



# **Bolsa Floresta**

## Program

Trajectory, lessons and challenges of an innovative public policy for the Amazon

#### 1st Edition

#### Manaus

Foundation for Amazon Sustentability
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Institutional Partnership:





Partners in Implementation:











Contribute to the environmental conservation of the Amazon by valuing the standing forest and its biodiversity and improving the quality of life of riverside communities associated with the implementation and dissemination of knowledge on sustainable development.

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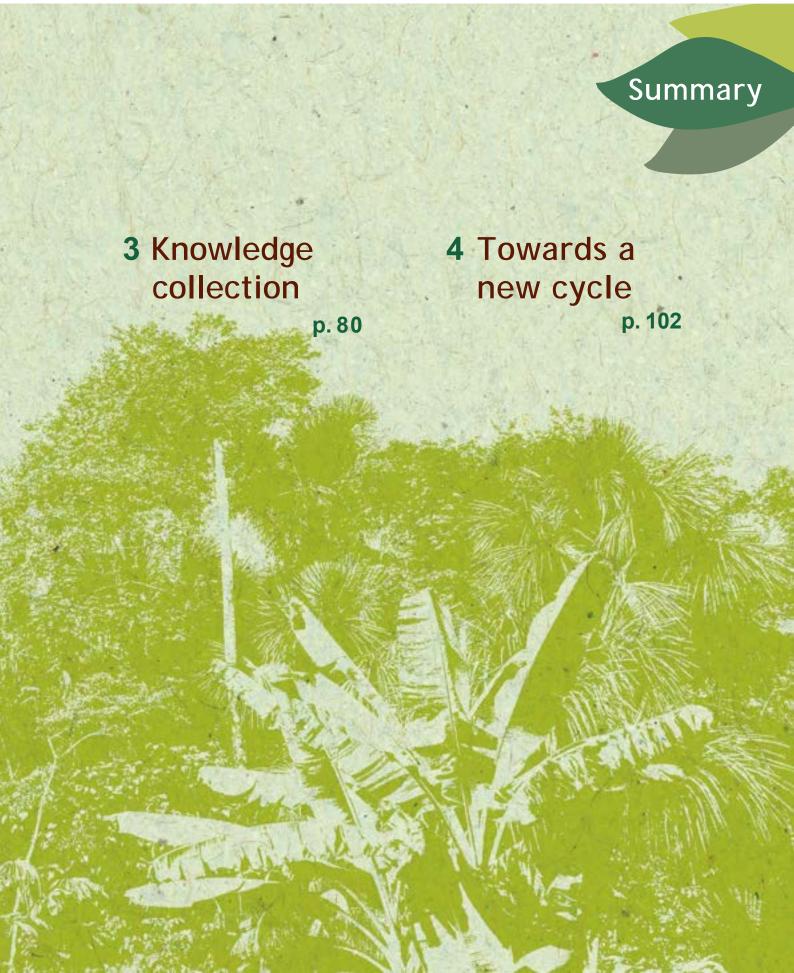


First of all, we would like to thank the more than 9,000 families benefited by Bolsa Floresta Program, who show that the forest is worth more standing than being cut down and that an improvement in the quality of life can be associated with the conservation of Amazon biodiversity.

To the Government of the State of Amazonas and to the entire system of program partners, who made this transformative action possible.

To all the professionals of the Foundation for Amazon Sustentability (FAS) who shared the program's innovative vision and committed to reaching the deep Amazon to take care of those who take care of the forest.





### Preface

he Bolsa Floresta Program (BFP) was born out of a concern: how to reward the guardians of the forest for the benefits generated for Brazil and the planet for the ecosystems they protect? How to reverse a climate injustice, in which those least responsible for climate change are the most affected?

The idea of creating a payment program for environmental services arose during a trip to Costa Rica, organized by the Department for the Environment and Sustainable Development of Amazonas (SDS). The delegation was led by Governor Eduardo Braga and was hosted by the then Minister of Environment of Costa Rica, Carlos Manuel Rodrigues. On this occasion, we got to know Costa Rica's pioneering system of payment for environmental services, its logic and operating structure.

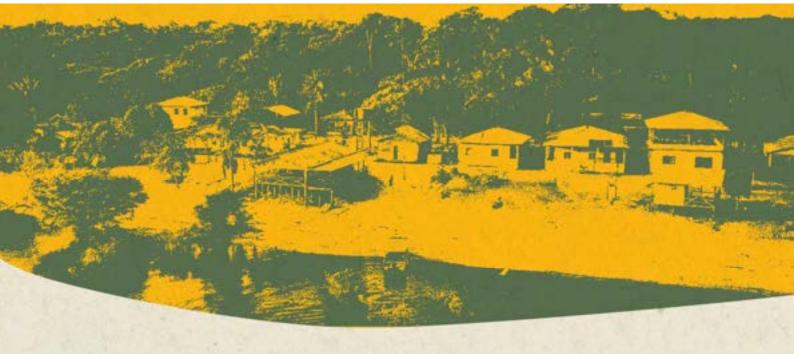
We returned to Brazil inspired and challenged to invent something appropriate for the reality of Amazonas. The challenge was enormous, given the dimensions and complexities of the state's reality, which has more tropical forests than any other country, with the exception of Brazil itself. Once the political decision was taken by the then Governor to create the Program, it was up to SDS to coordinate a long and rich process of construction. This process involved dozens of technical meetings, multi-institutional workshops in Manaus and in the Amazonas conservation units. Representatives of social movements, universities, environmental organizations and government bodies participated. In addition, several meetings were held to analyze the legal aspects, involving the Office of the President's Chief of Staff and the Attorney General's Office of the State of Amazonas, among others, in addition to specialized advisors. The result of this was a Bill, approved on Environment Day, on June 5, 2007.

The initial implementation, in the second half of 2007, was carried out by SDS with the support of the Institute of Conservation and Sustainable Development of Amazon (Idesam). As of early 2008, the task of implementing the

Program was granted to the Foundation for Amazon Sustentability (FAS) through a Cooperation Agreement with the SDS. Over time, FGP has gone through a process of maturation and evolution. In the original law that created it, the Program was aimed only at paying families, with a preferential focus on women. Soon after, the "support programs" and then the "FGP components" appeared. The evolution, detailed in this book, was the result of more than 970 participatory planning workshops carried out between 2008 and 2021.

The implementation of the FGP had the decisive support of Bradesco, which was the main supporter of FAS until the date of publication of this book. The Government of Amazonas made an initial donation of 20 million reais, which was fully used to pay monthly benefits to the families. The resources were applied and the total resources of the Government of Amazonas effectively applied was BRL 28,738,357. The rendering of accounts for the investments made was submitted and approved by the Accounting Court of the State of Amazonas.

When resources from the Government of the State of Amazonas ended in April 2015, FAS communicated the fact to SDS, manifesting the need for a solution that would avoid the discontinuity of the Program. The period that followed was one of great political instability in Amazonas, which culminated in the impeachment of the then Governor José Melo, followed by the institution of a provisional government led by the president of the State Legislature, David Almeida, and, later, by a partial term of office of the governor-elect, Amazonino Mendes. In this scenario of instability, FAS took the decision to pay for the maintenance of the Program, in agreement with the Departament of Environment (Sema), which replaced the old SDS with a new structure and mandate. For this, the institution allocated resources from its FAS Fund, which totaled BRL 28,626,173 in payments to FGP beneficiaries (nominal amounts until December 2020).



In 2019, under the Wilson Lima government, a solution was found to finance the payment of FGP, including the readjustment of its value to BRL 100,00 per family per month. Bill No. 491/2020 authorizes the inclusion of the Bolsa Floresta Program in the PPA (Multi-Annual Plan) 2020/2023, in the form of an item of BRL 20 million for Sema. With the pandemic, this amount was eliminated from the budget. In the following year (2021), the appeal was again included in the Budget Guidelines Law No. 5.248, dated September 14, 2020. In view of this, a new stage in the history of the Bolsa Floresta program opens. This was one of the factors that motivated the writing of this book, which covers the period in which FGP was managed by FAS, recording its main advances and results.

The implementation of FGP can be considered successful: in the opinion of beneficiary families, 81% say that life has improved (positive changes) after the beginning of the Program; deforestation was reduced by 53% and average income increased by 202%. In the evaluations carried out with a margin of error of 5%, in 2011, 2015 and 2019, the evaluation of the activities conducted by FAS for the implementation of FGP, obtained grades 7 (seven), 8.4 (eight point four) and 8.7 (eight point seven), respectively, on a scale of 0 to 10.

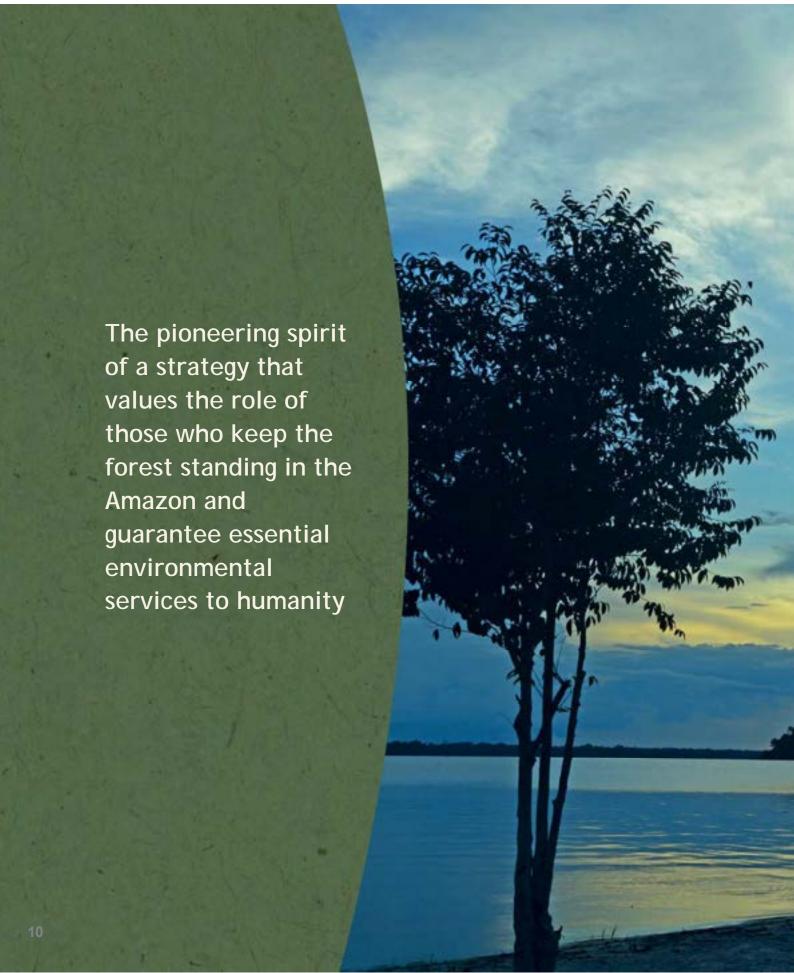
Success in achieving such expressive results was

only possible thanks to an extremely committed, competent and professional team at FAS. This team that faced tempests of tidal waves, Black flyies and tough times of the deep Amazon to transform a concept into a victorious program of concrete achievements. In addition, the partnership and engagement of SDS and Sema teams, each in their own time, was fundamental. Finally, we would not have achieved such success without the decisive support of more than 320 FAS partners. We are deeply grateful to all of them for their complicity and engagement in overcoming the challenges of this Program. Looking to the future, we can dream of a Program strengthened with the renewed commitment of the Government of Amazonas, with its funding through Sema.

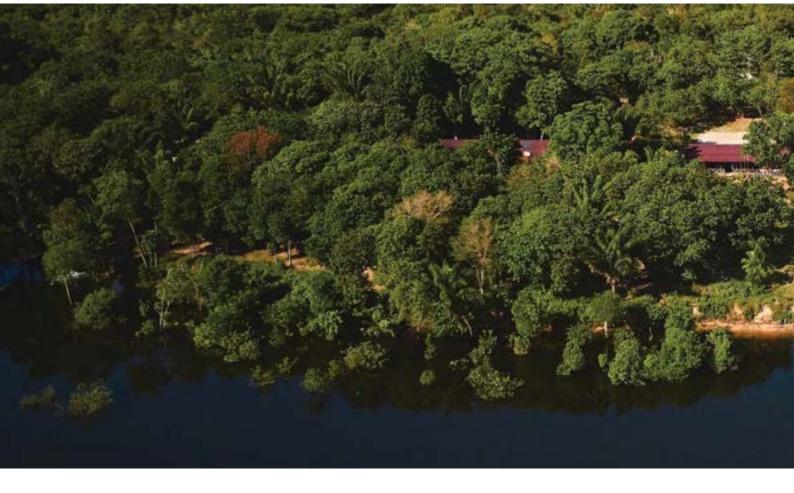
The management of the program must undergo adjustments according to the new financing model. We hope that these changes guarantee an even more successful future. After all, it is the largest payment program for environmental services in tropical forests in the world and the best evaluated internationally. It is our duty and that of all partners to fight for its perpetuity and continuous improvement. We hope that this book will contribute to that future, as a record of a pivotal period of history of Bolsa Floresta Program.











The first decade of the 21st century was marked by intense movement

in the debate on the future of the planet. There were great expectations of demands and transformations for the new millennium, which was full of uncertainties after the turn of the year 2000, the Kabbalistic dates from the history of humanity, inspiring positive and negative predictions coming from the various fields of knowledge, in addition to reference for commitments, goals, reflections.

The scenario of apprehension with the new times intensified at the beginning of that decade, with the terrorist attack on the Twin Towers, in New York, on September 11, 2001, and its possible global consequences. At the time, the world was already mobilizing around the Millennium Development Goals, established by the United Nations exactly one year earlier, in September 2000, presenting eight major goals

with an emphasis on the reduction of extreme poverty, in the horizon of 2015.

In 2002, the socio-environmental agenda came to the fore when around 100 heads of state and more than 50,000 scientists, activists and diplomats gathered in Johannesburg, South Africa, for the World Summit on Sustainable Development, chaired by UN: Rio+10, which resumed the agreements signed in 1992 at ECO-92, held in Rio de Janeiro.

The following year, the war led by the United States against Saddam Hussein's Iraq began, the space shuttle Columbia disintegrated in the re-entry of the Earth's atmosphere, with the death of the seven astronauts on board, and the last official flight of the Concorde took place, the legendary and then largest plane in the world. However, the debate on environmental issues only heated up again in 2006, when documentary An



Inconvenient Truthwas released, in which filmmaker Davis Guggenheim accompanies Al Gore, the former US presidential candidate, on the lecture circuit to raise public awareness of the dangers of global warming.

In 2007, the Kyoto Protocol, an international treaty with commitments to reduce the emission of gases that produce the greenhouse effect, completed ten years. Among other points, the agreement allowed developed countries to lower the targets by purchasing "carbon credits" directly from nations that pollute little and, thus, the Clean Development Mechanism (CDM) was created.

Globally, the topic of the impacts of global warming was gaining strength and increasing space in the news, due to the successive alerts of science and the reports of the Intergovernmental

Panel on Climate Change (IPCC) – the fifth and most recent, published in 2014 with the participation of more than a thousand scientists. In parallel, the private sector, led by large multinational companies, increased the movement around the concept of sustainability, on the environmental, economic and social tripod, with goals and commitments, as a strategy for the survival of the business itself. In this sense, the purpose of this publication is to present how Bolsa Floresta program connects with this global context and refers to the pioneering spirit of this initiative for the Amazon and for the world as a whole.

In Brazil, and particularly in the Amazon, the

It was necessary to tinker with the equation so that the person at the end recognizes that it is more worthwhile to keep the forest standing

Virgilio Viana, General Superintendent of FAS

> worrying scenario was no different. On the contrary, it was even more apprehensive about the high rates of deforestation, which in 2004 reached the highest level in history, with the annual loss of 27,400 km<sup>2</sup> of forest, greater than the area of Sergipe. The scenes of clearcutting with tractors and chains, and of the fires drew the world's attention, and, in the face of pressure, the country developed policies that markedly reduced the problem in the following years, as of 2005, until the measures were relaxed over time and the curve rises again in 2013, with a high risk to biodiversity, the living conditions of traditional populations and the role of the Amazon in regulating the global climate.

> Amazonas, heart of the largest tropical forest on the planet, is the greenest state in the country, with the largest extension of forests: more than 140 million hectares. It is also the state with the largest protected area: 45 million hectares in conservation units and indigenous lands, which serves as a shield against the advance of new frontiers of deforestation. In total, 97.7% of the Amazon territory is covered by forests, but the richness of the natural heritage coexists with precarious social and

economic indices, with low participation in the Brazilian Gross Domestic Product (GDP) - a scenario that, at that moment of disquiet (the murder of Dorothy Stang revived the memory of the death of Chico Mendes), at the beginning of the current century, mobilized the search for policies more effective capable of allying conservation and development in the state.

A big step in this direction, after a process of genesis started in 2003, came with the innovative Zona Franca Verde Program (Green Free Trade), focused on actions to make the forest worth more standing up than down. A new impetus came in 2007, with the innovative law that instituted the State Policy on Climate Change, Environmental Conservation and Sustainable Development of the Amazon (Law No. 3.135), carrying the symbolism of having been approved on that June 5, 2007, World Environment Day.

## A new look at the appreciation of the forest

First state legislation on climate change in Brazil, the Amazon legislation served as a reference for legal frameworks on this topic existing today in 17 other Brazilian states, with adaptations the US



to regional realities. As an unprecedented contribution, the policy brought an important implementation instrument: the Payment for Environmental Services (PSA) mechanism, to date one of the largest in the country and in the world, with the logic of financially rewarding those who adopt sustainable practices in the land use and, in this way, helps to protect vital natural resources for all humanity.

Thus, the Bolsa Floresta Program (BFP) was born, intended for the initial payment of BRL 50,00 monthly for riverside families living in state environmental reserves in exchange for a commitment not to deforest and prevent forest fires, with access to income and quality of life. In the program's vanguard vision, the achievement of better social and economic conditions is associated with the ofconservation ecosystem services: biodiversity, water, soils, food and carbon stock, among others, and nothing is fairer than the "forest guardians" be rewarded by those who depend directly or indirectly on these benefits.

As a source of long-term financing, the pioneering public policy of Amazonas looked at the potential – at the time, quite promising - around resources from carbon credits for avoided deforestation, given the expectation of transfers by companies, governments and organizations in Brazil and around the world in an effort to offset their greenhouse gas emissions, by contributing to keeping the forest well conserved. In addition to providing legal certainty for operations with carbon credits, the legislation provided for initiatives for later regulation and laid the institutional foundations for the execution of these resources, with lower risks of continuity due to political changes. In this way, the aim was to guarantee agility and efficiency of the implementation process, without the administrative obstacles of the Government.

The Bolsa Floresta Program encourages the commitment to keep the forest standing through access to improved income





There was an important differential: the strong social component. The residents of the state protected areas, who in turn need the forest standing to obtain income and daily sustenance for their families, gained prominence and occupied the center of the strategy. Taking care of those who take care of the forest became an essential mantra at that moment of search for sustainable development with reduction of deforestation. "It was the icing on the cake of the state law, within a very rich and participatory construction process", highlighted, at the time, Virgilio Viana, then Secretary of the Environment and Sustainable Development of Amazonas and current general superintendent of Foundation for Amazon Sustentability (FAS) non-governmental organization established in March 2008 as Foundation for Amazon with Sustentability, responsibility for implementing the public policy of Bolsa Floresta. In 2020, the institution expressed in its name the challenges for a greater scope of actions in the Amazon territory, as a result of the paths opened by the program throughout its history (read more in chapter 4).

