**AMAZON FUND'S
LOGICAL FRAMEWORK
2017**

CONTENTS

AMAZON FUND'S LOGICAL FRAMEWORK PRESENTATION

The logical framework, also known as result matrix, is a management tool used to ensure that supported actions contribute to the general objective of a program, being very useful for monitoring the impacts of its actions. The present work aims to present the main topics addressed in the development of the Amazon Fund's logical framework.

This document is a revised version of the Amazon Fund's logical framework, released in 2010. The present version considers adjustments resulting from changes in the dynamics of deforestation and in the emphases of public policies, especially the Plan of Action for Prevention and Control of Deforestation in the Brazilian Amazon - PPCDAm, which had a new phase released at the end of 2016.

The experience with monitoring and evaluating the impacts of projects supported by the Amazon Fund has also led to improvements such as the review of effectiveness indicators and the main risks that may affect their success. Adjustments have also been made in the terminology used, making it more compatible with the actions that the Amazon Fund supports and harmonizing it with the concepts used by the BNDES in its monitoring and evaluation procedures for the other projects and programs it finances.

The introduction makes a brief diagnosis of the problem-situation, from the analysis of the Amazonian space occupation history and its deforestation dynamics. Chapter 2, "The Amazon Fund and the logical framework methodology", presents the methodology behind this tool, which is also used by several institutions to monitor the achievement of objectives and goals.

Following the presentation of the methodology, Chapter 3 highlights some considerations that are important for the contextualization of the Amazon Fund's logical framework, such as the difficulty in establishing indicators and the need to carry out field surveys to assess the impacts of the Amazon Fund, which is just one among several public and private initiatives with impacts on the Amazonian reality.

Chapter 4 presents the general objective the Amazon Fund's logical framework, which is presented as a summarized proposal focused on the Brazilian Amazon, without prejudice to the Amazon Fund's authorization to act, by supporting the implementation of deforestation monitoring and control systems in other regions of Brazil and other tropical countries. Chapters 5 presents the outcomes and impacts and the indicators of the Amazon Fund's logical framework.

Chapter 6, "Inclusion of Projects in the Amazon Fund's logical framework", links the Amazon Fund's logical framework with the logical frameworks of individual projects. After the general characterization of the logical framework, an effort is also made in Chapter 7 to identify the risks that may compromise the achievement or maintenance of desired results.

The monitoring of the Amazon Fund projects (Chapter 8) complies with all BNDES's internal rules and each supported project is monitored for its impacts through its specific logical framework, a collaborative construction of the BNDES and the entity that is responsible for each project. Impact monitoring also includes the monitoring of the logical framework of the Amazon Fund as a whole, from the perspective of its accumulated impacts.

The last chapter concludes that the logical framework of the Amazon Fund may be improved in the future if more appropriate indicators are developed to monitor its results, and also from the experience with the analysis and monitoring of the supported projects. Next, the monitoring plan of the Amazon Fund's logical framework is presented, in the form of annex charts.

The development of a logical framework requires broad participation of those interested in contributing to its improvement. Comments and suggestions are welcome and should be forwarded to the BNDES, for evaluation by the team that is responsible for monitoring and evaluating the results of the Amazon Fund.

We thank all of those who have contributed to the development of the Amazon Fund's logical framework.

1. INTRODUCTION

Considered to be the largest biological diversity reserve in the world, the Amazon is also the largest Brazilian biome in extent and occupies 49% of the Brazilian territory, with an area of approximately 4.1 million km^2.

The Amazon basin takes up 2/5 of South America. Its approximately 7-million-square km area is home to the largest hydrographic network on the planet, which drains about 1/5 of the world's surface freshwater volume. Sixty percent of the Amazon basin is in Brazil, where the Amazon Biome encompasses a total of five units of the federation (Acre, Amapá, Amazonas, Pará and Roraima), a large part of Rondônia (98.8%), more than half of Mato Grosso (54%), besides part of Maranhão (34%) and Tocantins (9%)[1].

As from 2016, the Amazon Fund had its area of territorial performance expanded (for all the actions it supports) from Amazon biome to Brazilian Amazon ("Legal Amazon"), without prejudice to the continuity of the fund's support in other Brazilian biomes and in other tropical countries for the implementation of deforestation monitoring and control systems. The Brazilian Amazon refers to a territorial area with defined dimensions in the legislation, to facilitate the administration and management of the region, comprising the integrality of the Amazon biome and buffer zones between this biome and other Brazilian biomes, with a total area of about 5 million km^2.

The deforestation of the Brazilian Amazon is associated with its occupation process, especially since the second half of the 20th century, when highways were opened in the middle of the forest.

The Brazilian Government, through active colonization policies, attracted an expressive contingent of immigrants from other parts of the country, who were looking for more favorable conditions of life, to the region.

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[1] Source: Brazilian Institute of Geography and Statistics - IBGE

According to the diagnosis that is part of the Sustainable Amazon Plan, released in May 2008, "cities have grown, new cities have emerged, the population has been multiplied and new spaces have been effectively incorporated by the national society. But this process did not take place in a harmonious, balanced and sustainable way."

It has been noted that, indeed, there has been an economic expansion of the Brazilian Amazon, but this economic growth was predominantly based on the supply of low value-added raw materials. Its population reaches about 25 million inhabitants[2], compared with 3.8 million in 1950.

According to the diagnosis of the Sustainable Amazon Plan, the provision of services by the State was not able to keep up with the region's fast-paced growth, and this deficiency contributed to it having one of the lowest socioeconomic indicators in the country[3].

According to the Plan for Prevention and Control of Deforestation in the Brazilian Amazon - PPCDAM, Phase 2 (2009 - 2011), "regarding the strictly environmental aspect, a significant part of the immense natural patrimony that constitutes the forest was affected. Estimates from the National Institute for Space Research (INPE) from the Amazon Forest Deforestation Calculation Program (PRODES) show that about 18% of the forests in the Brazilian Amazon have been removed. This percentage is especially concentrated in an area called the Arch of Deforestation (or, in another perspective, Dense Population Belt), which extends from the west of the State of Maranhão, through Tocantins, part of Pará and Mato Grosso, the entire state of Rondônia, the south of Amazonas arriving in Acre ".

Deforestation has several negative effects, among which: (a) emissions of greenhouse gases; (b) climatic imbalances associated with the water cycle (reduction of forest evapotranspiration[4]); (c) loss of biodiversity; and (d) reducing the territories of populations that traditionally inhabit the forest.

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[2] According to IBGE, in 2010 the population of the Brazilian Amazon was 24 million inhabitants.

[3] Chapter 1 of the Sustainable Amazon Plan (PAS) Diagnosis, May 2008.

To combat deforestation, the Brazilian Federal Government has developed, among other initiatives, the Plan of Action for the Prevention and Control of Deforestation in the Brazilian Amazon - PPCDAm, which is in its 4th phase (2016-2020). This plan makes a diagnosis about the extent of the problem of deforestation, analyzes its dynamics and its vectors, and establishes several guidelines for facing this challenge.

Despite the advances - which resulted in a reduction of about 76% in the rate of deforestation between the year of 2004 (27,772 km^2) and the year of 2017 (6,624km^2), it is necessary to reduce the deforested area by facing its main causes.

One of the main vectors of deforestation is cattle ranching, which is considered to hold responsibility for most deforestation in the Brazilian Amazon. Regarding livestock, the PPCDAM, 2nd Phase (2009 - 2011), reports that "especially in pasture formation, the first years present good productivity. However, as nutrients decline over the years, areas lose their vigor and their recovery implies adequate soil treatment with fertilization, use of machinery and equipment, use of chemicals and adequate technical assistance. Due to these difficulties and market prices, the owner prefers to carry out new clearings or acquire new areas, thus expanding the frontier of deforestation."

A trend of greater occurrence of deforestation in areas with less vigilance and/or effective management by an agent, be it private or public, has been noted. Thus, public lands that are not destined (federal or state), that is, public lands that have not been transformed into indigenous reserves and conservation units or destined to agrarian reform, or reserved for military administration, tend to present higher rates of deforestation, since they are targets of land grabbing and land speculation. When destined, the probability of new deforestation is reduced[5].

[4] The combined phenomenon of evaporation of water from soil and liquid surfaces, and transpiration in plants.

[5] Plan of Action for the Prevention and Control of Deforestation in the Brazilian Amazon - PPCDAm (4th Phase)

There is also a fragility of the environmental agencies in the face of the enormous challenge represented by the inspection of the Brazilian Amazon. In this context, illegal logging occurs, also with the opening of clandestine roads by loggers in isolated places in the Amazon.

Agrarian reform settlements, in their different modalities, welcomed a large contingent of families in the Brazilian Amazon. However, settlements are also vectors of deforestation. Several factors contribute to the incipient exploration of sustainable economic activities of the forest and biodiversity in the region: low knowledge about the benefits of timber and non-timber forest management; low qualification of labor; incipient structuring of socio-biodiversity product value chains; lack of technical assistance for agroextractivist production and for the implementation of agroforestry and agroecological systems; low value-added agroextractive products and limited logistics infrastructure.

Permeating all these problems to a greater or lesser extent, it is possible to point out the insufficiency of the research and innovation system in the Brazilian Amazon, whose greater development will imply not only in answers to today's problems but also in the discovery of new opportunities, especially on account of the riches that are still unknown, related to the region's extraordinary biodiversity.

The challenge is not small. However, it is a unique natural and human heritage, of great dimensions, with vast rivers and horizons, containing diverse ecosystems in its plains, plateaus and mountain ranges. From the human perspective, many indigenous peoples live in the Amazon, some living in still inaccessible regions. It is known that the peoples of the forest have extensive knowledge of their environment, including knowledge of the active principles of numerous plants, which they use as medicines.

There are also *Quilombola* communities, formed by Afro-Brazilian descendants who rebelled against slavery, living side by side with rubber tappers, riverine people, squatters, miners, large farmers, cattle ranchers and loggers, as well as the existence of large cities such as Manaus and Belém, important industrial and services centers.

The Amazon also has natural gas and oil reserves, as well as being one of the largest mineral provinces in the world. Its majestic hydrography and nature attract tourists from all around. The population feeds on abundant fish from its rivers. Its great natural riches are widely known.

It is in this context, in a summarized way, that the challenge of combating deforestation in the Brazilian Amazon, with the promotion of its sustainable development, is set. The Amazon Fund, an initiative of the Brazilian society, which has counted since its conception with the international community's support, is one of the programs that integrate the strategy of the Brazilian Government to face this challenge.

