undermine their medium and long-term results.

### Box 6: Analysis of the evolution of land use, degradation, and recovery of vegetation in the Amazon Backyards project<sup>35</sup>

Based on studies of deforestation trends and recovery of degraded areas carried out in the areas of all the projects evaluated, which are available in Annex II, a unique experience of vegetation recovery was selected among the projects, considering the results achieved by the project and the importance of obtaining “know-how” on area recovery, a relevant topic for mitigating deforestation.

To this end, a comparative analysis was carried out on the evolution of land use and vegetation recovery in areas of the Amazon Backyards project of Rioterra. A polygon covering all areas of activity of the Amazon Backyards project was used. The area of operation covers three municipalities in the north of the state of Rondônia, with a total area of 1.64 million hectares.

Figure I — Location area of the analysis



For this analysis, images from the Planet<sup>1</sup> sensor were used for the years 2015, 2019 and 2021, obtained in the months of December 2015 and 2019 and October 2021), in false color composition, using the infrared band for the analysis above. This total period of six years of study consists of the project's period of planting that started in 2015, its completion in 2018 and a three-year period of evolution of the recovery process after the project was concluded. A comparison of the change of vegetation was carried out for the years 2015, 2019, and 2021. For this, the polygons referring to the areas of operation of the project were analyzed, and land use was classified into three main classes: exposed soil and other uses, moderate regeneration and dense vegetation.

Remote sensing software and Geographic Information Systems (GIS), high-resolution satellite

<sup>35</sup> Analysis prepared by the Center for Intelligence in Environmental Management and Technology (CIGTA).

## Aggregated Results

(Continued Box 6)

images, and time series from Google Earth Pro were used to verify and vectorize land use classification, to aid in the greater detailing of the classes. With the end of classifications, the areas per polygon and total area in hectares were calculated for each class, and the necessary analyzes were carried out.

### Results

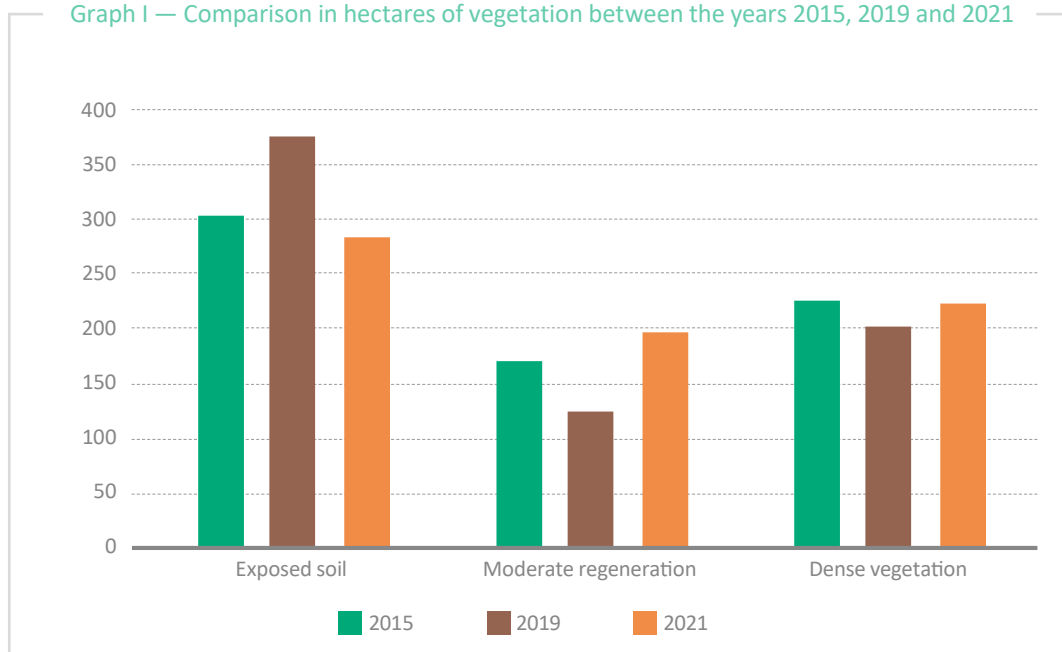
The "exposed soil and other uses" class covers, in addition to areas of exposed soil, areas of various uses, such as: plantations, pastures, undergrowth or sparse vegetation, etc. In this context, the following figures were found for 2015, 2019 and 2021, respectively: 304.57, 375.50 and 283.70 hectares. High-resolution Google images were used to differentiate these classes.

The areas defined by regenerating vegetation, in the "moderate regeneration" class, correspond to secondary forests or forest formations that have already suffered some interference but have not yet fully regenerated. Then, it was possible to observe an increase in the regenerated area at the end of the project. For 2015, 2019 and 2021, respectively, the following figures were observed: 171.26, 125.66 and 198.64 hectares.

For the "dense vegetation" class, in which forests are observed, the following figures were found, respectively, for 2015, 2019 and 2021: 227.67, 201.52 and 223.16 hectares.

As shown in [Graph I](#), a drop in the volume of areas with exposed soil can be observed after the end of the project. On the other hand, moderate regeneration and dense vegetation advanced, together totaling 421.81 hectares in the areas supported by the *Amazon Backyards* project. Three properties stood out for the greatest regeneration, with the following gains: 4.44, 3.12 and 2.06 hectares. The three properties with the highest vegetation losses had losses of 3.92, 1.69 and 1.49 hectares.

Graph I — Comparison in hectares of vegetation between the years 2015, 2019 and 2021



## Aggregated Results

(Continued Box 6)

In conclusion, analyses were carried out for 526 polygons in the project's area of operation, corresponding to 707.35 hectares. This is equivalent to the 700 hectares reported as a result obtained from the project. Based on the dynamics of land use evolution over the years, observed in [Graph I](#), it is possible to conclude that, despite the small variation between the dense vegetation figures, there was maintenance and growth of vegetation in the period from 2015 to 2021, with a 10.32% increase in regeneration and a 12.97% decrease in exposed soil areas.

It should be noted that the *Amazon Backyards* project covers municipalities under tremendous pressure, with high deforestation and intensive land use. Therefore, plant recovery is an important topic and must be applied intensively, but with socioeconomic and environmental attractiveness, to consolidate the maintenance of the recovered forest. Although the project did not operate in the entire municipality, between 2015 and 2020, an analysis of the average advance of deforestation was carried out, which was found to be 5.17%, equivalent to a total of 97,340 hectares of deforestation, according to PRODES data.

In this scenario, the maintenance of the vegetation in the recovery process carried out by the project (421.8 hectares) throughout the years of the project and especially after its end is the main benefit and positive result of the operation of the *Amazon Backyards* project.

—

<sup>1</sup> Planet images are obtained by the constellation of Dove satellites that have the same type of sensor, are acquired by more than 130 satellites, with 04 spectral bands and radiometric resolution of 12 bits, and are orthorectified and have 3 meters of spatial resolution, which allows obtaining current images of large areas with a high standard of quality and planimetric precision. They are acquired in the visible bands: blue, green and red, and also in the near-infrared (NIR), enabling environmental monitoring and mapping of land use and cover.

### *Positive aspects*

- All the projects evaluated worked to promote products, productive activities, or ways of using natural resources that are relevant and significant for the development of economic alternatives to deforestation.
- Several projects addressed issues directly related to increasing sustainability in the use of resources (for example, preparation of management plans in the *Sustainable Fishing* and *APL Babassu* projects, and good practice guidelines in the *Forest Sentinels* and *Productive Sociobiodiversity in the Xingu* projects) or developed restoration practices (*Sociobiodiversity in the Xingu*, *Amazon Backyards* and *APL Babassu* projects).

### Challenges

- Significant impacts on the different deforestation scenarios of the projects depend on the integrated effectiveness of public policies for the prevention and control of deforestation and cannot be attributed or expected from projects or axes of these policies in isolation. In the context of weakening policies, especially those involving inspection, local and regional deforestation dynamics cannot be associated with isolated project impacts.

## 4.11. OECD Evaluation Criteria and Cancun Safeguards

Based on the detailed analyses carried out in the individual evaluations, aggregated considerations are presented on the achievement of project evaluation criteria established by the Organization for Economic Co-operation and Development (OECD), alongside the Cross-Cutting Criteria for Poverty Reduction and Gender Equity and the Cancun Safeguards related to REDD+ approaches, which guide the implementation of Amazon Fund projects.

### OECD evaluation criteria

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>The projects evaluated were highly relevant as they covered regions, products and activities, organizations and beneficiary groups that reflect the diversity and potential for sustainable uses of natural resources in the Amazon.</p> <p>Important results were generated for the understanding of the productive structuring of emblematic chains of plant extractivism (Brazil nuts, babassu, oils, etc.) and animal extractivism (pirarucu), associated with the concept of sociobiodiversity, and the implementation of agroforestry systems. These activities are part of the productive activities that keep forests standing or contribute to restoring and recovering degraded areas.</p> <p>Some experiences stood out for operating along different links in the value chains, associated with robust governance and execution arrangements. These experiences contribute to the design of more effective approaches to strengthen the insertion of community organizations in sustainable productive activities.</p> <p><i>(Continued)</i></p>	<p>Very relevant</p> <p><i>(Continued)</i></p>

## Aggregated Results

(continuation)

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>(continuation)</p> <p>The projects addressed various contexts regarding the maturity of community organizations, execution arrangements, and chain development, so the results and impacts, in terms of market access and income generation, also varied. However, in all the important projects, there were learning processes on these topics, which contributed to the results achieved, but which can also be used for the design of new projects and calls for proposals and the Amazon Fund's learning, as well as the learning of related initiatives in general.</p> <p>In addition to the objectives of the Sustainable Production Component, part of the projects generated additional results and impacts under themes such as governance and territorial protection and food security.</p>	
<b>Effectiveness Criterion</b>	
<p>Different levels of effectiveness have been found for the projects. A considerable number of objectives and targets were achieved. There were cases in which the indicators were reached or even vastly exceeded, but which presented formulation and feeding problems that limited their interpretation as effectiveness indicators. Likewise, in some cases, indicators not achieved did not necessarily indicate failure of the action, whose effectiveness can be confirmed through interviews and project documentation.</p> <p>In some projects, relevant results were achieved in terms of increasing production and revenue, but, especially in cases where more incipient productive activities and organizations with less connection to markets were targeted, the initiatives demand continuity of support and development to achieve more significant results.</p> <p>Although there is a perception of income generation and some examples of quantitative data, the monitoring and evaluation information available is still fragile to support more assertive conclusions about the effectiveness of the projects in terms of generating income for the beneficiaries.</p> <p>The projects were effective in implementing arrangements that involved a relevant number of community organizations and beneficiaries. The differences between the Public Call and spontaneous demand projects on this topic are more qualitative than quantitative: the Public Call projects had more active governance structures, for example, with the holding of forums between organizations. Creating resource capillarity in these projects was more effective, and the organizations adopted more evident efforts towards integration.</p>	<p>Moderately Effective</p>

(continued)

## Aggregated Results

(continuation)

Evidence	Evaluation
<b>Efficiency Criterion</b>	
<p>The available documentation and project records provide a few elements for a more qualified evaluation of this criterion. As a rule, the projects carried out their work plans, i.e., the available resources were used to carry out the planned activities.</p> <p>In some cases, the time from the presentation of budgets in the proposals and the implementation led to outdated figures. In some cases, there were difficulties in procuring equipment and situations in which the need to comply with public health and licensing standards led to delays in execution.</p> <p>In projects with pioneering actions, such as the implementation of AFS, there were some losses of inputs, which is often part of experimentation and learning processes.</p>	<p>Few elements for the evaluation</p>
<b>Impact Criterion</b>	
<p>With the diversity of approaches and contexts, it is not possible to arrive at a unified evaluation of this criterion. More specific analyses are carried out within the scope of individual project evaluation.</p> <p>Based on the proposed General Theory of Change, it was possible to systematize the major fields of positive impacts and challenges of projects along the main links in the value chains (production, processing, and commercialization) and organizational strengthening as direct impacts, and the contribution to income generation and reduction of deforestation as indirect impacts. Important additional positive impacts were found in terms of food security and territorial management. The expected generation of impacts in the field of public policies to support sustainable production, present in some projects, was met by a few occasional contributions, falling short of expectations.</p> <p>Several initiatives left lessons learned that can support the design of new projects under the Amazon Fund or related initiatives. Important lessons learned, especially about supporting value chain approaches, were incorporated into the design of later Amazon Fund public notices.</p>	<p>Effects range from medium to strong</p>
<b>Sustainability Criterion</b>	
<p>The evaluation of the sustainability criterion proved to be challenging for all projects, considering the pandemic and the political-economic instability.</p> <p>As mentioned, the governance and execution arrangements followed different paths, with maintenance cases, such as the Productive Sociobiodiversity in the Xingu and APL Babassu projects, disintegration (Sustainable Fishing project), and a mix of continuity and weakening (Amazon Backyards and Forest Sentinels projects).</p>	<p>Low to medium sustainability</p>
<p>(Continued)</p>	

(continued)

## Aggregated Results

(continuation)

Evidence	Evaluation
<p><b>Sustainability Criterion</b></p>	
<p>(Continuation)</p> <p>It is important to mention that most of the executing organizations formulated proposals for the continuity of the projects evaluated here, in part within the scope of the second Public Call, in the context of the Sustainable Production Component. However, only Rioterra managed to implement a proposal approved by the Amazon Fund (Plantar Amazônia project). In several interviews, expectations of continuity that were not feasible due to discontinuity in approving and contracting new projects by the Amazon Fund were brought up. On the other hand, the executing organizations had, or sought, other sources of support for the continuity of strategic actions.</p> <p>Organizations with more robust governance arrangements and market insertion, such as the Forest Sentinels, APL Babassu, and Productive Sociobiodiversity in Xingu projects, were in a better position to face the impacts generated by the pandemic than organizations with weaker market and support structures and relationships.</p> <p>The sustainability of AFS as effective mechanisms of restoration and income generation can only be evaluated in the medium term; however, the continuity of beneficiaries in the Plantar Amazônia project offers possibilities for continuous monitoring of these aspects.</p> <p>The preparation of management plans not only contributed to environmental sustainability in the Sustainable Fishing and APL Babassu projects, but also produced inputs to the construction of community agreements, supporting the permanence of territorial governance results.</p> <p>Although the projects, except for the APL Babassu and Productive Sociobiodiversity in the Xingu projects, did not foresee specific initiatives on the theme of youth and generational succession, this was discussed in several interviews as highly relevant to communities and their organizations. The aging of the rural population is perceived as a sustainability challenge for the continuity of traditional economic activities. The case of the Agricultural Family Schools, which are part of the arrangement of the APL Babassu project, shows that successful initiatives in the field of education for rural youth only sometimes ensure widespread permanence of young people in the countryside.</p>	

Cancun Safeguards

Cancun Safeguards	Compliant	Observation
<p>Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements.</p>	<p>Yes</p>	<p>The Sustainable Production Component projects are aligned with Goal 7 of the 2016 to 2020 phase of the PPCDAm (“Promote Sustainable Forest Management”).</p> <p>The PPCDAm includes the other federal public policies relevant to the fight against deforestation in its pillars. More specific alignments, as well as alignment with the respective state deforestation prevention and control plans, were explored in the individual reports.</p> <p>Specific results are relevant according to the focus of each project, with emphasis on Results 7.2 (“Strengthening the Socio-biodiversity Productive Chain”) of the PPCDAm and its lines of action.</p> <p>The PPCDAm stage from 2016 to 2020 does not envisage specific lines of action related to AFS but mentions this topic among the results of the previous stages<sup>36</sup>. However, the topic is aligned with other national regulations, such as the Forest Code and the National Plan for the Recovery of Native Vegetation, which provide for the implementation of agroforestry systems as a way of recomposing Legal Reserves in the context of family farming (Law No. 12651/2012, art. 66, paragraph 3), highlighting their contributions to food security and other social and economic benefits.</p> <p>Possible contributions to reducing emissions from deforestation and forest degradation derive from the considerations on the connection between the projects and deforestation reduction, explored in item 4.10 of this report.</p>
<p>Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation.</p>	<p>Not applicable</p>	<p>There were no project contributions to governance structures at the national level.</p>

(continued)

36 MMA. Ministry of the Environment. *Plan for Prevention and Control of Deforestation in the Legal Amazon*. Base document: context and analyses. 2016. p. 8.

## Aggregated Results

(continuation)

Cancun Safeguards	Compliant	Observation
<p>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 has adopted the UN Declaration on the Rights of Indigenous Peoples.</p>	<p>Yes</p>	<p>There were only projects with indigenous target audiences. However, the <i>Sustainable Fishing</i>, <i>Forest Sentinels</i>, and <i>Productive Sociobiodiversity in the Xingu/Seed Network</i> projects involved indigenous communities in their implementation.</p> <p>In all cases, projects consulted the communities and obtained their consent. In the case of the <i>Forest Sentinels</i> project, the appreciation of the indigenous origin of production, with organic certification, has taken place without the formalization of the producer families as cooperative members. This process was underway when the evaluation was carried out.</p> <p>The sustainable fishing project's process varied over time in the regions where the project operates. The causes must be analyzed in greater depth but seem related to the legitimacy of the leaders involved beyond the project management's execution period.</p> <p>The <i>APL Babassu</i> and <i>Productive Sociobiodiversity in Xingu/Terra do Meio</i> projects were anchored in governance structures that already existed before the projects were initiated, focused on qualified participation and collective decision-making by communities and aimed at strengthening traditional ways of life and economic activities. There is, therefore, strong alignment with national and international agreements and commitments on this topic.</p>
<p>Full and effective participation of stakeholders, particularly indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of Decision 1/CP 16\.</p>	<p>In part</p>	<p>The <i>Babassu APL</i> and <i>Productive Sociobiodiversity in the Xingu</i> projects already had mechanisms for effective participation in their governance structures. In the case of the <i>Origens Brasil</i> seal initiative, the creation of governance structures that would allow for qualified dialogue between the communities of <i>Terra do Meio</i> and the purchasing companies were part of the project's actions. These structures remain in operation after the project's completion. The <i>Xingu Seeds Network</i> was consolidated and formalized as an association with a robust participatory governance structure.</p> <p>The <i>Amazon Backyards</i> project implemented training and awareness-raising events aimed at governance and management issues of the community organizations in its area of operation but still needs to carry out participatory planning and management in its implementation.</p> <p>The <i>Sustainable Fishing</i> and <i>APL Babassu</i> projects invested in mechanisms for the participatory construction of community agreements and decision-making processes on the management of natural resources.</p> <p>During the lifetime of the <i>Forest Sentinels</i> project, a management council was maintained, which became inactive at the end of the project. New partnerships signed after the end of the project began to question the legitimacy of the commercial relationship between the cooperative and indigenous peoples as a cooperative act. Steps to address the issue are in progress.</p>

(continued)

## Aggregated Results

(continuation)

Cancun Safeguards	Compliant	Observation
		<p>(Continuation)</p> <p>All projects developed communication actions, producing teaching and dissemination materials on the topics covered. The connection between the monitoring proposals presented and the associated evolution of the Amazon Fund's monitoring framework during project implementation was detailed in the individual reports. The interviews and documentation indicate several challenges on this topic, involving the definition and interpretation of indicators, the establishment of baselines, targets, and formats for feeding the indicators, different interpretations of the standard indicators between projects, etc. But the interviews also highlighted the learning, exchange, and joint evolution processes of the management teams and the Amazon Fund's technical team throughout implementation.</p>
<p>Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of 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 enhance other social and environmental benefits.</p>	<p>Yes</p>	<p>All projects were aimed at promoting the sustainable use of natural resources, either at maintaining standing forests or restoring them for economic purposes through AFS. Under the norms of the Forest Code, the recovery of environmental liabilities by properties belonging to family farmers allows for compositions of native and exotic forest and agricultural species. However, there needed to be consistent monitoring of the maintenance and evolution of the implemented AFS, so there may have been cases of abandonment or reversal of uses of these areas.</p> <p>None of the projects' actions involved the conversion of natural forests.</p> <p>There were no direct actions for the expansion or consolidation of protected areas. However, the projects impacted existing protected areas (sustainable use conservation units and indigenous lands).</p>
<p>Actions to address the risks of reversals in REDD+ results.</p>	<p>Not applicable</p>	<p>Not applicable. It could be addressed in the future with greater dissemination and consolidation of AFS at scale.</p>
<p>Actions to reduce the displacement of carbon emissions to other areas.</p>	<p>Not applicable</p>	<p>Not applicable.</p>

## 4.12. Analysis of Cross-Cutting Criteria

Poverty Reduction Criterion	Compliant
<p>As discussed in item 4.8 of this report, for the Amazon Fund, the central mechanism for generating income from the projects evaluated was the increase in revenue from the sale of in natura and processed products. The standard indicators of the monitoring methodology of the Sustainable Production Component are associated with this criterion. All projects reported these increments in different dimensions, again emphasizing the differences related to the degrees of maturity of the value chains and the commercialization arrangements involved. Therefore, it is reasonable to understand that the projects' actions resulted in income generation for the people and communities involved.</p> <p>However, as also explained in item 4.8, these indicators present several limitations for more assertive and specific conclusions in relation to income generation and, therefore, contributions to poverty reduction through project actions.</p> <p>The analyses allow the conclusion that, in addition to monetary income, there were qualitative contributions to strengthen the economic attractiveness of alternative activities to deforestation. These activities involve appreciating the communities' modes of production, demonstrating the interest of markets and companies purchasing the products, and strengthening governance structures and the communities' capacities for dialogue and negotiation, especially in the <i>Productive Sociobiodiversity in the Xingu</i> and <i>APL Babassu</i> projects. But the case of the <i>Forest Sentinels</i> project demonstrates that the positive effects of economic results can coexist with complex situations of inequality in participation and decision-making in community organizations.</p> <p>It is understood, therefore, that poverty reduction cannot be analyzed only from the point of view of income. However, this is the main focus expressed in the Logical Framework of the Amazon Fund. Unforeseen impacts were observed, as described in item 4.9 of this report, with effects on poverty reduction, such as food and territorial security. Additionally, there are fundamental elements of the discussion on the composition of monetary and non-monetary income, as well as the relative importance of monetary income for the different realities and demands of the communities, which are not explored in depth by the evaluation.</p> <p>Specific contributions to the Scientific and Technological Development Component were assigned only to the <i>Amazon Backyards</i> project and are discussed in the individual evaluation.</p>	<p>In part</p>
Gender Equity Criterion	Compliant
<p>The projects did not envisage systemic integration of gender issues in their original approaches. The only indicators collected with this focus were the standard indicators of the Sustainable Production Component (individuals directly benefiting from the supported activities – women).</p> <p>However, in all projects, it was possible to identify gender approaches in the organizations' institutional strategies.</p> <p>(Continued)</p>	<p>In part</p> <p>(continued)</p>

## Aggregated Results

(continuation)

Gender Equity Criterion	
<p>(Continuation)</p> <p>Among the projects, the Productive Sociobiodiversity in the Xingu/Seed Network project stands out. During its implementation, the project adjusted activities to strengthen women's participation, as it was noticed that women support seed collection in indigenous lands. Although seed collection is a family activity, decision-making and leadership have been the responsibility of women, who were recognized in community organizations and expanded their role through the projects' actions.</p> <p>In the APL Babassu project, women's role in collecting and breaking babassu nuts is one of the driving forces of the social and political movement that gave rise to the organizational arrangement. However, a relevant part of the project's actions was aimed at implementing AFS as a source of complementary income to extractivism, activities in which the direct involvement of women was not predominant.</p> <p>In the Forest Sentinels project, women's engagement was more vigorous in the nut processing stage. However, after the project's conclusion, the subproject aimed at the production of pasta and sweet meal (paçoca) made of Brazil nut was suspended due to administrative weaknesses of the new board of AMCA and the interruption of the partnership with COOPAVAM. In this project, the improvement of prices and production organization motivated greater involvement of women in the collection of nuts. It was not possible to verify to what extent this greater involvement overburdens women and what the perspectives are in relation to access and sharing of the generated benefits.</p> <p>More details on the incorporation of gender aspects into projects are provided in the individual reports.</p>	

# 5. Conclusions and Lessons Learned

---

- The Amazon Fund's investments in the initial stage of the Sustainable Production Component cover a diversity of organizations, activities, social groups, regions and conservation and deforestation dynamics. We consider this strategy adequate and positive insofar as it interacts with the context of diversity in the Amazon in these areas. It is an approach that requires considering several layers of complexity. However, we understand that the Amazon Fund, and any other initiative with a similar scale and scope, needs to incorporate these diversity elements.
- The composition of projects with both extractivism and AFS implementation approaches does not exhaust the entire spectrum of activities provided for under the Sustainable Production Component<sup>37</sup>. This composition was derived from the logic of the selection of projects for evaluation, which was guided by the chronological sequence of their conclusion. But **the selection portrays a relevant part of the scope of the component**.
- Organizations representing vulnerable and small populations and territories, which alone would not have been able to comply with the requirements for proposals to the Amazon Fund, participated in all the execution arrangements, whether in the scope of the Public Call or the spontaneous demand proposals. In this way, the projects contributed to the results of **the expansion of the capillarity of the Amazon Fund**. The executing organizations emphasized that the projects were the most significant initiatives captured by each one at the beginning of the projects, demonstrating this capillarity with the operation on a scale compatible with the procedures of the Amazon Fund.

---

<sup>37</sup> An example of a topic not covered is community timber forest management, but there is an individual project evaluation in the Effectiveness Evaluation Report of the Dissemination and Improvement of Sustainable Forest Management Techniques from Instituto Floresta Tropical – IFT, available at: <http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/monitoramento-avaliacao/5.avaliacoes-externas/individuais/IFT-Relatorio-Efetividade.pdf>

## Conclusions and Lessons Learned

- All projects achieved or exceeded the targets of involving individuals directly in the execution of activities, but the forms of involvement of beneficiaries varied. In this respect, the **more robust governance arrangements of projects approved in the Public Call provided more effective levels of participation** and greater connections with aspects of social management and governance of the territories where the projects operate.
- Both the spontaneous demand projects and the Public Call projects were initiatives that generated results and impacts but were also characterized by strong learning elements. This also applies to projects anchored in robust preexisting experiences and arrangements, with long implementation histories. In this way, the evaluation detected, in each project, a composition of successful experiences and others that faced challenges. We believe that this is characteristic of learning initiatives and that the use of non-reimbursable resources to support innovative and unique actions is pertinent, even if success is not guaranteed. This aspect is present in the projects, even in those that already had a previous path, but that took advantage of the opportunities offered by the Amazon Fund to expand and consolidate experiences or invest in innovations.
- In this analysis, we observed that the **logical structure of the component only partially contemplates this scope**, insofar as the indirect effect is defined as "Economic activities that keep the forest standing are economically attractive in the Legal Amazon," and part of the projects were aimed at the implementation of AFS, whose contribution focuses on forest restoration and recovery of degraded areas. However, one of the direct effects of the component is "Areas deforested and recovered and used for economic and ecological conservation purposes," which captures the spatial results of the AFS and is directly connected to the overall sustainable use objective of the Amazon Fund.
- The evaluation captured both qualitative elements and information made available in the monitoring plans agreed with each project. We explored the interfaces between these two approaches, which allowed us to understand the learning processes and the challenges, some of which were overcome and some of which remained present in the implementation of the projects. It is important to highlight that the evaluation included projects from the initial phase of the component's implementation (with cases of long negotiation periods between the presentation of the initial proposal and the effective start of implementation) and the first Public Call formulated in this context in 2012.

## Conclusions and Lessons Learned

- We emphasize that **several lessons learned from this stage were incorporated into subsequent public calls for proposals** (especially the Public Call for Consolidation and Strengthening of Sustainable and Inclusive Value Chains, 2017, and the Public Call for Projects Aimed at Supporting Territorial and Environmental Management Plans in Indigenous Lands, 2014), as well as project monitoring guidelines<sup>38</sup>.
- Considering income generation as a central element for achieving the effects of increasing the economic attractiveness of the supported activities, it has been recognized that more specific concepts and measurement methods need to be developed to verify the **effective impacts of support on the income of beneficiaries**. The evaluation also showed that the attractiveness of sustainable production activities for communities and families is associated with economic issues and monetary income. Other factors, related to improved quality of life, food and territorial security, and cultural aspects, are also very important.
- This improvement is also relevant to **strengthening the role of community organizations to expand value-adding opportunities** in the targeted productive activities. We have seen advances in this topic, especially in the guidelines for measuring the standard indicator of organizational development, which, however, have not yet been applied to these specifications in the projects evaluated. In general, the results of the projects, in terms of **strengthening the management and governance of community organizations, were incipient**, even in the Public Call arrangements. But it should be noted that the differences in organizational maturity between the organizations involved in the project were not fully considered in the strategies.
- We verified that the connections between the aspects of **market access, commercialization, and understanding of the sustainable productive activities' specificities and different degrees of maturity** are themes that need to evolve in the projects' approaches. We understand that these aspects were addressed in a generic and barely operational way in the Public Call, which proposed the promotion of "densification of sustainable productive activities," without further guidance on the objectives and activities that would lead to this result. There were considerable variations in the interpretation of this

---

38 GIZ. Deutsche Gesellschaft für internationale Zusammenarbeit. *Guia de monitoramento de efetividade de Projetos de Produção Sustentável apoiados pelo Fundo Amazônia*. Rio de Janeiro: GIZ

## Conclusions and Lessons Learned

perspective across projects. It was reported in the interviews that there were several processes of discussion about these approaches between the project teams and the Amazon Fund team. However, there is little documentation available that allows monitoring and understanding the evolution of these understandings. More effective documentation and systematization of these processes can expand the learning possibilities of follow-up or future projects.

- Considering the **medium to long-term horizons** demanded for the generation of results and the promotion of structural changes towards the establishment of economic models guided by forest maintenance and recovery, the implementation periods of three to four years of the Amazon Fund projects mainly encompassed stages of design, investment, and development. On several fronts, the most effective results, especially in commercialization and market access, only materialize in longer periods. In part, this had an impact on the Amazon Fund's strategies and structures due to the opportunities to present proposals for subsequent phases of the projects evaluated here. However, the implementation of most of these proposals was hindered by the impossibility of starting the execution of new projects after 2019.
- This perspective of an initial investment and development stage, which allows for the design of productive structures while more expressive results of commercialization and access to markets demand longer periods of support, is particularly valid for initiatives to implement AFS, but also for other initiatives that employed innovative and experimental approaches. These **initial stages generate results of a preparatory and learning nature** and performing more significant impacts and end targets often demands more extended support periods.
- The Public Call's focus on the combination of productive structuring, organizational development and promotion of market access (more consolidated in the second Public Call) were correct, even though, in the first edition, there were only **some cases of effective expansion of the participation of organizations and communities in generating value in the priority chains**. The project's prospect of fostering a business development environment is still incipient. The measurement of revenue as an indicator of effectiveness reflects this perception, since key factors for structuring businesses, such as cost management, are unclear. The logic of disbursement of resources, characteristic of projects, still prevails over a vision of generating resources through support.
- **Technical assistance** played a central role in the support provided by the projects in the production and processing, in the development of products,

## Conclusions and Lessons Learned

and in advising on the management and governance of production and commercialization arrangements. These assistance actions were provided by the technical teams of the projects, in general, qualified and valued by the beneficiaries and essential in multicultural contexts in which the teams play a vital mediation role. However, the work of the technical staff was linked to the duration of the projects and was therefore temporary. Executing organizations generally direct a significant part of their efforts to guarantee the action's continuity through new support. Even so, there are cases of discontinuity and breaks upon completion of the projects. This is a structuring challenge for providing services to the sector, whether public or private. At the Amazon Fund, this issue was addressed only through project mechanisms, so developing models that reduce projects' dependence in this respect remains a challenge.

- Concerning the **prospects of the projects after their completion**, it is important to consider that the evaluation was carried out at a critical moment of the Covid-19 pandemic, alongside a broader framework of weakening public policies and economic crisis, with repercussions even for the execution of the evaluation itself. We observed the impacts of these scenarios in the evaluation, which were varied. Some organizations were hit hard, with initiatives that came to an end. In contrast, others reported they could adapt and become more resilient. Some implementing organizations have accessed new support mechanisms, including new formats for entering markets in times of crisis. The continuity of the Amazon Fund's actions would keep adding to the initiatives that make a difference in promoting the APS that maintain and restore the forest. However, the contribution and legacy of the results generated were not lost in the period that elapsed after the completion of the projects.

## 6. Recommendations

Recommendations	Executing organizations	Public Actors	BNDES / Fund	Donors
Establish more specific guidelines for concepts for the development of APS in public calls or methodological roadmap for the presentation of proposals.			•	
Provide more accurate organizational diagnoses to guide the design of proposals according to the nature and development of each organization and arrangement.	•		•	
Emphasize the provision of actions and resources for the structuring and governance of organizational arrangements.	•		•	
Include governance and territorial protection targets for proposals operating in protected areas.			•	
Provide for the possibility of structuring the implementation of projects in stages, with specific objectives and targets for design and initial investment stages.			•	
Structure guidelines for organizational strengthening targets according to the maturity stages of community organizations and priority chains, with clear objectives to qualify organizations as economic or business agents.	•		•	
Encourage and provide for actions that promote adequate access to institutional markets at the local and regional levels.	•		•	
Develop mechanisms to encourage the establishment of technical assistance services that can be offered on an ongoing basis to organizations and audiences that make up APS.		•	•	
Incorporate the recovery of forest areas with economic use in the indirect effects of the Sustainable Production Component.			•	
Monitor the effective restoration of AFS areas.	•			
Adjust the standard indicator “recovered area used for economic purposes” to “area in recovery.”			•	
Resume exchange events between the projects and the systematization of experiences and lessons learned.	•		•	

(continued)

## Recommendations

(continuation)

Recommendations	Executing organizations	Public Actors	BNDES / Fund	Donors
Establish routines for documenting discussions and proposals' adjustments and interpreting and feeding indicators.	•		•	
Develop studies to deepen and improve the measurement of income generation by projects (including the possibility of launching public notices for the Science and Innovation Component). Consider incorporating a broader understanding of the monetary and non-monetary elements of income, associated with the additional benefits of projects regarding food security, social strengthening, and territorial protection.			•	
Provide for incorporating specific gender and youth strategies in the design and implementation of projects, with the development of indicators that capture effective change processes.			•	
Provide thematic evaluations of APS that are emblematic of the sustainable use of resources in the Amazon.			•	
Evaluate the possibilities of supporting projects that combine non-reimbursable and reimbursable resources ("hybrid financing") for community organizations with greater maturity and market insertion.			•	
Encourage coordination and support for initiatives with federal and/or state bioeconomy public policies, considering the specificities of the sociobiodiversity and forest restoration agendas.		•		•
Develop alternative mechanisms to support the sustainable production agenda, to address the discontinuity of the Amazon Fund's support for new projects.				•

Effectiveness Evaluation of  
of Sustainable Productive Activities (APS) Projects  
within the scope of the Amazon Fund / BNDES

---

# ANNEX I

---

# Individual Project Evaluations

---



# 1. APL Babassu

---

## 1. Project Fact Sheet

**Organization responsible for project management**

Association of Settlement Areas in the State of Maranhão (ASSEMA)

---

**Type of access**

First Public Call for Sustainable Production Activities, held in 2012

---

**Project period**

3rd quarter of 2016 to 3rd quarter of 2020

---

**Amount of support from the Amazon Fund**

BRL 4,897,085.37

**Beneficiaries**

Settlement populations, quilombola communities, traditional and family farmers

---

**Place**

State of Maranhão, in the municipalities of Lago do Junco, Lago da Pedra and Bacabal

---

**Land categories**

Settlement

---

**Axes**

Sustainable production



PHOTO: ASSEMA



## 2. Project Summary

The *APL Babassu* project supported the conservation and sustainable management of babassu groves and the recovery of degraded areas through agroforestry systems (AFS) in three municipalities that are part of the Amazon biome, in the state of Maranhão. In addition to the management and implementation of AFS and income generation from them, the project also prepared a Sustainable and Community Forest Management Plan for babassu, including provision of technical assistance and rural or agroforestry extension for the families reached by the project, trained young people from the Agricultural Family Schools and strengthened community organizations.

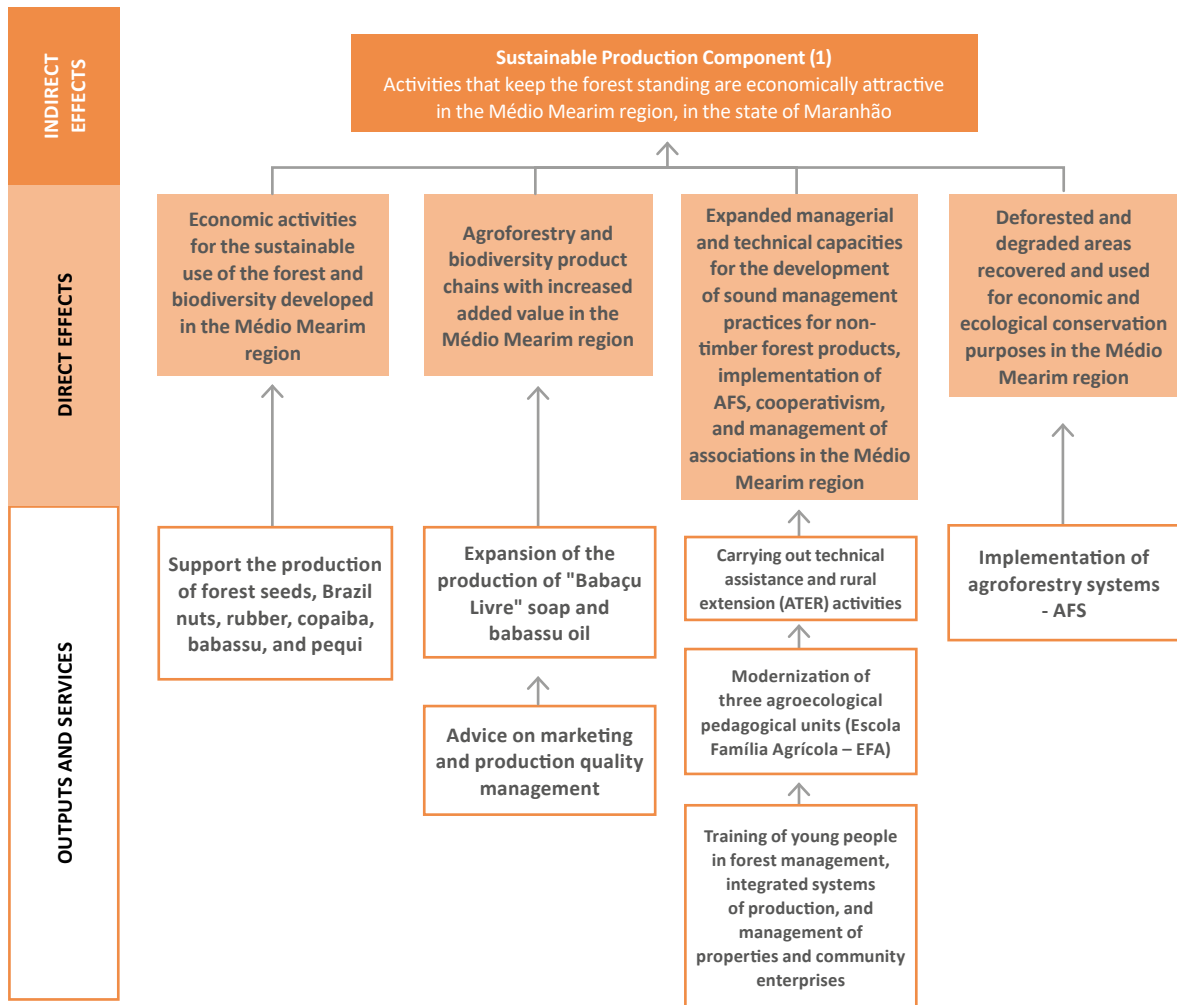


## 3. Project Intervention Logic

In compliance with the Amazon Fund's procedures in force during the implementation period of the *APL Babassu* project, a logical framework for the project was agreed upon, in line with the structure of the Amazon Fund Logical Framework (Figura 1).

The direct effects were interpreted as specific objectives in the Monitoring Plan agreed upon between the Amazon Fund and the project's teams. Indicators were defined for these objectives and associated outputs.

Figure 1: Logical Framework of the APL Babassu project agreed upon with the Amazon Fund<sup>39</sup>



Source: Amazon Fund/BNDES

The *APL Babassu* project proposal, initially presented by the executing organization (Association in Settlement Areas in the State of Maranhão – ASSEMA), worked with its structure, with the following definition of objectives<sup>40</sup>:

<sup>39</sup> There is a mistake in the description of the output linked to the first direct effect, which describes an output of the *Productive Sociobiodiversity in the Xingu* project. The correct output is "Elaboration of babassu management plans."

<sup>40</sup> ASSEMA. Association in Settlement Areas in the State of Maranhão. *APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 26 et seq.

### *General Objective (indirect effects)*

Contribute to the conservation and sustainable management of the babassu forest environment in the Pre-Amazon area of Maranhão, through low-impact production systems, linked to economic enterprises set up under the Médio Mearim Local Productive Arrangement.

### *Specific objectives (expected direct effects)*

- Protect and prepare a sustainable and community forest management plan in 13,000 hectares of babassu groves and confirm organic certification, currently under conditionality, in at least 70% of the area with the organic production seal.
- Implement 280 hectares of reference and irradiation units in integrated agro-extractive production systems in the babassu groves, with different techniques for densifying and intensifying production (agroforestry backyards; babassu and pasture integration; biodiverse and successional agroforestry systems; enrichment of babassu groves with native forest species and forest recovery of Permanent Preservation Areas.
- Increase operational capacity with productive efficiency of two babassu processing units of the Babaçu Livre brand (oil factory and soap factory) by reducing idle capacity, updating and implementing business plans, in order to offer high-quality products and inputs with socio-cultural and environmental values incorporated in them.
- Guarantee and control the quality of products and production processes through a quality management plan.
- Triple the volume of agro-extractive products sold by 400 families in three municipalities in an organized manner via institutional, differentiated, and local markets.
- Expand and qualify the incorporation and communication of socio-cultural and environmental values in agro-extractivism products by structuring a product development and marketing area for the Babaçu Livre brand.
- Develop skills in forest management and enterprise management among 60 young agro-extractivists.

## ANNEX I: 1 — APL Babassu

- Implement a project monitoring and evaluation plan to systematize lessons learned and generate information to support the improvement of public policies aimed at agro-extractivism and family farming.

For the implementation, ASSEMA organized a set of subprojects according to each organization. Each subproject had specific outputs. In the project report, subprojects were called components, and the activities for each of the outputs were also specified (Chart 1):

Chart 1: Components and outputs under the proposal of the APL Babaçu project

<b>Component 1 — Association of Rural Women Workers from Lago do Junco – AMTR / Subproject – AFS Women and Babaçu Livre Soap.</b>
Output 1.1: Expansion of Soap Production/Renovation and maintenance of the “Babaçu Livre” soap factory
Output 1.2: 40 hectares of Agroforestry Systems (AFS) and Integrated Systems
<b>Component 2 — Cooperative of Small Agroextractive Producers from Lago do Junco and Lago dos Rodrigues – COPPALJ / Subproject – Diversified production and processing of babassu.</b>
Output 1.2: Expansion of babassu oil production
Output 2.2: 20 hectares of Agroforestry Systems (AFS) and Integrated Systems
<b>Component 3 — Association Winning Together with Solidarity Economy – AVESOL / Subproject – Forest management and processing of quilombola babassu – Bacabal-MA.</b>
Output 3.1: 44 hectares of Agroforestry Systems (AFS) and Integrated Systems
<b>Component 4 — Antônio Fontineli Agricultural Family School – EFAAF / Subproject – “Integration and diversification for the agro-extractivists of the future.”</b>
Output 4.1: Modernization of 1 Agroecological Pedagogical Unit (Family Agricultural School/Elementary Education)
Output 4.2: 25 hectares of Agroforestry Systems (AFS) and Integrated Systems
<b>Component 5 — Association of the Family Center for Training by Alternating High School and Vocational Education – ACEMEP / Subproject – “Integrated management of babassu groves &amp; AFS– learning by doing”</b>
Output 5.1: 60 Hectares of Agroforestry Systems (AFS)

(continued)

## ANNEX I: 1 — APL Babassu

(continuation)

Output 5.2: Modernization of 1 Agroecological Pedagogical Unit (Family Agricultural Schools/High School/Lago do Junco)

### **Component 6 — Association of the Agricultural Family School of Lago da Pedra Agostinho Romão da Silva – AEFALPARS / Subproject – Integration of sustainable management of babassu groves, AFS and animal production in the Agricultural Family School**

Output 6.1: 10 hectares of Agroforestry Systems (AFS)

Output 6.2: Modernization of 1 Agroecological Pedagogical Units (Family Agricultural School/Elementary School/Lago da Pedra)

### **Component 7 — Cross-cutting Actions Providing Services to the Subprojects - ASSEMA**

Output 7.1: 01 Database referring to the production and processing of babassu soap/ Information system to develop and monitor the management of enterprises

Output 7.2: Communication Plan aimed at structuring the communication area of ASSEMA

Output 7.3: Marketing and Market Plan, focused on the Babaçu Livre products of the enterprises

Output 7.4: Quality management plans for manufactured products and 2 manuals of good manufacturing practices (soap and oil)

Output 7.5: Sustainable and Community Forest Management Plan (10 thousand hectares in Lago do Junco and 3 thousand hectares in Bacabal)

Output 7.6: Map for 10 thousand hectares in Lago do Junco/map for 3 thousand hectares in Bacabal / Geoprocessing for the production of georeferenced maps of the Forest Management Plan implementation area

Output 7.7: Report containing the results of the research on new products / Testing of new products / Research on the development of new products from babassu

### **Component 8 — Cross-cutting Actions Providing Technical Assistance and Rural Extension to Subprojects – ASSEMA**

Output 8.1: 262 hectares with biodiverse AFS integrated with babassu groves implemented, managed/ 5 reference and irradiation units in integrated agro-extractive production systems in modernized babassu groves

Output 8.2: Quality Management Plan (outputs and processes) coordinated and monitored with the agglutinated subprojects

Output 8.3: Technical monitoring of the implementation and development of 40 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in component 1 (AMTR)

Output 8.4: Technical monitoring of the implementation and development of 20 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in component 2 (COPPALJ)

(continued)

(continuation)

Output 8.5: Technical monitoring of the implementation and development of 44 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in Component 3 (AVESOL)

Output 8.6: Technical monitoring of the implementation and development of 25 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in component 4 (EFAAF)

Output 8.7: Technical monitoring of the implementation and development of 60 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in component 5 (ACEMEP)

8.8: Technical monitoring of the implementation and development of 8 hectares of Agroforestry Systems (AFS) and Integrated Systems provided for in component 6 (AEFALPARS)

#### **Component 9 — Cross-cutting Management Actions for subprojects - ASSEMA**

Output 9.1: Administrative management of all subprojects

Output 9.2: Institutional audit report

Output 9.4: Vehicles (4x4 pickup trucks and motorcycles) and Individual protection equipment to support the project

Output 9.5: Support fuels for project activities

Output 9.6: Vehicle documentation regularized

Output 9.7: Vehicle maintenance regularized

Output 9.8: Computer equipment to support project management

Output 9.10: Office furniture to support project management

Source: ASSEMA. Association in Settlement Areas in the State of Maranhão. APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora. Amazon Fund, s.d. p. 26 et seq.



## 4. Specific Methodology for Individual Evaluation

The general methodological steps defined for evaluating the APL Babassu project were followed, including the mission's exploratory stage focused on interviews with representatives from the projects and the feedback to the project's technical coordination ([List of interviewees in Annex 3](#)).

It is worth noting that the evaluation benefited from the coordination and mobilization work carried out by the project's coordination, with the greatest number and diversity of interviews among managers and technical staff from ASSEMA and the agglutinated organizations and beneficiaries.



## 5. The Project in the Organization's Trajectory

### 5.1. Organizational context<sup>41</sup>

ASSEMA is a non-profit civil society organization which was created in 1989. Its regional operations cover 53 communities/towns in the Médio Mearim region in the state of Maranhão. There are more than 5,000 families in communities located in 24 settlement projects, in eight municipalities in the region. ASSEMA's history is linked to the social mobilization of rural workers' unions and other community leaders in the Médio Mearim region, which began in the 1970s. It was marked by farmers' resistance to the fencing of babassu groves, supported by policies to encourage extensive livestock raising. The babassu groves were traditionally used in a regime of everyday use by families, with the collection and breaking of nuts being an activity exercised and dominated by women.

ASSEMA's institutional mission is the collective construction of sustainable actions for using natural resources to pursue quality of life in rural areas, based on family production, equitable gender relations, and respect for ethnic and cultural diversity. ASSEMA's base and management structure are formed by local organizations, which develop actions to improve production conditions and the communities' livelihood and commercialization activities. These organizations created the Babaçu Livre brand, including all products from the families' work: babassu oil, Babaçu Livre soap, mesocarp, fruit jams and liqueurs, and handicrafts. ASSEMA provides technical advice and support for these actions.

The first organization of the ASSEMA arrangement to be created was the Association of Rural Women Workers from Lago do Junco and Lago dos Rodrigues (AMTR), based on the mobilization of babassu nut breakers. The production and commercialization network were structured in five municipalities, covering the communities themselves, the canteens – points of exchange and sale of local goods linked to the cooperatives of Lago do Junco and Lago dos Rodrigues (Cooperative of Small Agroextractivist Producers of Lago do Junco – COPPALJ) and Esperantinópolis (Cooperative of Small Agroextractivist Producers of Esperantinópolis – COPAESP). The Babaçu Livre Cooperative, made up of members of the income generation groups, was also created and sells all products from the Babaçu Livre line and from other partners.

From the 2000s onwards, ASSEMA started to strengthen rural education through the alternation and agroecology methodology, so the organizational arrangement also

---

41 See ASSEMA's website (<https://assema.org.br/quem-somos/a-assema>) or in ASSEMA. Association in Settlement Areas in the State of Maranhão. *APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 5 et seq.

began to rely on the Agricultural Family Schools (EFAs) in Lago do Junco, Capinzal do Norte, and São Luis Gonzaga. Later, the Secondary School Training Center (ACEMEP) was implemented in Lago do Junco.

## 5.2. Design and implementation strategy

Over the years, ASSEMA's member organizations have received support from International Cooperation organizations and small projects, supported by the Ministry of Environment (MMA). More recently, they began to raise funds through federal and state calls for technical assistance and rural extension (ATER), private funds, partnerships with universities, and others. The financing for the project with the Amazon Fund was the largest ever requested by ASSEMA at the time.

The operating strategy for the *APL Babassu* project was associated with the concept of Local Productive Arrangement (APL) proposed in the context of the National Plan for the Promotion of Sociobiodiversity Chains, launched in 2009. The Plan envisaged the development of integrated actions aimed at promoting and strengthening the sociobiodiversity product chains, identifying 30 species traditionally used by traditional peoples and communities, with economic potential in the various Brazilian biomes<sup>42</sup>. In the context of its implementation, the MMA's Secretariat for Extractivism and Sustainable Rural Development signed grant agreements with eight civil society organizations to strengthen Sociobiodiversity APLs in the Southeast, Northeast and North regions, one of which is the APL Babassu.

The National Plan for the Promotion of Sociobiodiversity Chains defined Local Productive Arrangements as "groupings of enterprises in the same field, located in the same territory, which maintain some level of coordination, interaction, cooperation and learning among themselves and with other local actors: government, research, teaching, credit institutions." One of the priorities of the plan was to enable the connection of APLs to public policies related to the commercialization of socio-biodiversity products, such as the National School Feeding Program (PNAE), the Food Acquisition Program (PAA) and the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPMBio)<sup>43</sup>.

The collection and breaking of babassu nut in the Médio Mearim region were considered a symbolic expression of extractivism in private areas<sup>44</sup>, consolidated by the political movement of the babassu nut breakers. Since the 1980s, the babassu nut breakers have mobilized to gain access rights to public and private areas where the babassu is planted through the so-called Free Babassu Law, which also prohibits cutting

---

<sup>42</sup> MMA. Ministry of the Environment and Climate Change. *Arranjos produtivos locais - APLs de produtos da sociobiodiversidade*. Brasília, 2019. p. 11.

<sup>43</sup> Ibidem. p. 16.

<sup>44</sup> Ibidem. p. 34.

## ANNEX I: 1 — APL Babassu

the species, the use of pesticides, and the planting of crops that harm the babassu. Over time, 14 municipalities in the states of Maranhão, Pará and Tocantins passed similar laws, and the state of Tocantins passed a statewide Free Babassu Law.

ASSEMA and its associated organizations aligned themselves with the APL approach established by the plan. However, locally they adopted an "integrated system" concept developed over the years for the multiple use of babassu. The integrated system goes beyond the perspective of coordinating organizations in the same field, considering that different activities are carried out simultaneously and mutually support each other. In this view, babassu is perceived as a key resource for the transitional ecosystem that predominates in the region, connecting the Amazon and Cerrado biomes and enabling the natural process of regeneration and forest succession from secondary vegetation (capoeira) to secondary forest<sup>45</sup>. It is also a kind of multiple use for agro-extractivist communities, which traditionally use its fruits as food (for example, mesocarp and olive oil) and raw material for producing soap, charcoal, and other consumer goods. Finally, it is also a symbol of the struggle for access to the land and natural resources, especially for the women who break the babassu nut, who have organized themselves in a movement to defend the way of life and the social, economic, and cultural reproduction conditions of the communities. In addition to the uses mentioned above, babassu also generates income through the sale of processed nuts or kernels. However, although it has great economic potential for technological and industrial use (64 products were identified, such as coal, tar, fatty acids, glycerin, biofuel, methanol, and ethanol), its commercial use is still restricted to the production of oil and coal.

The generation of income from babassu has great economic relevance since the three municipalities covered by the project are located in a region that still has high levels of poverty, with a large dependence of the population on public policies for income transfer. These three municipalities – Lago do Junco, Lago da Pedra, and Bacabal – extend only through part of the region called Médio Mearim (Figure 2). Their prioritization stemmed from the need to locate the project in the official coverage area of the Amazon biome.

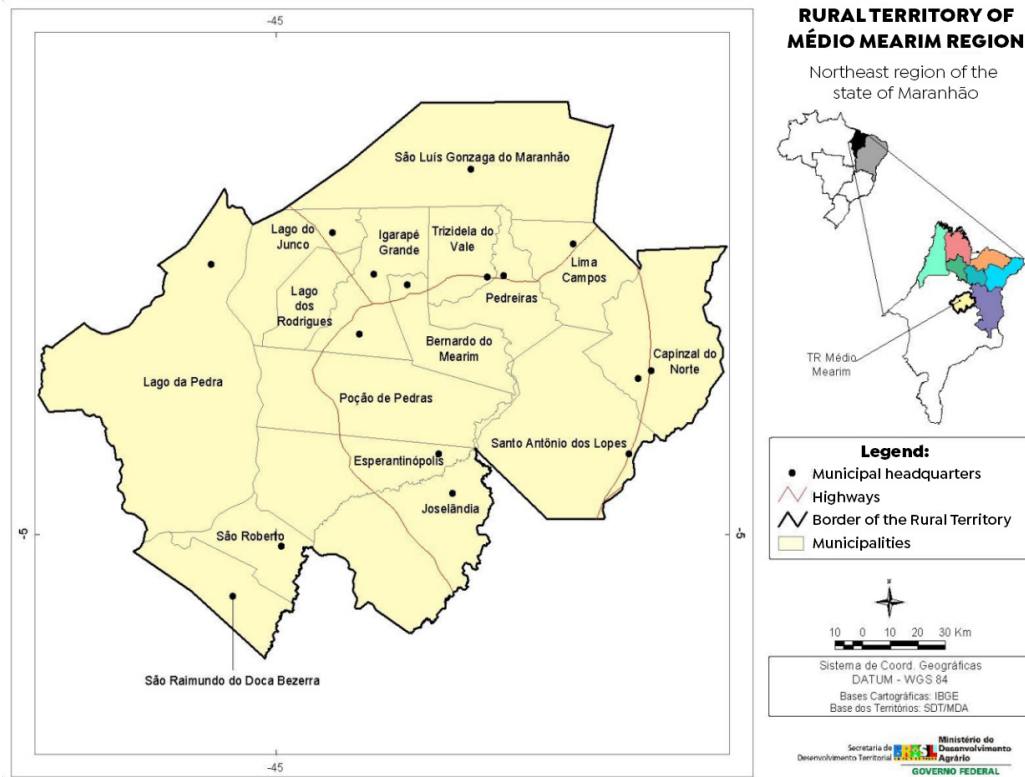


---

45 ASSEMA. Association in Settlement Areas in the State of Maranhão. APL Babassu, *Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 30 et seq.

ANNEX I:  
1 — APL Babassu

Figure 2: Location map of the municipalities Lago do Junco, Lago da Pedra, and Bacabal in the Médio Mearim region



Source: Association in Settlement Areas in the State of Maranhão (ASSEMA) (s/d): APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora, Amazon Fund, p. 82

The *APL Babassu* project, supported by the Amazon Fund, was part of ASSEMA's initiatives to structure and strengthen the babassu value, during a moment of expansion and deepening of actions to address the bottlenecks of the chain. Babassu oil, as the primary market product, had a structured chain and did not face demand problems, as all production was and is commercialized. But there was a need to invest in new production technologies since the machinery used in the processing units presented problems and only allowed crude oil production. Through the project, new opportunities were sought to make full use of babassu, through studies, partnerships, technology, and product development.

In addition, there were challenges related to collection sustainability, compounded by climatic effects. There was a perception that extractivist activities generated impacts on biodiversity, but there were no studies analyzing and quantifying these effects. The collection focused on the best fruits, but there was no information about the amount that that needed to be maintained to guarantee the species' perpetuation and the fauna's feeding. The nuts are broken using a straight and turned wood club with a diameter

compatible with the hand of the person using it. It is a tool that needs to be replaced daily, resulting in high wood consumption.

To approach these sustainability aspects, the *APL Babassu* project envisaged the preparation of a management plan for the babassu groves and the construction of community agreements for dealing with babassu. The management plan was intended to clarify and address sustainability challenges. At the same time, the agreements would provide concrete directions for the adoption of sustainable management measures for babassu. Additionally, the measurement of the area under sustainable management was also necessary to confirm the organic certification of the products of the cooperatives and associations participating in the arrangement, which were still being selected in the beginning of the project. It is worth noting that these initiatives continue to be inserted in a context in which the babassu groves are under threat of destruction of large areas, due to their replacement by monocultures (pasture, eucalyptus, sugar cane, and soy) and the implementation of large agro-industrial complexes for dairy and beef cattle, as well as mining and energy industries<sup>46</sup>.

In addition to investments directly associated with the babassu value chain, the project also provided for actions in complementary chains aimed at diversifying income generation in the communities. The focus of these actions was on the implementation of different types of agroforestry systems (AFS), both in direct association with babassu groves (forming protection belts with great relevance for the containment of fire and contamination by pesticides applied in adjacent areas), as well as associated with backyards and annual swidens, seeking food security and income generation in the fruit growing chains.

Finally, the AFS would also be implemented in the Agricultural Family Schools, which are part of ASSEMA's organizational base. The aim was to encourage their adoption through the involvement of young people, who, following the schools' modular pedagogical proposal, would take the learned practices back to their families' properties. In addition, the feasibility of the systems would be tested in the schools' own areas, also ensuring the improvement of school meals.

In this way, the approach of the APL Babassu project was built involving ASSEMA as an agglutinating organization and the organizations that were already part of its base. **Figure 3** presents the initial composition of the arrangement<sup>47</sup>, with the distribution of actions by the subprojects with the agglutinated organizations and the advisory and capacity development activities carried out by ASSEMA<sup>48</sup>.