"It is necessary that the main environmental services of the Amazon, such as water and carbon, be more appreciated. And who should pay for them are the guardians of the forest, as a matter of ethics, justice and strategy", says Viana. On the ground of communities, he says, "the

decision to cut a tree or not is not made out of ignorance or bad faith, but out of intelligence and rationality, according to the understanding of what is most advantageous to have a better life". Therefore, in his view, "it was necessary to change the equation so that the person at the tip recognizes that it is more worth keeping the forest standing than cutting it down". For Viana, therein lies the beauty of Bolsa Floresta, in the way it was implemented by FAS: "How much is a child in school worth to someone who lives in a remote area, far from any city? How much is the risk of the exodus to urban areas with social vulnerabilities, such as drugs and prostitution? How much is drinking water worth for a place that has a high rate of diarrhea?". According to him, these issues involve intangible values and to deal with them "we created around the program and FAS a set of elements that make the valorization of the standing forest to work".

### Evolution in socioenvironmental components

After the birth of Bolsa Floresta as a PSA, it was realized that only the reward of paying riverside people for environmental services would be insufficient to contain the risk of deforestation, a complex challenge that required a holistic and comprehensive strategic vision. Thus, in addition to the monthly BRL 50.00 transferred to families in state conservation units according to the Climate Change Law at its origin, FAS opened up the range of socioenvironmental actions with

On Madeira River, the cocoa production chain creates an alternative against deforestation



investments in components complementary to the program that evolved over time, demonstrating the institution's ability to articulate and attract resources (read more in chapter 2).

In addition to the Bolsa Floresta Family, intended for the monthly payment to beneficiaries, provided for in Law No. 3.135, of 2007, FAS conceived and implemented the "Association", "Social" and "Income" Bolsa Floresta modalities, which expanded the fronts of action in favor of quality of life in the communities served, dismembering like the branches of a leafy tree full of fruits – which, in 2018, gave basis to the creation of the Standing Forest Program (Floresta em Pé),

The community organization is the driving force for the participative management of investments in infrastructure, income and empowerment by Bolsa Floresta

that connects with other strategic initiatives developed by FAS.

"The model goes beyond the simple payment for environmental services; it is a process of engaging these populations in the conservation and deforestation reduction agenda", emphasizes Viana, paraphrasing the Chinese proverb of not only giving fish, but fishing rods, without assistentialism. In this trajectory, from social empowerment with appreciation of community leaders, gender equality and autonomy to develop forest production chains, new concepts and perspectives began to populate the debate on the reality of the so-called "deep Amazon" (Amazônia profunda). "Since the beginning of Bolsa Floresta, we have had social participation as a premise, rooted in my experience as a professor at ESALQ/Universidade de São Paulo, when I taught a course on participatory management with



extractivists, quilombolas, 'caiçaras' and other traditional populations", says Viana. "Our objective was to conceive an innovative program within the context of Amazon logistics, with the ability to engage and mobilize everyone. The challenge of keeping the forest standing would only come from this engagement".

The avant-garde of Bolsa Floresta directed all attention to Amazonas, which at the time, took a leading environmental position in the Brazilian scenario. The model became a reference to other public policy initiatives in protected areas, such as the Bolsa Verde income transfer program, created by the federal government in 2011 and discontinued in 2018. The main difference lies precisely in the participatory and engagement criteria of Bolsa Floresta, with a methodology of environmental education workshops prior to the adhesion of families, with support for community organization being one of the strongest pillars.

Due to its pioneering spirit, it was natural to have some initial resistance, and even criticism, since the program affected certain standards and values that had hitherto been uncommon in these areas. Some of the questions were around the amount of BRL 50.00 per month. "The amount may be low for the urban reality, but it represents a lot for those who are far from the financial world, obtain flour and fish for subsistence in their backyards, and need the money to buy clothes, medicines and other items, facing the exploitation of unfair prices when they sell production in exchange for basic necessities, in the traditional supply system of the Amazon", explains Viana.

Thus, the numerical results of socio-environmental actions need to consider the nuances of Amazon realities. In early 2021, after

Bolsa Floresta, in its different actions, allowed populations to advance faster to leave the level of extreme poverty.

Benjamin Sicsú, Chairman of the Board of Administration of FAS

14 years, Bolsa Floresta covered around 9,300 families, with almost 40,000 people benefited, in sixteen state conservation units, covering a total protected area of 10.9 million hectares, almost triple the territory of the state of Rio de Janeiro. Between 2008 and 2020, BRL 57.6 million was invested in payment as a reward for environmental services, in addition to the amounts raised and transferred by FAS to the various socio-environmental actions structuring the program (read more on page 28).

As a result, according to official indicators from National Institute for Space Research (INPE) processed by FAS, since the beginning of the program there has been a 53% reduction in average deforestation in the protected areas served by Bolsa Floresta, in the period from 2008 to 2017, with an increase of 18% between 2018 and 2019, reflecting the general context of increased forest falling throughout the Amazon during the period. The average income of families had a significant growth of 202% in the period from 2009 to 2019 in some areas, such as the RDS of Rio Negro, which rose from BRL 497 to BRL 968, between 2011 and 2019.

## Pregnancy in a favorable environment

The current results refer to a strategy built since 2003, when Eduardo Braga's first term in the state government began with the vision of making Amazonas an environmental power due to its forest characteristics and potential in the face of growing global demands, such as climate change. The creation of a State Department for the Environment and Sustainable Development (SDS), the first in the country to include the concept of sustainability in its name, was a sign of the new times. With this bias, the environmental conservation agenda became transversal to the economy, planning and other spheres of state management.

The process of modernization and strengthening of the environmental area gave rise, in 2003, to

It is possible to conserve the forest respecting and valuing the people who live in it, deep in the most remote corners of the Amazon, where it maintains a permanent respectful relationship with nature, taking only what is necessary to survive.

Green Free Trade Zone (PZFV), aimed at developing sustainable forestry chains associated with the management of conservation units and the promotion of ethnodevelopment in indigenous lands. In 2007, in addition to the aforementioned Law on Climate Change, the legal framework that created the State System of Conservation Units (SEUC) was approved — marked by the participation of traditional communities, academy, the third sector and public managers. Finally, in that same year, Decree No. 6.040 instituted the National Policy for the Sustainable Development of Traditional Peoples and Communities, with a strong contribution from Amazonas.

In a short time, several conservation units were created in the sustainable use category, with fewer restrictions in relation to those of integral protection, with the challenge of involving local communities so that the areas left the drawing board and exercised a fact its function with income generation, quality of life and protection of biodiversity.

In a favorable political and legal context, Bolsa Floresta prospered in its conception and in its first steps. "It was the answer awaited for decades by the fearless traditional peoples, riverside and indigenous peoples who had only one chance in life: to use natural resources to guarantee the family's food. For the first time, they gained the deserved role in the mission to keep the forest standing", highlights the senator and former governor of Amazonas.



At that time, according to him, there was already a consensus that it was imperative to create more effective ways to preserve nature — which facilitated the creation of the first law and the entire policy aimed at this segment. "In addition to creating the legal framework, we innovated by including those who live and raise their descendants amidst the green immensity, taking advantage of what the Amazon fauna and flora do not always have in the most appropriate way".

In the senator's view, the challenge went "beyond the transfer of resources for the caboclo to stop deforesting: it was an opportunity we created to invite them to rethink their relationship with the forest — an apparently indestructible biome, because of its grandeur, but delicate and finite." Looking back in history, the lesson is that

## As a pioneering and innovative experience, Bolsa Floresta attracted media attention

"it is possible to preserve the forest respecting and valuing the people who live in it, deep in the most remote corners of the Amazon, where they maintain a permanent respectful relationship with nature, taking only what is necessary to survive. This contingent renders an invaluable service to future generations and to the world, whose environmental balance, already as exhaustively proved by science, depends, indeed, on the preservation of the complex dynamics of the Amazon. These men and women always deserve to be recognized and valued."

### Reducing inequality

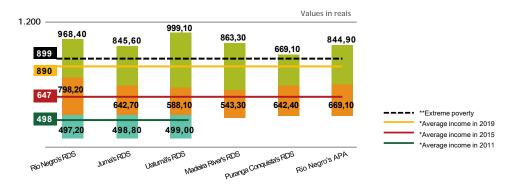
The challenge is in line with the current demands of society, notably on the issue of reducing social inequality, which has gained even greater attention in the world impacted by the covid-19 pandemic, with the prospect of transformations for a more sustainable future. "Bolsa Floresta, in its different actions, allowed populations to advance faster to get out of the level of extreme poverty", says Benjamin Sicsú, president of the Board of Directors of FAS - a position in which, since 2016, he has encouraged the construction of indicators on income growth and deforestation reduction. For Sicsú, the Bolsa Floresta has the potential to be replicated in the Amazon states as a public policy for income transfer, essential in a fair society, when seeking a development model for the country.

In its inception, the construction of the model required a series of technical, legal and political preparations, based on the decisions of a multi-institutional working group installed at the head office of the government of Amazonas, involving the State Attorney General's Office and several other instances. During the consultation period and the search for references, there was also a work trip by the governor and secretary of SDS to Costa Rica, a world pioneer in PSA, in addition to intelligence efforts to design an innovative financial arrangement capable of meeting the premises and incipient program strategies, with an emphasis on long-term investment capacity.

## Financial model ensured continuity

Financial engineering in the public-private partnership model was an innovative point of Bolsa Floresta. The initial investment in the implementation of the program by FAS was made through the contribution of BRL 20 million from the state government to finance the Bolsa Floresta Program.

#### POVERTY REDUCTION IN CONSERVATION UNITS



\*Source: Total sample for each year – Action. The results presented refer to weighted averages of the declaratory income of the families in each CU. \*\*Extreme poverty: For the presentation of the extreme poverty result, the monthly average of the dollar exchange rate for the year 2019 published by BACEN was used as a basis for calculation: BRL 3,9433. USD 1.90 x R\$ 3,9433: BRL 7,4923 x 30 days: BRL 224.77 x 4\*\*\*: BRK 899.1. 4\*\*\*: Average number of residents per occupied household in the North region – IBGE Census 2010. Note: Values corrected by the IPCA. This data refers to monetary income. It does not include subsistence economy (flour, fruit and others).



FAS received another BRL 20 million from Bradesco, with the creation of a long-term fund, providing for the use of the proceeds for its institutional activities. Two years later, Coca-Cola Brazil joined the initiative, with a contribution of over BRL 20 million, and then Samsung, with BRL 1 million. In addition, Bradesco made investments of BRL 10 million over five years, and then decreasing amounts until 2019, becoming the main funder of FAS.

"The program was a milestone in the history of the Amazon, made possible by the financial arrangement that was provided for in the Climate Change Law", emphasizes Luiz Villares, administrative-financial superintendent of FAS, remembering that "everything happened at the right moment and in the right place, at the time when Bradesco had the slogan 'Bank of the Planet' as its marketing slogan".

### Residents of protected areas in the Amazon are rewarded as guardians of the forest

In its conception, Bolsa Floresta had the expectation of being paid with resources collected by the state government in the carbon market, especially through the Reduction of Emissions from Forest Deforestation and Degradation (REDD+) mechanism, due to the prerogatives of the Climate Change Act. However, over the years, for various reasons, in practice the mechanism has not been regulated. In addition to political factors in Amazonas, the new market did not develop globally – in part, due to the 2008 international financial crisis and the barriers of diplomacy in climate agreements.

the dignity and capacity of these people to think of a sustainable development model, looking at the riches they have around them.

Eduardo Taveira, Secretary of State for the Environment of Amazonas

Without these resources, over time it was necessary to use only the resources of the fund to reward the BRL 50.00 monthly to the thousands of families benefiting from the program, and the amounts referring to the state government ended in May 2015. "We basically use donation resources for specific projects, which required a great effort to raise funds and financial management", reveals Villares. From a positive point of view, "we have acquired financial management know-how that will prove to be important in a growth scenario".

In this scenario, structuring socio-environmental actions, such as income generation and improvements in social infrastructure, were maintained over time thanks to the capture of new donations and partnerships by FAS. The Amazon Fund's investments, for example, totaling BRL 52.1 million in two projects already carried out between 2010 and 2020, marked an important chapter in the history of Bolsa Floresta in the search for a better quality of forest life.

In 2021, a new cycle is presented to the program, with the implementation of the State Environmental Services Policy (Law No. 4.266/2015), anticipating

new instruments and regulations. "A major achievement of Bolsa Floresta was correcting the narrative around the relationship between poverty and deforestation", points out Eduardo Taveira, state secretary for the environment and former technical-scientific superintendent of FAS.

According to him, the challenge is to "increase the dignity and capacity of these people to think of a sustainable development model, looking at the riches they have around and avoiding the social disruption that leads to an exodus and, consequently, to a possible opening of the forest to land grabbers and predatory activities". In this sense, completes Taveira, the Bolsa Floresta has played, in its history, an important pedagogical role in recognizing traditional and indigenous communities as agents of environmental conservation.

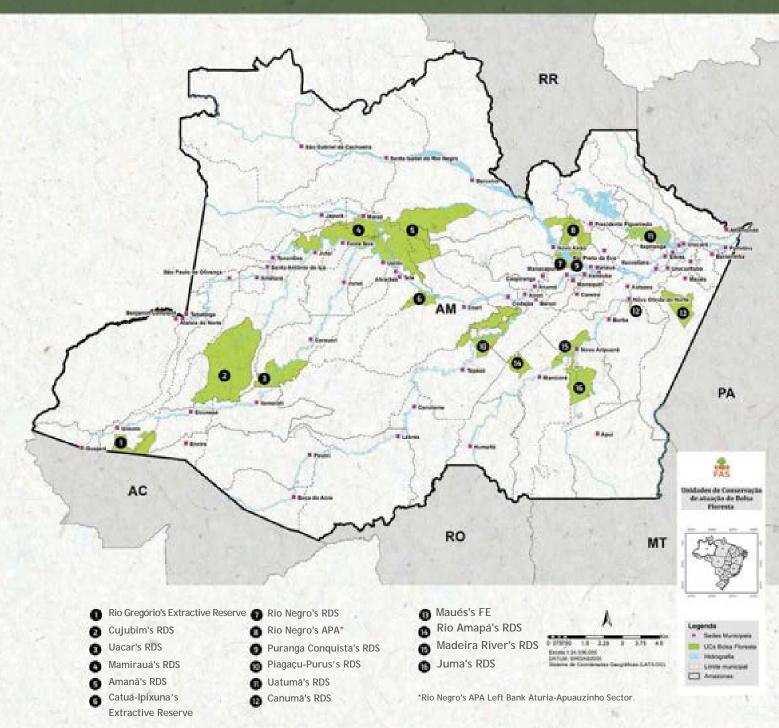
"In 14 years, including through the work of FAS, there have been many lessons learned that allow us to advance in the implementation of a restructured, effective and expanded public policy on PSA, with access rules and the launch of the Climate Change Fund, intended to receive resources for investment in conservation and sustainable use, arising, for example, from offsetting carbon emissions. Communities must understand the value of the environmental services they provide for the work they do, and not for the aid of a grant that can connote an assistentialist nature."

### Need for evolution

"Looking at the beginning of everything, the financial model adopted at the origin of Bolsa Floresta was the best decision we made, and without it we would not

### **TERRITORIES OF OPERATION**

The presence of Bolsa Floresta and the capillarity of socio-environmental actions





be guaranteed to get here, in the absence of the imagined carbon credits", says businessman Denis Minev, member of FAS Board of Directors at the time secretary of planning for Amazonas, with an effective contribution to the alignment of the concept of fund, conceived with the objective of "ensuring longevity and having the breath to survive in difficult years".

"I joined the government, attracted by the project to reconcile the environmental and the economic, similar to what my grandfather had advocated 30 years earlier", says Minev. He refers to economist Samuel Benchimol (1923-2002), a visionary of Amazon issues and defender of the thesis that "if the world wanted a degree of conservation of the Amazon above what would be natural to develop a prosperous economy, the only fair thing would be to pay for it."

In Minev's view, an important impetus to Bolsa Floresta occurred during the trip of the then governor Eduardo Braga and his entourage to the USA, for a dinner meeting with the influential writer Mark London and his guests. Among them, Marriott International's CFO at the time, Arne Sorenson, at the time gave the green light to the investment of

USD 2 million in the Juma's RDS, in Novo Aripuanã (AM), aimed at neutralizing carbon emissions from the hotel chain around the world. "It was the push that the (then) governor needed to see more clearly the potential of the private sector in the context of the program that was being designed", says Minev.

In 2007, it was clear that the carbon market would move faster as a result of global climate agreements. "We thought we could be part of the construction of this new market, but expectations around COP 15, the United Nations Conference on Climate Change in Copenhagen in 2009, were not confirmed", points out the businessman. Today, faced with the demands of the climate emergency, prospects have warmed up again, especially in the voluntary carbon market (read more in chapter 4).

"Adjustments in this successful trajectory of Bolsa Floresta are necessary to gain scale", emphasizes Denis Minev, for whom "there is no thriving extractivism with the image of the happy caboclo on the riverbank collecting nuts in a rudimentary way". The challenge, according to him, involves technologies and increased productivity so that riverside people have a higher standard of living with a boat, house, solar energy and internet. "We cannot raise living conditions just a little and be satisfied with that", emphasizes the businessman, acknowledging that this is not a unanimous opinion.

"We managed to reduce deforestation and alleviate poverty, reducing the level of subsistence, but there is a lack of entrepreneurs who grow and become entrepreneurs in conservation units, with greater capacity for action through their own financial resources and an example to the younger ones."

## The construction of a methodology

After 14 years, the current level of socioenvironmental transformations and the accumulation of knowledge about the reality of the distant world of the Amazon, provided by Bolsa Floresta, is the result not only of the financial intelligence and legal framework necessary for public policy to get off the ground and take off.

In the first chapter of this story, the preparations required the design of an entire implementation methodology, with procedures, criteria and rules – a challenging job due to the pioneering spirit of the strategy, when it was possible to count on your fingers the number of Payment for Service models. - Environmental Services (PSA) in the world. Without references, the construction process started practically from scratch.

From the initial prospecting visits to the end of the line with the payment of the benefit to the families, the teams experienced journeys of inspiration, discoveries and learning about the lives of these Brazilians in remote areas, some excluded from maps and statistics – which, in the Amazon, represents a great challenge due to the geography and diversity of cultures and social realities. In this exciting scenario, among the innovations conceived by the program model, one had a special meaning: the delivery of payment cards to women, a symbol of the search for greater autonomy, female empowerment and gender equality that characterize the actions of Bolsa Floresta.