2. THE AMAZON FUND AND THE LOGICAL FRAMEWORK METHODOLOGY

The Amazon Fund is a pioneering initiative that finances actions to Reduce Emissions from Deforestation and Forest Degradation (REDD+). The management of the Amazon Fund was granted to the Brazilian Development Bank (BNDES), by authorization of Decree n° 6,527, of 08.01.2008, with BNDES being responsible for raising and applying resources, for the monitoring of actions and the supported projects, for the accountability and communication of the results obtained in a continuous and transparent way, besides directing the executive secretariat of the Amazon Fund Guidance Committee - COFA.

Founded in 1952, BNDES is one of the Brazilian government's main instruments for long-term financing and investment in all segments of the Brazilian economy, supporting innovation, regional and socio-environmental development.

BNDES, as the manager of the Amazon Fund, is authorized to receive donations in cash for non-reimbursable investments in actions to prevent, monitor and combat deforestation and to promote conservation and sustainable use in the Brazilian Amazon. It may also allocate up to 20% of the resources in the development of monitoring and control systems for deforestation in other Brazilian biomes and in other tropical countries.

The actions supported by the Amazon Fund must comply with: (a) the provisions of Decree n° 6,527/2008; (b) the guidelines of the Plan for the Prevention and Control of Deforestation in the Brazilian Amazon - PPCDAM; (c) the guidelines of the National REDD+ Strategy (ENREDD+)[6] and (d) the Guidelines and Criteria for the Application of the Amazon Fund Resources established by the Amazon Fund Guidance Committee (COFA), as well as the BNDES operational policies. The alignment of the Amazon Fund with the ENREDD+

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[6] National Strategy for Reducing Emissions of Greenhouse Gases from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Forest Management and Increasing Forest Carbon Stocks - ENREDD+.

guidelines includes observance of REDD+ safeguards[7], which form a set of guidelines aimed at enhancing positive social and environmental impacts and reducing the negative impacts related to REDD+ activities, especially on sensitive issues such as indigenous peoples and traditional communities' rights, social participation, the permanence of REDD+ achieved results and the risk of shifting the pressure for deforestation and forest degradation to other areas.

According to the BNDES operational policies, the following entities can obtain non-reimbursable financial contributions from the Amazon Fund: NGOs (non-governmental organizations), cooperatives, government and university research centers, scientific and technological institutes, foundations, entities of federal, state and municipal direct and indirect public administration, as well as private companies. This means that, when submitting a project to obtain financial support from the Amazon Fund, the interested party must be organized under one of the legal forms mentioned above or be associated with a possible beneficiary of the Fund's resources.

The logical framework

The logical framework is a methodology used to ensure that the actions financed contribute to the general objective of a project or program and can be defined as a matrix in which, in an operational and organized way, strategic decisions about resource allocations to a project or program are inserted, explaining where it intends to reach (effects or objectives) and what is intended (how).

The following is a matrix that describes the logical framework structure of a project:

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[7] Established by Decision 1/CP.16 of the United Nations Framework Convention on Climate Change (UNFCCC).

	Intervention Logic	Objectively Verifiable Indicators	Sources of Evidence	Major Assumptions (Risks)
Impacts	Long-term impact of the intervention contributes to the achievement of the general objective	Effectiveness indicators	Sources that attest impact	External factors to ensure the sustainability of impacts
Outcomes	Situation-problem of the project solved as effect of the intervention	Effectiveness indicators	Sources that attest outcomes	External factors necessary to reach impacts
Outputs	Intervention implemented (purpose of the contract)	Efficiency indicators	Project completion's visit or report	External factors necessary to reach outcomes

This instrument is organized in two parts, called vertical logic and horizontal logic, detailed below, which explain the aspects of the construction of a logical framework.

I - vertical logic, which comprises:

a) the reasons why the project was designed; and

b) the way in which it will be executed (outputs, outcomes and impacts).

II - horizontal logic, which explains:

a) how the results of the project will be communicated, which should occur in a clear, realistic and verifiable manner through indicators, with their sources of evidence; and

b) external assumptions that are outside the project's governance and that must be taken into account for the assessment of its risks and potentialities.

The following figure illustrates the logical sequence of cause and effect that leads from the direct and indirect impacts of various projects to the general objective of one program, such as the logical framework of the Amazon Fund, which has four axes (components) and supports multiple projects.
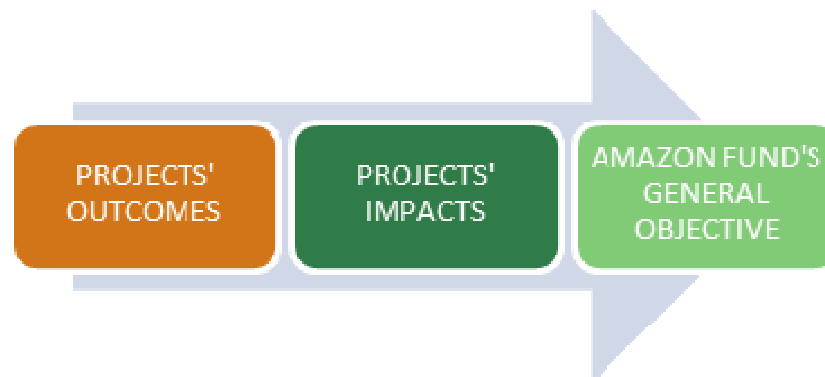
The development of a logical framework for the Amazon Fund aims to add one more instrument to its good management, as well as contribute to its monitoring and the consolidation of its results, based on an aggregated analysis of the supported projects and its impact indicators. It facilitates the process of its permanent evaluation, either internally, by those responsible for its management, or externally, by the general public.

3. GENERAL CONSIDERATIONS ON THE AMAZON FUND'S LOGICAL FRAMEWORK

In 2009, the Amazon Fund received its first donation and approved the first financial supports to five projects. In the development of the Amazon Fund's logical framework, presented below, simplicity was sought, especially in the selection of the indicators to monitor its impacts. The Amazon Fund is only one among several public and private initiatives that have impacts on the Amazonian reality. Nonetheless, some indicators with a regional scope were also selected, without prejudice to the indicators directly derived from the supported projects, with the capacity to assess their local impacts.

Whenever possible, information on social indicators is disclosed not only in an aggregate but also in a segmented way, so that there can be an assessment of the level of relative participation, in the appropriation of its results among specific publics, such as women and indigenous peoples.

The need for field research to assess the impacts of the Amazon Fund was also identified, as well as the construction of new indicators that contribute to the measurement of the defined objectives. Since then, some new indicators have been developed for the regional monitoring of the public policies supported by the Amazon Fund. Designing indicators alone is not such a complex task; however, identifying reliable sources of data and monitoring them regularly is always a challenge.

After about nine years of operation, several projects supported by the Amazon Fund were completed and evaluated by the teams responsible for its implementation and by the Amazon Fund staff. These evaluations of completed projects are available both on the Amazon Fund website and in its activity reports, where annual results of the completed projects are presented with a brief reflection on their results considering their outputs, outcomes and impacts. Some of these projects were subject to *ex post* evaluations, carried out by

independent evaluators and published on the Amazon Fund website.

These *ex post* evaluations follow a protocol established in a conceptual framework formulated in 2016[8] to evaluate the effectiveness of projects supported by the Amazon Fund. During this nine-year period, indicators for projects to prevent and combat forest fires and unauthorized burnings were also developed and a training course was given for the managers of projects being implemented by military firefighters brigades supported by the Amazon Fund on the theme of monitoring and evaluation, including the publication of a Guide for Monitoring Impacts of Military Fire Brigade Projects[9].

Since its creation, the Amazon Fund has sought to give transparency to the supported actions and its results. At the project's level this happens both by those responsible for its implementation and by the Amazon Fund itself. Project executors have a contractual obligation to disclose on their website, during the execution of their projects, updated information on the programmed activities and their physical and financial implementation. The Amazon Fund, in turn, has a specific section for each project in its own website, with information on, among others: name of the organization responsible for the project's implementaion; territorial scope of the project; its beneficiaries; value of the project and value of the financial contribution of the Amazon Fund; planned implementation period; amounts already disbursed to the project by the Amazon Fund and dates of disbursements; context in which the project is inserted and summary information about it; its objectives tree (intervention logic) and a summary of activities already carried out.

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8 The Conceptual Framework for Impact Evaluations of Projects supported by the Amazon Fund can be consulted on its website in the section dedicated to the theme of monitoring and evaluation (http://www.fundoamazonia.gov.br/export/sites/default/en/.galleries/documents/monitoring-evaluation/impact_evaluations_projects_supported_2016.pdf)

9 This guide can be found on the Amazon Fund's website (http://www.fundoamazonia.gov.br/export/sites/default/en/.galleries/documents/monitoring-evaluation/firefighting-impacts-guide.pdf) in the section on monitoring and evaluation.

During the development of the logical framework, the relevant exogenous risks that could prevent or hamper the achievement of the objectives of the Amazon Fund were mapped. These risks have been monitored and are part of the Amazon Fund monitoring process. An analysis of the behavior of both the identified risks and the effects of the mitigation measures is carried out annually, with the introduction and exclusion of risks, as well as the reassessment of the level of these risks over time, whenever necessary in view of the dynamic reality of deforestation.

The effectiveness of the Amazon Fund under a program's perspective, that is, an aggregate vision of the set of impacts resulting from the multiple actions supported in the four axes that guide its intervention logic, is monitored annually. Once a year the collected information, especially that derived from the selected indicators, is integrated and interpreted.

4. AMAZON FUND'S GENERAL OBJECTIVE

A definition focused on the Brazilian Amazon was chosen in the process of defining the general objective of the Amazon Fund, although the Amazon Fund is authorized to support the development of systems for monitoring and control of deforestation in other regions of Brazil and in other tropical countries[10].

Thus, the following general objective was proposed for the Amazon Fund: **Reduction of deforestation with sustainable development in the Brazilian Amazon**.

Indicators of the general objective

The indicators for monitoring the impact of actions supported by the Amazon Fund, in relation to its general objective, are:

- Annual deforestation in the Brazilian Amazon - Source: Inpe (PRODES); and
- Participation of Brazilian Amazon states' GDP in comparison to Brazil's GDP - Source: IBGE

The first indicator, "annual deforestation in the Brazilian Amazon", is directly related to the first part of the Amazon Fund's general objective, "reduction of deforestation in the Brazilian Amazon".

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[10] Support for monitoring in other regions of Brazil and other tropical countries will be followed in the logical framework of the Amazon Fund under Component 2, which deals with actions that aim to ensure the adaptation of human activities to environmental legislation.