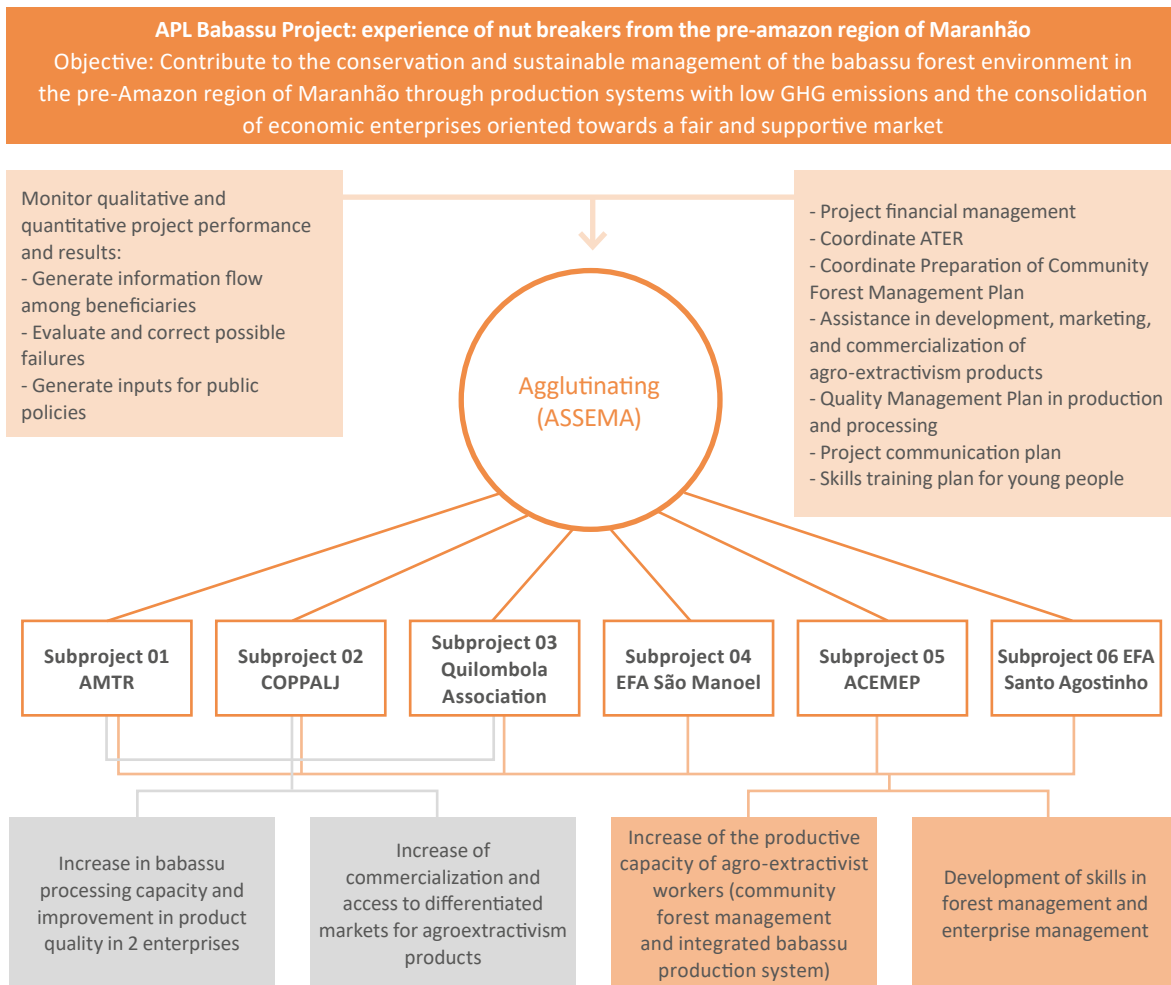
---

46 ASSEMA. Association in Settlement Areas in the State of Maranhão. *APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d. p. 30.

47 For legal reasons, in the actual implementation, the Quilombola Association represented in the figure was replaced by the Vencer Juntos com Economia Solidária (Avesol) Association as agglutinated in Sub-output 3.

48 ASSEMA. Association in Settlement Areas in the State of Maranhão. *APL Babassu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d. p. 30.

Figure 3: Institutional arrangement proposed for the project



Source: Association in Settlement Areas in the State of Maranhão (ASSEMA) (s/d): APL Babaçu, Roteiro para Elaboração do Projeto Modalidade Aglutinadora, Amazon Fund, p. 30.



## 6. Results Evaluation

### 6.1. Achievement of agreed indicators

In the evaluation of the *APL Babassu* project, presented below, the consolidated indicators of the project's monitoring plan were applied, and they were agreed upon between the executors and the Amazon Fund team. These indicators do not coincide

with the indicators contained in the project proposal initially presented by ASSEMA<sup>49</sup>, but align the project's contributions to the Amazon Fund's indicators and incorporate Fund-specific indicators.

Below, the goals and annual evolution of these indicators are presented. The percentage variation indicates the percentage of the target's achievement at the end of the project, according to the following classification:

Classification of indicator achievement	Achievement	Evaluation
	< 50%	Much lower than expected
	50 a 80%	Below expected
	80 a 120%	Achieved
	> 120%	Exceeded

**DIRECT EFFECT / GENERAL OBJECTIVE:** Activities that keep the forest standing are economically attractive in the Médio Mearim region in the state of Maranhão

**Indicator:** Annual deforestation in the municipalities of the Médio Mearim region in the state of Maranhão (Bacabal, Lago do Junco, Lago da Pedra) – annual data verification by PRODES, under the responsibility of BNDES (figures not available in the project monitoring spreadsheet).

**DIRECT EFFECT / SPECIFIC OBJECTIVE 1:** Economic activities for the sustainable use of the forest and biodiversity developed in the Médio Mearim region.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Area of the forest directly managed as a result of the project (hectares)	6,000	13,000	10,000	10,054	10,054	77.33
Production of <i>in natura</i> babassu nuts (tons)	283	500	394	501	474	94.8
Revenue obtained by extractivist workers targeted by the project with the production of <i>in natura</i> babassu nuts (BRL)	424,500	750,000	748,600	951,900	900,000	120

<sup>49</sup> Ibidem. p. 56 a 59.

ANNEX I:  
1 — APL Babassu

Output 1.1: Development of babassu grove management plans.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of sustainable forest management plans prepared	0	2	0	1	1	50

**DIRECT EFFECT / SPECIFIC OBJECTIVE 2:** Agroforestry and biodiversity product chains with increased added value in the Médio Mearim region.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Revenue obtained from the sale of "Babaçu Livre" soap	20,242.89	160,000	34,445	43,340	56,000	35
Revenue obtained from the sale of babassu oil	1,073,276.78	2,125,500	1,933,918.00	2,480,359.00	3,900,000.00	183.48
Quantity (units/year) of soap produced by the AMTR factory	20,248	100,000	19,583	31,158	33,000	33
Production volume of babassu oil (tons/year)	161	250	197.4	232.2	245.36	98.14
Number of individuals directly benefiting from the activities supported by the project	460	1,337	900	1,080	1,200	89.75
Number of community organizations strengthened	3	6	4	6	6	100
Number of settlers directly benefiting from the activities supported by the project	160	160	160	160	160	100
Number of women directly benefiting from activities supported by the project	360	785	150	225	225	28.66

*Output 2.1: Expansion of the production of Babaçu Livre soap and babassu oil.*

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
List of equipment purchased	0	2	0	1	1	50

*Output 2.2: Advice on product marketing and quality management.*

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of marketing actions carried out to assist in the dissemination and commercialization of the products of the agglutinated companies' enterprises	0	3	0	9	70	2,333
Number of quality management plans implemented for the products and processes of the companies' enterprises	0	2	0	4	4	200

**DIRECT EFFECT / SPECIFIC OBJECTIVE 3:** Expanded managerial and technical capacities for the development of good practices in the management of non-timber forest products, implementation of AFS, cooperativism and management of associations in the Médio Mearim region.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of young people trained by EFAs who are effectively using the knowledge acquired	0	25	50	35	45	180

*Output 3.1: Execution of ATER activities.*

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of technical assistance and rural or agroforestry extension visits carried out	1/month	3/month	1,260	4,503	5,163	not applicable

(continued)

## ANNEX I: 1 — APL Babassu

(continuation)

Number of family production units benefiting from technical assistance and rural or agroforestry extension	0	4,011	442	479	479	11.94
------------------------------------------------------------------------------------------------------------	---	-------	-----	-----	-----	-------

*Output 3.2:* Modernization of three agroecological pedagogical units (Escola Família Agrícola, EFA).

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of modernized agroecological pedagogical units	0	3	0	3	3	100

*Output 3.3:* Training of young people in forest management, integrated systems of production, and management of properties and community enterprises.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Number of young graduates	0	60	45	45	85	141.6

**DIRECT EFFECT / SPECIFIC OBJECTIVE 4:** Deforested and degraded areas recovered and used for economic and ecological conservation purposes in the Médio Mearim region.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
Area under recovery and used for economic purposes (hectares)	240	500	500	500	500	100

*Output 4.1:* Implementation of agroforestry systems, AFS.

Indicator	2013 Baseline	Target	Apr 17	Dec 18	Dec 19	Variation (%)
AFS are implemented	150	280	156	210	210	75

## 6.2. Objectives, indirect and direct effects

The monitoring plan makes it possible to assess the scope of the indicators agreed upon between the Amazon Fund and the project's executors. Records that allow recapping how the indicators of the Monitoring Plan of the *APL Babassu* project were established and/or adjusted were not available.

In the project's Monitoring Plan, indicators were not defined to measure the achievement of objectives and indirect effects. At the level of direct effects, there are both indicators that have been largely exceeded and results that are significantly below the established targets. In some cases, it was possible to recap the context of the evolution of the indicators in the interviews and in the documentation, but such recaps were not always possible. Some of the variations identified are effectively related to the implementation of the project, others may result from the definition of indicators, baselines, goals, and ways of gathering information. Thus, a qualitative description of the direct effects will be presented below, referring to the indicators. The general evaluation of the achievement of the project's objectives will be carried out conclusively in item 6.3 of this individual project report.

### 6.2.1. Direct effect “Economic activities for the sustainable use of the forest and biodiversity developed in the Médio Mearim region”

In the Logical Framework of the APL Babassu project, only the preparation of the babassu groves management plan was associated with this effect. However, according to the Amazon Fund's logic, aspects related to the production/extraction level of the economic activities covered must be gathered here. The project's Monitoring Plan follows this logic, presenting indicators for the evolution of the managed forest area (directly related to the management plan, presented below in Output 1.1): quantity of babassu nut kernels collected and revenue obtained from their sale in natura by the extractivist workers. These two aspects constitute indicators of the Monitoring Plan and correspond to standard indicators raised by the Amazon Fund in projects under the Sustainable Production Component.

The nut kernel production volume target was reached (94.8%), and the revenue generation target was exceeded (120%). However, there were no specific activities aimed at expanding in natura production in the project. Considering that the demand for babassu oil exceeds the supply (which is supported by the increase in revenue per volume from BRL1,500.00 to BRL1,900.00 per ton during the term of the project), it seems plausible to assume that the expansion of processing capabilities and, possibly, the implementation of management practices, increased the harvest. However, the annual figures measured throughout the project also show seasonal variations in collection volumes.

## ANNEX I: 1 — APL Babassu

The production and revenue figures in 2020, the first year after the end of the project, found in the interviews (Tables 1 and 2 below), indicate the continuity of the level of production and the project's success in this aspect, promoting an increase from 283 to almost 500 tons of production during its lifetime.

Table 1: : Fresh and processed production volume monitored by ASSEMA.

Products	2018	2019	2020	Expected 2021	Reached until July/21
Liquor (units)	783	2,026	1,090	3,000	373
Jam (units)	950	300	1,023	1,000	370
Babassu mesocarp (kg)	11,093	11,500	6,696.5	12,000	2,050
Jaborandi leaves (kg)	17,000	9,600	0.0	16,000	2,000
Soap (kg)	2,942	2,800	9,890	15,000	5,879
Soap (unit)	31,158	33,000	41,390	50,000	30,106
Babassu meal (kg)	118,569	127,538	135,366	125,000	97,200
Crude babassu oil (kg)	221,000	245,368	254,742	310,000	191,326
Refined babassu oil (kg)					10,000
Babassu nut kernel (kg)	501,869	474,739	496,251	620,000	344,109
Fruit pulp (kg)	1,500	2,341.50	2,156	3,000	11,011
Handicraft (units)	624	1,862	6,217	6500	1623

Source: Information provided by ASSEMA.



PHOTO: ASSEMA

Table 2: Revenue obtained from commercialization monitored by ASSEMA

Products	2018	2019	2020	Expected 2021	Reached until July/21
Liquor (BRL)	5,645	10,145	10,428	12,000	2,190
Jam (BRL)	133	365	5,000	5,000	178
Babassu Mesocarp (BRL)	4.1964	154,912	90,368	120,000	39,393
Jaborandi leaves (BRL)	147,500	62,322	29,308	60,000	46,146
Soap (BRL)	13,858	15,388	40,044	90,000	34,476
Soap (BRL)	43,340	56,000	61,510	92,500	28,995
Babassu meal (BRL)	46,720	53,728	61,454	62,500	43,919
Babassu oil (crude and refined) (BRL)	2,428,204	3.900.00	3,715,663	4,185,000	3,569,399
Fruit pulp (BRL)	7,500	48,000	10,780	15,000	88,088
Handicraft (BRL)	2,653	7,475	27,613	28,000	3,546

Source: Information provided by ASSEMA

### Output 1.1: Preparation of babassu grove management plans

In the *APL Babassu* project, the proposal to develop a management plan to guide the extraction of babassu nut was associated with the perception of the predatory aspects of extractivist activity<sup>50</sup>. As there was no qualified information on the possible impacts of extraction, it was not possible to assess its effects on the conservation of biodiversity in the babassu groves. Through the monitoring plan, these impacts should have been surveyed and evaluated, creating the basis for the establishment of community agreements for dealing with babassu.

It was planned the map of a covering area of 13 thousand hectares. The final mapped area covered 10,054 hectares, since the studies excluded some areas that did not fit the criteria established for the delimitation of babassu groves. However, this ex-

<sup>50</sup> The indicator for this effect envisaged the elaboration of two plans within the Monitoring Plan, but only one was concluded. Possibly, the second plan corresponds to the georeferenced mapping of the areas for organic certification. However, it was not possible to confirm this understanding in the interviews and reports.

clusion was not reflected in an adjustment of the indicator in the monitoring plan, suggesting that only 77.3% of the target was achieved. The surveys also made it possible to carry out georeferenced mapping of areas associated with organic babassu production, necessary to guarantee the organic production seal of the Biodynamic Institute (IBD). Organic certification covers both COPPALJ's oil production and Babaçu Livre soaps.

There were no previous examples of the preparation of sustainable management plans for babassu, so an attempt was made to adjust the models of management plans made for other non-timber Amazonian products. Thus, the preparation of the management plan was an innovative process carried out with consultancy and support from Embrapa researchers. Although the studies were completed during the project term, the management plan was not formalized, since the State Environment Agency, which was responsible for its approval, did not have guidelines for this process. Even so, within the possibilities provided by the project's governance, the activity was successfully completed.

Based on the inputs collected for the plan, a handbook of good practices for collecting and managing babassu and a fire-fighting plan were also prepared. It was reported in the interviews that the management practices included thinning and rejuvenation of the babassu groves, providing productivity gains and reduced effort for the collectors, since the distances to be covered during collection were reduced. In the interviews, it was also reported that the implementation of AFS consortium with babassu trees contributed to protection against the incidence of fires and resulted in productivity gains.

### ***6.2.2. Direct effect “Agroforestry and biodiversity product chains with increased added value in the Médio Mearim region”***

At the direct effect level, a set of indicators was listed to express the increase in the added value generated by the actions of the APL Babassu project. In addition to the figures for soap production (Tables 1 and 2), the volume and revenue generated in the production of babassu oil were measured, reflecting the added value.

In terms of demand, the project achieved its production expansion target. However, the revenue target evolved much more favorably than projected, indicating the product's appreciation in the market. Improvements in quality and production processes may have contributed to this evolution, indicating the project's success in this regard.

It is worth mentioning that ASSEMA carries out more detailed monitoring of production and processing of the set of products, which provides a wider picture of the added value generated by the organizations involved in the babassu arrangement, including, for example, the production and commercialization of fruit pulp from the AFS implemented in the Agricultural Family Schools with the project's support. In addition to that, 2020 data from this monitoring was collected within the scope of the evaluation, allowing post-project verification of continuity of production and commercialization (Tables 1 and 2).

This direct effect also included indicators used in a standardized way in the Am-

azon Fund projects, referring to the number of producers and organizations reached by the APL Babassu project. But its composition and targets made it difficult to capture the project's effects. Apparently, the number of individuals directly benefiting from the project tripled, reaching the proposed target. However, the target for the number of settlers directly benefited is the same as the baseline and does not vary throughout the project. In turn, the target for the number of women involved was much lower than expected, reaching half of the baseline at the end of the project. This quantitative performance strongly clashes with the relevance of the role of women in the babassu value chain and in the performance of the project arrangement. The interviews with ASSEMA representatives showed that the indicator was interpreted differently by the Amazon Fund team and by ASSEMA. While ASSEMA had established the target for the women who were part of the families benefiting from the project, the Amazon Fund team focused on surveying the women directly involved in the project's actions. With the relevance of the implementation of AFS for direct involvement, the project, in fact, addressed a productive activity in which male work predominates and women participate in smaller numbers. As no adjustment was made to the target to accommodate a common interpretation, the achievement of the target for this indicator was far below expected.

Doubts and uncertainties related to the indicators and their measurements limit the possibilities of drawing conclusions about income generation from the available data. But it is worth noting that the effective operation of the arrangement of organizations and the multiple ways of using the resources operated by the partners allow a diversified income composition from the different stages of production, collection, and processing of the products (an example of income generation is presented in the thematic report).

### **Output 2.1: Expansion of the production of Babaçu Livre soaps and babassu oil**

The indicator for this output covers only the list of equipment purchased under the *APL Babassu* project, but which relates to a set of reforms and improvements to the existing soap factory managed by AMTR:

- Replacement of the hydraulic and sanitary electrical installation system;
- Renovation and restoration of two rooms;
- Acquisition of equipment to change the processing of soaps from "cold" to "hot," expanding semi-automated processes.

However, the execution of the works was delayed due to changes in the format for issuing the operating license and other difficulties in the regularization of the factory. Several stages were only completed in the last year of the project. Thus, both the increase in production and revenue from soaps are among the indicators whose achieve-

ment was much lower than projected. By the end of the project, production and revenue generated from the sale of the soap had more than doubled but had only reached one-third of the targets. In 2020, after the project was completed, production (41,390 units) and revenue (BRL 61,510.00) continued to grow. However, they were still far from the initial targets, indicating the possibility of errors in their calculation.

### Output 2.2: Advice on product marketing and quality management

This output refers to actions carried out in the different processing units involved in the *APL Babassu* project. They are:

- Preparation of communication and marketing plans for the appreciation of babassu products, generating several products for dissemination, such as articles and notes in printed newspapers, electronic and television media, expansion of presence on social networks, preparation of videos, and creation of a bank of images of the initiatives.
- Development of labels for products with the Babaçu Livre brand (soaps, oil, mesocarp flour, liqueurs, and jellies).
- Preparation of an economic feasibility study for soap produced with crude and refined babassu nut oil.
- Preparation of two Quality Management Plans for manufactured products, two manuals of good manufacturing practices, a work safety plan for the babassu soap factory, and environmental risk prevention programs for the soap factory.
- After purchasing said equipment, training, and qualifications for operators and the chemist responsible for the production process.

The indicators referring to these outputs are not very significant: the initial targets referred to the number of plans or instruments to be developed, while the monitoring counted the actions carried out. Thus, the targets were largely exceeded, but they do not seem to translate the project's ambition correctly.

Finally, it is worth mentioning studies to create new food products from babassu mesocarp flour, which have great potential to occupy a market in the area of baked products (cookies, pasta, ready mixes). The study resulted in the proposition of a dry mesocarp pasta, a ready-to-drink porridge mix, and a lactose-free babassu cookie. Methodological procedures, formulations, production processes, indication of packaging, technical and nutritional labeling, indication of equipment for production, analysis

of reports and tests related to the development of products in accordance with food legislation and consumer information.

***6.2.3. Expanded managerial and technical capacity for the development of sound management practices for non-timber forest products, implementation of AFS, cooperativism, and management of associations in the Médio Mearim region***

For this direct effect, all assistance and support activities carried out by ASSE-MA's technical staff, the investments for the modernization of the Agricultural Family Schools, and the training provided by them were considered.

**Output 3.1: Execution of technical assistance and rural extension (ATER) activities**

The ATER actions (defined by ASSEMA as Technical Assistance and Forestry Extension, ATERF) cover the activities of the entire technical staff that worked throughout the lifetime of the APL Babassu project. Again, the format and measurement of the indicators do not allow any conclusions about the effectiveness of these activities. As a target for measuring the number of visits by extension workers to family units, an increase from one to three visits per month was established, but the monitoring plan counted the total number of visits. Thus, it was not possible to determine whether they achieved the target. The number of units visited reached only 12% of the stipulated target, raising doubts about the indicator's interpretation.

However, reports and interviews indicate that the technical staff's performance was a key factor in successfully implementing all the activities. The extension workers guided and monitored all babassu management actions and the implementation and maintenance of AFS, both in the family units and the schools. The team supported the surveys for the babassu management plan, defining sampling units together with the communities and making inventories of species. For the implementation of different types of AFS, species composition was studied, tested, and oriented, experimenting with species with a short reproductive cycle, introduction of fruit trees, soil preparation techniques, planting, fertilization and other treatments, such as fire control.

**Output 3.2: Modernization of three agroecological pedagogical units (Agricultural Family School – EFA)**

The Agricultural Family Schools were implemented in the region in 1996 and serve students from the 6th to the 9th year of basic education. They are considered an achievement of the social movement that created and sustains community organizations, since the schools are located within the communities and are identified with the

movement's values. A modular teaching system is adopted, in which students spend 15 days at the school, on a boarding-school basis, and 15 days on their family's property, so that the learning can also be implemented there. The implementation of AFS met not only the pedagogical objectives of the schools, but also contributed to the improvement of the quantity and quality of meals for the students.

The three EFAs participating in the APL Babassu project received a series of improvements and equipment. The schools were equipped with weirs and water tanks, greenhouses for producing vegetables and agroecological products, fruit processing and storage units, and other gears.

### **Output 3.3.: Training of young people in forest management, integrated production systems, and management of properties and community enterprises**

In this output, the young people who participated in the various training processes offered by the *APL Babassu* project were counted (exchanges, training on good babassu management practices, and workshops on good practices for processing non-timber forest products, such as mesocarp, oil, soap, and fruit pulp).

An output indicator was established for the training, with the target of 60 young people trained having been exceeded, reaching 80. At the level of direct effect, the number of young people who were effectively applying the acquired knowledge was measured. Although the target of 25 was also exceeded, with 45 young people trained, this number is just over half of the participants. But a detailed analysis reveals the involvement of the graduates in the different activities of the arrangement of the organizations: there are 8 young people in charge of managing the collection of kernels in the community canteens and in the production and commercialization of babassu oil, 5 in the production and management of the soap manufacturing, 22 who have taken on pedagogical and complementary technical assistance activities in schools and for the sectors integrated productive activities (AFS, fish farming, horticulture, animal management), in addition to 12 that took over productive activities in family units.

#### ***6.2.4. Direct effect “Deforested and degraded areas recovered and used for economic and ecological conservation purposes”***

This effect was associated with the implementation of AFS as the only output. However, the previous items show that this strategy is part of the integrated systems approach adopted by ASSEMA and the organizations of the arrangement and was used in the APL Babassu project in a cross-cutting way, with several interfaces with the project's ATER, training, and value-adding actions.

As with babassu, the implementation of AFS served a multiple strategy, focusing on different objectives:

- Forming protection belts around the babassu groves: the plantations increase the families' commitment to prevent fires and protect the babassu groves against contamination by pesticides and against deforestation.
- Food security for the families and EFA students: in the schools, integrated systems were used in pedagogical practices, but also for the school meals.
- Access to markets and income generation from fruit and wood species, with a focus on the regional market.

Inputs and equipment were acquired for the implementation of AFS (for example, construction of fences, seedlings for planting and replacement, and machinery). At the end of the project, 210 hectares of AFS were implemented (120 in family units and 90 in the schools). In 2019, production reached 2,848 kg of pulp from five types of fruit. The AFS also enabled inter-crop production of important crops for food security, such as grains (beans, corn, and fava beans), legumes (okra, vinegar, and gherkin), and tubers (yuca and cassava).

#### Output 4.1: Implementation of agroforestry systems, AFS

The output and direct effect indicators both refer to the implementation of AFS. But in the *APL Babassu* project, different targets were established for areas of implemented AFS (target of 280 hectares, 75% achieved) and area under recovery with economic use (target of 500 hectares, 100% achieved). As there is no variation in the evolution of the area under recovery, the area effectively measured was probably that of the implemented AFS.

### 6.3. General evaluation

Considering the scope and complexity of the *APL Babassu* project, the evaluative elements will be organized by the project's major fronts of action, which allows a more organic aggregation than the structure of effects and outputs.

#### 6.3.1. Positive aspects

- The APL Babassu project was **very important for the improvement and consolidation of the organizational and productive arrangement** headed by ASSEMA. Despite the adoption of the APL concept, designed in the context of the Promotion Plan for the Social Biodiversity Product Chain, in practice, the implementation of actions followed the concept of integrated

systems, shaped by the trajectory of ASSEMA and other organizations. Its distinguishing feature is the approach to the multiple and diversified use of extractivism and family farming products, in which one type of use complements the other. Thus, **babassu and its byproducts play a key role in the economy of communities, but in association with products from traditional family farming and AFS** introduced by the project.

- The project's organizational arrangement existed previously and stood out for its **unique origin resulting from popular mobilization**, reflected in the governance structures of organizations, with members being able to participate in several of them, simultaneously. There is a strong sense of identity and belonging towards community organizations and ASSEMA itself:

“

“We will always work to make ASSEMA exist.  
99% of what we have was made by us.”

“We are a body with many limbs.”

- This **background facilitated the structuring of the project**, with ASSEMA, which already held the role of strategic discussion and technical advice, as an agglutinating organization, and the productive organizations (e.g. AMTR and COPPALJ) and EFAs as agglutinated organizations. The EFAs play a strategic role in attracting and training young people. However, they were considered weak and incapable of attracting resources from production systems for school meals.
- The organizations' specialization in the processing of certain babassu by-products, with COPPALJ focused on the production of meal and oil, AMTR on the production of soap, and COPAESP (which did not participate in the project as it covered cerrado areas) on the processing of mesocarp, made it possible to explore specific insertions in value chains in a complementary way. Thus, it is **one of the projects that most clearly worked along different links in a chain**, covering production, processing, and expansion of value-adding (e.g. by prospecting for new products).
- The **ecological limitations** identified in the process of traditional extractivism were **addressed through the development of a sustainable community management plan for babassu groves** and community agreements, but also by providing incentives to AFS as part of integrated systems, associating aspects of sustainability, productivity, and income generation.

- The **preparation of the management plan was an innovative contribution** of the project, which may inspire similar plans in other regions characterized by babassu extractivism. It also strengthens the symbolic appreciation of babassu, which is still viewed as a pest by many in the region. In addition, it was complemented by associated instruments, such as the manual of good management practices, community agreements, and fire-fighting plans.
- The surveys for the management plan generated **knowledge about the natural succession dynamics of the babassu palm**, making it possible to monitor the natural regeneration of the forest through the implementation of permanent plots. They also contributed to the identification of existing species in babassu groves and made it possible to map suppliers and the volume of babassu kernels sold in each community, in addition to georeferencing the collection areas to confirm organic certification.
- The development of **community agreements**, based on the work to prepare the management plan, involved meetings with various local actors, including farmers, traders, politicians, etc. The narrative that **it is possible to combine livestock farming with the maintenance of babassu groves**, increasing animal comfort and reducing the need for inputs, was strengthened. The interviews showed that there are cattle farmers with increasing awareness of these aspects, which creates favorable conditions for coexistence between cattle raising and babassu extractivism.
- Investments in equipment and renovations of AMTR and COPPALJ processing units allowed for **improvement and expansion of existing production lines**, such as babassu oil and soap, with emphasis on the start of production of refined oil. As a result, it was possible to increase the revenue of the organizations responsible for these product lines.
- The investments in the **implementation of AFS** also began to contribute to **revenue generation**, although such contributions were not monitored by the project. Investments in the EFAs made it possible to disseminate knowledge and experience the implementation of AFS in a practical way. The alternation methodologies allowed the knowledge acquired by the students in the schools to be disseminated to the families' properties. In addition, the production contributed to the improvement of school meals.

### 6.3.2. Challenges

- Even though the babassu collection, associated with a political movement with a strong female presence, is considered an emblematic expression of traditional extractivism, the **Médio Mearim region has been suffering high pressure from deforestation** since the 1980s due to the expansion of livestock. The replacement of forests and babassu with pastures is also practiced by family farmers in the settlements. Therefore, it is a problem that affects the extractivist communities themselves.
- Despite all the advances, **it was not possible to formalize the management plan**, since the State Environment Agency does not have guidelines and criteria to approve it. The people in charge at ASSEMA do not consider the management plan to be finalized, so the results have not yet been published. Likewise, community agreements are voluntary and have not been registered due to the lack of rules for their regulation. The mapped areas are not associated with specific land categories; they are not continuous areas, they are mosaics composed of public and private areas, constituting what is called the "babassu territory."
- Although the concept of APL was developed with a view mainly to insertion in institutional markets, the aspect of **expansion of access to markets did not receive specific attention in the APL Babassu project**. The outstanding positioning of COPPALJ, with its focus on supplying babassu oil with organic certification to national and international companies, and the growing demand for the product indicated a positive evolution in the production and revenue of this key product. The project's contributions on this front focused on investments that allowed qualitative improvement and prospecting of new products. The expansion of commercialization took place as an effect, but not as a direct result of the project's targeted actions. The project's diversification efforts were mainly oriented towards productive structuring, especially the implementation of AFS. Considering the time required to consolidate AFS, the prospects for commercialization and income generation from this production are still incipient.
- The organizations and activities carried out in the context of the APL Babassu project generated several contributions in terms of **added value that were not captured by the project indicators**. The improvement of facilities, equipment, and processes in the production of oil made it possible to start the production of refined oil (12,620 kg in 2020). The production of refined oil was highlighted in the interviews as one of the

project's strategies for adding value to the chain. In addition, production diversification through agroforestry systems was also undertaken with a view to generating income for project participants. ASSEMA supports the evolution of production volumes and income generated by the production of pulps, jams, and liqueurs, in addition to handicrafts.

- Although PGPMBio is a very relevant policy in the context of babassu extractivism<sup>51</sup>, this relevance is lower for COPPALJ members, with their prominent positioning in the private and international markets. COPPALJ pays more than PGPMBio and produces profits, so its partners are familiar with price fluctuations and market dynamics. Public markets could be relevant for the commercialization of babassu mesocarp and, in the future, for the production of AFS (especially fruit pulps), but, according to the interviews, **access to these markets proved to be bureaucratic and marked by relationship and management issues** with the responsible public bodies.
- The project's arrangement was facilitated by the existing relationships between ASSEMA and the other organizations, but **no specific institutional strengthening efforts were made** to promote greater managerial autonomy of the organizations. The technical and managerial capacity component prioritized training related to the management and establishment of AFS, without specific actions directed to the management of the productive organizations. In the interviews, perceptions of improvement in the autonomy of productive organizations were expressed, but this does not extend to the EFAs that participated in the projects. In addition, the role of project management and fundraising is seen as a specific task for ASSEMA in the institutional arrangement, and there is no expectation that the agglutinated organizations will take on these functions.
- The negotiation of community agreements showed that the **transition from extractivism to a sustainable babassu management system is not simple**. Adopting new practices takes time, and there was resistance in the process, partly related to fears of loss of traditional knowledge. Currently, the nut-breaking process is manual, since there is still no machinery adapted to the irregularities of the fruit. Investments in improving production and

---

51 OLIVEIRA, Letícia Sales da Costa: "Saiu o dinheiro do coco?": Avaliação de processo da Política de Garantia de Preços Mínimos para os Produtos da Sociobiodiversidade (PGPMBio) para a amêndoa do babaçu no Médio Mea- rim. 2020 Dissertation (Master) – Federal University of Pará. Federal University of Pará, Belém, 2020..

adding value to babassu products contribute to strengthening the identity and movement of the nu breakers, but also generate fears:

“*“We'll only be pickers,  
and the machine will break the nuts?”*”

- The **pioneering implementation of AFS in the transition region between the Amazon and Cerrado biomes entailed considerable challenges**. Initially, the idea was to work with a greater diversification of species, but the experiments led to a smaller number of species and the introduction of others over time. For example, cupuaçu, characteristic of many AFS in the Amazon region, did not adapt to the region's climate variability, leading to seedling losses in drought and flood periods. But several adaptations were made, such as planting cupuaçu at the end of the rainy season. There were also difficulties in obtaining adequate seedlings of species in the region. Learning about viable models is still ongoing. Some AFS models may require the use of irrigation and the implementation of small dams and cisterns. Although the planting of fruit trees is part of family farming, the preparation and maintenance work of the AFS represented new activities for most farmers:

“*“It's not something you sow today and reap tomorrow.  
Some people give up, but that's not our case.  
It is such an ecological thing, we are in the middle of  
nature, and the climate is good.”*”

- The **implementation of AFS in EFAs faced practical problems**. Unlike the initial years, when the EFAs served an almost adult audience, currently, students join the EFAs from the age of 10 and are not able to engage in heavier agricultural work. The project underestimated the need for adult labor to introduce and maintain the plantations. This was partially addressed by inviting the students' parents, who participate directly in the management of the schools, but also contribute with working days.
- In general, the students interviewed value the knowledge learned in school, but **there is a proclivity to take advantage of the education offered as a step in the educational process and not as a preparation for working on the property**. This aspect is related to the general trends of depopulation and aging of the rural population, which also affects the project communi-

ties and the nut breakers' movement.

“Eight-year-olds are already thinking of studying, I didn't have this dream in the 80s. Some young women at the EFA still think it is important to collect nuts, they are few, but they do believe so. But nobody goes to college to break nuts.”

### Box 1: Impacts of the pandemic on the APL Babassu project

- The pandemic affected the region shortly after the project's conclusion. All collective activities by ASSEMA and the organizations were suspended. A general meeting was held in 2020, but the governance of the organizations was undermined.
- Internet access in the region is limited, but some communities have installed antennas. With the younger participants, remote coordination worked well.
- Production, processing and commercialization activities continued and even increased, with reduced teams and turn-taking.
- The canteens were of great importance for supplying and maintaining the isolation of the communities and increased the number of items offered. Some occasional meetings were held in the canteens.
- Technical assistance activities were reduced, but individual visits to families continued.
- Training activities were seriously impaired, remote formats were not feasible, but it was possible to keep in touch through WhatsApp groups.
- Part of the EFAs closed during the pandemic, others tried remote teaching, recorded classes, and sending handouts, but the technical result was not considered good.
- In the EFAs, some vegetable gardens were maintained, and baskets were distributed to families. But with the lack of consumption by the students, the tending of the garden beds was reduced.
- The state government opened public notices to distribute basic food baskets, and some producers managed to organize themselves to supply.

### 6.4. Analysis of the OECD evaluation criteria

#### OECD evaluation criteria for the Babassu APL project

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>The project made contributions to an emblematic chain of sociobiodiversity in the Amazon and Cerrado. The so-called APL Babassu operates in one of the priority territories for the chain. The work on the management plan was innovative in addressing the sustainability challenges of extractivism.</p> <p>The project's contributions expanded and consolidated operations in different links in the babassu value chain, benefiting from the unique institutional arrangement built by the communities of the Médio Mearim. The implementation of AFS enabled complementary economic activities that will contribute more significantly to income generation and food security for communities in the future.</p>	Very relevant
<b>Effectiveness Criterion</b>	
<p>Despite variations in scope in the indicator framework, this should be considered a project that has achieved most of its objectives and effects. The inconsistencies observed in the formulation and measurement of indicators and targets were clarified in the interviews and reports. After the project was completed, it was possible to achieve some targets that had suffered delays due to operational difficulties (e.g. production of the soap factory).</p>	Effective
<b>Efficiency Criterion</b>	
<p>The project documentation offers few inputs to evaluate this criterion effectively, and the failure to carry out field visits limited the collection of complementary information.</p> <p>Efficiency bottlenecks could be observed concerning delays in the execution of activities, caused by difficulties in acquiring the specific equipment needed in the processing units, in carrying out the licensing processes for the operation of the facilities, and the impossibility of formalizing the management plan.</p> <p>Due to the innovative nature of some actions, for example, the implementation of AFS, there were some losses of inputs, which should be considered part of the experimentation and learning processes.</p>	Few elements for the evaluation

(continued)

(continuation)

**Impact Criterion**

In addition to the results achieved during the project, there is a prospect of generating medium-term impacts due to consolidating an arrangement that associates extractivism with diversified production based on family farming and AFS.

The work to prepare the management plan, in addition to contributing to the sustainability of extractivism, also provided inputs for the construction of community agreements, which strengthened dialogue among the actors present in the region, generating opportunities for coexistence between babassu extractivism and other uses of the soil and contributing to the management of conflicts that historically characterized the region and were at the origin of the popular mobilization that led to the creation of the organizations participating in the project.

Moderate to strong effect

**Sustainability Criterion**

The sustainability of the project's results and impacts is difficult to evaluate in the context of the pandemic and political-economic instability.

On the one hand, the organizations' production and processing activities were not massively impacted by the pandemic, indicating the robustness of the arrangement and structuring work undertaken, including project support. However, the expansion and consolidation activities envisaged by the project requested in the context of the second Public Call for the Sustainable Production Component could not be implemented, with implications for the sustainability of the results. It is also worth noting that the impacts of the pandemic on the work of EFAs, the training results, and the implementation of AFS in schools were more significant, temporarily compromising sustainability.

The medium-term prospects of babassu extractivism were discussed in several interviews. As in other regions, the rural population is aging, which also affects women nut breakers. Manual nut-breaking is still the norm, requiring heavy physical work, which is uncomfortable for older women and unattractive to most young women. The work of the EFAs made quality formal education accessible to young people in the region. It allowed them to continue their search for professional qualifications. Even if several remain in the region and work in the productive activities or in services related to them (for example, as teachers or monitors at EFAs, as managers of canteens or workers in processing plants), as a rule, there is little interest in continuing to collect in the current fashion. This dynamic should constitute a point of attention for the operation of the babassu arrangement, especially considering that it is a chain with consolidated and even growing demand. Possible prospects for continuity may be associated with a combination of future mechanization of nut breaking with the productivity gains made possible by the babassu management techniques developed with the support of the project.

Average sustainability

## 6.5. Cancun Safeguards Analysis

### Cancun Safeguards of the APL Babassu Project

Safeguard	Compliant	Comments
<p>Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements</p>	<p>Yes</p>	<p>In general, the projects of the APS Component are aligned with Objective 7 of the 2016 to 2020 phase of the PPCDAm (“Promote Sustainable Forest Management”). This project is directly associated with Outcome 7.2 (“Strengthening the Sociobiodiversity Productive Chain”), with emphasis on action lines 7.2.2. (“Support sustainable productive inclusion projects for indigenous peoples, traditional and extractivist peoples and communities”) and 7.2.3. (“Produce and disseminate materials on recommendations and good practices for the management of native species of sociobiodiversity in language appropriate for indigenous peoples, traditional peoples and communities and family farmers”). As pointed out in the analysis, the policies to promote public purchases, provided for in the Normative and Economic Instruments axis (Outcome 9.4) could have presented potential. However, they did not prove to be of relevance to the project.</p> <p>Regarding the promotion and implementation of AFS, the 2016 to 2020 PPCDAm includes this topic among the results of the previous phases<sup>52</sup>, but does not foresee specific actions in this agenda. However, there is alignment with other national regulations, such as the Forest Code and the National Plan for the Recovery of Native Vegetation, which provides for the implementation of agroforestry systems as a way of recomposing Legal Reserves in the context of family farming (Law No. 12651/2012, art. 66, paragraph 3), highlighting their contributions to food security and other social and economic benefits.</p> <p>The Action Plan for the Prevention and Control of Deforestation and Fires in the State of Maranhão dates from 2011 and, therefore, does not have updated guidelines for the project implementation period. The only specific objective with which the project partly aligns is “Supporting the development of research for the strengthening of APS,” insofar as it can be considered that the work to prepare the management plan is associated with these efforts. But there is no specific focus in the plan on promoting or strengthening sociobiodiversity products.</p> <p>The municipal laws of free access to babassu groves in the state are relevant protection mechanisms in the project context.</p>

(continued)

52 MMA. Ministry of the Environment. *Plano de Prevenção e Controle do Desmatamento na Amazônia Legal*. Documento base: contexto e análises. 2016. p. 8.

ANNEX I:  
1 — APL Babassu

(continuation)

<p>Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation</p>	<p>No</p>	<p>There were no specific contributions from the project in this regard.</p>
<p>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 has adopted the UN Declaration on the Rights of Indigenous Peoples</p>	<p>Wide-ranging</p>	<p>The project directly promoted babassu extractivism, traditionally carried out by communities in the Médio Mearim region.</p> <p>The debates on the challenges of continuity and evolution of the systems for using natural resources and the communities' ways of life were at the center of the project's concerns.</p>
<p>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</p>	<p>Yes</p>	<p>No evidence of formal compliance with the decisions was identified, but it is worth noting that the project execution arrangement is composed of organizations formed and consolidated by the social movement, driven by extractivist communities present in the region (including quilombola communities), which actively participate in the management and the development of these organizations.</p> <p>The project was inserted in the participatory planning mechanisms practiced in the context of the institutional arrangement of ASSEMA. There was a consistent investment in communication actions and in the dissemination of the Manual of Good Management Practices for Babassu.</p> <p>Regarding the establishment of the project monitoring system, the problems found were addressed in the analysis. There were weaknesses in the formulation and verification of the indicators, which make it difficult to draw conclusions on the contributions to income generation based on the project's results.</p>

(continued)

## ANNEX I: 1 — APL Babassu

(continuation)

<p>Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of 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 enhance other social and environmental benefits</p>	<p>Yes</p>	<p>The focus of the contribution is on the protection of babassu groves and the use of areas for recovery through the implementation of AFS for economic and food security purposes. The implementation of AFS is still going through stages of experimentation and adaptation to climatic conditions in the region, but there is attention to the use of native species, such as cupuaçu.</p> <p>There was no project action in protected areas. The public involved is primarily located in settlement projects.</p>
<p>Actions to address the risks of reversals in REDD+ results</p>	<p>NA</p>	<p>Not applicable. It could possibly be addressed in the future, with greater dissemination and consolidation of AFS at scale in the region.</p>
<p>Actions to reduce the displacement of carbon emissions to other areas</p>	<p>NA</p>	<p>Not applicable</p>



PHOTO: ASSEMA

## 6.6. Analysis of Cross-Cutting Criteria

Criterion	Compliant	Comments
Poverty reduction	Yes	<p>There were increases both in volume and in revenue from in natura and processed products supported by the project. Despite the difficulty in drawing more concise evidence from the project's indicators, the increase in the income of the productive organizations that participated in the project indicates the contribution to income generation of the partners of these organizations. It is worth highlighting the fact that the prices paid by COPPALJ for babassu kernels are higher than the minimum prices established by PG-PMBio, indicating the relevance of this organization's performance for generating income for its partners in a region where PG-PMBio constitutes an important mechanism to fight poverty.</p> <p>The project strengthened economic alternatives associated with various ways of using babassu, as a product associated with the appreciation of transition forests between the Amazon and Cerrado biomes.</p> <p>The project did not include actions under the Scientific and Technological Development Component, but the preparation of a sustainable community management plan for babassu contributed with relevant elements for a development model suitable for the region.</p>
Gender equity	Yes	<p>As reported, women play a strong role in babassu collection and breaking in the communities. Although men also participate in these activities, traditionally their activities were more focused on agricultural production.</p> <p>The project developed initiatives in both lines of action, investing both in strengthening the babassu chain and in the complementary promotion of AFS, which were also implemented by women, although to a lesser extent.</p> <p>Women also play a leading role in the organizational arrangement, for example, AMTR is an organization composed and managed exclusively by women. Soap manufacture was started as an activity specifically intended to promote the generation of additional income for its female members.</p> <p>The interviews brought up evidence of women's empowerment through economic activities and participation in organizations, highlighting gains in autonomy and participation in decision-making.</p> <p>The number of women benefiting from the project's actions was determined as a standard indicator of the Amazon Fund. However, there was no disaggregation of the other indicators by gender. The quantitative performance below expectations for this indicator was analyzed in item 6.2.2.</p> <p>Finally, the management and processing activities in the organizations supported by the project were highlighted as attractive for the involvement of young women in the chains (for example, several women are working in the management of community canteens and processing plants), which contrasts with the aging trends observed in babassu collection and breaking.</p>



## 7. Conclusions and Lessons Learned

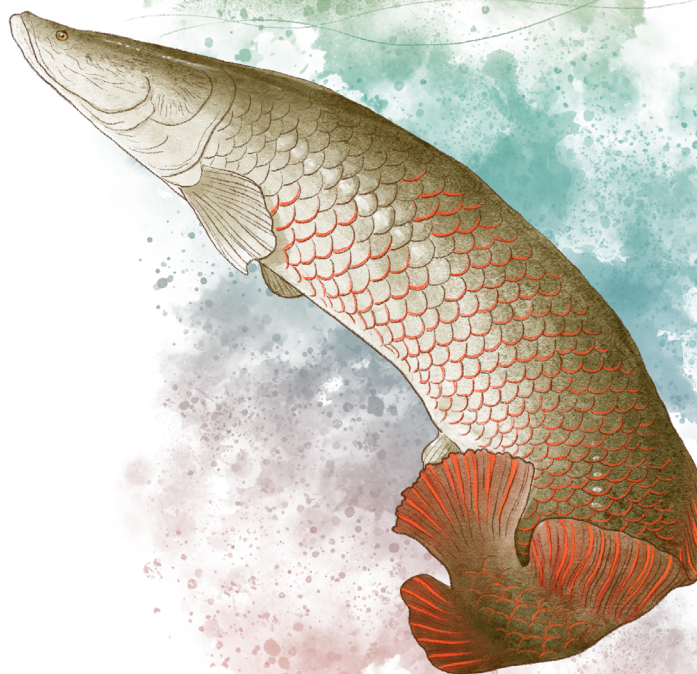
The trajectory of the participating organizations in the Médio Mearim region represents a peculiar case of organizational arrangement, marked and driven by popular movements active in the region since the 1980s. While this highlights the dynamics and results achieved by the APL Babassu project, it also limits generalized conclusions and the scaling up or replication of approaches to other regions or projects.

The *APL Babassu* project supported by the Amazon Fund represents a step on the path. It stands out for its scale, representing the largest initiative ever implemented by ASSEMA and associated organizations at the time. The project achieved most of its objectives and results, some of which could be complemented in the post-project period. It is clearly perceived as relevant for the expansion and consolidation of organizations and the production and processing activities undertaken by them. Greater impacts could have been achieved if the activities had unfolded in the project approved in the context of the second public call for the Sustainable Production Component.

The combination of lines of action in the babassu chain and in the implementation of AFS as productive diversification mechanisms met different objectives and focuses. Nevertheless, the project operated through different stages of an emblematic chain for the use and conservation of sociobiodiversity in a region relevant for fighting deforestation in transition areas in the Amazon.

The role of women in babassu collection and breaking already represented a prominent element in the work of the organizations involved in the project's arrangement. Therefore, attention to aspects of gender equality was part of the project's actions, but it was not targeted by specific approaches other than those already present.

In the context of the other projects included in the evaluation, the *APL Babassu* project stands out for its approach to topics related to youth, resulting from the insertion of the Agricultural Family Schools in the organizational arrangement. This factor allowed the theme to be addressed specifically in the interviews, but also encouraged attention to the theme in the evaluation of other projects, showing that the related aspects should receive greater attention and direction in the Amazon Fund projects.



## 2. Sustainable Fishing

---

### 1. Project Fact Sheet

**Organization responsible for project management**

World Wildlife Fund (WWF) Brazil

---

**Type of access**

Spontaneous demand, initial project presentation:  
April 2009.

---

**Project period**

2rd quarter of 2014 to 4rd quarter of 2017

---

**Amount of support from the Amazon Fund**

BRL 3,205,943.00

**Beneficiaries**

Artisanal fishermen and riverside  
and indigenous communities.

---

**Place**

Municipalities of Feijó, Tarauacá and Manoel  
Urbano, in the state of Acre.

---

**Land categories**

Indigenous Lands

---

**Axes**

Sustainable production



## 2. Project Summary

The *Sustainable Fishing* project promoted the adoption of management measures combined with the signing of fishing agreements, to reduce the degradation of aquatic ecosystems and establish sustainable economic alternatives to deforestation in the state of Acre. A standard was developed to certify managed pirarucu, and a program to improve fishery was developed. In addition, an ecological-economic feasibility study was carried out, and the potential for expanding management practices in the pirarucu production chain was analyzed. The knowledge acquired can guide the design of actions necessary to expand these practices and strengthen the pirarucu production chain.



## 3. Project Intervention Logic

The *Sustainable Fishing* project was derived from the proposal presented by the World Wildlife Fund (WWF) Brazil through spontaneous demand. The original proposal involved the chains of rubber, Brazil nuts, timber, and fish in several regions in the states of Acre and Amazonas. Under the title of "Valuing Ecosystems and Communities: Valuing Ecological Products and Services as a Strategy to Promote Local Sustainable Development and Reduce Deforestation and Ecosystem Degradation in the Southwest of the Amazon," the proposal submitted to the Amazon Fund defined the following objectives:

### *General Objective (indirect effects)*

Promote the adoption of policies, measures, and actions to reduce deforestation rates and ecosystem degradation in the southwest of the Amazon. In addition, to ensure the conservation of natural ecosystems in the long term, through the strengthening of sustainable economic activities, based on the appreciation of ecosystem products and services, social cohesion, engagement of local actors, and support for public policy decisions.

### *Specific objectives (expected direct effects)*

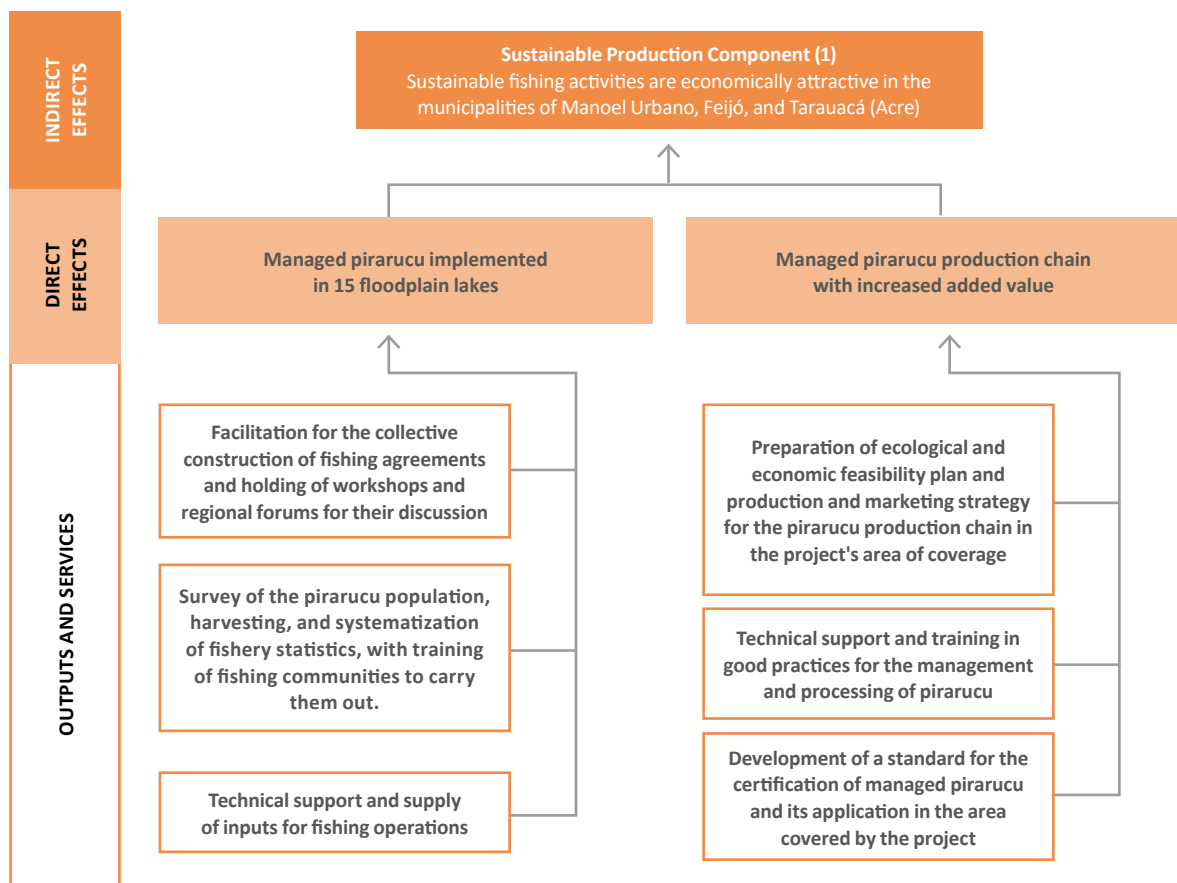
- Assess the impacts of sustainable and unsustainable productive activities on income generation and reducing or increasing deforestation, ecosystem degradation, and associated carbon emissions.
- Foster the implementation of structuring actions to strengthen sustainable productive activities and the provision of payments for ecological services in priority locations.

ANNEX I:  
2 — Sustainable Fishing

- Encourage the replication of project results with local actors through an effective communication strategy.

The original proposal had a budget of approximately BRL 25 million, of which BRL 17 million was requested from the Amazon Fund. After a long negotiation process, the project was approved in 2013 and contracted in 2014. As a record of the newly approved project and under the procedures in force during the implementation period, a new logical framework was created for the project, adapting it to the results structure of the Amazon Fund (Figure 4).

Figure 4: Logical Framework for the Sustainable Fishing project agreed with the Amazon Fund<sup>53</sup>



Source: Amazon Fund/BNDES

<sup>53</sup> There is a mistake in the description of the output linked to the first direct effect, which describes an output of the *Productive Sociobiodiversity in the Xingu* project. The correct output is “Elaboration of babassu management plans”

## ANNEX I: 2 — Sustainable Fishing

In the project's implementation and reporting, the executing organization divided the implementation strategy into four components, replacing the two direct objectives/effects, but keeping the outputs in line with the Logical Framework. This structure guided the description of activities in the Performance Reports and Results Evaluation Report.

### Chart 2: Components and outputs under the proposal for the *Sustainable Fishing* project

<b>Component 1 — Develop an analysis of the ecological and economic feasibility and the potential for expansion of management practices and the production chain of pirarucu.</b>
Output 1.1: Facilitation for the collective construction of fishing agreements and holding of workshops and regional forums for their discussion
Output 1.2: Survey of the pirarucu population, harvesting, and systematization of fishery statistics, with the training of fishing communities to carry them out.
Output 1.3: Technical support and supply of inputs for fishing operations
<b>Component 2 — Build and consolidate participatory systems for the management of fishery resources</b>
Output 1.2: Preparation of ecological and economic feasibility plan and production and marketing strategy for the pirarucu production chain in the project's area of coverage
Output 2.2: Technical support and training in good practices for the management and processing of pirarucu
<b>Component 3 — MSC certification for fishing of managed native pirarucu</b>
Output 2.3: Development of a standard for the certification of managed pirarucu and its application in the area covered by the project.
<b>Component 4 — Project Communication</b>
Component 4, which focused on communication, did not have outputs specified in the Logical Framework and indicators in the monitoring plan.



## 4. Specific Methodology

In the evaluation of the *Sustainable Fishing* project, the general methodological evaluation steps defined were followed. The exploratory interview steps were carried out with the project coordination, and the mission focused on the other project participants. The evaluation benefited from the coordination and mobilization carried out by the project coordination, but access to the indigenous people of the municipality of Tarauacá was hindered by the isolation measures put in place to tackle the increase of Covid-19 cases in the state of Acre.



## 5. The Project in the Organization's Trajectory

### 5.1. Organizational context

The WWF Network began its operations in Brazil in 1971 focusing on species conservation. In 1990, an office was opened in Brasília and, in 1996, WWF-Brasil was officially established as an autonomous, non-profit Brazilian nature conservation organization that became part of the international network. In addition to the headquarters in Brasília, WWF-Brasil currently has four other offices, in São Paulo (SP), Rio Branco (AC), Manaus (AM), and Campo Grande (MS).

At the time of the project, WWF-Brasil's activities were structured around thematic conservation programs (Agriculture and the Environment, Water for Life, Education for Sustainable Societies and Climate Change and Energy, in addition to a Landscape Ecology Laboratory) and regional programs (Support for Sustainable Development in the Amazon, Protected Areas and Support for the Arpa Program, Cerrado-Pantanal, and Atlantic Rainforest).

WWF-Brasil's activities in the fishing chain began in an integrated manner with the structuring of community-based tourism in Silves, in the state of Amazonas. As part of the organizational structuring processes, the "fishing agenda" became part of the Amazônia Program, then based in Rio Branco. Within the program's scope, the Alto Purus project was designed and implemented in the municipalities of Sena Madureira and Manoel Urbano in the state of Acre from 2005 onwards. This project involved the structuring and strengthening artisanal fishing through actions of the Secretariat of Production of the Government of the State of Acre (SEAPROF). The fishing agreements were the central strategy, coupled with promotion, technical assistance, and inspection actions, which made up the governmental action based on integration between the bodies and leadership of the fishing team at SEAPROF.

The results of the *Alto Purus* project in Manoel Urbano drew the attention of the Feijó Fishing Colony (COPAF), which, as of 2007, began to participate in training and municipal forums held in Manoel Urbano. Ad-hoc actions started to be carried out in Feijó, and consultancies indicated an even greater fishing potential in this municipality. Based on these indicators, WWF-Brasil expanded its area of operation to the region of the Envira and Tarauacá rivers.

As of 2010, artisanal fishing lost ground in the new strategy of the government of Acre, which was redirected to the promotion of fish farming. The governmental technical team was demobilized, and there was a gradual retraction of the State government's participation in the actions.

When the *Sustainable Fishing* project was approved, the partnership with the state government was maintained locally in Feijó. To fill the gap left in the technical

team, WWF-Brasil selected a consulting firm to take on most of the technical assistance for the *Sustainable Fishing* project: Tipoiá – Work and Inclusion for Populations, Organizations and Institutions of the Americas Ltda. Other consultancies complemented the technical support to the project in a more ad-hoc manner.

Still, in the organizational context, it is important to mention the change in project coordination in January 2016. From then on, the project has a more constant presence in the monitoring and coordination of activities.

After the *Sustainable Fishing* project was completed, a comprehensive “feedback and evaluation” round was carried out in 2019 to monitor its effects and gather lessons learned. There was also continuity of some actions with the communities, especially with the indigenous people of Tarauacá, where the project had a more educational than economic focus. As a result of the project, discussions were underway with the State Federation of Fishermen, which covers 16 colonies, to ensure the continuity of actions and appropriation of lessons learned, through the creation of a State Fishing Forum. Both activities were interrupted due to the Covid-19 pandemic in early 2020.

### 5.2. Conceptual and implementation strategy

The original Sustainable Fishing project presented in 2009 by WWF-Brasil to the Amazon Fund precedes the strategies of the public calls for proposals directed to the APS Component. In terms of design and conception, the proposal already provided for a specific fishing action, aiming to consolidate the management system in place since 2005 in Manoel Urbano and Sena Madureira, in the state of Acre; and to start demonstration projects in Boca do Acre and Pauini, in Amazonas.

For the purposes of the evaluation, a new document that systematizes the revised implementation strategy for the project that was approved in 2013 was not made available. The reference is the Logical Framework, in which the project's scope is adjusted to the state of Acre and redefines the municipalities to Manoel Urbano, Feijó, and Tarauacá.

The interviews with the representative from the project revealed that the intention of the Sustainable Fishing project was to reproduce the successful experience of the Alto Purus project that was implemented in partnership with the government of Acre and the Manoel Urbano Fishing Colony, in which the fishing agreements made it possible to increase the pirarucu population by 260% in three years of management of the species<sup>54</sup>. The project strategy was based on understanding fishing agreements as a formal instrument of co-management that regulates the use of lakes and creates the basis for managing pirarucu, the main commercial species.

The fishing agreements are built in a participatory way, involving representatives of all users: riverside communities, professional fishermen associated with fishing colonies,

---

<sup>54</sup> WWF-Brazil. Valuing Ecosystems Project. Amazon Fund, 20019. p. 64..