How to reach communities and get to know local realities? How to engage them and make them understand that the forest is worth more standing than being cut down

#### ANNUAL IMPACTS

10.9 million ha of conserved areas

**16** protected areas of sustainable use benefited in Amazonas

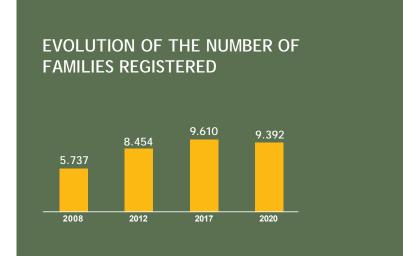
582 communities and localities engaged

9,4 thousand families served

39.3 thousand people benefited

BRL 57.6 million in reward for environmental services to families (2008-2020)

Source: www.fas-amazonia.org



so that they make a commitment not to deforest? Based on the georeferencing of each community in the conservation units, the first field action, the registration of families, consisted of the precursor visit for the initial contact with the residents and the general recognition of the area and the logistics of the territory, as a preparation to the next stage: the arrival of the team of mobilizers to apply a socioeconomic questionnaire to the families, in order to identify the income profile, education and health, among other points.

Subsequently, after a new field trip to deliver the invitations to the families, training workshops were held, lasting two days, whose script had the objective of awakening the pride of where they live and debating unprecedented topics for everyone there, such as development sustainability, climate change and environmental services. In the challenge of a language close to community daily life, recreational

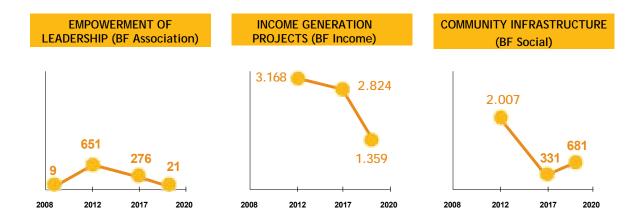
art-education activities were carried out, in which the figure of the clown Curumim always became a major attraction. At the end of the first day, there was a cultural competition with questions about the topics discussed, planned in a way that everyone felt like a winner.

On the second day, the term of commitment was signed in exchange for the monthly financial reward, a formal agreement that requires zero deforestation in primary forest areas, use of fire prevention practices and participation in the association of residents of the conservation unit. In addition, you need to be over 18, keep your children in school and be recognized as a resident by the reserve association for at least two years, among other points.

A particularity of the Program is the valorization of female protagonism. Thus, registration is preferably done on behalf of

### ANNUAL INVESTMENTS IN BOLSA FLORESTA

Values in thousand reais

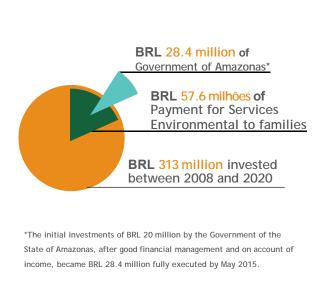


the woman as the holder of the family, then the card is given in her name, giving women who live in protected areas in the state of Amazonas strength and recognition for their important role within their community. Thus, after meeting all the necessary criteria, the family is registered and included in the FAS database to apply for the card. After the bank issues the cards, they are then organized and sent to the field team to deliver them to the cardholder, thus starting to receive BRL 50.00 per month.

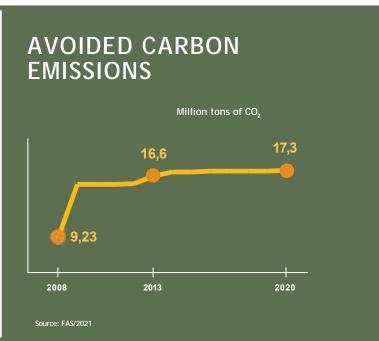
### Overcoming resistance

"Initially, the new public policy was challenged by resistance and mistrust due to programs that were promised in the past and did not advance, involving political interests in exchange for votes", observes Valcléia Solidade, superintendent of sustainable development at FAS, a member of the first Bolsa Floresta teams that rolled up their sleeves to face adventures from igarapés to igarapés, to interact with communities in Amazon areas protected as environmental reserves. "We found people who could not read and write, could not see or did not have documents", says Solidade, recalling the effort made to cultivate harmony and empathy with local realities, starting with the need for a simple and clear language, associated with to elements of everyday life in communities.

"To talk about global warming, we used analogies such as the shade of trees, under which we often held meetings, and with the traditional mosquito net used over the beds of riverside houses – in this case, as an allusion to the greenhouse effect", illustrates Solidade.



Source: FAS/2020









Amazon serve as a basis for education and different socio-environmental actions





"We set up a whole methodological structure as a guideline for our path and, after an initial moment of questioning and fear on the part of the public to be served, the adherence to the agreement not to deforest, which at the beginning covered about 60% of the families, it gradually increased with the perception of new values." Doubts were natural in the face of an innovative program, under construction and still little known. In some cases, there misinformation and fear about was restrictions on the use of protected areas by families and their permanence on their lands. "By working day and night in the field, we tried listening more than talkin and in this way we built trust", explains Solidade. highlighting three essential virtues for the success of Bolsa Floresta: "credibility, agility and effectiveness".

"Working on the program continued my own life story as a native of a quilombola community, helping to improve the socioenvironmental conditions of people like me", she highlights, in the hope that this reference public policy is added to others that will be undertaken in the future in the Amazon, because "our capacity is the size of what we want to do".

## The delivery of the first cards

When they recall the initial moments of motivation to take new ideas and socioenvironmental transformations to remote points of an increasingly strategic region for the country and the world, Solidade and other pioneers of Bolsa Floresta found strength to swim against the tide of the continuous risks to the Amazon. "It was a tough and committed team", says Isandra D'avila, former coordinator of institutional relations at FAS.

Her contribution dates back to the initial period of public policy construction within the state government, when, in the former SDS, she provided secretarial support to the management of the Bolsa Floresta Monitoring Group, with the participation of civil society. "It was a great learning experience in face of the proposed change of paradigm and culture", says D'avila, proud when reviewing old documents, posters, booklets and other materials produced at the time.



Source: FAS/2021





Over time, each visit to communities served as an injection of spirit, when comparing themselves to how they lived before", she says. In early March 2008, she took part in a trip to the Uatumã's RDS, when the inaugural meeting of FAS Board of Directors took place, with the presence of Governor Eduardo Braga. At the opportunity, the members participated in a community workshop to adhere to the program and the governor made the symbolic delivery of the first card for payment to the families, which started a few months later, in September. Today, the reserve reflects the results of the initiative in increasing income and reducing deforestation.

"It was like a war mission", compares Mariano

Cenamo, director of new business at Idesam, member of the technical team that created the foundations of the Amazon law on climate change, along with other collaborators. The NGO was a partner with the state government in the first phase of testing the Bolsa Floresta methodology: "The first workshops for the registration in Uatumã, beneficiaries, promoted an unprecedented dialogue on climate change, in the logic of free, prior and informed consent. Why will they receive the financial incentive? Why can't they deforest?".

There were moments of contact with life stories. "Mr. Mauro, do you see something different in my house?", asked the riverside mother, pointing to a novelty in the kitchen: a





The first task was to register the families that agreed to receive allowance with a commitment to adopt sustainable practices

gas stove, at the time a luxury in the community. The episode lives on in the memory of Mauro Cristo, a member of the pioneering Bolsa Floresta teams. "That woman, for over 40 years, had been cutting wood chips to make breakfast, lunch and dinner, and when she received the card, the first thing she thought was: I'm going to change my life!."

## Performance and efficiency in the forest

"Bolsa Floresta's intelligence dynamics changed symbolic and institutional values and gained importance over time, able to be incorporated by the demands of society in the future", highlights João Tezza, former technical-scientific superintendent of FAS. The initial challenge, he says, consisted of building a perennial model in the long term, without an assistentia list emphasis, in addition to other premises that marked the creation, preparation and management of teams, divided by regional centers as a guarantee of greater approximation with the beneficiaries of the conservation units. "We looked at building trust and performance standards without imposing top-down solutions," emphasizes Tezza.

In his analysis, "Bolsa Floresta has advanced in time, showing that it is possible to take intelligent and viable development projects to the interior of the Amazon, with high efficiency and excellent cost-benefit ratio, against the low

# UATUMÃ, INCOME FROM SPORT FISHING

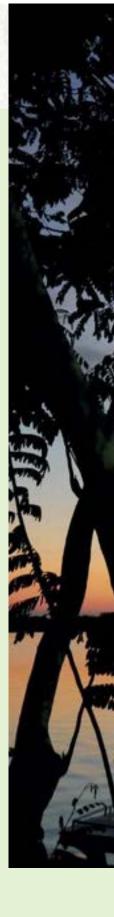
Social and environmental actions help change a long history of impacts

Uatumã Sustainable Development Reserve (RDS), created in 2004 with 424 thousand hectares, was the first state conservation unit benefited by Bolsa Floresta. In addition to the BRL 50.00 monthly reward to families for their commitment to keeping the forest standing, investments were made in support of social organization, community infrastructure and income generation, collectively defined. One of the main activities is community tourism, which has sport fishing as a major attraction. "It's an alternative to growing in life, unlike in the past, when no one visited us and we were forgotten even by the city halls", says Cleide Ferreira, owner of the Mirante do Uatumã inn.

According to Cleide, after Bolsa Floresta, a new vision was established and the most visible change was the social one. "The communities became more united when they looked at a common path", says the entrepreneur, former president of the local association. "In the beginning it was difficult, because not everyone adhered to the commitments, but little by little they saw the success of the actions", he emphasizes.

In addition to supporting entrepreneurship in community tourism, the flour mills were improved to increase income. The more structured social organization opened doors for new partnerships between communities and other organizations, aiming, for example, at the production and commercialization of vegetable oils for industries, with the maintenance of the forest standing.

In this way, the riverside people have the chance to write a different story for the region, the target of attacks on biodiversity from the impacts caused by the construction of Balbina hydroelectric plant, in the 1980s, to the exploitation of illegal wood and rosewood, a natural active that is already scarce there. In addition, predatory fishing had been practiced within the reserve by foreign boats, without collective gains for the residents. Today, after creating rules, the reality is quite different: "Jaraquis, matrinxãs and other species are sold by community members during the fishing season to boats that come to buy them", says Mrs. Cleide.







government investment scenario and high capital flow to activities that deforest".

Francisco Pinto, former coordinator of the program, agrees: "The program played an important role in bringing public policy more efficiently to the forest, which today is even more relevant given the limitations of governments and the lack of commitment to combine development with environmental conservation in the Amazon at the necessary level in the face of reflections for the whole planet". He joined FAS team to join forces in the challenge of accelerating and increasing the number of families registered after the initial field phase, and the main learning in this process was the "understanding of the social, economic and political dynamics of the communities".

"The program represented a key turning point for a new logic of welcoming and recognizing traditional communities of environmental reserves, until then forgotten by public policies, due to isolation and low population density", observes Professor Marcelo Castro, biologist who lived the trajectory of Bolsa Floresta since 2011, to then follow new professional paths, carrying the experience in her luggage for the rest of her life.

"In the field work, we find people on the margins of the citizenship process and access to rights; some had not even gone to nearby cities", says Castro. He completes: "In order to protect the guardians of the forest, we valued

By creating environmental reserves for sustainable use, Amazonas invested in people to conserve and protect the forest and its biodiversity citizens previously invisible to society, and in this way, we build bridges for families to have documents and access other social programs, such as Bolsa Família (Family Grant)".

# Improvement after improvement, the transformations of Gregório River

On his first trip, to the Gregório River Extractive Reserve, in the municipality of Eirunepé (AM), up to 17 days by boat from the capital, Castro found precarious living conditions with 90% illiteracy and a complete lack of opportunities. The income came basically from the farm in the production of flour, and the main project of the teenagers was to get married as soon as possible to start a family. The three schools in the entire reserve only worked 30 days a year – the one located in the Santo Amaro community had a straw roof, which made classes impossible when the rain soaked the notebooks.

"Improving the education structure. collectively decided by the community with FAS support for social organization, was the starting point for the transformations brought to the region by Bolsa Floresta", says Castro. Then came four new schools, including a house for teachers' accommodation - essential for their presence in such a remote area, starting to operate six months a year. From improvement to improvement, the riverside people conquered ambulances radio communication. for transporting the sick, energy generator, running water, and so on, until obtaining a minimum base of dignity to then expand the radius of socio-environmental transformations.

The social factor is the first step for later investments in productive activities to generate income, which allows communities to evolve also in the economic aspect, necessary for the quality of life of those who inhabit and protect the forest. "We were put to the test in the covid-19 pandemic and in the great flood of 2021 that had a great impact", reports Delziano Pinheiro, president of the Association of Agroextractive Residents of Gregório River (AMARGE), founded in 2008 as a result of the Bolsa Floresta actions in support of community organization. At the Extractive Reserve, created a year earlier by the state government with 427 thousand hectares, the current scenario differs from the past: "Before, people worked more and earned less, based on illegal extraction". wood says Pinheiro. acknowledging that it was difficult to make families aware of sustainable use, because the old culture, already ingrained, came from parents and grandparents. The flagship of production by the 200 local families is manioc flour - around 500 tons a year, with the challenge of avoiding degradation

We cannot raise
living conditions just
a little and be
satisfied with that

Denis Minev, businessman, member of the Board of Directors of FAS and former secretary of planning for Amazonas of fires and deforestation. "Decades ago, the strength was rubber extractivism, but with the fall in prices — without public subsidies — the children of rubber tappers migrated to flour", says Pinheiro, remembering that the production structure received investments from Bolsa Floresta, through the Amazon Fund, to improve quality and access to marketing. "Young people who previously dreamed of leaving to study and have a chance at a new life now find reasons to stay, with plans to become local leaders," adds Pinheiro.

"Today, we have internet, which we never dreamed of", emphasizes Pinheiro. With it, leadership is added, "we do videoconferencing, receive health care via telemedicine, have contact with the rest of the world and give interviews like this, being in a remote location in the forest, more than 200 km from the headquarters of the nearest municipality, Eirunepé".

### Informality and the lunch invoice: "An ox"

Ademar Cruz, coordinator of institutional articulation at FAS, knows that reality well. "The Gregório River EXTRACTIVE RESERVE is one of the main

is one of the main

positive references from Bolsa Floresta, which created the bases in the area for maturation and continuity of improvements, including through new programs", he points out. According to him, the example is in line with the objective of modernizing the management of the new conservation units created at the time by the State of Amazonas, going beyond management plans and the constitution of management councils, as determined by law. The participatory footprint, with community involvement in decisions, was an outstanding differential already in the beginnings of Bolsa Floresta, still in the state government, but the practice of the strategy required overcoming barriers - both those of the typical informality of the deep Amazon and those of the plastered public power. .

The challenge provided folkloric situations. One of them occurred when Cruz needed to gather the leaders to create the Catuá-Ipixuna EXTRACTIVE RESERVE, in the municipalities of Tefé and Coari, in 2003, and he realized that there would be a lack of food, because the number of people was much higher than expected. The idea was to kill an ox that grazed in the area, but there was a need for the invoice to account for the expense to the government. At the nearby gas station, it was possible to obtain an unusual receipt with the service specification: "An ox".

As a former member of the Basic Education Movement (MEB) and the National Council of Extractive Populations (CNS), Cruz has a long experience in the "borders" of Amazon rivers,

Community strengthening, with support for social activities and local infrastructure, is one of the pillars of Bolsa Floresta





in contact with traditional communities. This factor made a major contribution to Bolsa Floresta's fieldwork, overcoming the challenges of isolating protected areas to speed up the registration and inclusion of families in the program. "Given this need, in some areas the way out was to arrive by seaplane", he says.

This was the case of the distant Cujubim's RDS, with 2.5 million hectares and the lowest population density (37 families) in the Jutaí River region, west of the Amazon, about six days by boat from the capital, apart from the long journey from the county'f head office to the first communities in the reserve.

"We are faced with precarious living conditions and a high incidence of malaria", recalls Cruz.

#### Leadership training was the basis for a series of positive transformations in the areas of Bolsa Floresta

Among the needs discussed with the residents was the construction of a village to house communities isolated from each other, and thus enable the provision of infrastructure and socioenvironmental actions. Houses, sidewalks, a school and a community tavern were built, among other works — including bathrooms, which never existed there. "Can you imagine the adventure of transporting building materials over such a long distance?" asks Cruz.

He recalls that, from the beginning, in that area, it was thought that the reward of BRL 50.00 a month to families would not be enough without social organization. "As a learning experience, we identified the need to better prepare the population to deal with structural improvements and new practices", recognizes Cruz, informing that the actions there ended up bumping into cultural and social issues inherent to the local reality.

"The program was not enough to carry communities on its lap, in an assistentialist way", explains Cruz, for whom the experience in Cujubim reflects the lessons with mistakes and successes that marked the trajectory of Bolsa Floresta as a reference in Brazil and in the country and world. In contrast to the realities of Gregório and Jutaí rivers, in which the demand for social organization was initially the main priority, in other areas already advanced in this aspect it was possible to give impetus to income generation, as in the case of Uacari's RDS, in Médio-Juruá (read more on page 48).

#### The meaning of trust

In addition to the back flies and horseflies, relentless in their bites at certain times of the year, the first trips of the Bolsa Floresta were marked by the discovery of human purposes and values: "I saw the importance of sensitivity in dealing with riverside communities that need attention and I learned to value every moment of life", highlights Socorro Lira, a forestry engineer who found a new professional direction in this relationship, as coordinator of Bolsa Floresta Familiar.

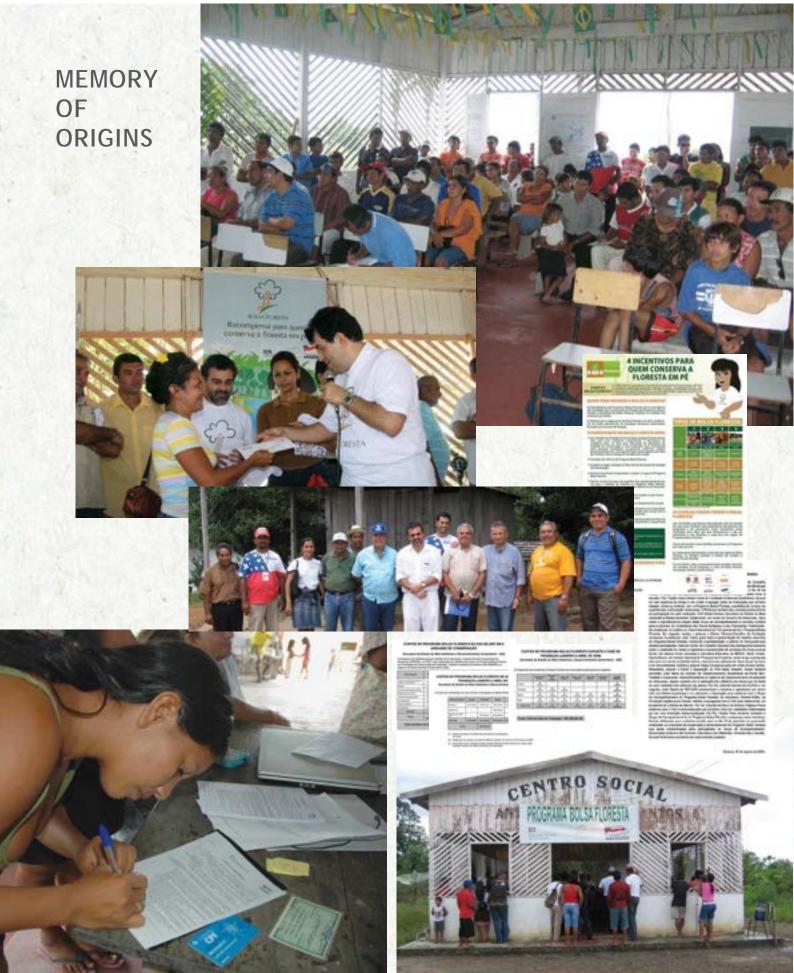
If in Uacari's RDS a former resident said that "if you had white skin like mine,

We found people who could not read and write, could not see or did not have documents

Valcléia Solidade, superintendent of sustainable development at FAS

you would never enter the bush", on the Piagaçu-Purus's RDS, it took a bit of flexibility when "a gentleman approached and warned that the men are in charge here". There is no lack of stories gathered in the field work, although Lira spent most of her time at FAS headquarters in Manaus, answering the phone to beneficiaries with questions and entering information into the system for registering families. "Even from a distance, service to beneficiaries created personal bonds and often ended up in conversation and even outbursts", says the "woman of the payment", as Lira is also known among the riverside people.