The participation of the of the Brazilian Amazon states' Gross Domestic Product (GDP) in relation to the Brazilian GDP aims to measure the regional economy evolution degree vis a vis the national economy, in relation to which there is a lag. It should be noted that GDP is not an ideal indicator for the measurement of sustainable development because it does not include, for example, information such as environmental liabilities generated by economic growth. Nevertheless, given the current unavailability of a more appropriate indicator for measuring "sustainable development", the general objective will be measured by the joint interpretation of the two indicators. It is important to emphasize that the indicators mentioned above only demonstrate the positive changes expected by the program when they are equally successful, that is, when the decrease of deforestation in the region is associated with a growing participation of the Brazilian Amazon's GDP in relation to the Brazilian GDP.

5. IMPACTS, OUTCOMES AND INDICATORS OF THE AMAZON FUND

Impacts

To achieve its impacts, the Amazon Fund can support projects in the following areas, specified in Decree n° 6,527/2008:

1. Management of public forests and protected areas;
2. Environmental control, monitoring and inspection;
3. Sustainable Forest Management;
4. Economic activities with the sustainable use of forests;
5. Ecologic-economic zoning (ZEE), land-use planning and land-title regularization;
6. Conservation and sustainable use of biodiversity; and
7. Recovery of deforested areas.

As previously seen, Decree n° 6,527/2008 also provided that up to 20% of the Amazon Fund's resources may be used to develop systems to monitor and control deforestation in other regions of Brazil and other tropical countries. It also established that the guidelines of the Action Plan for the Prevention and Control of Deforestation in the Brazilian Amazon (PPCDAm) and the National REDD+ Strategy (ENREDD+)[11] should be observed in the projects carried out in the Brazilian Amazon.

In addition to these regulations and policies, the Amazon Fund must observe the Guidelines and Criteria for Allocation of Resources approved by the Amazon Fund's Guidance Committee (COFA) and, finally, the BNDES' operational policies established by its board of directors.

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[11] National Strategy for Reducing Emissions of Greenhouse Gases from Deforestation and Forest Degradation, Forest Carbon Stocking, Sustainable Forest Management, and Increasing Forest Carbon Stocks - ENREDD +

The thematic areas of the Amazon Fund, as defined by Decree n° 6,527 / 2008, contribute to all the axes of the PPDCAM, which are: (i) "Promotion of Sustainable Productive Activities"; (ii) "Monitoring and Control"; (iii) "Land-use and Territorial Planning" and (iv) "Normative and Economic Instruments".

Considering the breadth of the Amazon Fund's areas of activity, its logical framework was structured in four components, according to the figure on the following page, which result in four logical frameworks sharing the same general objective. It should be mentioned that the science, technology and innovation was highlighted in the development of the logical framework, since it is a strategic and cross-cutting issue for all the Amazon Fund's components, as well as the transversal use of economic instruments (4th phase of the PPCDAm (2016 to 2020).

INTERVENTION LOGIC

GENERAL OBJECTIVE	Reduction of deforestation with sustainable development in the Brazilian Amazon			
IMPACTS	**Component 1** Activities that maintain the forest standing are economically attractive	**Component 2** Governmental actions ensure the conformity of human activities to the environmental legislation	**Component 3** The Brazilian Amazon is submitted to land-use planning	**Component 4** Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity

The table below shows the link between the four components of the logical framework and the seven thematic areas provided for in Decree 6,527 / 2008.

INTERVENTION LOGIC

OBJECTIVE	**Component 1** Activities that maintain the forest standing are economically attractive	**Component 2** Governmental actions ensure the conformity of human activities to the environmental legislation	**Component 3** The Brazilian Amazon is submitted to land-use planning	**Component 4** Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity
AREAS CORRESPONDING TO DECREE N° 6,527 / 2008	Sustainable forest management Economic activities developed based on sustainable use of vegetation Conservation and sustainable use of biodiversity; and Recovery of deforested areas	Environmental control, monitoring, and inspection	Management of public forests and protected areas Ecologic/economic zoning, territorial planning, and land-title regularization	Management of public forests and protected areas Environmental control, monitoring, and inspection Sustainable forest management Economic activities developed based on sustainable use of vegetation Ecologic/economic zoning, territorial planning, and land-title regularization Conservation and sustainable use of biodiversity; and Recovery of deforested areas

It is worth emphasizing that the existence of seven thematic areas in Decree n° 6,527 / 2008 does not automatically imply in its adoption as seven objectives of the Amazon Fund. This is due to the methodology of the logical framework, which is based on the analysis of the chain of impacts of a given project or program.

For example, the provisions of clause III and IV of article 1 of the Decree n° 6,527 / 2008, "III - sustainable forest management" and "IV - economic activities developed from the sustainable use of vegetation", as two of the seven Amazon Fund areas of support, does not necessarily imply that these have autonomous causal logics, for the sustainable forest management is only one among several economic activities that can be developed from the sustainable use of the vegetation.

In practice, it can be inferred that the Decree n° 6,527 / 2008 aimed to emphasize the suitability of the Amazon Fund's support for sustainable forest management, that is, low impact logging, in this case dispensing with logical rigor in favor of greater clarity regarding the scope of the Amazon Fund.

Still in this example, it can be observed that these two thematic areas are implicitly inserted in component 1: "Activities that maintain the forest standing are economically attractive". This is made especially clear when the outcomes that lead to the four components (impacts) are observed (see following section). This same line of argument applies to the other thematic areas provided for in Decree n°. 6,527 / 2008, which are all contemplated in the intervention logic presented above.

Outcomes

The assessment of the Amazon Fund's results, at the outcomes level, is carried out by consolidating the results monitored in projects supported by the Amazon Fund, that is, impacts fully attributable to those projects that are regularly measured during their implementation and annually consolidated at the Amazon Fund level.

The following are the outcomes of the four components of the Amazon Fund's logical framework, organized in tables.

Component 1: Activities that maintain the forest standing are economically attractive

Intervention Logic	
General Objective	Reduction of deforestation with sustainable development in the Brazilian Amazon
Impacts Component 1	1. Activities that maintain the forest standing are economically attractive
Outcomes	1.1 - Economic activities that use the forest and biodiversity sustainably have been identified and developed
	1.2 - Production chains of agroforestry and biodiversity products with increased added value
	1.3 - Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity
	1.4 - Deforested and degraded areas recovered and used for economic or ecological conservation purposes

Component 2: Governmental actions ensure the conformity of human activities to the environmental legislation

Intervention Logic	
General Objective	Reduction of deforestation with sustainable development in the Brazilian Amazon
Impacts Component 2	2. Governmental actions ensure the conformity of human activities to the environmental legislation
Outcomes	2.1 – Monitoring, control and environmental accountability institutions have been structured and modernized
	2.2 –Access of rural producers to environmental regularization of their properties has been increased

Component 3: The Brazilian Amazon is submitted to land-use planning

Intervention Logic	
General Objective	Reduction of deforestation with sustainable development in the Brazilian Amazon
Impacts Component 3	3.The Brazilian Amazon is submitted to land-use planning
Outcomes	3.1 – Public forests and protected areas expanded
	3.2 – Protected areas have infrastructure, territorial protection and consolidated management
	3.3 – Areas with regularized land titles expanded
	3.4 – Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded

Component 4: Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity

Intervention Logic	
General Objective	Reduction of deforestation with sustainable development in the Brazilian Amazon
Impacts Component 4	4. Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity
Outcomes	4.1. Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated
	4.2 Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated

Indicators

The logical framework of a program should contain indicators that enable the measurement of the outcomes and impacts of the supported interventions over time, i.e., to assess whether the program is achieving the expected effects.

In the logical framework of the Amazon Fund, broader indicators were selected at the impacts level, which are related to the public policies that the fund aims to contribute through the projects it supports. Monitoring these public policies helps to understand the progress made in promoting the reduction of deforestation with sustainable development in the Amazon. For this monitoring, indicators that measure (i) regional revenue from sustainable forest-based production activities, (ii) the capacity of environmental agencies to implement current legislation, (iii) the degree of consolidation of protected areas management and (iv) the evolution of research activities in the Amazon are analyzed from a comparative perspective.

The baseline of impacts indicators is the year 2009, when the first operations of the Amazon Fund were approved, without, however, disbursements of resources for these projects. It is important to mention that the contribution of the Amazon Fund to the behavior of the set of indicators that monitors its impacts, although already identifiable and relevant, as attested by the evaluation of the projects concluded with the fund's support, is not exclusive, adding to initiatives and actions by various public and private agents that operate in this vast Amazonian territory.

In order to monitor the outcomes of supported projects, a range of common indicators has been developed for the projects that allow them to be consolidated and provide an aggregated view of the impacts resulting from their actions. The baseline for monitoring these indicators varies from project to project, depending on the beginning of their implementation, which makes data consolidation with different baselines more complex.

The following tables show the outcomes and impacts of the four components of the Amazon Fund's logical framework, together with the respective indicators and sources of evidence.

Component 1: Activities that maintain the forest standing are economically attractive

	Intervention Logic	Indicators	Sources of Evidence
Impact	Reduction of deforestation with sustainable development in the Amazon region	Annual deforestation in the Amazon Biome	Inpe (PRODES)
		Participation of Brazilian Amazon states' GDP in relation to Brazil's GDP	IBGE
Indirect Effects Component 1	Activities that maintain the forest standing are economically attractive	Production of the vegetal extraction from the states of the Legal Amazon	IBGE
Direct Effects	1.1 - Economic activities that use the forest and biodiversity sustainably have been identified and developed	Income from sustainable production (in natura products)	Supported projects
		Income from sustainable production (processed products)	
	1.2 - Production chains of agroforestry and biodiversity products with increased added value	Area of forest used for extractivism (hectares)	
	1.3 - Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity	Number of individuals trained to effectively practice sustainable economic activities using the knowledge acquired, broken down by: (i) X individuals (total); (ii) Y women and (iii) Z indigenous people	
		Number of strengthened community organizations	
	1.4 - Deforested and degraded areas recovered and used for economic or ecological conservation purposes	Area with recovered vegetation cover used for economic purposes	

* When the sources of evidence are the supported projects, the means of verification will be done through technical and monitoring reports

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The indicator of the vegetal extraction production verified in the Brazilian Amazon states was selected for the monitoring of this component's impact. The vegetal extraction production data is obtained by IBGE in consultation with public and private entities, producers, technicians and bodies directly or indirectly linked to the sectors of production, commercialization, industrialization and inspection of native vegetal products.

Vegetal extraction comprises the process of exploitation of native vegetal resources through the harvesting of products. The Amazon is an important source of production of açaí, brazil nuts, native rubber and other oleaginous products and diverse fibers, products that are economically representative and commercialized inside and outside the region.

The evolution of the income generated by these products is followed by the Amazon Fund due to its economic relevance in the regional context. The evolution of timber extraction is still not being monitored due to the lack of systematized information that allows clear segregation between legally harvested native wood and illegally harvested timber.