## ANNEX I: 2 — Sustainable Fishing

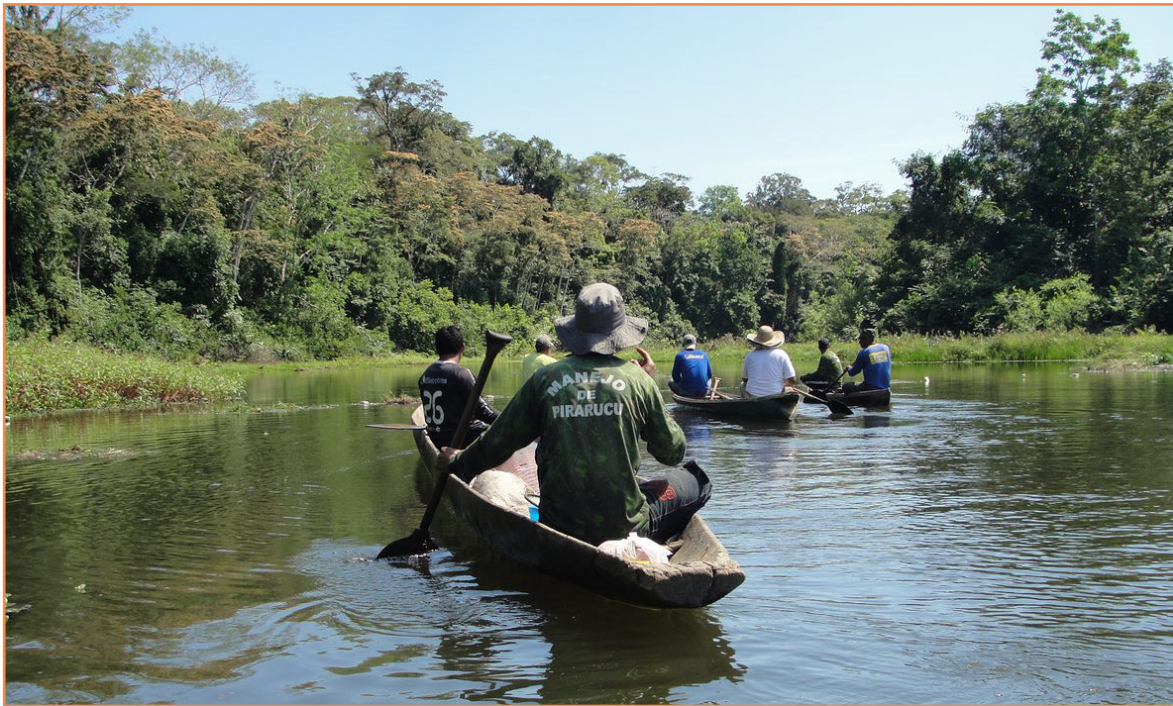


PHOTO: WWF Brazil

representatives of "regulatory" bodies, and activity promoters, such as state, municipal and federal governments. The agreements establish rules for the use of the lake, such as types of gear, fishing periods, and the sharing of the benefits of commercial fishing, to guarantee the conservation of the lakes, improve the fish population and protect endangered species – as is the case of pirarucu. Based on the guidelines of the agreements, pirarucu management takes place according to the fishing quota to be licensed by the environmental agency based on data from fishery statistics generated by counting and monitoring activities.

In the strategy adopted by the *Sustainable Fishing* project, fishing colonies are the primary operator in the production chain to be strengthened, through training, organizational development, and infrastructure actions. Among the fishermen and project team, pirarucu fishing is considered a highly specialized activity requiring a mix of talent and technique. The strategy of creating a Pirarucu Management Group (GMP) was adopted to develop this expertise within each fishing colony. The group members participated in an intense and continuous training to monitor activities (counting before fishing), fishing and processing (cutting and salting after fishing for adequate storage during the trip). Fishing takes place in expeditions that can last from 20 to 40 days, due to the distance of the lakes in the state of Acre.

Management was implemented in riverside communities and in the Kaxinawá Nova Olinda, and Praia do Carapanã Indigenous Lands. Communities were mobilized for the participatory construction of fishing agreements. The meetings were timely in enabling dialogue between the communities and representatives of the government and the fishing colony, allowing the communities to present their needs. The agreements make it possible to regulate the use of the lakes, which can mean a reduction in predatory fishing and

an increase in the availability of fish for the community. Pirarucu management makes it possible to clean lakes (removal of vegetation), an important action to facilitate fishing by communities, but also opens space for more predatory fishing, hence the importance of solid fishing agreements with adequate supervision.

Fishing agreements establish the sharing of revenue generated by pirarucu fishing. Communities receive 20% of the fish value referring to the lake where they live. In the case of indigenous lands, they receive a higher percentage, since the Fishing Colony does not benefit from the fish from these territories. In the others, the colony receives 15% and the management group 65% in all cases. Communities have the autonomy to define the use of resources, but the project encourages the use of collective activities. There were cases in which it was decided to share the resource among the families that participated directly in the activities. In the case of Feijó, the Fishing Colony proposed to affiliate riverside people, providing fishing licenses, to motivate their work as “guardians of fishing agreements”<sup>55</sup> within the scope of the project, thus making it possible for them to receive the off-season insurance.

Since the experience in Manoel Urbano, the commercialization of pirarucu took place locally, generally linked to municipal events that provided visibility to the product and the project. Thus, the production calendar was organized so that fishing took place on a date close to these events, which in general quickly absorbed all production. Initial studies estimated an increase in pirarucu production, so the *Sustainable Fishing* project was intended to address production certification, aiming to provide certified production for the 2016 Olympics. To this end, a scientific bias line was created to develop an innovative certification standard based on marine fisheries.

In parallel with all this structuring of the pirarucu chain from the perspective of income generation in Feijó and Manoel Urbano, the project took on a different shape in Tarauacá. Mapping on the Tarauacá River indicated that part of the manageable lakes would be in the state of Amazonas, therefore outside the “jurisdiction” of the Fishing Colony. On the other hand, leaders from the Kaxinawá Praia do Carapanã Indigenous Land were supported by the WWF-Brasil to carry out the management experience in their territory.

Thus, the *Sustainable Fishing* project had two distinct areas of activity: “product-arrangement” and “educational-arrangement”<sup>56</sup>. On the Envira River, the strategy adopted in Manoel Urbano was focused on the Fishing Colony and integrated with the actions of the state government. On the Tarauacá River, the strategy was created during the execution of the project. Even though on the Envira River the project worked on Indigenous

---

<sup>55</sup> Registered as fishermen, riverside people can access the off-season insurance and guarantee remuneration for their work in protecting and monitoring fishing agreements.

<sup>56</sup> WWF. *Results Evaluation Report*. WWF, 2017. p. 36.

Lands, on the Tarauacá River the focus was directly linked to territorial management and food security rather than income generation.

In Manoel Urbano, changes were identified in the Fishing Colony's commitment to the proposal for sustainable management. Despite the interest of the members of the Management Group, after some meetings within the scope of the project, it was decided that the minimum conditions for continuity of actions in that municipality were not present. Thus, although it was kept in the scope of action, few activities were carried out in that municipality.



## 6. Results Evaluation

### 6.1. Achievement of agreed indicators

In the Monitoring Plan of the *Sustainable Fishing* project, there is a list of indicators for the two direct effects together, without distinction. According to the structure of the project's Logical Framework, there were also specific indicators for each of the expected outputs.

The indicators consolidated in the project's monitoring plan, agreed upon between the executors and the Amazon Fund team, were used for the evaluation presented below. The targets and annual evolution of these indicators are presented. The percentage variation indicates the percentage of the target's achievement at the end of the project, according to the following classification:

Classification of indicator achievement	Achievement	Evaluation
	< 50%	Much lower than expected
	50 a 80%	Below expected
	80 a 120%	Achieved
	> 120%	Exceeded

In the municipality of Manoel Urbano, the internal conflicts made the implementation of the project unfeasible. Data for 2015, 2016, and 2017 remained the same as those reported at the end of 2014 (many of which related to the baseline) for all indicators of the monitoring plan, generating a biased analysis for some of these numbers.

## ANNEX I: 2 — Sustainable Fishing

**DIRECT EFFECT 1:** Pirarucu management implemented in 15 floodplain lakes.

**DIRECT EFFECT 2:** Managed pirarucu production chain with increased added value.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
No. of fishing agreements collectively approved and submitted to the competent body	4 Feijó proposals submitted MMA/MPA	15	9	13	22	22	147
No. of fishing agreements regulated by the competent body	3 Manuel Urbano	15	3	3	9	9 (+10 under analysis)	60
Increase in stocks in managed lakes (young individuals, adult individuals, young/adult ratio)	Manuel Urbano: 0,54 Feijó: 0,78 Tarauacá: no data	15 (monitored lakes)	Feijó: 0,85 Manuel Urbano e Tarauaca: no data	Manuel Urbano: sem dados Feijó: 0,49 Tarauacá: 1	Manuel Urbano: sem dados Feijó: 0,44 Tarauacá: 0,6	Manuel Urbano: 0,8 Feijó: 0,84 Tarauacá: no data	NA
Number of fishermen directly benefiting from the project	25 Manuel Urbano: 15 Feijó: 10 Tarauacá: 0	60	41 Manuel Urbano: 15 Feijó: 15 Tarauacá: 11	54 Manuel Urbano: 15 Feijó: 15 Tarauacá: 24	58 Manuel Urbano: 15 Feijó: 18 Tarauacá: 25	55 Manuel Urbano: 15 Feijó: 15 Tarauacá: 25	92
Number of individuals directly benefiting from activities supported by the project (based on the number of families, x 3.7 individuals)	569 Manuel Urbano: 310 Feijó: 259 Tarauacá: 0	800	975 Manuel Urbano: 310 Feijó: 610 Tarauacá: 55	1072 Manuel Urbano: 310 Feijó: 707 Tarauacá: 55	1109 Manuel Urbano: 310 Feijó: 707 Tarauacá: 92	1327 Manuel Urbano: 310 Feijó: 925 Tarauacá: 92	166
Number of individuals of indigenous ethnicity directly benefiting from the activities supported by the project	0	120	0	991	991	991	826

(continued)

## ANNEX I: 2 — Sustainable Fishing

(continuation)

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of women directly benefiting from activities supported by the project	23 Manuel Urbano: 13 Feijó: 10 Tarauacá: 0	240	45 Manuel Urbano: 13 Feijó: 25 Tarauacá: 7	398 Manuel Urbano: 13 Feijó: 260 (associates Z4) Tarauacá: 260 (IL residents)	398	373 Manuel Urbano: 13 Feijó: 100 (associates Z4) Tarauacá: 260 (IL residents)	155
Number of women holding coordination positions at WWF-Brasil and total number of individuals holding coordination positions at this institution	36%	35%	36%	38%	62%	35%	100
Number of community organizations strengthened	2 Manuel Urbano: 1 Feijó: 1 Tarauacá: 0	3	3 Manuel Urbano: 1 Feijó: 1 Tarauacá: 1	3	3	3	100
Revenue obtained from the sustainable use economic activity supported by the project	<p><b>Manuel U.</b> Family / fisherman: 0 Community: 0 Colony: 0</p> <p><b>Feijó</b> Family / fisherman: BRL 650.00/year Communities: BRL 158.00/year Colony: BRL 158.00/year</p> <p><b>Tarauacá</b> Family / fisherman: 0 Community: 0 Colony: 0</p>	30% increase	<p><b>Feijó</b> Family / fisherman: BRL 1,530.00/year Communities: BRL 940.00/year Colony: BRL 758.00/year</p>	<p><b>Feijó</b> Family / fisherman: BRL 2,716.91 to BRL 2,946.66/year Communities: BRL 6,158.00/year Colony: BRL 1,758.00/year</p>	<p><b>Feijó</b> Family / fisherman: BRL 3,634.66/year Communities: BRL 8,040.00/year Colony: BRL 2,858.00/year</p>	<p><b>Feijó</b> <u>There was no fishing. Same data as previous year</u> Family / fisherman: BRL 3,634.66 fisherman/year Communities: BRL 8,040.00/year Colony: BRL 2,858.00/year</p>	24 (family/fisherman income systematized by the Amazon Fund team) Amazônia)

(continued)

## ANNEX I: 2 — Sustainable Fishing

(continuation)

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Volume of unprocessed production generated by the supported project	1,888.10 kg Feijó	4,000 kg	3,852.2 kg Feijó	5,931.7 kg <u>Feijó Accumulated data for the previous year</u>	6,679.7 kg <u>Feijó Data accumulated from previous year</u>	6,679.7 kg <u>Feijó There was no fishing. Same data as previous year.</u>	167
Volume of processed product from the extractive chain supported by the project	1,052.20kg Feijó	2,000kg	2,098.2kg Feijó	3,512kg Feijó	4,004 kg Feijó	4,004 kg Feijó	200

*Output 1.1:* Facilitation for the collective construction of fishing agreements and holding workshops and regional forums for their discussion.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of workshops and regional forums for the construction and discussion of fishing agreements	0	6	8	34	54	62	1,033
Number of individuals participating in workshops and regional forums for the construction and discussion of fishing agreements	86	180	228	530	750	878	1,020

*Output 1.2:* Survey of the pirarucu population, harvesting and systematization of fishery statistics, with the training of fishing communities to carry them out..

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of lakes with fishing statistics performed regularly	10 Manuel Urbano: 4 Feijó: 6 Tarauacá: 0	15	13 Manuel Urbano: 4 Feijó: 6 Tarauacá: 3	13 Manuel Urbano: 4 Feijó: 6 Tarauacá: 3	13 Manuel Urbano: 4 Feijó: 6 Tarauacá: 3	23 Manuel Urbano: 4 Feijó: 9 Tarauacá: 10	153

## ANNEX I: 2 — Sustainable Fishing

*Output 1.3:* Technical support and supply of inputs for fishing operations.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of managed pirarucu maintenance and fishing operations supported by the project	3	9	9	25	45	49	544

*Output 2.1:* Preparation of ecological and economic feasibility plan and production and marketing strategy for the pirarucu production chain in the project's area of coverage.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of municipalities with an economic, ecological feasibility plan for the pirarucu production chain developed	0	3	2	2	2	2	67
Number of municipalities with a production and marketing strategy for the developed pirarucu production chain	1	3	1	1	1	1	33

*Output 2.2:* Technical support and training in good practices for the management and processing of pirarucu.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of training and qualification workshops	0	12	13	36	50	60	508

## ANNEX I: 2 — Sustainable Fishing

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of individuals participating in training and qualification workshops	0	360	177	362	420	453	126

*Output 2.3:* Development of a standard for the certification of managed pirarucu and its application in the area covered by the project.

Indicator	2013 Base-line	Target	Jan 15	Jan 16	Sep 16	Sep 17	Variation (%)
Number of lakes with pre-evaluation of pirarucu fishing completed	0	10	6	6	6	6	60
Number of lakes with programs for fishing improvement implemented	0	10	9	9	9	9	90
Number of lakes with complete evaluation for environmental certification completed	0	10	0	0	0	0	0
Number of lakes under management with certification criteria implemented	0	10	0	6	6	10	100

### 6.2. Objectives, indirect and direct effects

The monitoring plan makes it possible to assess the scope of the indicators agreed upon between the Amazon Fund and the project's executors.

### *Indirect effect*

In the case of the Sustainable Fishing project, the project's general objective/indirect effect, according to the monitoring plan, was the sustainable fishing as an economic attractiveness in the case of the municipalities of Manoel Urbano, Feijó, and Tarauacá, which is confirmed through annual deforestation rates of these municipalities. Data available in the plan indicate a significant increase of the annual deforestation, considering the two years before and during the execution of the project. (Table 3)

Table 3: Annual deforested area in the municipalities of the Sustainable Fishing project

Municipality	Annual deforested area (hectares)		Variation (%)
	2013 / 2014	2016	
Manoel Urbano	1,872	2,780	148
Feijó	1,378	4,030	292
Tarauacá	579	1,400	241

Source: Monitoring Plan, WWF 2017.

### *Direct effects*

Even though the Sustainable Fishing reporting was based on the logic of components, we will keep the discussion of the results based on **direct effects/specific objectives** defined in the Logical Framework. The indicators, at this level, were integrated in the monitoring plan in terms of the two direct effects. For evaluation purposes, a distinction was made, grouping the indicators related to income and production volume under the direct effect aimed at adding value and the others under the effect related to lake management.

Some indicators differ from those systematized on the Amazon Fund's website, possibly due to differences in the interpretation of indicators or the effect of the time elapsed between the publication of data, the systematization of reports by the executor, and the execution of the evaluation.

The general evaluation of the achievement of the project's objectives will be presented conclusively in item 6.3 of this individual project report.

### 6.2.1. Direct effect “Pirarucu management implemented in 15 floodplain lakes”

There is an extensive list of indicators related to this direct effect of the *Sustainable Fishing* project, as well as complementary indicators at the output level.

According to the monitoring plan, the pirarucu **management implementation** exceeded the initially planned target, reaching 22 managed lakes. This number considers Manoel Urbano's three fishing agreements in force since 2006, but which, although not revoked, have not been the object of effective environmental inspection and monitoring action by the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), by the Environmental Institute of Acre (IMAC) and by the Fishing Colony since 2011. The indicator expresses the set of agreements in Feijó, developed during the timeframe of the project, seven of which with riverside communities and two in the Nova Olinda Indigenous Land. It also includes the ten agreements of the Kaxinawá Praia do Carapanã Indigenous Land, in Tarauacá, systematized as a fishing regiment, of which three are specific to pirarucu management.

The Manoel Urbano and Feijó fishing agreements have an economic bias and were developed by the respective of the fishing colonies and management groups. At the same time, those in Tarauacá are led by the association and community leaders and are focused on food security and territorial management.

The regulatory process, as reported, has not been fully concluded due to the lengthy process of technical analysis and approval (and publication in the Federal Official Gazette -DOU) of fishing agreements<sup>57</sup>. The *Sustainable Fishing* project was implemented at the time of transition of the licensing attributions from IBAMA to IMAC and boosted the action of the WWF for the publication of Normative Ordinance No 08/2015, through which IMAC takes responsibility for the construction, approval, monitoring, and evaluation of fishing agreements. This ensured the review and approval of fishing agreements out of the indigenous lands.

In the case of indigenous lands, prior consent from the National Indigenous Foundation (Funai) is required, followed by environmental licensing by IBAMA, including analyses, field surveys, questioning by applicants, etc. The bureaucracy involved in the deliberations between Funai, IBAMA, and IMAC resulted in the agreements not having been ratified yet, although Funai's prior consent has already been obtained.

Regarding **management effectiveness**, the pirarucu population was monitored, and the rates of increase (or reduction) of stocks and the behavior of the young/adult ratio (preferably closer to 1) were observed regularly and periodically, since some methodological errors occurred. It was reported that the lakes are an open system with numerous individuals observed in one year, followed by none the next year, and they return in the following year. The data collected during the project period did not allow

---

<sup>57</sup> WWF. *Results Evaluation Report*. WWF, 2017. p. 34.

the team to make a conclusive evaluation of the effects of management on the conservation of the species and sustainability of management. There was a reduction in some and an increase in others, and the rates varied greatly from one year to the next.

It is important to highlight that the monitoring effectively guided the fishing activities and resulted in the suspension of the activity by the fishermen themselves when a low population was observed in the lakes of Feijó, which was highlighted as a positive result of the use of information for decision making. The monitoring plan indicates the number of lakes to be monitored as a target and the annual data indicate the rate of increase in the pirarucu population, making it difficult to correlate the data.

The **beneficiary** indicator is quite significant because it has been interpreted through the lens of the indirect beneficiaries: it includes members of the fishing colonies, as well as fishermen re-registered in the Fishing Registry, the population of the two indigenous lands and four riverside communities that received quotas in the sharing of fishing benefits. It should be noted that the registration of indicators considered accumulated numbers, including the sum of the baseline. Even so, the numbers that show the involvement are significant, although the rate of change is biased due to the calculation method.

Also, regarding reaching beneficiaries, the number of fishermen participating in the Pirarucu Management Group has remained practically stable since the beginning of the project. In Manuel Urbano, there were no fishing operations, and a record was kept of the 15 fishermen who participated in the Management Group before the start of the project. In Feijó, there were 18 fishermen, 12 from the Management Group, and six community monitors of fishing in the managed lakes. In Tarauacá, there were another 25, including the ten pirarucu management agents and 15 other leaders, including teachers and chiefs of the ten villages of the Indigenous Land (IL), who actively participated in the workshops to produce teaching material.

The stability in the number of fishermen in the Feijó Management Group provides elements regarding the attractiveness of the activity, carried out in general by older men. Fishermen report that the "work is very heavy," involving long trips. Added to this, the conflicts within the group at the beginning of the project may have contributed to keeping new members away.

“Fishing here is very difficult. You must carry all the material to get to the lake. When the lake is clean, it's easier. But even so, there is resistance, it is not for everyone. Only those who like it do it.”



The *Sustainable Fishing* project did not have a specific strategy to address the **gender issue** or the strengthening of women's participation in fishing activities and the views of women in fishing agreements. Pirarucu fishing activity is usually seen as a manly activity. Considering fishing in general, the socioeconomic study<sup>58</sup> carried out by the project indicated that, in 37% of the sampled families, women fish regularly. The agreement-building meetings counted on family participation, especially in Indigenous Lands, but there are no stratified data on this participation. It should be explained that the indicators related to the benefits for women inform data obtained from the number of fishing cards in the name of women and from the proportion of the female population in the communities. The participation of women in coordination positions on the part of WWF-Brasil reflects the composition of the technical staff of the institution.

As to **strengthened community organizations**, it should be noted that the project precedes the agglutinating modality. The monitoring plan indicates that, quantitatively, the target of strengthening three organizations was achieved, but it should be noted that, in the implementation, there were marked differences between the support received by the Feijó Fishing Colony (COPAF), the Kaxinawá People's Association of Aldeia Nova Olinda (ASPAKNO), which represents the Huni Kui people of the Nova Olinda IL, and the Association of Kaxinawá Producers and Breeders of Praia do Carapanã (ASKAPA), of the Praia do Carapanã IL.

Focusing on structuring a “productive arrangement” for pirarucu management, the Sustainable Fishing project centered on strengthening the Feijó Fishing Colony (COPAF), enabling the acquisition of various equipment and vessels, as well as organizational and accounting support. The Colony's management was centered on the chairman, who participated in carrying out activities that led to advances, especially in the relationship between the Management Group and the Colony. As of the middle of the project (2016), the chairman left to run for elections for the Municipal Council and, since then, it has been difficult to continue the organizational development work. Thus, there was no willingness on the part of the Colony to introduce effective procedures for transparency and participatory management within the scope of the Fishing Colony itself. The result was that the Fishing Colony did not take over the management of pirarucu, which continued to be carried out by the technical consultancy. The partnership between WWF and the Colony's management weakened in the final third of the project.

A relevant aspect of organizational strengthening was the process of building the Internal Regulations of the Management Group. Conducted by a specialized consultancy over five workshops, it included a more precise definition of roles and procedures and resulted in a more effective organization of the work and a reduction in conflicts.

In the support given to ASPAKNO, which represents the indigenous people of the

---

<sup>58</sup> WWF. *Results Evaluation Report*. WWF, 2017. p. 47.

Kaxinawá Nova Olinda Indigenous Land, there was no difference in the implementation of fishing agreements in the Indigenous Land compared to other riverside communities in Feijó. ASPAKNO participated in sharing financial benefits from the sale of pirarucu caught in the lakes of the Nova Olinda IL in 2014 and 2015. As mentioned, the amount allocated to the indigenous communities was more significant than to the riverside communities. In the case of ASPAKNO, the funds were used to build a meeting place. The association also received, from the project, ATER supplies, and services for the annual counting of pirarucu in the Indigenous Land.

In the villages of the Kaxinawá Praia do Carapanã indigenous land in Tarauacá, represented by ASKAPA, the project had a very different strategy from the one implemented in Manoel Urbano and Feijó, as mentioned above. In this case, the strengthening of ASKAPA focused on its role in the "educational arrangement," with the supply of two small outboard motors and copies of teaching materials (booklet, calendar, and series of banners of the Fishing Regiment, all in the indigenous language) to facilitate the educational actions of the Pirarucu Management Group formed by the project, as well as in the village schools.

Although it does not have specific indicators and may seem like an unforeseen effect of the project, the results of the strengthening of ASKAPA and the management group, added to the broad participatory process of construction of fishing agreements (systematized as a fishing regiment for the Indigenous Land), enabled significant results in social cohesion for the maintenance of agreements and protection of the territory, as indicated by the interviews carried out with the project team. The fishing regiment is a "living instrument," all teaching materials are used in the schools, and the community has been active in monitoring the territory. The first harvest<sup>59</sup> was scheduled for 2020, when the Community Cultural Festival was held, but was postponed due to the pandemic.

*Output 1.1: Facilitation for the collective construction of fishing agreements and holding of workshops and regional forums for their discussion*

The Sustainable Fishing project achieved or even exceeded many of the indicators that express the participatory methodology, advice, and training, considering the number of beneficiaries, workshops and other events held. This is explained by the adjustment in the project's methodological approach when implementing it in relation to the targets initially established. That is, the targets were timid in relation to the project's potential reach after the methodological adjustments made and the constant presence of the team in the field.

The indicators address the number of participants involved in the construction and discussion of fishing agreements, which far exceeded the target of 180. This num-

---

<sup>59</sup> Name given to the pirarucu capture activity.

## ANNEX I: 2 — Sustainable Fishing

ber was almost reached considering Manuel Urbano alone, where it was reported that 160 people participated in the debates for the construction of the fishing agreements. However, considering that the project was not implemented in this municipality, there were doubts about the numbers recorded in the monitoring plan. In Feijó, there were 487 participants in the workshops and 118 in the Municipal Fishing Forum and, in Tarauacá, 113, totaling 878 participants.

In Manoel Urbano, from 2014 to 2016, six meetings were held with local stakeholders to reach agreements for the resumption of pirarucu management and the revision of fishing agreements without success. In Feijó, where there were better conditions for the project to operate, 40 meetings were held. In Tarauacá, an area of indigenous groups with the most recent involvement in the project, 16 meetings were held. In total, 62 activities were carried out, including meetings, workshops, and forums. Therefore, the initial target of six workshops was largely exceeded, due to the needs and specificities of the project and the riverside and indigenous populations involved.

*Output 1.2: Survey of the pirarucu population, of harvesting and systematization of fishery statistics, with the training of fishing communities to carry them out*

The indicator informs about the number of lakes monitored by the fishing statistics, carried out by participants of the Feijó Management Group, as well as some riverside and indigenous people trained throughout the *Sustainable Fishing* project: four lakes in Manoel Urbano and nine in Feijó. It should be noted that, in Tarauacá, the methodology was refined, and the Community Fishing Monitoring Group was formed in the ten lakes covered by the Huni Kui Fishing Regiment of the Praia do Carapanã IL.

*Output 1.3: Technical support and supply of inputs for fishing operations*

The initial target of the *Sustainable Fishing* project was for nine fishing operations to be carried out. In the implementation of the project, there was a need to carry out specific expeditions to clean the lakes and monitor them. Although the monitoring plan reports that 49 operations were carried out, the evaluation report mentions 57 operations, 12 of which were for harvesting.



PHOTO: WWF Brazil

### 6.2.2. Direct effect "Managed pirarucu production chain with increased added value"

Within the scope of the direct effect "Managed pirarucu production chain with increased added value," a set of three indicators was listed with a view to expressing the increase in added value generated by the actions of the Sustainable Fishing project. In addition to the figures referring to the revenue generated for the fishermen of the Feijó Management Group, the volume of in natura and processed production was measured, to reflect the added value. The indicators were expressed by accumulated values and volumes and do not depict the year-to-year evolution of the project. In the last year of the project, there were no fishing operations due to the low fish stock, so data from the previous year were repeated in the monitoring plan.

The total amount calculated from the commercialization of fish was considered as revenue, without discounting the costs, all covered by the project. When the project team analyzed these costs, the estimated value was BRL 65.00/kg of pirarucu<sup>60</sup>; far exceeding the local market value of BRL 25.00/kg of salted fish.

The total amount calculated for the commercialization was divided among riverside and indigenous families, as well as with the Fishing Colony itself, according to the distribution agreements defined in the bylaws of the Management Group. The total amount received by the communities was reported in the monitoring plan. The data provided in the monitoring plan do not allow for a conclusive analysis of the achievement of the 30% revenue increase target, as it compares annual baseline income data with accumulated

---

<sup>60</sup> WWF. *Results Evaluation Reports*. WWF, 2017. p.25

## ANNEX I: 2 — Sustainable Fishing

total revenue data. Data systematized by the Amazon Fund<sup>61</sup> reveal, as a result, a 7.6% reduction in the total revenue obtained from the commercialization of sustainably managed pirarucu, considering that this value was obtained from the production of seven lakes with fishing agreements regulated at the time. Additionally, the data reveal a 24% increase in the average income of each fisherman considering the last harvest in 2016.

The relevance of the income was considered very positive by the fishermen interviewed, who were paid for the production and for monitoring or cleaning services.

“The most important thing was that the project covered the costs, the income was net. When it was divided, each one received BRL 1,000.00 because there were about 14. At the time, I made half of that without the project. Today, I make less, about BRL 300.00 per month. At the time of the project, pirarucu was sold at R\$ 25.00 per kilo, while other fish was sold at BRL 5.00. Today, there's been an increase, and the small fish can reach BRL 10.00.”

In the project's design, there was an expectation of high fishing productivity, according to initial studies of the potential of the lakes in Feijó. The expectation was not confirmed, and the productivity of managed pirarucu was lower than expected. All the harvests were below the licensed quota. Even so, the total volume of fish (in natura and processed) far exceeds the targets, even without production in the last year.

In search of adding value, the project invested in processing and commercialization simulations: fresh fish filleted industrially, salted fish, local market in Feijó, and regional market in Rio Branco. The commercialization of salted fish in the local market prevailed, as the local fishery culture is to guarantee the most immediate payment possible after the fishing, even if this results in smaller gains.

*Output 2.1: Preparation of ecological and economic feasibility plan and production and marketing strategy for the pirarucu production chain in the project's area of coverage*

Two of the three municipalities targeted by the *Sustainable Fishing* project developed or revised their ecological economic feasibility plan for the arapaima production chain (Feijó and Manoel Urbano). However, as pirarucu management in Tarauacá had no commercial purpose, it was decided not to include the municipality in that study.

---

<sup>61</sup> Check out the [webpage of the Sustainable Fishing project on the Amazon Fund website:](http://www.fundoamazonia.gov.br/pt/projeto/Pesca-Sustentavel) <http://www.fundoamazonia.gov.br/pt/projeto/Pesca-Sustentavel>

A first stage of the study was carried out at the beginning of the project (2015), and some of the recommendations were evaluated as already envisaged in the project. Based on the studies, the strengthening of the Fishing Colony and the Management Group was prioritized, following the chain structuring strategy previously defined in the project.

A second stage of the study was carried out at the end of the project (2016/2017), focusing on commercialization, updating economic data on the activity, and the development of the Pirarucu Management Group. The WWF team emphasizes the study's importance, as it provides very broad recommendations, but points out the limitation of integrating it, considering the indication of more robust adjustments in the economic strategy for structuring the chain, which exceeded the time frame defined for the execution of the project.

The feasibility of managed pirarucu proved to be a complex equation to solve, according to the results of these studies. The chain structuring model based on a Management Group moving through the lakes proved insensitive to cost reduction. Expanding the area (more lakes managed) would entail an increase in costs but could increase the number of benefiting fishermen.

*Output 2.2: Technical support and training in good practices for pirarucu management and processing*

The Sustainable Fishing project's design provided a more solid technical partnership with the Government of Acre and support from the rural extension team. The change in the strategy to support aquaculture instead of artisanal fishing undermined the partnership. The technical support of the State Secretariat for Production (Seaprof) team was maintained in Feijó thanks to the personal commitment of a local technical expert with artisanal fishing and the Management Group.

Technical support for the project was provided by the company Tipoia, which oversaw facilitating fishing agreements, providing various technical training events (Participative Management, Monitoring and Tracking), and advising the Fishing Colony and the Management Group. Tipoia's consultancy extended after the project, with the continuity of support to the pirarucu management group in the Kaxinawá Praia do Carapanã Indigenous Land, evaluation of fishing agreements, and other actions. Another consultancy, from the Social Development Institute, facilitated the construction of the Management Group's bylaws.

As mentioned, the technical assistance approach in the implementation of the project underwent a methodological adjustment in relation to what was initially planned. The change in approach consisted of designing the consultancy according to the analysis of the current situation at each stage of the project. The consultancies actively participated in this design in dialogue with the project's coordination, and there was a willingness to adjust throughout the project.

This is clear from the fact that 60 workshops were held, significantly exceeding the target of 12 workshops. Regarding the number of participants in training and ca-

## ANNEX I: 2 — Sustainable Fishing

capacity building workshops, the project workshops were attended by 453 participants (295 in Feijó, 30 in Manuel Urbano, and 128 in Tarauacá) out of a target of 360 people, i.e., 25% more than expected.

The training events involved technical aspects of fishing, monitoring, tracking, and participatory management. A permanent monitoring of fishing expeditions made it possible to introduce teamwork procedures, leadership, and aspects related to waste disposal. Despite the advances, such as more "professionalism" to the activity, especially in personal relationships, income sharing, individual fishing skills, and catching techniques, at the end of the project, the fishermen still depended a lot on technical assistance for the coordination of the fishing team and sale of production.

“

*"It is important to contextualize the particularities of this activity. There is a fascination, almost a mystique around the hunting of that fish. It requires strength and lots of connection with nature. It is a job that requires individual and group skills, as a highly specialized team, which requires enormous coordination skills. It has many nuances, and it can be very difficult".*

*Output 2.3: Development of a standard for the certification of managed pirarucu and its application in the area covered by the project.*

The certification was an important bet of the *Sustainable Fishing* project to add value to the fish. The aim was not only to certify production, but also to develop the certification standard based on the guidelines of the Marine Stewardship Council (MSC), an international certifier of maritime fishing activity. The project developed a Fishing Improvement Program (FIP) with actions to meet the 27 MSC certification requirements. These actions guided the entire technical structuring for fish management and the strategies for strengthening the management group and the Fishing Colony. The cost of certification was estimated at around BRL 115,000 per lake<sup>62</sup>.

By analyzing the four indicators on this item, the plan of implementing 24 of the 27 criteria in the ten planned lakes was achieved, which made it possible to address several relevant issues. A full criteria evaluation was completed in nine lakes, and the Improvement Program was implemented in six lakes on the Envira River in Feijó. However, certification was not obtained, so this indicator was not achieved.

---

<sup>62</sup> WWF. *Results Evaluation Report*. WWF, 2017. p. 30.

### 6.3. General evaluation

In this section, the evaluative elements will be organized by the major fronts of action of the *Sustainable Fishing* project, which allows a more organic aggregation than the structure of effects and outputs.

#### 6.3.1. Positive aspects

- The organization fully embodied the coordination change halfway through the project and benefited its management, since it became more present in the municipalities covered.
- The approach of the Sustainable Fishing project allowed for **considerable evolution of the Feijó Management Group** in their ability to organize the work and fishing techniques, with individual gains as well.

*"It was as if illiterate fishermen went to the classroom. They began to understand what was right and wrong. They gained a new view thanks to the exchanges. They began to make better use of their money. A better house, better boats. They learned fishing techniques and became teachers to train others."*

*"The fishermen broadened their view of the possibilities for themselves."*

- The **management of indigenous lands** has become more innovative. The Kaxinawá Praia do Carapanã Indigenous Land was the first in Brazil to have a plan formalized by Funai, as mentioned by the project team. Fishing capacity was recovered to ensure food security in the Indigenous Land, which appropriated the project and generated materials that are still being widely used in schools, expanding the agreements for fishing rules in the Indigenous Land. Such results need to be contextualized by the educational difference that exists today between the riverside communities, which are very underserved, and the indigenous ones, with a high capacity for production of texts, art, cultural production, and in an active process of leadership renewal.
- **Creation of the pirarucu certification standard** based on the Marine Stewardship Council (MSC) guidelines, with potential to support larg-

er-scale initiatives that can benefit from added value and undertake the operational costs of certification.

- The Sustainable Fishing project boosted the WWF's incisive action in the construction of Normative Ordinance N. 08/2015, defining the **decentralization of attributions** from IBAMA to IMAC in the approval, monitoring, and evaluation of fishing agreements.
- As a result of the studies and the entire experience of the project, a request was sent to assess the feasibility and benefits of creating/recognizing a **special zone to encourage pirarucu management and conservation of fishery resources**, with specific guidelines to be defined within the scope of the third phase of Acre's Ecological Economic Zoning.

### 6.3.2. Challenges

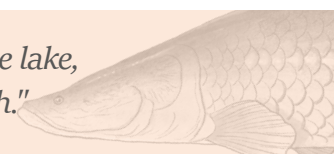
- The Sustainable Fishing project was designed on the basis of the premise that the structuring of the managed pirarucu chain would take place through the integrated action of public bodies from the various spheres of government (responsible for promotion, licensing, and inspection), the mobilization of civil society and the interest of the private sector. After four years negotiations, when the project was approved, the **political-organizational context of this multi-institutional arrangement** was quite different, but it was only fully understood in the second half of the project, when the coordination began to be carried out by the WWF office in Rio Branco, with a more routine presence in the project's institutional coordination and activities. The **change in the political focus of the state government**, from artisanal fishing to fish farming, and the lack of motivation of the Fishing Colony to carry out fish management affected the implementation of the project. At the end of the project, WWF underwent a restructuring that resulted in a significant reduction in actions in the fishing chain. The fact is that the sustainability of the pirarucu chain has been threatened and is inoperative in the state of Acre.
- The **complexity of the scope of the managed pirarucu chain structuring** was quite ambitious for a chain in its initial phase. The project was intended to address all stages of production, including fishing agreements, fishing techniques, monitoring of fish management, and training of fishermen, both in the practical aspect of fishing and in collaborative group activity. It was also intended to test different forms of processing to add value and create a certification standard and commercialize certified production, which can be

considered the most sophisticated level of added value.

- The **commercial chain structuring model** for managed pirarucu proved to be economically unfeasible. It was based on centralization, through the strengthening of the Fishing Colony, with the creation of a Management Group acting in indigenous territories and riverside communities, from where production was brought after long fishing expeditions. The **economic feasibility** equation is not simple, as indicated by the consultancies carried out by the project. The central issue is focused on increasing productivity, which is limited by the characteristics and availability of pirarucu in the specific conditions of the lakes in the state of Acre.

“

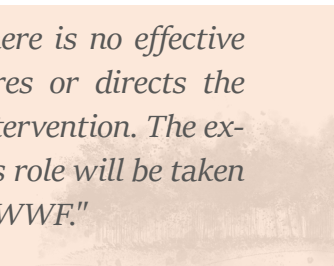
*“In Amazonas it is easier. You manage the lake, you don't let anyone touch it, and you fish.”*



- The project sought to replicate a model already carried out in Manuel Urbano, but which at the time of project implementation showed signs of fragility, due to the removal of the Fishing Colony, a fact attributed to changes in the direction of the Colony. The same process was repeated in Feijó, where **the chain's main operator, in this case the Fishing Colony, did not take ownership of the project**, which resulted in dependence on the work of the WWF.

“

*“Today, in the group or the colony, there is no effective leadership that takes the lead, inspires or directs the group, or even makes any necessary intervention. The expectation of group members is that this role will be taken over by the technical assistance or the WWF.”*



- The **fishing agreements are weakened**. The evaluation round carried out by WWF in 2019, after the project ended, pointed out that in some lakes there were users (families and fishermen) who were not mobilized to participate, due to limitations in the mapping of actors at the time of the project. Communities want to participate in pirarucu fishing activities and benefit more directly. They also request a review of the percentage of sharing benefits from pirarucu fishing to communities. The dissatisfaction refers to the removal of the Fishing Colony from monitoring the agreements and supporting the communities, which is added to the broader context of changes in the rules for granting the off-season insurance, an instrument to moti-

vate community involvement in the lake protection actions.

- The counting expedition, carried out by WWF-Brasil in seven lakes in 2019, indicated that only one had a pirarucu count higher than the previous one. Although the analysis was inconclusive, it showed signs that the **management measures were insufficient to promote a population increase** of pirarucu in the lakes of the managed river stretch. That is, in the ecological conditions of the Alto Purus, pressure for productivity can compromise conservation objectives. Such indications may require a reduction in fishing quotas hitherto practiced within the scope of the project and in the size of the animals slaughtered, privileging conservation measures at the expense of productivity and income from the activity carried out with economic objectives.

### Box 2:

#### Impacts of the pandemic on the Sustainable Fishing Project

##### Highlight: Impacts of the pandemic

- WWF had limited resources for the fishing agenda, but some activities were planned to create better conditions for the continuity of actions where there was still “fertile ground” after the project was completed.
- The pandemic occurred at a time when the mobilization for the constitution of a State Fishing Forum was being developed through the coordination of the WWF with the State Fishing Federation for the appropriation of the lessons learned by the project and the mobilization of the actors.
- It was also planned, for 2020, to continue the training activities in capture techniques for the group of fish managers of the Praia do Carapanã Indigenous Land, in Tarauacá. The training would take place in Bolivia, and there was much expectation regarding the completion of this cycle of activities to complement the process aimed at the autonomy of the indigenous people in pirarucu management.

### 6.4. Analysis of the OECD evaluation criteria

#### OECD evaluation criteria for the Sustainable Fishing project

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>The project generated contributions in a poorly supported chain in the Amazon, providing access to production promotion measures for marginalized social groups, with a view to income generation and conservation of species and ecosystems through fishing agreements and structuring of the managed pirarucu chain.</p> <p>The experience of food security and territorial management through fishing management in Indigenous Lands represents an innovation with significant results to inspire other territories.</p> <p>The development of a certification standard for the species (pirarucu) allows adding value to more consolidated management experiences.</p> <p>The project made significant contributions to structure the regulatory framework for the decentralization of attributions from the federal to the state agency in relation to fishing agreements.</p>	Very relevant
<b>Effectiveness Criterion</b>	
<p>Regarding the achievement of the proposed objectives, the project was effective in structuring the initial link of the chain, which is quite complex, involving aspects of strengthening organizations and groups, training, development of production techniques and sustainable management, articulation of partnerships, and participatory territorial management through fishing agreements.</p> <p>But it did not achieve the expected success in adding value, which entailed prior development of an innovative certification standard to finally certify the production and position it in a differentiated way in the market.</p> <p>The project generated additional effects that were not initially foreseen, aimed at food security and strengthening the participatory management of protected areas with the Huni Kui Fishing General Regiment of Praia do Carapanã.</p>	Moderately effective
<b>Efficiency Criterion</b>	
<p>WWF's procurement and contracting procedures were quite efficient, providing materials, inputs, and services according to the project's schedule and needs. However, we question the high cost of the prerequisites related to certification, which did not achieve the expected result.</p>	Efficient

(continued)

## ANNEX I: 2 — Sustainable Fishing

(continuation)

Evidence	Evaluation
<b>Impact Criterion</b>	
<p>Considering the current situation of the project's results in relation to the weak fishing agreements, the indications (although not conclusive) regarding the reduction of the pirarucu population, the demobilization of the management group, and the interruption of the activities of the chain by the Fishing Colony, the project's effects remain only within the scope of more consolidated management in the Kaxinawá Praia do Carapanã Indigenous Land than in the riverside communities.</p>	<p>Average effect</p>
<b>Critério Sustentabilidade</b>	
<p>At the end of the execution, the sustainability of the results and impacts was already threatened by the disintegration of the multi-institutional arrangement that supported the project.</p> <p>In carrying out the evaluation, it was found that this situation worsened with the context of the pandemic, which led to the cancellation of activities in progress by the WWF and that could support the continuity of some actions, especially in the coordination with the Acre Fishing Federation and in the Kaxinawá Praia do Carapanã Indigenous Land, which today has the best conditions for the sustainability of the results generated by the project through the Huni Kui Fishing General Regiment of Praia do Carapanã.</p>	<p>Low sustainability</p>

### 6.5 Analysis of the Cancun Safeguards

#### Cancun Safeguards of the Sustainable Fishing Project

Safeguard	Compliant	Comments
1 – Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements	Yes	<p>In general, the projects of the APS Component are aligned with Objective 7 of the 2016 to 2020 phase of the PPCDAm (“Promote Sustainable Forest Management”).</p> <p>This project is directly associated with Results 7.2 (“Strengthening the Socio-biodiversity Productive Chain”), with emphasis on action lines 7.2.2. (“Support sustainable productive inclusion projects for indigenous peoples, traditional and extractive peoples and communities”) and 7.2.3. (“Produce and disseminate materials on recommendations and good practices for the management of native species of sociobiodiversity in language appropriate for indigenous peoples, traditional peoples and communities and family farmers”).</p> <p>The Integrated Plan for the Prevention and Control of Forest Fires and Burns in the state of Acre, in its 2013 version, indicated Lake Management as a structuring action, referring to the experience of Manoel Urbano as a reference.</p>
2- Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation	Yes	<p>The project promoted non-formal spaces for coordination between government actors and civil society in the context of structuring the chain and conserving fishery resources.</p> <p>It generated information, learning, and guidelines for the executing organization to provide relevant technical contributions for the decentralization of government attributions with the publication of Normative Ordinance No. 08/2015, through which Imac took responsibility for the construction, approval, monitoring, and evaluation of the fishing agreements.</p> <p>Supported the presentation of information within the scope of the State Zoning Commission, for studies on creation/recognition of a special zone to encourage pirarucu management and conservation of fishery resources, with specific guidelines for this zone defined in the scope of the 3rd phase of Ecological Economic Zoning of the state of Acre.</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 has adopted the UN Declaration on the Rights of Indigenous Peoples	Wide-ranging	<p>The project worked directly to strengthen artisanal fishing practiced by riverside people and indigenous people in the municipalities of Manuel Urbano, Feijó, and Tarauacá.</p> <p>Fishing agreements strengthen the right of peoples and communities to use fishing resources in the lakes within their scope, defining the attributions of the various governmental and civil society actors in the protection and conservation of these aquatic environments.</p> <p>Debates on the challenges of continuity and evolution of systems to use fishery resources and communities' ways of life were at the heart of the project's concerns.</p>

(continued)

## ANNEX I: 2 – Sustainable Fishing

(continuation)

Safeguard	Compliant	Comments
4 – Full and effective participation of stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 4 and 72 of Decision 1/CP 16\	Yes	<p>During the execution of the project, investments were made in mechanisms for the participatory construction of fishing agreements and more transparent decision-making and accountability processes, with significant participation of those involved. The leaders formally established in each context, and the legal rites regarding the approval of agreements and decisions were respected.</p> <p>The extent to which these mechanisms remained “full and effective” over time varied among the regions in which the project operated. The causes must be analyzed in greater depth, but it seems to be related to the legitimacy of the leaders involved, which is beyond the project management in its execution period.</p> <p>There was a consistent investment in communication actions, with the production of videos and the availability of teaching materials on fishing agreements, especially in the Praia do Carapanã Indigenous Land.</p> <p>Regarding establishing the project monitoring system, there were weaknesses in the interpretation and verification of the indicators addressed in the analysis. This circumstance did not prevent the recording of results in the project's monitoring and evaluation reports from being explicit in demonstrating advances, challenges, and limitations in a more qualitative way.</p>
5 – Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 5 of 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 enhance other social and environmental benefits	Yes	<p>The focus of the contribution is on the development of conservation, monitoring, and management practices that enable the reproduction of pirarucu and generate a viable surplus for income generation.</p> <p>The project worked in two Indigenous Lands, providing relevant contributions to expand fishing autonomy and participatory management of fishery resources, especially in the Praia do Carapanã Indigenous Land, where the project's effects were aimed at conservation and food security.</p>
6 – Actions to address the risks of reversals in REDD+ results	NA	Not applicable
7 – Actions to reduce the displacement of carbon emissions to other areas	NA	Not applicable

### 6.6. Analysis of Cross-Cutting Criteria

#### Cross-Cutting Criteria of the Sustainable Fishing project

Criterion	Compliant	Comments
<b>Poverty Reduction</b>		
<ul style="list-style-type: none"> <li>• To what extent has the project effectively contributed to economic alternatives that value the standing forest and the sustainable use of natural resources?</li> <li>• To what extent has the project positively influenced poverty reduction, social inclusion, and improved living conditions for the beneficiaries (mainly: traditional communities, settlers, and family farmers) living in its area of operation?</li> <li>• Has the project been able to promote and increase the production in value chains of timber and non-timber forest products originating from sustainable management?</li> <li>• In the case of a project that contains scientific development and technological component, did it contribute to the construction of a development model suitable for the region?</li> </ul>	Yes	<p>The group of fishermen directly involved in pirarucu fishing had access to higher income during the execution of the project, which was made possible to a large extent by the project's support towards the costs of the activity. However, the economic feasibility of the activity was not reached, during the project and after its completion.</p> <p>Benefit-sharing mechanisms were built in a participatory manner, implemented, and evaluated after the project was completed.</p> <p>The sustainability of the managed pirarucu chain depends on a solid multi-institutional arrangement, which was not maintained by changes in the strategic direction of partner organizations (state government, fishing colony, and WWF-Brazil).</p> <p>In the organizational, political, and environmental context of the Alto Purus region, sustainable pirarucu management is being consolidated as a poverty reduction strategy, not through income generation, but through food security in the Praia do Carapanã Indigenous Land.</p> <p>The project had no actions under the Scientific and Technological Development Component. The development of an international certification standard for managed pirarucu can expand the possibilities of adding value to more consolidated experiences in the region. The development of the General Regulations for the Huni Kui Fishing of Praia do Carapanã can be adopted as a model for the territorial management of other indigenous lands, contributing to the development and conservation of the region.</p>

(continued)

## ANNEX I: 2 — Sustainable Fishing

(continuation)

Criterion	Compliant	Comments
<b>Gender Equity</b>		
<ul style="list-style-type: none"> <li>• Has the project been able to integrate gender issues into its strategies and interventions, or has it addressed the issue in isolation? How?</li> <li>• Was there gender separation in data collection for project planning and monitoring?</li> <li>• How did the project contribute to gender equity?</li> </ul>	Yes	<p>The project collected some data stratified by gender to feed the monitoring plan according to agreed indicators. The indicators mainly reflect the indirect beneficiaries of the project.</p> <p>Although women participate in artisanal fishing, Pirarucu Management is mostly a male activity, especially in the capture stage. The chain was structured from the fishing colony, with trips to riverside communities involved in fishing agreements and monitoring stages. Such a structuring strategy limited the involvement of women. A model designed based on the riverside communities was signaled as potentially increasing women's interest, especially in the processing stage.</p> <p>Strong strategies were not outlined by the project, whose team was formed only by men. There was some female presence in the fishing agreement meetings with riverside communities, but this data was not collected separately. In the Praia do Carapanã Indigenous Land, all family members were mobilized, with gender and age inclusion, for the construction of the fishing agreements.</p>



### 7. Conclusions and Lessons Learned

The ecological characteristics of the pirarucu in the Alto Purus resulted in specific lessons learned in the *Sustainable Fishing* project compared to other regions that manage this species for commercial purposes, which may limit the possibility of generalizing the conclusions. But in the context of this project, the managed pirarucu chain as a business, based on the implemented model, had a series of limitations in terms of economic feasibility, aggravated by the disruption of its multi-institutional arrangement. Despite the relevance of this arrangement, other models, more focused on the development of riverside populations, can be tested.

The development of sophisticated value-adding strategies, such as certification, in a chain still in the primary structuring phase of the initial links generated a mismatch in the chain development process, dissipating efforts that could have been more focused on structuring these initial links.

Finally, positive effects unforeseen in the project revealed that fishery management can be an important issue for food security and territorial management, according to results in the Praia do Carapanã Indigenous Land.



# 3. Amazon Backyards

## 1. Project Fact Sheet

### Organization responsible for project management

Center for the Study of Culture and the Environment of the Amazon (Rioterra)

### Type of access

Spontaneous demand, initial project presentation: March 2011

### Project period

1st quarter of 2014 to 4th quarter of 2019

### Amount of support from the Amazon Fund

BRL 8,837,852.29

### Beneficiaries

Small family farmers

### Place

State of Rondônia, in the municipalities of Machadinho D'Oeste, Cujubim and Itapuã do Oeste.

### Land categories

Settlement

### Axes

Sustainable production  
Science, innovation, and economic instruments



PHOTO: Rioterra



## 2. Project Summary

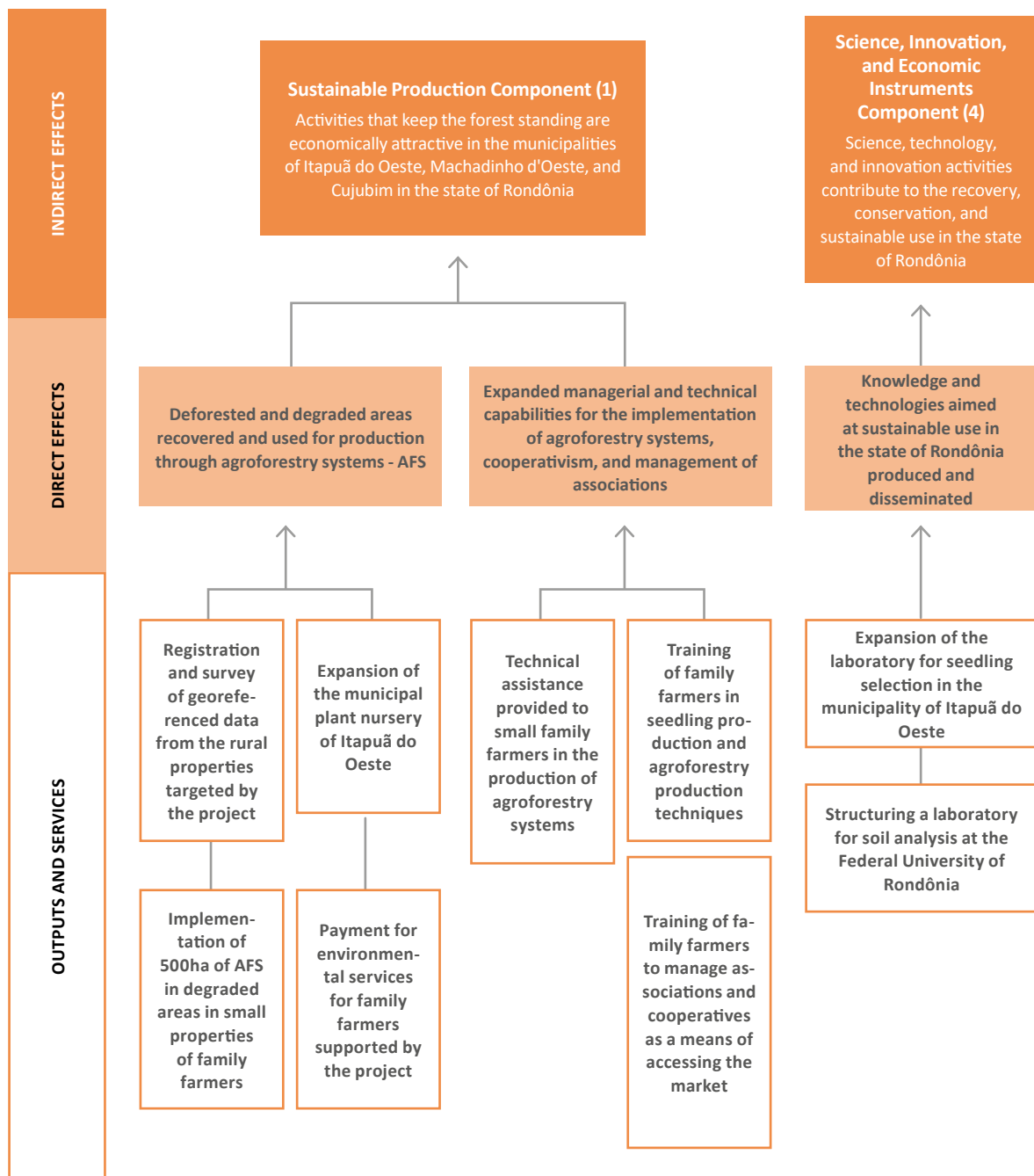
The *Amazon Backyards* project supported family farmers and land reform settlers in the state of Rondônia, with residents in the municipalities of Itapuã do Oeste, Cujubim, and Machadinho D'Oeste as the central nucleus. The project's main support actions were to carry out the registration of rural properties in the Rural Environmental Registry (CAR) as well as planting and research on Agroforestry Systems (AFS) for the recovery of altered or degraded areas in legal reserves and Permanent Preservation Areas (APPs). This assistance contributed to the environmental regularization of small rural properties belonging to family farmers, generating income through the recovery of deforested areas using AFS. Furthermore, the project modernized and structured the laboratory for soil analysis at the Federal University of Rondônia (UNIR), carried out mobilization activities with community associations, and introduced payment for environmental services. The underlying objective was to strengthen the bonds of acceptance and credibility between the parties and to recognize the implementation and good maintenance practices carried out by the beneficiaries in areas recovered by the project.



### 3. Project Intervention Logic

According to Amazon Fund procedures , a logical framework for the *Amazon Backyards* project was agreed upon, in line with the structure of the Amazon Fund's Logical Framework (Figure 5).

Figure 5: Logical Framework of the *Amazon Backyards* project agreed with the Amazon Fund



Source: Amazon Fund/BNDES

In the Monitoring Plan of the *Amazon Backyards* Project, agreed upon between the Amazon Fund and the representative of the project, the direct effects were interpreted as specific objectives, and indicators were defined for these objectives and the associated outputs.

The proposal initially presented by the executing organization Rioterra worked with its structure, with the following definition of general and specific objectives<sup>63</sup>:

### *General objective and expected impacts*

Carry out the recovery of altered/degraded areas in legal reserves and permanent preservation areas using AFS as a way to generate alternative income for family farmers based on productive arrangements with high potential for carbon fixation, to contribute to the stability of environmental systems (decreased carbon emissions, increased sequestration in soils and vegetation, maintenance and/or improvement of water cycling, nutrient cycling, conservation of biodiversity and watershed integrity).

### *Output and services*

- Produce 1 million seedlings of native and exotic species of ecological and economic interest to enable actions for the recovery of degraded areas (carbon fixation) of the experimental models/AFS and for seedling donations to rural producers registered in the area bank.
- Recover 500 hectares of legal reserves and/or permanent preservation areas with the implementation of AFS.
- Create two geographic information systems based on the registration of rural properties, with at least 500 records, to identify properties located in the municipalities of Itapuã do Oeste, Cujubim, and Machadinho D'Oeste, in the state of Rondônia, which have a deficit in vegetation coverage in their permanent protection and legal reserve areas and whose owners wish to carry out the voluntary recovery of these areas following the technical and scientific principles and criteria established by law.
- Identify distinct zones with potential for the occupation and use of their natural resources, with the evaluation of the supporting capacity of the physical environment for the planning of priority areas for recovery, for conser-

---

<sup>63</sup> RIOTERRA. Center for the Study of Culture and the Environment of the Amazon Rioterra. *Consulta Prévia Quintais Amazônicos*. Amazon Fund, 2011. p. 27 et seq.

vation, and for the expansion of new arable areas and crops that are better suited to Itapuã do Oeste, Machadinho D'Oeste, and Cujubim.

- Train up to 600 people in activities with high potential for generating income and employment in the targeted municipalities.
- Carry out a communication campaign about the project to democratize access to information.

For the implementation, five thematic axes were defined by Rioterra, envisaging integrated, interdependent, and simultaneous actions:

- Seedling production and seed collection;
- Area bank;
- Physical environment (verification of agricultural suitability and identification of areas with greater natural vulnerability to erosion);
- Agroforestry systems; and
- Cross-cutting axis (education, communication, geotechnology, general and administrative coordination).



#### 4. Specific Methodology for Individual Evaluation

In the evaluation of the *Amazon Backyards* project, the general methodological steps defined for the evaluation were followed, with the stages of exploratory interviews. The mission focused on interviews with project participants and feedback to the technical coordination of the project (see list of interviewees in the annex).

The interviews with the team and technical staff who worked on the Rioterra project were scheduled and carried out remotely. However, in this evaluation, there were mobilization difficulties for interviews with beneficiaries. As informed by the Rioterra team, this difficulty is due to the loss of contact with the beneficiaries resulting from restrictions imposed on field trips in the context of the pandemic. Most of the telephone numbers provided by Rioterra were inactive, so it was possible to carry out only two telephone interviews with beneficiaries.



## 5. The Project in the Organization's Trajectory

### 5.1. Organizational context

The Center for the Study of Culture and the Environment of the Amazon (Rioterra) is a Civil Society Organization of Public Interest (OSCIP), created in 1999, to contribute to the formation of a critical society, aware of its socioeconomic and environmental context, capable of proposing a development model for the Amazon region that combines conservation and sustainability with the improvement of the quality of life of local populations<sup>64</sup>.

Its actions were initially aimed at environmental education and working in protected areas. It implemented one of the first community participation subprojects in the context of the Amazon Protected Areas Program (ARPA)<sup>65</sup>, in the 2006-2007 period, implementing a proposal that involved the production of flour, bio-jewels, and artisanal fishing by communities around the Serra da Cotia National Park. With this action, it accumulated the first experiences of working with sustainable production activities. Another important precursor was the Sowing Sustainability project, implemented with the support of Petrobras from 2010 onwards, aimed at associating environmental regulation with sustainable production practices.<sup>66</sup>

As of 2010, actions were initiated to support public policies aimed at family farmers. With the enactment of the Forest Code in 2012, the adhesion of these groups to the CAR became one of Rioterra's main challenges.