"The monthly payment of BRL 50.00 goes beyond the money itself: it is the gateway to many local improvements and a new vision of the forest", she reinforces. She remembers the process of selecting social mobilizers in which she participated, launched in 2008 by FAS to increase the team and the number of families benefiting from the program.



Jousanete Lima, also a participant in that call, and who today coordinates Regional Amazon, made up of four conservation units, never forgets the moment: "It was the most difficult process I faced, with all the candidates locked up for a weekend in Tarumã, in the spirit of 'doing' and with a lot of motivation and purpose, which are hallmarks of FAS team".

As a debut at FAS, Lima worked on precursor visits to homes and field workshops to register families at Piagaçu-Purus' RDS. Later, in this and other environmental reserves, contributed to support the community decision on infrastructure improvements and income activities. The "management of goods for community use" workshops serve to guarantee basic care and maintenance of machines, boats, generators and other equipment implemented in the community. "Usage rules are defined and agreed collectively by the riverside people, because they are responsible for management", explains Lima, remembering that the key is joint construction and not imposition of ideas.

Despite the technical guidance and support received, some unusual activities in the local productive culture, such as poultry and fish farming, for example, did not prosper – which served as a new lesson. "Based on these unsuccessful experiences, we started to look at and strengthen already traditional activities in the communities, based primarily on existing products in the area", she says.

In 14 years, in the face of many lessons learned and many life stories, Bolsa Floresta has developed an invaluable body of knowledge about socio-environmental realities in protected areas, strategic for the future of the Amazon. From the complex logistics of work in these regions to management efficiency, financial intelligence, transparency and relationships with communities and their different beliefs and cultures, countless knowledge has been collected in the chapters of a narrative that is always under construction.

We've brought previously invisible citizens to the acknowledgment of the society

Marcelo Castro, professor and former coordinator of Juruá region

#### INNOVATIVE TRAJECTORY

Milestones of an evolution that inspires new challenges for the Amazon

2007 2008 2009 2012 2013 FEBRUARY Creation of JULY 10th JUNE Approval of the JUNE Implementation of MAY Participation Climate Change Law, Foundation for new BFP components of seventeen Leadership Meeting which established the Amazon Sustentability and complementary leaders in Rio+20 Bolsa Floresta - FAS projects Program MARCH Start of management of Bolsa Floresta by FAS SEPTEMBER Amazon Fund for MAY Start of payment of Complementary Law Bolsa Floresta: Bolsa Floresta to families by No. 53 instituted FAS Income, SEUC (State System Association and of Conservation Units) Environmental **SEPTEMBER** Delivery of Monitoring the first BFP card by FAS OCTOBER CCB First FAS Strategic Plan, validation of Juma's prepared by Bain & **SEPTEMBER** RDS REDD+ Project Company and with an Adhesion of the first (gold standard) emphasis on BFP conservation unit supported by Bolsa Floresta: Uatumã's REDD+ project at Juma's RDS (carbon credit) OCTOBER-DECEMBER FAS 4 thousand was a challenge to be achieved by the and of the year



### JURUÁ, TOWARDS SUSTAINABLE DEVELOPMENT

History of social organization opens doors to greater income autonomy

The Bertha Becker Conservation and Biodiversity Center, maintained by FAS in the Uacari's RDS, in the Middle Juruá, pays tribute to the visionary Brazilian geographer who considered the Amazon "the great Brazilian challenge for the 21st century" and that it would be necessary to "enable a long-term strategy capable of reconciling the promotion of economic development with the sustainable use of natural resources, social inclusion and income distribution, resulting in an improvement in the population's quality of life".

The issue finds important advances in that surroundings of the most sinuous river in the world, in Carauari (AM) and region, stage of numerous socio-environmental projects and partnerships, involving several organizations, which Bolsa Floresta helped catalyze – a living laboratory of how it is possible to join forces in order to combine conservation of biodiversity and income, with the involvement of local communities.

Médio Juruá region has experienced a remarkable history of social struggles, since the times of the Basic Education Movement (MEB), disseminated by the Catholic Church in the 1960s in defense of citizenship and popular participation in public policies aimed at the poorer. Among the voices that preached liberation from the predatory system of work

in the rubber plantations under the yoke of the "bosses", the leadership of the Dutch priest João Derickx stood out – honored in the name of the other nucleus maintained by FAS in the Uacari's RDS, in the Bauana community, as a pole of socio-environmental and educational actions in the region.

## From vegetable oils to arapaima

The site hosted the Technical Course on Sustainable Production in Conservation Units, held between 2013 and 2014 by FAS and the Amazonas Technological Education Center (Cetam), with the support of a network of partners working locally, when 40 riverside young people received training entrepreneurship and presented business plans that were candidates for management support. One of them resulted in the creation of the Community-Based Company (EBC), a producer of vegetable oils, mainly andiroba and murumuru butter, sold to the cosmetics industry through the local association, moving more than 700 families to collect seeds. Between the course and EBC Bauana, in 2014, an R&D project was developed, supported with more than BR 1 million from Videolar Inova (computer law), through the Committee on Research and Development Activities in the Amazon

(CAPDA/SUFRAMA). It was a pioneering investment (which led FAS to become an RD&I institution), in the açaí and vegetable oil chains. In addition to good production practices and techniques for maximum yield and quality control, one of the legacies for EBC was the infrastructure of the açaí and vegetable oil processing plant. Current EBC entrepreneurs, graduates of the technical course, were involved in the RD&I project.

"Without this opportunity to change, my destiny would be to cut rubber and work in the fields like my father", highlights Vagner Menezes, who runs the business together with other riverside people, reinforcing the importance of entrepreneurship in mobilizing young people to keep the forest standing.

His younger brother, João Paulo Menezes, an environmental agent in the São Raimundo community, mobilizes schools and residents in cleaning efforts, with the installation of trash cans at strategic points and the reuse of waste. He and other young people help to monitor the lakes destined for the sustainable management of arapaima, an important source of local income. The activity is the result of the legacy of the elders around social organization, which culminated in the creation of environmental reserves for sustainable use, preventing the destruction of the forest and opening doors for the development of production chains through partnerships with companies and civil society.

The trend, after the initial push by Bolsa Floresta, is to concentrate new investments

no longer at the base of forest chains, but in product development. The associations became mature, with management and articulation capacity, and with that the region advanced in income opportunities with greater autonomy – a scenario strengthened by achievements such as education, solar energy, access to water and digital connectivity. "The great gain of the joint actions is that the work became easier, cheaper and with more tangible results", highlights Manoel Cunha, manager of the Médio Juruá Extractive Reserve, maintained by the Chico Mendes Institute for Biodiversity Conservation (ICMBio). "Working together, uniting all partners on several simultaneous fronts, made it possible to increase the results, which would not have been the same without it".



### Bolsa Floresta is born\*

(Historical article commemorating the launch of the program)

Today, Bolsa Floresta Program begins to be paid in the Uatumã Sustainable Development Reserve (RDS). It is the first time that caboclos receive a direct reward for conserving nature in the Āmazon. It is the rescue of the dream of many who, like Prof. Samuel Benchimol, advocated a payment in the form of a "tax" for the "benefits" produced by our forests. Today we call this "payment for environmental services".

The Amazon Climate Change Law was a pioneer in defining the concept of environmental services. Environmental services are benefits provided by standing forests, such as climate stability, maintenance of rainfall, carbon storage in trees, etc. With Bolsa Floresta, the Government of Amazonas recognizes that environmental services are the result of people's attitudes, especially those who live on the borders and in the interior of the forest.

Bolsa Floresta is a program of the Government of Amazonas to recognize, value and compensate the state's traditional and indigenous populations – the guardians of the forest – for their role in conserving forests, rivers, lakes and igarapés (streams). It is a benefit passed on to those who help to keep the forest standing.

Bolsa Floresta program was built in a participatory manner, with extensive discussion both in communities and with governmental and non-governmental institutions in Manaus. All 265 families of residents of the Uatumã's RDS, in the municipalities of Itapiranga and Urucará, were registered. All houses were visited, with a complete socioeconomic survey. Four training and capacity building workshops were held on the role of deforestation in the process of global climate changes.

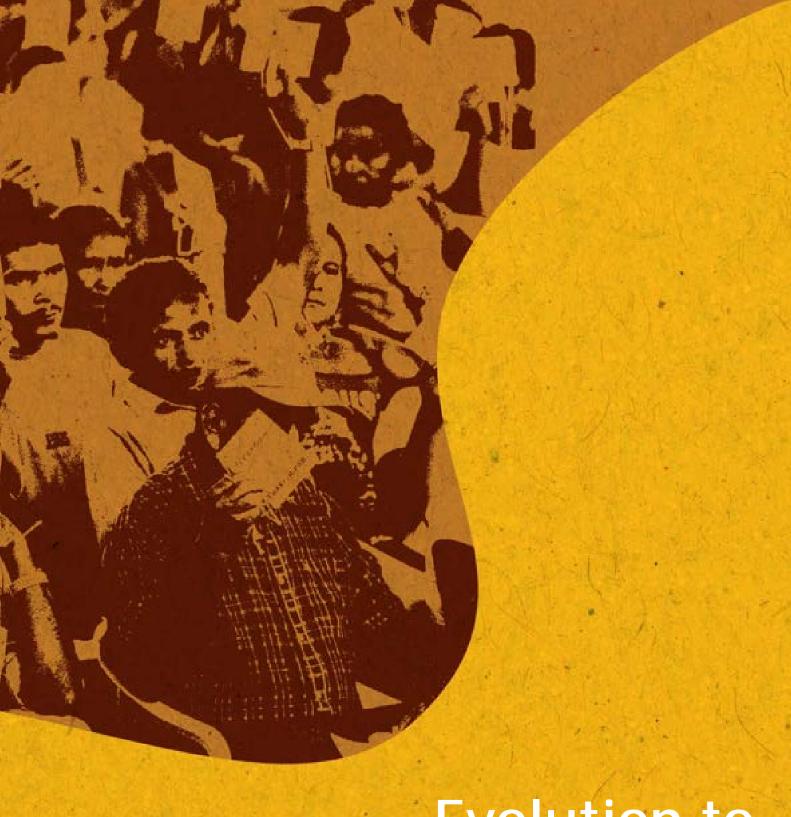


Among all those registered by the Program, 100 already had documents, attended the training workshop and signed the Commitment Agreement. These already start receiving payments starting today. For the others, the Government has already started a documentation campaign (Individual Taxpayer Number, ID Card) and new training workshops. We therefore hope to benefit all residents of the Uatumã's RDS and start the Program in five other conservation units.

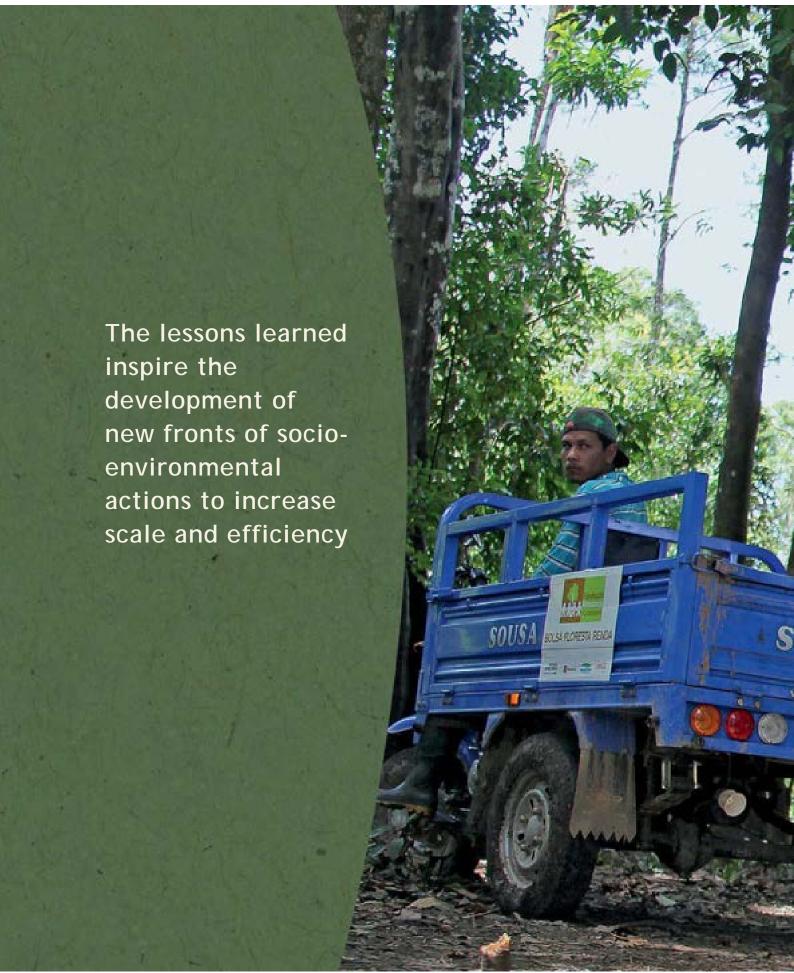
There are two types of Bolsa Floresta. Bolsa Floresta to Family is paid preferably to wives, in the amount of BRL 50.00 per month. Bolsa Floresta Association is paid to the residents' associations, totaling 10% of the sum of the grants of each community. Bolsa Floresta is supported by the Community Investment Program, which allocates BRL 4,000 per year for each community to invest in income-generating activities that do not involve burning the forest and are carried out in a sustainable manner.

Bolsa Floresta is complemented by other programs: monitoring and inspection, community infrastructure, education, culture, science and technology, agroforestry production, sustainable business, green credit and management of protected areas. A program with this scope and boldness would only be possible with the statesman and contemporaneity vision of the Governor of Amazonas, Eduardo Braga.





Evolution to maturity





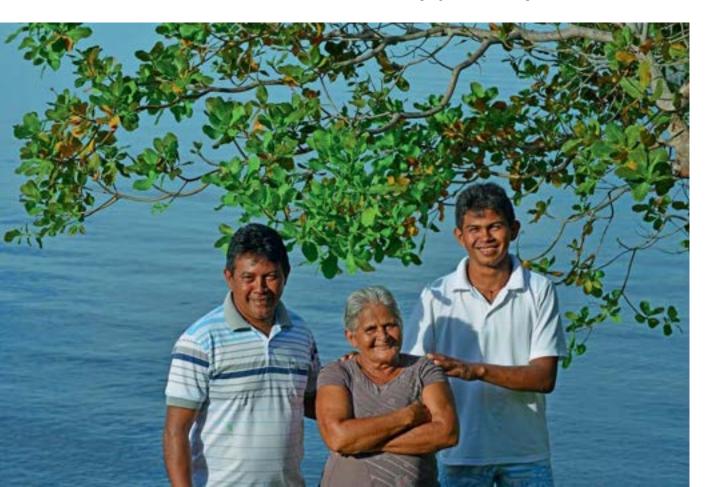
fter the period of gestation, birth and first steps within the scope of the state government of Amazonas, Bolsa Floresta was developed in youth – already embraced by FAS – with the ambition to increase the scale and scope of the positive impact on conservation units. In the FAS 4000 campaign, carried out in 2008, the goal was established beyond the 971 families registered in 2007. The objective was surpassed in about four months, and since then, attention has turned to the gradual growth to possibly reach 10 thousand beneficiaries or more – limited, of course, to the availability of the required resources.

Throughout its development until maturity, in addition to the BRL 50,00 monthly paid to families as a reward for the standing forest, the program

incorporated structuring strategies with socioenvironmental actions based on local demands for income generation, social organization and community infrastructure. In this way, the program evolved and reached the adult stage ready for the generation of new fruits. Legacies, such as the emergence of other programs for conservation units in the field of education, health, access to clean water and energy, for example.

From arapaima to flour and vegetable oils, the initial investments are focused on the basic structure of production for later support to commercialization, in the challenge of consolidating the production chains

W Raimunda Saracá, leader of Rio Negro's RDS, died due the pandemic and left a great legacy for the new generations



(read more on page 72). The achievements can be enhanced by municipal, state and federal public procurement policies that cover sociobiodiversity products, such as cocoa, which encourages producers to increase productivity.

After 2015, with the second Amazon Fund project, Bolsa Floresta's strategy focused on specific areas and projects in protected areas and surroundings to give continuity to already mature chains, so that they could achieve autonomy and walk alone, allowing, thus, directing new investment efforts in other activities.

### Empowerment of women

The construction of the program's social base required a systemic view, including issues hitherto distant from the interior of the forest, such as gender equality, an essential requirement for sustainable development. Female empowerment, a highlight of FAS's work in Amazon conservation units, is one of the positive examples of the cultural interconnection between these traditional populations and the values sought by society in general at this time of global challenges around of reducing social inequalities.

"Women in these regions are empowered by their own life history. Each one leaves, a cathedral falls with it", illustrates actress Christiane Torloni, member of the Board of Directors of FAS, referring to the lamentable loss of teacher Raimunda Ribeiro – Mrs. Saracá, as she is better known in the community of the same name

founded by her in the Rio Negro's RDS. As one of the main female leaders in the areas served by FAS, the defeat to covid-19 left the entire community orphaned. "It was an icon in the transmission of knowledge and formation of generations", laments Torloni, remembering that great leaders, like Chico Mendes, are irreplaceable. "They are essential in the current scenario of loss of structuring columns in the Amazon."

"There is no paternalistic or colonialist narrative, and the place where residents speak is not only given, but encouraged, as true owners of the forest", completes Torloni. "They talk like doctors about topics that concern them, which usually breaks the standards of our society in general, and that is why it is necessary to give visibility."

"It is more necessary than ever to have strong leaders, prepared to raise funds and turn the wheel in face of the change of command of local organizations", agrees Edvaldo Correa, manager of Floresta em Pé program at FAS.

Women in these regions are empowered by their own life history.

Each one leaves, a cathedral falls with it

Christiane Torloni, actress and member of the Board of Directors of FAS

Since 2010, meetings have been held for leaders of the conservation units benefited by the Bolsa Floresta Program, spaces for dialogue aimed at exchanging experiences, presenting demands and debating problems, solutions and strategies.