- Production of the vegetal extraction of the states of the Brazilian Amazon – Source - IBGE

  It identifies the value of the vegetal extraction production according to the main products. Some of the products followed by the Amazon Fund are: açaí, Brazil nuts, rubber (coagulated and liquid latex), cumaru almonds, pequi, babassu and other oleaginous products and various fibers such as piaçava and buriti. This impact indicator monitors the evolution of sustainable forest-based production throughout the Brazilian Amazon. In order to monitor the outcomes of the projects supported by the Fund specific indicators of revenues generated by the projects are used. They are consolidated and published annually in the Amazon Fund's activity report.

Within component 1, the four outcomes resulting from projects with sustainable production actions, as well as their indicators, are listed

below.

Outcome 1.1: "Economic activities that use the forest and biodiversity sustainably have been identified and developed" and outcome 1.2: "Production chains of agroforestry and biodiversity products with added value increased". Indicators of these two outcomes monitor the income generation capacity of economic activities for sustainable use, as well as the area of forest used for extractivism. The greater the income obtained from the sustainable use of the forest and the biodiversity, the greater the interest of the populations that live in the forest or in its surroundings to conserve them, and the greater the extension of the forest that is used for extractivism, the larger is the area informally inspected by these populations.

- Income from sustainable production (*in natura* products) and income from sustainable production (processed products) - Source: supported projects

  The two chosen indicators respectively measure the income produced by the primary activities of sustainable use of the forest and biodiversity resulting from the support of the Amazon Fund, that is, extractive production commercialized *in natura*, and the income generated by the commercialization of these products after their industrialization, processing or environmental certification , that is, after some value-adding activity, including their promotion through association with seals of origin and of environmental compliance.

- Area of forest used for extractivism (hectares)

  This is an indicator associated with support to sustainable extractive production, which measures the area of forest directly used for extractivism, highlighting the extent of the forests in which these activities are carried out and, consequently, the extent of forests "controlled" by the local populations that develop and benefit from these extractivist activities.

Outcome 1.3: "Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity". This item's indicator seeks to evaluate training at managerial and technical levels for the aforementioned sustainable productive activities. The public to be followed includes leaders from public and business sectors and community groups, as well as technicians and farmers.

- Number of individuals trained to effectively practice sustainable economic activities using the knowledge acquired, broken down by: (i) X individuals (total); (ii) Y women and (iii) Z indigenous people - Source: supported projects

  It identifies the number of individuals trained in the implementation of agroforestry systems, timber and non-timber forest management activities, agroextractivist production, extractive products processing and other economic activities for a sustainable use of forest and biodiversity. This indicator also monitors gender perspectives and benefits distribution, by disaggregating the data by sex and social group of those who use the knowledge acquired.

- Number of strengthened community organizations - Source: supported projects

  This indicator aims to measure the number of community organizations strengthened with the support of the Amazon Fund. Associativism and cooperativism have been essential for the Amazon Fund's support to sustainable productive activities in the Amazon, since these organizations are protagonists in the elaboration and implementation of projects of this nature. Also, in regards to territorial planning, it is through community organizations that the populations of the protected areas are structured, implementing collective projects with the Fund's support. It is often necessary to strengthen these organizations as one of the supported actions, either to allow the implementation of the project itself or to ensure the sustainability of the results achieved after its completion.

Outcomes 1.4: "Deforested and degraded areas recovered and used for economic or ecological conservation purposes". The following indicator seeks to evaluate the recovery evolution of deforested and degraded areas that generate occupation and income, apart from fulfilling its environmental function in the cases of systems that mix agricultural crops with native tree species:

- Area with recovered vegetation used for economic purposes - Source: supported projects.

  Measurement of total area that has been recovered and used for economic purposes. The recovery of these areas for economic purposes with proper monitoring prevent farmers from seeking new areas for agropastoral activities. It can also contribute to the formation of protective belts for the forest against new invaders.

Component 2: Governmental actions ensure the conformity of human activities to the environmental legislation

	Intervention Logic	Indicators	Sources of Evidence
Impactl	Reduction of deforestation with sustainable development in the Brazilian Amazon	Annual deforestation in the Legal Amazon	Inpe (PRODES)
		Participation of Brazilian Amazon states' GDP in comparison to Brazil's GDP	IBGE
Indirect Effect Component 2	Governmental actions ensure the conformity of human activities to the environmental legislation	Number of outposts (regional units) of state environmental agencies	State Environmental Bodies
		Number of municipalities capable to license activities with local environmental impact	
		Number of environmental permits or licenses granted annually by state environmental agencies	
Direct Effects	2.1 –Monitoring, control and environmental accountability institutions have been structured and modernized	Number of public servants trained effectively using the acquired knowledge (specified by gender)	Supported projects
		Nº of rural properties or possessions registered in the CAR with analyzed and regular cadastre	
		Area of rural properties or possessions registered in the CAR with analyzed and regular cadastre	
		Number of forest fires or unauthorized burnings fought by fire brigades	
		Area monitored in other Brazilian biomes and other tropical countries	
	2.2 – Access of rural producers to environmental regularization of their properties has been increased	Number of properties that had their application to join the CAR registered	
		Area of properties that had their application to join the CAR registered	
		Area with vegetation cover recovered for environmental regularization (regeneration in progress)	

The indicators of this component are intended to measure the capacity for inspection and implementation of environmental legislation. These broad indicators are monitored annually based on the information provided by the state environmental agencies of the Amazon region, and their evolution results from various causes, including the technical and institutional strengthening and modernization actions supported by the Amazon Fund.

The indicators for monitoring the actions supported by the Amazon Fund are the following, regarding the impact of Component 2:

- number of municipalities capable to license activities with local environmental impact - Source: state environmental agencies

  Municipalities are responsible for the environmental licensing of enterprises and activities that cause or may cause local environmental impact, according to the typology defined by the respective state environmental council, considering size, pollutant potential and nature of the activity [12]. The indicator that measures the number of municipalities able to license activities with local environmental impact is aimed at verifying the degree of participation of municipalities in the implementation of environmental legislation in their territories.

- Number of environmental permits or licenses granted annually by state environmental agencies - Source: state environmental agencies

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[12] (Complementary Law 140, dated 12.12.2011)

With this indicator, the aim is to measure the improvement in the processing of demands that reach the state environmental agencies. Licensing is an important instrument of the National Environmental Policy, and the increase in licenses granting and other authorizing acts signals greater degree of state environmental agencies' control over human activities that interfere with environmental conditions.

- Number of outposts (regional units) of state environmental agencies - Source: state environmental agencies

Administrative deconcentration with the implementation of state environmental agencies outposts in the interior of the states provides capillarity to these institutions, facilitating the access of the population to their services and, consequently, contributing to the process of environmental regularization of the activities that require this licensing and which are subject to its supervision.

Within Component 2, the indicators proposed for its two outcomes are:

Outcomes 2.1 - " Monitoring, control and environmental accountability institutions have been structured and modernized".

The indicators of this outcome are intended to measure the direct contribution of the projects supported by the Amazon Fund to the expansion of the capacity of the government agencies to verify compliance with environmental legislation and to fight forest fires and unauthorized burnings. To do so, five indicators were chosen:

- Number and area of rural properties or possessions registered in the CAR with analyzed and regular cadastre - Source: supported projects

Among the actions supported by the Amazon Fund is the expansion and strengthening of the Rural Environmental Registry (CAR) as an instrument for rural environmental management and for monitoring deforestation in rural establishments. With the massive adhesion of rural producers to the CAR, a new demand for their analysis and management by environmental agencies arises. This

indicator intends to measure the number of properties that were registered in the CAR, analyzed by the environmental agency and considered environmentally regular, resulting directly from the actions of projects supported by the Amazon Fund. These properties include both those registered in the CAR without environmental liabilities and those considered as having regular registration by the competent environmental agency because they are fulfilling the steps of their environmental regularization process.

- Number of public servants trained effectively using the acquired knowledge (specified by gender) - Source: supported projects

This indicator shall measure the degree of success in technical capacity building of public servants for the strengthening of the government's environmental management.

- Number of forest fires or unauthorized burnings fought by fire brigades - Source: supported projects

The Amazon Fund also supports actions to prevent and combat forest fires and unauthorized burnings. This indicator intends to monitor the evolution of the number of fires fought by the Amazon military fire brigades as a result of the Fund's support.

- Monitored area in other Brazilian biomes and other tropical countries - Source: supported projects

This indicator intends to measure the contribution of the Amazon Fund to the expansion of the monitoring of vegetation cover and tropical forests in Brazil and in the world.

Outcome 2.2 - " Access of rural producers to environmental regularization of their properties has been increased". The indicators of this component are intended to measure the contribution of the Amazon Fund to the increase in rural producers' participation in regards to compliance with environmental legislation. To do so, the following indicators were chosen:

- Number and area of rural properties or possessions that had their application to join the CAR registered - Source: supported projects

Holders of rural properties or possessions that join the CAR, among other obligations, must prepare a technical project for their property's georeferenced mapping, indicating both its size and the location of its permanent protection areas (APP)[13] and of legal reserves[14]. Registration in the CAR is an important step in the process of environmental regularization of rural properties or possessions, acting as inducer of production systems that are more adapted to the Amazon and, therefore, with environmental sustainability. This indicator measures how many rural properties had their application for joining the CAR filed with state environmental agencies.

- Area with recovered vegetation cover for environmental regularization (regeneration in progress)

The process of environmental regularization of rural properties also includes the recovery of the vegetation cover of those properties that have environmental liabilities resulting from a deficit of legal reserve area or APP. This indicator aims to quantitatively measure the contribution of the projects supported by the Amazon Fund in this process of recuperation of the vegetation cover for the purpose of environmental regulation of rural establishments.

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13 Permanent Preservation Area - APP: protected area, covered or not by native vegetation, with the environmental function of preserving water resources, landscape, geological and biodiversity stability, facilitating fauna and flora gene flow, protecting the soil and ensuring the well-being of human populations.

14 Legal reserve: an area located inside a rural property or possession with the purpose of ensuring the sustainable economic use of the natural resources of the rural property, assisting the conservation and rehabilitation of ecological processes and promoting biodiversity conservation, as well as shelter and protection of wildlife and native flora.