For Rioterra, the *Amazon Backyards* project was a large project with a volume of resources and scale that made the organization known in the state. Among the projects evaluated, it was the only executing organization that managed to approve a subsequent project with the Amazon Fund<sup>67</sup>, which expands the scale and ensures the continuity of several of the approaches developed. The Plant Amazon project broadens the area of operation from 3 to 12 municipalities. In part, the beneficiaries of the municipi-

---

64 Check more details at [the Rioterra website: www.rioterra.org.br](http://www.rioterra.org.br).

65 The objective of these subprojects was to encourage community initiatives aimed at economic and socio-environmental development around the protected areas covered by ARPA (cf. <https://www.gov.br/mma/pt-br/noticias/arpa-divulga-selecionados-no-edital-participacao-comunitaria>).

66 Learn more about the Semeando Sustentabilidade (Sowing Sustainability) project at [Rioterra website: https://rioterra.org.br/pt/essencial\\_grid/semeando](https://rioterra.org.br/pt/essencial_grid/semeando).

67 Learn more at [Rioterra website: http://www.fundoamazonia.gov.br/pt/projeto/Plantar-Rondonia](http://www.fundoamazonia.gov.br/pt/projeto/Plantar-Rondonia)

palities covered by the *Amazon Backyards* project continue to be contemplated within the scope of the successor project.

In recent years, Rioterra has been studying institutional sustainability strategies that combine fundraising and project execution with the sale of seedlings from the organization's own nursery. It also seeks international partnerships for these strategies, for example, through the opening of an office in Europe.

### 5.2. Design and implementation strategy

The coordination for the construction of the Amazon Backyards project started in 2010, thus preceding the strategies of public calls for the Sustainable Production Component.

According to the interviews with the team, the project's initial aim was to focus more on investments and actions in science and technology, aiming to create the basis for technical assistance to the areas to be recovered to promote compliance with the Forest Code. Thus, the initial actions planned were to implement a matrix bank and to prepare and implement areas for recovery through AFS. But the project went through a long period of negotiation with the Amazon Fund, whose team insisted on an approach that would direct a greater volume of resources to beneficiaries.

The project's focus was to identify volunteers for reforestation, especially considering that water scarcity on the properties was already becoming a problem in several areas. By associating forest restoration with the recovery of water APPs, the project would support the state of Rondônia in implementing the CAR<sup>68</sup>.

At the same time, a proposal was developed to associate adherence to the CAR with the implementation of sustainable production activities, aiming to diversify production and compensate for the reduction of productive areas.

With the encouragement of the Amazon Fund team, throughout the negotiation, an experience in Payment for Environmental Services (PES) was also incorporated into the proposal, leading to a set of innovative approaches in the context of the state. This set also included training and training actions aimed at raising awareness, attracting and preparing farmers for the implementation and management of AFS.

With this arrangement, the implementation of actions to encourage sustainable production activities was associated with adherence to the CAR and the preparation of recovery plans for the identified environmental liabilities. The project did not envisage working with specific value chains. However, with the implementation, some chains

---

<sup>68</sup> Despite the name *Amazon Backyards*, the implementation of AFS was not associated with domestic backyards, but with areas of environmental liability to be recovered within the scope of compliance with the Forest Code.

ANNEX I:  
3 — Amazon Backyards



PHOTO: Rioterra

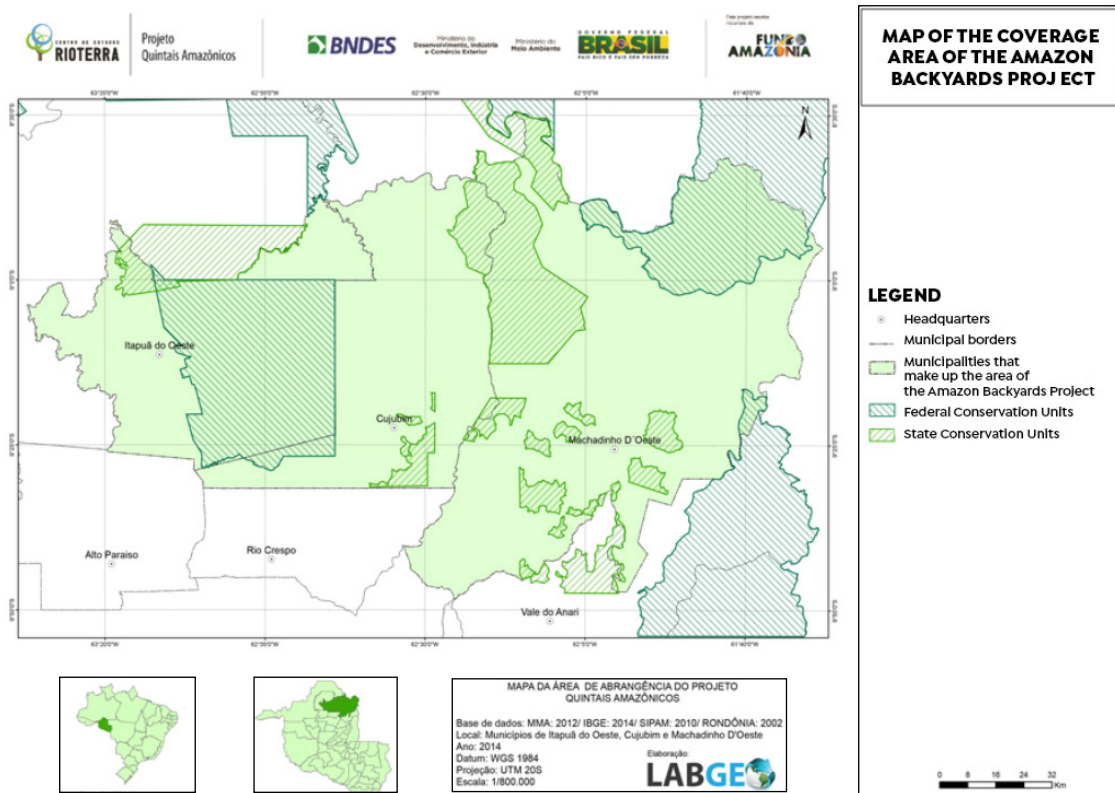
began to stand out. The proposal was perceived by the Rioterra team as a learning process about restoration and the income generation opportunities that restoration areas could provide.

The implementation region included the municipalities of Itapuã do Oeste, Cujubim, and Machadinho D'Oeste, located in the northeast of the state of Rondônia (Figure 6)<sup>69</sup>. These are municipalities that, at the time the project was designed, already had high rates of deforestation, and were covered by the so-called Operation Arco Verde, a concentrated government action in the municipalities of the Deforestation Arch within the scope of the Action Plan for Prevention and Control of Deforestation in the Legal Amazon (PPCDAm). Machadinho D'Oeste and Cujubim have been on the list of priority municipalities for deforestation control actions since 2008 and 2017, respectively. At the same time, these municipalities are home to many federal and state conservation units, with emphasis on the Jamari National Forest, which covers a large portion of the municipality of Itapuã do Oeste. In addition, they were in the area covered by the Madeira River hydroelectric plants, then under construction, and were part of the Territory of Citizenship, a regional governance arrangement promoted by the Ministry of Regional Integration. Rioterra was already active in these municipalities in its previous projects.

<sup>69</sup> More details at: RIOTERRA. Center for the Study of Culture and the Environment of the Amazon Rioterra. Consulta Prévia Quintais Amazônicos. 2011. p. 24 et seq.

ANNEX I:  
3 — Amazon Backyards

Figure 6: Coverage area of the Amazon Backyards Project



Source: [https://rioterra.org.br/pt/essencial\\_grid/quintais](https://rioterra.org.br/pt/essencial_grid/quintais)

The implementation strategy of the *Amazon Backyards* project provided for the collection of seeds necessary for the implementation of AFS to take place in the Jamari National Forest, so cooperation agreements were signed with the Chico Mendes Institute for Biodiversity Conservation (ICMBio), responsible for its management, and with the Federal University of Rondônia (Unir), which had researchers working in the area.

Rioterra also had an agreement with the Municipality of Itapuã do Oeste for the co-management of a municipal nursery, where the necessary seedlings for restoration would be produced. In order to ensure the quality of the analyses, support was provided for the expansion of the laboratory for the selection of seedlings from the nursery in Itapuã do Oeste and for the structuring of a soil analysis laboratory at the Federal University of Rondônia. By their nature, these actions were allocated to the Science and Technology Component of the Amazon Fund, but they were integrated actions that would support the implementation of the restoration proposal through AFS in the context of the Sustainable Production Component.

The target public of the actions would be primarily settlers, considering that

the colonization of the region resulted from the implementation of official settlement projects carried out in the 1980s. As mentioned, the project predates the design of the implementation arrangement provided for by the public calls for the Sustainable Production Component, carried out from 2012 onwards. Thus, there is no agglutinating/agglutinated organization arrangement in the project, and Rioterra is fully responsible for its execution. In the initial proposal, there was no design foreseeing the interaction with community organizations, the strategy focused on providing individual assistance to producers who volunteered to implement the AFS and who would be registered in an area bank. To this end, the Rioterra team would carry out zoning work and identify appropriate areas for restoration, managing the entire process through geographic information systems.

The project provided technical assistance and training actions for this public, including a partnership with the National Institute for Research in the Amazon (Inpa), for planning the productive and economic arrangements of the AFS. Field assistance would be provided by Rioterra's technical team, which would also oversee a set of capacity building and training actions on topics such as seed collection, seedling production and nursery farming, zoning of rural properties, agroecology and permaculture, among others, with the support of both the municipal nursery and rural schools.



## 6. Results Evaluation

### 6.1. Achievement of agreed indicators

The evaluation of the *Amazon Backyards* project, presented below, used the indicators consolidated in the project's monitoring plan, agreed upon between the executors and the Amazon Fund team. These indicators are not those listed by Rioterra in its original project proposal<sup>70</sup>, but align the project's contributions to the Amazon Fund's indicators, also incorporating some Fund-specific indicators.

The targets and annual evolution of these indicators are presented below. The percentage variation indicates the percentage of the target's achievement at the end of the project, according to the following classification:

---

70 RIOTERRA. Center for the Study of Culture and the Environment of the Amazon Rioterra. *Consulta Prévia Quintais Amazônicos*. 2011. p. 55 et seq.

Classification of indicator achievement	Achievement	Evaluation
	< 50%	Much lower than expected
	50 a 80%	Below expected
	80 a 120%	Achieved
	> 120%	Exceeded

The project monitoring plan only presents the target and the final figures achieved for each indicator without defining baselines. Annual intermediate figures were obtained from performance reports. The figures of the 2nd (considered for the year 2015), 5th (considered for the year 2016), and 7th report (for 2017) were used.

### *Sustainable Production Component*

**INDIRECT EFFECT / GENERAL PURPOSE:** Activities that keep the forest standing are economically attractive in the municipalities of Itapuã do Oeste, Cujubim, and Machadinho D'Oeste.

**Indicator:** Annual deforestation in the municipalities of Itapuã do Oeste, Cujubim and Machadinho D'Oeste – annual measurement of data from the Project for Monitoring Deforestation in the Legal Amazon by Satellite (PRODES), in charge of the National Bank for Economic and Social Development (BNDES), figures not available in the project monitoring worksheet.

**DIRECT EFFECT / SPECIFIC OBJECTIVE 1<sup>71</sup>:** Expanded managerial and technical capabilities for implementing agroforestry systems, cooperativism, and management of associations.

<sup>71</sup> The order of specific objectives in the monitoring framework and in the project reports is reversed in relation to the sequence adopted in the project's Logical Framework, in line with the overall Logical Framework of the Amazon Fund.

## ANNEX I: 3 — Amazon Backyards

Indicator	Target	2015	2016	2017	Variation (%)
Number of trained individuals (for the implementation of agroforestry systems) effectively using the acquired knowledge	300	91	295	353	117.16

*Output 1.1:* Technical assistance provided to small family farmers in the production of agroforestry systems.

Indicator	Target	2015	2016	2017	Variation (%)
Número de famílias (imóveis) rurais beneficiados com assistência técnica	500	948	1.201	1.201	240.20

*Output 1.2:* Training family farmers in seedling and agroforestry production techniques.

Indicator	Target	2015	2016	2017	Variation (%)
Number of rural families (properties) benefiting from technical assistance	500	152	386	540	108

*Output 1.3:* Training family farmers to manage associations and cooperativism to access the market.

Indicator	Target	2015	2016	2017	Variation (%)
Number of trained individuals (for managing associations and cooperativism as a means of accessing the market)	100	43	78	114	114

**DIRECT EFFECT / SPECIFIC OBJECTIVE 2:** Deforested and degraded areas recovered and used for production through agroforestry systems (AFS).

Indicator	Target	2015	2016	2017	Variation (%)
Area recovered and used for economic purposes (ha)	500	91	276	742,7	148.54

## ANNEX I: 3 — Amazon Backyards

Indicator	Target	2015	2016	2017	Variation (%)
Revenue obtained from sustainable use economic activities (BRL)	-	-	12,806.95	13,414.04	-
Number of community organizations strengthened	10	17	11	14	140

*Output 2.1:* Registration and survey of georeferenced data from the rural properties under the project.

Indicator	Target	2015	2016	2017	Variation (%)
Number of awareness-raising or integrative events	15	10	29	42	280
Number of individuals participating in awareness-raising or integrative events	500	396	851	1,084	216.8

*Output 2.2:* Implementation of 500 ha of AFS in degraded areas in small properties of family farmers.

Indicator	Target	2015	2016	2017	Variation (%)
Number of properties with sustainable production projects (implementation of agroforestry systems)	500	23	112	504	100.8

*Output 2.3:* Payment for environmental services for family farmers supported by the project.

Indicator	Target	2015	2016	2017	Variation (%)
Area benefited from payment for environmental services (ha)	-	-	246	257	-
Total amount paid for environmental services (BRL)	292,000	-	168,646.34	415,165.26	142.17
Number of families benefiting from payment for environmental services	-	-	57	184	-

*Output 2.4:* Expansion of the municipal plant nursery of Itapuã do Oeste.

Indicator	Target	2015	2016	2017	Variation (%)
Number of seedlings produced by the nursery with project support	800,000	130,365	645,000	1,035,000	129.38

### *Scientific and Technological Development Component*

**INDIRECT EFFECT / GENERAL OBJECTIVE:** Science, technology, and innovation activities contribute to the recovery, conservation, and sustainable use in the state of Rondônia.

**Indicator:** The project's indirect contribution to the objectives of the Amazon Fund will be monitored by regional indicators within the scope of its Monitoring and Evaluation System.

**DIRECT EFFECT / SPECIFIC PURPOSE:** Knowledge and technologies aimed at sustainable use in the state of Rondônia produced and disseminated.

Indicator	Target	2015	2016	2017	Variation (%)
Number of scientific, pedagogical or informative publications	-	9	31	69	
Number of participations in integrative events (seminars and forums) aiming to disseminate the knowledge produced	-	5	9	13	
Number of researchers and technical staff involved in ST&I activities residing in the Amazon region during project execution	10	2	13	13	130

*Output:* Expansion of the laboratory for seedling selection in the municipality of Itapuã do Oeste.

Indicator	Target	Until 2016	2016	2017	Variation (%)
Amount invested in ST&I infrastructure (BRL)	250,000	123,376.08	217,976.28	280,520.89	112.20
Built, expanded, or modernized laboratory area (m <sup>2</sup> )	-	-	1,024	1,024	-

*Output:* Structuring a laboratory for soil analysis at the Federal University of Rondônia.

Indicator	Target	Until 2016	2016	2017	Variation (%)
Amount invested in ST&I infrastructure (BRL)	185,000	40,456.16	164,929.29	153,003.52	82.70
Built, expanded, or modernized laboratory area (m <sup>2</sup> )	-	90	90	90	-

## 6.2. Objectives, indirect and direct effects

The monitoring plan allows for verifying the scope of the indicators agreed upon between the Amazon Fund and the project's executors. In the Amazon Backyards project, records were not made available to review how the monitoring plan indicators were established and/or adjusted.

The project's monitoring plan defines as general objectives/indirect effect of the project that the activities that keep the forest standing have economic attractiveness in the municipalities of Itapuã do Oeste, Cujubim, and Machadinho D'Oeste and establishes the annual deforestation in these municipalities as an indicator. However, these values were not measured.

The *Amazon Backyards* project is the only evaluated project with objectives and indicators allocated to more than one component of the Amazon Fund, since support for the structuring of laboratories was included in the Scientific and Technological Development Component. However, these actions were not oriented to specific research purposes, but constituted means to reach the objectives of the Sustainable Production Component. Thus, a separate analysis of the two components will not be made here.

Nominally, the *Amazon Backyards* project reached or exceeded all indicators that were included in the monitoring plan. However, it is important to consider a series of limitations related to the definition and feeding of indicators that reduce their relevance as a reflection of the effectiveness of the project's results. These issues will be addressed below in the context of a qualitative description of the project's direct effects. The overall evaluation of the achievement of the project's objectives will be carried out conclusively at the end of the chapter.

### 6.2.1. Direct effect “Expanded managerial and technical capacities for the implementation of agroforestry systems, cooperativism and management of associations”

Unlike the other projects evaluated and the general organization of the Amazon Fund's Logical Framework, the Logical Framework of the *Amazon Backyards* project

presents the specific objective related to managerial and technical capabilities first.

In general, the training actions undertaken by the project are divided into two blocks: training directly related to environmental regularization activities and implementation of AFS, as supporting actions aimed at achieving Objective 2, and actions aimed at institutional strengthening of community organizations.

The Amazon Fund's standard indicator assesses direct benefit. It was used to measure the number of individuals effectively trained using the knowledge they have obtained. The project specified that the indicator refers to participation in training for the implementation of AFS. The training events were attended by 353 people, exceeding the stipulated target of 300.

### **Output: Technical assistance provided to small family farmers in the production of agroforestry systems**

With 1,201 families visited, this is the indicator of the *Amazon Backyards* project, which more clearly exceeded the stipulated target of 500 families. For its measurement, a methodology was adopted that follows the criteria of the federal government, considering as “served by technical assistance and rural extension” the families that received three visits from the technical team. Regardless of this being a number related to the team's actions and not to results, the number reflects the centrality of face-to-face technical assistance in Rioterra's operating strategy, highlighted both in the interviews with the team and with the beneficiaries.

But the high number of visits also reflects an initial understanding reported in the interviews that the implementation of AFS on rural properties would be an activity to be carried out by Rioterra itself. In the project's initial years, in addition to providing all the inputs, Rioterra's technical staff implemented the actions, putting up fences and railings and planting, in addition to taking care of their maintenance. Some technical staff reported that, initially, this approach was relevant in terms of demonstration and learning effect, not least because the project also provided for testing the effectiveness of different AFS models. During the project, requirements for the farmers' contribution were incorporated, especially the availability of labor for planting and maintenance.

### **Output: Training of family farmers in seedling production and agroforestry production techniques**

With 540 people trained under the *Amazon Backyards* project, the indicator also exceeded the established target of 500 people. The number achieved is related to the number of properties in which the AFS were implemented, reflecting the demonstrative actions carried out directly on the properties. It is worth noting that Rioterra carried out several courses and training events in agroecology, soil management, zoning of properties and implementation of AFS, and it is not clear whether the participation

in these trainings was accounted for in this indicator.

The interviews showed that the audience for these courses was usually people already interested in the topics offered. Demonstrations of practical experiences and addressing activities that allow saving resources and reusing existing inputs on the properties generated greater interest. It was reported that there was a difference between the farmers interested in training generally more aimed at awareness raising, and the participants of training in recovery of the areas, who were interested in practical activities, but with less commitment. Thus, awareness-raising strategies proved to be of great relevance in enabling the implementation of AFS. As reported in the interviews, the technical staff found that many farmers made basic mistakes in their production activities, which could be easily fixed. The guidelines provided generated trust and facilitated the advancement of work proposals with the AFS.

### **Output: Training of family farmers to manage associations and cooperatives as a means of accessing the market**

Again, this is an output for which the indicator was reached, with 114 people trained (target of 100). However, this does not reflect the relevance and challenges of working with community organizations as a link to access markets, which was explored qualitatively in the interviews.

It should be noted that the project's original design did not provide for the institutional strengthening of these organizations. The original proposal was developed in the initial years of operation of the Amazon Fund, before the arrangement of agglutinating/agglutinated organizations that was applied as of the public call for proposals held in 2012.

However, the interviews explored various reflections and initiatives undertaken by Rioterra throughout the project to address the role and relevance of community organizations. It was reported that an initial diagnosis of organizations in the area covered by the project had found a context of great fragility of existing associations. Many did not have the Declaration of Aptitude for the National Program for the Strengthening of Family Agriculture (DAP), necessary for access to rural credit and public purchase programs. There was no understanding of the functions of the governance bodies of the associations, such as assemblies and councils, whose functioning needs to be proven to ensure the legal regularity of the organization. Dominance and centralization on the part of the leaders were also common, and usually associated with political objectives.

Rioterra held courses on associativism and cooperativism to address the basic issues of collective organization, with the number of participants counted as an indicator, and directly advised the formalization of some associations. It also used the spaces and the capacity to convene the organizations for other training events carried out within the scope of the project and to initiate contact with farmers interested in the implementation of AFS, to overcome the individual approach, which was presented as a

limitation to the achievement of the project's targets. Actions and reflections on the role of community organizations as a means of accessing markets will be addressed in the next chapter. It is plausible to assume that the training has contributed to the advancement of some organizations. However, it was not possible to establish this correlation more specifically within the scope of the evaluation.

### ***6.2.2. Direct effect “Deforested and degraded areas recovered and used for production through agroforestry systems (AFS)”***

This theme addresses the field actions that connected the environmental regularization agenda and recovery by means AFS with economic purposes within the scope of the *Amazon Backyards* project. Actions to strengthen community organizations are also allocated here. Three indicators at the level of direct effects capture the results of these actions: the area in which the AFS were implemented, the revenue obtained from the commercialization of their products and the number of organizations strengthened. Targets for area (500 hectares planned, 742.7 achieved) and organizational strengthening (10 organizations planned, 14 achieved) were exceeded. An annual average of BRL 13,414.04 per person for the revenue indicator was measured, but there was no established target. Considerations about these indicators are:

- The area indicator changed its understanding throughout the project: while Rioterra had interpreted that this was the area for AFS implementation, the Amazon Fund team saw a correspondence between the number of properties to be served and the area of the AFS, based on the expectation of reaching a significant number of beneficiaries by means of the project. Over the project, Rioterra adjusted its approach of working with multi-hectare AFS (especially silvopasture) to implement AFS with an average of 1.5 hectares per farm, aiming to reach 500 individual farms. The achievement of this number at the end of the project, explains why the hectare target was exceeded. It is important to point out that the indicator considers all areas where the AFS were implemented as "recovered." However, no systematic monitoring of the maintenance and effective recovery of the areas was carried out.
- The revenue indicator was built throughout the project, but its calculation basis requires contextualization of several aspects: data on commercialization volume and value were collected on a sample basis, involving a minimal and variable number of individual farmers. The reports present surveys carried out in 2015 (8 farmers), 2017 (14 farmers), and 2018 (16 farmers). The data were collected through interviews during field visits by Rioterra technical staff, who reported difficulties on the part of farmers in understanding the calculations,

especially in distinguishing between gross and net values and costs.

- Regarding the institutional strengthening indicator, its connection with training actions has already been addressed in the analysis of Output 1.3. A very simplified calculation basis was adopted to arrive at the result of 14 strengthened organizations, if their representatives have participated in three or more project activities<sup>72</sup>. As mentioned, the maturity of organizations in the project area was very low at the beginning of the project. In addition to training courses, Rioterra supported the regularization of documentation of some associations, so that they could access formal markets. In the interviews with the Rioterra team, the technical staff pointed out one to two associations that they considered more advanced, generally due to the leaders' understanding of the organizations' role. The technical staff identified a process of learning by the team about the importance of organizations for commercializing more significant volumes. They view actions to engage and prepare leaders as relevant to this process. But they also reported that the priority focus of the *Amazon Backyards* project was not commercialization but preparation of the productive processes.

### Output 2.1: Registration and survey of georeferenced data from the rural properties targeted by the project

As output indicators, the number of participants and events to raise awareness of the environmental regularization process supported by the *Amazon Backyards* project were counted. Both were largely exceeded: 15 events planned, and 42 carried out; 500 expected participants, and 1,084 registered participants. However, this is the only indicator of the project that informs about Rioterra's performance in the environmental regularization agenda, and these strategies also relied on several other elements.

As reported in the interviews, Rioterra was already working to support adherence to the CAR in previous initiatives and maintained a position of alignment and technical support to state policies regarding this agenda. The project itself included investments in structuring geographic information systems and preparing databases for registering properties. Although the specific purpose of the registries was to identify suitable areas for the implementation of AFS, Rioterra routinely supported CAR registration in all its initiatives. Information processing was carried out, addressing inconsistencies and overlaps and iden-

---

<sup>72</sup> Currently, there is a recommendation to evaluate 12 planning, accountability and governance criteria to comprise levels of managerial quality to be considered for this indicator (GIZ. Deutsche Gesellschaft für Internationale Zusammenarbeit. Guia de Monitoramento de Efetividade de Projetos de Produção Sustentável apoiados pelo Fundo Amazônia. Rio de Janeiro, 2020. p. 38-39.)

tifying liabilities and biophysical appropriateness for the implementation of AFS. Various materials and booklets were prepared for awareness-raising actions, both at events and within the scope of technical visits to properties. The CAR preparation was associated with the implementation of the AFS: the field technical staff knew the farmers and were able to advise on priorities and preferred species for restoration. The logistics of delivering materials and seedlings were combined with surveys for environmental regularization. Based on cooperation agreements with the State Secretariat for Environmental Development (SEDAM), Rioterra accesses the base of the state environmental agency as a partner organization. There is sharing of information and learning with government technical staff. Several field actions, such as regularization efforts, were carried out jointly.

### **Output 2.2: Implementation of 500ha of AFS in degraded areas in small properties of family farmers**

Although this output refers to the area of implemented AFS (already captured by the indicator of direct effect discussed above), the indicator defined for its measurement is the number of properties with projects to implement AFS within the scope of the *Amazon Backyards* project. Therefore, the 504 properties on which the 742 hectares of AFS are located were recorded here.

### **Output 2.3: Payment for environmental services for family farmers supported by the project**

This output refers to a specific action of the *Amazon Backyards* project not foreseen in the initial design. As informed in the reports and interviews, payment for environmental services was an action encouraged by the Amazon Fund team, which saw the project as an opportunity to carry out a pilot project on this topic. The indicators envisaged only a value target for the payments (BRL 292 thousand). However, in addition to the final amount disbursed (BRL 414,165.26), the number of families that received the payments (184) and the corresponding area of the properties (257 hectares) were also computed.

There was an expectation on the part of the Amazon Fund team to carry out individual monitoring of all properties with AFS for the calculation of environmental services, which proved to be unfeasible from a logistical point of view. Rioterra carried out modeling exercises to estimate carbon stocks to inform the payments, evaluating models and arrangements with forest essences with greater absorption power. They also evaluated the successive stages of recovery to feed the models. Publications were made on landscape analysis and carbon monitoring.

In the end, a scoring system was established that counted the days dedicated to the maintenance of the AFS and other services provided by the farmers in the context of the project as environmental services (e.g. construction of fences, removal of degrading fac-

tors, etc.). The owners with the most significant results were rewarded with the payment, made in equal parts and through a single disbursement. However, the Amazon Fund did not have a mechanism for this payment method, so it was challenging to find a viable disbursement mechanism<sup>73</sup>. After the first payment, the initiative was not continued.

#### Output 2.4: Expansion of the municipal plant nursery of Itapuã do Oeste

For this output, the production of seedlings by the nursery was measured, and its target (800,000 seedlings) was vastly exceeded (final figure of 1,035,000 seedlings).

This action was supported by the co-management agreement that Rioterra already had with the Municipality of Itapuã do Oeste in the nursery operation. The possibility of using the municipal nursery was of great importance for the supply of forest seedlings for the implementation of AFS. A series of project actions were linked to the production of seedlings: seed gathering in the Jamari National Forest, construction and expansion of laboratories for the necessary analysis and quality controls, training actions, and the work of the technical staff who operated the nursery.

The *Amazon Backyards* project provided essential lessons for the operation of the nursery and seed gathering. The gathering was carried out in georeferenced matrices in Jamari National Forest. The gathering had to be adapted to the dynamics of each species and was sometimes carried out biannually. Improvements were incorporated, such as the transition to production with tubes and substrate in place of plastic bags. The implementation of the laboratory associated with the project (see chapter 6.2.3) increased quality control.

However, the partnership with the municipal government faced problems and was terminated after the project was completed. Currently, the nursery is deactivated, and the municipal government is evaluating its transformation into a municipal green area. Rioterra has set up a nursery in its area and continues to produce an average of one million seedlings annually.

#### **6.2.3. Direct effect “Knowledge and technologies aimed at sustainable use in the state of Rondônia produced and disseminated”**

This item gathers the results and outputs that were allocated to the Scientific and Technological Development Component of the Amazon Fund. However, although Rioterra is an organization with a profile for teamwork, partnerships, and lines of work aimed at research and technology, the actions considered here were not planned with this specific purpose, but rather, to reach the objectives of the Amazon Backyards project. Other pro-

---

<sup>73</sup> The solution found was payment via Autonomous Payment Receipt (RPA), with tax deduction.

jects evaluated with similar investments in infrastructure and knowledge generation had these actions integrated into the Sustainable Production Component.

At the direct effect level, the *Amazon Backyards* project fed the Amazon Fund's standard indicators for the Component, summing up all communication materials produced throughout the project, such as scientific, educational, or informative publications. There was no defined target for the indicator, which reached almost 70 contributions. For the indicator of participation in integrative events, also without a defined target, 13 presentations of the project were recorded at integrative events attended by the project's target audience and/or institutions related to the theme.

Finally, the project listed a total of 13 researchers and technical staff (target 10) who participated in the project's actions through institutional partnerships, covering both SEDAM technical staff, who participated in the evaluation of the recovery of environmental services, and students and professors at the Federal University of Rondônia, who contributed with phytophysiology and physical environment studies to identify areas for AFS. Attention should be drawn to the partnership signed with the Executive Committee of the Cocoa Crop Plan (CEPLAC), which not only made it possible to supply cocoa seedlings and clonal coffee for planting, but also provided technical guidance and training for the management of AFS.

#### **Output 2.5: Expansion of the laboratory for seedling selection in the municipality of Itapuã do Oeste**

This output concerned investments in the laboratory expansion associated with the municipal nursery of Itapuã do Oeste, with the works and the built laboratory area considered indicators. However, as already mentioned, the partnership with the municipality for the management of the nursery was dissolved after the *Amazon Backyards* project was completed, so the current use of the investments made in this partnership is not clear.

#### **Output 2.6: Structuring a laboratory for soil analysis at the Federal University of Rondônia**

This output addresses yet another investment in the structuring of a laboratory, in the understanding that soil analysis was an important step in identifying areas for the implementation of AFS. The amount invested and the area of the laboratory was also established as indicators for the *Amazon Backyards* project.

As informed in the interviews, initially, Rioterra had plans to install the laboratory on its premises. However, later on, there was an understanding that it would be valuable to carry out this action with the Federal University of Rondônia, with which Rioterra already had cooperation agreements.

The materials acquired were left to the University and as informed by Rioterra, are currently available for research activities at the Plant Physiology Laboratory.



PHOTO: Rioterra

### 6.3. General evaluation

Considering the scope and complexity of the *Amazon Backyards* project, the evaluative elements will be organized by the project's major fronts of action, which allows a more organic aggregation than the structure of effects and outputs..

#### 6.3.1. Positive aspects

- The *Amazon Backyards* project implemented **AFS in a novel way for the population of settlers in the northeast region of the state of Rondônia<sup>74</sup>**, a region where the implementation of the Forest Code is controversial and rejected by many farmers.
- Based on Rioterra's experience in supporting CAR implementation, the *Amazon Backyards* project is unique among the projects evaluated, for associating **the promotion of sustainable productive activities in the context of environmental regularization**. The Rioterra team highlighted the im-

---

<sup>74</sup> Although Rondônia has one of the most consolidated and emblematic experiences of implementing AFS in the Amazon through the so-called RECA project – Consortium and Densified Economic Reforestation (<https://www.projetoreca.com.br>), the RECA experiences were not of great relevance to the *Amazon Backyards* project. The Rioterra team is familiar with RECA, has acquired seedlings, and carried out visits and exchanges. However, its geographic location in the state's far west does not allow for continuous contact.

portance of AFS as a mechanism that encourages and favors environmental regularization instead of merely punitive approaches. The expectation of income generation was seen as a critical element to motivate producers to carry out actions to recover environmental liabilities. The dynamics of this awareness-raising process is reflected in a beneficiary's testimony:

“People must like it a little, it's a good project that generates income, but to make people understand it, they'll have to be interested. I tell neighbors: Why don't you do this? Planting a tree is not bad. We choose what we want to plant. People think it doesn't, but it generates income. In the beginning I produced cassava, pumpkin, pineapple, it is already an income. I was interested in the first Rioterra meeting because they talked about water recovery. I come from a region that suffered from deforestation, where springs were running dry. I had a spring that erosion was drying up. Now the water is springing more, it's not running yet, but the earth is already damp. They planted the seedlings, today the erosion is recovered, and in a year, I will have the first sale.”

- The project's design began in the initial phase of implementation of Amazon Fund projects. Both the Rioterra team and the Amazon Fund technical team highlighted the **learning processes** on the agenda of sustainable production activities carried out during the project's implementation. The project went through a three-year negotiation period until it was implemented. The negotiation of Rioterra's next project with the Amazon Fund only lasted four months.

“The Backyards project provided learning pills; it was a school.”

- The initial design of the project, which aimed to experiment with different AFS arrangements, was adjusted towards **greater emphasis on allocating resources and actions among beneficiaries**. This allowed reach a more significant number of beneficiaries.
- The **expansion of Rioterra's previous experiences in gathering and producing seeds and seedlings** was relevant to advance restoration models in the state. Investments in the municipal nursery of Itapuã do Oeste, co-man-

aged by Rioterra at the time of the project, and the possibility of gathering seeds in the Jamari National Forest made the implementation of AFS possible and led to the generation of knowledge that is currently used in the organization's nursery. The installation of the laboratories made it possible to improve the quality of restoration. The laboratory installed at UNIR continues to be used for research and training.

- The **fieldwork of Rioterra's technical team**, whether in technical assistance or training and capacity building, was highlighted in interviews with technical staff and beneficiaries. Especially the practical demonstration work was considered very relevant for the awareness-raising and persuasion processes.

“Governments are not focused on family farming and leave it alone. Technical teams don't go to the area. But we need technical experts, agronomists, and veterinarians. We farmers are lay people, and we don't have the resources to pay for the technical experts to come. Rioterra has been doing this throughout the project. For us, it is of great importance, without knowledge, we are ultimately unsuccessful.”

- Rioterra technical staff have adopted an approach in which they provide **recommendations for the management of the property as a whole to attract** farmers to adopt more sustainable practices and recovery actions.
- The project's partnerships with INPA and CEPLAC, in addition to ensuring the supply of cocoa and clonal coffee seedlings to the AFS, promoted **learning about the most suitable species for economic use**, with cocoa and acai berry being pointed out as the most promising. The experiences helped identify modalities and species (mainly cocoa, coffee, acai berry, and pupunha) currently implemented in pre-defined AFS arrangements for different types of areas, enabling larger-scale operations within the scope of the Plantar Amazônia project, whose AFS implementation target is 3 thousand hectares.
- Rioterra understood the **PES experience** carried out within the project's scope as a pilot for a state policy on this topic. The work allowed the parameterization of indicators in model properties and the construction of forms for surveying the criteria.

### 6.3.2. Challenges

- The peculiar nature of **Rioterra's work at the intersection between the environmental regularization agenda and the promotion of AFS** is present in the proposal of the *Amazon Backyards* project, but not so much in its **results**. Thus, for example, registrations and adjustments to the CAR, which the Rioterra team systematically promotes in all its initiatives, were not computed as project results, as they refer to indicators from the Monitoring and Control Component of the Amazon Fund. On the other hand, actions that were allocated to the Monitoring and Control Component were computed as results of the Scientific and Technological Development component, but they were clearly more connected to the achievement of the objectives of sustainable production than to specific scientific and technological development purposes.
- Rioterra already had some experience supporting sustainable production activities, but **the project's focus was more on structuring production than on actions effectively aimed at generating income**. The interviews and even the activities that are currently carried out under the *Plantar Amazônia* project demonstrate how the initial design and implementation of the *Amazon Backyards* project did not consider key aspects for an approach aimed at generating income through AFS, since there were no defined strategies and activities for the commercialization and access to markets of the products generated by the AFS. The initial approach was individualized, and the weakness of the associations was so great that there was no prospect of advancing the role of these organizations in commercialization until the end of the project. Currently, the Rioterra team recognizes the need to act more effectively along the links in the value chains, incorporating aspects such as economic feasibility analyses and stages of processing, distribution, and commercialization.



*"I said that you have to think about where to sell the production in the project. This is missing from the project. Rioterra has to provide more conditions for a project to succeed. The project has to plant, produce and add value. It has to be expanded to keep it going. Otherwise, a lot of money comes through the bank and in the future, there will be none. People don't have the knowledge. You have to bring the knowledge of where to sell better."*

- Despite having reported the strengthening of 14 community organizations, in addition to the training and awareness-raising of more than 100 people for the management of associations and for cooperativism as a means of accessing the market, **the project did not view community organizations as mechanisms to promote commercialization** of the products generated by the AFS. In fact, Rioterra did not monitor sales, only reporting that sales took place in local markets and fairs, and individual sales were also made to public procurement programs (Food Acquisition Program - PAA and National School Feeding Program - PNAE). The initial diagnoses had pointed to the great weakness of local associations, with an individualized attitude predominating. Training in associativism and cooperativism was not enough to change this situation significantly. However, the interviews with the technical staff indicate there was a learning process throughout the project regarding the relevance of organizations for productive and organizational issues and a recognition of their importance for the commercialization of larger volumes and a more effective focus on these aspects within the scope of the Plantar Amazônia project.
- The project indicators themselves reflect the initial moment of elaboration of metrics in the context of the Amazon Fund on this topic. The project fed the Amazon Fund's standard indicator, which computes the revenue obtained from sustainable use economic activities. The methodology and measurement performed face recurring problems in measuring the financial results of AFS in their first years of implementation. The detailing of the products considered in the calculations, made available by Rioterra, shows that they are primarily short-cycle crops, with products that are cultivated among shrub and tree species in their initial growth phase, such as cassava, watermelon, pumpkin, etc. Although these plantations allow for revenue generation in the initial years of implementation of the AFS, these **results reflect revenue generation only in the initial stage of a AFS, and cannot serve as a reference for their revenue potential**. Consolidated production and revenue data demonstrate the weight of short-cycle products in the computed average. Shrub products with longer cycles, such as cupuaçu and cocoa, present neutral or negative variations, and timber products are not yet included in the survey (Chart 3).

## ANNEX I: 3 — Amazon Backyards

- Furthermore, the sampling methodology applied by Rioterra, in addition to the problems associated with surveying revenue through interviews with a very small number of farmers, considering that the data collected do not include inflation depreciation, **strongly limits its validity as a result of the project in terms of income generation through AFS.**

Chart 3: Details of production and commercialization volumes and values

Products	Unit of measurement	TOTAL PRODUCTION				TOTAL REVENUE			
		Base Year	Last year	Variation (%)	Cumulative Production	Base Year	Last year	Variation (%)	Accumulated Revenue
Manioc	Kg	26,566	51,200	48.1%	102,400	35,067	100,864	65.2%	201,728
Watermelon	Kg	400	12,600	96.8%	25,200	472	23,310	98.0%	46,620
Banana	Kg	200	3,907	94.9%	7,814	428	10,158	95.8%	20,316
Cupuaçu	Kg	950	727	-30.7%	1,454	5,007	3,633	-37.8%	7,266
Guaraná	Kg	1,329	720	-84.6%	1,440	14,951	7,200	-107.7%	14,400
Pumpkin	Kg	448	1,900	76.4%	3,800	681	4,446	84.7%	8,892
Cocoa	Kg	1,714	1,714	0.0%	0	17,145	17,145	0.0%	17,145

Source: Rioterra, Results of the basic questionnaire for evaluating sustainable productive activities.

- Similar limitations should also be considered **in using the areas of implanted AFS as indication of "recovered area"**, as in the feeding of this standard indicator of the Amazon Fund. It should be noted that the Environmental Code itself considers that the recovery actions reach their result in a period of up to 20 years, an approach also adopted by Rioterra in the design of the Projects for the Recovery of Degraded and Altered Areas (PRADAs) envisaged in the scope of the environmental regularization. Considering that the implementation of the areas began in 2015 and that the project invested resources in structuring geographic information systems for Rioterra to conduct the biophysical analyses that supported the implementation of the AFS, the evaluation explored the possibility of obtaining more assertive monitoring data on the evolution of the recovery of the areas, especially from the beneficiaries who were reached by the *Amazon Backyards* project and who continue to participate in the *Plantar Amazônia* project, thus counting on continued monitoring by Rioterra. Howev-

er, the Rioterra team informed that this monitoring could not be carried out at scale, since the available satellite images do not allow data collection with the required precision. The team carried out sample surveys with drones and photographs for four project beneficiaries. The visual impressions in the available documentation show an incipient stage of recovery (Figure 7).

Figure 7: Evolution of vegetation on a farm with AFS implemented by the project



Figure 8: Google Earth with polygons of the property of Mr. Erasmo in 2016.



Figure 9: Google Earth with polygons of the property of Mr. Erasmo in 2020.

Source: Rioterra.

- In addition to the recovery period, the **difficulties in maintaining the areas by the beneficiaries themselves** should be taken into consideration. Throughout the project, the maintenance of the AFS was undertaken by the beneficiaries, without systematic monitoring of their continuity:

“Many people give up, because they have to do maintenance for four years to wait for production and have another activity to be able to have value. In the Amazon, the bush takes over if you leave the land alone for ninety days. It must have maintenance for up to four years. I only persisted because I wanted to preserve the mine.”

“What happens most are the cases in which the plantation is abandoned due to lack of maintenance, it is the most difficult. Rioterra provided railings, fencing, pits, and planting. The project needs to be expanded for people to continue. You must think not only about planting, but about maintenance until production, otherwise people abandon it. If you visit all the projects ten years from now, you will see that many have abandoned them.”

- The project faced difficulties in **the nursery co-management** with the Municipality of Itapuã do Oeste, leading to the termination of co-management at the end of the project. Despite its satisfactory performance during its execution, it was difficult to align the technical work with the more political management dynamics of the municipal public authority. It was unclear how the project's investments in this nursery would be used subsequently.
- The PES experience generated methodological knowledge, but **implementing the payments proved challenging**. In addition to the difficulties in identifying a viable disbursement mechanism, it is worth questioning whether a single payment in the context of a project with limited time frame and resources in fact corresponds to the concept of remunerating the generation of services for forest conservation and/or recovery.
- The project **did not foresee specific actions aimed at topics such as gender equality or youth**. However, these themes were addressed during the interviews. It is worth mentioning that GIZ conducted a study on gender equality in the Amazon Fund's sustainable productive activity projects, and field surveys were carried out in the Amazon Backyards project. However, the focus of the publication was not directed at the project's actions. The approaches of the visited projects are only briefly mentioned in a footnote, pointing out that the approach to promoting equality between men and women was spontaneous:

“As the projects developed, the teams became more aware of the theme and developed actions according to the local reality, based on the organizational values and norms of each one of them. Challenges: lack of broader theoretical knowledge on the subject on the part of the technical team, a more concrete way of working on the theme without overburdening the technical staff, in addition to the little knowledge or the absence of local organizations that work specifically with this approach in the region”<sup>75</sup>

---

75 GIZ. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH; BNDES. National Bank for Economic and Social Development. *Igualdade entre homens e mulheres em projetos de atividades produtivas sustentáveis apoiados pelo Fundo Amazônia*. Rio de Janeiro, 2019. p. 28

## ANNEX I: 3 — Amazon Backyards

- In the interviews, the issue of generational succession and the involvement of women was treated in an associated way. It is recognized that the theme of renovation is central to the target group, both at the property management and organizational levels. Many producers are already old. When there is no involvement of young people in income generation, they tend to migrate to work in agribusiness or in urban spaces. The importance of investing in leadership and renewal was considered:

“You have to let young people experiment, make mistakes and earn their own money. The focus should be on renewal, women, and children are more open to environmental issues, as long as they are involved in income, it is important that this generation is not lost.”

### Box 3: Impacts of the pandemic on the Amazon Backyards Project

#### Highlight: Impacts of the pandemic

- The Amazon Backyards project was concluded in 2019, so its execution was not directly affected by the pandemic. However, several of its work fronts continue in the Plantar project, also supported by the Amazon Fund.
- In the context of Rioterra's activities, direct contact with beneficiaries and local partners was lost, which also impacted the evaluation, due to the difficulties in scheduling and conducting remote interviews. The beneficiaries who were interviewed reported the continuity of contact and assistance from the Rioterra team, but many contacts were maintained only by cell phone, and had been ended at the time of the evaluation contact.
- Since few local interviews were conducted, information about the effects of the pandemic was limited. The continuity of production activities was reported. After an initial interruption, commercialization activities were also resumed. Structured actions and support from the government, such as alternatives for public purchases, etc., were not reported.

### 6.4. Analysis of the OECD evaluation criteria

#### OECD evaluation criteria for the Amazon Backyards project

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>The project started the implementation of AFS in an expanded form in the northeast region of the state of Rondônia that is highly relevant for deforestation containment, where the implementation of the Forest Code is controversial. Its relevance lies in pointing out perspectives for environmental regularization with possibilities of generating income based on recovery of liabilities.</p> <p>It is also worth mentioning the work of productive structuring of the restoration chain, developing methodologies and mechanisms that enable the supply of seeds and seedlings necessary for restoration with native species.</p>	Relevant
<b>Effectiveness Criterion</b>	
<p>O projeto alcançou todas as metas acordadas com o Fundo Amazônia, mas vários indicadores e formatos de levantamento não refletem o alcance dos objetivos de forma adequada. As análises qualitativas da avaliação apontam para importantes processos de aprendizado do projeto, mas também para limitações no alcance dos objetivos propostos (especialmente no que se refere à geração de renda).</p>	Moderately effective
<b>Efficiency Criterion</b>	
<p>The available documentation provides few elements for the evaluation of this criterion. In the performance reports, which should offer inputs to understanding compliance with schedules and degree of execution, there are built-in spreadsheets that do not allow access to the data that fed them.</p>	No elements for evaluation
<b>Critério Impacto</b>	
<p>The most significant impacts are qualitative in nature but have the potential to manifest themselves in a broader way through the actions of the Plantar Amazônia project. In addition to practical demonstrations of the feasibility of implementing AFS on properties and their use to raise awareness and mobilize a wider audience, it is also worth mentioning that Rioterra's close partnership with SEDAM contributes to promoting the strategy of environmental regularization through AFS with economic use at the state level.</p>	Qualitative impacts

(continued)

**ANNEX I:**  
**3 — Amazon Backyards**

*(continuation)*

Evidence	Evaluation
<b>Sustainability Criterion</b>	
<p>The continuity of several of the project's lines of action in the initiatives of Rioterra, primarily through the Plantar Amazônia project, must be seen as a positive sustainability factor. Rioterra, in addition to expanding the territory of the project region, also continues to pursue its strategies for coordinating and promoting governance at the state and municipal levels, seeking to align and improve public policies.</p> <p>Some restrictions must be made regarding the loss of partnerships and investments, for example, in relation to the municipal plant nursery of Itapuã do Oeste.</p> <p>The sustainability of AFS as effective mechanisms of restoration and income generation can only be evaluated in the medium term. However, the continuity of beneficiaries in the Plantar Amazônia project offers good possibilities for carrying out continuous monitoring of these aspects. As for the insertion of products in value chains, there are indications of promising perspectives, especially in the cocoa, coffee, and acai berry chains. However, there are also continuous pressures for expansion of agribusiness and deforestation trends in the region.</p>	<p>Average sustainability</p>

### 6.5. Analysis of the Cancun Safeguards

#### Cancun Safeguards of the Amazon Backyards project

Safeguard	Compliant	Comments
Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements	Yes	<p>The project is not directly aligned with any specific line of action of the PPCDAm, but can be associated with Objective 8 of the 2016 to 2020 phase of the PPCDAm (“Promote the sustainability of agricultural production systems”), which provides, in Result 8.3, for increased adoption of sustainable practices in agriculture, with the Line of Action</p> <p>8.3.2. (“Promote the technological dissemination of sustainable production systems”).</p> <p>Regarding the promotion and implementation of AFS, the 2016 to 2020 PPCDAm mentions this topic among the results of the previous phases<sup>76</sup>, but does not envisage specific actions in this agenda. However, there is alignment with other national regulations, such as the Forest Code and the National Plan for the Recovery of Native Vegetation, which provides for the implementation of agroforestry systems as a way of recomposing Legal Reserves in the context of family farming (Law No. 12651/2012, art. 66, paragraph 3), highlighting their contributions to food security and other social and economic benefits.</p> <p>At the state level, Rióterra considers the alignment and contribution to implementing the ABC Plan (Low Carbon Agriculture Plan), climate governance, and the state's Sustainable Development Plan as priorities.</p>
Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation	Not applicable	There were no specific contributions from the project in this regard.
Respect for the knowledge and rights of indigenous peoples and members of local communities, considering relevant international obligations, national circumstances, and laws and noting that the UN General Assembly has adopted the UN Declaration on the Rights of Indigenous Peoples	Not applicable	There was no involvement of indigenous peoples in the implementation of project actions.

(continued)

<sup>76</sup> MMA. Ministry of the Environment. *Plano de Prevenção e Controle do Desmatamento na Amazônia Legal*. Documento base: context and analyses, 2016. p. 8.

## ANNEX I: 3 — Amazon Backyards

(continuation)

Safeguard	Compliant	Comments
<p>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</p>	<p>In part</p>	<p>No evidence of formal compliance with the decisions was identified. Field actions were carried out individually, demanding the consent of producers to carry out activities in their areas. In the implementation of the AFS, crop planning was carried out with the direct involvement of the producers in selecting areas, purposes, species composition, etc.</p> <p>It was not possible to identify evidence of involvement of community associations in the planning and monitoring of project actions, which were carried out within the scope of Rioterra.</p> <p>Regarding the establishment of the project's monitoring system, the problems found were addressed in the analysis. There were weaknesses in the formulation and verification of the indicators, which made it difficult to draw conclusions on the contributions to income generation based on the project's results</p>
<p>Actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of 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 enhance other social and environmental benefits</p>	<p>Yes</p>	<p>The project was specifically aimed at the implementation of AFS with economic use for the recovery of deforested or degraded areas, in the context of the regularization of environmental liabilities. There were no interfaces with the expansion or consolidation of protected areas.</p> <p>The AFS methodologies encompass models that combine forest restoration with native species and species of economic use that are partially native, as provided for in the Forest Code.</p> <p>At the end of the project, 742 hectares of AFS were established, which will contribute to the recovery of deforested and degraded areas in cycles lasting a total of up to 20 years.</p> <p>An experience of payment for environmental services provided by producers in the implementation of AFS was also carried out, covering an area of 257 hectares.</p>
<p>Actions to address the risks of reversals in REDD+ results</p>	<p>Not applicable</p>	<p>Not applicable. It could be addressed in the future, with greater dissemination and consolidation of AFSs in the region.</p>
<p>Actions to reduce the displacement of carbon emissions to other areas</p>	<p>Not applicable</p>	<p>Not applicable</p>

## 6.6. Analysis of Cross-Cutting Criteria

### Cross-Cutting Criteria of the Amazon Backyards project

Criterion	Compliant	Comments
Poverty reduction	Incipiently	<p>The project sought to encourage economic alternatives to deforestation by implementing AFS.</p> <p>The measurement methodology presented a series of weaknesses, limiting the use of the measurement results as evidence of income generation (in addition to not having baselines and targets). Thus, it has not yet been possible to prove increases in production and income on the scale of the project's operations. However, there are prospects that this can be carried out more effectively in the Plantar Amazônia project, which continues the project's actions.</p> <p>It is plausible to assume that there were contributions to increasing food security through the actions carried out, as a form of contribution to poverty reduction that was not directly measurable.</p> <p>The actions allocated to the Scientific and Technological Development Component contributed to the project's actions, without a specific focus on research and technology. This component included project communication and dissemination actions, in addition to the work of researchers from the project's institutional partnerships and investments in laboratory infrastructure. Thus, it is possible to state that the actions contributed to the construction of the environmental regularization model through AFS for economic use in the region.</p>
Gender equity	Incipiently	<p>The project did not address gender and youth issues in a structured way. However, interviews with the project's technical staff indicated increased awareness of these issues. The need to provide incentives for the inclusion of young people and women as members in community organizations and as direct interlocutors in the implementation of project actions was mentioned, given their knowledge and involvement in decision-making on property management, production, and commercialization, including planning and use of financial resources. The relevance and affinity of young people with topics related to the use of technology was also reported.</p> <p>There was no disaggregation of indicators by gender in the project's monitoring plan.</p>



## 7. Conclusions and Lessons Learned

The *Amazon Backyards* project is part of the evaluation as an initial case of a project under the Sustainable Production Component, preceding the design that guided the public calls from 2012 onwards.

Rioterra, as an executing organization, had specific experience in implementing actions to promote sustainable production. The proposal linked this perspective with the implementation of the Forest Code, supported by Rioterra's expertise in carrying out CAR registrations and formatting PRADAs.

The project was implemented in the northeast region of the state of Rondônia, a priority region for fighting deforestation, where the implementation of the Forest Code was challenged by many producers.

The project stood out for its investments in the productive structuring of the restoration chain through producing seedlings and seeds, indispensable for recovering environmental liabilities. The work of the Rioterra team in the field was also highlighted, providing direct assistance to implementing AFS and, little by little, involving producers in maintenance actions. In addition, a wide range of training sessions were carried out on priority topics for the project.

Due to the project's design history, its role in structuring value chains, promoting access to markets, and qualifying community organizations to sell AFS products was incipient. For these reasons and the still initial production of the AFS, it is not yet possible to measure the project's results and impacts in terms of income generation. Likewise, the contribution of AFS to the recovery of liabilities and forest restoration can only be measured in more advanced stages of consolidation.

The *Amazon Backyards* project is perceived as a source of important learning for executors, beneficiaries, and the Amazon Fund's team. The experience of implementing the AFS is useful in Rioterra's partnerships with SEDAM, especially in supporting the preparation of the Plans for the Recovery of Degraded or Altered Areas (PRADAs), foreseen in the scope of environmental regularization.

In the field team's work, the importance of providing small-scale technical support for the improvement of conventional crops and the management of the property was reported as a strategy to generate confidence and prepare for adopting sustainable practices.

The lessons learned regarding greater attention to market access and commercialization issues, focus on articulating value chains, and the relevance of community organizations for generating volumes and adding value are considered in the implementation of Rioterra's subsequent projects.



## 4. Forest Sentinels

---

### 1. Project Fact Sheet

**Organization responsible for project management**

Vale do Amanhecer Farmers' Cooperative (COOPAVAM)

---

**Type of access**

First Public Call for Sustainable Production Activities held in 2012

---

**Project period**

2014 – 2018

---

**Amount of support from the Amazon Fund**

BRL 5,175,522.50

---

**Axes**

Sustainable production

**Beneficiaries**

Four indigenous groups (Apiaká, Caiaby, Munduruku, and Cinta Larga), family farmers and extractivists from the Vale do Amanhecer settlement and the Cantinho da Amazônia Women's Association (AMCA)

---

**Place**

Eight municipalities in the northwest of the state of Mato Grosso (Aripuanã, Brasnorte, Castanheira, Colniza, Cotriguaçu, Juara, Juína, and Juruena)

---

**Land categories**

Settlement  
Indigenous Lands



PHOTO: Coopavam



## 2. Project Summary

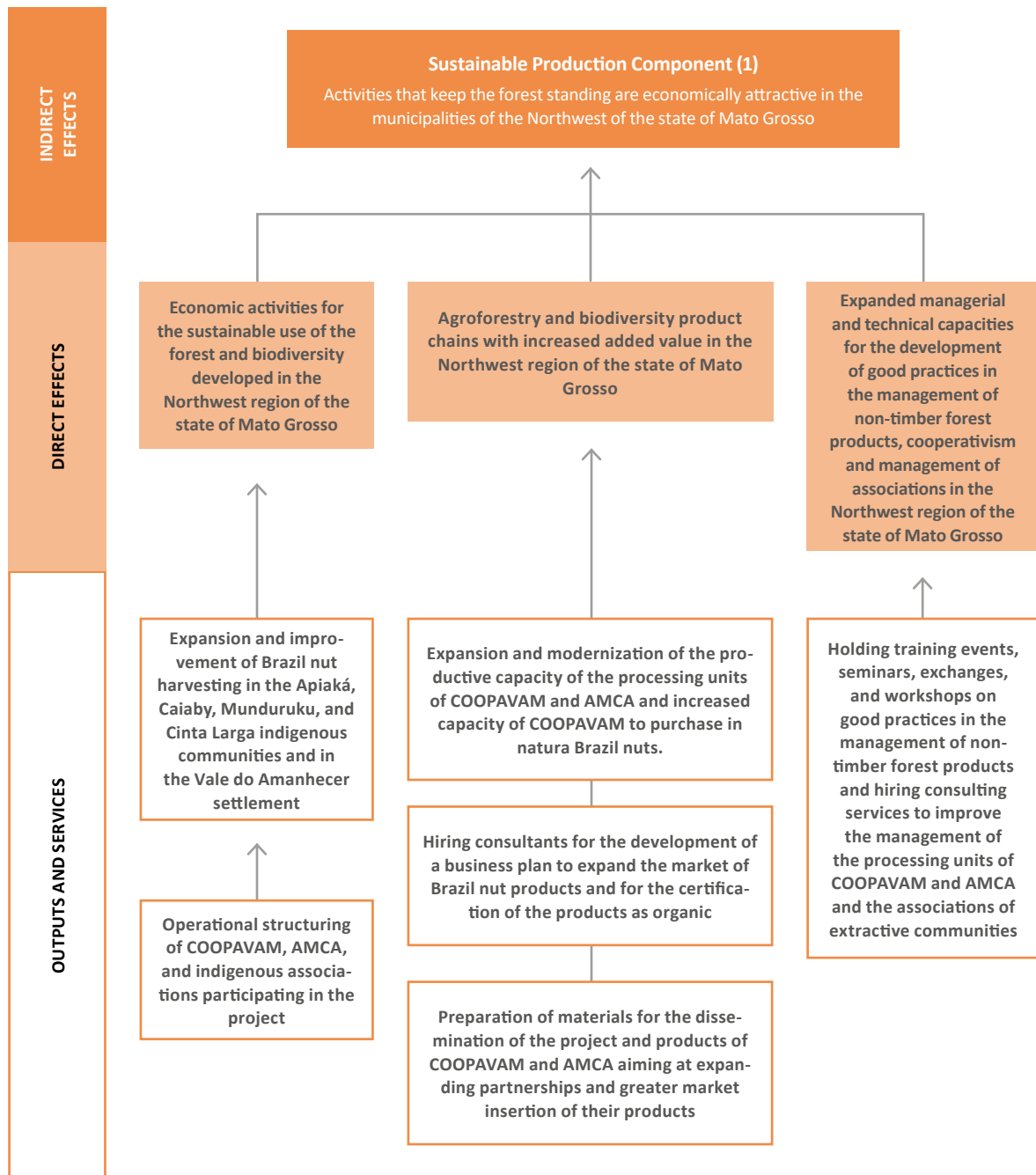
The *Forest Sentinels* project supported the Brazil nut chain, from harvesting to processing and commercialization, increasing the income of extractive communities living in the northwest of the state of Mato Grosso. Its results are unique in terms of employment and income generation, including the implementation of extractive activities in indigenous lands and an agrarian reform settlement, in addition to the expansion of Brazil nut processing capacity by community industrial units, certification, creation of own brand and commercialization of this production.



## 3. Project Intervention Logic

In compliance with the Amazon Fund procedures in force during the implementation period, the structure of outputs and services presented in the proposal submitted for the Forest Sentinels project was adapted to an agreed project log frame, mirroring the structure of the Amazon Fund Logical Framework (Figure 8).

Figure 8: Logical Framework for the Forest Sentinels project agreed with the Amazon Fund



Source: Amazon Fund/BNDES

The structure of the Logical Framework of the Forest Sentinels project guided the development of the monitoring plan for the organization of the project's indicators. To report performance and results, however, the component-based logic was followed:

**Component 1:**

Operational structuring of the agglutinated organizations and improvement of the Brazil nut harvesting process.

**Component 2:**

Expansion and modernization of the production capacity of the processing units.

**Component 3:**

Hiring consultants for the development of a business plan for the expansion of the market of Brazil nut products.

**Component 4:**

Materials prepared to publicize the project, to increase the number of partners and market insertion of COOPAVAM and AMCA products.