With experience in the socio-environmental actions of the Coari-Manaus gas pipeline, Correa is well aware of the importance of strengthening leaders, from the first challenges faced when he coordinated the Bolsa Floresta on the Madeira River channel, with the mission of mediating conflicts with illegal loggers, reestablish closer ties with the communities and resume sustainable income-generating projects, such as cocoa and nut production.

# Taking care of the guardians of the forest

Under the premise of caring for those who take care of the forest, new professional challenges came to Correa, in the coordination of the Education and Health Program (PES), when he participated in the launch of Primeira

It is more necessary than ever to have strong leaders, capable of turning the wheel in local organizations



Infância Ribeirinha (PIR). The initiative, aimed at the period from pregnancy to the child's six years old, trains community health agents to provide care to families in conservation units, with basic guidance on disease prevention, hygiene, food, vaccination and other points, knowing that healthy psychomotor development in this age group is decisive for the health of the future adult. The boys and girls of today will be the guardians of the forest tomorrow.

With the seed of Bolsa Floresta, these and other innovative actions were developed, such as those of the Programa de Desenvolvimento Integral de Crianças e Adolescentes Ribeirinhas na Amazônia (Dicara), aimed at sports, culture and education activities, and guaranteeing human rights. facing the situation of social vulnerability in the Amazon conservation units. "The goal is to invest



in the emergence of new generations of transformation agents", explains Fabiana Cunha, coordinator of the program. "The youthful engagement of traditional forest peoples is considered a strong ally in the search for improvements in the quality of life inside and outside the communities".

Kelita Gondin, 22 years old, resident of Uacari's RDS and participant in the activities, reinforces: "Well-informed young people become more active and empowered". Thus, they will be better able to take over the baton of old leaders and give continuity to history with the colors of new challenges and modernity.

Over time, new demands have presented themselves to FAS, given the capillarity of its presence in Amazonas, as well as the capacity for institutional articulation and the vast knowledge about the different realities of the region, acquired



Dicara Program mobilizes forest youth in educational and social engagement actions



# RIO NEGRO, SCENARIO OF TRANSFORMATIONS

Riverside people bet on business with the forest standing

Located on the outskirts of the capital of Amazonas, Rio Negro's RDS, with just over 103,000 hectares, is a showcase of Bolsa Floresta as a model that reconciles environmental conservation, income alternatives and improved quality of life. "We were recognized and valued for living here", says riverside entrepreneur Roberto Brito, highlighting the advances in education, resulting from a whole process of social involvement provided by the program: "In 2008, completing Secondary Education was a dream. Now many attends university with remote classes".

"We gained visibility", adds Brito, who admits that his past was shrouded in smoke from illegal logging, which seemed to be the only alternative for survival. Life has changed as an entrepreneur in community tourism, an activity that values the standing forest in hiking trails, river baths, alligator spotting, gastronomy and even in the whistling of curupira – a legendary forest entity that frightens the evildoers of nature. "I experienced haunting moments when I cut down trees to sell wood", says the riverside man, knowing that history is a cultural asset that enchants visitors. "I gain more from the forest

that is conserved than that with one cut down", he emphasizes.

In the Tumbira community, Brito conducts business with his wife, Nádia, in addition to his children Giovani and Giovana, and his nephew, Marcos Renato, riverside chef and right-hand man at Garrido Inn and other tasks. "What would be the fate of them and the other young locals without everything that happened here as a result of Bolsa Floresta?", he asks. As a result of better management, the number of tourists increased from ten to 60 a month, on average, moving a chain of services that benefits the community. "With the digital inclusion, we are not stuck in time, and now it is necessary to follow up for more achievements."

### **Engagement trajectory**

Since the end of the 1990s, there has been resistance and controversy due to restrictions on use in nearby federal environmental reserves, threatening old practices adopted by riverside people from father to son. "There were arrests and, without the families' sources of income, school lunch was the alternative to feed the children".



Izolena Garrido and her daughters represent current and future female leadership in Rio Negro's RDS

says professor Izolena Garrido, a leader who fought for a new history in the region.

It was only in September 2005 that the first meeting between the environmental agency and the communities took place to explain what could or could not be exploited in the forest. Without the possibility of cutting a stick to guarantee survival, the only alternative would be to leave", says Garrido.

The turning point was the creation of conservation units for sustainable use by the government of Amazonas, after articulation of local leaders, at the end of 2007. In 2008, the new areas were implemented, after meetings with the communities to explain the objectives – and it did not take long for the Bolsa Floresta to arrive, with the payment of the financial reward for the commitment not to deforest, in addition to complementary programs to generate income and support for infrastructure improvements and community organization. "At first, some did not believe it and thought it would be another

unfulfilled promise, but they soon got involved", says Garrido.

The first step was to create the association so that the community would have access to collectively approved benefits, such as the construction of the church and leisure spaces. Then came investments in education, health, basic sanitation and productive activities. "It was a great management learning experience, with appreciation of the local workforce", adds the leadership, citing as an example the construction of the Conservation and Sustainability Center (NCS), designed for continuing education activities, with a pedagogical proposal based on the traditional knowledge.

In addition to being vice president of the association that brings together the communities of the reserve, totaling 1,900 families, Izolena is an entrepreneur in the field of handicrafts, using natural pigments in bio-jewels. "Contrary to the past, today we believe we are capable of doing and moving forward with our own legs".

while managing Bolsa Floresta, its socioenvironmental components and programs that complement the sustainable development strategy conducted by FAS. An emergency need was to advance the health issue, in the context of the lack of infrastructure and basic assistance in the interior of the forest affected by the new coronavirus pandemic.

To face the risks and impacts of the pandemic in remote areas of the forest, FAS led the creation, in 2020, of the Covid-19 Alliance, articulating partnerships, donations and delivery logistics to communities. By June 2021, the initiative had mobilized 128 partners, with more than BRL 33.5 million raised for investments in emergency demands to face the pandemic in 135 territories (conservation units, indigenous lands, poor neighborhoods in Manaus) – from basic food baskets and protective masks to river ambulances, telemedicine points and mini-plants for oxygen adapted to the reality of the region.

#### Solar energy and safe water

In the wake of Bolsa Floresta, populations in remote areas gained small solar-powered water structures for access to safe water,

Well-informed youth become more active and empowered

Kelita Gondin, youth leader in Uacari's RDS



⚠ The distribution of water purifiers in remote areas served by Bolsa Floresta was one of the actions of Aliança Covid Amazônia

resulting in a reduction in the rate of diarrhea, in the partnership of FAS with Foundation Avina and Aliança Água+Accesso, promoted by Coca-Cola. By making it possible to capture water from rivers or artesian wells together with water treatment for distribution to homes, the photovoltaic system reduces the dependence on diesel generators in communities. In this way, going beyond the benefit of taps, solar energy provides greater security to the internet offer, with a positive impact on education, health, productive activities, social empowerment and community management, in the virtuous cycle for quality of life, without deforestation.

Like a domino effect, one socioenvironmental action inspires another, and the efforts to effectively attract new investments – necessary for this proactive range that is continually opening up – have given FAS a remarkable ability to mobilize

#### **COMMUNITY INFRASTRUCTURE**

The Bolsa Floresta Program's support for improving community infrastructure in the areas of education, health, sanitation, communication and transport is defined based on the demands of communities and riverside locations in participatory workshops.

103 social spaces renovated between 2009 and 2019

13 water collection systems

58 artesian wells

160 radio sets

104 ambulance boats

295 thousand P&G sachets

Source: FAS/2021 - Exclusive investments in the areas where the Bolsa Floresta Program operates

INDICATOR PANEL	2012	2017	2020
Children and adolescents aged 0 to 17 years attended	0	1.298	1.261
Number of Community and Indigenous Health Agents trained	0	79	223
Number of students enrolled	466	622	586
Number of participants in Leadership Meetings (single participants)	59	94	29
Number of students in training courses and professional qualification	645	2.252	762
Number of connectivity poles	0	0	50
Number of projects to support quality of life improvement	207	32	198
Health teleservices	0	0	118





social values involves complex issues, and FAS has been an essential interlocutor for us to act in the Amazon

Luciana Pacheco, executive manager of communication and corporate sustainability at Americanas

partnerships, as demonstrated in the challenges of covid-19. "Working with cultural and social values involves complex issues, and FAS has been an essential interlocutor for us to act in the Amazon", says Luciana Pacheco, executive manager of communication and corporate sustainability at Americanas/B2W Digital, a partner in socio-environmental projects in the Amazon, partner in socio-environmental projects in the field of health, connectivity and entrepreneurship. "These are jobs at the long-term pace that the forest demands."

At Jirau da Amazônia, a virtual showcase for the sale of handicrafts and other riverside and indigenous products from the conservation units supported by Bolsa Floresta in the group's marketplace, "the dream is to increase the scale of commercialization to generate more benefits". On trips to the forest to develop the action, Pacheco learned about the size of the challenges and the effects that an income project can bring to the autonomy of these families. "It drew attention to how much communities are open to issues of empowerment", he says.

### The key to managing indicators

The purpose of valuing people and the standing forest in all its complexity must be proportional to the effort in the construction and management of socio-environmental indicators, strategic to the evaluation of what went right or wrong, with measurement of the impacts achieved, planning financial and monitoring of goals and results as support for new investment decisions.

"With the indicators, it was possible to know how much benefits each family actually receives, in addition to the BRL 50.00 monthly", points out Michelle Costa, superintendent of management and planning at FAS, remembering that the public policy was initially complemented by projects to support the "income", "social" and "association" components, in addition to the payment to families, and then new frontiers of social, environmental, educational, health and production chains emerged, by the institution, resulting in the current and final programmatic structure of FAS, composed of the Floresta em Pé Programs (in which the Bolsa Floresta is included), Education for Sustainability, Health in the Forest and Innovative Solutions.

The conceptual root of this entire historical process in its different dynamics was based on the Theory of Change, based on the pillars of the union between environmental conservation and improvement of the quality of life. "The maintenance of public policy for 14 years, through payment for the commitment not to deforest and other subsequent actions, created a strong relationship of respect and trust with the communities", emphasizes Costa.

#### COMMUNITY EMPOWERMENT

Its objective is to strengthen community-based social organizations.

Based on this, it encourages the consolidation of current leaders and the training of future riverside leaders, especially women and young people in protected areas in the Amazon. The empowerment initiatives carried out are based on the qualification of residents, with political-citizen training of social groups, training of directors and popular leaders.

15 formal associations representing state conservation units

111 actions to support management and leadership training

29 leadership meetings

59% female participation

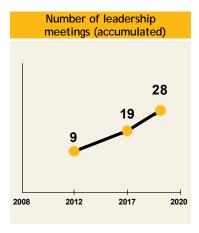
25% of leadership positions held by women in community associations

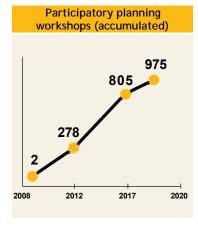
86% of BFP beneficiaries are women

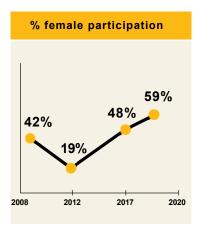
975 participatory planning workshops

3.878 participants

Source: FAS/2020

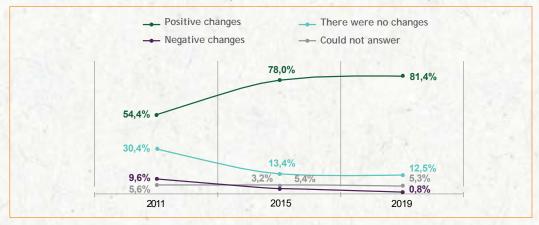






### **INDEPENDENT OPINION SURVEY: COMMUNITIES'** PERCEPTION OF BOLSA FLORESTA

HAVE THERE BEEN CHANGES IN THE COMMUNITY WITH THE ARRIVAL OF THE BOLSA FLORESTA PROGRAM AND ITS PROJECTS? (SPONTANEOUS AND SINGLE RESPONSE) PER YEAR



#### SUMMARY OF ASSESSMENTS



#### HAS THE OFFER OF HEALTH AND EDUCATION SERVICES IN COMMUNITIES IMPROVED?



Source: FAS2020.

Source: FASADA.
Only for BENEFICIARIES in each year in the CUs served by FAS: 2011, 3 CUs: Rio Negro's RDS, Juma's and Uatumā's RDS.
2015, 6 CUs: Rio Negro's RDS, Juma's RDS, Uatumā's RDS, Madeira River's RDS, Puranga Conquista's RDS and Rio Negro's APA. 2019, 6 CUs: Rio Negro's RDS, Juma's RDS, Uatumā's RDS, Madeira River's RDS, Puranga Conquista's RDS and Rio Negro's APA.
Note: Weighted average of grades awarded on a scale from 0 to 10. The grade assigned to the FAS employee was given only by those who know the FAS employee(s).

A highlight of this work was the monitoring of the socioeconomic profile of the beneficiaries over the years and the carrying out of three surveys - in 2011, 2015 and 2019 - on the satisfaction of families served by Bolsa Floresta, including data on income and use of good practices against deforestation. The (independent) opinion poll carried out by the company Action Market Research, in 2019, covered 3,101 families from six conservation units, pointed to an average annual income of BRL 890.00 - that is, on the edge of extreme poverty, estimated at BRL 899.00 (World Bank, USD 1.9 per day), but 44% higher than the rate recorded eight years earlier. In the period, the evaluation score by the beneficiary public increased from 7 to 8.7. Altogether, 87.9% reported making firebreaks to avoid

fire in the woods. In addition, the percentage of families who reported positive changes with Bolsa Floresta in their communities increased from 54.4% to 81.4% between 2011 and 2019.

"The main achievement of Bolsa Floresta was to transform BRL 50.00 in potable water, ambulances and equipment and transport vehicles that took the weight of the paneiro (wicker basket) off the back of the worker in the forest", emphasizes Emerson Moreira, leader of the community association of Canumã's RDS, in the municipality of Borba (AM). As a teacher, the riverside dweller has observed improvements in education: "If the family is doing well, the students are able to dedicate themselves more to school and studies, which is reflected in the reduction of school dropouts and in the Basic Education Development Index (IDEB)".



# MADEIRA RIVER, ALTERNATIVES TO ENVIRONMENTAL PRESSURES

Nut and cocoa production chains are supported by Bolsa Floresta

The name of the river already indicates the main product extracted in large quantities from the forest and carried by the waters of that waterway to consumer markets. Ever since he was a teenager, when he worked in the fields with his family, beneficiary of the Bolsa Floresta, riverside dweller Edmar Pereira de Souza, leader of Rio Amapá's RDS, in Manicoré (AM), understood the reasons for the commitment not to deforest. However, in the daily life of the Lago de Jatuarana community, I witnessed the devastation caused by loggers in the surroundings.

The challenge of containing it remains to this day, but it could have been greater and more difficult were it not for the seeds planted by the program, demonstrating the potential of economic alternatives and supporting social organization and empowerment in state conservation units in that territory. "It was the opportunity for a different dynamic for the Madeira River, where public policies did not reach due to the distance", emphasizes the riverside dweller. After studying in the city and returning to live in the community where he was born, Souza led the creation of the reserve association, in which projects were developed with chestnuts that gave visibility to the municipality beyond illegal and predatory wood. Today, says Souza, the apple of the eye in search of a new reality is cocoa. He is now part of the staff of FAS, further strengthening the actions for improvements for his region.



### The mining challenge

Crossed by roads, such as the BR-319, which connects Manaus to Porto Velho, the region influences new frontiers of deforestation in southern Amazonas. "There is concern about the expansion of urban areas and the increase of invasions in protected areas", reveals Souza, warning that in the future "there may be a lack of forest for riverside people and indigenous people who live there". Many, according to him, are being forced to migrate and no longer survive in harmony with what they had in the forest. "Given the difficulties in investing in production chains, there is a risk of losing the achievements of recent years", observes the leadership. The hope is that the heating up of the carbon market, with the climate emergency, will bring new resources to the Juma's RDS, also in the Madeira River region, benefited from transfers to offset greenhouse gases at the beginning of the Bolsa Floresta (read more in chapter 1).

At the same time, the region deals with the issue of mining operations, which are illegally operated on river rafts, with the impact of mercury on health and the environment. "While a bunch of bananas costs BRL 20.00, a gram of another is worth BRL 250.00", compares Marcos Paulo Barros, president of Rio Madeira's RDS association, a state conservation unit created in 2006 in the Amazonas municipalities of Manicoré, Novo Aripuanã and Borba. "With less investment in sustainable use, more illicit activities will occur to compensate for income", he warns.

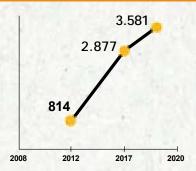
With support from Bolsa Floresta to associate production and environmental conservation, communities received brushcutters, fertilizer and other implements that increased agricultural income. "Without the program, which also helped equip the association, it would be impossible to travel to all communities," emphasizes Barros, for whom this more effective presence of leaders is fundamental in the current moment in the Amazon, in terms of deforestation. "The challenge is impunity in the face of the absence of Government, which does not carry out inspections."

## **INCOME GENERATION**

The Floresta em Pé program absorbed socio-environmental actions to strengthen production chains developed within the scope of Bolsa Floresta

# Income generation projects

(accumulated amount)



## 12 priority production chains\*

\*Acai, Flour, Pirarucu, Tourism, Guarana, Chestnuts, Bananas, Crafts, Vegetable Oils, Cocoa, Family Agriculture, Forest Management.

## AVERAGE MONTHLY FAMILY INCOME OF RESIDENTS

PUBLIC	2019		
	Average monthly family income (BRL)	% of the minimum wage	
Program beneficiaries implemented by FAS	920	92,2%	
Non-beneficiaries of programs implemented by FAS	780	78,2%	
Difference between beneficiaries and non- beneficiaries	+15,2%		

Source: FAS/2019. Satisfaction and Opinion Survey in protected areas covered by the Bolsa Floresta Program.

Opinion poll carried out by Action Pesquisas de Mercado between October and December 2019, involving 970 families (30.6% of the sample universe considered) benefiting from the Bolsa Floresta Program

Researched Conservation Units: Juma's RDS, Madeira's RDS, Uatumā's RDS, Rio Negro's RDS, Puranga Conquista's RDS and Rio Negro's APA.

Sample error margin of 3% plus or minus.

\*Nota: Minimum Wage 2019 BRL 998.00. The results presented refer to weighted averages





#### **AÇAÍ**

Consumed and appreciated by the populations living in the Amazon region, in recent years it has spread throughout the world. With undeniable health benefits, commercialization has become an important source of income for riverside populations as an economic alternative that helps keep the forest standing. An important stage is the processing of the fruit, which, with the support of the FAS Income Generation Program, now has açaí mixers.

1,5 families benefited

#### **CACAU**

Getting to know traditional communities along the Madeira River has a special flavor: chocolate flavor in its most varied forms and tastes. In addition to the economic potential, the activity contributes to sustainable production and reduction of greenhouse gas emissions, through agroforestry systems.

396 families benefited 5.7 tons produced BRL 1,500 • average gross revenue per family per harvest 2018-2019



#### CHESTNUT

Appreciated in cuisines around the world, Brazil nut is a source of income for more than 3,000 families in 57 communities distributed in the Negro-Amazonas, Solimões and Madeira regions within the nearly 1 million hectares. The Piagaçu-Purus' RDS, in the Negro-Amazonas region, is a unit with the greatest potential for nut production, with an average of more than a thousand tons.