Component 3: The Brazilian Amazon is submitted to land-use planning

Impact	Reduction of deforestation with sustainable development in the Brazilian Amazon	Annual deforestation in the Legal Amazon	Inpe (PRODES)
		Participation of Brazilian Amazon states' GDP in relation to Brazil's GDP	IBGE
Indirect Effect Component 3	The Brazilian Amazon is submitted to land-use planning	Area of indigenous lands and federal protected areas in the Legal Amazon with territorial management instrument	Funai e ICMBio
		Deforestation in protected areas in the Legal Amazon	INPE (PRODES)
Direct Effects	3.1 – Public forests and protected areas have been expanded	Area of created protected areas	Supported projects
		Area of recognized indigenous lands	
	3.2 – Protected areas have infrastructure, territorial protection and consolidated management	Area of protected areas with strengthened management, infrastructure and/or control of their territory	Supported projects
		Area of indigenous lands with strengthened management, infrastructure and/or control of their territory	
		Area with vegetation cover recovered in protected areas and indigenous lands for environmental conservation purposes (regeneration in progress)	
		Number of individuals trained in activities related to management of protected areas and indigenous lands effectively using the knowledge acquired	
	3.3 – Areas with regularized land titles expanded	Area of rural properties with regularized land titles	
	3.4 – Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded	Area of land with territorial organization defined through the EEZ	

The indicators of this component aim to measure the effectiveness of land-use planning and territorial management. The scope of this component, besides contributing directly to the general objective, will bring several changes: it will ensure the sustainability of the economic activity in the Amazonian space; the reduction of land conflicts; will provide greater legal certainty in business relations that deal with real estate; will contribute to the creation of public forests and other protected areas and the consolidation of their management, and will expand the area of recognized indigenous lands.

Two indicators were created to monitor the impacts of this component. The first monitors the extension of federal protected areas with territorial management instruments, and the second monitors the rate of deforestation in protected areas (federal / state protected areas and indigenous lands in the Brazilian Amazon), namely:

- Area of indigenous lands and federal protected areas in the Legal Amazon with territorial management instrument: Funai and ICMBio

  The objective of this indicator is to monitor the extent of federal protected areas (including indigenous lands) that already have a territorial management instrument developed, either with the Amazon Fund's support or through other initiatives. This indicator follows the evolution of the development of territorial management instruments in indigenous lands and other federal protected areas that have, respectively, territorial and environmental management plans of indigenous lands (PGTA) and management plans of other protected areas. The use of these instruments in protected areas has contributed significantly to the reduction of deforestation in these territorial domains.

  The management plan of a protected area is a document which establishes its zoning and the norms that should govern the use of the area and the management of natural resources, including the implantation of necessary physical structures for the management of the unit.

In turn, the PGTAs are tools for implementing the National Policy for the Territorial and Environmental Management of Indigenous Lands - PNGATI, and can be defined as instruments that aim at the promotion of indigenous material and immaterial heritage, recovery, conservation and sustainable development use of natural resources, ensuring quality of life improvement and the full physical and cultural reproduction of current and future indigenous generations. These plans must express the protagonism, autonomy and self-determination of the peoples in the negotiation and in the establishment of internal agreements that allow the strengthening of territorial protection and control, as well as being a subsidy that guides the execution of public policies which are directed to the indigenous peoples.

- Deforestation in protected areas in the Brazilian Amazon - Source: Inpe / Prodes

  Based on data provided by INPE - National Institute for Space Research, it is possible to monitor the deforestation rate that occurs within protected areas of the Brazilian Amazon. This indicator intends to monitor the dynamics of deforestation in federal and state protected areas, as well as in Amazonian indigenous lands, thus covering all protected areas of the Amazon and not only the protected areas which have already benefited from actions supported by the Fund Amazon.

Within component 3 of the logical framework of the Amazon Fund, the following indicators were selected for its four outcomes:

Outcome 3.1 - " Public forests and protected areas have been expanded ".

- Area of created protected areas and of recognized indigenous lands - Source: supported projects

  The two indicators for this outcome are intended to measure the effective expansion of the area of protected areas (PAs) and indigenous lands (ILs) for the supported projects, through the creation of new PAs or the recognition of new ILs

Outcome 3.2 - "Protected areas have infrastructure, territorial protection and consolidated management ".

- Area of protected areas and indigenous lands with strengthened management, infrastructure and/or control of their territory - Source: supported projects
- Number of individuals trained in activities related to management of protected areas and indigenous lands effectively using the knowledge acquired - Source: supported projects

These two indicators aim to measure the area of ILs and PAs with defined management tools and created management infrastructure, including the formation of a management committee with local community participation for each of the PAs' management structures, as well as the effectiveness of the training of individuals in activities that are related to protected areas management.

- Area with vegetation cover recovered in protected areas and indigenous lands for environmental conservation purposes (regeneration in progress) - Source: supported projects

This indicator aims to quantify the area of native vegetation that was recovered by projects supported by the Amazon Fund in protected areas.

Outcome 3.3 - "Areas with regularized land titles have been expanded".

- Area of rural properties with regularized land titles - Source: supported projects

The above indicator will be important to quantify the results of actions to support land-title regularization in the Brazilian Amazon.

Outcome 3.4 - "Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded".

- Area of land with territorial organization defined through the EEZ - Source: supported projects

The National Environmental Policy (Law No. 6,938/1981) instituted ecological-economic zoning (ZEE) as an instrument of territorial planning. Territorial planning presents itself as a mechanism to reveal the dynamics that are established between different political, economic and social sectors, as well as to reveal the relation of these sectors with the natural environment on which they depend to exist. The understanding of these dynamics and relations is necessary to ensure that the decisions taken at the time of the territorial planning are aligned with the imagined future scenario, the constitutional principles and the promotion of a sustainable socio-productive conformation[15].

This indicator aims to measure the accomplishment of planning activities carried out within the territory through the Ecological-Economic Zoning (ZEE).

[15] Concept extracted from the publication of the Ministry of the Environment of 2016 , entitled "O zoneamento ecológico-econômico - Trilhando o caminho do futuro"

Component 4: Economic instruments and science, technology and innovation activities contribute to the recovery, conservation and sustainable use of biodiversity

	Intervention Logic	Indicators	Sources of Evidence
General Objective	Reduction of deforestation with sustainable development in the Brazilian Amazon	Annual deforestation in the Legal Amazon	Inpe (PRODES)
		Participation of Brazilian Amazon states' GDP in relation to Brazil's GDP	IBGE
Impacts Component 4	Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity	Number of patent applications filed with the National Intellectual Property Institute	INPI
		Value of subsidy paid to extractivists for the promotion of socio-biodiversity product chains in the states of the Legal Amazon (PGPM-Bio)	CONAB
Outcomes	4.1. Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated	Number of scientific, pedagogical or informative publications produced	Supported projects
		Number of researchers and technicians involved in CT&I activities residing in the Amazon region (specified by gender)	
	4.2 Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated	Number of solidarity finance operations carried out to promote sustainable productive activities through community revolving funds or similar instruments	

The support to component 4 has a strategic and transversal character, benefiting the other components. In this component the effectiveness of the use of economic instruments that help reduce deforestation will be measured. These instruments (payments, compensations, tax incentives and solidarity finance instruments) aim to encourage the conservation and restoration of ecosystems, giving to the obtained conservation a monetary value that was previously absent[16].

This component will also measure the impact of scientific and technological development activities that contribute to the sustainable use of biodiversity in the Amazon, the monitoring and control of anthropic activities and the territorial management of that region. An important result of the activities of science and technology is related to the accumulation of knowledge by researchers and local technological institutions. This accumulated knowledge will enable future innovations that may not even be part of the scope of supported projects.

Indicators for the impact of Component 4 are:

- Number of patent applications filed with the National Institute of Intellectual Property - Source: Inpi

  This indicator allows an initial assessment of the degree of strengthening of the regional innovation system. The number of patent applications filed by residents in the Amazon states is low in absolute terms when compared to the rest of Brazil. This demonstrates the need to strengthen this relevant theme for the knowledge and sustainable exploitation of the region's riches, for the improvement of deforestation monitoring and combat and also for the development and improvement of forms and methods that contribute to the region's land-use planning. The reasons that lead to this scenario are complex and have historical roots.

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[16] Concept of an economic instrument adapted from the website of the Ministry of the Environment on the Internet in http://www.mma.gov.br/cidades-sustentaveis/planejamento-ambiental-urbano/instrumentos-econ%C3%B4micos

They range from differences in levels of investment in higher education and research to factors such as the lower level of development of the industrial sector of the Amazon region, when compared to the southern and other Brazilian regions.

- Value of subsidy paid to extractivists to promote the chains of socio-biodiversity products in the states of the Brazilian Amazon (PGPM-Bio) - Source: Conab

In order to monitor the evolution of economic incentive policies in the Amazon region, an indicator that measures the amount of subsidy paid to extractivists for the promotion of socio-biodiversity product chains in the states of the Brazilian Amazon, within the scope of the Minimum Price Guarantee Policy for Socio-biodiversity Products (PGPM-Bio), was selected. Through this policy, the extractivist receives a bonus after attesting the sale of his product at a price that is lower than the minimum set by the federal government. These payments, in addition to stimulating the economic activities that value the standing forest, are associated with the concept of benefit distribution, which aims to ensure that REDD+ payments to the country are fairly distributed among all the actors that contributed or could come to contribute to reducing deforestation.

Within Component 4, two indicators were selected for their two outcomes, which aim to measure the results of economic incentives actions supported by the Amazon Fund to the conservation or restoration of ecosystems and for scientific and technological development that contribute to the reduction of deforestation and for the sustainable development of the Amazon.

Outcome 4.1. "Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated".

- Number of researchers and technicians involved in scientific research, technology and innovation activities residing in the Amazon region (specified by gender) - Source: supported projects

This indicator intends to quantify the number of researchers and technicians involved with research activities in the supported projects.

- Number of scientific, pedagogical or informative publications produced - Source: supported projects

The indicator aims to measure the production and diffusion of knowledge and new technologies aimed at the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and the territorial planning of the Amazon region.

Outcome 4.2. "Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated."

- Number of solidarity finance operations carried out to promote sustainable productive activities through community revolving funds or similar instruments

Solidary finance can play an important role in the structuring of forestry-based economic activities, for family farming and for the processing of this production, occupying a space that is not served by the traditional financial system. This indicator will measure the number of solidarity finance operations carried out with the support of the Amazon Fund.