**Component 5:**

Holding training events for building social capital and local leaders who can continue the project.

**Component 6:**

Human Resources for project management and holding of evaluation and planning seminars with the Management Board.

In order to understand the implementation of the project, it is also necessary to take into account the objectives presented in the project proposal<sup>77</sup>:

- Generate income for extractive workers by means of sustainable management of Brazil nuts.
- Reduce deforestation through appreciation of non-timber forest products.
- Expand the production scale of Brazil nut products to cater to the regional institutional market and other markets.

---

<sup>77</sup> COOPAVAM. *Forest Sentinels: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 42 et seq.



## 4. Specific Methodology

The evaluation methodology of the *Forest Sentinels* project followed the general methodological steps defined for the evaluation, carrying out the steps of exploratory interviews with the coordination and the mission, focused on interviews with members of COOPAVAM's management, technical team, indigenous leaders, and partners.



## 5. The Project in the Organization's Trajectory

### 5.1. Organizational context

The Vale do Amanhecer Settlement Project (PA), created in December 1998, occupies an area of 14,500 hectares expropriated by the National Institute for Colonization and Agrarian Reform (Incra), which designated an area of 7,200 hectares as a legal reserve where some families-initiated management activities of non-timber products, mainly extraction of Brazil nuts. In 2008, with support from Incra and the United Nations Development Program (UNDP), a nut processing unit was installed, creating conditions for families to add value to their production. Frustrated commercialization experiences led to the formalization of the Vale do Amanhecer Farmers' Cooperative (COOPAVAM) in 2008, with an initial group of 33 members.

The entire process of management of the Legal Reserve by the families and the creation of the cooperative were supported by the Rural Development Association of Juruena (Aderjur), created in 1995 to deliver advisory projects in the northwest region of the state of Mato Grosso.

In 2010, the Women's Association Cantinho da Amazônia (AMCA) was created, bringing together a group of settlers from the Vale do Amanhecer-PA around an industrial kitchen, on the same land as COOPAVAM, to produce pasta and cookies made of Brazil nut, with a focus on the institutional market.

After some time working with the settlement's local production to processing Brazil nut kernels, flour, and oil, increasing demand led COOPAVAM to seek other areas to source raw materials. Thus, with the support of Aderjur, purchases began to be made from indigenous communities in the region, which were already selling Brazil nuts through middlemen.

In 2012, Aderjur coordinated the board of COOPAVAM, AMCA, indigenous leaders, Funai, and other partners to submit a proposal, through the public call for the Amazon Fund, to strengthen the productive arrangement of Brazil nuts.

### 5.2. Design and implementation strategy

At the time the proposal of the *Forest Sentinels* project for the Amazon Fund was developed, COOPAVAM and AMCA together were purchasing around 270 tons of in natura Brazil nuts, spending BRL 825 thousand in the acquisition of raw materials. The network of suppliers was made up, at that time, of the Vale do Amanhecer PA settlers and extractive workers from the Guariba-Roosevelt Reserve, with about 90% coming from the Apiaká, Caiaby, Munduruku, and Cinta-Larga and Zoró Indigenous Peoples associations. The purchases relied on support from Funai in defining contracts, establishing volumes and prices, maintained throughout the harvest.

In 2012, COOPAVAM obtained the tax benefit of the Mato Grosso Industrial and Commercial Development program (Prodeic-MT), which exempts Brazil nut products (kernels, flour, and oil) from the Tax on Circulation of Goods and Services (ICMS), which generated a margin for improvement in prices paid to families. The pricing policy adopted by COOPAVAM aimed, from that moment on, to consolidate the cooperative as a more advantageous buyer for families, who could thus free themselves from abusive practices used by intermediaries. This experience of fair prices made it possible to obtain the Millennium Development Goals Brazil Award.

The cooperative had Ecocert organic certification for the Brazil nut grove in the Vale do Amanhecer PA and for a management area (25,000 hectares) of the Rohden Indústria Lígnea company as for the factory. The certification opened markets and made it possible to sell oil to the Natura Cosméticos company, with volumes of 20 tons in 2012 and the prospect of 33 tons distributed over the following two years. Other large companies were already part of the cooperative's buyer list.

The institutional market also represented a substantial share of the revenue. Between 2011 and 2012, COOPAVAM and AMCA totaled around BRL1.5 million in contracts, benefiting around 22,000 children from six municipalities.

The issue to be addressed was to expand the scale of production<sup>78</sup>, involving a larger group of people and access to new harvesting areas. The central strategy adopted by the project was to guarantee transport, drying, and storage infrastructure in the communities, so that families could expand the harvesting areas with quality assurance. The strategy also included modernizing the processing structure of the cooperative and AMCA.

The development of the *Forest Sentinels* project was mediated by Aderjur, with the holding of events involving all partners. Unlike other projects submitted in the agglutination modality, the *Forest Sentinels* project did not include contextualization and description of the agglutinated organizations. However, it was decided that AMCA

---

78 COOPAVAM. *Sentinelas da Floresta: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 41.

ANNEX I:  
4 — Forest Sentinels

and the indigenous organizations/communities Apiaká, Caiaby, Munduruku, and Cinta-Larga would be supported, in addition to COOPAVAM itself, with direct actions in the municipalities of Juruena, Juara, and Aripuanã. (Figure 9)

Figure 9: Region covered by the *Forest Sentinels* project



Source: COOPAVAM. *Sentinelas da Floresta: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, sd. P.23.



## 6. Results Evaluation

### 6.1. Achievement of agreed indicators

The evaluation of the *Forest Sentinels* project, presented below, is based on the indicators consolidated in the project's monitoring plan, agreed upon between the executors and the Amazon Fund team.

## ANNEX I: 4 — Forest Sentinels

The targets and evolution of these indicators are presented below. The percentage variation indicates the percentage of the target's achievement at the end of the project, according to the following classification:

Classification of indicator achievement	Achievement	Evaluation
	< 50%	Much lower than expected
	50 a 80%	Below expected
	80 a 120%	Achieved
	> 120%	Exceeded

**INDIRECT EFFECT:** Activities that keep the forest standing are economically attractive in the Xingu River Basin.

**DIRECT EFFECT 1:** Economic activities for the sustainable use of the forest and biodiversity developed in the Northwest region of the state of Mato Grosso.

**DIRECT EFFECT 2:** Agroforestry and biodiversity product chains with increased added value in the Northwest region of the state of Mato Grosso.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Number of individuals directly benefiting from the project	150	170	1,191	2,169	2,677	2,677	1,785
Number of women directly benefiting from the project	90	45	399	795	999	999	1,110
Total number of indigenous people benefiting from the project	150	81	260	820	1,195	1,195	797
Number of settlers directly benefiting from activities supported by the project	30	44	212	515	573	573	1,910

## ANNEX I: 4 — Forest Sentinels

*Output 1.1:* Expansion and improvement of Brazil nut harvesting in the Apiaká, Caiaby, Munduruku, and Cinta Larga indigenous communities and in the Vale do Amanhecer settlement.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Quantity (in kg) of in natura nuts purchased by COOPAVAM and AMCA from the extractive communities Apiaká, Caiaby, Munduruku, Cinta-Larga and PA Vale do Amanhecer	150 ton / year	25,700	232,000	427,173	460,000	651,000	434,000
Improvement of the quality of in natura nuts	0	Zero Aflatoxin	Zero Aflatoxin	Zero Aflatoxin	Zero Aflatoxin	Zero Aflatoxin	100
Amount received by a family of extractivists as a result of the sale of in natura nuts to COOPAVAM and AMCA	300	250	320	1,100	2,100	2,800	933

*Output 1.2:* Operational structuring of COOPAVAM, AMCA and indigenous associations participating in the project.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Number of community organizations strengthened	6	6	6	6	6	12	200

*Output 2.1:* Expansion and modernization of the productive capacity of the processing units of COOPAVAM and AMCA and increased capacity of COOPAVAM to purchase in natura Brazil nuts.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Gross revenue of COOPAVAM obtained from the sale of nut products to the institutional market	360,000	15,056	317,641	587,515	587,515	587,515	163
Gross revenue of COOPAVAM obtained from the sale of nut products to the corporate market	250,000	127,540	1,181,737	1,845,314	2,742,464	4,496,464	1,799
AMCA's gross revenue obtained from the sale of nut products to the institutional market	200,000	179,375	344,121.5	446,635.6	446,635.6	446,635.6	223

(continued)

## ANNEX I: 4 — Forest Sentinels

(continuation)

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
AMCA's gross revenue from the sale of nut products to the corporate market	150,000	5,605	98,606	110,000	275,000	395,000	263
Number of assistance institutions benefiting from COOPAVAM and AMCA products	150 institutions	288	621	847	856	856	571

*Output 2.2:* Hiring consultants to develop a business plan to expand the market of Brazil nut products and for the certification of the products as organic.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Organic product certificates of Brazil nut harvested in areas supported by the project	2 indigenous lands and Vale do Amanhecer certified	0	2 indigenous lands, COOPAVAM Factory and Vale do Amanhecer Legal Reserve certified	2 indigenous lands, COOPAVAM Factory and Vale do Amanhecer Legal Reserve certified	2 indigenous lands, COOPAVAM Factory and Vale do Amanhecer Legal Reserve certified	Legal Reserve of Vale do Amanhecer certified	100
Business plan	1 Business Plan for the Brazil nut production chain prepared	0	Business Plan prepared	Business Plan Prepared and International Diagnosis in progress	Business Plan Prepared and International Diagnosis completed	Business Plan Prepared and International Diagnosis completed	100

*Output 2.3:* Preparation of materials for disseminating the project and the COOPAVAM and AMCA products, aiming at expanding partnerships and greater market insertion of their products.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Website for the dissemination of the project	1 website created	0	1 website created, social network active with 350 contacts	1 website created, social network active with 350 contacts	1 website created, social network active with 629 contacts	1 website created, social network active with 629 contacts	100
Video about the project	1 video produced	1 video produced	2 videos produced	6 videos produced + 4 videos from local TV	9 videos produced + 4 videos from local TV	10 videos produced + 4 videos from local TV	1,400

(continued)

## ANNEX I: 4 — Forest Sentinels

(continuation)

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Book about the project	1 book printed	0	0	1 Best Practices Manual printed	1 Best Practices Manual printed	1 Best Practices Manual printed	100

**DIRECT EFFECT 3:** Expanded managerial and technical capacities for developing good practices in the management of non-timber forest products, cooperativism, and management of associations in the Northwest region of the state of Mato Grosso.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Number of individuals trained in good practices in the management of non-timber forest products, cooperativism, management of associations and nut processing effectively using the knowledge obtained	100 people	121	454	697	697	697	697
Number of individuals of indigenous ethnicity exercising coordination positions in the project's indigenous associations	20 people	21	63	84	84	84	420
Number of women holding management or coordination positions at COOPAVAM and AMCA	15 women	10	22	34	34	34	227

*Output 3.1:* Holding training events, seminars, exchanges, and workshops on good practices in the management of non-timber forest products and hiring consultancy services to improve the management of the processing units of COOPAVAM and AMCA and the associations of extractive communities.

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Number of editions of teaching materials prepared for awareness-raising events and integrative events	5 editions	0	2	6	6	6	120
Number of individuals trained in good practices in the management of non-timber forest products, cooperativism, management of associations, and nut processing	100 people	121	454	697	697	697	697

(continued)

## ANNEX I: 4 — Forest Sentinels

(continuation)

Indicator	Target	12 / 2014	12 / 2015	12 / 2016	12 / 2017	07 / 2018	Variation (%)
Number of individuals participating in awareness-raising or integrative events	150 people	326	866	1,821	2,294	2,294	1,529
Number of awareness-raising or integrative events held	20 events	13	38	72	79	79	395

### 6.2. Objectives, indirect and direct effects

Considering the general objective of increasing the economic attractiveness of production coupled with forest conservation, the *Forest Sentinels* project made relevant contributions, both in terms of results and lessons learned.

The baseline and established targets seem to be undersized in relation to what is described in the proposal text.

The interviews and indicators jointly point to achieving the objectives present in the initial proposal: to enable an increase in production, quality improvement, expansion of the number of families, and commercialization. A qualitative discussion of the results will be made based on the direct effects defined in the Logical Framework and reported in the form of components.

#### 6.2.1. Direct effect 1 – Economic activities for the sustainable use of the forest and biodiversity developed in the Northwest region of the state of Mato Grosso

Brazil nut harvesting is part of the indigenous culture, both for commercial purposes and for consumption. The Brazil nut groves, however, are located far from the villages, and the harvesting was carried out almost entirely “on one’s back,” which explains the low productivity characterized at the beginning of the project.

“The burden of harvesting and doing the whole process was not worth receiving BRL 2 to BRL 3.”

In terms of productive structuring of the nut chain, the *Forest Sentinels* project initially envisaged 12 drying and/or storage sheds. However, resource management measures adopted by the project made it possible to expand to 20 installed units. The location of the infrastructure was based on participatory mapping of Brazil nut groves in Indigenous Lands and joint planning, to optimize the logistics of harvesting and transport

## ANNEX I: 4 — Forest Sentinels

expeditions, through the use of boats, motorcycles, tractors, and trucks. The production's organization was structured during the project according to the experience of each location and continued to be improved after completion, with the families' own resources.

“At the time of the project, there was support in the form of fuel and vehicles. After sales improved, people got their own boats and motorcycles. The cost of expeditions is shared.”

Data systematized in a report show that about 42% of the project's resources were invested in the four indigenous organizations, considering infrastructure, vehicles, tools, training, participation in events, advice, working capital, fuel, and certification, as shown in [Chart 4](#).

Chart 4: Partner organizations and support of the *Forest Sentinels* project

	Partner Organizations	Place	Support value (BRL)	%
1	Community Association of the Mayrob Indigenous Village – ACAIM (Representative <b>Apiaká</b> )	Juara	410,180.16	7.94
2	Kawaiwete Indigenous Association (representative <b>Caiaby</b> )	Juara	339,380.16	6.57
3	<b>Munduruku</b> Institute	Juara	361,965.16	7.01
4	Passapkarej Association <b>Cinta Larga</b>	Aripuanã	1.062.798,42	20,59

Source: Adapted from COOPAVAM (2018): *Forest Sentinels, Results Evaluation Report*, Amazon Fund, p. 33.

Infrastructure was crucial but was one of many strategies adopted to encourage production. COOPAVAM had already been paying better prices since obtaining the ICMS exemption and negotiating contracts in person in the communities. But, even so, the purchasing dynamics in each community needed to be improved, mainly to demobilize the activity of middlemen.

“Before the harvest starts, people have a rope around their necks and end up taking advance money from the middleman. Then they cannot pay off this debt, and the cycle of dependency is strengthened.”

“The middlemen weakened good practices. He bought the nuts straight from the bush. Then paid less, arguing: ‘dirty nuts weigh more, it’s better for you.’ This created resistance to selling to a cooperative.”

The technical assistance hired by the project ensured a more frequent presence in the communities, supporting the organization of production, management of financial resources (advances) to enable harvesting expeditions and the holding of good practice courses. Community monitors were supported with “grants” to facilitate the introduction of new production and purchase procedures.

“There was a situation where eight middlemen bumped into each other on the same day. The monitors worked from 6 am until dark, talking about the importance of selling to the cooperative, they went to people’s homes, just like the middleman. This constant presence made a difference.”

The results of the set of actions of the Forest Sentinels project with the supplier communities are evidenced by the production of 650 tons/year at the end of the project (variation of 433% in relation to the target). The expectation of increasing the number of indigenous families involved in the nut chain was also reached. Although there are weaknesses in the data (no baseline, possibly underestimated target), the indicators report a variation of 797%. During the interviews, cases were reported in which all the families in some villages started to dedicate themselves to Brazil nut harvesting due to the improvement in infrastructure and prices.

“The project added value to the product and increased harvesting. The price aroused interest and made the whole family go along for the harvesting. The women cleaning and the men carrying. Young people who had left indigenous lands and worked in cities and farms returned to work in harvesting.”

Although there was no specific strategy for empowering women, income was a stimulus, even for the younger women.

“The price attracted the women. The Kayabi are organizing groups of girls aged 13 to 16 who go out to harvest at locations nearby, allowing them to return on the same day. They want to buy their things.”

Family income improved significantly, with a variation of 933%, reaching an average of BRL 2,800.00 per harvest at the end of the project, according to the monitoring plan. This value is well below the current one, which varies from BRL15,000 to BRL50,000 per harvest, according to interview reports.

Payment upon delivery of production is essential to ensure commercialization preference to the cooperative. To make this payment feasible, the “advancement” process was monitored, i.e., an initial resource made available for the families to maintain themselves until production was initiated and, if necessary, to organize themselves to pay for the harvesting expeditions, partially covered with project resources. The evolution of the organization of production, associated with the progressive gains of families, has meant that advance payments are no longer necessary, or have been greatly reduced.

The establishment of working capital for the purchase of production was one of the actions of the Forest Sentinels project, which provided a BRL 600 thousand grant from the Amazon Fund for this purpose. During the term of the project, BRL 462,988.00 were raised from the National Supply Company (Conab) for the same purpose. At the end of the project, these resources did not make up a specific allocation that would enable the effective rotation of capital to purchase production. Learning from this experience, and from dialogue with other partners, such as Instituto Conexões Sustentáveis (Conexsus), led to the creation of a Solidarity Fund supported by the Climate and Land Use Alliance (CLUA) in the amount of BRL 400,000.

This Solidarity Fund has been managed by Aderjur and maintained in the last four harvests for the purchase of production by COOPAVAM. In 2021, it will be fully allocated by Aderjur for the purchase of production from the Zoró Indigenous People’s Production Cooperative (Cooperapiz). Added to this amount, after the project, other resources were raised for working capital, all managed by COOPAVAM itself, such as BRL 1 million from Partners for Forests, as grant resources, and BRL 500 thousand from Conexsus, as reimbursable resources.

“The experience of the Sentinel project showed the importance of separating the working capital resource from the cooperative’s general account. It has worked in the case of the CLUA resources, which have grown by 10% over the years. In the case of P4F support, monitoring is being carried out to create a fund that runs within the cooperative itself.”

The strengthening of nut extractivism was valued from the point of view of its effects on the protection of indigenous territories. The biggest threats reported are invasions for logging, poaching, and forest fires. The production system through expeditions, with a significant expansion of the harvesting areas, has made it possible to monitor possible invasions. In addition, the community organization was strengthened to deal with emergency issues, such as the mobilization to fight a major fire in the Apiaka-Kaiyabi Indigenous Land in 2019.

“Sentinels are guardians. When harvesting nuts, they monitor the territory. Before them, there were more invasions. They went in, grabbed wood, and left. Nut harvesting drastically reduced the number of invasions. But there is pressure from agribusiness in the region. As long as the chain is strengthened, it has more protection.”

### **6.2.2. Direct effect 2 – Agroforestry and biodiversity product chains with increased added value in the Northwest region of the state of Mato Grosso**

Increasing the scale of production of Brazil nut products was an important value-adding strategy structured by the Forest Sentinels project through the modernization of infrastructure and product development, with dehydrated kernels, nut oil, and cereal bars manufactured by the COOPAVAM factory and the pasta and cookies by AMCA.

It is important to contextualize that, although Brazil nuts are harvested in the Vale o Amanhecer PA, factories that manufacture nut products account for most of the cooperative members of COOPAVAM, many of whom are also hired to work in the processing.

“An incredible achievement is the possibility for women and their children to have paid work within the settlement. More important than having division of surpluses is guaranteeing salary and employment. If at the end of the year it levels out, that’s great.”

In addition to investments in infrastructure, partnerships with SENAI, SEBRAE and consultancies contributed to improvements in the processing and quality of the products, even resulting in a new product being created: sweet meal (paçoca) made of Brazil nut produced at the AMCA factory. An investment of around BRL 1 million is estimated in equipment for COOPAVAM and AMCA, which together received about 58% of the project’s resources, as shown in [Chart 5](#).

Chart 5: Partner organizations and support of the Forest Sentinels project

	Partner Organizations	Place	Support value (BRL)	%
1	Cantinho da Amazônia Women’s Association –AMCA	Juruena	571,387.58	11.06
2	Vale do Amanhecer Farmers` Cooperative –COOPERATE	Juruena	2,416,811.89	46.81

Source: Adapted from COOPAVAM (2018): Forest Sentinels, Results Evaluation Report, Amazon Fund, p. 33.

With the *Forest Sentinels* project, Ecocert’s organic certification was expanded and extended to the two Indigenous Lands, contributing to an increase in the sales volume of Brazil nut oil.

“The certification does not generate a higher price, but it is still worth keeping it because it proves that good practices are being carried out.”

The project also invested in developing brands and labels, valuing the indigenous origin of the raw material, and producing various materials to promote the products in different media.

COOPAVAM's revenue from flour and cereal bars grew throughout the project but did not reach 10% of the total. The cooperative's flagship products were, in fact, dehydrated kernel and nut oil. The revenue from processed products (BRL 2.8 million) was almost triple that of in natura nuts (BRL 1 million), evidencing the value added through processing. Data on the volume of production benefiting from the project were not systematized.

The generated revenue targets were vastly exceeded, according to the monitoring plan. During the period of the project, the corporate market accounted for most of the revenue of both COOPAVAM and AMCA, while the institutional market was more important for the association. Although there was a retraction in sales in the institutional market, for the duration of the project, contracts worth BRL 1 million were signed by the two organizations in the Food Acquisition Program (PAA), benefiting 40 thousand people from 856 assistance organizations, in eight municipalities in the northwest region of the state of Mato Grosso. In addition to financial transactions, these results led to regional appreciation of the products.

Despite the positive economic results obtained, with the end of the project, the partnership relationship between AMCA and COOPAVAM was interrupted after the election of a new board of directors for the association. It was highlighted in the evaluation that the AMCA Brazil nut product factory is deactivated, and there are plans to lease the warehouse for other purposes.

### ***6.2.3. Direct effect 3 – Expanded managerial and technical capacities for the development of good practices in the management of non-timber forest products, cooperativism, and management of associations in the Northwest region of the state of Mato Grosso***

Capacity development actions were analyzed based on the implementation structure, considering two components of the *Forest Sentinels* project:

#### **Component 5:**

Holding of training events for building social capital and local leaders who can continue the project

#### **Component 6:**

Human Resources for project management and holding of evaluation and planning seminars with the Management Board

In addition to these components, there was direct support for indigenous community organizations, for AMCA, and for COOPAVAM itself, but which are not systematically apparent in the project's actions.

Several technical training sessions were carried out at the processing units, covering aspects of production, development of new products, use of machinery, quality con-

trol, and storage. In the forest, the training sessions addressed good management practices. In this regard, the community agents (monitors), who received project grants, played a prominent role.

*“The monitors acted as disseminators of good practices. Indigenous people talking to indigenous people, in their day-to-day activities, because they are also gatherers.”*

The indigenous people had already adopted some practices, such as washing the nuts. It was easy to adopt and improve routine harvesting activities.

*“In the project, community agents accompanied the technical staff and provided guidance on the cleaning process. They verified that it was done according to the project’s requirements. Today, the agents are no longer needed because the cleaning care has been maintained.”*

Courses on associativism, cooperativism, and information technology were held. But it was the technical assistance, with professionals who lived for some time in the villages, working on a day-to-day basis, that actually integrated the new procedures into the routine of the production organization.

*“Many do not use receipts but use notebooks. They adapted it to their way of doing things, and they have already mastered it. They are on their own. They don’t need someone with them. They can walk alone.”*

Advances in managerial capabilities took place differently in each location. In some, there are teachers and indigenous youth who were more mobilized and more active than in others.

Despite the advances, the formal aspects of managing associations and cooperatives were addressed very incipiently during the project’s lifetime. Subsequent support continued the development of management capacities, and some issues remain challenging.

The development of the productive arrangement around the COOPAVAM nut was addressed in some aspects since the design of the *Forest Sentinels* project, which was built with the involvement of leaders of each indigenous people.

“The project was designed from the bottom up. Each one voiced their needs at that moment.”

The Management Council functioned as an embryo for the broader coordination around the chain. Throughout the project, five meetings were held, addressing implementation of the project itself, but, at times, the agenda advanced on relevant issues for the chain, such as prices. The destination of the assets acquired by the project was also the subject of final meetings of the Board. The intercultural coexistence around the project was unique. However, after the conclusion of the *Forest Sentinels* project, the space for coordinating the arrangement under the leadership of COOPAVAM was not maintained.

Although the topic of the relationship between cooperatives and indigenous communities did not arise during the project's lifetime, subsequent support questioned the fact that indigenous people represent 90% of the cooperative's raw material supply base, but do not participate as cooperative members.

“The cooperative is concerned about how to make this mix, we held several meetings, and for now, the idea is to associate the indigenous people as cooperative members.”

### 6.3. General evaluation

In this section, the evaluative elements will be organized by the major fronts of action of the *Forest Sentinels* project, which allows a more organic aggregation than the structure of effects and outputs.

#### 6.3.1. Positive aspects

- Based on a guiding vision of increasing production, using an integrated approach for the various stages, the *Forest Sentinels* project enabled the **consolidation of the Brazil nut chain** in the northwest of Mato Grosso, raising COOPAVAM to a position of reference on the national scene.

“COOPAVAM entered the world”.

- The results leveraged **commercial partnerships and other support to ensure the continued** structuring made possible by the project, with progress on important topics such as the territorial management of indigenous lands, the Solidarity Revolving Fund, and the format of the relationship with indigenous communities.

“Without the Sentinels project, COOPAVAM would never be discussing with these clients and funds. It was the salvation of the cooperative.”

- Although the nut chain has been inserted in the world commodity market and is subject to fluctuations due to the dynamics of supply and demand, the project launched COOPAVAM as a **regional price regulator**, breaking historical relations of exploitation by middlemen.

“Middlemen wait for COOPAVAM to set the price.”  
“We may not buy everything, there are leftover nuts for them, and they try to reach our price. And when there are few nuts, they pay even more.”

- The events promoted by the project were highlighted in the interviews for their role as a pioneering space in the municipality of Juruena (MT) for coexistence between indigenous and non-indigenous people, resulting in greater appreciation of cultural diversity and knowledge about indigenous culture, and **appreciation of indigenous peoples** who had previously been invisible in the northwest region of the state of Mato Grosso..

“People don't know the indigenous people, and they create a biased image. The project created spaces for coexistence, and another vision opened up because people had the opportunity to see the work done by the indigenous people.”

“The indigenous young women who participated in the events were more awakened to community life.”

- Participation in the project broadened the leaders' views on the **role of indigenous communities in the Brazil nut chain**, initially limited to the supply of raw materials and dependent on intermediaries. Exchanges, local and na-

ANNEX I:  
4 — Forest Sentinels

tional events, and the very structuring of the production base in the communities, awakened the leaders to other possibilities. Currently, indigenous cooperatives are being set up, and the leaders intend to gain autonomy in the nut chain, add value locally through the implementation of small mills and expand the commercialization network beyond COOPAVAM.

“The competitiveness of indigenous products has no limit.”

“We want to have a production, processing, and transport infrastructure for us to commercialize, rather than the cooperative buying.”

“This step is risky because many do not understand what a cooperative is and the pace that needs to be followed. The beginning is always difficult, but soon they will get it because they have trained people and even graduates in administration. Young people are also interested.”

- The project enabled resources for stock formation at approximately 10% of the total project. However, the amount invested was insufficient to establish **working capital** regarding the subsequent harvest. Even so, there were lessons learned that enabled the implementation of a Solidarity Revolving Fund, managed by Aderjur and which has facilitated the purchase of production for four harvests.



PHOTO: Coopavam

### 6.3.2. Challenges

- The **coordination of the arrangement** around COOPAVAM and indigenous associations did not advance within the scope of the *Forest Sentinels* project. Despite the positive experience, the Management Council was not internalized by the cooperative and was demobilized.
- The questioning of supporting organizations has pressured this discussion within the cooperative, and there has been resistance from the cooperative members. The situation deserves to be highlighted due to accounting and tax implications, insofar as there are specific legal provisions for **the acquisition of products through so-called “non-cooperative acts”** by cooperatives at the volume that is being purchased.
- Another situation that affected the organizational arrangement after the project’s conclusion was the interruption of the partnership between COOPAVAM and AMCA, due to a loss of trust in the management of the new board of the association. Despite the positive economic results obtained, the **factory has been deactivated**, and there are plans to lease the shed for other purposes.

#### Box 4: Impacts of the pandemic on the *Forest Sentinels* Project

##### Highlight: Impacts of the pandemic

The infrastructure made possible by the project in the Indigenous Lands and the Vale do Amanhecer Settlement Project is fully operational and was important to enable the continuity of deliveries, allowing social isolation and continuity of activities.



“The Indigenous Land’s gate was closed.  
But production and sales went on as usual.”

“Production was stored, waiting for the days scheduled for transport by the cooperative, following the safety protocols.”



### 6.4. Analysis of the OECD evaluation criteria

#### OECD evaluation criteria for the Forest Sentinels project

Evidence	Evaluation
<b>Relevance Criterion</b>	
The project brought significant contributions to the consolidation of an emblematic value chain in the Amazon, expanding the possibilities of income generation for indigenous people and settled family farmers.	Very relevant
<b>Effectiveness Criterion</b>	
Regarding the achievement of the proposed objectives, the project was effective in all the expected effects, thanks to infrastructure improvements, price increases, production organization, and value addition that increased the activity's attractiveness and increased production.	Very effective
<b>Efficiency Criterion</b>	
Measures were adopted to optimize resources that led to an expansion of the goods and services offered by the project for the productive structuring of the Brazil nut chain.	Very efficient
<b>Impact Criterion</b>	
The project consolidated the Brazil nut chain, with the installation of infrastructure that has enabled the cooperative to increase revenue and generate income for nut harvesting families. The role of the cooperative as a price regulator at the regional level has contributed to breaking historical relations of exploitation by intermediaries. The perception of its potential on the part of indigenous communities has expanded. They envision new possibilities of positioning in the chain with more autonomy.	Relevant positive impacts
<b>Sustainability Criterion</b>	
Despite the economic results, the relationship established between the cooperative and the indigenous communities may not be compliant with cooperative relations.	Average sustainability
The issue is under discussion, and even its full implementation constitutes a risk for the sustainability of the results achieved in structuring the Brazil nut chain in the northwest region of the state of Mato Grosso.	

### 6.5. Cancun Safeguards Analysis

#### Cancun Safeguards for the Forest Sentinels project

Safeguard	Compliant	Comments
Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements	Yes	<p>In general, the projects of the APS Component align with Goal 7 of the 2016 to 2020 phase of the PPCDAM (“Promote Sustainable Forest Management”).</p> <p>This project is directly associated with Results 7.2 (“Strengthening the Sociobiodiversity Productive Chain”), emphasizing action lines 7.2.2. (“Support sustainable productive inclusion projects for indigenous peoples, traditional and extractive peoples and communities”) and 7.2.3. (“Produce and disseminate materials on recommendations and good practices for the management of native species of sociobiodiversity in language appropriate for indigenous peoples, traditional peoples and communities and family farmers”).</p>
Transparent and effective national forest governance structures, with a view to national sovereignty and national legislation	Not applicable	There were no project contributions to governance structures at the national level.
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 has adopted the UN Declaration on the Rights of Indigenous Peoples	Yes	<p>The project followed the rite of the planned consultation and consent processes with the communities.</p> <p>Specifically in relation to the commercial partnership with a cosmetics company, it was formally approved by Funai upon a request from the Public Prosecutor’s Office.</p> <p>The appreciation of the indigenous origin of production, with organic certification, has taken place without formalizing the producing families as cooperative members, and this situation was addressed when the evaluation was carried out.</p>
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	In part	<p>During the lifetime of the <i>Forest Sentinels</i> project, a management board was maintained.</p> <p>It should be noted that the board became inactive at the end of the project.</p> <p>New partnerships signed after the conclusion of the project began to question the legitimacy of the commercial relationship between the cooperative and indigenous peoples as a cooperative act. Steps to address the issue are in progress.</p>

(continued)

## ANNEX I: 4 — Forest Sentinels

(continuation)

Safeguard	Compliant	Comments
Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of 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 enhance other social and environmental benefits	Yes	<p>The consolidation of the Brazil nut chain presupposes the maintenance of forests, therefore it is fully aligned with the established guidelines.</p> <p>None of the project's actions involved the conversion of natural forests.</p> <p>There were no direct actions to expand or consolidate protected areas, but the harvesting of Brazil nuts promotes the monitoring of the territory by the populations, indirectly contributing to the consolidation of existing Indigenous Lands.</p>
Actions to address the risks of reversals in REDD+ results	Not applicable	Not applicable
Actions to reduce the displacement of carbon emissions to other areas	Not applicable	Not applicable



PHOTO: Coopavam

### 6.6. Analysis of Cross-Cutting Criteria

#### Cross-cutting Criteria of the Forest Sentinels project

Criterion	Compliant	Observation
<b>Poverty reduction</b>		
<ul style="list-style-type: none"> <li>• To what extent has the project effectively contributed to economic alternatives that value the standing forest and the sustainable use of natural resources?</li> <li>• To what extent has the project positively influenced poverty reduction, social inclusion, and improved living conditions for the beneficiaries (mainly: traditional communities, settlers, and family farmers) living in its area of operation?</li> <li>• Has the project promoted and increased the production in value chains of timber and non-timber forest products originating from sustainable management?</li> <li>• In the case of a project with a scientific and technological development component, did it contribute to constructing a development model suitable for the region?</li> </ul>	Yes	<p>The project created conditions to increase production, and advanced the regulation of Brazil nut prices regionally, contributing to income generation.</p> <p>Quantitative data on the impact generated are limited.</p>
<b>Gender equity</b>		
<ul style="list-style-type: none"> <li>• Has the project been able to integrate gender issues into its strategies and interventions, or has it addressed the issue in isolation? How?</li> <li>• Was there gender separation in data collection for project planning and monitoring?</li> <li>• How did the project contribute to gender equity?</li> </ul>	In part	<p>The project envisioned strengthening a women’s initiative, focused on the processing of nuts through support to AMCA. However, after the end of the project, COOPAVAM’s partnership with the association was interrupted due to administrative weaknesses of the new AMCA board. The factory is deactivated with the possibility of having a different destination.</p> <p>Price and infrastructure improvements motivated the participation of women in nut gathering. There is no information on the specific working conditions for women in this new context and to what extent there is visibility, recognition, and appreciation of women’s work or overburdening due to accumulation with domestic tasks.</p> <p>Although there was no previously structured strategy, events promoted by the project sparked the interest of young girls in community involvement.</p>



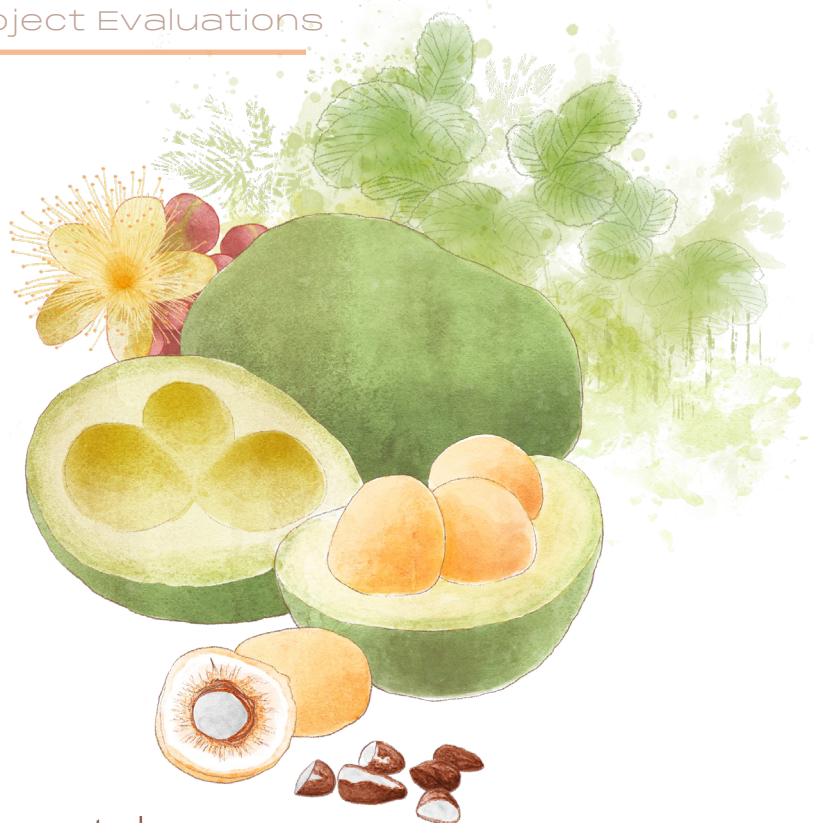
## 7. Conclusions and Lessons Learned

The *Forest Sentinels* project proved successful in all the proposed objectives. COOPAVAM's Brazil nut processing unit represents a consolidated occupation and income enterprise, constituting a unique experience in settlements in the Amazon. Unfortunately, administrative and conflict management issues interrupted the successful trajectory implemented by the Cantinho da Amazônia Association (AMCA).

Indigenous communities have evolved from being suppliers of raw materials, subjected to abusive situations, and now they not only dream of, but are already beginning to play a leading role in the operation of the Brazil nut chain through the creation of their autonomous cooperatives, ready to face new challenges inherent to this new journey.

The creation of a Solidarity Revolving Fund based on the experience of the project constitutes an innovative mechanism in the context of this chain. The challenge of the multicultural commercial relationship is being tackled. And it is expected that the network of partners will support the definition of an arrangement that is fully favorable to all parties.





## 5. Productive Sociobiodiversity in the Xingu

### 1. Project Fact Sheet

**Organization responsible for project management**  
Socioenvironmental Institute (ISA)

**Type of access**  
First Public Call for Sustainable Production Activities, held in 2012

**Project period**  
2nd quarter of 2014 to 1st quarter of 2019

**Amount of support from the Amazon Fund**  
BRL 8,023,856.00

**Axes**  
Sustainable production

**Beneficiaries**  
Indigenous peoples, small farmers, and extractive communities

**Project Areas**  
The project areas are located in the Xingu River basin, with activities in the Xingu Indigenous Park (PIX), Cabeceiras do Xingu/BR-158, and Terra do Meio sub-regions. These areas are located in 11 municipalities in the state of Mato Grosso and two in the state of Pará

**Land categories**  
Indigenous lands  
Conservation units

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu



PHOTO: ISA, Socioenvironmental Institute



### 2. Project Summary

The *Productive Sociobiodiversity in the Xingu* project supported the structuring and strengthening of sociobiodiversity value chains in the Xingu River Basin, including forest seeds and seedlings, rubber, Brazil nuts, pequi, and fruits, with indigenous populations, extractivists, and family farmers. Within this project's scope, the Xingu Seeds Network, in the states of Mato Grosso and Pará, and the Terra do Meio Cantina Network, in the state of Pará, were consolidated. A pilot certification of origin was implemented, with the structuring of the Origins Brasil seal, which increased negotiation possibilities for the communities in the region. Partnerships were strengthened with several companies for the commercialization of copaiba oil, latex, Brazil nuts, babassu mesocarp, and handicrafts, covering perfumes, natural products, rubber, food, and handicraft companies.

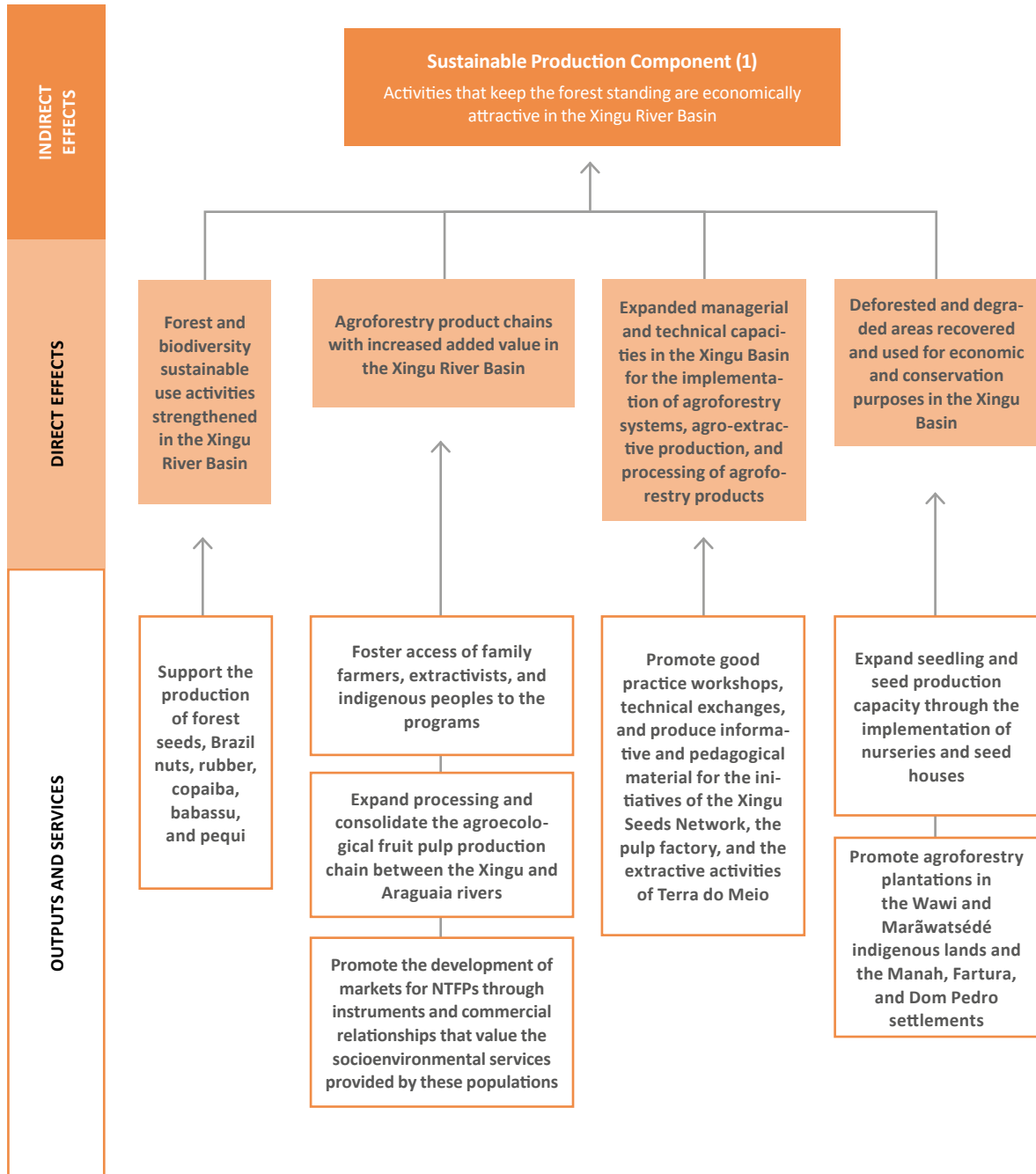


### 3. Project Intervention Logic

In accordance with the Amazon Fund procedures in effect during the implementation period, a logical framework for the *Productive Sociobiodiversity in the Xingu* project was agreed upon, in line with the structure of the Amazon Fund's Logical Framework (Figure 10).

ANNEX I:  
5 — Productive Sociobiodiversity in the Xingu

Figure 10: Logical Framework of the *Productive Sociobiodiversity in the Xingu* project in line with the Amazon Fund



Source: Amazon Fund/BNDES

During implementation of the Productive Sociobiodiversity in the Xingu project, a second set of outputs was created to organize the project indicator (see cap. 6.2.). These outputs were allocated to the direct effects of the Logical Framework, but do not corre-

spond to the outputs and services in [Figure 10](#).

However, to understand the implementation of the project, it is also necessary to consider the general and specific objectives of the project proposal initially presented by the Socioenvironmental Institute (ISA)<sup>79</sup>:

### *General objectives*

- Make an effective contribution to the feasibility of agro-extractive institutional and productive arrangements around sustainable value chains, contributing to building and experimenting with solutions combining production and socioenvironmental conservation of the Amazon in the Xingu that can be incorporated into regional public policies.
- Encourage and strengthen economic alternatives, through market actions and commercialization of extractive production, family, and indigenous agriculture, seeking to differentiate agroforestry products traditionally managed by communities to contribute to income generation for these populations and improve their quality of life.

### *Specific objectives*

- Promote economic sustainability of extractive and indigenous populations through improved production and development of markets for NTFPs, such as rubber, copaiba, Brazil nuts, and pequi;
- Deepen commercial relations and establish differentiated arrangements between communities and companies that recognize and value the socioenvironmental services provided by these populations, which result in adding value to agro-extractive products and in the sustainable economic development of these populations;
- Connect with public policies by accessing government programs such as the Food Acquisition Program (PAA) and Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPMBio);
- Promote and consolidate the value chain of forest seeds through the Xingu Seeds Network, through the inclusion of new communities and gatherers and by in-

---

<sup>79</sup> ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d.. p. 90 et seq.

creasing production, assuring professionalism, quality, and quantity in the current and future market as well as its expansion to the project's target regions;

- Consolidate the agroecological fruit pulp production chain, generating income for family farmers, preserving and recovering degraded areas in agrarian reform settlements;
- Promote agroforestry and agro-silvo-pastoral plantations with economically valued species through seeds and seedlings.

This structure was converted into an arrangement of subprojects, outputs, and services (different from the two sets of outputs mentioned in the project's Logical Framework), which were allocated in the three regions of the project – Xingu Indigenous Park (MT), Cabeceiras do Xingu (MT), and Terra do Meio (PA) – and organized by value chains and the 12 agglutinated organizations. The project's implementation structure was composed of 19 outputs and services, one of which was intended for project governance, 3 for cross-cutting training and qualification, and 15 related to the 12 subprojects of the organizations. This structure of outputs and services was also adopted in the Project's Results Evaluation Report, which turns them into action, with a composition that shows the intersection between the agglutinated organizations and the value chains contemplated in the project (Chart 6).

Chart 6: Executing organizations and actions

Executing Organization	Actions
<b>Xingu Indigenous Park / State of Mato Grosso</b>	
Moygu Indigenous Association Ikpeng Community (AIMCI)	Production chain of forest seeds in the Xingu Indigenous Park (PIX) including 150 indigenous people harvesting and selling 5 tons
Kisêdjê Indigenous Association (AIK)	60 hectares of degraded pasture recovered through the consortium of pequi, livestock, and fruits of interest to the Kisêdjê and the organization of the production and sale of 100 liters of pequi oil.
<b>Cabeceiras do Xingu / State of Mato Grosso</b>	
Operation Native Amazon (OPAN)	Structuring and strengthening agroforestry production; of seeds and seedlings of the Xavante people.
Nossa Senhora da Assunção Education and Social Assistance Association (ANSA)	Support production, storage and marketing of frozen fruit pulp and structuring the forest seed production chain in São Félix of Araguaia.

(continued)

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu

(continuation)

Executing Organization	Actions
Terra Viva Association of Alternative Agriculture and Environmental Education (ATV)	Structuring the forest seed production chain and seedling production for planting agroforestry systems in two municipalities in the state of Mato Grosso.
Estrela da Paz Agroecological Community Association (Acaep)	Production, storage, and commercialization of frozen fruit pulp in the Brasil Novo settlement in Querência.
<b>Terra do Meio / Pará</b>	
Agroforestry Seeds of the Forest Association (AASFLORE)	Expansion of vegetable oil production with improved processing, storage, logistics, communication, and marketing.
Association of Extractive Residents of the Iriri Maribel River (AERIM)	Support the production of rubber and nuts regarding processing, and storage, and other technical assistance.
Xingu Resex Residents Association (AMOMEX)	Support the production of rubber, vegetable oils, and nuts regarding processing and storage.
Residents Association of Resex do Riozinho do Anfrísio (AMORA)	Support the production of rubber, vegetable oils, and nuts regarding processing and storage, and installation of a small vegetable oil plant.
Residents Association of Resex do Rio Iriri (Amoreri)	Support the production of rubber, vegetable oils, and nuts regarding processing and storage, and installation of a small vegetable oil plant.
<b>Cross-cutting Actions</b>	
Socioenvironmental Institute (ISA)	Coordination and internal governance structure in full operation, supporting all project actions and advising the agglutinated organizations - Coordination and Management.
Socioenvironmental Institute (ISA)	Organization of the production and marketing of associations in the Terra do Meio region is strengthened, with improvement in the quality of production and networking – Technical Support.
Socioenvironmental Institute (ISA)	Consolidation of the Xingu Seeds Network in the States of Mato Grosso and Pará – Xingu Seeds Network.
Socioenvironmental Institute (ISA)	Improvement of technical aspects in the production and commercialization of forest seeds in the Xingu – Xingu Seeds Network.

(continued)

(continuation)

Executing Organization	Actions
Forest and Agricultural Management and Certification Institute (Imaflora)	Two new commercial partnerships were implemented; monitoring of their impacts; establishing establishment of a guide containing recommendations and negotiation criteria; and maintenance and monitoring of the three existing commercial partnership contracts.
Forest and Agricultural Management and Certification Institute (Imaflora)	Social, environmental and economic indicators to assess, measure, and monitor the impact of actions to strengthen production chains are defined and tested.
Forest and Agricultural Management and Certification Institute (Imaflora)	Pilot certification of origin from the Baixo Xingu Region is implemented with a structured monitoring process and with the involvement of at least one company and a community.



#### 4. Specific Methodology for Individual Evaluation

The evaluation methodology for the *Productive Sociobiodiversity in the Xingu* project followed the general methodological steps defined for evaluation, going through the stages of exploratory interviews with the coordination and the mission, with a focus on interviews with ISA members and project participants.

Since it is the project with the highest level of complexity in terms of regional and organizational diversity, approaches, value chains, and stakeholders involved, the evaluation team was divided to carry out the surveys. Each evaluator oversaw one of the regional and thematic blocks that characterize the project and that guided the ISA team's own performance. Therefore, the interview stage was carried out independently with the branch of the project in the state of Mato Grosso, considering the sub-regions of the Indigenous Park and Cabeceiras do Xingu, and the branch of Pará, overseeing the players of Terra do Meio.



#### 5. The Project in the Organization's Trajectory

##### 5.1. Organizational context

The Socioenvironmental Institute (ISA) is a non-profit Brazilian civil society organization founded in 1994 to propose integrated solutions to social and environmental

issues with a central focus on defending social, collective, and diffuse goods and rights related to the environment, cultural heritage, human rights and peoples' rights. Since 2001, ISA has been a Civil Society Organization of Public Interest (Oscip), headquartered in São Paulo (SP) with offices in Brasília (DF), Manaus (AM), Boa Vista (RR), São Gabriel da Cachoeira ( AM), Canarana (MT), Eldorado (SP) and Altamira (PA)<sup>80</sup>.

ISA has a long history of working in the territories of the Xingu River Basin, having established long-term relationships with the communities and local organizations. The local agglutinated organizations were already partners in previous initiatives. Even so, according to ISA, the project was the first major initiative to address what the organization calls the "economics of sociobiodiversity," contributing to structuring this agenda in the organization. It was also the first project with this structure of action in a territory, with financial resources and services transfer to partners that cooperated with each other.

## 5.2. Design and implementation strategy

### *Selection of the Xingu River Basin as a project area*

The proposal for the Productive Sociobiodiversity in the Xingu project submitted to the Amazon Fund presents the Xingu River Basin as an emblematic area of the socio-environmental and cultural diversity of the Amazon and development trends in the region. The history of occupation since 1970, in contrast to the mosaic of indigenous lands and conservation units created over the years, has led to a complex landscape setup, in which forest blocks and fragments, in part under strong pressure from deforestation, are opposed to territories occupied by agribusiness and major infrastructure works. As a result, the region has become a strategic hotspot for the maintenance of environmental services, such as water production, biodiversity conservation, maintenance of carbon stocks, and regional microclimates<sup>81</sup>.

ISA's activities in the region had already received previous financial support and are currently supported by other projects, so that the project supported by the Amazon Fund is part of a sequence of initiatives aimed at supporting the implementation of medium to long-term strategies, which associate the conservation of protected areas, the maintenance of the local population's ways of life and income generation based on development of sociobiodiversity value chains.

---

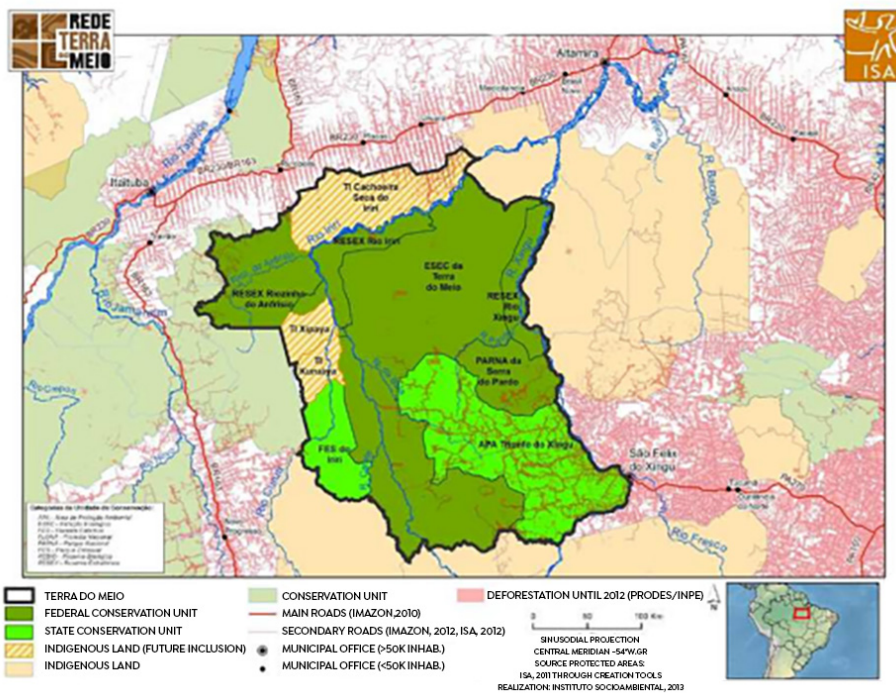
<sup>80</sup> More information can be found at the [ISA website: https://www.socioambiental.org/pt-br/o-isa](https://www.socioambiental.org/pt-br/o-isa)

<sup>81</sup> ISA. Socioenvironmental Institute (ISA). *Sociobiodiversidade Produtiva no Xingu: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d. p. 86.

*Terra do Meio – Pará*

ISA has been active in the region since the studies to create the set of Extractive Reserves (RESEX) of Terra do Meio – RESEX Riozinho do Anfrísio, 2004, RESEX Rio Iri-ri, 2005 and RESEX do Rio Xingu, 2008. It is the most longstanding organization in the region, with a history of building relationships, training leaders, actions to protect the territory and in topics such as health and education<sup>82</sup>. (Figure 11)

Figure 11: Mosaic of protected areas in the Terra do Meio



Source: VILAS-BOAS, André et al. As reservas extrativistas da Terra do Meio: uma experiência de desenvolvimento alternativo para a Amazônia. *Revista Desenvolvimento e Meio Ambiente (UFPR)*, Curitiba, v. 48, p. 219.

<sup>82</sup> VILAS-BOAS, André et al. As reservas extrativistas da Terra do Meio: uma experiência de desenvolvimento alternativo para a Amazônia. *Revista Desenvolvimento e Meio Ambiente (UFPR)*, Curitiba, v. 48, 2007, p. 219..

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu



PHOTO: ISA. Socioenvironmental Institute

The local focus of action of the *Productive Sociobiodiversity in the Xingu* project in this region was towards a joint strategy, articulated by the Canteen Network of Terra do Meio, made up of all the extractive associations that participated in the project (i.e., the activity reports of these organizations are addressed jointly, as it is a single strategy<sup>83</sup>).

In addition to implementing the Canteen Network itself, actions included the structuring of working capital funds, managed by the communities through canteens and small plants, in addition to commercial partnerships organized through the Forest Management and Certification Institute and Agricultural (Imaflora), aiming at the commercialization of the production in private markets.

### ***Indigenous Park and Cabeceiras do Xingu – State of Mato Grosso***

In the Cabeceiras do Xingu axis, the six organizations participating in the project were already articulated within the scope of the Xingu Araguaia Articulation (AXA), created in 2007, and in partnership with the Xingu Indigenous Land Association (ATIX).

In this aspect, the *Productive Sociobiodiversity in the Xingu* project worked with the

---

<sup>83</sup> ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Relatório de Avaliação de Resultados*. Amazon Fund, 2018. p. 7.

Xingu Indigenous Park and the settlements in its surroundings, and the consolidation of the Seeds Network had a structuring bias, as it involved all social groups and most of the agglutinated organizations. But, in addition to the forest seed chain, the fruit pulp chain stood out with two supported organizations – Nossa Senhora da Assunção Education and Social Assistance Association (ANSA) and Estrela da Paz Agroecological Community Association (Acaep), establishing agroforestry – Native Amazon Operation (OPAN) and Terra Viva Association for Alternative Agriculture and Environmental Education (ATV) – and an innovative model of pequi, fruit and livestock integration – Kisêdjê Indigenous Association (AIK). (Chart 7)

Chart 7: Strengthened chains and activities in the Indigenous Park and in the Cabeceiras do Xingu

Agglutinated organizations	Strengthened chains and activities		
	Forest Seeds	Seedling production, agroforestry, fruit and livestock integration, forest restoration	Fruit pulp
Native Amazon Operation – OPAN	•	•	
Moygu Indigenous Association Ikpeng Community – AIMCI	•	•	
Terra Viva Association of Alternative Agriculture and Environmental Education – ATV	•	•	
Nossa Senhora da Assunção Education and Social Assistance Association – ANSA	•	•	•
Estrela da Paz Agroecological Community Association – Acaep		•	•
Kisêdjê Indigenous Association - AIK		•	



## 6. Evaluation of Results

### 6.1. Achievement of established indicators

For the evaluation of the Productive Sociobiodiversity in the Xingu project, presented below, the indicators consolidated in the project's monitoring plan, agreed upon between the executors and the Amazon Fund team, were used. It is worth noting that these indicators do not coincide with the indicators contained in the initial project proposal<sup>84</sup>, but align the project's contributions to the Amazon Fund's standard effects and indicators. The discussion of indicators is based on qualitative information about the actions, as mentioned at the beginning of this report.

The goals and annual evolution of these indicators are presented below. The percentage variation indicates the percentage of the target's achievement at the end of the project, according to the following classification<sup>85</sup>:

Classification of indicator achievement	Achievement	Evaluation
	< 50%	Much lower than expected
	50 a 80%	Below expected
	80 a 120%	Achieved
	> 120%	Exceeded

**INDIRECT EFFECT:** Activities that keep the forest standing are economically attractive in the Xingu River Basin.

As an indicator, the survey of annual deforestation in the Xingu River Basin by the Amazon Fund team is planned, but these values were not made available in the monitoring worksheet.

<sup>84</sup> ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, s.d. p. 160 et seq.

<sup>85</sup> However, it is important to emphasize that the processing of indicators was not carried out uniformly throughout the Monitoring Plan, e.g. there were variations between cumulative and annual values, which, in some cases, can explain targets that have been largely exceeded.

**DIRECT EFFECT 1:** Activities for the sustainable use of forest and biodiversity strengthened in the Xingu River Basin.