1.6 thousand families

1.2 thousand tons

BRL 2,1thousand • average gross revenue per family per harvest 2018-2019

#### **FLOUR**

Almost a symbol for the state of Amazonas, flour is an important production chain for FAS. Therefore, it has been adopting strategies to improve and strengthen its production chain. The initial strategy was to improve the issue of food security and bring social technologies that facilitate the production process.

4,2 thousand families 8,8 thousand tons BRL 2,9 thousand • average gross revenue per family per harvest 2018-2019



#### **PIRARUCU**

Since 2010, FAS has developed the management of the "Giant of the Amazon" in five conservation units: Uacari's RDS, Mamirauá's RDS, Amanā's RDS, Cujubim's RDS and Piagaçu-Purus' RDS. In the process, it was identified that the largest share of the arapaima's income went to intermediary and not with the manager, demanding actions to improve marketing and prices paid to community members.

1,4 thousand families
979 tons
280% price improvement
BRL 3,7 thousand • average gross
revenue per family per harvest
2018-2019

## COMMUNITY FOREST MANAGEMENT

Conscious logging, carried out using technical criteria. In addition to allowing the conservation of species, management provides more security to community members, insofar as it removes explorers from illegality and provides training in safety.

148 families BRL 1 thousand • average gross revenue per family per harvest 2018-2019



### **TOURISM AND CRAFTS**

Qualification actions are developed for enterprises and technical assistance in the region that comprises the Lower Rio Negro (Rio Negro's RDS, Rio Negro's APA and Puranga Conquista's RDS), comprising an ecosystem of six inns, three restaurants and seven groups of handicrafts spread across ten communities that contribute to the income generation of more than 100 families in this region. In the Uatumā's RDS, where sport fishing tourism predominates, the business arrangement is made up of ten inns that operate mainly during the sport fishing season, from September to January.



## RESULTS OF TOURISM AND CRAFTS CHAINS IN 2019

CHAIN	Result 2019 (Gross revenue)	
Tourism - Lower Rio Negro	BRL 373,167	
Tourism - Uatumã's RDS	BRL 1,966,100	
Crafts - Lower Rio Negro	BRL 178,737	

Source: FAS

# Bolsa Floresta and Bolsa Verde: similarities, differences and challenges\*

In June 2007, in a pioneering initiative at the national level, the Government of the State of Amazonas, under the leadership of Governor Eduardo Braga, launched the Bolsa Floresta Program. Four years later, in September 2011, the Federal Government launched Bolsa Verde Program. What are the similarities, differences and challenges between these programs?

Both are aimed at residents of conservation units. Bolsa Verde, however, also includes residents of agrarian reform settlements that have an environmental distinction: Agroextractive Settlement Projects, Forest Settlement Projects and Sustainable Development Projects. This spatial limitation reflects a common thread: these are areas of great environmental value, where extractive populations and traditional family farmers predominate.

Both can be seen as an additional remuneration due to the protection of forests resulting from the life habits and production systems of these populations. They can be seen as payment programs for environmental services. However, there are some differences between the programs. The Bolsa Verde Program requires that the beneficiaries meet the criteria of the Bolsa Família Program, whether they are residents of conservation units or differentiated settlements, and respect the management plan or plan for the use of these areas. The Bolsa Floresta program deals with environmental commitments in a more detailed and explicit way. All participants attend a two-day workshop, where topics such as sustainable development, climate change, etc. are discussed. Environmental education work and support for community-based organization are fundamental pillars of the Bolsa Floresta Program. After that, participants are invited to sign a formal term of commitment, which requires zero deforestation in primary forest areas, use of fire prevention practices and participation in the conservation unit's residents' association.

Both can be seen as anti-poverty programs. However, there are some differences between the programs. Bolsa Verde provides for quarterly payments of BRL 300.00, totaling BRL 1200,00 per family per year. Bolsa Floresta establishes an annual payment totaling BRL 1360.00 per family per year, divided into four components. The first (Bolsa Floresta Familiar), similar to Bolsa Verde, includes direct payments to the woman representing each family, in the form of monthly transfers of BRL 50.00, totaling BRL 600.00 per year. The second (Bolsa Floresta Renda), results in investments of BRL 350.00 per family per year, aimed at generating income (production of Brazil nuts, pirarucu, açaí, tourism, etc.), taking advantage of the wealth of the standing forest. This means a historical average, between 2008 and 2020, of BRL 165,042 per protected area per year. The third (Bolsa Floresta Social) is focused on social investments, especially support for community infrastructure, in the amount of BRL 350,00 per family per year. This means, on average, BRL 73.999 per conservation unit per year. The fourth component (Bolsa Floresta Association), foresees investments in strengthening community-based organizations, especially support for offices and local mobility of leaders. This means, on average, BRL 28.112 per conservation unit per year.



There is a difference in terms of the duration of programs. Bolsa Verde provides for payment for two years, renewable for another two. It is expected that at the end of the period, the beneficiaries will reach a new socioeconomic level, as a result of productive inclusion, making the continuity of the program unnecessary. Bolsa Floresta is a program that intends to last indefinitely, while the provision of environmental services by the forests guarded by the program participants lasts: biodiversity conservation, maintenance of the hydrological cycle and climate, etc. The logic, therefore, is environmental and not socioeconomic. For this, the budgetary resources for Bolsa Floresta Familiar come from a Trust Fund, from which only the annual dividends are extracted.

Bolsa Floresta program has a time condition: only families with more than two years of living in protected areas are eligible. This rule is intended to discourage migration to these areas motivated by the benefits of the program. Bolsa Verde, in turn, does not have this condition.

There is a difference as to the origin of the resources. Bolsa Verde is financed by resources from the Federal Treasury. Bolsa Floresta is financed through a public-private partnership. The Government of the State of Amazonas contributed about one third of the Permanent Fund's current resources, with the remainder provided by Banco Bradesco and Coca-Cola. Additional resources from HRT Oil and Gas are planned. The other components of the Bolsa Floresta program all come from private partnerships (Bradesco, Samsumg and others) or international donations, such as the Amazon Fund/BNDES.

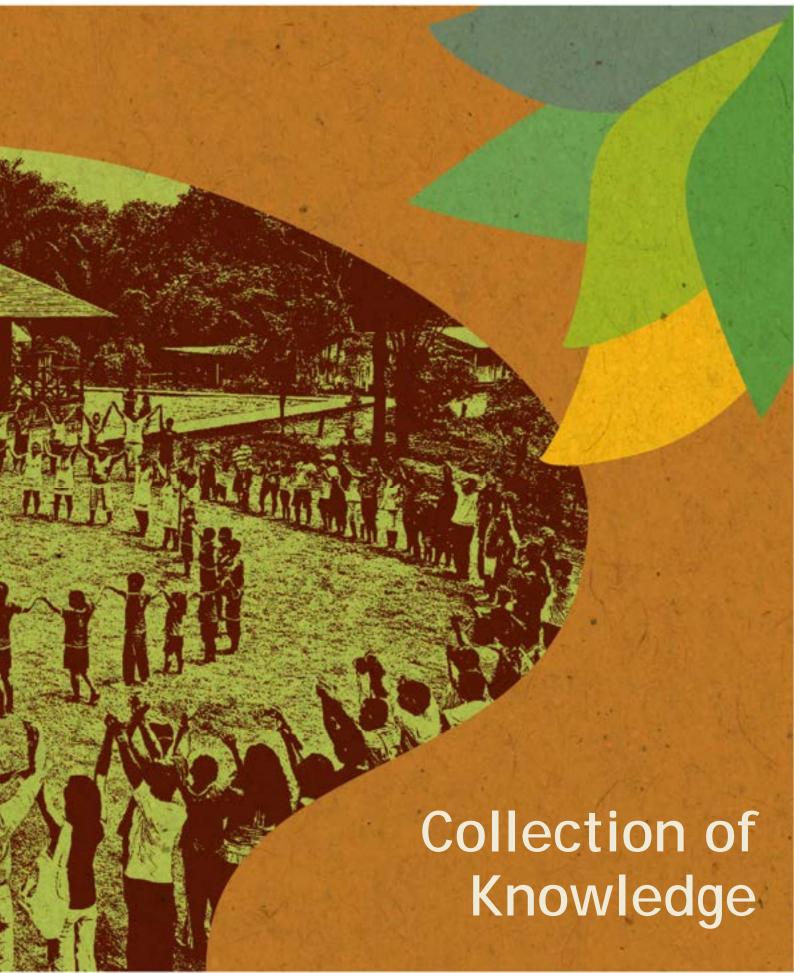
Both programs are implemented with a strong component of institutional partnerships. Within the scope of Bolsa Verde, the Ministries of Social Development, Environment and Agrarian Development coordinate the actions of various bodies linked to them and partnerships with other ministries, state governments and municipal governments. Special emphasis is

given to partnerships aimed at productive inclusion, through different programs of the Federal Government and other partners. Bolsa Floresta is implemented by a public-private, non-governmental institution, Foundation for Amazon Sustentability, in coordination with the Secretary of the Environment of the State of Amazonas and its related institutions – in addition to several other governmental and non-governmental institutions and companies.

While there are many similarities and some differences, both programs have common challenges. The main challenge is ethical. We cannot allow forest guardians to live in extreme poverty. It is essential to build an agenda capable of eradicating poverty and promoting the citizenship of forest guardians. Investments in income generation and productive inclusion represent the best way to eradicate poverty and improve quality of life. Another challenge is to promote environmental conservation, reducing deforestation and the degradation of natural ecosystems. It is essential to build a strategy that values the standing forest and walks towards zero deforestation. Finally, the common challenge is to connect the social, economic and environmental agendas. Only with a holistic approach, capable of understanding the interconnectivity of these components of sustainability, will it be possible to overcome the immense challenges of working with the difficult reality of the Amazon.

There is already a process of change and exchange of experiences between the institutions involved in both programs, which is very positive. It is equally positive to see that several state governments in the Amazon are beginning to design similar programs, adjusting to their local particularities. There is an excellent opportunity for synergy between these new programs and the Bolsa Verde program. There is also a great opportunity for new programs to build on lessons learned since 2007 in implementing the Bolsa Floresta program. Good for the communities, the forest. Good for Brazil.









hroughout its trajectory, Bolsa Floresta and its results as a public policy, combining improved quality of life and reduced deforestation in protected areas in the Amazon, inspired technicalscientific studies and passed the sieve of critical and independent by third parties academy, consultancies and international organizations. This process contributed not only to validating or correcting directions as an innovative model, but also to evolving the knowledge necessary for debating promoting sustainable development in the Amazon.



As a pioneering Payment for Environmental Services (PSA) strategy, which is still the largest in the country and one of the largest ever adopted in the world, the program attracted external attention due to its holistic methodology and the effectiveness of its implementation. In this way, a fertile field for reflections and learning was configured, including as a reference in the perspective of replication or formulation of new arrangements aimed at rewarding riverside and indigenous communities for maintaining the standing forest in the Amazon territory.

"Fourteen years seems like a lot for someone who lives in cities, but for the context of the Amazon,

The complexity of the Amazon and its ecosystems requires humility and wisdom to listen to science

Jacques Marcovitch, professor emeritus at the Faculty of Economics, Administration and Accounting at University of São Paulo (USP) and member of the Board of Directors of FAS



The Leadership Meeting with representatives of Bolsa Floresta conservation units promotes the exchange of experiences

represent seconds. The complexity of the biome and its ecosystems requires humility and wisdom to listen to science", says Jacques Marcovitch, professor emeritus at the Faculty of Economics, Administration and Accounting at University de São Paulo (USP) and member of the Board of Directors of FAS. He especially mentions pioneers of great dedication to the subject, such as Samuel Benchimol (1923-2002), Bertha Becker (1930-2013) and Aziz Ab'Saber (1924-2012).

"Bolsa Floresta initiative is extremely worthwhile and, like any public policy, needs to be evaluated in several dimensions: knowledge of the territory, leadership strategy and metrics to monitor results", analyzes Marcovitch. "Getting out of poverty requires a set of joint and synchronous measures, such as those necessary to pull a person from the bottom of the well – as FAS did, by bringing together different actors to promote transformations".

Within the scope of the first premise, there is the ability to "know, look and listen to the surroundings, with the achievement of trust, an experience that FAS dominates







△ Communities contribute to the conservation of biodiversity



as few do", says Marcovitch. In this scenario, according to him, there is a challenge: as the hand that educates often should not be the same to supervise or punish, the need to guarantee compliance with the agreement not to deforest in exchange for the financial reward of Bolsa Floresta became a sensitive point of attention that required effort of engagement and empathy in the protected areas served, so that carelessness in sustainable community practices did not occur.

### Qualification of teams

In the dimension, second analyzes strategy encompassed a Marcovitch, the rigorous method of implementation, from adhesion to the transfer of resources to community members. "It has become very successful due to the complementary socioenvironmental components and where it needs to be effective is in its perpetuity and long-term sustainability. Without a permanent injection of resources, a successful project will have a finite duration", ponders the professor. In his analysis, Bolsa Floresta public policy needs to be lasting: "When a community manages to create its own capacity to generate well-being, it must make room for others to benefit from the program".

Regarding leadership capacity, in the third dimension. "Bolsa Floresta the differential of a qualified team with knowledge of local realities, skills in community relations, ability solve to resilience in adversity problems, creativity in the search for new solutions. FAS's response to the Covid-19 crisis was the result of a leadership culture, proactive and entrepreneurial, to build a better future".

Added to this, adds Marcovitch, "the engineering of FAS in the multi-institutional relationship from the beginning, determinant for the complementarity of visions and profiles, with emphasis on the role played by Virgilio Viana and Luiz Fernando Furlan in the high command of the institution. The first, general superintendent, originally from the academy; the second, chairman of the Board of Directors at the time of the creation of FAS to implement Bolsa Floresta, coming from the business world - both with government sensitivity for the public functions they held in the past. It was a very suitable environment for the flowering of ideas".

With these credentials, FAS looks to future scenarios, including the sense of "becoming an increasingly direct interlocutor with international agencies, organizations and NGOs on a global scale, and for that it needs to invest and advance in these relationships", analyzes Marcovitch, remembering that limiting oneself to the national space means depending on the political conjuncture of the state and federal spheres, according to ideological issues that influence socio-environmental commitments.

Finally, according to the professor, the fourth and final dimension of analysis of Bolsa Floresta as a public policy is in the application of metrics to monitor the entire process up to the measurement of results and impacts. "It is difficult to analyze just the payment of BRL 50.00 per month, without considering the parallel initiatives for socio-environmental improvements: FAS is a development agent, not an entity that grants scholarships", emphasizes Marcovitch.

One of the main challenges "is to measure what would have happened if there hadn't been the Bolsa Floresta and what happened as a result thereof". Marcovitch says that the program has generated excellent results, but "there is still a need to advance more effectively to overcome the pressure of deforestation in the areas where it works". He cites the World Bank report Impacts of

conservation incentives in protected areas: The case of Bolsa Floresta, Brazil, 2019, which incentive-based conservation "promising approach to rainforest, including multi-use protected areas". but recommendations. The main one is the need to focus on areas most threatened by deforestation, in order to obtain greater conservation additionality through the program. When analyzing indicators between 2002 and 2015, comparing protected areas served and not served by Bolsa Floresta actions, the World Bank study detected a low effect in terms of avoided deforestation.

In contrast, internal FAS indicators, processed using a different methodology and permanently updated based on official deforestation data, demonstrate the positive impact of the program's actions for forest maintenance (read more about results of avoided deforestation in chapter 1).

#### PARTNER ACADEMIC INSTITUTIONS

Partnert	Acronym	Scope
Aliança para a Bioeconomia da Amazônia	ABIO	Regional
Centro Agronómico Tropical de Investigación y Enseñanza	CATIE	International
Centro de Educação Tecnológica do Amazonas	CETAM	Regional
Coventry University	Coventry University	International
Faculdades Nilton Lins	FNL	Regional
Fundação de Amparo à Pesquisa do Amazonas	FAPEAM	Regional
Fundação Hospitalar de Hematologia e Hemoterapia do Amazonas	HEMOAM	Estadual
Fundação Oswaldo Cruz	Fiocruz	Federal
Fundação Universidade Aberta da Terceira Idade	FUNATI	State
Fundo Newton	Fundo Newton	International
Instituto de Ciência e Tecnologia	Sidia	Regional
Instituto Federal de Ciência e Tecnologia do Amazonas	IFAM	Federal
Instituto Nacional de Pesquisas da Amazônia	INPA	State
London School of Economics	LSE	International
Pontifícia Academia das Ciências do Vaticano	PSA	International
Samsung Eletrônicos da Amazônia	SEDA	Regional
Sustainability Institute	Sustainability Institute	International
Universidade Corporativa Bradesco	UNIBRAD	National
Universidade de Delft	TU Delft	International
Universidade de Notre Dame	Notre Dame	International
Universidade do Estado do Amazonas	UEA	State
Universidade Federal do Amazonas	UFAM	State
Universidade Nilton Lins	Nilton Lins	State
Victoria University of Wellington	WGTN	International

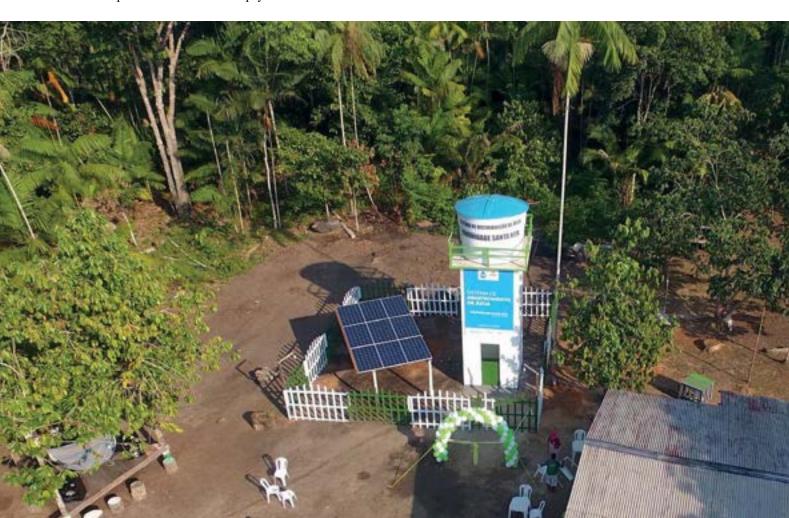
## The importance of a comprehensive look

"It is necessary to move away from a simplistic view, such as that of the World Bank study, and consider intangible factors from the perspective of sustainable development", evaluates Brazilian researcher Livio Miles Silva-Müller, author of a master's thesis We Are Not Here to Monitor You: Payment for Ecosystem Services in the Brazilian Amazon at the Graduate Institute, Geneva, Switzerland.

Dedicated to the relationship between the economy and the environment, the sociologist compared metrics of more and less complex dimensions that measured the impacts of Bolsa Floresta as payment for environmental services. During four months of visits to the FAS headquarters and the RDS of Uatumã, in 2019, the researcher immersed himself in the analysis of how public policy interacts with partners, leaders and local realities. "The objective was to understand the context as a whole, looking at what happens at the end", says Silva-Müller.