6. INCLUSION OF PROJECTS IN THE AMAZON FUND'S LOGICAL FRAMEWORK

The Amazon Fund adopts the procedure of building a specific logical framework for each project that it supports, in a participatory manner with the entities which are responsible for its implementation. The logical frameworks of the supported projects necessarily follow the same structure of the Amazon Fund's logical framework, and the main difference is in the hierarchical level, since the projects execute actions, while the program executes lines of action. Thus, the outcomes of each project should be closely correlated with the outcomes of the Amazon Fund (see the following figure), and the impacts of the supported projects should be embedded in one or more of the four impacts (components) of the Amazon Fund
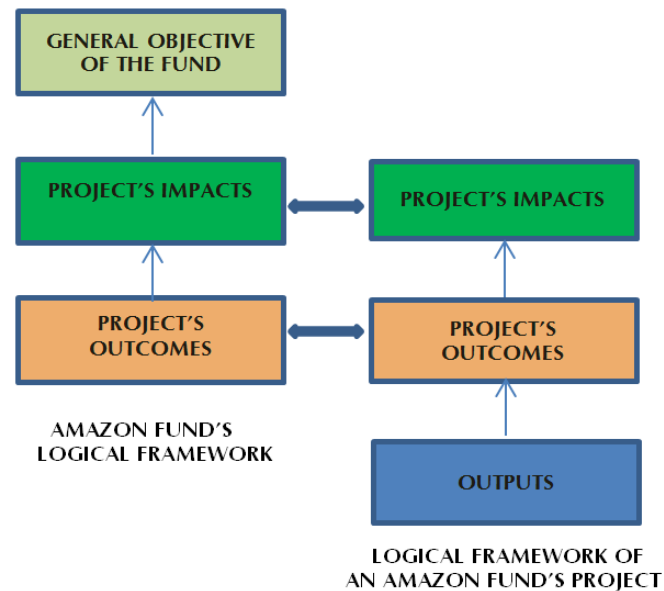
Figure 1 - Correspondence between the Logical Framework of a program and one of its projects. Adapted from PFEIFFER, Peter. *O Quadro Lógico: um método para planejar e gerenciar mudanças.* Revista do Serviço Público. 2000 page 110.

7. RISKS

When planning an intervention it is also necessary to take into account aspects that are outside the governance of the project, but which are important to achieve the desired effects. Thus, the logical framework of the Amazon Fund considers the main risks (assumptions) that can affect its success.

The risks considered were submitted to two processes of analysis: the first is an algorithm that defines the relevance of the risks; and the second an exercise of consistency proper to the logical framework, called diagonal logic.

The algorithm has three steps:

Step 1 - Determining if the risk is external to the project. If it is internal, it must be included in the project to be mitigated by the intervention.

Step 2 - Determining if the risk is relevant to the designed logic. If it is not, it should be disregarded.

Step 3 - Determining the probability of the risk occurring. If its probability is insignificant, it should be disregarded. If its probability is high, the strategy should be changed, because the project has a high risk of failure. The relevant external risks, which should be included in the logical framework, are those with a not too high or too low probability of occurrence.

Only risks which are actually relevant to the success of the intervention or program will be monitored. These relevant risks should be incorporated into the logical framework matrix so that they can be monitored along with the intervention logic indicators.

To verify the consistency of the risks pointed out, one must use diagonal logic, which is to allow the passage from one level of the

intervention logic to a higher one only if the same level risk does not occur.

The risks included in the logical framework of the Amazon Fund are presented in Tables A, B, C and D below:

Table A:

Intervention Logic Sustainable production component		Risks
Impact	Reduction of deforestation with sustainable development in the Amazon region	Migratory flows in the Amazon that put pressure on the environment
		Changes in Brazilian environmental legislation that reduce forest protection
		Climate change resulting in periods of prolonged drought and forest fires
		New strategies and technologies are incorporated by offenders to illegally deforest
Indirect Effect Component 1	Activities that maintain the forest standing are economically attractive	Deterioration of the economic scenario undermines the development of a sustainable forest-based economy
Direct Effects	1.1 - Economic activities that use the forest and biodiversity sustainably have been identified and developed	Phytosanitary and public health problems related to agroforestry products hinder their insertion in the market
	1.2 -Production chains of agroforestry and biodiversity products with added value increased	
	1.3 - Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity	
	1.4 - Deforested and degraded areas recovered and used for economic or ecological conservation purposes	

Table B:

Intervention Logic Monitoring and control component		Risks
Impactl	Reduction of deforestation with sustainable development in the Amazon region	Migratory flows in the Amazon that put pressure on the environment
		Changes in Brazilian environmental legislation that reduce forest protection
		Climate change resulting in periods of prolonged drought and forest fires
		New strategies and technologies are incorporated by offenders to illegally deforest
Indirect Effect Component 2	Governmental actions ensure the conformity of human activities to the environmental legislation	Agrarian reform policy not aligned with environmental policy
		Insufficient enforcement actions and repression of deforestation as a result of fiscal restrictions
Direct Effects	2.1 – Monitoring, control and environmental accountability institutions structured and modernized	Migration of trained civil servants to other activities inside and outside government
	2.2 – Access of rural producers to environmental regularization of their properties increased	

Table C:

	Intervention Logic Land-use planning componet	Risks
Impact	Reduction of deforestation with sustainable development in the Amazon region	Migratory flows in the Amazon that put pressure on the environment Changes in Brazilian environmental legislation that reduce forest protection Climate change resulting in periods of prolonged drought and forest fires New strategies and technologies are incorporated by offenders to illegally deforest
Indirect Effect Component 3	The Brazilian Amazon is submitted to land-use planning	Growth of demand for new land for cultivation and pasture
Direct Effects	3.1 – Public forests and protected areas have been expanded	Discontinuation of demarcation policy and homologation of new protected areas
	3.2 – Protected areas have infrastructure, territorial protection and consolidated management	Discontinuation of protected area management activities financing by other private sponsors
	3.3 – Areas with regularized land titles have been expanded	
	3.4 – Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded	

Table D:

Intervention Logic Science, innovation and economic instruments component		Risks
Impact	Reduction of deforestation with sustainable development in the Brazilian Amazon	Migratory flows in the Amazon that put pressure on the environment Changes in Brazilian environmental legislation that reduce forest protection Climate change resulting in periods of prolonged drought and forest fires New strategies and technologies are incorporated by offenders to illegally deforest
Indirect Effect Component 4	Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity	
Direct Effects	4.1 Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated	Qualified technical staff and researchers leaving the region
	4.2 Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated	

8. MONITORING OF THE AMAZON FUND

The monitoring of the projects of the Amazon Fund complies with all internal BNDES rules regarding the monitoring of operations, aiming at preventing or solving situations that put the implementation of supported projects at risk.

In addition to this set of monitoring standards, summarized below, each supported project is monitored for its impacts, based on a specific logical framework (see section below).

After the signing of the non-refundable financial grant from the Amazon Fund and the disbursement of resources in tranches to the project, meetings with the beneficiary are held during the implementation phase, when the results obtained by the project are discussed, as well as the risks raised and other external scenarios (previously unidentified) that may impact it.

In case of deviation from the expected results, the internal and external conditions that led to the situation are verified. From there, the possible corrective actions are evaluated and agreed upon, and the indicators and risks are updated.

The results and impacts of the completed projects are evaluated together by BNDES and the organization responsible for the project's implementation and are disclosed in the Amazon Fund's annual reports and in the fund's website. Annually, in the Activity Report of the Amazon Fund, there is a specific chapter where information on projects completed that year is presented. The information provided includes: (i) description of the project and name of the organization responsible for its implementation; (ii) final beneficiaries of the actions implemented by the project; (iii) territorial coverage; (iv) contextualization of the project, its objectives and its intervention logic; (v) the total investment of the project and the amount of the Amazon Fund's support; (vi) implementation period; (vii) activities carried out; (viii) analysis of output, outcome and impact indicators; (ix) institutional and administrative aspects; (x) risks and lessons learned and (xi)

sustainability of achieved results.

The logical framework of the Amazon Fund as a program is also followed by the BNDES technical team. In summary, in addition to the monitoring of every project's impacts, an annual assessment of the consolidated impacts of the Amazon Fund is also carried out, using the logical framework presented in this document.

PROCEDURES FOR MONITORING PROJECTS' IMPACTS

The period for the monitoring of each project comprises from the signing of the contractual instrument until the completion of the obligations assumed therein. The minimum frequency for the monitoring of each project is annual.

The monitoring report is the main internal instrument used by BNDES to record the verifications, activities and recommendations resulting from monitoring a project. This report is prepared by the bank's technical team that is responsible for monitoring a project supported by the Amazon Fund.

The monitoring of the Amazon Fund's projects includes, among others, the following activities:

- verification of the physical and financial implementaion of the project, also by visiting the project site, whenever necessary;
- analysis of the beneficiary's financial data;
- analysis of the project's indicators and of the evolution of the risks identified in the logical framework;
- verification of compliance with the conditions established in the contractual instrument;
- observation of recommendations from the project's technical analysis report and from previous monitoring reports; and

- recommendations for future monitoring of the project, when necessary.

Each disbursement of resources to a project is conditioned to compliance with the relevant norms and contractual clauses by the beneficiary of the financial support of the Amazon Fund. At the BNDES's discretion a monitoring visit is carried out prior to the disbursement, and the beneficiary must also be up to date with the physical and financial implementation of the project and with the submission of a performance report.

The performance report has its deadline set by BNDES by letter and must contain, among others, the following information:

- activities carried out and degree of physical execution of the project;
- charts with uses and sources of the project, indicating the total realized in the period and the accumulated;
- list of payments;
- schedule of the project's physical implementation;
- indicators of the monitoring plan;
- proof of the environmental regularity of the interventions foreseen in the project and
- evidence, through proper documents, that the company is up-to-date with its tax and labor obligations.

At the end of the project's resources utilization period, the beneficiary is required to send a final performance report to BNDES, containing, in addition to the data normally provided, the following information:

- chart of conclusion of the physical implementation of the project;
- chart of conclusion of the financial execution of the project; and
- final chart of uses and sources of the project.

At the end of the project, the beneficiary must also submit a results evaluation report, that should cover the entire project implementation period. The basic objective of this report is to consolidate information on the implementation of the supported project and the results achieved, and should contain information on its evolution, monitoring the indicators of its logical framework, the results and impacts achieved, the future sustainability of these results, problems emerged in its implementation, as well as the knowledge generated and lessons learned.

DEVELOPMENT OF EACH PROJECT'S LOGICAL FRAMEWORK

The logical framework and the impact indicators applied to the Amazon Fund's projects are defined together with the proponent still in the analysis phase of each operation. For the purposes of the Amazon Fund, the following terminology is used to describe the logical sequence of cause and effect from the results to be implemented by the project to the expected effects over time[17]:

Output - as stipulated as the purpose of the contract between the BNDES and the beneficiary (contractual obligation), at the level of effectiveness of the intervention, representing the completion of the activities performed within a project;

Outcome - main objective of support, that is, the solution of a problem situation or the achievement of an opportunity, representing a concrete change in the beneficiary's or the target public's condition, with the use of the results implemented by the project, highlighting the rationale behind the intervention and corresponding to the impacts of the intervention in short term; and

Impact - a concept adopted to explain the long-term intervention's expected contribution to the beneficiary or its target audience, representing the direction to be followed so that the long-term changes are achieved as a consequence of the outcome(s). It is

17 Definitions based on the articles: "Um resumo da teoria por trás do Método do Quadro Lógico, ASDI, 2003 and "O Quadro Lógico: um método para planejar e gerenciar mudanças", Peter Pfeiffer, 2000.

difficult to assess exactly how much a specific project contributes to its impact, since, in most cases, this impact is usually achieved through a set of interventions for which the project contributes, but it is not enough to reach.