**DIRECT EFFECT 2:** Agroforestry product chains with increased added value in the Xingu River Basin.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Revenue obtained from sustainable economic activities (BRL)	536,000	267,100	567,057	543,587	562,270	105
Number of strengthened community organizations	10	3	5	6	8	80
Number of indigenous people directly benefiting from the project	200	500	576	598	684	342
Total number of families directly benefiting from the project	766	648	896	886	896	117
Number of women directly benefiting from the project	425	260	545	562	556	131
Number of individuals directly benefiting from the project	1,950	2,000	2,118	2,462	2,115	108

*Output 1.1:* Support for the production of forest seeds, Brazil nuts, rubber, copaiba, baobassu, and pequi.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Number of harvested seeds (t)	30	12.2	17	17.5	23	77
Number of gatherers involved	300	342	421	449	421	140
Revenue obtained from the sale of forest seeds (BRL)	250,000	162,000	344,000	319,000	339,207	136
Revenue obtained from the sale of extractive products (excluding forest seeds) (BRL)	150,000	113,100	223,057	276,237	363,686	242
Forest area directly managed as a result of the project's support (ha)	2,500,000	4,079,000	4,079,000	4,079,000	4,079,000	163

(continued)

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu

(continuation)

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Amount of vegetable oils produced (t)	4	0.75	0.04	0.3	0.7	49
Number of nuts produced (t)	70	23.3	50	13	16.31	147
Amount of rubber produced (t)	10	0	4.84	5	8.4	182

*Output 2.1:* Expanded access for extractive workers, indigenous people, and family farmers to government procurement programs.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Revenue obtained from economic activities supported by the project is exclusively generated through commercialization through government purchases or subsidies	25,000	0	0	84,250	11,000	381
Number of farmers accessing PNAE, PAA, and PGPMBio institutional markets	30	0	0	2	2	13

*Output 2.2:* Expand processing and consolidate the agroecological fruit pulp production chain between the Xingu and Araguaia rivers.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Revenue obtained from the sale of fruit pulp (BRL)	136,000	37,800.00	66,150.00	112,455.00	141,750.00	104
Amount of fruit pulp produced	90,000	4,000.00	7,011.40	11,900.00	15,000.00	42

## ANNEX I:

### 5 — Productive Sociobiodiversity in the Xingu

*Output 2.3:* Promote the development of markets for NTFPs through instruments and commercial relationships that value the socioenvironmental services provided by traditional populations.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Number of commercial partnerships established	2	1	2	4	6	300
Extent of implementation of the pilot project for certification of origin in the Xingu region (%)	100	20	30	50	100	100

**DIRECT EFFECT 3:** Expanded managerial and technical capacities in the Xingu Basin for implementing agroforestry systems, agro-extractive production, and processing of agroforestry products.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Number of individuals trained in native seed management, forest management activities, and agro-extractive production effectively using the knowledge obtained	320	205	352	551	348	109
Number of contributions to public policy improvements incorporated into government regulations and programs	3	0	0	1	1	67%
Number of indigenous people holding management and coordination positions in the institutions that participate in the project	2	2	5	5	22	1,100
Number of women holding management and coordination positions in the institutions that participate in the project	7	13	4	13	11	157

## ANNEX I:

### 5 — Productive Sociobiodiversity in the Xingu

*Output 3.1:* Promote good practice workshops, technical exchanges and produce informative and pedagogical material for the initiatives of the Xingu Seeds Network, the pulp factory, and the extractive activities of Terra do Meio.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Number of individuals trained in the processing of agroforestry products, the management of native seeds, forest management activities, and agro-extractive production	245	220	165	604	338	542
Number of informative and pedagogical materials produced	4	5	1	2	3	275
Number of individuals participating in integrative events	30	364	355	132	141	3,307
Number of integrating events	5	7	9	15	7	760
Number of families benefiting from technical assistance	120	213	690	384	355	1,368

**DIRECT EFFECT 4:** Deforested and degraded areas recovered and used for economic and conservation purposes in the Xingu Basin.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Area recovered and used for economic purposes	55	2	28	60	60	109
Area reforested with seeds and seedlings commercialized by the Xingu Seeds Network	60	540	656	650	200	333

*Output 4.1:* Increase seedling and seed production capacity by implementing nurseries and seed houses.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Number of seedlings produced	12,000	9,000	2,000	5,200	3,000	160
Number of seedling nurseries established or expanded	3	0	1	1	4	200
Number of seed houses established or expanded	4	1	4	4	4	325

*Output 4.2:* Promote agroforestry in the Wawi and Marawãtsédé indigenous lands and in the settlements.

Indicator	Target	11 / 14	07 / 15	03 / 16	04 / 17	Variation (%)
Reforested area in the recovery process	55	3	27	72	70	313

## 6.2. Objectives, indirect and direct effects

Considering the general objective of increasing economic attractiveness of production associated with forest conservation, the *Productive Sociobiodiversity in the Xingu* project had relevant outcomes, both in terms of results and lessons learned. Both the report referring to the actions carried out and the interviews and indicators point to the achievement of the objectives present in the initial proposal, i.e., to enable the arrangements associated with the different value chains and the expansion of commercialization.

Due to its complexity, it is challenging to consolidate the findings related to this project. The ISA team itself approaches the two major regions and themes differently<sup>86</sup>. Thus, the results will be described separately for both regions.

### 6.2.1. Terra do Meio

The actions in Terra do Meio were associated with three of the four direct effects, leaving out only the direct effect related to the recovery of areas. The individual results are presented below.

#### Direct effect 1 - “Improved sustainable use of the forest and biodiversity”

In terms of productive structuring, it is worth mentioning the implementation of the so-called canteens in the communities of Terra do Meio, which began before the

<sup>86</sup> It is worth mentioning the Origens Brasil seal initiative, which has a monitoring system, based on interviews with 35 companies and 300 producers. An application was created that inserts the information generated into a platform, which feeds the generation of annual reports. The information covers territorial and income generation aspects, including respect for ways of life and the adequacy of language, in the relationship with companies. Results are made available online, with information on the communities and associations and disaggregated numbers on beneficiaries, production volumes, etc. Check out the [Origens Brasil website: https://www.origensbrasil.org.br](https://www.origensbrasil.org.br).

project was implemented, resulting from a trip by representatives of the communities of Terra do Meio to Acre, where they got to know this model of commercialization, based on the historical model of the rubber sheds, but with fair prices.

The *Productive Sociobiodiversity in the Xingu* project helped implement 20 canteens in Terra do Meio, highlighting that this was a commercialization model that did not exist before in the region. The previous model was based on collecting the production of a local group, which was transported to the city and delivered to a purchasing company. In this way, the payment of extractive workers could be extended for up to three months. The alternative was to exchange production for goods with the so-called "regatões," traders who circulated in the region's rivers, generally under very unfavorable conditions for extractive workers.

The community itself maintains the *canteens*. *Cantineiros* are members of the community in charge of the commercialization warehouse, where the purchase and storage of products and the sale of consumer products take place. Canteen workers do not profit from this activity, and only freight costs are incurred in marketing products. In addition, the canteens are also used as meeting places, where management, governance, and creation of local associations take place, as well as spaces for conflict resolution and networking.

In addition to the physical implementation of the canteens, the project supported the planning of their operation, the training of canteen workers, and the evaluation of their operation, as well as making necessary improvements. Working capital was made available for the operation of the canteens, and mechanisms were developed for their shared management by the community. At the end of the project, the canteens were worth around BRL350,000, allowing payment for the extractive workers upon delivery of the product.

The 20 canteens sold nine products, with each community deciding on the basket of products adopted, prioritizing according to their interests. Currently, the network is made up of 28 canteens that, as of 2020, have also started to buy agricultural products from the communities.

The second element of productive structuring was implementing small plants to process priority products. Small plants were installed in three communities to process Brazil nuts, babassu mesocarp, and vegetable oils. The project supported not only the construction and acquisition of equipment, but also the training processes for the operation of the small plants.

### Direct effect 2 – The increased value of agroforestry product chains

In the commercialization and market access agenda, the commercial partnerships made possible by the joint action of ISA and Imaflora must be mentioned, as they resulted in the creation of the Origens Brasil seal.

Commercial partnerships were identified according to the value chains prior-

itized by the communities, and the actions were planned and executed jointly with local associations. In the arrangement, ISA made use of its knowledge and connections in the region, having participated in the creation of conservation units in Terra do Meio and seeking perspectives for communities that feared reduced income from the implementation of the units and the restriction of activities such as illegal mining. Imaflora had a history of working closely with the business community and Amazon communities, especially regarding certification.

In the *Productive Sociobiodiversity in the Xingu* project, value chains with which communities were already working were prioritized, aiming to create connections with local culture and tradition. These chains had already been identified in diagnoses before the project through surveys by ISA and Imaflora. The chains were formed in a logic of multiple use, in which products destined exclusively for commercialization (such as rubber) were combined with others that combined consumption and sale (such as Brazil nuts) and even those intended only for consumption (such as fruits produced in gardens and backyards). In addition, there were products that contributed less significantly to income generation, such as manioc flour and vegetable oils (including babassu, patoá, and andiroba). The income generated by these products resulted from a combination of different productive activities undertaken throughout the year<sup>87</sup>.

Imaflora and ISA contacted companies willing to buy local production, emphasizing that the representatives of these companies understood the specificities of the productive and logistical chains and traditional ways of life. The first long-term commercial partnership established in Terra do Meio was with the company Mercur for the purchase of rubber, in 2010, before the beginning of the project<sup>88</sup>. In the following years, the partnership and commercialization model established with Mercur was reproduced and adapted in the relations with other companies, diversifying the contracts. Contracts were entered for the purchase of copaíba (with Firmenich in 2011), Brazil nuts (Ouro Verde, in 2012, Wickbold, in 2015 and Fundação Somos Um, 2018), handicrafts (Tucum, in 2016), and cumaru (Lush, in 2017).

There was already initial support for structuring this partnership model by Fundo Vale, establishing guidelines and allowing for tests to be carried out. But the official launch of the Origens Brasil seal took place in 2016 within the project's scope, with Mercur as the first partner company. The seal does not follow a certification logic but identifies a network "that promotes sustainable business in the Amazon, connecting indigenous peoples, traditional populations, supporting institutions and companies"<sup>89</sup>. In addition to

---

<sup>87</sup> VILAS-BOAS, André et al. As reservas extrativistas da Terra do Meio: uma experiência de desenvolvimento alternativo para a Amazônia. *Revista Desenvolvimento e Meio Ambiente* (UFRP), Curitiba, v. 48. p. 222.

<sup>88</sup> Ibid. p. 223.

<sup>89</sup> Report Origens Brasil. 2020. p. 5. Available at: <https://origensbrasil.org.br/media/relatorio-origens-brasil-2020.pdf>

applying good practices and guidelines from Origens Brasil, the project also supported a pilot to build indicators that measured conservation benefits.

The main objective of the partnerships was to establish long-term contracts, which were the object of direct negotiation with the extractive workers, aiming to establish fair prices. The focus was to attract companies with the potential to create long-term involvement, based on principles of transparency in purchasing, annual evaluation, and commitment to ethical principles. However, companies may leave, as was the case with Firmenich, which recently changed its operating structure in Brazil, making continuity impossible. The security of these contracts should enable advances in the structuring of production. The partner companies ensured the purchase of production but mobilized their processing networks to purchase products from the communities.

Implementing the Origens Brasil seal is also associated with a governance system (item 6.3 of this annex). The Terra do Meio pilot, carried out in the context of the project, allowed the expansion of the Origens Brasil network to other regions, currently totaling four territories<sup>90</sup>.

In addition to partnerships with private sector players, the project also envisaged expanding the access of extractive workers to government procurement programs. The results along this line are less clear. There was an attempt to access the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPMBio) through the sale of rubber in partnership with Michelin, but, at the time, the regularization of the Declaration of Access to PRONAF (DAP) for the organizations involved, a condition for access, proved to be unfeasible. The qualification process was difficult because many extractive workers did not even have personal documentation. Thus, it was only in 2016 that the first legal DAP was issued. This type of difficulty was reported as one of the reasons for the project's focus on private markets.

Currently, institutional markets are part of the more than 30 commercial relationships maintained by the Canteen Network, ranging from partnerships with local emporiums in Altamira (PA) to supplying large companies. The establishment of operations in institutional markets, especially those of school meals, was reported as challenging in the interviews, as it involved convincing mayors, nutritionists, and cooks to hold events and tastings at school, and even convincing parents to accept the forestry products in the implementation of the National School Feeding Program (PNAE) at the local level. Progress on this topic occurred after the project was completed.

With the impact of the pandemic, coordination activities were intensified, making it viable to include babassu flour in school lunch baskets distributed in the municipality of Vitória do Xingu during the closure period of local schools within the scope of sanitary measures. Currently, the network's organizations sell babassu flour as an

---

<sup>90</sup> Learn more about the development of Origens Brasil in the 2020 report: <https://origensbrasil.org.br/media/relatorio-origens-brasil-2020.pdf>.

exclusive product that is well accepted and appreciated, combining income generation and improved food security for students.

Thus, although the other targets of the revenue indicators were exceeded, the number of beneficiaries accessing institutional markets represents the indicator with the lowest level of achievement of the *Productive Sociobiodiversity in the Xingu* project (13%).

### Direct Effect 3 - Expanded managerial and technical capacity

On this topic, the Productive Sociobiodiversity in the Xingu project conducted various actions aimed at productive, commercial, and institutional strengthening.

The first highlight is the structuring of the Canteen Network, built by the communities and their associations, with technical assistance from ISA. ISA advised on the various arrangements that emerged as a result of the project's actions, including analysis and monitoring by anthropologists, to ensure, for instance, the compatibility of these constructions with the communities' ways of life.

Within the scope of the Canteen Network, the management of canteens and small plants by community members, and the use and management of working capital resources, among others, were negotiated. Making these arrangements viable involved many training and capacity-building actions, but also alignment with the Amazon Fund itself, considering the investment and development time of these actions.

The networking started during the project implementation period in 2016. In 2018, the current structure was established, in which the Resex of Rio Iriri Residents' Association (Amoreri) was elected the "mother association," with responsibility for resource management. This is a rotating role, with an expected term of two years. In 2020, due to the pandemic, it was not possible to hold the Extractivism Week (more details below), in which the election takes place, so Amoreri's mandate is still in force. Unlike the Seeds Network, the Canteens Network was not institutionalized, so the management system shared by the associations that comprise it remains. Thus, it is the associations that make payments to extractivist workers and issue receipts.

The second aspect refers to the social management of the territory and the relationship with companies. A system of periodic meetings with different purposes and participation was implemented. The Terra do Meio Canteen Network Meetings took place annually, with a view to improving the flow and exchange of information, and planning actions for the improvement of the arrangement. The Extractivism Week was also held annually, with the participation of communities and representatives of member companies, government agencies, and supporting organizations. Until 2018, meetings with each governance instance took place separately. Then the groups were brought together, with positive outcomes in terms of generating networks and results. Due to the pandemic, the general meeting was held online, bringing together more than 150 people over two days. This continuity demonstrated the value of the arrangement for companies, enabling new deals, supplier involvement, branding, among others.

For the relationship with companies, Imaflora created a platform for prospecting and organizing data on the demand and supply of products from different chains. The Companies' Committee was also installed to exchange information, good practices, and expanding engagement. The Origens Brasil seal has its website with manuals and procedures, available to companies and communities<sup>91</sup>.

### 6.2.2. Indigenous Park and Cabeceiras do Xingu – State of Mato Grosso

The actions in this sub-region of the project contemplated the four direct effects foreseen in the Logical Framework of the *Productive Sociobiodiversity in the Xingu* project, whose results are presented below.

#### Direct effect 1 – Improved sustainable use of forest and biodiversity

The Xingu Seed Network began to be formed by ISA in 2007. At the beginning of the project, it already benefited around 300 families and sold 71 tons of seeds, which served as input for approximately 1,000 hectares of crops, generating revenue of BRL 800,000<sup>92</sup>. Diversity was not just about seeds, it was also expressed in social terms, since the Network is formed by indigenous groups, settled family farmers, and urban gatherers. The *Productive Sociobiodiversity in the Xingu* project aimed to expand the Network's reach in terms of the number of communities and gatherers, increase seed production and improve processes, adding quality and professionalism at all stages of the forest seed production chain.

In summary, the Xingu Seeds Network is structured by “gatherer centers,” which are families or groups of people who manage the organization of the chain in the communities, centralizing production in regionalized “seed houses,” which are more directly linked to the office where orders are organized. The first business plan already indicated the importance of defining an institutional arrangement that would best meet the Network's needs.

In terms of productive structuring, the project implemented or improved the infrastructure of the seed houses, including the provision of various office supplies, and collection and transport in some cases. The monitoring plan notes 13 “houses,” while the reports identified four nuclei supported by 7 “houses”:

---

<sup>91</sup> Origens Brasil website: <https://www.origensbrasil.org.br/>

<sup>92</sup> Roteiro para Elaboração do Projeto – Modalidade Aglutinadora. Projeto Sociobiodiversidade Produtivo no Xingu, p.97.

- Xingu Indigenous Park (subproject Moygu Indigenous Association Ikpeng Community – AIMCI), with four “seed houses” (four villages) and transport.
- Marãiwatsédé Indigenous Land with the Xavante people (OPAN subproject), one seed house built.
- São Felix do Araguaia (ANSA subproject), one seed house built.
- Porto Alegre do Norte (ATV subproject), improvements in the existing structure.

Qualitative information provided during the interviews and collected in the reports indicate success in achieving the targets<sup>93</sup>, however, the monitoring plan states that the amount of harvested seeds was lower than expected (77%), although the total revenue generated was exceeded (136%). Baselines were not defined for these targets, which may have been underestimated in some cases. There are doubts about using annual or cumulative data in the case of the Xingu Seed Network indicators registered in the Monitoring Plan. Regarding the scope of the Network, the proposal submitted to the Amazon Fund already mentioned about 300 beneficiary families, the same number that was maintained as a target of gatherers involved in the project, which was vastly exceeded (140%). Data on income generation were not systematized. In interviews, significant variation was noticed between social groups and in the Network as a whole. Incomes ranging from BRL 1.5 thousand to BRL 50 thousand per year were mentioned.

The quality of the organizational development processes, coupled with the training of individuals in the various functions of the Xingu Seeds Network, was highlighted as a distinguishing feature. Governance was structured based on the training course for managers. The pricing system was also structured, with the involvement of links/managers, leading to the systematization of a Management Guide.

In commercial terms, the activities of the Xingu Seeds Network were expanded from the exclusive supply of seeds to the restaurant service sector, which has gradually been established in the region. The Network's progress has led to the creation of similar initiatives by other regions and biomes. The Network was granted the Ashden Award in 2020, an international award for initiatives that generate solutions for the climate crisis.

An unexpected effect of the *Productive Sociobiodiversity in the Xingu* project was highlighting **female empowerment** in the Xingu Seeds Network's activities. Although indicators were grouped over the entire scope of the project, exceeding the target for

---

<sup>93</sup> ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Relatório de Avaliação de Resultados*. Amazon Fund, 2018. p.13.

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu



beneficiary women (131%), interviews emphasized this number in the Network.

The organization of data through the control system implemented by the project made the overview of the Network clearer, and from that, it was possible to define more assertive actions to strengthen the participation of women. One measure was to make it possible for companions to participate in events outside the community, creating conditions for women to bring their children.

Gathering is a traditionally female activity among the Xingu peoples. The proposal to organize seed gathering was not an innovation foreign to the culture but was initially seen as a temporary project in some indigenous communities. The structuring of the chain, with the construction of seed houses, helped materialize the activity in a symbolic way. The organizational processes, with the definition of roles, brought more internal visibility to the role of women, led to the empowerment of female leaders and community recognition. In the case of the Ikpeng people, the group created an identity and denomination, the “Yarang” gatherers, which have inspired other groups, such as the Xavante gatherers from the Marãiwatsédé indigenous land, who created the group "'iõ Rómnhá' a'ubumr' i'wa," where the leader of the group became the first chief.

*“The organization led to recognition by the community and leaders. The group becomes a deity in the spirit world.”*

The gathering work involves the whole family, but the female role is more prominent. The income generated by the activity is decided by the women and used to ensure the family's well-being. Estimates raised in the interviews indicate an average annual income that can vary from BRL 300 to BRL 500. But the value of the activity for indigenous gatherers lies in the fact that the seeds create forests, intergenerational exchange inherent in group work is valued, and the territory is protected through expeditions and gathering hikes. A book is being prepared by ISA systematizing the experience of Xingu women in the Seed Network.

As part of the Origens Brasil seal initiative, segmented quantitative and qualitative surveys were carried out, addressing women, youth, and leaders, including issues of generational succession. Internal work was carried out to bring this content to social networks, having, mainly, women and young people as spokespersons who speak on behalf of the initiative. Of the total of 1,882 producers involved, 42% are women. In the interviews, it was considered that there were advances in women's voices in the negotiation processes. Perception evaluations were carried out, which indicate that 85% of the interviewees believe that young people are involved in the chains, which deserves attention in the context of the Amazonian reality. The involvement of young people and women is encouraged in the guidelines and governance of the initiative.

Another result was the increased **youth participation** in the Xingu Seeds Network, with the gradual occupation of management positions. For this, inclusion strategies that were not initially foreseen were implemented, such as some attractive and educational methodological instruments (for example, phenophasic games and forestry) and the production of a book by young people based on interviews with older folk about climate change. A new project of the Network will continue this line of action through conversation circles with young people and an incentive to occupy spaces of leadership.

### Direct effect 2 – Increased value on agroforestry product chains

The *Productive Sociobiodiversity in the Xingu* project envisioned the strengthening of the agroforestry products chain through the restructuring of the Araguaia Fruit Pulp factory, managed by the Nossa Senhora da Assunção Education and Social Assistance Association (ANSA) and the renovation of the pulp factory of the Estrela da Paz Agroecological Community Association (Acaep). Both initiatives involved settled producers and were at different stages of development, with ANSA's experience being more structured. In the interviews, it was possible to raise more information about ANSA's experience.

In terms of indicators, the expected revenue from the commercialization of pulp exceeded the target (104%). However, the production volume was much lower than expected (42%), and the expected commercialization through institutional markets (13%). Access to these markets was provided by an organization from Terra do Meio, the Sementes da Floresta Agroforestry Association (AASFLOR), and by ANSA. Accord-

ing to an interview report, in the case of ANSA, orders never reached 15% of what was established in the contract, causing setbacks in planning. It was considered in the interviews that the feasibility of the institutional market in the region where the project operates required more significant coordination efforts than what could be undertaken at that moment, requiring actions to organize production and processing. Thus, within the scope of ANSA, the primary marketing strategy was the structuring of points of sale with the installation of freezers. Although promising, according to the indicators reported, the strategy was resized, so that, currently, only about five points of sale have been maintained.

In the interviews, it was evaluated that the infrastructure was improved with the project, which helped the organization more effectively enter the pulp chain and covered about 45% of the factory's operating costs. Currently, this share is estimated to reach 30%, with the remainder supported by religious organizations.

It should be contextualized that the central objective of ANSA's work is to defend the rights of family farmers, settled farmers, and indigenous farmers. The organization sees productive activities as a means for its work, not its final goal.



*“Those are strategies to become closer to the rural workers. It is a way of approaching through income. They are tools to work on environmental conservation and rights.”*

The Acaep subproject faced initial mobilization difficulties, requiring more intensive assistance to make the construction of the factory viable, including support and exchange of experience with ANSA. At the end of the project, a greater engagement of the members was noticed, which led to the construction of the artesian well and the electrical network for the association's land, allowing the project to be carried out in full<sup>94</sup>.

### Direct Effect 3 - Expanded managerial and technical capacity

Within the scope of the Xingu Seeds Network, training actions for the *Productive Sociobiodiversity in the Xingu* project included holding the Network's annual general meetings, as well as various exchange events, expeditions, and specialist gatherer workshops. The indicators, consolidated in the Monitoring Plan, show the scope reached by the project in this regard, surpassing all targets. The “Meeting” was a hallmark of the entire project, valued as a time for acquiring technical knowledge, but also for exchanging

<sup>94</sup> ISA. Socioenvironmental Institute. Sociobiodiversidade Produtiva no Xingu: Relatório de Avaliação de Resultados. Amazon Fund, 2018. p. 6; 17.

ing, strengthening social cohesion around common goals:

*"The seed connects people, and the Network can unite those who are different. The meetings created cohesion in this diversity of social groups, and we improved governance."*

The Modular Training Course for Managers was a success, as it addressed aspects of the individual development of links, creating the basis for defining and implementing management processes for payment, quality control, conducting meetings, conflict resolution, leadership, and decision-making. The course made the need to improve governance instances evident, creating the Network's Management Committee with representatives from social groups and preparation of the Management Guide to guide the work on the links:

*"The training course for managers changed the network. It brought out talents that could not gain expression. They couldn't act, some gatherers only respected what was said by the technical experts. They were empowered, and today they are more active, unraveling the problems at their roots, with autonomy."*

Activities within each nucleus were carried out to meet specific needs for structuring management, improving quality, and adopting good practices. They also provided a space for cultural mediation, essential for the professionalization of the Xingu Seeds Network, respecting the characteristics and practices of each social group. As an example, we cite the ethno-mathematics workshops held with Xavante gatherers from the Marãiwatsédé Indigenous Land, to improve the understanding of weights and measures, with significant reduction of gathering of seeds beyond what was ordered.

*"Seeds were gathered in the traditional way that they gather any other resources: gathering what is offered by nature at that moment. For an order of 4 kg of embaúba, they could gather 124 kg. The Xavante people can count only to 5. Numbers greater than that are defined as "a lot" by them. Understanding what was actually ordered required introducing a new logic to the gatherers."*

Training activities and production organization were also carried out within the other supported chains, such as production, conservation, and storage of native/traditional seeds, use of fruits from the Cerrado, and agroforestry practices. Various teaching materials, guidance manuals, and videos were produced to support the entire training process and disseminate results.

#### Direct effect 4 - Deforested and degraded areas recovered and used for economic and conservation purposes in the Xingu Basin

The approved proposal of the Productive Sociobiodiversity in the Xingu project expected to reach 150 hectares of planted areas<sup>95</sup>. The Monitoring Plan subdivides these areas into three categories that add up to the expected goal of 170 hectares. The quantitative results vastly exceed this target and inform the planting of 2,368 hectares, as follows:

- Estimate of the area reforested with seeds and seedlings commercialized by the Xingu Seeds Network: 2,046 hectares;
- Reforested area in the process of recovery in the Wawi and Marawãtsédé Indigenous Lands and in the settlements: 172 hectares; and
- Area recovered and used for economic purposes: 150 hectares.

In the interviews and reports, it was not possible to gather more detailed information about the effectiveness of the plantations carried out.

The project included the structuring of seedling production nurseries together with five agglutinated organizations (OPAN, ATV, ANSA, Acaep, AIMCI), aiming at the recovery of degraded areas with the seeds from their gathering groups. The project used multiple strategies to implement the areas, according to each context, from the implementation of agroforestry backyards (OPAN), orchards in schools (ATV), experimental reforestation (Acaep) and integration with local initiatives such as the commercialization of Acaep for a project of the Institute of Environmental Research of the Amazon (Ipam) and a consortium of pequi and livestock (AIK).



*“Fire is a severe constraint for the recovery of areas. Planting was carried out with a focus on backyards, because there needs to be an owner who takes care of it.”*

<sup>95</sup> ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Roteiro para Elaboração do Projeto Modalidade Aglutinadora*. Amazon Fund, sd. P. 101.

The project's action in the settlements, through the agglutinated groups and the ISA itself, adopted an integrated approach, involving seed gathering, seedling production, planting, and training processes that improved existing initiatives and encouraged new experiences. The interviews revealed a guideline that permeated the process: adapt the project to the needs and demands that emerged as an opportunity to mobilize families, considering the context of strong pressure to lease land for soybeans, demobilization of families, worsening situations and extreme climate impacts (for example, fire and drought), scarcity of water for consumption and irrigation, and several cases of vulnerability of different kinds (child malnutrition, for example).

“The context is very diverse; it is difficult to raise the specifics while designing the project. Every project must be seen as a guide to enter the situation. Adapting is a fundamental part of it.”

An example of remarkable adaptation occurred in the OPAN subproject in the Marãiwatsédé Indigenous Land, where it was evaluated that the nursery implantation was not integrated with the culture. Therefore, the agglutinated organization decided that the resources would be better used in actions that strengthen community engagement and solve emergency problems. The negotiation process for this change was considered emblematic, as it reveals different logic about income generation in project management.

“In terms of economic feasibility, the Amazon cost must be considered. The training process made it possible for people to come and go, and a lot of fuel was spent attending the community meetings. It is not possible to assess this cost against the income generated. Projects of this nature spend more money on fuel than women generate in income.”

Finally, a new destination was decided for the nursery resources. The inclusion of further training and advisory activities were not carried out. However, the drinking water supply system was made possible, and the planting of yam was included to provide food for the coming years.

In the ATV subproject, according to a document analysis<sup>96</sup>, the area recovery

96 ISA. Socioenvironmental Institute. *Sociobiodiversidade Produtiva no Xingu: Relatório de Avaliação de Resultados*. Amazon Fund, 2018. p. 13.

activities served to strengthen the women's group, specifically the groups of guardians of creole seeds, and actions to plant seedlings in schools. Multiplication of the produced creole seeds occurred, guaranteeing a small stock of seeds to grow gardens for several farmers. The women's groups that participated in the activities attended several state-level exchanges and events.

The noticeable results encourage the continuity of actions. For example, we can mention the successful planting of pequi, which made the Ikpeng interested and committed to the project's activities.

In the Wawi Indigenous Land, the subproject of the Kisêdjê Indigenous Association (AIK) strengthened an existing activity, i.e., extraction of pequi oil, with the implementation of an innovative proposal for a mechanized consortium of pequi, fruits, and livestock. The strategy is an experiment that aims to use degraded areas of the Indigenous Land for traditional productive activities. There were investments in oil processing, with the acquisition of new machines.

The target of planting 60 hectares was reached, with maintenance replanting, ensuring the effectiveness of the area's recovery. There are plans to expand pequi plantations and introduce other traditional crops with economic potential, such as annatto and murici (for fruit pulp).

*"We are choosing activities that have to do with our culture and that can be carried out without interfering with the activities in the fields, daily activities, parties and without overloading women by increasing commercial production."*

Manual processing was much work, especially for women, who were happier with the new machines. At the end of the project, 260 liters of oil were processed. The last production in 2019 was 315 liters, with a revenue of BRL 37 thousand. Part of this resource was reserved to guarantee the next harvest.

The ideal that has guided AIK, based on the project's experience, is to create a "small local job market," remunerating people who work in production, from coordination, gatherers, machine operators, cooking, and food.

*"The community is happy with the work. The chief's vision is to generate income in the village so that young people do not have to go out to look for work on farms and in the city."*

Part of the oil production is distributed among all families, and most of it is easily sold through a niche market, such as fine dining restaurants and differentiated mar-

kets. The implementation of the project influenced the self-confidence of the community and the leadership. It brought more credibility to the work of AIK.



*“After seeing our capacity, organizations are looking to us to offer resources for the continuity of the work. This is a great privilege.”*

### **6.3. Governance and institutional strengthening within the framework of the arrangement between agglutinating and agglutinated organizations**

Implementing the Productive Sociobiodiversity in the Xingu project involved the specific governance and management arrangements of the Canteen Network, the Xingu Seeds Network, and the Origens Brasil seal, which were analyzed in the context of their respective lines of action throughout the previous items. However, due to the scope and complexity of this project, we find it relevant to reflect on the procedures adopted for the operation of the arrangement between the agglutinating and agglutinated organizations.

As in the other projects approved by the Public Call, there were institutional connections between the participating organizations prior to the project. When the call was launched, ISA saw the opportunity to agree on a broad arrangement to make the agenda viable in the two areas of action. The proposal envisaged the ISA as an agglutinating organization and a set of 13 agglutinated organizations with different profiles: ranging from associations of indigenous communities, extractivist workers, and settlers, mostly at incipient levels of institutionalization, to non-governmental organizations such as Imaflora and OPAN, who are experienced in the autonomous execution of projects. According to the interviews, Imaflora considered a separate proposal, but the integrated arrangement was more favorable. As the call did not detail the format of the arrangement, the project was perceived as an opportunity to test different arrangements in line with the objectives and projected lines of work, leading to investments in the structuring of the networks and the Origens Brasil seal.

To facilitate the operational execution of the project, a general arrangement was established between the participating organizations. This arrangement included the definition of regional focal points and ISA managers responsible for the relationship between project partners and the Amazon Fund team. Two to three annual meetings were held between the participating organizations, and a governance manual was established for the execution of the project.

Regarding financial execution, it was agreed to transfer funds to organizations with installed management capacity (Imaflora and OPAN, but also some local organizations such as ATV and Acaep). The project arrangement was conceived in an integrated

way, but the participation of each organization was designed considering their capabilities. Some organizations received the maximum value established for the subprojects in the Public Call; others agreed on lower values. It was also agreed that there could be changes in the allocation of resources in case of issues with the execution.

The transfer of resources was not considered a key part of institutional improvement, being carried out only when the execution conditions were sufficiently robust to the point of not compromising the final actions. In the case of the Canteen Network of Terra do Meio, the associations themselves indicated that they had no interest in carrying out the fiscal and bureaucratic operation, preferring the financial management to be taken over by ISA. Even without the transfer of funds, the associations participated in the design and management of the project at all stages and were supported by their governance mechanisms, such as the holding of meetings and assemblies. This support made it clear how relevant investments in governance arrangements and the social management of territories are for achieving results, strengthening the insertion in production chains and affecting conservation and territorial protection.

Overall, the project was seen as an opportunity for institutional strengthening, in addition to resource management. In the interviews, the arrangement was considered as being successfully managed, despite specific issues around the alignment of different organizational cultures among the participants. At the individual level, there was no specific case of evolution towards generating resource management autonomy based on the project experience. The structuring of the two networks, with their different institutional trajectories, is the primary expression of the collective results of these efforts.

#### 6.4. General evaluation

In the general evaluation, the territorial fronts of the *Productive Sociobiodiversity in the Xingu* project will be brought together again in a joint analysis.

##### 6.4.1. Positive aspects

- Even with the contributions of previous projects and support that generated the bases for the design, implementation and results, the Productive Sociobiodiversity in the Xingu project was of great relevance to ISA and the other organizations that participated in the arrangement, being the **largest project implemented by ISA** so far.
- Among all the projects evaluated, this one adopted and **improved production chain approaches most effectively**. In terms of the Terra do Meio Canteen Network and the Origens Brasil seal initiative, the work ranged from produc-

tion structuring to the relationship with the final consumers of the products. The Xingu Seeds Network initiated the structuring of the forest restoration value chain, still incipient in the country, but crucial for implementing the Forest Code and achieving Brazilian restoration commitments.

- It was one of the few projects that involved **preliminary work on financing through the provision of working capital** for the Terra do Meio Canteen Network.
- The formalization of the Xingu Seeds Network as an association marked a new phase of the initiative, with autonomy in relation to ISA, having its structure and governance processes established and a network of active gatherers and managers, expanding its insertion in the restoration chain. Thus, it stands out as an example of **institutional strengthening of a grassroots organization that achieves autonomy** based on participation in the agglutinating/agglutinated organization arrangement.
- The **Origens Brasil seal initiative arose from the project**, becoming a relevant result. Subsequently, it evolved and became a specific project supported by the Amazon Fund<sup>97</sup>.
- In Terra do Meio, the structuring of the Canteen Network was a joint initiative based on **the prioritization of production and commercialization of the communities themselves**, however, it was possible to reach an agreement with the purchasing companies' demands and purchase conditions.
- The project contributed to local learning processes, helping a **larger group of people take ownership of organizational, productive and commercial management processes**, improving the organization of the production base and increasing transparency with the communities.

---

<sup>97</sup> Learn more on the project page projeto [Florestas de Valor - Novos modelos de Negócio para a Amazônia no site do Fundo Amazônia](http://www.fundoamazonia.gov.br/pt/projeto/Florestas-de-Valor-Novos-modelos-de-Negocio-para-a-Amazonia): <http://www.fundoamazonia.gov.br/pt/projeto/Florestas-de-Valor-Novos-modelos-de-Negocio-para-a-Amazonia>.

*“The money must be in the canteen. First, I started with a notebook. Then we changed it to a notebook with three copies, one for the extractive worker, one for the company and one for the canteen. It used to be hard for people to pay their bills in the canteen, today they play a lot with money. It all became easier; we send the receipts through cell phone.”*

*“Dealing with other people's money is difficult. It often got confusing, receipts were lost, we di not know who got paid. ISA technicians followed up, helped write receipts and balance sheets. Now they separate bill by bill and pay everyone. Today, everyone already has an account.”*

- The **Xingu Seed Network has reached a new level** thanks to investments in the project, valued in terms of infrastructure, definition, management, production, and training processes.

*“The Seed Houses are the heart of the Network. In addition to building or renovating the house, it is active, thanks to the training. The infrastructure helps with organization, having a place to meet, materials to store, and conditions for standards and good practices to really work.”*

- In terms of the development of processes, we highlight the formalization of the Network as the Xingu Seeds Network Association, based on a participatory decision-making process on the most appropriate legal approach. With the formalization, the Network itself began raising funds (for instance, with PPP-ECOS, Funbio/REM and the Norwegian organization Rainforest Foundation).

*“We were incubated at ISA, which helped us walk independently. Understanding independence was a process.”*

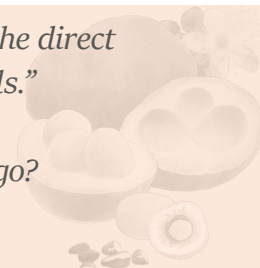
- The interviews with representatives of the Terra do Meio Canteen Network highlighted the achievements in overcoming unequal commercialization relations, in the installation of canteens and small plants in the territory, and in **establishing fair business partnerships**. One highlight was that they had overcome the historical situation of accumulating production but not knowing who to sell it to. Before the creation of the Canteen Network, production had

low value, the prices paid by the regatões (travelling traders) were far below the value chain. Communities also did not know where production was heading. Currently, the companies involved value environmental services, practice fair prices, and do not impose a production scale.



*“In former times, it was difficult, only with the direct trade. It was practically an exchange of goods.”*

*“We asked ourselves: where will our product go? Today, we can choose a company.”*



- The project was structured based on an existing selection of products of the communities, but also allowed the addition of new chains and products, such as babassu mesocarp flour. The **mix of chains** reflects the way of life of the communities in Terra do Meio, who already worked with many seasonal products throughout the year before the project (harvesting Brazil nuts at the beginning of the rainy season, then andiroba and babassu, fishing activities in the dry season, after cleaning the rubber tree plantations, etc.)
- Working on the commercialization of various products was made possible by the project's partner network. The actions of ISA and Imaflora led to the **composition of purchasing companies willing to consider the context of the region and communities**.
- Imaflora's experience in adapting certification mechanisms to the context of tropical forests made it possible for the first companies to adhere to the Origins Brasil seal. It was possible to **mobilize visionary companies**, such as Mercur, Natura, and Osklen, and influence other players, such as Wickbold, where it was possible to raise the awareness of the company's management to the initiative. In addition, small start-up companies and other companies in the conversion stage toward more sustainable production were signed up. Companies with innovative proposals were added, such as Atina, which developed a technology to use babassu mesocarp to produce microparticles that replace silicones in cosmetic creams.



*“More and more, we have to do good business.”*



- Although it was not a defined strategy since the beginning of the project, the implementation of the Xingu Seeds Network made it possible to **strengthen**

**the role of women gatherers**, who expanded their performance in leadership positions in the projects. It is important to mention that the female role has expanded in the Network as a whole. In the interviews, it was highlighted that the participation in the project's events and the representation of the Network in other initiatives expanded their perception of themselves, strengthened the practice of participating and the development of skills.



*“In workshops and meetings, you realize that you have value too. Then new opportunities open up.”*



- In a similar way, we tried to give **visibility to youth participation** with developments after the end of the project.
- Finally, the interviews emphasized that the results of strengthening the Xingu Seed Network **far exceed the economic outcomes**, impacting the people's relationship with the territory and their quality of life.



*“People feel valued, they give meaning to everything they experience. Think: I'm creating a forest. With the seed, they go to the forest, move around, feed on the fruit, change their diet. It creates a bond with the trees, with the medicine of the forest. Our families' lives have changed. My father worked cutting into the woods, and my mother was a maid. Today her entire income comes from seeds. It changes the way of thinking, the ideology. I hated this municipality. Today, my backyard is my treasure. It awakened another relationship of love and connection with the place and with nature. The way to thank nature is to remain on the land.”*



### 6.4.2. Challenges

- Despite the results achieved, challenges remain for **production processing** in small plants, especially that of finished products and **quality issues** related to drying, selection, etc., that have yet to be overcome. But small plant equipment is suitable for multiple uses.
- The insertion of communities in the fruit pulp chain and the production of seedlings **evolved more modestly**. The economic feasibility of these initiatives is not yet established. In part, they are still active as a strategy for social organization processes.
- In the ISA approaches, there is a close connection between the social management of territories and production initiatives and insertion in value chains. In territories that are remote or have complex logistics, the costs of social management have been financed through projects. It is not clear whether, in the medium term, the return of productive activities will be able to cover these costs. However, governance and social management arrangements contribute to the generation and maintenance of impacts that ensure conservation and territorial management.
- In the context of the Origens Brasil seal, it is not yet clear whether the **companies will finance the generation of impacts** and if there are possibilities of scale advancements through the initiative's expansion to secure its feasibility.
- The **integration of social logic and economic aspects also raises challenges for the support of projects by the Amazon Fund**, as pointed out in the example of the work in the Marãiwatsédé Indigenous Land, but it extends to the economic feasibility of the fruit pulp chain, in which social investments are even more significant than the income from economic activity, and are crucial for the strengthening of these groups in the face of socioenvironmental threats.
- **Financing actions related to territorial protection and maintaining the social fabric** remains challenging for organizations. There are doubts about whether, in the medium term, the potential economic results of the initiatives generate sufficient resources to support functioning community organizations.
- The relationship with the companies continues to be challenging, even with

those engaged. There is a **difference between awareness and everyday business**. The quality, deadline, and price requirements of companies are challenges for communities.

- Companies invest in structuring the chains, but there are differences between the more significant value chains. The Brazil nut chain is the most complex, depending on seasonality. But the **investment possibilities in fields such as pre-processing, technical assistance, etc. also vary depending on profit margins**, which differ in the food sector and the luxury fashion market, for example.
- Despite the path already taken by the Xingu Seed Network, **issues related to the formalization** of arrangements are still relevant to the organizations that operate them, all of which have adopted the association format. Both the expansion of insertion in private markets and access to institutional markets demand advances in the structure of organizations in terms of management and commercial operation. The Canteen Network follows its process of social organization, but according to ISA, it should not yet seek to establish itself as a cooperative. The formalization of a structure that still cannot be operated can become a mechanism for expelling communities from the market.
- In a broader context, it is important to highlight the **weakening of government actions** reported in the regions of the Productive Sociobiodiversity in the Xingu project. This applies both to environmental inspection actions and the territorial integrity of protected areas, which is leaving communities vulnerable to the action of external players associated with predatory activities, such as logging and land grabbing, as well as the absence of actions to support and promote economic activities related to extractivism and restoration.

## Box 5:

Impacts of the pandemic on the *Productive Sociobiodiversity in the Xingu* project

- In the Xingu Seeds Network, production was maintained throughout the pandemic, being the only source of income for some families. The consolidation of management made it possible for the Network to continue operating remotely. New ways of working have been discovered, which can reduce costs in the future.
- Remaining in isolation at the sites has become a distinguishing feature and synonymous with comfort, many families of gatherers have invested in improvements in communication.
- In the Canteen Network, the operation of the canteens also supported the maintenance of the communities' isolation, since supply via canteens reduced the need to go to the municipality's headquarters. In ISA's evaluation, the operation of the canteens was decisive to contain the advance of the pandemic, allowing people to remain in the communities without interrupting production.
- Communities in secured territories and assisted by supporting organizations were able to face the impacts of the pandemic more effectively. Several funders allowed the redirection of projects to keep economic activities in progress, for example, making it possible for the canteens to purchase agricultural products from the communities to supply the localities.
- In the companies themselves, Wickbold for instance, the pandemic scenario led to the engagement of decision-making levels that were not previously involved with the initiatives in Terra do Meio. There were no breaches of contract with private companies. The trips to deliver medicines and carry out health campaigns were used to transport production on their way back.
- However, there were partial losses in contracts with institutional markets. In Altamira (PA), for example, the municipal government did not purchase the products that were on the school meal contract. On the other hand, in Vitória do Xingu (PA), the contracts were converted into basic food baskets, in which it was possible to insert products from the chain, resulting in a larger purchase than initially contracted.
- Other opportunities generated by the pandemic include access to rural credit and emergency credit lines, as made possible by the Sustainable Connections Institute (Conexusus).
- Currently, there are around 16 to 17 internet points in the Terra do Meio region, which contribute to maintaining ongoing economic activities. During periods of isolation, it became clear that this dynamic can be maintained without the technical teams working on the field. However, the management and operation of the Network still require funds and support.
- An impact was generated by the simultaneous incidence of the pandemic with the retraction of government action, especially the reduction of restraint over illegal loggers and other players that entice rural youth into predatory activities, as well as the return of invasions by miners and ranchers due to the reduction of environmental inspection.

### 6.5. Analysis of the OECD evaluation criteria

#### OECD evaluation criteria for the Productive Sociobiodiversity project in the Xingu

Evidence	Evaluation
<b>Relevance Criterion</b>	
<p>In Terra do Meio, the project's contribution was decisive in developing a production model that's compatible with the demands of traditional communities in terms of long-term multi-contracts, good prices, differentiated conditions in commercial relations, processing of products and a set of canteens with working capital that enable local production.</p> <p>In the region of the Indigenous Park and Cabeceiras do Xingu, the project established the work of the Seeds Network as a pioneering initiative for community action in the restoration chain, generating relevant contributions to the implementation of the Forest Code and restoration commitments.</p>	<p>Very relevant</p>
<b>Criterion Effectiveness</b>	
<p>There were variations in scope in the framework of indicators and challenges in the interpretation of some indicators. However, complementary qualitative analyses indicate that the project achieved most of its objectives and effects. The biggest limitations were identified in the targets related to insertion in institutional markets and the possibility of influencing related public policies.</p>	<p>Effective</p>
<b>Efficiency Criterion</b>	
<p>The project documentation offers few inputs for evaluating this criterion, and the failure to carry out field visits limited the collection of additional information. It is worth mentioning the reflections on the costs of operating comprehensive governance arrangements associated with the operation of networks and the Origens Brasil seal initiative. As discussed, these structures are relevant for generating conservation and territorial management impacts. Currently, they need support from non-reimbursable funds for their maintenance.</p> <p>There are doubts about the ability to absorb these costs within the scope of business arrangements and the competitiveness of extractive products compared to plantations. However, there are still opportunities to make improvements that reduce costs, such as issuing electronic invoices, further advances in management, etc.</p>	<p>Few elements for the evaluation</p>

(continued)

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu

(continuation)

Evidence	Evaluation
<b>Impact Criterion</b>	
<p>In this project, the impacts of actions beyond the enhanced activities and sustainable productive activities were particularly evident. Among them is the issue of remunerating these impacts beyond the increased value of products, including payment for environmental and ecosystem services and the incorporation of maintenance costs of networks and organizational structures. In the context of the project, there was an experience of payments for ecosystem services, in which compensation was negotiated with the Osklen company, which currently generates a higher remuneration than the purchase of the product itself. However, this type of arrangement was only viable in the context of a company operating in the luxury fashion market, with high-profit margins. Its application in the food market, for instance, would be unfeasible.</p> <p>In addition to the results generated during the project, it is worth mentioning the expansion of impacts already verified, such as the growth of canteens in Terra do Meio and adjacent areas. The network includes 28 canteens and communities from the Xipaya and Arara indigenous lands.</p> <p>Likewise, the Origens Brasil seal initiative was expanded to four more regions, operating in Calha Norte in the state of Pará, in the Negro and Solimões Rivers in Amazonas, and the Tupi Guaporé mosaic in the state of Rondônia. In 2021, the Network added more than BRL 100 million in transactions, involving 35 protected areas. In 2020, the number of partner companies increased by 60%, with 66 organizations as members.</p> <p>The dissemination of the experience of the Xingu Seeds Network inspired and supported the creation of networks in the Cerrado and Caatinga, leading to coordination between these networks ("network of seed networks").</p>	<p>Strong effect</p>
<b>Sustainability Criteria</b>	
<p>Currently, the networks supported by the project continue to depend on non-refundable resources and the support of partners. There are possibilities of expanding the generation of resources from the commercialization of products, especially as more sensitized companies are pressured to adopt sustainability criteria and incorporate payment for environmental services and benefit sharing, such as the aforementioned Osklen company. In the case of the Seeds Network, advances in pricing have already made it possible to separate the costs related to the "seed cost" and the broader costs associated with strengthening social groups.</p> <p>The ongoing support structure has technicians from ISA, TNC, the Franciscan Sisters, and an outsourced company from Norte Energia SA. In addition, the implementation of the Origens Brasil seal project is still in progress.</p> <p>As part of the Origens Brasil seal initiative, the Origens Fund is being created, fed by company fees, and aimed at financing the cost of impacts, with a perspective of remuneration partly through fees and partly through donations.</p> <p>As reported, the pandemic had an impact on the performance of the networks but did not lead to the interruption or termination of contracts with the companies, so the various support formats generate perspectives of sustainability that are comparatively more consolidated than those of the other projects.</p>	<p>Average sustainability</p>

### 6.6. Analysis of the Cancun Safeguards

#### Cancun Safeguards for the Productive Sociobiodiversity Project in the Xingu

Safeguard	Compliant	Comments
Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements	Yes	<p>In general, the projects of the APS Component align with Objective 7 of the 2016 to 2020 phase of the PPCDAm (“Promote Sustainable Forest Management”). This project is directly associated with Results 7.2 (“Strengthening the Socio-biodiversity Productive Chain”), with emphasis on Action Lines 7.2.2. (“Support sustainable productive inclusion projects for indigenous peoples, traditional and extractive peoples and communities”) and 7.2.3. (“Produce and disseminate materials on recommendations and good practices for the management of native species of sociobiodiversity in appropriate language for indigenous peoples, traditional peoples and communities and family farmers”). As pointed out in the analysis, there was a perspective that the policies to promote public purchases, foreseen in the Normative and Economic Instruments axis, Result 9.4, could have played a more relevant role than they did in the implementation of the project.</p> <p>The structuring actions of the restoration chain undertaken in the context of the Seeds Network are related to the implementation of the Forest Code, with the National Plan for the Recovery of Native Vegetation (Law No. 12651/2012, art. 66, paragraph 3) and with the restoration commitments undertaken by Brazil within the scope of its Nationally Determined Contribution to the Paris Agreement, in the context of the United Nations Framework Convention on Climate Change.</p> <p>In the interviews, there was an emphasis on the weakening of complementary government actions to prevent and control deforestation over the last few years (including weakening of inspection activities, reduction of field teams of environmental agencies directed to the protection of indigenous peoples, and reduction of actions to promote extractive and agroforestry activities). This reflects a scenario of growing threats, not only from deforestation and degradation, but also from the actions of organizations and leaders.</p>
Transparent and effective national forest governance structures, considering national sovereignty and national legislation	No	There were no specific contributions from the project in this regard.
Respect for the knowledge and rights of indigenous peoples and members of local communities, considering relevant international obligations, national circumstances and laws and noting that the UN General Assembly has adopted the UN Declaration on the Rights of Indigenous Peoples	Wide-ranging	The project directly strengthened the governance management structures of traditional and indigenous communities.

(continued)

## ANNEX I: 5 — Productive Sociobiodiversity in the Xingu

(continuation)

Safeguard	Compliant	Comments
Full and effective participation of stakeholders, primarily indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of Decision 1/CP 16	Yes	<p>No evidence of formal compliance with the decisions was identified, but the execution arrangements included associations of indigenous peoples and local communities with which ISA already had a previous relationship, including the execution of projects. There were specific actions of governance arrangements aimed at strengthening these communities' management and decision-making capacities throughout the project.</p> <p>There were several investments in communication actions and the availability of teaching and publicity materials.</p> <p>The project's monitoring system presented inconsistencies in the formulation and verification of indicators, which, as in the other projects evaluated, limited conclusions on the contributions to income generation attributed to the project.</p>
Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of 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 enhance other social and environmental benefits	Wide-ranging	Both the use of NTFPs and the activities of the Seeds Network were aimed at protecting and conserving forests and maintaining ecosystem services. The implementation of the project did not involve the conversion of forests.
Actions to address the risks of reversals in REDD+ results	NA	Not applicable
Actions to reduce the displacement of carbon emissions to other areas	NA	Not applicable

### 6.7. Analysis of Cross-Cutting Criteria

#### Cross-Cutting Criteria of the Productive Sociobiodiversity in the Xingu project

Criterion	Compliant	Observation
<b>Poverty reduction</b>		
<ul style="list-style-type: none"> <li>• To what extent has the project effectively contributed to economic alternatives that value the standing forest and the sustainable use of natural resources?</li> <li>• To what extent has the project positively influenced poverty reduction, social inclusion, and improved living conditions for the beneficiaries (mainly: traditional communities, settlers, and family farmers) living in its area of operation?</li> <li>• Has the project been able to promote and increase the production in value chains of timber and non-timber forest products originating from sustainable management?</li> <li>• In the case of a project that contains a scientific and technological development component, did it contribute to the construction of a suitable development model for its region?</li> </ul>	Yes	<p>There were increases in the volume and revenue of the <i>in natura</i> products and beneficiaries supported by the project. As in the other projects, the data generated only allow us to infer that these increases have contributed to the generation of income and, by extension, to the reduction of poverty of the beneficiaries involved.</p> <p>However, several interviews highlighted the project's contribution to changing the history of low prices practiced by intermediaries in the region of Terra do Meio and the relevance of direct negotiation with purchasing companies for a fairer remuneration of forest products.</p>
<b>Gender equity</b>		
<ul style="list-style-type: none"> <li>• Has the project been able to integrate gender issues into its strategies and interventions, or has it addressed the issue in isolation? How?</li> <li>• Was there gender separation in data collection for project planning and monitoring?</li> <li>• How did the project contribute to gender equity?</li> </ul>	Yes	<p>As in the other projects evaluated, no specific strategies to promote gender equity were envisaged in the project. In its implementation, however, the relevance of such approaches was apparent, and adjustments were made, resulting in decisive actions to strengthen women's participation.</p> <p>In both areas, the strengthening of women's involvement in production, processing, and marketing activities was highlighted in the interviews, including the management of organizations (especially the Canteens and Seed Network) and participation in governance structures. The prominent role of female seed gatherers was a highlight of the project. Although the gathering activity involves the entire family, the decision-making and leadership has been the responsibility of women, who have had their role in the structure of their communities recognized.</p>

ANNEX I:  
5 — Productive Sociobiodiversity in the Xingu



PHOTO: Instituto Socioambiental (ISA)



## 7. Conclusions and Lessons Learned

The *Productive Sociobiodiversity in the Xingu* project was the most complex and comprehensive among the projects evaluated. The operation in two extensive territories, with multiple products and chains associated with different modes of resource use (extractivism, restoration, and, to a lesser extent, implementation of agroforestry systems), represented a challenge for the evaluation. The degree of detail and depth of the work was adjusted to the restrictions generated by the pandemic, which prevented the completion of field missions.

A highlight is the effective performance of the project in structuring value chains. The Xingu Seeds Network Association was consolidated as an important agent in the forest restoration chain with native species in the country and in the area implemented in Terra do Meio through the Canteen Network. With the Origens Brasil seal initiative, it was the only one among the projects evaluated that effectively involved the engagement of companies that purchased extractive products and explored opportunities for the insertion of extractive communities into the private market.

The progress achieved on this front contrasts with the difficulties of expanding communities' access to institutional markets, whose opportunities seemed more prom-

ising at the beginning of the project. Existing policies could have played a more relevant role in this regard. However, the project's implementation period coincided with a time of reduction and weakening of these policies and programs. Their resumption can provide significant support to the project's initiatives. The PAA and PNAE are programs that absorb diversity in production, a central element in the project proposal, through purchases, stimulating food security based on regional income-generating products.

The difficulties mentioned are also associated with weakening other public policies that need to be complementary to the projects in a systemic perspective of preventing and fighting deforestation, such as environmental inspection, effective management of conservation units and indigenous lands, fighting invasions, among others.

A key contribution of the *Productive Sociobiodiversity in the Xingu* project is experimentation and reflection on the connections between the social management of territories and income generation and conservation impacts. There were limitations regarding the possibilities of inserting these costs, which are significant in extensive and remote territories, in the operating costs of commercial chains. Approaches such as benefit-sharing can offer opportunities in this field, but if the costs are high, there is a risk of pressure leading companies to replace forest products with synthetic alternatives. It is worth evaluating to what extent the production of synthetics should subsidize the costs of extracting natural products.

The integration between the work of projects and public policies remains a priority to ensure robust and lasting impacts in terms of conservation and territorial management. Despite the successful experiences of companies' relationships and engagement, they were primarily generated in niche markets and partnership with visionary companies in their fields.



Effectiveness Evaluation of  
Sustainable Productive Activities (APS) Projects  
within the scope of the Amazon Fund / BNDES

---

## ANNEX II

---

Analysis of the  
Evolution of  
Deforestation  
in Sustainable  
Productive Activity  
(APS) Project Areas  
of the Amazon Fund

---

## Introduction

As part of the cooperation project between Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and the National Bank for Economic and Social Development (BNDES)/Amazon Fund, one of the actions supported by GIZ is the ex post effectiveness evaluation of completed projects supported by the Amazon Fund.

In order to understand the results and impacts achieved and identify possible paths towards greater effectiveness, efficiency and sustainability of projects included in the theme of support for indigenous peoples and in the theme of sustainable productive activities, GIZ is coordinating the execution of thematic evaluations.

In a complementary way, it is important to rely on analyses based on geoprocessing and remote sensing in the Legal Amazon to evaluate - based on images from high-resolution orbital sensors - the evolution of deforestation, degradation, and forest recovery in the areas of operation of the evaluated projects and link them to the areas where activities were implemented as part of the project.

This work will, in a complementary way, encourage, with its results, the evaluation of indigenous projects and sustainable productive activity projects. It presents the results of the evolution of deforestation in the areas of operation of the projects supported by the Amazon Fund, with a view to substantiating them.

### 1. Objective

The main objective is to analyze the evolution of deforestation in areas of sustainable productive activities projects in the Amazon Fund (Chart 1).

Chart 1: Sustainable Productive Activity (APS) Projects of the Amazon Fund analyzed

Project	Project website
Forest Sentinels	<a href="http://www.fundoamazonia.gov.br/pt/projeto/Sentinelas-da-Floresta/">http://www.fundoamazonia.gov.br/pt/projeto/Sentinelas-da-Floresta/</a>
Productive Sociobiodiversity in the Xingu	<a href="http://www.fundoamazonia.gov.br/pt/projeto/Sociobiodiversidade-Produtiva-no-Xingu/">http://www.fundoamazonia.gov.br/pt/projeto/Sociobiodiversidade-Produtiva-no-Xingu/</a>
Amazon Backyards	<a href="http://www.fundoamazonia.gov.br/pt/projeto/Quintais-Amazonicos/">http://www.fundoamazonia.gov.br/pt/projeto/Quintais-Amazonicos/</a>
Sustainable Fishing	<a href="http://www.fundoamazonia.gov.br/pt/projeto/Pesca-Sustentavel/">http://www.fundoamazonia.gov.br/pt/projeto/Pesca-Sustentavel/</a>
APL Babassu	<a href="http://www.fundoamazonia.gov.br/pt/projeto/APL-Babacu/">http://www.fundoamazonia.gov.br/pt/projeto/APL-Babacu/</a>

## 2. Methodology

The methodology was applied with to the objective of understanding deforestation in the periods before, during and after the projects. The main methodological step was the definition of the area of activity, the deforestation data and the baseline.

### 2.1. Definition of the area of activity

For each project, the areas of activity in the field were surveyed. With the exception of the *Forest Sentinels* project, which operated in three well-defined indigenous lands (ILs), the other projects were distributed across an extensive region, corresponding to target municipalities, and were not limited by a previously defined territory. Thus, a methodology of analysis by proximity was adopted, tracing areas of influence based on project intervention sites with a 5, 10, 15, 20, 25, and 30 km radius. Deforestation was calculated for each area. **Chart 2** lists the areas analyzed.