He highlights: "We soon realized that what leads someone to deforest is something much more complex than the existence or not of the BRL 50.00 per month". One of the main conclusions of the study revolves around

W Bolsa Floresta attracted partnerships, such as the Água+Accesso (Water+Access) program for solar water supply in remote areas



the role of building trust between those who implement the program in the field and the beneficiary residents. "This is a value that is difficult to measure, but it can make a public policy work or not", he says.

"At the end, the work of NGOs adds value in a more substantial way so that policies are implemented, which is often ignored. Looking at metrics is necessary, but this alone can harm the understanding of the program in all its complexity in the long term", completes the researcher, now dedicated to the doctoral study with a comprehensive look at deforestation curves in Brazil and the configuration of policies based on them. "Bolsa Floresta opens a key path for sustainable development, in the expectation of a more favorable future Brazilian political environment, and FAS is in an excellent position to scale the results"

In the search for forest conservation and poverty reduction, what is the impact of more structured and active associations, more mature forest production chains and better-quality community life, with access to water and internet, for example? To what extent should the built model be replicated and scaled? How? At what cost-benefit? What aspects to correct? Faced with a pioneering initiative that opened new paths in the forest based on mistakes, successes and discoveries, the academy and organizations dedicated to the generation of knowledge have much to contribute – in critical thinking, in recommendations and in recognition – to the continuity of this story.

## Contribution to the green economy

"As a public policy in Amazonas, Bolsa Floresta is a highly successful Payment for Environmental Services (PSA) experience, the largest associated with an NGO due to the scope, dimension of resources and long continuity time", says Carlos Eduardo Frickmann Young, coordinator of the Environmental Economics and Sustainable Development Group at the Federal University of Rio de Janeiro (UFRJ) and advisor to FAS.

Dedicated to academic research in the field of the green economy, Young recalls that the private-public financing program, added to a very proactive fundraising strategy, generated effective environmental and social results in 14 years. According to him, opinion polls in the communities show improvement in living conditions and the adoption of sustainable practices (read more in chapter 2), but "there is demand

was the capacity for dialogue and independence from governments

Carlos Eduardo Frickmann Young, coordinator of the Environmental Economics and Sustainable Development Group at the Federal University of Rio de Janeiro (UFRJ) and member of the board of directors of FAS for more independent academic studies to delve into these and other topics." To what extent are other vectors, in addition to Bolsa Floresta and its actions, influencing avoided deforestation in these areas?

A challenge is precisely to evaluate a problem, according to Young, associated with success: "The better quality of life reduced the exodus and attracted families back, with population swelling in the communities, most of them with a high fertility rate. We are not prepared to deal with this. What is the impact on basic services such as sanitation? What is the maximum size for a community within a support capacity? This is the big question of the moment and the planning needs to start now".

The legacy of Bolsa Floresta left marks and footprints with the potential to guide new policies and actions. "A great achievement was the capacity for dialogue and independence in relation to governments", emphasizes Young, stressing that a new cycle of history must be concerned with separating the roles. Over time, he says, "FAS ended up assuming functions in the vacuum of the lack of policies in health, education and social assistance, for

Bolsa Floresta, in its set of socio-environmental components, needs to have perpetuity, incorporated as a State strategy

Neliton Marques, coordinator of the Graduate Program in Environmental Sciences and Sustainability in the Amazon, from the Federal University of Amazonas (UFAM) and vp of CAD example, responsibility that belongs to the Government". Beyond this point, the researcher defends greater sensitivity to the limits of scale and financial capacity, with "fundraising from sectors that really want to conserve the forest in the Amazon".

Professor Neliton Marques, director at FAS and coordinator of the Graduate Program in Environmental Sciences and Sustainability in the Amazon, at the Federal University of Amazonas (UFAM), agrees and goes further: "Public policy in its origin, Bolsa Floresta in its set of socioenvironmental components needs to have perpetuity, incorporated as a State strategy. Without this, the success of the results achieved by the role of FAS in this process of improvement is in danger of disappearing".

In Marques' analysis, "a bridge is needed to reach a larger scale", since reaching 40,000 people benefited, as it happens today, is still a small dimension for him in the context of the Amazon and its challenges. "The central question is how to fill this gap created by the ineffectiveness of governments". He concludes: "The academy's interpretation is that Bolsa Floresta at this stage needs to make a leap as a long-term public policy to avoid deforestation and more effectively lift people out of poverty in rural areas".

Despite the effort to raise funds and partnerships by FAS, the challenge requires public investment capacity, with permanent attention to socio-environmental indicators. "The yellow light is on", warns Marques, reminding that the presence of traditional populations in conservation units is essential to cushion the environmental pressure of other forms of soil use.



"But something is off the curve, given the data indicating a downward trend in the number of families participating in the program in recent years", he adds (read more in chapter 1).

"Bolsa Floresta is a great learning laboratory, with positive and negative experiences", emphasizes Rita Mesquita, extension coordinator at the National Institute for Research in the Amazon (INPA). However, she says, "there is a lack of more independent studies carried out by academic institutions in the region, with the eyes of those who live with this reality". In Mesquita's view, in terms of environmental conservation, income generation and rights protection, "the program deals with

A FAS's structure and logistics allow reaching remote areas to expand the knowledge already generated by Bolsa Floresta

multiple sociocultural issues that can be better understood and dealt with with the support of local researchers experienced in Amazon themes, such as traditional knowledge.

"How to measure the empowerment of women in remote areas of the forest? How to pay for environmental services not fully understood by the beneficiaries", asks Mesquita, highlighting issues that demand greater debate and academic in-depth study. Collaborator of

# It is a great learning laboratory

Rita Mesquita, extension coordinator at the National Institute for Research in the Amazon (INPA) and former deputy secretary for environmental management at the Department for the Environment and Sustainable Development of the State of Amazonas

innovative environmental policy initiated by the government of Amazonas in 2003, the researcher looks back at the trajectory of Bolsa Floresta and recognizes the importance of the results, which "have proved to be even more expressive in the face of the impacts of the covid-19 pandemic and need to have continuity with independence and continuous search for financial support".

## Independent evaluation

The program has been submitted for evaluation by third parties, with emphasis on the ex post report of Bolsa Floresta - Amazon Fund 2010-2015, carried out by a team of independent consultants under the coordination of the Social Development Economic and Bank (BNDES) within the scope of technical cooperation with the German Cooperation for Sustainable Development, through "Beneficiaries developed the capacity to act and decide on their territory, becoming protagonists for the conservation of forests and biodiversity", highlighted the document when verifying the efficiency and impact of the program in several aspects.

In addition, "there was a positive impact on avoided deforestation and on the reduction of the amount

of hotspots in the conservation units served by the project, both smaller compared to the unsupported ones". According to the analysis, the positive impacts perceived from Amazon Fund financing to production chains "cannot be completely dissociated from the Family and Social modalities, whose monthly payment and investments in health and education, respectively, also contribute in a significant contribution to the improvement of the quality of life and provision of environmental services".

"The program directly influenced the reduction of rural poverty through an increase in the average monthly family income. However, the monthly per capita income is still insufficient to overcome the extreme poverty line", pointed out the study, with one caveat: "In the context of conservation units, food and nutrition security and quality of life are independent of a monetary income comparable to that of residents of urban areas".

Another external evaluation, carried out in 2013, consisted of the "Participatory Analysis of the Five Years of Implementation of the State Policy on Climate Change", led by Idesam and five other relevant non-governmental organizations in the Amazon. Produced at a time when the country in general was already showing signs of weakening of the environmental policy, the document considered the level of implementation of the policy by Amazonas low and indicated as an essential factor for improvements the approval of the Environmental Services Law, the which regulates economic mechanisms such as payments for environmental services and the Reduction of Deforestation from Deforestation and Degradation (REDD) – which only happened in 2015. In addition to these points, the new

legislation created a Climate Change Fund to finance the planned programs and projects.

## Recognition of international studies

In addition to audits in the field of financial management carried out by PwC, Bolsa Floresta was subject to external evaluations by the Federal Court of Auditors and the Economic Commission for Latin America and the Caribbean (ECLAC), among others that contribute to the process of building ideas and solutions and with the global visibility of FAS for the actions implemented within the scope of the program – recognition that accredits new partnerships with institutions and multilateral organizations and access to international funds for raising funds, giving continuity to what was sown 14 years ago.

One of the main international studies of evaluation

consisted of the Report of the External Review Committee, led in 2013 by five Brazilian and foreign experts, including environmentalist and biologist Thomas Lovejoy, PhD from Yale University – scientist who received the Tyler Prize in 2001, one of the most prestigious awards in the American scientific world — in addition to Ana Toni, Eugênio Scannavino, José Serafico and Gustavo Fonseca.

This independent evaluation aimed to evaluate the Bolsa Floresta and other programs implemented by FAS in the mission of "promoting sustainable development, environmental conservation and improving the quality of life in the conservation units of the State of Amazonas, valuing the people, services and environmental products".

W Bolsa Floresta indicators have been debated at events and studies in the search for continuous improvement





Technical-scientific analyzes contribute to the recognition of Bolsa Floresta

recommendations, the need for Asempowerment strategy for communities was highlighted, increasingly increasing the capacity self-sustainability. In diversification of funding sources was indicated, seeking bilateral and multilateral funds as well as donations from individuals and inheritances, as well as the establishment of transparent criteria for private donors, in order to avoid "green washing". Scientific partner of FAS, with wide participation in the global debate on the green economy and several contributions to Bolsa Floresta, researcher Steve Bass, senior associate of the International Institute for (IIED), Environment and Development recommends an analysis on the necessary balance and the ideal developmental stage to serve as references.

"We believe that FAS, largely through Bolsa Floresta, has catalyzed the emergence of a green and inclusive economy in Amazonas – a standing forest economy, in which the people of the region are the beneficiaries of the sustainable use of natural resources", as producers and environmental conservation agents. Through the program, adds Bass, "riverside dwellers were for the first time connected to the economy in general as owners of the means of production, registering improvements in well-being in several dimensions".

"Meanwhile, the environment is being protected and, in fact, better utilized. And then?", asks the researcher, reinforcing that he thinks of development as "the creation of wealth necessary for the well-being of people and nature". Thus, within the scope of Bolsa Floresta, Bass proposes to categorize these assets into: natural capital (forests, water, biodiversity), physical capital (community and productive

structure), human capital (skills, work), social capital (community organizations, rules, powers, relationships), intellectual capital (knowledge of forests, management techniques, etc.), financial capital (income, credit, etc.). These capitals were systematized in the 2019 FAS Integrated Report, a publication that followed the standards of the International Integrated Reporting Framework, developed by the International Integrated Reporting Council (IIRC), as a reference for integrating financial and socio-environmental information.

In each of these dimensions, the challenge is to find a balanced scenario for decision-making from the baseline on the community reality to the level of autonomy to walk alone and the level of maximum aspiration. In Bass' view, the proposed method makes it possible to establish priorities in line with the recommendations of the Bain & Company report that supported the FAS Strategic Plan 2030 (read more in chapter 4). "The lack of clarity, consistency and communication of priorities, and of easy ways to translate them into actions and report them, are identified by the team as the main barriers to wasting energy and resources", progress, highlights Bass.

We believe that FAS, largely through Bolsa Floresta, catalyzed the emergence of a green and inclusive economy in Amazonas

# The environmental services of the Amazon for Brazil\*

Amazon conservation has many motivations; some of a subjective nature and others of an objective nature. In the collective imagination, the Amazon is the place of mysteries, with its endless forests and its many indigenous peoples – some dozen of whom have not yet been contacted. Its complexity and mysteries arouse attitudes of protection and care, both among forest peoples and those who live in urban centers in Brazil and around the world. This, in part, justifies the immediate and overwhelming repercussion in the national and international media when the news addresses deforestation, fires and disrespect for indigenous peoples.

There is another set of rational and objective justifications for conservation. We can mention geodiversity, with great potential for the mineral industry, and Amazon biodiversity with enormous possibilities for the development of medicines and other products for the most diverse purposes. After all, each diversity of plants and animals corresponds to a gigantic variety of chemical compounds, practically unexplored.

The charm of this natural diversity is symbolized by the magic and romanticism of perfumes with fragrances and aromas from the forest. The most symbolic is the Chanel 5, made from rosewood essence, a tree native to the Amazon. There is also the wealth of timber and non-timber forest products that traditionally have significant economic value.

Other motivations for the conservation of the Amazon begin to emerge from the realization of its importance for the global climate balance. If the current pace of deforestation and fires in the Amazon continues – added to the effects of the burning of petroleum products and mineral coal – we will all be fried. Literally, before the end of this century.

These indirect benefits of the forest for the global climate balance we call environmental services. The services concern all the non-palpable products of the forest: the exchange of gases with the atmosphere, the dampening of rain, the maintenance of ecological processes, etc. In recent years, environmental sciences have advanced a lot in the quantification of environmental services. On the other hand, public policies aimed at regulating these services began to emerge, such as the Climate Change Law and the Law on the State System of Protected Areas in the State of Amazonas.

It is worth mentioning the conclusions of the I Workshop on the Role of Amazon Forests for the Hydrological Cycle, held in Manaus, in July 2007. About 20 of the most distinguished scientists from Brazil and the world participated in this workshop on a boat that sailed along the banks of the Rio Negro. The main conclusion is that the environmental services of the Amazon are essential for the rain that falls in the rest of Brazil and in much of South America.

In a simplified way, we can say that the forest works as a water processing plant. It sucks, like a huge bomb, the moisture from the Atlantic Ocean. The rain that falls in the eastern region is dampened by a complex forest sponge, composed of leaves, branches, trunks and the soil, rich in organic matter, earthworms and millions of other small animals. The water that falls quickly turns into water vapour, which leaves enriched by chemical compounds, called volatile organic compounds. These compounds act as accelerators for the formation of new rains, acting on low-altitude clouds. The second generation rains repeat the same process as those that started the processing of water, from the coast of the Atlantic Ocean to the slopes of the Andes Mountains. In the middle of this walk, the forest produces some jets that carry excess moisture out of the Amazon. This phenomenon, called low-altitude jets, takes billions of cubic meters of water to the southwest (Argentine and Paraguayan Chaco) and southeast of South America (South, Southeast and Central-West Brazil). Throughout the year, the moisture exported by the Amazon to other regions is around 1.7

trillion cubic meters of water vapor, according to an estimate by Professor Enéas Salatti, from the Brazilian Foundation for Sustainable Development (FBDS) and former director of CENA/USP and INPA.

We can say that the rain that falls in other regions of Brazil is significantly influenced by the water processing carried out by the Amazon forest. If we see that rain is essential to feed the plants in our agriculture and livestock, as well as to fill the rivers that supply our cities and power plants, we can say that the Amazon is essential for the future of Brazil.

Changes in rainfall variability – with increased floods and droughts – are predicted by most climate change models. If we deforest the Amazon, this variability is likely to increase, with serious social, environmental and economic consequences. We can therefore say that conserving the forest is a strategic part of the national interest.

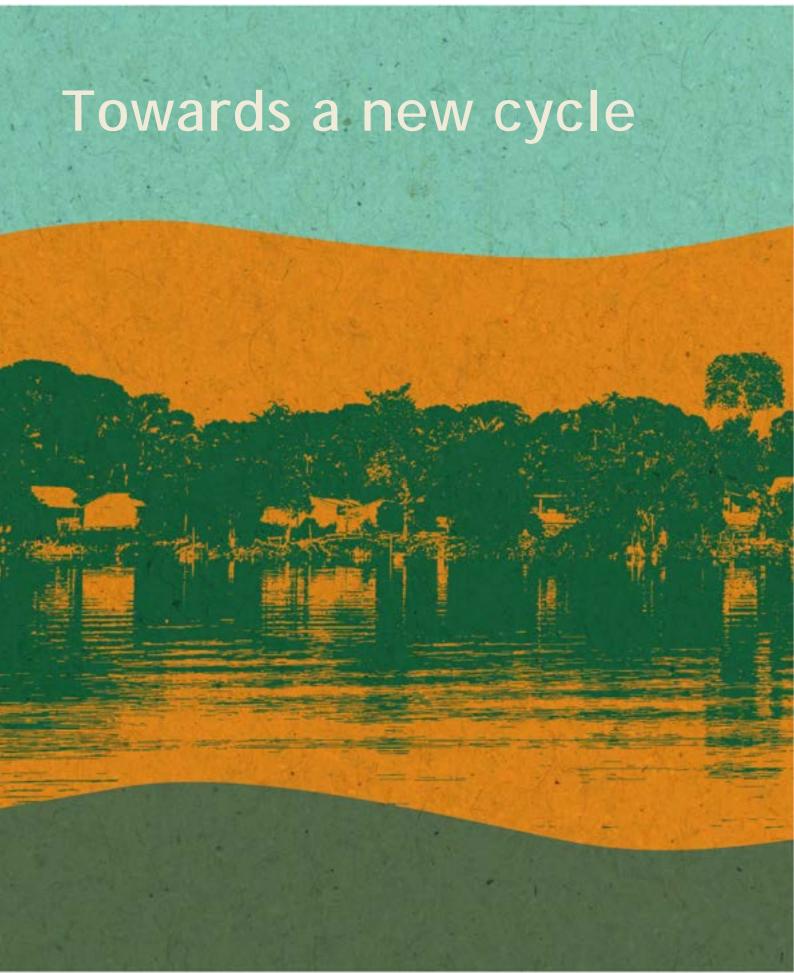
It is important to translate this scientific rationality of the Amazon's environmental services into coherent and serious public policies. First, we must increase investment in research and environmental education. Unfortunately, Brazil invests little in science and uses little scientific knowledge in the formulation of sustainable development strategies and programs. Knowledge of environmental sciences needs to reach our schools, the media and the general population. Second, we must build a national project for the Amazon. This is not a political project to conveniently serve the various interest groups that are related to the Amazon.

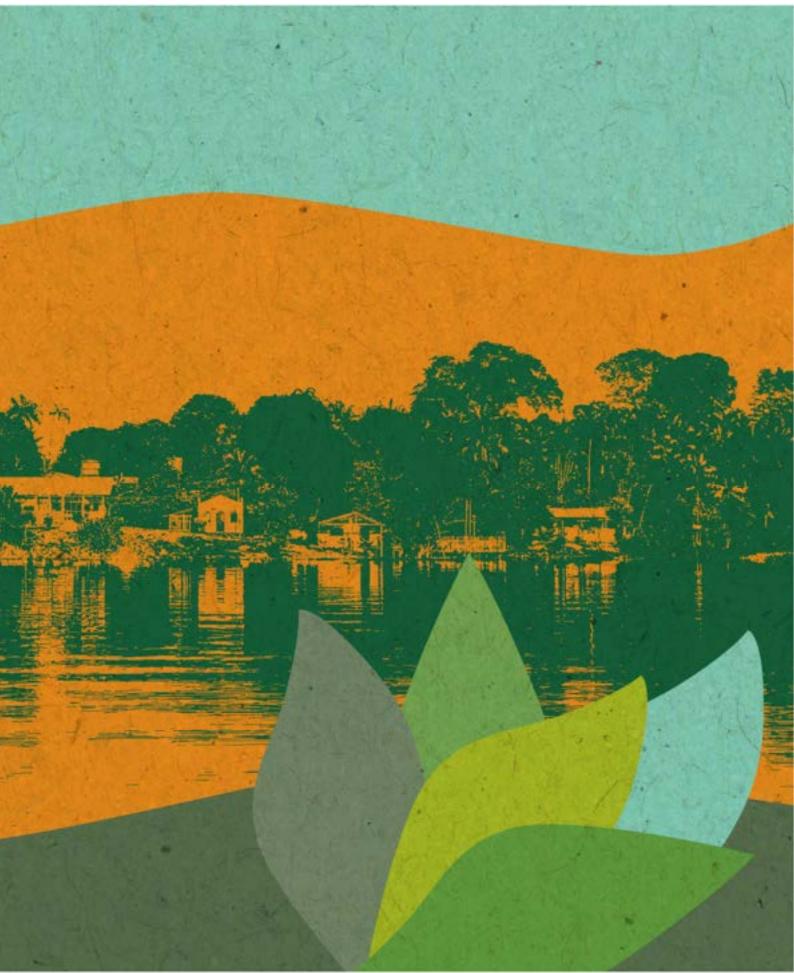
The challenge is a national project truly committed to a strategic vision for the future and the well-being of current and future generations. This project must reconcile the social, environmental and economic components. We call this sustainable development, a concept forged 20 years ago, in 1987 – by the Bruntland Commission – and later ratified by almost all countries in Rio-92, including Brazil.