In order to monitor the results of the supported projects, a range of indicators that are common to the projects was developed, allowing their consolidation and providing an aggregated vision of both results and impacts resulting from their actions.

This set of indicators has been constructed as the Amazon Fund's areas of activity are broadened and consolidated. For example, it was necessary to develop indicators to monitor and evaluate projects implemented by the Military Fire Brigades of the states of the Brazilian Amazon for the prevention, monitoring and control of forest fires and unauthorized burnings, which resulted in the development of indicators of specific outcomes for these projects and the production of a guiding document called "Guide for Monitoring the Impacts of Military Fire Brigade Projects"[18].

The indicator's definition stage is fundamental and considers several variables, such as:
- defining the indicator and describing its purpose;
- calculation methodology;
- collection method, identifying the form and sources of the data to be collected;
- frequency in which the indicator will be measured; and
- entity responsible for collecting the data, that can be one or more.

[18] The "Guide for Monitoring the Impacts of Military Fire Brigade Projects" was prepared togehter with the German Technical Cooperation (GIZ) and can be consulted on the Amazon Fund website - http://www.fundoamazonia.gov.br/export/sites/default/en/.galleries/documents/monitoring-evaluation/firefighting-impacts-guide.pdf

The process of defining the indicators, together with the proponent/beneficiary, helps to verify, among others, the following conditions:

- alignment with the project's objectives and, consequently, the Amazon Fund; and
- the feasibility for obtaining data for its measurement.

Whenever possible, in the monitoring of projects impacts, an assessment is made of the appropriation of results and the relative level of participation of women and specific social groups, such as members of agricultural and extractivist communities, settlers of the agrarian reform and indigenous people.

IMPACT EVALUATION OF CONCLUDED PROJECTS

In 2016 a conceptual framework for conducting impact evaluations of projects completed with the support of the Amazon was prepared and disseminated[19]. These independent evaluations are part of the strategy of carrying out *ex-post* evaluations of the main completed projects (about two years after their completion), without prejudice to future evaluations of groups of projects, to analyze the effectiveness / impact of the fund's support to sectors, territories or some other criteria that is defined.

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[19] http://www.fundoamazonia.gov.br/export/sites/default/en/.galleries/documents/monitoring-evaluation/impact_evaluations_projects_supported_2016.pdf

The independent evaluations that have been carried out can be fully checked on the Amazon Fund website.[20] The conduction of these effectiveness evaluations under the Amazon Fund has the following main purposes:

I. assist the Amazon Fund in rendering accounts to its donors about the type of project supported and its impacts;

II. enable institutional learning of the fund itself and its partners, improving the quality of projects, prioritization of investments and thus supporting decision-making;

III. verify compliance of the projects supported by the Amazon Fund with Cancun safeguards agreed under the United Nations Framework Convention on Climate Change (UNFCCC) for REDD+ actions; and

IV. verify the alignment of projects with the PPCDAm and the state plans for prevention and control of deforestation.

MONITORING THE AMAZON FUND'S IMPACTS

An analysis of the impacts of the Amazon Fund is published annually in the Activity Report of the Amazon Fund, according to the intervention logic and indicators of this logical framework. The indicators of this logical framework at the level of its general objective and at the level of the impacts of the projects have the nature of regional indicators, relating to the public policies to which the Amazon Fund aims to contribute through the projects it supports. The baseline of these indicators is the year 2009, because that was when the first operations of the Amazon Fund were approved, although there were no disbursements of resources for these projects in that year. Monitoring these public policies helps to understand the progress made in promoting the reduction of deforestation with sustainable development in the Amazon.

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[20] http://www.fundoamazonia.gov.br/en/monitoramento-e-avaliacao/independent-evaluations/

The Amazon Fund indicators are also monitored and evaluated at the level of their outcomes, by consolidating the results of these indicators based on the contribution of the various supported projects. These results are grouped in four support axes of the Amazon Fund, with a brief contextualization of their contribution and the highlight of the main results achieved.

In the case of these indicators, results have been reported in absolute terms, without reference to a baseline (zero mark). For example, in the case of the indicator "number of individuals qualified to practice sustainable economic activities effectively using the knowledge acquired", the absolute number of individuals trained by the actions of the supported projects is monitored independently of whether the implementing organizations of these projects have already acted in the past, enabling other individuals, whether in the same territory of the actions supported by the Amazon Fund or elsewhere.

The main indicators of outputs delivered by the projects are also monitored and reported annually in the Amazon Fund's Activity Report. In this way, all interested parties can monitor not only the outcomes and impacts of the Amazon Fund, but also the scope and scale of the supported actions at the level of their outputs. Examples of reported output indicators are: small-scale projects (up to R$ 100 thousand) supported by agglutinative entities; rural properties with sustainable production projects; processing plants implemented for products from family agriculture and extractive activities; indigenous lands and conservation units supported etc.

It is important to mention that the contribution of the Amazon Fund to the behavior of the indicators related to its general objective and impacts, although already identifiable and relevant, as attested by the evaluation of the projects concluded with the support of the fund, is not exclusive, joining initiatives and actions by a plurality of public and private agents that operate in this vast territory that is the Amazon.

9. CONCLUSION

As already mentioned, the monitoring of the Amazon Fund is consolidated annually, when its performance and impact indicators are verified, the risks that threaten the success of its initiatives and other relevant facts that have impacted the Amazon region are assessed, and an analysis that seeks to integrate and interpret this information is made.

Within the scope of a project, the monitoring of the effects of the supported actions occurs concurrently with the monitoring of its implementation and also at its conclusion. For each completed project, an evaluation of its results and impacts is carried out and published in the activity report of the Amazon Fund. *Ex-post* evaluations of the effectiveness of some completed projects were also carried out.

Finally, it should be stressed that this logical framework will necessarily undergo further adjustments throughout its existence, especially with regard to its indicators and risks. As more appropriate and regional indicators become available, they should be adopted. Also, the day-to-day reality along with the analysis and monitoring of projects supported by the Amazon Fund will imply the identification of new indicators for monitoring their outcomes.

A monitoring plan in the form of tables is attached.

Annex

MONITORING PLAN

GENERAL OBJECTIVE: Reduction of deforestation with sustainable development in the Brazilian Amazon			
Indicator	**Definition**	**Collecting method**	**Frequency**
Annual deforestation in the Legal Amazon	Estimation of clear cut deforestation in the Legal Amazon using satellite images with a margin of error of around 10%	Viewing of the INPE website	Annual
Participation of Brazilian Amazon states' GDP in comparison to Brazil's GDP	To compare the evolution (%) of the Legal Amazon states net production goods and services in relation to the country	Viewing of the IBGE website	Annual

MONITORING PLAN

Impact component 1: Activities that maintain the forest standing are economically attractive			
Impact indicator	**Definition**	**Collecting method**	**Frequency**
Production of the vegetal extraction of the states with presence of the Amazon Biome	To measure the evolution of the value of the production of the vegetal extraction in the states of the Legal Amazon	Viewing of IBGE website	Annual

Outcome 1.1: Economic activities that use the forest and biodiversity sustainably have been identified and developed Outcome 1.2: Production chains of agroforestry and biodiversity products with added value increased			
Indicator	**Definition**	**Collecting method**	**Frequency**
Income from sustainable use economic activities—unprocessed and processed products	Measurement of income increment generated by sustainable use economic activities supported by the Amazon Fund during the period of implementation of the projects	Technical and supervision reports of supported projects	Annual
Directly managed forest area (hectares)	Measurement of forest area increment directly managed with extractive activities as a result of the projects supported	Technical and supervision reports of supported projects	Annual

MONITORING PLAN

Outcome 1.3: Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity			
Indicator	**Definition**	**Collecting method**	**Frequency**
Number of individuals trained to effectively practice sustainable economic activities using the knowledge acquired, broken down by: (i) X individuals (total); (ii) Y women (including indigenous women) and (iii) Z indigenous people (including indigenous women)	Measurement of the number of individuals trained to effectively practice sustainable economic activities using the knowledge acquired, broken down by: (i) X individuals (total); (ii) Y women (including indigenous women) and (iii) Z indigenous people (including indigenous women)	Technical and supervision reports of supported projects	Annual
Number of strengthened community organizations	Measurement of the number of strengthened community organizations as a result of the projects supported.	Technical and supervision reports of supported projects	Annual

Outcome 1.4: Deforested and degraded areas recovered and used for economic or ecological conservation purposes			
Indicator	**Definition**	**Collecting method**	**Frequency**
Area with recovered vegetation cover used for economic purposes	Measurement of area with recovered vegetation cover used for economic purposes as a result of the projects supported.	Technical and supervision reports of supported projects	Annual

MONITORING PLAN

Impact component 2: Governmental actions ensure the conformity of human activities to the environmental legislation			
Impact indicator	**Definition**	**Collecting method**	**Frequency**
Number of municipalities able to license activities with local environmental impact	Measurement of number of municipalities able to license activities with local environmental impact	Research with the state environmental agencies of the Legal Amazon	Annual
Number of environmental permits or licenses granted annually by state environmental agencies	Measurement of number of environmental permits or licenses granted annually by state environmental agencies	Research with the state environmental agencies of the Legal Amazon	Annual
Number of outposts (regional units) of state environmental agencies	Measurement of number of outposts (regional units) of state environmental agencies	Research with the state environmental agencies of the Legal Amazon	Annual

MONITORING PLAN

Outcome 2.1: Monitoring, control and environmental accountability institutions have been structured and modernized			
Indicator	**Definition**	**Collecting method**	**Frequency**
Number of forest fires or unauthorized burnings fought by fire brigades	Measurement of the number of forest fires or unauthorized burnings fought by fire brigades as a result of the projects supported.	Technical and supervision reports of supported projects	Annual
Number of servers effectively trained using the knowledge acquired (specified by gender)	Measurement of the number of servers effectively trained using the knowledge acquired (specified by gender)	Technical and supervision reports of supported projects	Annual
Monitored area in other Brazilian biomes and other tropical countries	Measurement of monitored area in other Brazilian biomes and other tropical countries	Technical and supervision reports of supported projects	Annual
Area and number of properties registered in the CAR with analyzed and regular cadastre	Measurement of the number and area of properties registered in the CAR as a result of the supported projects that were analyzed by the environmental agency and which have a regular cadastre (not pending before the environmental agency), including both properties registered in the CAR that do not have environmental liabilities and those considered with regular registration by the competent environmental agency because they are complying with the stages of their environmental regularization process.	Technical and supervision reports of supported projects	Annual