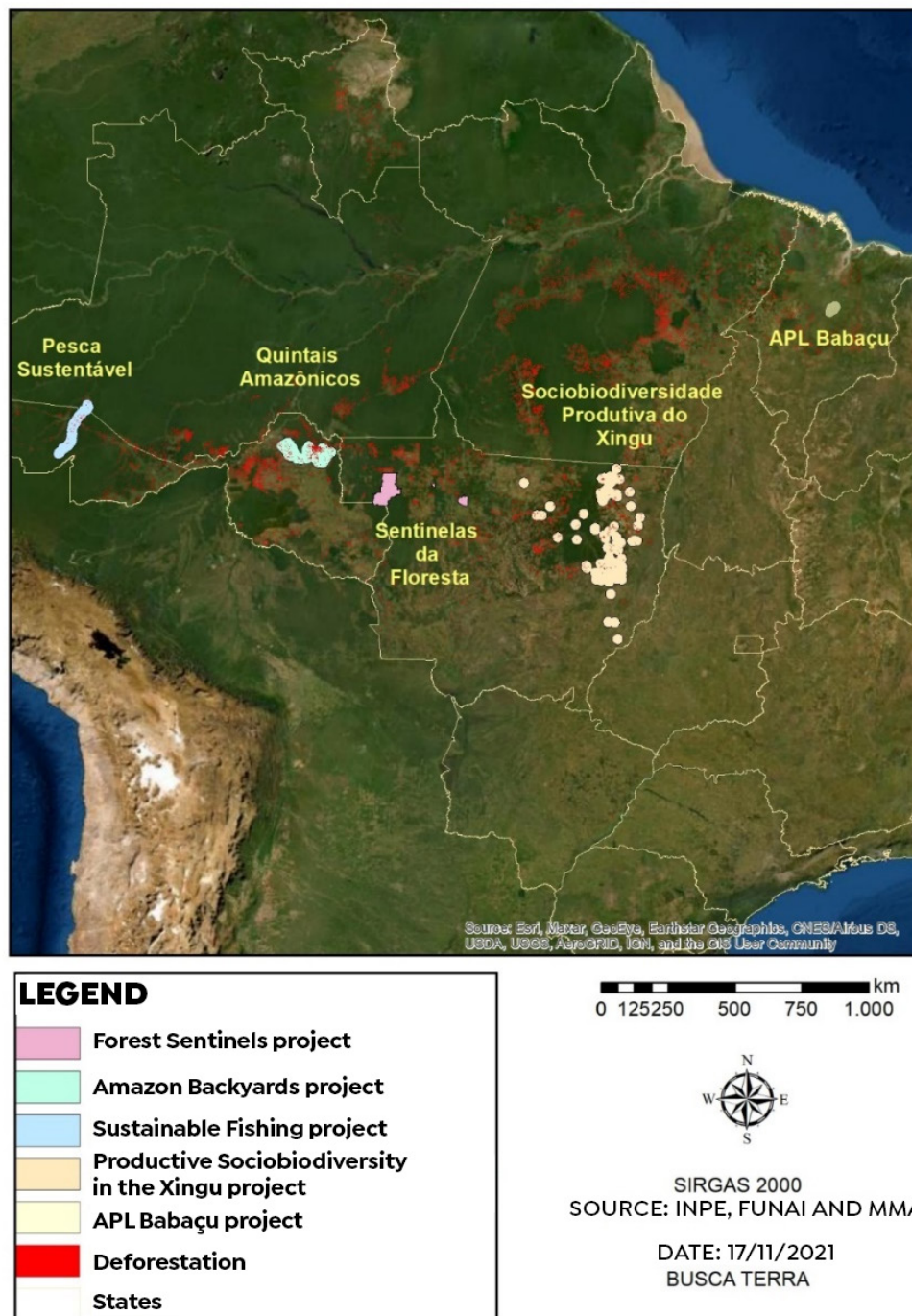
Chart 2: Areas of activity of the analyzed projects

Project	IL	State	Municipality
<b>Forest Sentinels</b>	Vale do Amanhecer PA	MT	Juruena
	Apiaka/Kayabi IL	MT	Aripuanã
	Aripuana IL	MT	Aripuana, Juara
<b>Productive Sociobiodiversity in the Xingu</b>	Area of Influence - 5 to 30 km radius	MT	33 municipalities in the Xingu River Basin
<b>Amazon Backyards</b>	Area of Influence - 5 to 30 km radius	RO	Cujubim, Itapuã do Oeste, Machadinho D'Oeste
<b>Sustainable Fishing</b>	Area of Influence - 5 to 30 km radius	AC and AM	Envira and Feijó
<b>APL Babassu</b>	Area of Influence - 5 to 30 km radius	MA	Bom Lugar and Lago do Junco

On the map in **Figure 1** below, it is possible to observe the approximate location of each of the projects analyzed here.

**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund**

Figure 1: Areas of activity of the projects analyzed and accumulated deforestation between 2008 to 2020 (in red)



## 2.2. Deforestation data

To calculate the annual rate of deforestation in the projects' area of activity, data from the Project for Satellite Monitoring of Deforestation in the Legal Amazon<sup>98</sup> (PRODES)<sup>99</sup>. PRODES has been used as an indicator for proposing public policies and for evaluating the effectiveness of their implementation. PRODES spatial data are used in: (a) certification of agribusiness production chains, such as the Soy Moratorium and the Conduct Adjustment Agreement (TAC) for Beef Livestock; (b) intergovernmental agreements, such as the United Nations Conference on Climate Change (COP 21) and the National Greenhouse Gas Emissions Inventory Reports; and (c) monetary donations by the Amazon Fund, which use PRODES for reference data on deforestation activity in the Legal Amazon.

## 2.3. Baseline

Deforestation in the five-year period prior to the start of activities was surveyed in order to calculate the deforestation baseline in the region where the projects operate. It corresponds to the average of deforestation in the calculated period. As all projects started in 2014, the years 2009, 2010, 2011, 2012, and 2013 were selected to make up the baseline.

## 3. Results

The Amazon biome is the largest in the country (corresponding to approximately 49% of the Brazilian territory). It is also home to the largest tropical forest and the largest hydrographic basin in the world. Although there are protected areas, deforestation rates have increased dramatically in recent years.

Generally, deforestation in the Amazon has a known pattern that follows some well-defined stages. The first stage of deforestation is the illegal extraction of timber, with the opening of clearings and trails for the removal of hardwood of commercial interest.

---

98 The PRODES Project monitors deforestation by clear-cutting in the Legal Amazon and, since 1988, has produced annual deforestation rates in the region, which are used by the Brazilian government to establish public policies. PRODES uses LANDSAT class satellite images (20 to 30 meters of spatial resolution and 16-day revisit rate) in a combination that seeks to minimize the problem of cloud cover and ensure interoperability criteria. The images from the American LANDSAT-5/TM satellite were, historically, used most frequently by the project, but the images from the CCD sensor on board the CBERS-2/2B, satellites of the Sino-Brazilian remote sensing program, were widely used. PRODES also used LISS-3 images from the Indian satellite IRS-1 and images from the British UK-DMC2 satellite. Currently, it makes massive use of images from LANDSAT 8/OLI, CBERS 4 and IRS-2. Regardless of the instrument used, the minimum area mapped by PRODES is 6.25 hectares.

99 Data available at: <http://terrabrasilis.dpi.inpe.br/downloads/>

## ANNEX II:

### Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund

After the removal of hardwood, the bushes and smaller trees are burned to clear the land and facilitate access. After burning, the land is converted to pasture. According to the Food and Agriculture Organization of the United Nations (FAO), in Brazil, more than 80% of deforestation is linked to the transformation of forest into irregular pastures. Another deforestation driver, not linked to the cycle of forest conversion into a productive area, is mining. The opening of economically advantageous stone and metal mines has been the cause of deforestation since the period of colonization of the Brazilian territory. Currently, illegal mining puts pressure on preserved areas of forest in the Amazon.

It is understood that productive activities are essential for the economic development of a country. However, they must be guided by consistent environmental legislation and have clear social objectives to generate results balanced by a vision of sustainability, a theme increasingly present in international discussions and agreements. In addition, enforcement activities must be strengthened to deter crimes and ensure the conservation of natural resources.

At the end of 2020, support for sustainable production activities represented 26% of the value of the Amazon Fund's project portfolio, i.e., BRL 476 million<sup>100</sup>. The set of projects supported in this axis covers, for example, extractive activities, processing (industrialization) of extractive products and family farming, food security (food production for own consumption), handicrafts and community-based tourism. The supported products include the following: rubber, seeds, handicrafts, manioc flour, cocoa, tourism, wood, honey, resin, soaps, oils, babassu, and acai berry.

For the five projects analyzed in this report, the evolution of deforestation in recent years was calculated using PRODES data. The data were aggregated into three periods to facilitate understanding: before the project (baseline), during project execution, and post-project. Deforestation data for each project are presented in Table 3. Detailed data are presented in ANNEX I.

---

100 For additional information:  
<http://www.fundoamazonia.gov.br/pt/noticia/Relatorio-de-Atividades-do-Fundo-Amazonia-2020/>

## ANNEX II:

### Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund

Chart 3: Deforestation data (in km<sup>2</sup>) for the five projects analyzed

Project	Area of Influence	Area (km <sup>2</sup> )	Baseline)	During the Projects (2014 - 2018)	Post-project (2019-2020)
<b>Forest Sentinels</b>	Apiaka/ Kayabi IL	1,095.73	4.73	0.37	0.95
	Vale do Amanhecer PA	147.18	4.86	0.87	0.47
	Aripuana IL	7,510.51	2.12	0.84	1.32
<b>Amazon Backyards</b>	5 km	4,313.29	147.67	197.95	61.85
	10 km	8,249.03	270.78	391.77	132.96
	15 km	11,816.18	388.21	578.28	198.42
	20 km	15,140.00	509.69	771.69	270.56
	25 km	18,399.36	582.97	943.72	350.79
	30 km	21,614.30	634.54	1,071.92	418.34
<b>Sociobiodiversity of the Xingu</b>	5 km	7,026.77	37.41	80.28	22.34
	10 km	21,316.28	133.41	225.31	62.82
	15 km	38,254.09	210.16	345.01	129.63
	20 km	55,841.22	288.52	437.01	183.97
	25 km	73,843.53	374.48	544.58	261.47
	30 km	91,986.23	451.32	648.54	336.06
<b>Sustainable Fishing</b>	5 km	2,516.05	32.49	40.14	33.34
	10 km	5,095.87	47.78	68.57	57.69
	15 km	7,752.98	58.81	83.84	67.66
	20 km	10,534.09	73.29	105.81	88.77
	25 km	13,451.57	102.83	130.44	109.56
	30 km	16,511.18	115.37	145.30	126.23

(continued)

**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable**  
**Productive Activities (APS) Project Areas of the Amazon Fund**

(continuation)

Project	Area of Influence	Area (km <sup>2</sup> )	Baseline)	During the Projects (2014 - 2018)	Post-project (2019-2020)
<b>APL Babassu</b>	5 km	475.72	0.00	0.00	0.00
	10 km	1,096.81	0.00	0.00	0.00
	15 km	1,816.16	0.00	0.00	0.00
	20 km	2,681.93	0.00	0.00	0.00
	25 km	3,698.39	0.02	0.00	0.00
	30 km	4,866.80	0.12	0.09	0.00

The focus on areas of influence allows observing the extent of deforestation. Thus, deforestation increases when there is a greater distance from the first 5 km strip, defined as the area close to the projects' actions with the small rural producers who participated in the projects. Except in the APL Babassu project, it is possible to observe an increase in deforestation during the execution of the analyzed projects, but, after completion, there is a negative variation.

Based on the extension of the areas in [Chart 3](#), the percentage of deforestation was calculated for each project and in each period. The data are presented in [Chart 4](#).

Chart 4: Deforestation Analysis for the APL Babassu project

Project	Analysed Area km	Baseline (2009-2013)	During the Projects (2014 - 2018)	Post-project (2019-2020)
<b>Forest Sentinels</b>	TI Aripuanã, TI Apiaka / Kaya-bi e PA Vale do Amanhecer	2,34%	0,42%	1,37%
<b>Amazon Backyards</b>	5	3.42%	4.59%	1.43%
	10	3.28%	4.75%	1.61%
	15	3.29%	4.89%	1.68%
	20	3.37%	5.10%	1.79%
	25	3.17%	5.13%	1.91%
	30	2.94%	4.96%	1.94%

(continued)

**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable**  
**Productive Activities (APS) Project Areas of the Amazon Fund**

(continuation)

Project	Analysed Area km	Baseline (2009-2013)	During the Projects (2014 - 2018)	Post-project (2019-2020)
<b>Productive Sociobiodiversity in the Xingu</b>	5	0.53%	1.14%	0.32%
	10	0.63%	1.06%	0.29%
	15	0.55%	0.90%	0.34%
	20	0.52%	0.78%	0.33%
	25	0.51%	0.74%	0.35%
	30	0.49%	0.71%	0.37%
<b>Pesca Sustentável</b>	5	1.29%	1.60%	1.33%
	10	0.94%	1.35%	1.13%
	15	0.76%	1.08%	0.87%
	20	0.70%	1.00%	0.84%
	25	0.76%	0.97%	0.81%
	30	0.70%	0.88%	0.76%
<b>APL Babassu</b>	5	0.000%	0.000%	0.000%
	10	0.000%	0.000%	0.000%
	15	0.000%	0.000%	0.000%
	20	0.000%	0.000%	0.000%
	25	0.000%	0.000%	0.000%
	30	0.002%	0.002%	0.000%

## 4. Conclusion

This study aimed to evaluate the impact of projects on fighting deforestation in the Amazon. To this end, data from PRODES and the areas of activity of each project were used. Except for the *Forest Sentinels* project, in which the actions took place in two indigenous lands and a settlement project, the other projects were observed based on proximity, i.e., without a precise geographical area of activity. An area of influence was calculated

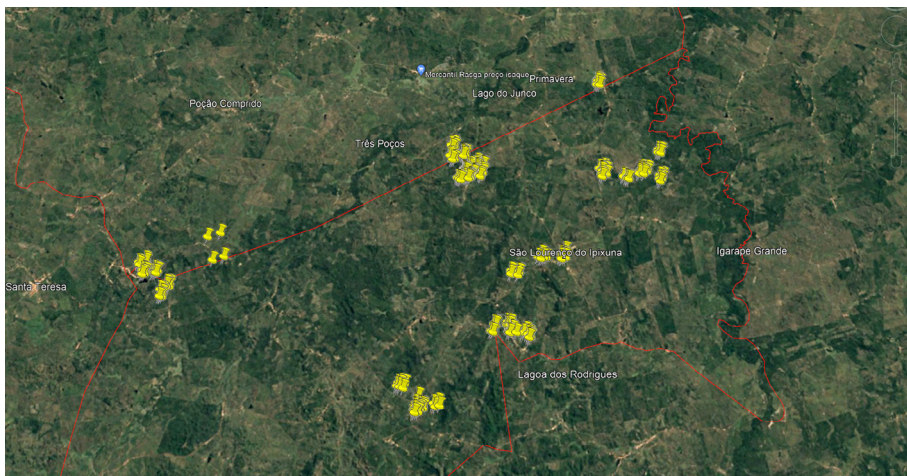
## ANNEX II:

### Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund

based on proximity. Thus, radii of 5, 10, 15, 20, 25 and 30 km away from the locations where the projects operate were established.

As a result, it was observed that the APL Babassu project had practically no deforested areas recorded in the entire period. It is not possible to identify the real reason, but we can infer that the area had a long-standing history of occupation, without many areas of native vegetation (Figure 2). In the areas of influence of the other projects, increasing deforestation was observed the greater the distance from the first strip of 5km, which represents the closest area of influence of the projects. Deforestation was constant, even during the period of the projects. This is probably due to the location of the areas in the arc of deforestation and because they are outside protected areas, with many of them on farms or private areas.

Figure 2: 2007 image of the area of implementation of the APL Babassu project



It is important to consider that the main focus of the projects was not to fight deforestation. This was, in general, an indirect focus of the projects. The central objective was to strengthen the production chain and forest recovery using sustainable production. Recovery takes place in previously deforested areas and, in this analysis, the areas recovered by the projects were not considered.

In summary, there was no pattern among the five projects analyzed, and the results must be weighed against the territorial reality of each project, as well as the types of actions carried out: the *Sustainable Fishing* project, for example, was carried out in areas close to Amazonian rivers and lakes; the *Amazon Backyards* project worked with rural properties; while the *Sociobiodiversity of the Xingu* project operated in indigenous villages.

**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable**  
**Productive Activity (APS) Project Areas of the Amazon Fund**

**ANNEX I: COMPLETE DEFORESTATION SURVEY DATA**

Project	Analysis Area	Area (km <sup>2</sup> )	Deforestation (km <sup>2</sup> )												
			2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Forest Sentinels	IL Apiaka/Kayabi	1,095.73	0.81	0.42	0.10	4.01	0.09	0.11	0.00	0.37	0.00	0.00	0.00	0.00	0.95
	Vale do Amanhecer PA	147.18	3.87	1.84	0.58	0.56	0.96	0.91	0.08	0.26	0.22	0.00	0.31	0.18	0.29
	Aripuana IL	7,510.51	0.37	0.80	0.55	0.07	0.17	0.52	0.14	0.16	0.16	0.06	0.31	0.28	1.04
Amazon Backyards	5 km	4,313.29	37.97	17.31	18.21	37.34	26.80	48.01	36.91	44.36	47.65	39.54	29.48	34.82	27.03
	10 km	8,249.03	73.53	33.25	30.23	60.00	56.54	90.75	67.60	84.66	91.92	77.22	70.38	74.26	58.70
	15 km	11,816.18	101.56	50.59	41.96	89.41	85.96	120.29	92.78	122.55	133.44	122.81	106.71	116.61	81.80
	20 km	15,140.00	133.16	66.53	54.77	109.24	125.95	153.19	121.77	159.74	179.07	171.67	139.44	164.22	106.34
	25 km	18,399.36	149.25	77.48	61.99	125.48	145.41	172.62	138.63	189.04	229.01	216.36	170.68	208.01	142.78
	30 km	21,614.30	165.38	83.83	66.27	134.65	159.74	190.05	147.32	212.54	258.93	251.43	201.69	243.06	175.28
Productive Sociobiodiversity in the Xingu	5 km	7,026.77	23.12	5.04	7.74	6.08	12.41	6.14	13.40	10.69	13.78	12.60	29.81	11.59	10.75
	10 km	21,316.28	90.55	20.92	26.47	26.51	36.92	22.60	29.46	25.00	37.56	40.74	92.55	37.98	24.85
	15 km	38,254.09	167.26	33.33	42.17	42.35	55.95	36.37	44.30	47.22	55.50	68.40	129.59	80.72	48.91
	20 km	55,841.22	276.67	55.71	50.60	59.76	70.52	51.94	69.82	69.35	67.46	84.86	145.52	112.58	71.39
	25 km	73,843.53	359.75	81.46	57.96	80.02	86.78	68.26	90.80	87.71	93.22	104.79	168.06	151.21	110.27
	30 km	91,986.23	442.41	98.72	67.64	93.95	109.82	81.19	106.45	123.84	108.13	118.41	191.72	181.81	154.25

(continued)

**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable**  
**Productive Activity (APS) Project Areas of the Amazon Fund**

(continuation)

Project	Analysis Area	Area (km <sup>2</sup> )	Deforestation (km <sup>2</sup> )												
			2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Sustainable Fishing</b>	5 km	2,516.05	7.99	5.08	8.12	5.78	7.96	5.55	12.21	1.61	7.45	6.01	12.86	18.00	15.34
	10 km	5,095.87	12.17	6.97	10.91	9.86	11.73	8.31	19.23	2.02	12.66	10.12	24.54	28.75	28.94
	15 km	7,752.98	15.87	8.91	13.11	12.14	15.32	9.33	21.60	2.68	16.66	12.82	30.08	34.17	33.48
	20 km	10,534.09	19.84	12.10	16.79	14.23	18.35	11.82	24.92	4.28	20.99	15.93	39.70	44.53	44.24
	25 km	13,451.57	25.03	17.25	22.93	20.28	24.46	17.92	32.27	6.38	24.76	19.23	47.80	55.09	54.47
	30 km	16,511.18	29.24	20.55	25.22	23.69	26.70	19.21	36.54	7.58	27.10	21.76	52.31	63.65	62.58
<b>APL Babassu</b>	5 km	475.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10 km	1,096.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	15 km	1,816.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20 km	2,681.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25 km	3,698.39	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30 km	4,866.80	0.07	0.01	0.03	0.02	0.06	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00

ANNEX II: AREAS OF ACTIVITY OF THE PROJECTS

Figure 3: Areas of activity of the Sentinels of the Forest project and accumulated deforestation between 2008 and 2020 (in red)

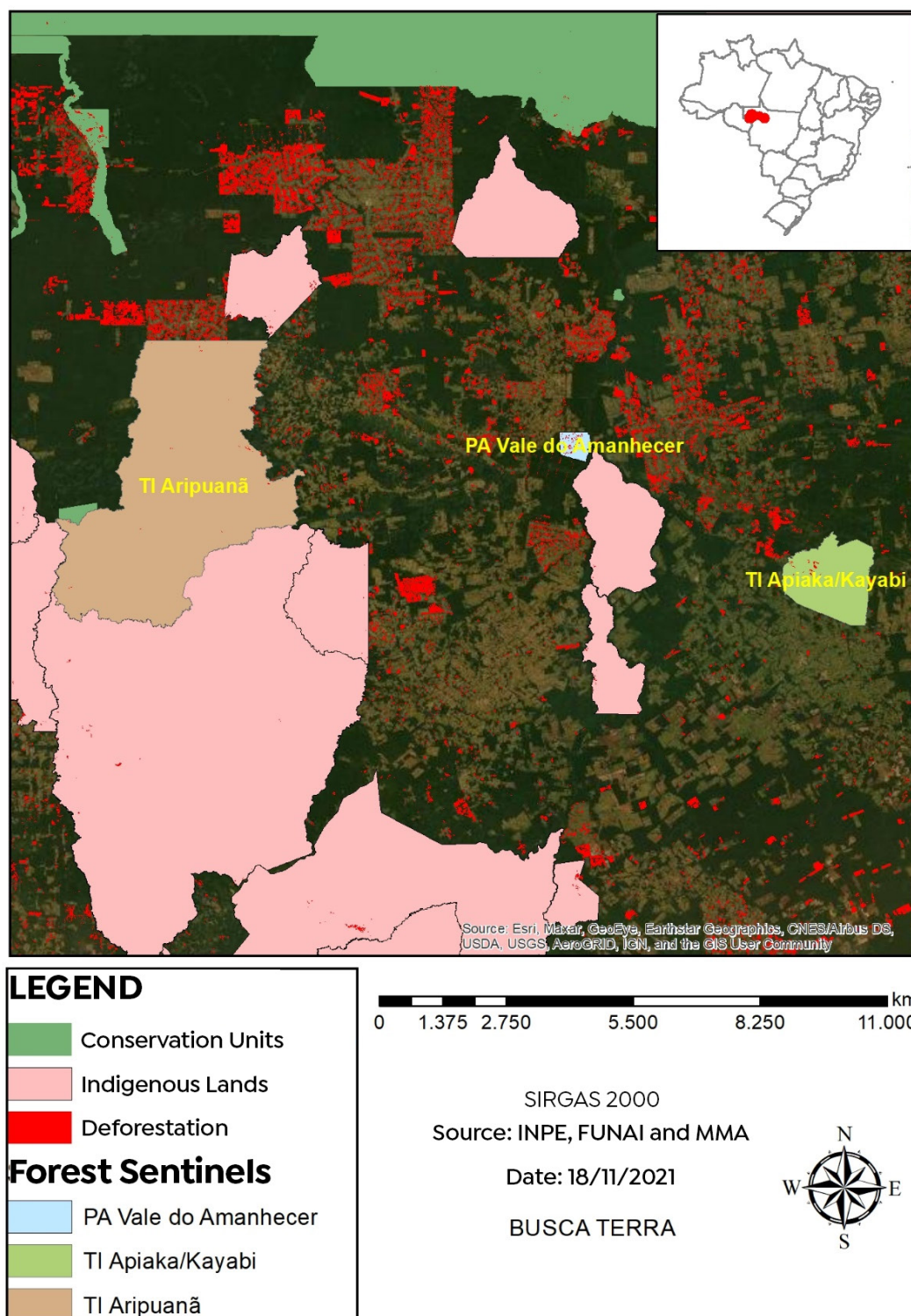
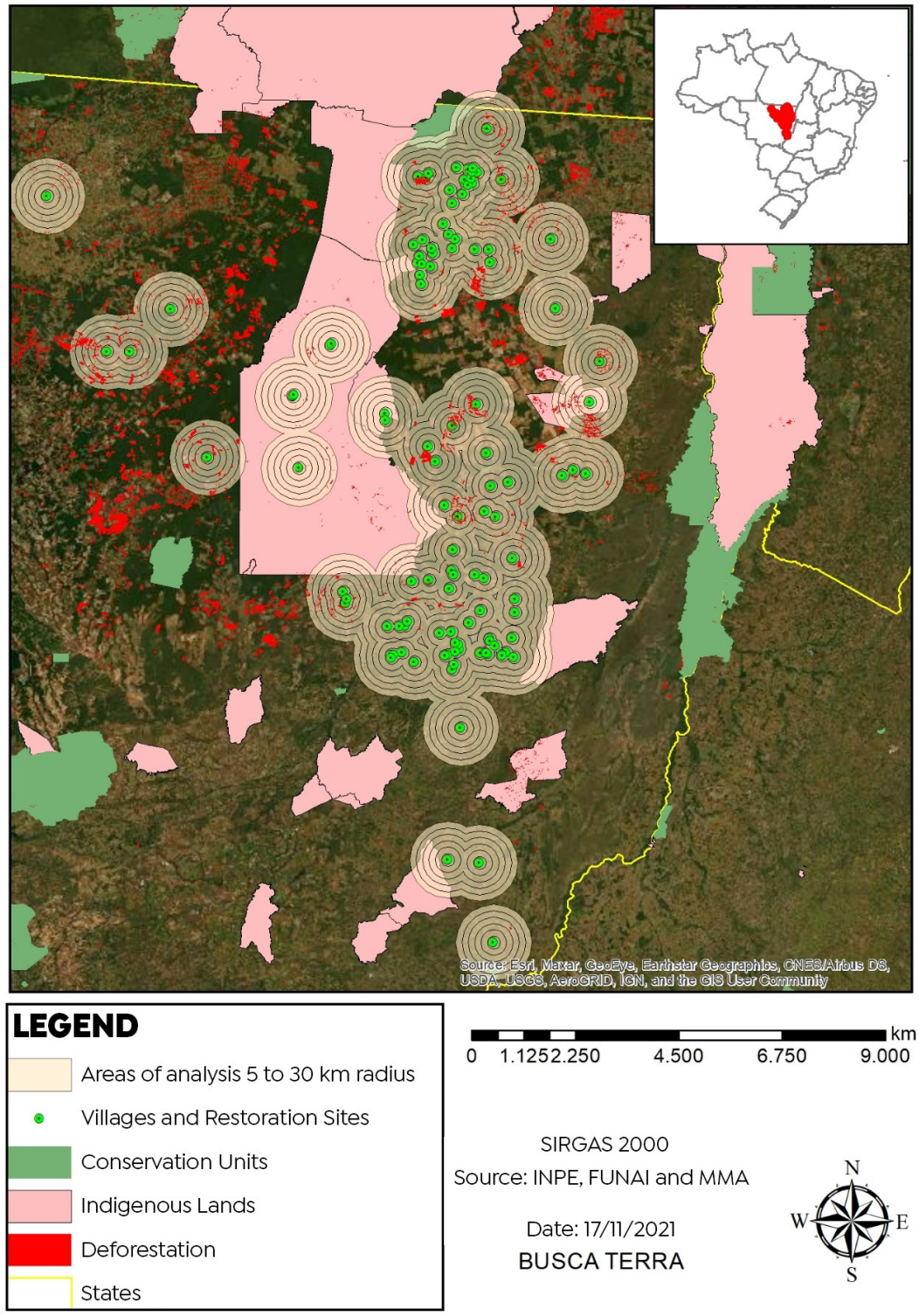
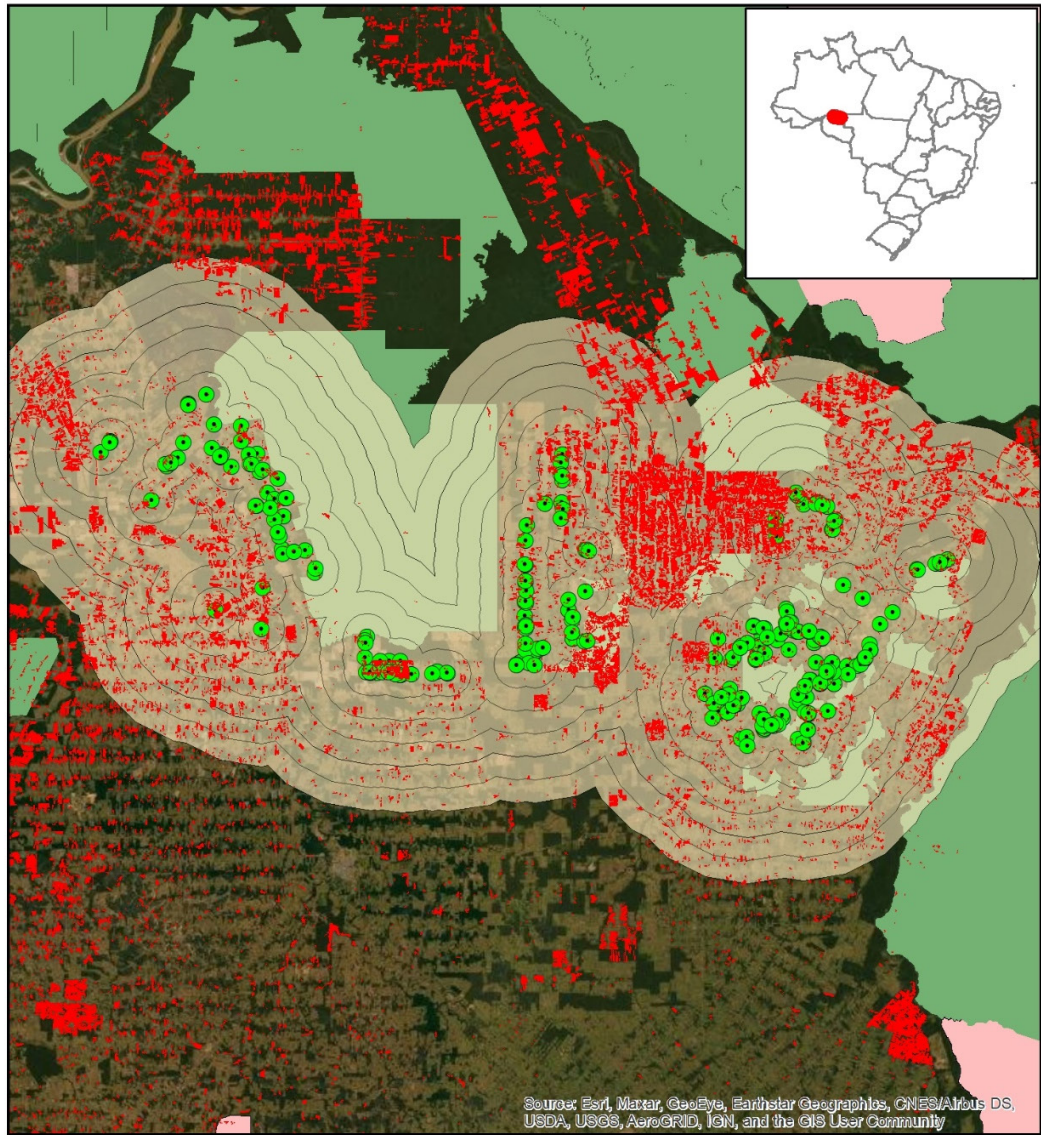


Figure 4: Areas of activity of the Productive Socio-biodiversity in the Xingu project and accumulated deforestation between 2008 and 2020 (in red)



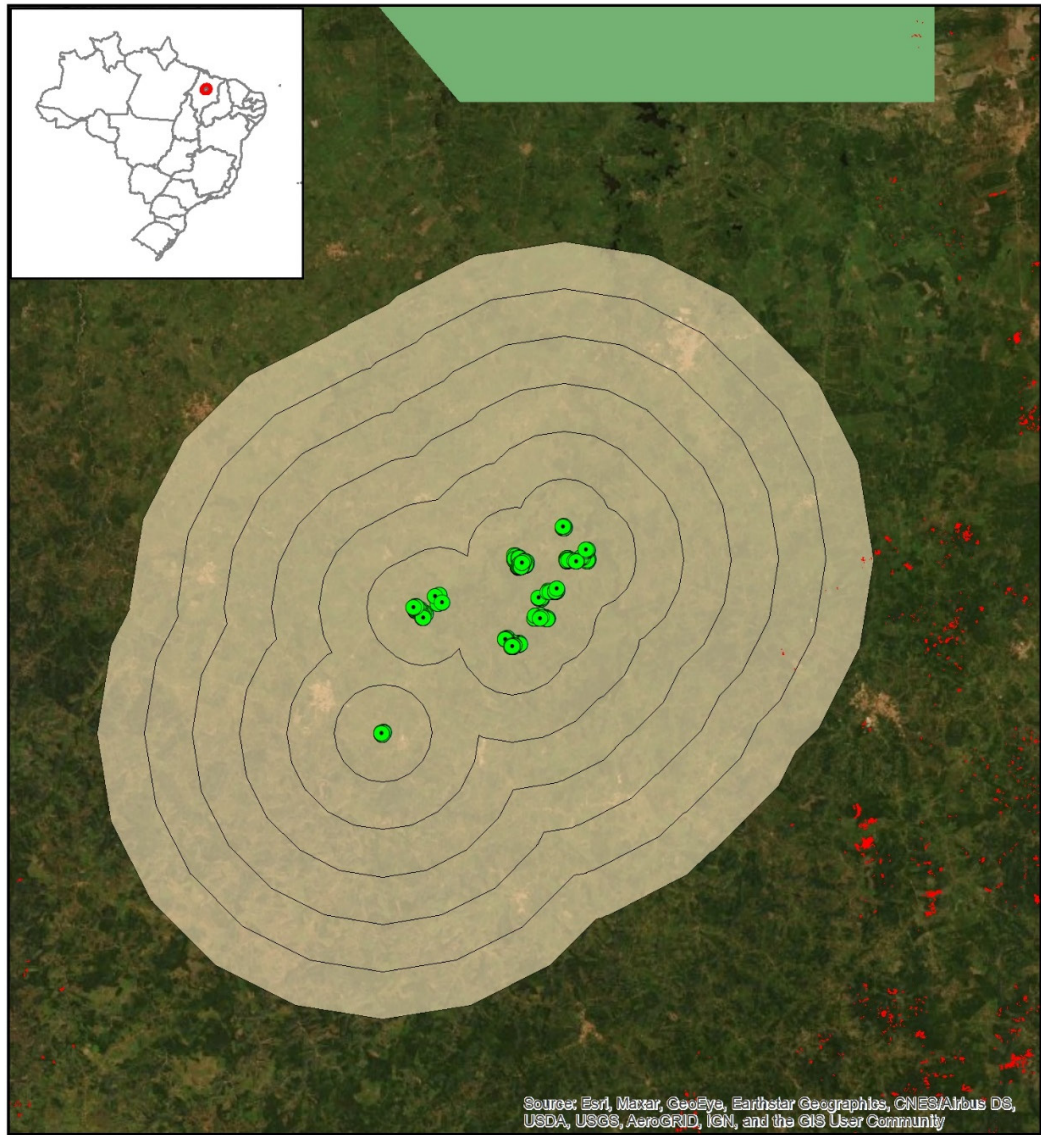
**ANNEX II:**  
**Analysis of the Evolution of Deforestation in Sustainable Productive Activities (APS) Project Areas of the Amazon Fund**

Figure 5: Areas of activity of the Amazon Backyards project and accumulated deforestation between 2008 and 2020 (in red)



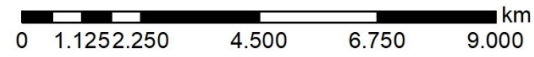
<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">●</span> Areas of activity</li> <li><span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas of analysis 5 to 30 km radius</li> <li><span style="background-color: green; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Conservation Units</li> <li><span style="background-color: pink; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Indigenous Lands</li> <li><span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Deforestation</li> </ul>	<p>0 1.250 2.500 5.000 7.500 10.000 km</p> <p>SIRGAS 2000          Source: INPE, FUNAI and MMA</p> <p>Date: 17/11/2021          BUSCA TERRA</p>	
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------	--

Figure 6: Areas of activity of the APL Babassu project and accumulated deforestation between 2008 and 2020 (in red)



**Legend**

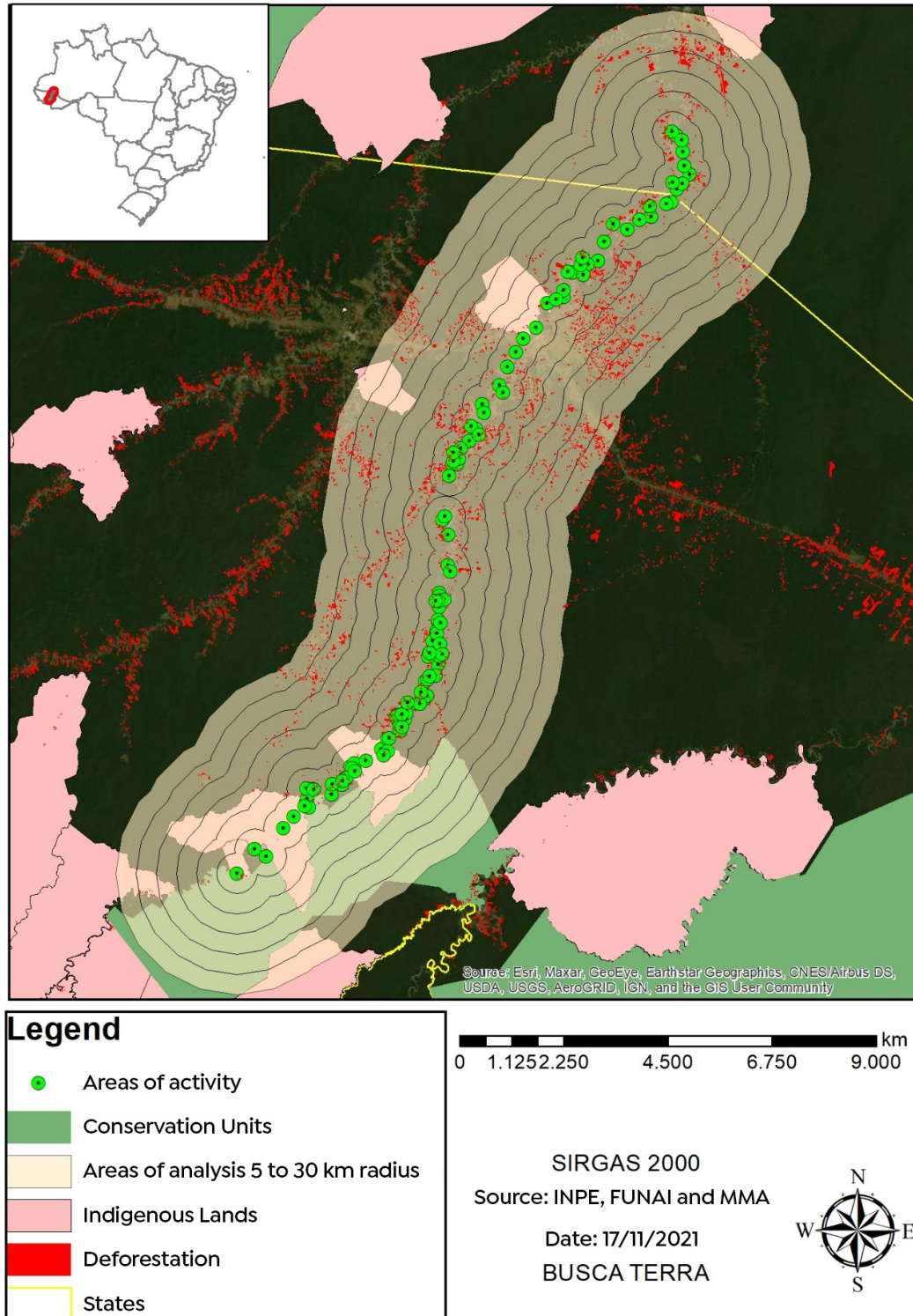
- Areas of activity
- Conservation Units
- Areas of analysis 5 to 30 km radius
- Indigenous Lands
- Deforestation



SIRGAS 2000  
 Source: INPE, FUNAI and MMA  
 Date: 17/11/2021  
 BUSCA TERRA



Figure 7: Areas of activity of the Sustainable Fishing project and accumulated deforestation between 2008 and 2020 (in red)



Effectiveness Evaluation of  
Sustainable Productive Activities (APS) Projects  
within the scope of the Amazon Fund / BNDES

---

## ANNEX III

---

# Analysis of the Evolution of Land Use, Degradation, and Vegetation Recovery of the *Amazon Backyards* Project<sup>101</sup>

---

101 Analysis prepared by the Center for Intelligence in Environmental Management and Technology (CIGTA).

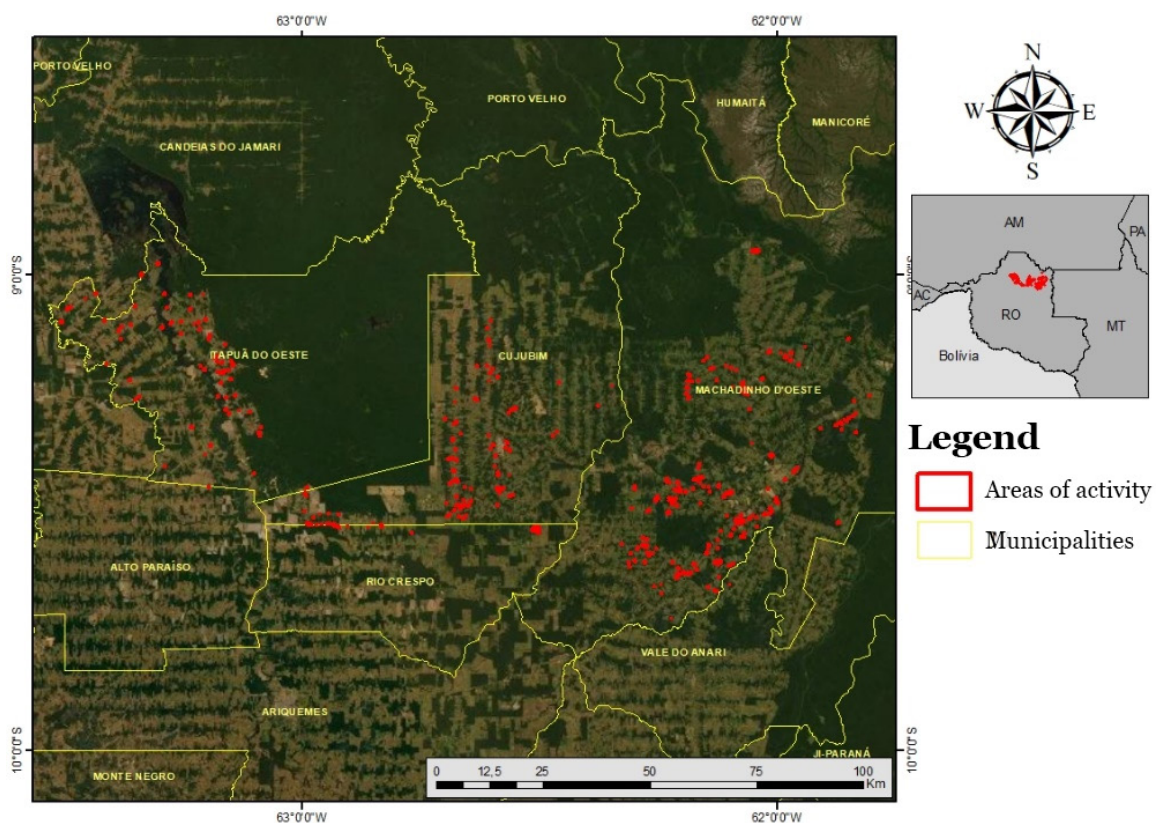
## 1. Objective

This work aims to conduct a comparative analysis of the evolution of land use and vegetation recovery in areas of the *Amazon Backyards* project of Rioterapia. This analysis will take place in the context of evaluating Sustainable Productive Activity (APS) projects of the Amazon Fund/BNDES.

## 2. Methodology

A polygon covering all areas of the Amazon Backyards project was used (Figure 1). The area of activity covers municipalities in the north of the state of Rondônia.

Figure 1: Analysis location area



## ANNEX III:

### Analysis of Land Use Evolution, Degradation, and Restoration of Vegetation in the *Amazon Backyards* Project

Planet images were used for this analysis<sup>102</sup> for the years 2015, 2019, and 2021, obtained in the months of December 2015 and 2019 and October 2021, in false color composition, using the infrared band for the analyses mentioned above. This six-year period consists of the implementation of the actions of the *Amazon Backyards* project in 2015, its completion in 2018, and a three-year post-project period.

A comparison of the evolution of vegetation was carried out for the years 2015, 2019, and 2021. For this, the polygons referring to the areas of operation of the project were analyzed and land use was classified into three main classes: exposed soil and other uses, moderate regeneration, and dense vegetation.

Remote sensing software and Geographic Information Systems (GIS), high-resolution satellite images, and time series from Google Earth Pro were used to verify and vectorize the classification of land use, to help provide greater detail of the classes. With the classifications finalized, the areas per polygon and total area in hectares were calculated for each class, and the necessary analyses were carried out.

## 3. Results

### 3.1. Exposed soil and other uses

The "exposed soil and other uses" class covers, in addition to areas of exposed soil, areas of various uses, such as: plantations, pastures, undergrowth or sparse vegetation, etc. In this context, the following figures were found for 2015, 2019, and 2021, respectively: 304.57, 375.50, and 283.70 hectares. The exposed soil is characterized by being reflected in all bands of the false color composition, thus presenting a whitish appearance. The other uses, due to the presence of vegetation, reflect more in the infrared range (to which, in the false-color composition, the color red is attributed), in a very similar way to areas with vegetation in primary stages of regeneration. To help differentiate between these classes, high-resolution Google images were used. (Figure 2)

---

102 Planet images are obtained by the constellation of Dove satellites that have the same type of sensor, are acquired by more than 130 satellites, with four spectral bands and radiometric resolution of 12 bits, are orthorectified, and have three meters of spatial resolution, which allows obtaining current images of large areas with a high standard of quality and planimetric accuracy. They are acquired in the visible bands: blue, green and red, and also in the near-infrared (NIR), enabling environmental monitoring and mapping of land use and cover.

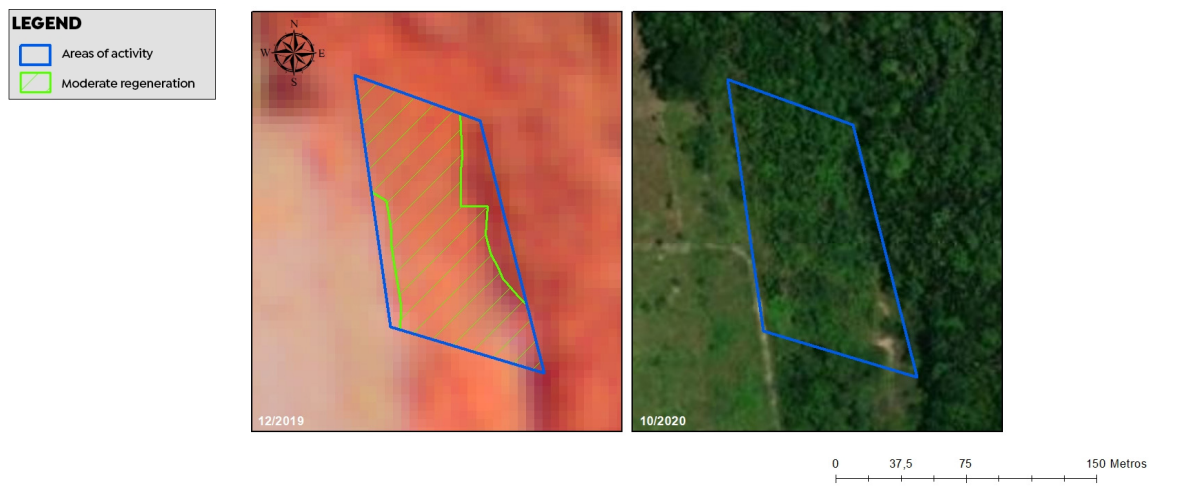
Figure 2: Classification for ex-  
 posed soil and other uses



### 3.2. Moderate regeneration

In the "moderate regeneration" class, we considered areas with vegetation in a state of regeneration, secondary forests or forest formations that have already suffered some type of interference but have not yet fully regenerated. For 2015, 2019, and 2021, respectively, the following figures were observed: 171.26, 125.66, and 198.64 hectares. The reddish tone and roughness are not as evident as in primary vegetation or an advanced state of regeneration, due to less vigorous canopies and the possible occurrence of spacing between plants. (Figure 3)

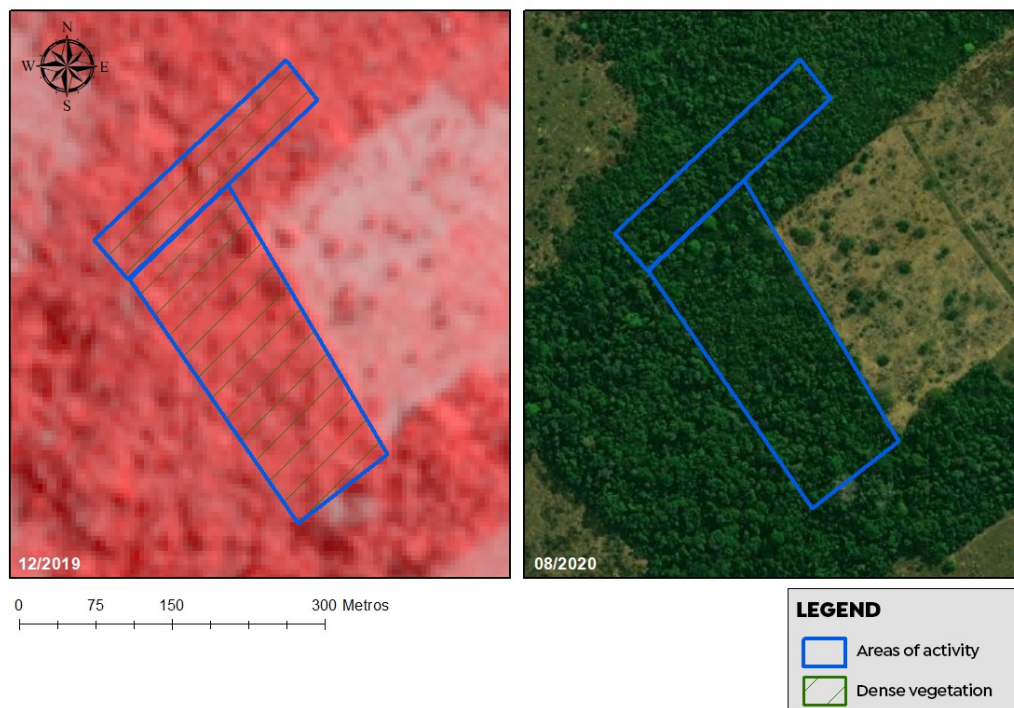
Figure 3: Classification for  
 Moderate Regeneration



### 3.3. Dense vegetation

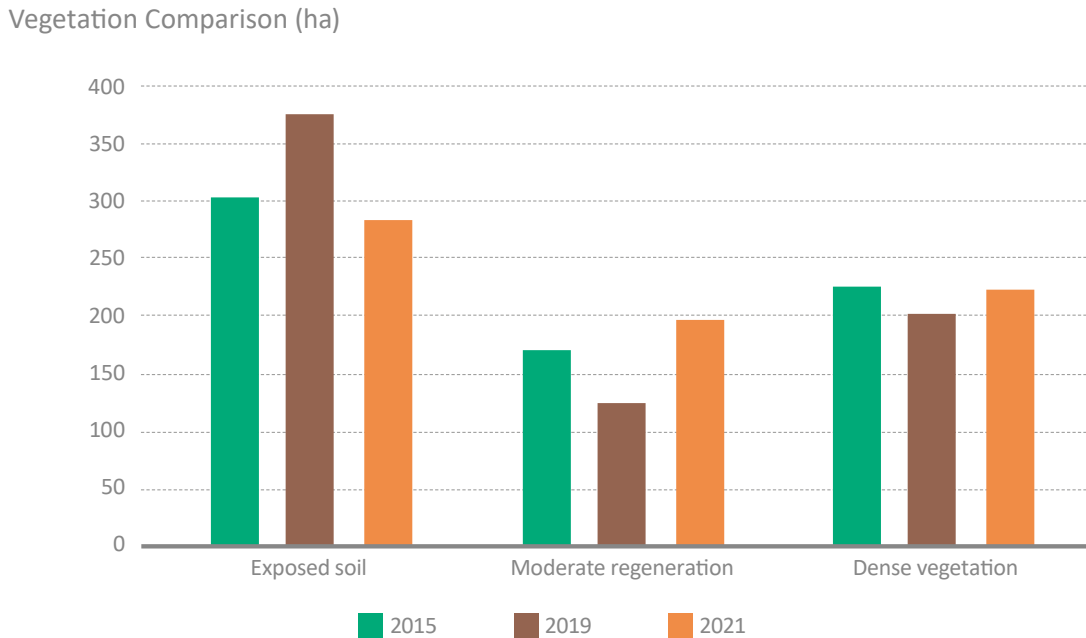
The "dense vegetation" class is characterized by having a more intense red color in the false-color composition and a rough appearance, attributed to the high plant density and high infrared reflectance for forests. Thus, for 2015, 2019, and 2021, respectively, the following values were found: 227.67, 201.52, and 223.16 hectares. (Figure 4)

Figure 4: Classification for Dense Vegetation



As shown in Graph 1, a drop in the volume of areas with exposed soil can be observed after the end of the project. On the other hand, moderate regeneration and dense vegetation have advanced where, together, they total 421.81 hectares in the areas supported by the *Amazon Backyards* project. The properties with the greatest gains in regeneration in the period were those of Jucelino da Silva dos Santos, Fernando Jorge Cordeiro (AFS II), and Fernando Jorge Cordeiro (AFS I), with the corresponding gains: 4.44, 3.12, and 2.06 hectares. The properties with the highest losses of vegetation were Dolsimeire Palavicine, Airton Leite da Silva, and Kezia Ferreira da Costa, with respective losses: 3.92, 1.69, and 1.49 hectares.

Graph 1: Comparison of vegetation in hectares between the years 2015, 2019 and 2021



#### 4. Conclusion

Analyzes were carried out for 526 polygons in the project's area of operation, corresponding to 707.35 hectares. This is equivalent to the 700 hectares reported as a result obtained from the project on the Amazon Fund page<sup>103</sup>.

Based on the evolution of land use over the years observed in Graph 1, it is possible to conclude that, despite the small variation between the values of dense vegetation, vegetation was maintained in the period from 2015 to 2021, with a 10.32% increase of regeneration and a 12.97% decrease of exposed soil areas.

The area of activity of the *Amazon Backyards* project encompasses municipalities with high deforestation rates, which, between 2015 and 2020, had an average increase of 5.17% in deforestation, equivalent to a total deforested area of 97,340 hectares, according to data from PRODES.

In this scenario, the maintenance of vegetation throughout the years of the project and, especially after the end of the project, is the main benefit and positive result of the activities of the *Amazon Backyards* project.

103 For additional information: [www.fundoamazonia.gov.br/pt/projeto/Quintais-Amazonicos](http://www.fundoamazonia.gov.br/pt/projeto/Quintais-Amazonicos)

Effectiveness Evaluation of  
Sustainable Productive Activities (APS) Projects  
within the scope of the Amazon Fund / BNDES

---

# ANNEX IV

---

# Evaluation Criteria

---

## ANNEX IV: Evaluation Criteria

The effectiveness evaluation of sustainable productive activities projects followed the guidelines and criteria specified in the Conceptual Framework for Evaluating the Effectiveness of Projects Supported by the Amazon Fund and in the Addendum to the Conceptual Framework for Thematic Evaluations based on the Organization for Economic Cooperation and Development (OECD), the Cross-Cutting Criteria for Poverty Reduction and Gender Equity and the REDD+ Safeguards.

Each criterion adopts a basic structure of guiding questions for the evaluation of individual projects and, also, complementary questions defined in the Addendum to the Conceptual Framework for the evaluation of aggregated impacts, which are presented in an integrated manner by criterion in the table below.

### 1. OECD Criteria

Criteria	Definition and Guiding Questions
<b>Relevance</b>	Evaluates the coherence of the project's objectives according to the demands of the beneficiaries and the political priorities of the target groups, the recipient, and the donors.
<b>Effectiveness of aggregated impacts</b> (Addendum)	Did the projects contribute jointly and aggregately to the objectives of the Amazon Fund?
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• To what extent are the project's objectives still valid at the time of its completion?</li> <li>• Are the activities and immediate results of the project consistent with the achievement of the objectives defined for the project?</li> <li>• Are the project's activities and immediate results consistent with the expected effects and impacts?</li> </ul>
<b>Effectiveness</b>	Evaluates the extent to which the project's direct objectives were achieved or are expected to be achieved and what factors were important.
<b>Effectiveness of aggregated impacts</b> (Addendum)	What aggregated direct effects were achieved?
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• Have the direct (specific) objectives of the project been, or will be, achieved?</li> <li>• What are the main factors that influence the achievement (or lack thereof) of the direct (specific) objectives?</li> </ul>

(continued)

## ANNEX IV: Evaluation Criteria

(continuation)

Criteria	Definition and Guiding Questions
<b>Efficiency</b>	Measures outputs and services in relation to the resources invested in the project. It indicates whether the financial fund was invested in the most economical way and whether the results were satisfactorily achieved. To evaluate whether the most efficient process has been adopted, it is necessary to compare alternative approaches to achieve the same results.
<b>Effectiveness of aggregated impacts</b> (Addendum)	Does the cost-benefit of project activities maintain coherence across the activities?
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• What is the cost-benefit ratio of the activities carried out?</li> <li>• Are the means applied in a reasonable ratio to the results obtained?</li> <li>• Were the objectives achieved within the established deadlines?</li> <li>• Are there alternative ways to obtain the same results with less cost/means?</li> </ul>
<b>Impact</b>	Evaluates the positive and negative changes produced by the project, directly or indirectly, intentionally or unintentionally. This involves the main impacts and effects resulting from the project on local indicators of social, economic, environmental development, and others. The evaluation should be concerned with both intended and unintended results and should also include analysis of the positive and negative impact of external factors, e.g. cultural, economic, and environmental changes.
<b>Effectiveness of aggregated impacts</b> (Addendum)	What were the main aggregated effects of the projects? Were there aggregated impacts? Have they shown scalability in the territory?
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• What were the main changes generated as a result of the project?</li> <li>• What are the main effects achieved that contributed to the achievement of the objective?</li> <li>• What actions or events external to the project contributed to the achievement of the observed changes?</li> <li>• Did the project make any difference to the beneficiaries?</li> <li>• Does the project have scale in the region or influence other initiatives?</li> </ul>

(continued)

## ANNEX IV: Evaluation Criteria

(continuation)

Criteria	Definition and Guiding Questions
<b>Sustainability</b>	Evaluates whether the benefits of the project continue to occur after its completion, with an emphasis on social, economic and environmental aspects.
<b>Effectiveness of aggregated impacts</b> (Addendum)	<ul style="list-style-type: none"> <li>• Are the aggregated effects achieved by the projects lasting? Has sustainability been achieved?</li> <li>• What are the effects of the Covid-19 pandemic on the organization and results of the project, especially income generation through sustainable production activities?</li> </ul>
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• To what extent do the project's benefits last after the Amazon Fund's funding ends?</li> <li>• What were the main factors that influenced the achievement, or lack thereof, of the project's sustainability?</li> <li>• What risks must be monitored to ensure the sustainability achieved?</li> </ul>

## 2. Cross-Cutting Criteria

Criteria	Definition and Guiding Questions
<b>Poverty Reduction</b>	
<b>Effectiveness of aggregated impacts</b> (Addendum)	In what way did the projects, in aggregated form, influence poverty reduction, social inclusion, and improvement in the living conditions of the beneficiaries in their areas of activity?
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• To what extent have projects effectively contributed to economic alternatives that value standing forests and the sustainable use of natural resources?</li> <li>• To what extent have the projects positively influenced poverty reduction, social inclusion, and improved living conditions for beneficiaries in their area of activity?</li> <li>• Have the projects been able to promote and increase production in the value chains of timber and non-timber forest products originating from sustainable management?</li> </ul>
<b>Gender Equity</b>	
<b>Effectiveness of aggregated impacts</b> (Addendum)	Did the projects in aggregated form lead to some results, and impacts on gender issues? How and what aggregated results can be observed?

(continued)

## ANNEX IV: Evaluation Criteria

(continuation)

Criteria	Definition and Guiding Questions
<b>Effectiveness per project</b> (Conceptual framework)	<ul style="list-style-type: none"> <li>• Have the projects been able to integrate gender issues into their strategies and interventions, or have they addressed the issue in isolation? How?</li> <li>• Was there gender separation in data collection for the purpose of project planning and monitoring?</li> <li>• How did the projects contribute to gender equity?</li> </ul>

### 3. Cancun Safeguards

Listed below are the seven Cancun Safeguards and the corresponding guiding questions.