MONITORING PLAN

Outcome 2.2: Access of rural producers to environmental regularization of their properties has been increased			
Indicator	**Definition**	**Collecting method**	**Frequency**
Number and area of properties that had their application to join the CAR registered	Measurement of number and area of properties that had their application to join the CAR registered as a result of the projects supported.	Technical and follow-up reports of supported projects	Annual
Area with vegetation cover recovered for environmental regularization (regeneration in progress)	Measurement of area with vegetation cover recovered for environmental regularization (regeneration in progress) as a result of the projects supported.	Technical and follow-up reports of supported projects	Annual

MONITORING PLAN

Impact component 3: The Brazilian Amazon is submitted to land-use planning			
Impact indicator	**Definition**	**Collecting method**	**Frequency**
Area of indigenous lands (ILs) and federal conservation units (CUs) in the Legal Amazon with territorial management instrument	Measurement of area of indigenous lands (ILs) and federal conservation units (CUs) in the Legal Amazon with territorial management instrument	Research with ICMBio and Funai	Annual, if available
Deforestation in protected areas in the Legal Amazon	Measurement of deforestation in protected areas in the Legal Amazon	Viewing of INPE website	Annual, if available

MONITORING PLAN

Outcome 3.1: Public forests and protected areas expanded			
Indicator	**Definition**	**Collecting method**	**Frequency**
Area of conservation units (CUs) created	Measurement of area of conservation units (CUs) created as a result of the projects supported.	Technical and supervision reports of supported projects	Annual
Recognized indigenous lands (ILs)	Measurement of recognized indigenous lands (ILs) as a result of the projects supported.	Technical and supervision reports of supported projects	Annual

Outcome 3.2: Protected areas have infrastructure, territorial protection and consolidated management			
Indicator	**Definition**	**Collecting method**	**Frequency**
Area of conservation units (UCs) and indigenous lands (ILs) with strengthened infrastructure, management and/or control of their territory	Measurement of area of conservation units (UCs) and indigenous lands (ILs) with strengthened infrastructure, management and/or control of their territory	Technical and supervision reports of supported projects	Annual
Number of individuals trained in activities related to UCs and ILs management effectively using the knowledge acquired	Measurement of the number of individuals trained in activities related to UCs and ILs management effectively using the knowledge acquired as a result of the projects supported.	Technical and supervision reports of supported projects	Annual
Area with vegetation cover recovered in CUs and/or ILs for environmental conservation purposes (regeneration in progress)	Measurement of area with vegetation cover recovered in CUs and/or ILs for environmental conservation purposes (regeneration in progress) as a result of the projects supported.	Technical and supervision reports of supported projects	Annual

MONITORING PLAN

Outcome 3.3: Areas with regularized land titles expanded.			
Indicator	**Definition**	**Collecting method**	**Frequency**
Rural properties areas with regularized land titles	Measurement of rural properties areas with regularized land titles as a result of the projects supported.	Technical and supervision reports of supported projects	Annual

Outcome 3.4: Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded.			
Indicator	**Definition**	**Collecting method**	**Frequency**
Land areas with territory organization defined through the EEZ	Measurement of land areas with territory organization defined through the EEZ as a result of the projects supported	Technical and supervision reports of supported projects	Annual

MONITORING PLAN

Impact component 4: Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity			
Impact indicator	**Definition**	**Collecting method**	**Frequency**
Number of patent applications filed with the National Intellectual Property Institute	Measurement of the number of patent applications filed with the National Intellectual Property Institute por residentes nos estados da Amazônia Legal	Viewing of INPI website	Annual
Value of subsidy paid to extractivists for the promotion of socio-biodiversity product chains in the states of the Legal Amazon (PGPM-Bio)	Measurement of the value of subsidy paid to extractivists for the promotion of socio-biodiversity product chains in the states of the Legal Amazon (PGPM-Bio) pela Conab no âmbito da Política de Garantia de Preços Mínimos para Produtos da Sociobiodiversidade (PGPM-Bio).	Consultation to Conab	Annual

MONITORING PLAN

Outcome 4.1: Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated

Indicator	Definition	Collecting method	Frequency
Number of scientific, pedagogical or informative publications produced	Measurement of the number of scientific, pedagogical or informative publications produced no âmbito de projetos de pesquisa apoiados pelo Fundo Amazônia	Technical and supervision reports of supported projects	Annual
Number of researchers and technicians involved in CT&I activities residing in the Amazon region (specified by gender)	Measurement of the number of researchers and technicians involved in CT&I activities residing in the Amazon region (specified by gender) durante a execução dos projetos de pesquisa apoiados pelo Fundo Amazônia (especificados por gênero)	Technical and supervision reports of supported projects	Annual

Outcome 4.2: Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated

Indicator	Definition	Collecting method	Frequency
Number of solidarity finance operations carried out to promote sustainable productive activities through community revolving funds or similar instruments	Measurement of the number of solidarity finance operations carried out to promote sustainable productive activities through community revolving funds or similar instruments com o apoio do Fundo Amazônia	Technical and supervision reports of supported projects	Annual

AMAZON FUND'S OBJECTIVES TREE

GENERAL OBJECTIVE
Reduction of deforestation with sustainable development in the Brazilian Amazon

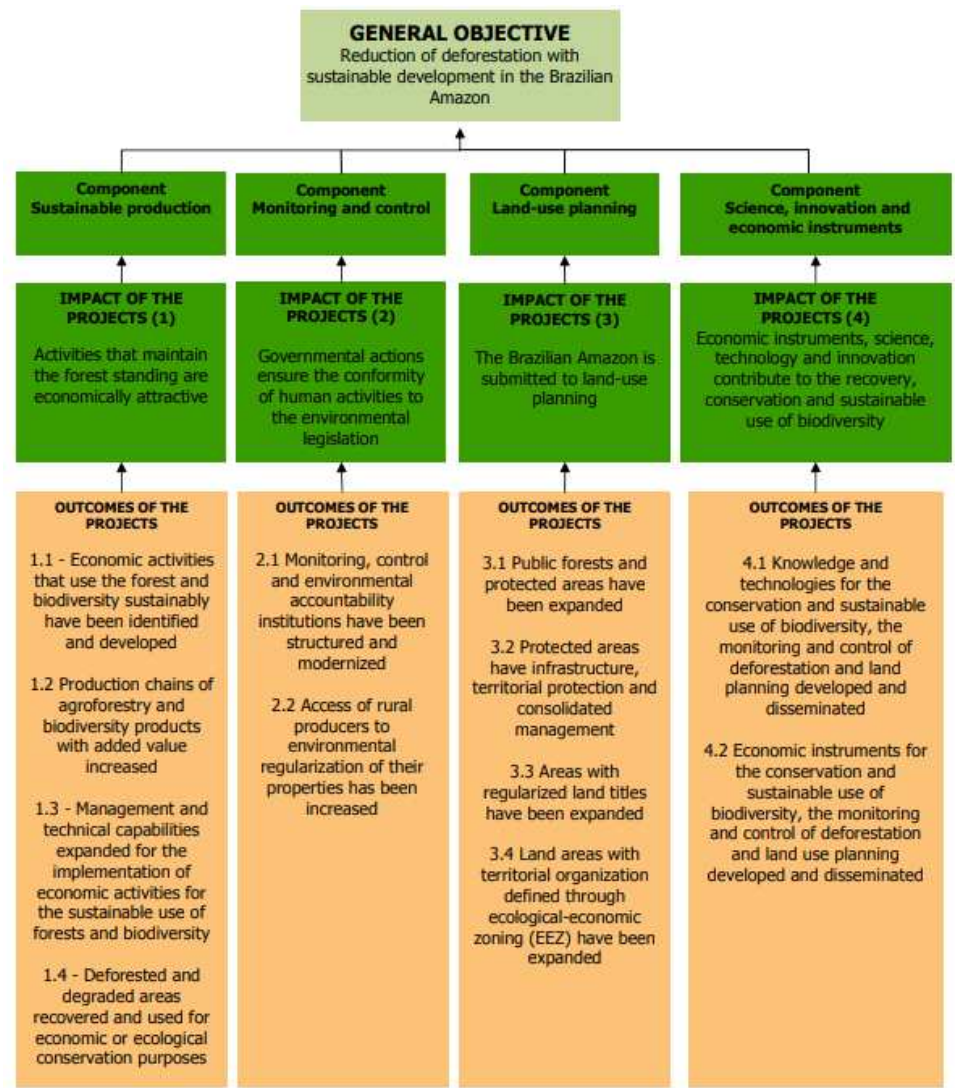| Component Sustainable production	Component Monitoring and control	Component Land-use planning	Component Science, innovation and economic instruments
IMPACT OF THE PROJECTS (1) Activities that maintain the forest standing are economically attractive	**IMPACT OF THE PROJECTS (2)** Governmental actions ensure the conformity of human activities to the environmental legislation	**IMPACT OF THE PROJECTS (3)** The Brazilian Amazon is submitted to land-use planning	**IMPACT OF THE PROJECTS (4)** Economic instruments, science, technology and innovation contribute to the recovery, conservation and sustainable use of biodiversity
OUTCOMES OF THE PROJECTS 1.1 - Economic activities that use the forest and biodiversity sustainably have been identified and developed. 1.2 Production chains of agroforestry and biodiversity products with added value increased. 1.3 - Management and technical capabilities expanded for the implementation of economic activities for the sustainable use of forests and biodiversity. 1.4 - Deforested and degraded areas recovered and used for economic or ecological conservation purposes	**OUTCOMES OF THE PROJECTS** 2.1 Monitoring, control and environmental accountability institutions have been structured and modernized. 2.2 Access of rural producers to environmental regularization of their properties has been increased	**OUTCOMES OF THE PROJECTS** 3.1 Public forests and protected areas have been expanded. 3.2 Protected areas have infrastructure, territorial protection and consolidated management. 3.3 Areas with regularized land titles have been expanded. 3.4 Land areas with territorial organization defined through ecological-economic zoning (EEZ) have been expanded	**OUTCOMES OF THE PROJECTS** 4.1 Knowledge and technologies for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land planning developed and disseminated. 4.2 Economic instruments for the conservation and sustainable use of biodiversity, the monitoring and control of deforestation and land use planning developed and disseminated

The Amazon Fund. Brazil protects it. The world supports it. Everyone wins.

Fotos: Divulgação/BNDES