<b>1.</b> Actions that are complementary or consistent with the objectives of national forest programs and other relevant international conventions and agreements.	<ul style="list-style-type: none"> <li>• Have the projects shown to align with the PPCDAm and state plans to prevent and control deforestation?</li> <li>• What other federal public policies or international agreements did the projects show alignment with? In what aspects?</li> <li>• Have the projects contributed, or may they contribute directly or indirectly to reducing emissions from deforestation or forest degradation? In what way?</li> </ul>
<b>2.</b> 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 did the projects promote coordination between different players (public, private, third sector, or local communities)? Were shared governance instances used? Which ones?</li> <li>• To what extent have the projects contributed to strengthening public instruments and forest and territorial management processes?</li> </ul>
<b>3.</b> 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 has adopted the UN Declaration on the Rights of Indigenous Peoples.	<ul style="list-style-type: none"> <li>• To what extent have the projects influenced the constitutional rights associated with formal land tenure and destination in their area of operation?</li> <li>• To what extent have projects influenced the sustainable use of natural resources in their area of operation?</li> <li>• If the projects directly benefited indigenous peoples, traditional communities, or family farmers, were their sociocultural systems and traditional knowledge considered and respected throughout the projects?</li> <li>• Are there effects that interfere with these groups' traditional way of life? What effects (on social, economic organization, or the use of available spaces and resources)? How do they interfere (positively, negatively, or both)?</li> </ul>

(continued)

## ANNEX IV: Evaluation Criteria

(continuation)

<p><b>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.</b></p>	<ul style="list-style-type: none"> <li>• How did the projects guarantee prior consent and the local/traditional way of choosing representatives of their beneficiaries (especially indigenous peoples and traditional communities)?</li> <li>• What participatory planning and management tools did the projects apply during planning and decision-making?</li> <li>• In the case of projects with economic purposes, were any benefits arising from the projects accessed in a fair, transparent, and equitable manner by the beneficiaries, avoiding the concentration of resources?</li> <li>• To what extent did the projects provide the general public and their beneficiaries with free access and easy understanding of information related to project actions?</li> <li>• Have the projects been able to set up a good results and impact monitoring system? Have the projects systematically monitored and disseminated the results achieved and their effects?</li> </ul>
<p><b>5. Actions consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of Decision 1/CP 16<sup>104</sup> 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 enhance other social and environmental benefits.</b></p>	<ul style="list-style-type: none"> <li>• How did the projects contribute to the expansion or consolidation of protected areas?</li> <li>• How did they contribute to the recovery of deforested or degraded areas?</li> <li>• In the case of restoration and reforestation activities in areas, did the methodologies employed prioritize native species?</li> <li>• To what extent have projects contributed to establishing recovery models with an emphasis on economic use?</li> </ul>
<p><b>6. Actions to address the risks of reversals in REDD+ results.</b></p>	<ul style="list-style-type: none"> <li>• What factors constitute risks to the durability of REDD+ results? How did the projects address them?</li> </ul>
<p><b>7. Actions to reduce the displacement of carbon emissions to other areas.</b></p>	<ul style="list-style-type: none"> <li>• Has there been a displacement of the emissions avoided by the actions of the projects to other areas?</li> </ul>

<sup>104</sup> Decision 1/CP 16: Reduction of emissions from deforestation; reduction of emissions from forest degradation; conservation of forest carbon stocks; sustainable forest management and increased carbon stocks.

Effectiveness Evaluation of  
Sustainable Productive Activities (APS)  
Projects in the Scope of the Amazon Fund/BNDES

---

# ANNEX V

---

## List of Interviews Conducted

---

## ANNEX V: List of Interviews Conducted

	Name	Organization	Occupation
1.	Adriano Ramos	Rioterra	Technical expert
2.	Agenor Nepomuceno	ASSEMA	Technical expert
3.	Alexandre Queiroz	Rioterra	Education coordinator
4.	Alexis Bastos	Rioterra	General coordinator
5.	Amarildo Nogueira		Farmer, <i>Amazon Backyards</i> project
6.	Ana Paula Donato	BNDES	Amazon Fund technical expert
7.	André Ferro	BNDES	Amazon Fund technical expert
8.	Antonio Oviedo		Initial coordinator of the <i>Sustainable Fishing</i> project
9.	Charles Guimaraes	Z4 Fishing Colony	President, <i>Sustainable Fishing</i> project
10.	Claudia Araújo	Xingu Seeds Network Association	Coordinator
11.	Claudia Nessi	BNDES	Amazon Fund technical expert
12.	Daniela de Paula		Technical adviser for the <i>Sociobiodiversity in the Xingu</i> project
13.	Dannyel Sá	ISA	Technical adviser
14.	Dejesus Ramos	Rioterra	Head of the plant nursery at the time of the <i>Amazon Backyards</i> project
15.	Edilson Crixí	Apiaká Cooperative	Apiaká indigenous leader, <i>Forest Sentinels</i> project
16.	Edivilson Gomes	Seaprof	Civil servant, <i>Sustainable Fishing</i> project
17.	Eduardo Malta Campos Filho	ISA	Technical adviser
18.	Eliane Righ	Xingu Seeds Network Association	Seed gatherer, <i>Productive Sociobiodiversity in the Xingu</i> project
19.	Fabiana Gomes	Rioterra	Geotechnology Coordinator
20.	Fabiola Silva	ISA	Technical expert
21.	Fernanda Basso Alves	Social Development Institute	Coordinator of the <i>Sustainable Fishing</i> project
22.	Francisco Germano	ASSEMA	General coordinator
23.	Jefferson Straatmann	ISA	Technical coordinator of <i>Value Chains</i>
24.	João de Deus		Farmer, <i>APL Babassu</i> project

## ANNEX V: List of Interviews Conducted

	Name	Organization	Occupation
25.	José Ramos Leitão	Avesol	Farmer, <i>APL Babassu</i> project
26.	Leonardo Lopes	Tipoia Consultoria	Coordinator of the <i>Sustainable Fishing</i> project
27.	Leopoldina Neves	Aefalpars	Technical expert
28.	Liebe Lima	OPAN	Adviser
29.	Luis Ramos	EFAAF	Teacher
30.	Luiz Gusmão	ASSEMA	Technical expert
31.	Luiz Neto	Avesol	Technical expert
32.	Luzirene Lustosa	COOPAVAM	President
33.	Marcelo Manhuari	Munduruku Institute	Leader of the Munduruku Indigenous People, <i>Forest Sentinels</i> project
34.	Maria das Dores Vieira	AMTR	Coordinator
35.	Maria Júlia	Aefalpars	Student
36.	Marlene Rodrigues		Farmer, <i>APL Babassu</i> project
37.	Milene Alves	Xingu Seeds Network Association	Seed gatherer
38.	Moacyr Silva	WWF	Coordinator of the <i>Sustainable Fishing</i> project
39.	Naldo Lima	Amoreri	Technical adviser
40.	Nicolau Morimã	Funai	CTL civil servant
41.	Pray Ikpeng	Moygu Indigenous Association Ikpeng Community	Xingu Seeds Network
42.	Patricia Gomes	Imaflora	Executive Secretary
43.	Paulo Cesar Nunes	Aderjur	Coordinator
44.	Pedro Castro	Amora	Canteen worker
45.	Pedro Nascimento Gadelha	Pirarucu Management Group	Fisherman, <i>Sustainable Fishing</i> project
46.	Raimunda Rodrigues	Amora	Small-plant manager
47.	Raimundo Ermino	ASSEMA	General coordinator at the time of the <i>APL Babassu</i> project
48.	Raimundo Martins		Farmer, <i>Amazon Backyards</i> project

## ANNEX V: List of Interviews Conducted

	Name	Organization	Occupation
49.	Raimundo Nonato Souza	Pirarucu Management Group	Fisherman, <i>Sustainable Fishing</i> project
50.	Roberto	Acemep	President of the association
51.	Roberto Raspini		Agricultural Technical expert, <i>Forest Sentinels</i> project
52.	Rodrigo Junqueira	ISA	Executive Secretary
53.	Roque Cosme Tome		Farmer, <i>APL Babassu</i> project
54.	Silvianete Matos	ASSEMA	General secretary
55.	Tadeus	Acemep	Monitor
56.	Uéilton Pinheiro	Rioterra	Technical expert
57.	Vanderval Spadetti	Acemep	Teacher
58.	Vania Costa Aguiar	ANSA	Coordinator
59.	Vicente	Acemep	Monitor
60.	Winti Suya	Kisedje Indigenous Association	Kisedje leader

Effectiveness Evaluation of  
Sustainable Productive Activities (APS) Projects  
within the scope of the Amazon Fund / BNDES

---

# ANNEX VI

---

## Terms of Reference (ToR)

---

## ANNEX VI: Terms of Reference (ToR)

Project	Cooperation with the Amazon Fund/BNDES
PN	15.2132.7-002.00
Output activity	3 + 3.5
Technical expert in charge	Ester Gomila
Objective:	Carry out an evaluation of the thematic effectiveness of five concluded Sustainable Production projects supported by the Amazon Fund/BNDES.

# Effectiveness Evaluation of Sustainable Productive Activities (APS) Projects

## 1. Context

Within the scope of the cooperation project between Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Amazon Fund/BNDES, one of the actions supported by GIZ is the ex-post effectiveness evaluation of completed projects supported by the Fund, with the aim of making the results and lessons learned with these projects visible, promoting the institutional learning of the Fund itself and responding to a demand from donors and international cooperation actors for monitoring and evaluation actions through external and independent evaluation.

So far, eight effectiveness evaluations have been carried out, six of which are individual project evaluations, one is a thematic evaluation of five projects from component 4 on Science, Innovation and Economic Instruments, of the Logical Framework of the Amazon Fund/BNDES, and one is a mid-term evaluation of the effectiveness of the Amazon Fund. Their results are accessible to the public on the [Fund's website](#).

The projects that are the object of this Term of Reference (ToR) fall under Component 1, "Sustainable Production," and will be jointly evaluated on a thematic basis to ensure greater efficiency in the result, expand the understanding of the results achieved jointly by the projects and generate recommendations for supporting the theme of sustainable productive activities, in addition to supporting individual projects.

Sustainable productive activities have gained more relevance with the growing volume and value of their products on the market (especially for the bioeconomy) and increased importance to the traditional communities that produce them, but they still face numerous barriers to their integration into the formal economy.

Among these barriers are the great distances between producers and the main consumer markets, high transportation costs, poor storage infrastructure, lack of understanding of regulations and laws that govern production and marketing in within the sustainable productive activities, difficulty in accessing initial capital and efficient

administrative management, lack of qualification of human resources and lack of access to technologies and information for the improvement of planting, handling, processing, storage, quality control, among others. Adding to these difficulties is the environmental pressure of deforestation that affects the region and makes it even more important to develop activities that keep the forest standing.

The five projects to be evaluated are:

- [\*Forest Sentinels \(Cooperative of Farmers of Vale do Amanhecer - COOPAVAM\)\*](#);
- [\*Productive Sociobiodiversity in the Xingu \(Socioenvironmental Institute - ISA\)\*](#);
- [\*Amazon Backyards \(Center for Studies on Culture and the Environment of the Amazon - Rioterra\)\*](#);
- [\*Sustainable Fishing \(Worldwide Fund for Nature - WWF Brazil\)\*](#);
- [\*APL Babassu \(Association in Settlement Areas in the state of Maranhão, ASSEMA\)\*](#).

The projects were implemented in municipalities and protected areas in the states of Acre, Maranhão, Mato Grosso, Pará, and Rondônia, included in the so-called arc of deforestation in the Amazon, mainly around the Cuiabá-Porto Velho highway, BR-174 and BR-364, where agricultural expansion towards the north, illegal logging, and mining are observed.

The projects were implemented in agrarian reform settlements, in indigenous lands (ILs), and in areas close to conservation units (UCs), to strengthen the environmental role played by protected areas and promote conservation, as a way of maintaining environmental services, preventing the degeneration of water resources and protecting the (socio)biodiversity of the Amazon by promoting sustainable economic alternatives that generate income for populations while keeping the forest standing and reducing the pressure of deforestation.

The economic alternatives include non-timber forest products from extractivism and Agroforestry Systems (AFS). The projects work mainly with strengthening the value chains for Brazil nuts, babassu, forest seeds and seedlings, rubber, pequi, and fruits, as well as the management of pirarucu and the planting of AFS together with registration in the Rural Environmental Registry (CAR).

## 2. Rationale

Carrying out the evaluation that is the object of this ToR requires hiring consultants specialized in sustainable production policies and in (socio)biodiversity chains and monitoring and evaluating socio-environmental programs and projects in the Legal Amazon region. In addition, this contract is justified due to the wide spectrum of multi-disciplinary topics and the scope and complexities of the analyses to be carried out in evaluating these projects.

## 3. Purpose of the evaluation

The main purpose of the projects' evaluation is to measure the results achieved, their effects and the sustainability of the changes generated by their implementation, in addition to evaluating the effectiveness of five completed projects of Component 1, "Sustainable Production," of the Logical Framework of the Amazon Fund, which the Fund supported.

All projects supported by the Amazon Fund follow an individualized logical framework in which results (outputs and services to be delivered), direct effects of the intervention (specific objectives, or outcomes), and indirect effects (general objectives, or impacts) to be achieved. This is the project intervention logic, also known as theory of change, as it represents a model of thinking that explains how the project is expected to lead to the desired change. The logical frameworks of the projects can be viewed in topic 3.2 or on the Amazon Fund website.

The specific objectives of this evaluation are to:

- Strengthen the accountability of the Amazon Fund to its donors regarding the type of project supported and its effects, especially considering the project's impacts after it is completed;
- Enable the Fund's own institutional learning, contributing to improving the quality of projects and prioritizing investments, providing inputs for decision-making, as well as providing lessons for the institution that is executing the respective project;
- Check the extent to which the projects are relevant, efficient, effective, sustainable, and generate impacts (OECD criteria);
- Verify compliance by projects supported by the Amazon Fund with the Cancun Safeguards agreed under the UNFCCC for actions towards Reducing Emissions from Deforestation and Forest Degradation (REDD+), as well as

the Cross-Cutting Criteria for Poverty Reduction and Gender Equity;

- Check the alignment of projects with the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm) and the state plans for prevention and control of deforestation and alignment with the REDD+ National Strategy (ENREDD+);
- Generate specific recommendations for bioeconomy product chains that could be strengthened;
- Analyze the strengths and weaknesses of the projects' interventions;
- Evaluate the effectiveness of the Amazon Fund's support on the theme of sustainable production
- Identify challenges and lessons learned, which can be disseminated nationally and internationally.

## 4. Service Specifications

### *4.1 Description of the projects*

#### **A) Project name: Forest Sentinelsa**

*Organization responsible for project management: Vale do Amanhecer Farmers' Cooperative (COOPAVAM)*

**Project period:** 2nd quarter of 2014 to 3rd quarter of 2018

**Amount of support from the Amazon Fund:** BRL 5,175,522.50

The project supported the Brazil nut chain, from harvesting to processing and marketing, increasing the income of extractive communities living in the northwest region of the state of Mato Grosso. Its results, in terms of employment and income generation, are unique, having covered the implementation of extractive activities in indigenous lands and an agrarian reform settlement, in addition to the expansion of Brazil nut processing capacity by community industrial units, certification, creation of its brand and commercialization of this production.

***B) Project name: Productive Sociobiodiversity in the Xingu***

*Organization responsible for project management: Socioenvironmental Institute (ISA)*

**Project period:** 2nd quarter of 2014 to 1st quarter of 2019

**Amount of support from the Amazon Fund:** BRL 8,023,856.00

The project supported the structuring and strengthening of sociobiodiversity value chains in the Xingu Basin, covering forest seeds and seedlings, rubber, Brazil nuts, pequi, and fruits, involving indigenous populations, extractivists, and family farmers. Within the scope of this project, the Xingu Seeds Network was consolidated in the states of Mato Grosso and Pará, and a pilot certification of origin was implemented, with the structuring of the Origens Brasil seal, which increased the possibilities of negotiation for the communities of the region. Partnerships were strengthened with several companies for the commercialization of copaiba oil, latex, Brazil nuts, babassu mesocarp, and handicrafts, covering production of perfumes, natural products, rubber, food, and handicraft companies.

***C) Project name: Amazon Backyards***

*Organization responsible for project management: Center for the Study of Amazon Culture and the Environment (Rioterra)*

**Project period:** 1st quarter of 2014 to 4th quarter of 2019

**Amount of support from the Amazon Fund:** BRL 8,837,852.29

The project supported family farmers and agrarian reform settlers in the state of Rondônia who live in the municipalities of Itapuã do Oeste, Cujubim, and Machadinho d'Oeste, with a view to the registration of rural properties in the CAR, crop planting, and research on AFS for the recovery of altered or degraded areas in legal reserves and Permanent Preservation Areas (APPs). The project, in addition to contributing to the environmental regularization of small rural properties of family farmers, generating income through the recovery of deforested areas using AFS, modernized and structured the laboratory for soil analysis at the Federal University of Rondônia, carried out activities to mobilize community associations (contributing to strengthening ties of acceptance and credibility between the parties) and introduced payment for environmental services to recognize the implementation and good maintenance practices carried out by the beneficiaries in areas recovered by the project.

***D) Project name: Sustainable Fishing***

*Organization responsible for project management: World Wildlife Fund (WWF) Brazil*

**Project period:** 2nd quarter of 2014 to 4th quarter of 2017

**Amount of support from the Amazon Fund:** BRL 3,205,943.00

The project promoted the adoption of management measures combined with the signing of fishing agreements to reduce the degradation of aquatic ecosystems to provide sustainable economic alternatives to deforestation in the state of Acre. In addition, it developed a standard for the certification of managed pirarucu, prepared a Fishing Improvement Program, with actions to comply with 27 certification requirements to obtain an international seal for maritime fishing activities, and prepared an ecological-economic feasibility study and a study of the potential for expanding management practices and the pirarucu production chain, to guide the design of necessary actions to expand management practices and strengthen the pirarucu production chain.

***E) Project name: APL Babassu***

*Organization responsible for project management: Association in Settlement Areas in the state of Maranhão (ASSEMA)*

**Project period:** 3rd quarter of 2016 to 3rd quarter of 2020

**Amount of support from the Amazon Fund:** BRL 4,897,085.37

The project supported the conservation and sustainable management of babassu groves and the recovery of degraded areas through agroforestry systems (AFS) in three municipalities that are part of the Amazon biome, in the state of Maranhão. In addition to the management and implementation of AFS and the income generated from them, the project also prepared a Sustainable and Community Forest Management Plan, including the provision of technical assistance and rural or agroforestry extension to the families reached by it, trained young people from the Agricultural Family Schools and strengthened community organizations.

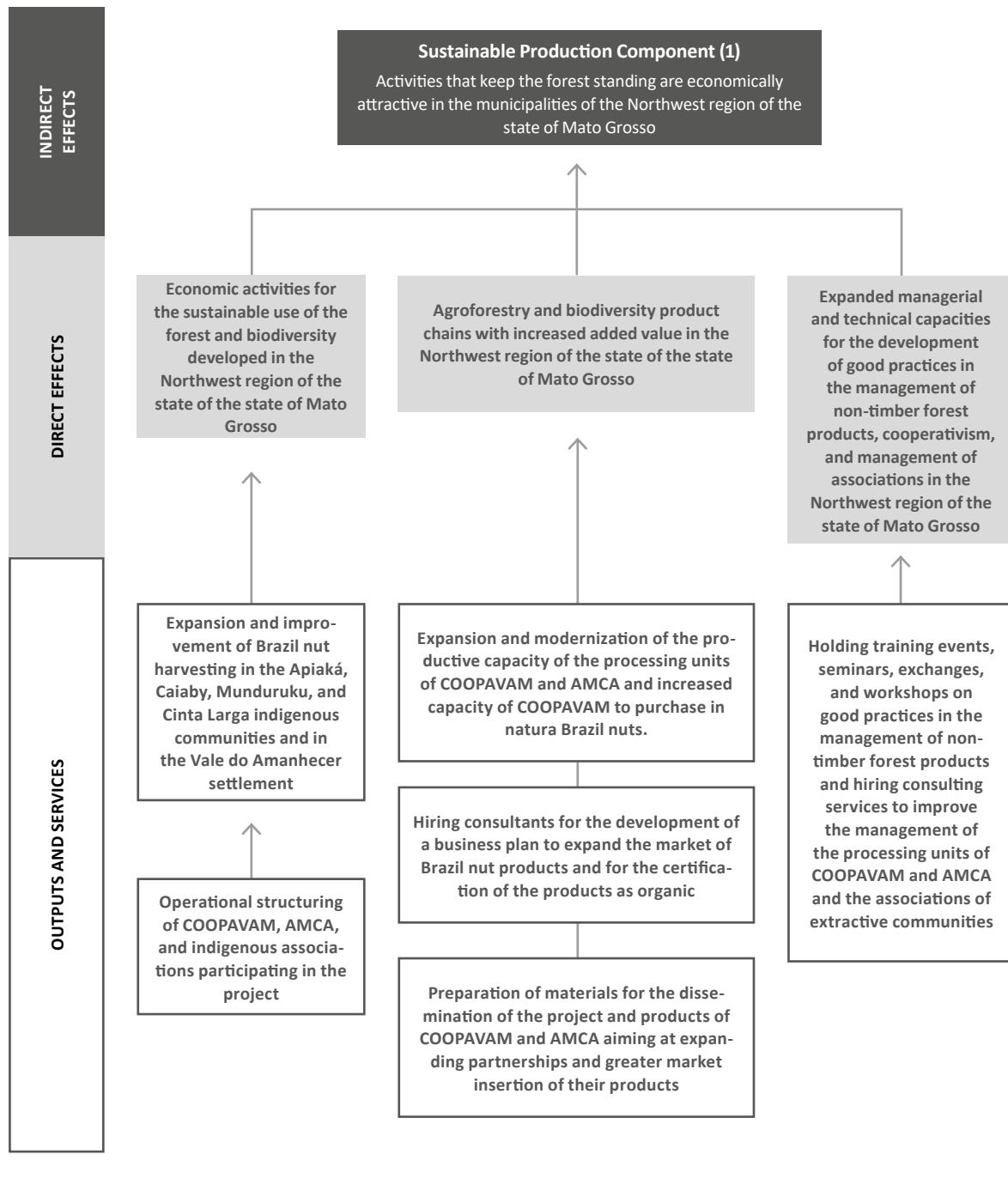
***4.2 Object and focus of the evaluation***

The projects were implemented between 2014 and 2020, operating in five states of the Legal Amazon: Acre, Maranhão, Mato Grosso, Pará, and Rondônia. Thus, the focus of the evaluation is the areas of intervention of the projects, and it addresses the direct effects, as well as the indirect ones explained in the objective trees presented in the following item (4.3).

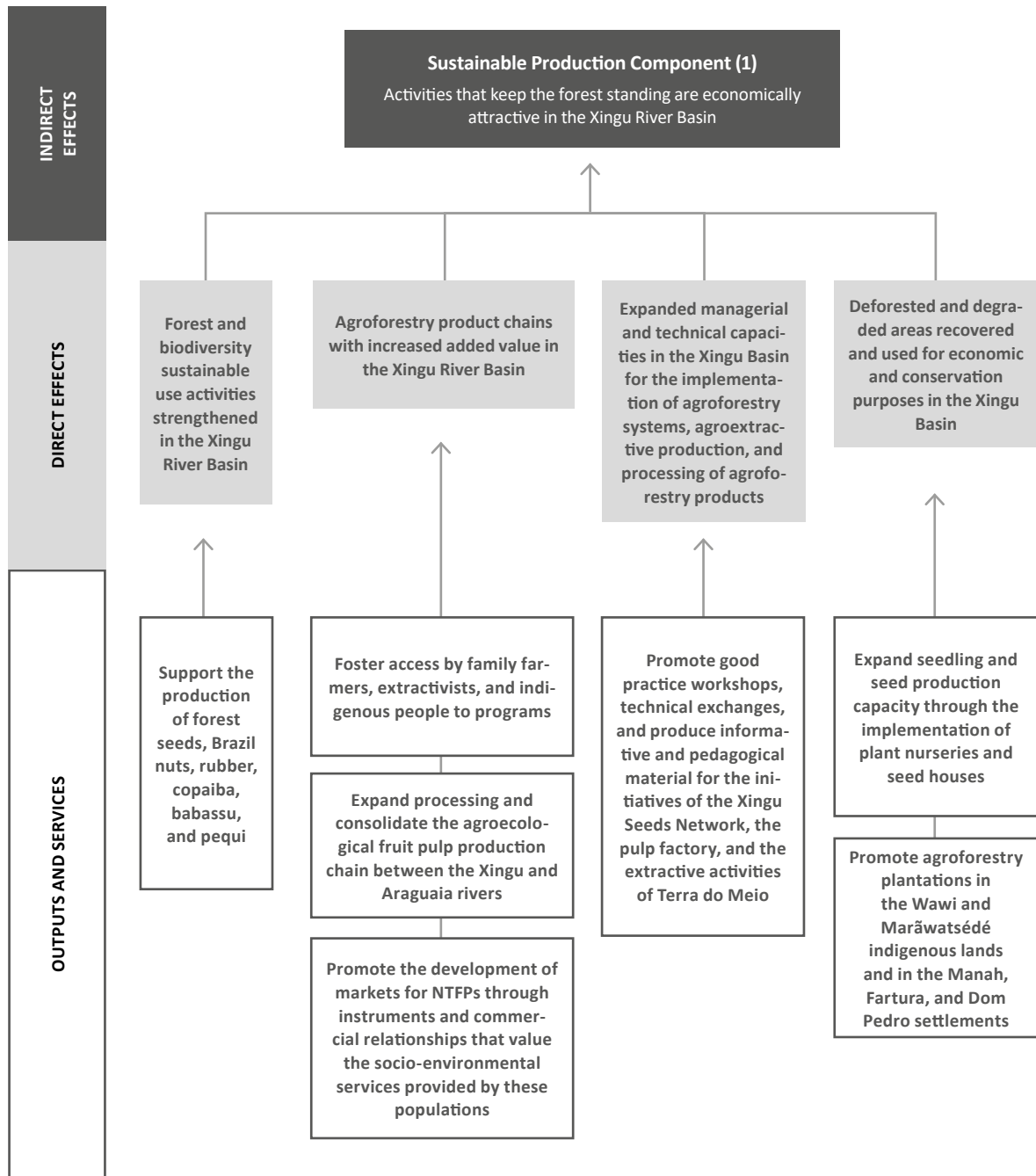
### 4.3 Intervention logic

Project Logical Framework Objectives Tree:

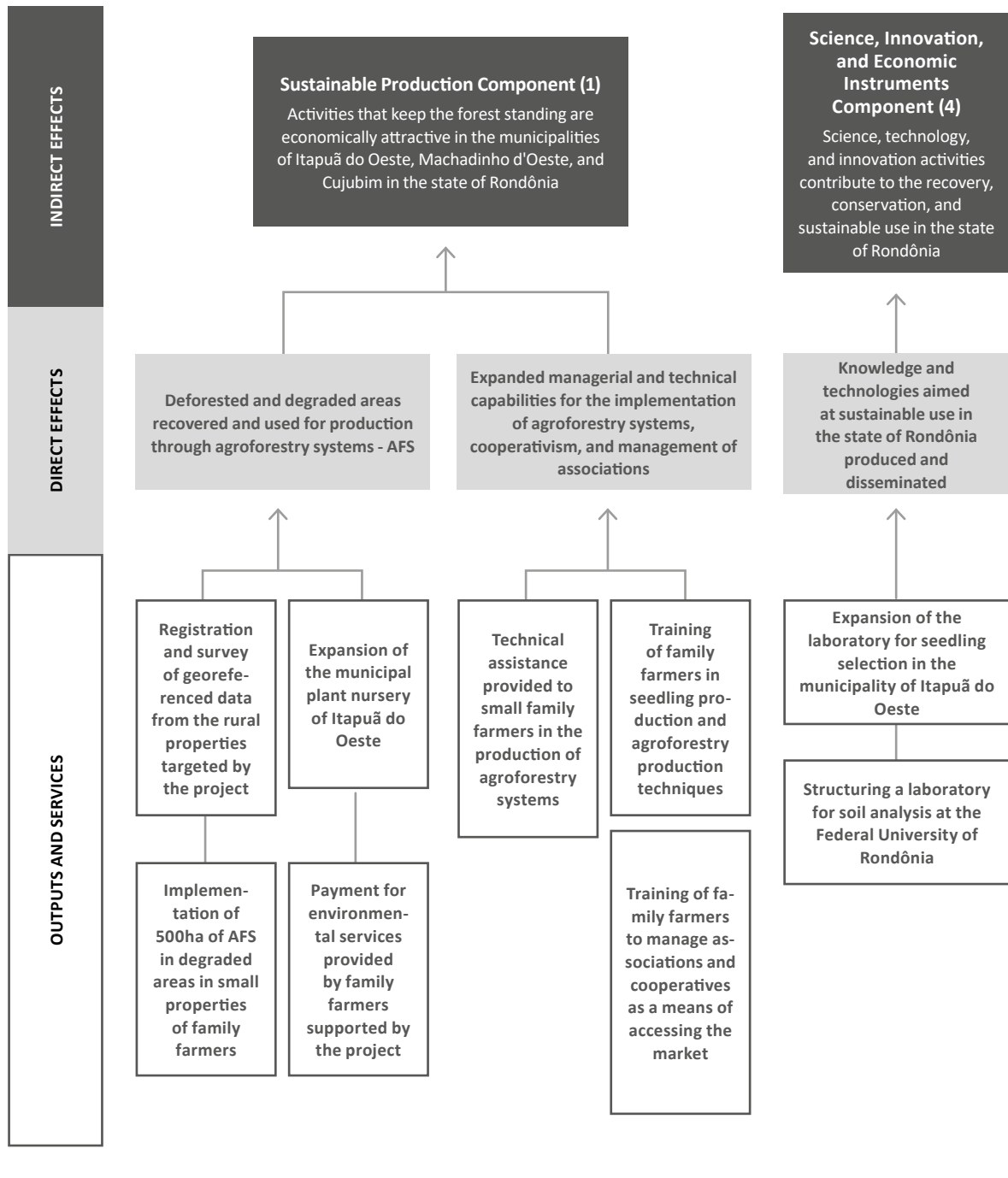
#### A) Forest Sentinels:



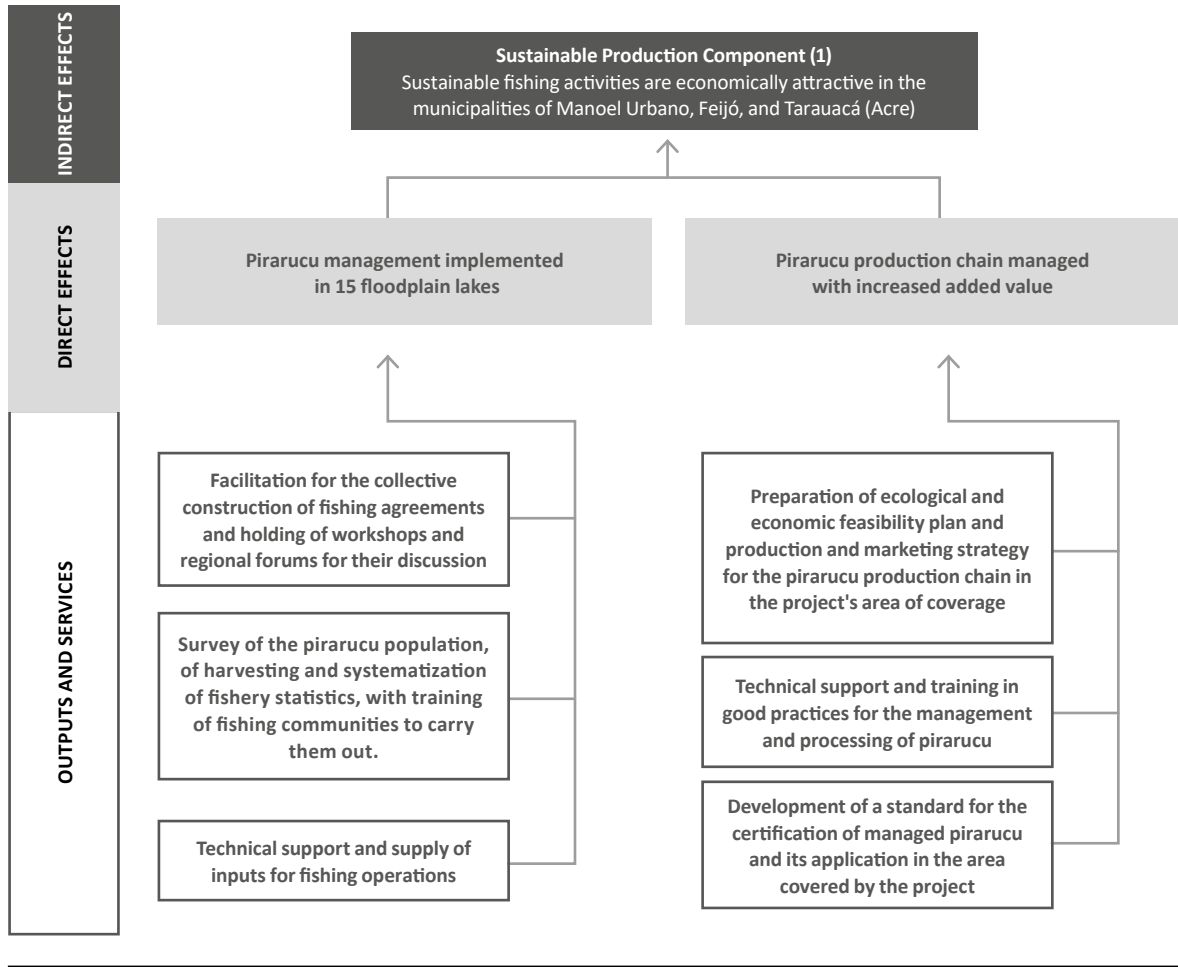
**B) Productive Sociobiodiversity in the Xingu:**



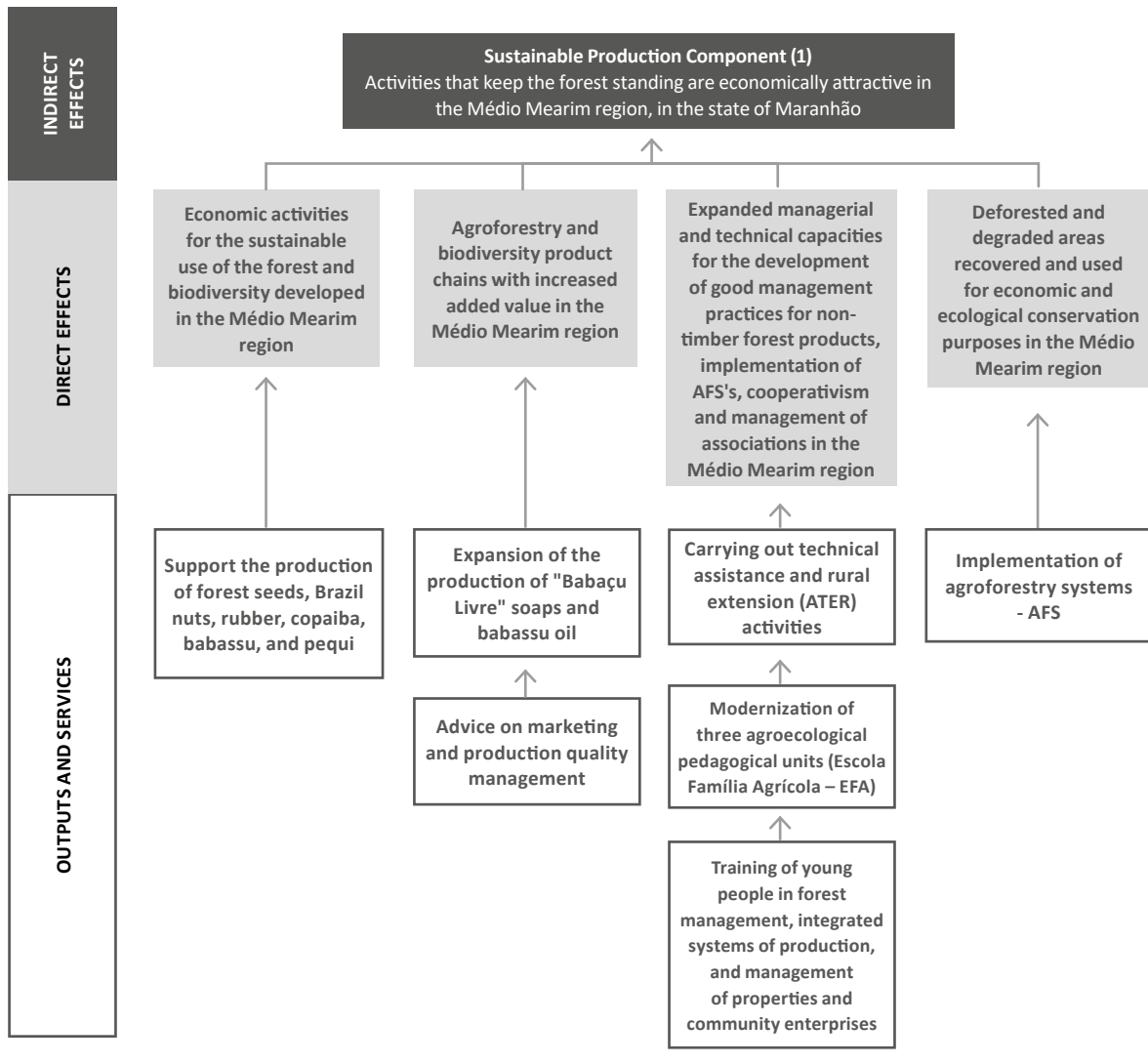
**C) Amazon Backyards:**



**D) Sustainable Fishing:**



**E) APL Babassu:**



#### 4.4 Key questions and evaluation criteria

The effectiveness evaluation of APS projects will comply with the guidelines and criteria specified in the document **Conceptual Framework for Evaluating the Effectiveness of Projects Supported by the Amazon Fund** and the **Addendum to the Conceptual Framework for Thematic Evaluations** based on the Organization for Economic Co-operation and Development (OECD), the Cross-Cutting Criteria for Poverty Reduction and Gender Equity and the REDD+ Safeguards, which were defined by the Framework Convention (in Annex I of Decision 1/CP 1641 and the guidelines of Decision 12/CP 17).

As described in the Conceptual Framework document (pages 23 to 29), each criterion adopts a basic roadmap of guiding questions to be answered by the projects and which should be complemented in the evaluation design report, as the evaluation team deems necessary. Since five different projects will be evaluated, guiding questions that make sense according to the objectives of each project should be selected. They can be complemented by project-specific questions.

In addition to the guiding questions, the following complementary questions available in the Addendum to the Conceptual Framework are recommended, in order to evaluate the effectiveness and especially the aggregated impacts:

Criteria	Guiding questions
Relevance	Did the projects contribute jointly and in aggregate to the objectives of the Amazon Fund?
Effectiveness	What aggregated direct effects were achieved?
Efficiency	Does the cost-benefit of project activities maintain coherence across the activities?
Impact	What were the main aggregated effects of the projects? Were there aggregated impacts? Have they proven to have scalability in the territory?
Sustainability	Are the aggregated effects achieved by the projects lasting? Has sustainability been achieved?
Cross-Cutting Criteria	
Poverty Reduction	In what way did the projects collectively influence poverty reduction, social inclusion, and improvement in the living conditions of the beneficiary people who live in their areas of activity?
Gender Equity	Have the projects integrated gender issues in an aggregated way in the planning and execution of their activities? How and what results can be observed?

## 4.5 Methodology

The methodology to be applied in the evaluation should be based on the criteria and objectives contained in the document **Conceptual Framework for Evaluating the Effectiveness of Projects Supported by the Amazon Fund** and the corresponding Addendum.

The consultancy should generate the following outputs: the evaluation design report and the effectiveness evaluation report. Additionally, in an intermediate stage, a preliminary effectiveness evaluation report should be produced to be used in the consultation round, which can be carried out remotely.

The proposed methodology for each phase and its respective stages follows below:

### 4.5.1 Preparation phase:

- In this phase, the objectives should be defined, and the evaluation of the projects should be planned. After the evaluation team is formed, the key documents should be organized. To this end, the documents, data, and reports that will be used to carry out the evaluation should be identified, together with the BNDES and the organization responsible for executing the respective project. The evaluation team will systematically collect data from secondary sources, with the aim of writing a *memorandum* which will serve as a source of reference, leveling, and aide-mémoire for all information relating to the projects to be evaluated.

### 4.5.2 Implementation phase:

- Design report. The design report to be prepared by the evaluation team should present the roadmap, the detailed methodology, and the tools that will be used in the evaluation. This report should observe the following roadmap: (a) basic project data; (b) introduction; feedback on the ToR, according to the Conceptual Framework (page 20); (d) division of tasks, work plan, and logistics; (e) design and methodology; and (f) attachments. The specifics of the projects must be considered, possibly with guiding questions and specific survey methods. This report should have a maximum of 20 pages in the main part (excluding attachments).
- Data collection and analysis. The methodology to be developed should adopt a diversified format, using the following types of data collection: i) non-reactive (secondary sources: project documentation, public and scientific data

available in the projects' area of activity, in addition to the key documents already organized in the preparation phase); ii) survey (field research: application of standardized quantitative and qualitative questionnaires, conducting qualitative interviews with individuals or groups, use of situational analysis tools, so that it can be carried out remotely); iii) observation (during the visits, participatory or individual) and iv) construction of a general theory of change, if applicable. This is the first phase of data analysis, which aims to analyze the intervention logic, the outputs, and services delivered by the projects and the results achieved.

- Field mission (or alternatively, remote collection of empirical data). Its objective is to carry out part of the data collection, with the support of organizations in the field, in a representative sample of the field of action of the projects, on visits to their region of activity and its surroundings. During these visits, technical staff who worked directly with the projects during the evaluation reference period should also be interviewed. If necessary, local technical staff may be hired to verify any on-site results. At this point, it should also be discussed whether a so-called counterfactual analysis would be necessary. Counterfactual analysis is intended to assess impacts in similar situations, but without the intervention of the projects in question, to build a basis for comparison and isolate the project's impact, i.e., the impact that only happened where there was an intervention..
- Preliminary report. After collecting information, the evaluation team should complement the analysis of the collected data. To this end, a preliminary effectiveness evaluation report should be generated, containing an analysis of the results achieved by the projects in the light of the indicators of component 1, in order to generate recommendations.
- Consultation round. At this stage, a workshop (online or in-person) will be held with the participation of the evaluation team, the Amazon Fund/BNDES team, representatives of the Ministry of the Environment, key people in the projects, and representatives of the organizations evaluated, in addition to some peers, who are the experts responsible for topics related to the evaluated projects. The workshop methodology should be described in the effectiveness evaluation design report.

### 4.5.3 Analysis and dissemination phase:

- Consolidation of data analysis. Along with the complementary inputs from the consultation round, there will be a new analysis based on the comments and justifications presented by the participants.
- Final report. The methodology and composition of the report to evaluate the effectiveness of APS projects are specified in the document of the **Conceptual Framework for Evaluating the Effectiveness of Projects Supported by the Amazon Fund** and the corresponding Addendum. It should have up to 45 pages in the main part (without considering cover, table of contents, indexes of figures and tables, list of abbreviations and acronyms, executive summary, and annexes).
- Dissemination of results. The project effectiveness evaluation report and its executive summary will be published on the [Amazon Fund website](#).

## 5. Activities, expected outputs, and deadlines

The following schedule presents the basic roadmap for carrying out the project evaluation. The table contains activities, services, and outputs, as well as deadlines for the process.

	Activities	In charge	Working days	Deadlines	Outputs
1	Prepare and disseminate ToR, receive and organize proposals, select consultants for pricing.	GIZ	15	30/09/2020	Proposals received from consultants organized.
2	Launch pricing and hire consultants.	GIZ	32	07/12/2020	Consultants hired and team formed.
3	<ul style="list-style-type: none"> <li>• Prepare the team's initial meeting with the Amazon Fund.</li> <li>• Contact the institutions responsible for the projects to be evaluated.</li> <li>• Analyze relevant documents.</li> <li>• Consolidate the proposal for an Effectiveness Evaluation Design Report.</li> <li>• Deliver the Effectiveness Evaluation Design Report to the BNDES.</li> <li>• Presentation of the report to the BNDES.</li> </ul>	GIZ	25	31/12/2020	Proposal for an Effectiveness Evaluation Design Report.

(continued)

## ANNEX VI: Terms of Reference (ToR)

(continuation)

	Activities	In charge	Working days	Deadlines	Outputs
4	Comment on the proposal for an Effectiveness Evaluation Design Report.	GERAV/ BNDES DEFAM/ BNDES	4	08/01/2021	Proposed Effectiveness Evaluation Design Report with comments.
5	Review Effectiveness Evaluation Design Report.	Evaluation team	4	12/01/2021	Revised Effectiveness Evaluation Design Report.
6	Approve revised report.	GERAV / BNDES DEFAM / BNDES	3	15/01/2021	Effectiveness Evaluation Design Report (final).
7	Implement evaluation: • Collect and analyze secondary data, • Conduct field missions or online interviews.	Evaluation team	55	10/03/2021	
8	Prepare and deliver Preliminary Effectiveness Evaluation Report.	Evaluation team	15	25/03/2021	
9	Present results (Consultation Round).	Evaluation team	9	02/04/2021	Preliminary Effectiveness Evaluation Report with considerations reported in the Consultation Round.
10	Comment on Preliminary Effectiveness Evaluation Report.	GERAV/ BNDES DEFAM/ BNDES Organizations responsible for each project	5	07/04/2021	Preliminary Effectiveness Evaluation Report with comments sent after the Consultation Round.
11	Prepare Final Effectiveness Evaluation Report.	Evaluation team	10	17/04/2021	Effectiveness Evaluation Report.
12	Comment on Final Effectiveness Evaluation Report.	GERAV/ BNDES DEFAM/ BNDES	5	08/09/2021	Effectiveness Evaluation Report with comments.
13	Incorporate suggestions and finalize the Final Effectiveness Evaluation Report.	Evaluation team	5	26/04/2021	Effectiveness Evaluation Report.

(continued)

(continuation)

	Activities	In charge	Working days	Deadlines	Outputs
14	Layout design and translation of the Final Effectiveness Evaluation Report.	Designer and translator	31	26/05/2021	Effectiveness Evaluation Report in format for dissemination.
15	Send to BNDES for publication of the designed Final Evaluation of Effectiveness Report.	GIZ	1	26/05/2021	Effectiveness Evaluation Report in format for dissemination.
16	Review translation.	GIZ	14	08/06/2021	Effectiveness Evaluation Report in English.
17	Layout design of the Final Effectiveness Evaluation Report in English.	Layout designer	19	26/06/2021	Effectiveness Evaluation Report in English format for dissemination.
18	Send to BNDES for publication of the Final Effectiveness Evaluation Report with layout design in English.	GIZ	1	27/06/2021	Effectiveness Evaluation Report in English format for dissemination.

## 6. Skills and experience required to carry out the activities

The projects will be evaluated by a team comprising at least four people, being two (2) GIZ experts and two (2) external consultants to be hired by GIZ. The GIZ experts will be a senior and a junior consultant with experience in project evaluation, data collection, and thematic diagnoses. The external consultants should be one senior consultant, with experience in project evaluation and knowledge of sustainable production issues, especially in indigenous lands, and one full consultant, with experience in project evaluation and knowledge on sustainable production and settlements. The qualifications of the evaluation team include the following requirements:

- **Technical knowledge.** Multidisciplinary knowledge about public policies in the area of sustainable development and the environment, about monitoring and evaluation of socio-environmental projects, and about the topics addressed by the projects, mainly sustainable production;
- **Methodological knowledge.** Knowledge about the methodologies that will be used to evaluate the projects, especially those related to the methods used for data collection and analysis, measuring the achievement of results, and qualifying the effects achieved. In addition, it is important to know instruments that allow the combination of methods to triangulate data collection, to

increase the reliability of the results; and

- Regional expertise. Knowledge of regional issues in the Amazon that are addressed within the scope of projects supported by the Amazon Fund. They should have professional experience in the Amazon.

Consultants cannot have any previous involvement or private connection with the projects to be evaluated.

## 7. Reporting, coordination, and responsibilities

Two reports will be produced during the evaluation process: the Evaluation Design Report and the Effectiveness Evaluation Report. The content of these reports will follow the guidelines established in topic 8.1.7 of the document **Conceptual Framework for Evaluating the Effectiveness of Projects Supported by the Amazon Fund** and as described in the relevant Addendum.

The projects' effectiveness evaluation will be accompanied by a Reference Group of the projects, with the following composition:

- a. Representatives of the Strategic Planning Area of BNDES;
- b. Representatives of the Environment and Management Department of the BNDES Amazon Fund;
- c. Representatives of GIZ, within the scope of the current cooperation project;
- d. Representatives of the projects and partners responsible for executing the projects to be evaluated; and
- e. Evaluation team members.

The coordination of the evaluation work will be carried out by GIZ. The responsibilities of each party that comprises the Reference Group are defined in topic 5.1 in the Conceptual Framework document.

## 8. Final considerations

### ***a. Copyright***

All information and materials produced based on the work conducted under this contract will have the copyright reverted to GIZ. Their total or partial reproduction requires express authorization, acknowledging intellectual property. Credits will be given for authorship of maps, photos, films, and other records that may be used to provide information about the study, at the discretion of the contracting institution.

Authorization must be previously requested from GIZ for publication and production of bibliographic materials in the form of articles, academic papers, congresses, and scientific events, among others, based on information produced under contract by the consultancy and its technical team.

### ***b. Code of Conduct***

GIZ's internal management aims to promote equality of opportunity and perspectives, regardless of gender identity, sexual orientation, ethnicity, health condition, social origin, religion, or age. The diversity of its staff, as well as a corporate environment ruled by mutual respect and appreciation, represents for GIZ a sign of success and excellence in its work. GIZ prioritizes the appointment of women, LGBTI (lesbian, gay, bisexual, transgender and intersex), black and indigenous people, and people with disabilities for lectures, representations, interviews, and even job vacancies.

Thus, the selected consultant must respect the diversity of gender, sexual orientation, ethnicity, health condition, social class, religion, and age, and adopt attitudes that, with a multiplier effect, will help to promote equality between the different players involved in the consultancy that is the object of this ToR, adopting the following behaviors:

#### **• *Personal behavior***

- Listen and give credit to your co-workers' ideas, regardless of gender, sexual orientation, ethnicity, health status, social origin, religion or age, pay attention to situations of vulnerability, respect their opportunity to speak up and support the ideas of co-workers;
- Talk about issues related to gender, listen and empathize with those who are harmed by inequalities – especially women, read about the topic and encourage this discussion in the spaces where you circulate, whether in the company, organization, meetings, or lectures;

- Question and fight sexual harassment, be an example of respect for women, and speak up when any harassment is reported or witnessed;
- Question the idea that there are activities for men and activities for women, avoid attributing certain activities only to women, simply because they are considered "female activities";

- ***When providing the service***

- Be an example of respect for the rights of women, LGBTI, black and indigenous people, people with disabilities, and the elderly to your co-workers. Avoid jokes that demean these groups;
- Always seek to be informed about policies to promote gender equity in your work environment, seek to disseminate and respect them. The implementation of strategies to promote gender equity aims at transforming the internal culture and can also have an impact externally;

- ***Corporate guidelines***

- Support initiatives for the access and permanence of women, LGBTI, black and indigenous people, and people with disabilities in sustainable development, who face numerous obstacles to occupying spaces of decision and power in our society.

Rio de Janeiro, November 17, 2020

**Heliandro Maia**

Project DV

*Cooperation with the Amazon Fund/BNDES*

*Biodiversity, Forests and Climate Program*

*Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*

## ANNEX VI: Terms of Reference (ToR)

This ToR has two appendices referring to the hiring of two consultants for evaluation:

- Appendix 1 – Individual Consultancy – Consultant 1
- Appendix 2 – Individual Consultancy – Consultant 2

## APPENDIX 1 – CONSULTANT 1

### TERM OF REFERENCE OF INDIVIDUAL CONSULTANCY

Call for contract referring to the ToR on the effectiveness evaluation of APS projects

*Project:* Cooperation with the Amazon Fund/BNDES

*Title:* Effectiveness evaluation of APS projects - Consultant 1

#### 1. Objective

Hire one (1) senior consultant with expertise in sustainable production in the Legal Amazon, especially in indigenous lands, with experience in monitoring and evaluation, including remote evaluation methods.

To achieve this objective, the consultant shall work in a team to contribute to the effectiveness evaluation of APS projects, as provided for in item 2 of this ToR.

#### 2. Activities of consultant 1

The consultant shall be part of the evaluation team on **sustainable productive activities (APS)** projects, with the following activities:

- Prepare, together with the evaluation team, the effectiveness evaluation design report under the terms of reference;
- Conduct data collection, analysis and interpretation of results, effects, and impacts of projects related to sustainable production;
- Conduct project evaluation field interviews and, if applicable, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis field workshops, together with the evaluation team;
- Contribute to the preparation and consolidation of the preliminary effectiveness evaluation report as a whole, including the chapters related to the topics under his/her responsibility;

- Support the organization and participate in the round of consultations to present the preliminary effectiveness evaluation report; and
- Prepare, together with the evaluation team, the final version of the project effectiveness evaluation report.

### 3. Work period

The activities shall be carried out over nine months, **starting on** December 11, 2020, with the **final deadline for delivery of the outputs scheduled for** April 17, 2021. The period for the field mission, in case of in-person data collection, is scheduled for February and March 2021. Over the course of this period, the consultant shall dedicate **50 effective days** to carrying out the work.

### 4. Consultant's Outputs 1

Outputs	Workdays	Deadline	Format / Technical Specifications
Output 1 - Effectiveness evaluation design report	5	31/12/2020	Word document, Arial 12 font, 1.5 spacing, digital format.
Output 2 - Preliminary effectiveness evaluation report	33	25/03/2021	Word document, Arial 12 font, 1.5 spacing, digital format.
Output 3 - Effectiveness evaluation report	12	17/04/2021	Word document, Arial 12 font, 1.5 spacing, digital format.
<b>TOTAL:</b>	<b>50 days</b>		

### 5. Trips

This evaluation can be carried out entirely online. If possible, field missions and a round of in-person consultation will be carried out, totaling up to 3 trips (maximum 19 days), for 1 person, to the following destinations, as described below.

Destination	Planned date	Travel days	Accommodation (n. days)	Meals (n. days)
Altamira/PA (one way), São Luís/MA (return)	February-March	Up to 7 days	Up to 6 nights	Up to 7 days

## ANNEX VI: Terms of Reference (ToR)

Rio Branco or Feijó/AC (one way), Porto Velho/RO (intermediate), Alta Floresta or Juína/MT (return)	February-March	Up to 10 days	Up to 9 nights	Up to 10 days
Brasilia DF	February-March	Up to 2	Up to 1 night	Up to 2 days
<b>Up to 3 trips</b>		<b>19 days</b>	<b>Up to 16 nights</b>	<b>Meals for up to 19 days</b>

From these cities, the evaluation team shall visit the municipalities in the region of Terra do Meio/PA, Xingu/MT, municipalities of Bacabal, Lago da Pedra, and Lago do Junco in the state of Maranhão, municipalities of Feijó or Tarauacá in the state of Acre, municipalities of Itapuã do Oeste, Cujubim, and Machadinho d'Oeste in the state of Rondônia, and municipalities in northwest region of the state of Mato Grosso by land, as organized directly by GIZ.

## 6. Output presentation

The outputs will be presented with an identification cover containing the following information: name of consultant, or legal name in case of a company, title of the consultancy, contract number, number, and name of the outputs.

## 7. Payment (Approval)

Payments will be made after signing the contract, approval of the outputs, and submission of invoice.

The cost of services and travel costs, including airfare and land transportation, shall be presented by the selected candidate in the technical-financial proposal. The proposal shall present an estimate of working days per output and the cost of fees with payment distribution.

Travel costs shall be reimbursed upon submission of proof of expenses, as per GIZ guidelines to be informed in the contract.

The output review and technical approval process include an evaluation by the GIZ technical adviser.

The final approval of the outputs and payment authorization fall under the responsibility of the project's AV/DV.

## 8. Contract period

From December 11, 2020 to May 25, 2021.

## 9. Professional Qualification

- Senior consultant, with at least 15 years of experience in the area;
- Qualification in policies related to (socio)biodiversity chains in the Legal Amazon, mainly in indigenous lands;
- Professional experience in the Amazon (such as employment in entities based in the Amazon, consulting in the region, teaching, academic experience, etc.);
- Knowledge of new development concepts based on production chains and bioeconomy;
- Experience in monitoring and evaluation of socio-environmental projects in the Legal Amazon region;
- Knowledge of regional issues in the Amazon that are addressed within the scope of this thematic evaluation;
- Understanding of public policies in the area of sustainable development, climate change, and the environment is desirable.

## APPENDIX 2 – CONSULTANT 2

### TERM OF REFERENCE OF INDIVIDUAL CONSULTANCY

Call for contract referring to the ToR on the effectiveness evaluation of APS projects

*Project:* Cooperation with the Amazon Fund/BNDES

*Title:* Effectiveness evaluation of Sustainable Productive Activities (APS) projects - Consultant 2

#### 1. Objective

Hire one (1) full-time consultant, with knowledge of sustainable production in the Legal Amazon, specifically in settlement areas, and with experience in monitoring and evaluating socio-environmental projects, including remote evaluation methods.

To achieve this objective, the consultant shall work in a team to contribute to the effectiveness evaluation of the Sustainable Productive Activities (APS) projects, as provided for in item 2 of this ToR.

#### 2. Activities of consultant 2

The consultant shall be part of the evaluation team on APS projects, with the following activities:

- Contribute, together with the evaluation team, to the preparation and consolidation of the drafting of the effectiveness evaluation design report under the terms of reference;
- Carry out data collection, analysis, and interpretation of results, effects, and impacts of projects on themes related to environmental policy and sustainability and, in particular, in the area of sustainable production;
- Conduct project evaluation field interviews and, if applicable, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis field workshops, together with the evaluation team;
- Contribute to the preparation of the preliminary effectiveness evaluation re-

port as a whole, including the chapters related to the topics under his or her responsibility;

- Support the organization and participate in the round of consultations to present the preliminary effectiveness evaluation report; and
- Consolidate, together with the evaluation team, the final version of the project effectiveness evaluation report.

### 3. Work period

The activities will be carried out over nine months, **starting on** December 11, 2020, with a **final deadline for delivery of the outputs scheduled** for April 17, 2021. The period for the field mission, in case of in-person data collection, is scheduled for February to March 2021. Over the course of this period, the consultant shall dedicate 50 effective days to carrying out the work.

### 4. Consultant's Outputs 2

Outputs	Workdays	Deadline	Format / Technical Specifications
Output 1 - Effectiveness evaluation design report	5	31/12/2020	Word document, Arial 12 font, 1.5 spacing, digital format.
Output 2 - Preliminary effectiveness evaluation report	33	25/03/2021	Word document, Arial 12 font, 1.5 spacing, digital format.
Output 3 - Effectiveness evaluation report	12	17/04/2021	Word document, Arial 12 font, 1.5 spacing, digital format.
<b>TOTAL:</b>	<b>50 days</b>		

### 5. Trips

This evaluation can be carried out entirely online. If possible, field missions and a round of in-person consultation will be carried out, totaling up to 3 trips (maximum 19 days), for 1 person, to the following destinations, as described below.

## ANNEX VI: Terms of Reference (ToR)

Destination	Planned date	Travel days	Accommodation (n. days)	Meals (n. days)
Altamira/PA (one way), São Luís/MA (return)	February-March	Up to 7 days	Up to 6 nights	Up to 7 days
Rio Branco or Feijó/AC (one way), Porto Velho/RO (intermediate), Alta Floresta or Juína/MT (return)	February-March	Up to 10 days	Up to 9 nights	Up to 10 days
Brasília DF	February-March	Up to 2	Up to 1 night	Up to 2 days
<b>Up to 3 trips</b>		<b>19 days</b>	<b>Up to 16 nights</b>	<b>Meals for up to 19 days</b>

From these cities, the evaluation team shall visit the municipalities in the region of Terra do Meio/PA, Xingu/MT, municipalities of Bacabal, Lago da Pedra, and Lago do Junco in the state of Maranhão, municipalities of Feijó or Tarauacá in the state of Acre, municipalities of Itapuã do Oeste, Cujubim, and Machadinho d'Oeste in the state of Rondônia, and municipalities in northwest region of the state of Mato Grosso by land, as organized directly by GIZ.

## 6. Output presentation

The outputs shall be presented with an identification cover containing the following information: name of the consultant or of the company in case of a legal entity, title of the consultancy, contract number, number, and name of the outputs.

## 7. Payment (Approval)

Payments will be made after signing the contract, approval of the outputs, and submission of invoice.

The cost of services and travel costs, including airfare and land transportation, shall be presented by the selected candidate in the technical-financial proposal. The proposal will bring an estimate of working days per output and the cost of fees with payment distribution.

Travel costs shall be reimbursed upon submission of proof of expenses, as per GIZ guidelines to be informed in the contract.

The output review and technical approval process includes an evaluation by the GIZ technical adviser.

The final approval of the outputs and payment authorization fall under the responsibility of the project's AV/DV.

## 8. Contract period

From December 11, 2020 to May 25, 2021.

## 9. Professional Qualification

- Full consultant, with 10 years or more of experience in the area;
- Knowledge in environmental economics and sustainable production, with experience in topics such as family farming, agroforestry systems (AFS), and settlements in the Amazon;
- Professional experience in the Amazon (such as employment in entities headquartered in the Amazon, consulting in the region, teaching, scientific work, etc.);
- Desirable experience in monitoring and evaluating socio-environmental programs and projects in the Legal Amazon region;
- Desirable knowledge of regional issues in the Amazon that are addressed within the scope of this thematic evaluation;
- Knowledge of public policies in sustainable development, climate change, and the environment is desirable.

May / 2022