The environmental services provided by the Amazon to the rest of Brazil need to be valued economically. How much is water vapor exported from the Amazon to the rest of Brazil worth? How should the beneficiaries of these environmental services compensate the governments and the traditional and indigenous populations of the Amazon, who are the guardians of these environmental services?

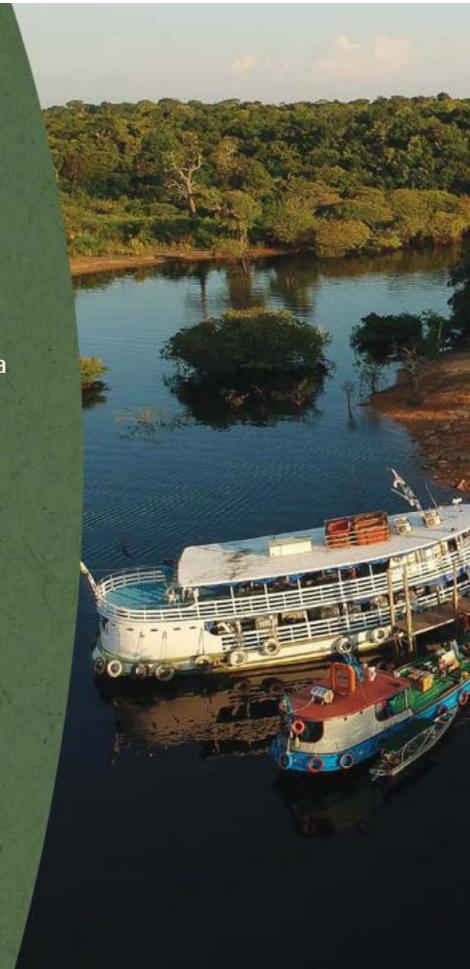
It is obvious that the environmental services of the Amazon also have a global value. This must also be the subject of analysis and strategic actions, but it may be opportune to pay special attention to the importance of the Amazon to objective national interests. As the Zen philosophy says, the solution to the problem is never in the other: it starts with ourselves. Fortunately, there is still time to act. However, time is pressing.







The lessons
learned with Bolsa
Floresta launch
opportunities for
the future of
sustainable
development in
the Amazon





he trajectory of the first Amazon initiative in the logic of rewarding populations for ecosystem services, represented by Bolsa Floresta and its spectrum of actions for income, quality of life and reduction of deforestation in conservation units in the State of Amazonas, opens perspectives for new paths of public policies for sustainable development. More than that, by demonstrating the viability of the model and presenting challenges and solutions, the program sheds light on the expansion of strategic synergies, in the scale and urgency of actions that the region needs - from the involvement of riverside and indigenous communities to the partnerships with companies, international organizations and financial funds aligned with the current environmental and social demands of the planet, especially in the context of climate change.

The global climate movement has reached a new chapter in this second decade of the 21st century, marked by the significant advance of the voluntary carbon market, in the context of continuous growth

inspiration for new
Amazon conservation
policies, with a focus on
economic and social
development

of pressures for sustainability, in which the world is compelled to reduce greenhouse gases. In parallel, regulations are expected around the commitments of countries in the Paris Agreement in its implementation, to be negotiated at the UN climate conference in Glasgow, in October 2021. The agenda highlights the need for advances in the topic of carbon market instruments, such as REDD+ (Reducing Emissions from Deforestation and Degradation).

The year 2021 could be decisive for collective action to limit the increase in global temperature to 1.5° in relation to pre-industrial levels, with a reduction in deforestation and energy transition, among other points of interest. This goal, necessary to avoid the risks of a climate catastrophe, can only be achieved with a global drop of approximately 50% in greenhouse gas emissions by 2030 and carbon neutrality in 2050, as indicated by the Intergovernmental Panel on Climate Change.

A large-scale voluntary carbon market is seen as key to achieving the goals of the Paris Agreement, allowing more companies to meet their goals of net-zero carbon emissions through investments in greenhouse gas reduction projects as more effective. and lower costs, with emphasis on conservation and sustainable use of forests. According to the Taskforce on Scaling Voluntary Carbon Markets, to meet the demand for global climate commitments, this

Agroforestry production on the Madeira River proves the importance of attention to those who care for vital ecosystem services for the planet market will need to grow at least 15 times, with the potential to increase 160 times, compared to 2020.

In the voluntary carbon market, companies offset greenhouse gas emissions mainly as a business sustainability strategy and for reputational reasons, in response to pressure from investors and consumers. This modality moved USD 320 million in 2019, according to a World Bank report, which means less than 1% of the volume transacted in regulated markets – in which national, subnational or local governments determine carbon pricing schemes or emission reduction targets with specific economic sectors. In this field, in 2019, more than 60 initiatives were registered worldwide, covering about 20% of global emissions, with a total of USD 45 billion in revenues.

## New paradigms of the pandemic

In the socio-environmental scenario awakened by the covid-19 pandemic and from the perspective of a green economic recovery, the demand of companies for carbon credits has increased significantly in the wake of an increasing number of companies that disclose carbon commitments. neutralize greenhouse gases through investments in the conservation and sustainable use of forests.

Despite the differential for having the largest tropical forest in the world and a clean energy matrix, Brazil ranks seventh in the world in the voluntary generation of carbon credits, behind neighbors such as Peru and Colombia. The way ahead



the potential requires political, economic and diplomatic effort so that Brazil is integrated into the global debate and does not become a supporting player in a discussion in which it should be a protagonist, with competitive advantages in the scenario of a world focused on the climate issue.

With the leadership of the European Union and the United States under the command of Joe Biden, the theme interferes with increasing force in the international trade of commodities, pressured to follow environmental standards of zero deforestation, which potentially influences activities important Brazilian economic sectors, such agribusiness - the main contributor to the national Gross Domestic Product (GDP). On the global horizon, strongly influenced by climate demand, the Sustainable Development Goals (SDGs) agenda on the horizon also stands out.

of 2030 and the growing business movement, including the financial market, around ESG (Environment, Social and Governance) strategies. The sense of urgency comes to the fore in a world exposed to environmental and social degradation. According to a report by the World Institute, Resources tropical deforestation increased by 12% between 2019 and 2020, which represents a football field full of trees disappearing every six seconds. The situation accelerates the loss of biodiversity, with the mass extinction of species and impacts also on the economy and quality of life of humanity. According to the UN, about 1.6 billion people worldwide depend

Containing deforestation is essential for Brazil to meet the climate targets of the Paris Agreement



directly from forests for food, shelter, energy, medicine and income.

Brazil, and more particularly the Amazon, is at the center of global attention. In 2021, under international pressure, the Brazilian government announced the goal of achieving carbon neutrality by 2050, which will require greater investment in enforcement and sustainable policies for practices against deforestation. Between 2019 and 2020, the area destroyed in the Amazon rose from 10,129 to 11,080 square kilometers, according to the Space Research Institute (INPE) - which worries the world. According to Brazilian and international scientists, deforestation in the Amazon is close to reaching the point of no return, in which degradation becomes irreversible, with numerous environmental, social and economic impacts, including the rainfall regime that guarantee the production of Brazilian agribusiness in the Center-South of the country.

Within the framework of solutions and opportunities to face these risks is the potential of public policies around financial mechanisms aimed at encouraging the conservation and sustainable use of natural resources. In addition to REDD+ already discussed in this chapter, within the scope of the carbon market, it is worth mentioning the expectations around

The challenge gains greater expression in the national context when the role of local governments and the civil society gains increasing importance

Mario Mantovani, director of public policies at SOS Mata Atlântica and member of the Board of Directors of FAS

the Payment for Environmental Services (PSA), in which the Bolsa Floresta program stood out due to the pioneering nature of the policy adopted by the Government of Amazonas and the implementation strategy by FAS and its lessons, valuable in the current moment of challenges and to the future of the Amazon.

## The future of low carbon

In this way, FAS is experiencing a new moment of challenges in the context of a low carbon economy, based on the sustainable development of the Amazon, with the possibility of expanding and

## Volumes, values and average prices transacted in the voluntary carbon market by project category (2019)

Туре	Volume (MtCO₂e)	Average price	Value (USD mm)
Renewable energies	42,4	US\$ 1,4	60,1
Forests and land use	36,7	US\$ 4,3	159,1
Waste management	7,3	US\$ 2,5	18
Chemical and industrial processes	4,1	US\$ 1,9	7,7
Energy efficiency	3,1	US\$ 3,9	11,9
Transport	0,4	US\$ 1,7	0,7

Fonte: Capital Reset/Ecossystem Marketplace Insight Brief, Set/20

replicate the achievements of Bolsa Floresta. The expectation of investments arising from the compensation of greenhouse gases by emitters from all over the world returns to the scene, a potential that inspired the public climate policy in Amazonas at its origin, in 2007, but the expectation of this market ended up cooling down and did not materializing in the following years (read more in chapter 1). The world experienced a turning point. Unlike in the past, the carbon market is gaining momentum in a more solid and mature way, in proportion to the climate urgency that puts the planet in check.

The seeds planted by Bolsa Floresta germinate in promising fields to the strategy of combining environmental conservation and development, as is the case of the much defended and discussed Amazon bioeconomy, with the involvement of native peoples, integrated into a low carbon economy. Over 14 years, the path in this

It is essential to guarantee the continuity of this public policy in the face of the process of deconstructing narratives about the importance of conservation units and indigenous lands

perspective was cemented towards a greater scope and scale of FAS's socio-environmental agenda, offering the ecosystem of institutional partners and investors new opportunities to increase positive impacts.

In 2017, the consulting firm Bain & Company carried out a detailed diagnosis of the performance and programmatic impact of FAS, as well as its achievements in 10 years of operation. Based on this information and on the views of employees, partners and market research, a strategic positioning was built for 2030, the reference year for the goals of the SDGs, already mentioned here. Looking at eight thematic axes, the plan establishes as an institutional vision "to be a national reference in solutions for sustainable development in the Amazon through the valorization of the standing forest and its biodiversity, community empowerment and the expansion and strengthening of partnerships".

Among the topics considered most relevant by FAS employees are "education", "production chains" and "reducing deforestation". In terms of risks, the strategy highlighted the impacts of the covid-19 pandemic on people's health and quality of life, something unprecedented in contemporary history, with expressive influence on the reality of the remote areas where the institution works, in Amazonas. In this challenging scenario, associated with other global demands, such as climate change, FAS must be prepared for opportunities, with



increase in funding capacity, according to the strategic plan.

To consolidate itself as a reference organization for the conservation of the Amazon with effective results, recognized at local, national and global levels, the objective is to extend projects and activities to more areas inside and outside the Amazon, covering other states and Amazon countries. In addition, work with traditional populations will be expanded, with greater emphasis on indigenous peoples, and entrepreneurship, income generation, education, health and citizenship projects should continue with full vigor, with effective results. In summary, the condition of FAS, as a collaborator and technical partner for projects to improve life quality

Attention to indigenous peoples is a priority challenge to replicate socioenvironmental actions in the Amazon

of forest peoples throughout the Amazon, has in the model built from the Bolsa Floresta a great source of inspiration.

## Basis for new public policies

This is a very valuable differential in the trajectory followed by the planet in this and in the coming decades. Despite its historical importance, "Bolsa Floresta is already insufficient in the face of the demands that are presented, and therefore it must have



its radar expanded and perpetuity as a State policy and not a government policy, with the involvement of several partners", says consultant Luiz Castro, a former state deputy who collaborated with the construction of the program as a parliamentarian. "The model serves as the basis for new Amazon conservation policies, with a focus on economic and social development".

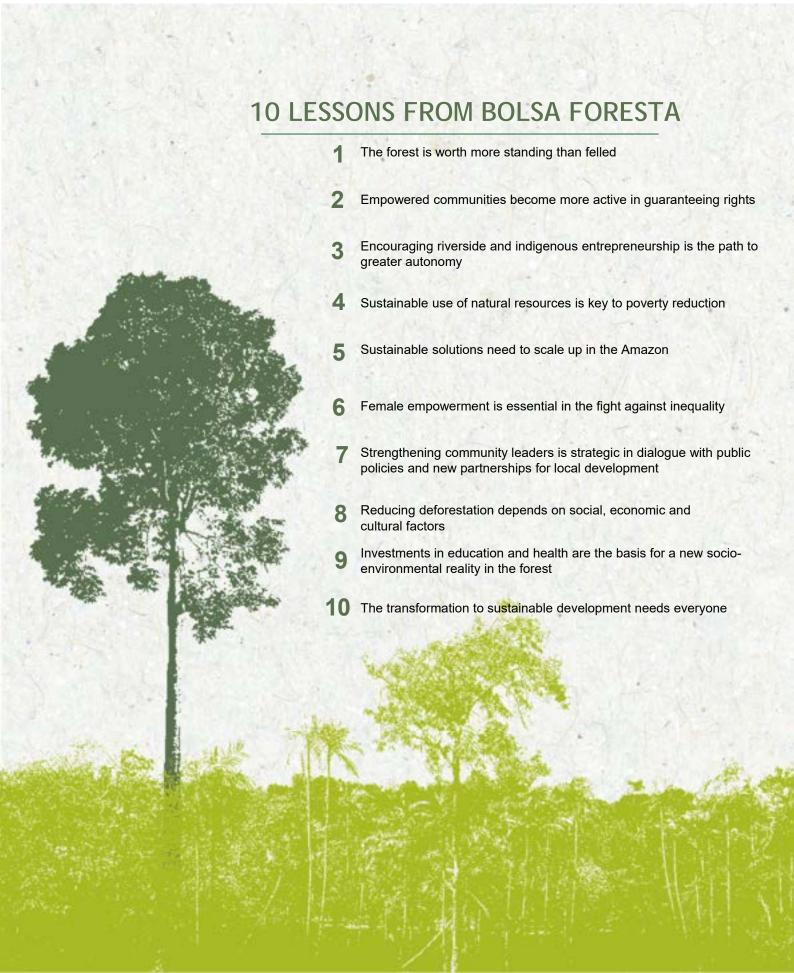
Environmentalist Mario Mantovani, director of public policies at SOS Mata Atlântica and member of the Board of Directors of FAS, goes further: "The challenge gains greater expression in the national conjuncture, when the role of local governments and civil society gains increasing importance, with independence from the federal spheres". In his view, this perspective was demonstrated in the fight against covid-19, especially in the Amazon, where FAS – owner of capillarity and knowledge acquired in the implementation and development of Bolsa Floresta – built an alliance of partners to bring aid to remote areas, with structuring legacies.

"The program's basic income as a reward to families for keeping the forest standing, together with structural support for communities, is strategic at this time, as we know that economic crises and their social impacts generate environmental degradation", emphasizes Mantovani. He reinforces: "All this can be even more relevant in the perspective of the impoverishment of the country, in the post-pandemic period, and in the need to adapt to new times".

In the opinion of Dione Torquato, secretary general of the National Council of Extractive Populations and member of the Board of Directors of FAS, "it is essential to guarantee the continuity of this public policy in the face of the process of deconstructing narratives about the importance of conservation units and indigenous lands". The organization works on the following pillars: defense of these territories as a political space for citizenship; environmental conservation as a way of guaranteeing the way of life of populations in relation to biodiversity and its importance for the rest of the world; and strengthening of forest production chains and community organization with local autonomy.

"There is greater awareness among populations about the value of their territories", reinforces **Torquato** when mentioning the achievements achieved in conservation units, especially in the Sustainable Development Reserves (RDS) created in the last two decades by the government of Amazonas, with the challenge of accessing these areas to public policies. "Bolsa Floresta recognized the environmental services provided by these traditional communities to society."

From Juruá to Madeira, from Jutaí to Uatumã, at such a crucial moment for the future of humanity, Brazil and the Amazon, the life stories and socio-environmental transformations surrounding Bolsa Floresta in its 14 years give FAS recognition in the challenge of mobilizing partnerships to overcome health, social and economic crises.



## The challenge of the 2010-2020 decade: Amazon \*

The main challenge of the 2010-2020 decade for Brazil is the construction of a National Project for the Amazon. After all, we still haven't decided, as a nation, if it is best to expand agribusiness in this region – by deforesting – or if it is better to conserve the forest – and in what proportions. It is also unclear whether forest conservation serves national or international interests more. This challenge is urgent and should be at the center of the national debate.

Amazon conservation has many motivations; some of a subjective nature and others of an objective nature. In the collective imagination, the Amazon is the place of mysteries, with its endless forests and its many indigenous peoples – some dozen of whom have not yet been contacted. Its complexity and mysteries arouse attitudes of protection and care, both among forest peoples and those who live in urban centers in Brazil and around the world. This, in part, justifies the immediate and overwhelming repercussion in the national and international media when the news addresses deforestation, fires and disrespect for indigenous peoples.

There is another set of rational and objective justifications for conservation. We can mention geodiversity, with its potential for the mineral industry, the potential for timber and non-timber forest production and Amazon biodiversity, which has enormous possibilities for the development of medicines, cosmetics and products for the most diverse purposes. After all, each diversity of plants and animals corresponds to a gigantic variety of chemical compounds, practically unexplored. There are also traditional and indigenous populations with their precious ethnoscientific knowledge.

Other motivations for the conservation of the Amazon begin to emerge from the realization of its importance for the global climate balance. If the current pace of deforestation and fires in the Amazon continues – added to the effects of the burning of petroleum products and mineral coal – we will all be fried. Literally, before the end of this century.

<sup>\*</sup> VIANA, Virgilio Mauricio. The challenge of the 2010-2020 decade: Amazon. Blog Virgilio Viana, April 27, 2010. Available at: <a href="https://fas-amazonia.org/blogpost/o-desafio-da-decada-2010-2020-amazonia/">https://fas-amazonia.org/blogpost/o-desafio-da-decada-2010-2020-amazonia/</a>

These indirect benefits of the forest for the global climate balance we call environmental services. These services concern all the non-palpable products of the forest: the exchange of gases with the atmosphere, the dampening of rain, the maintenance of ecological processes, etc. In recent years, environmental sciences have advanced a lot in the quantification of environmental services.

The state of the art of scientific knowledge allows us to affirm that the environmental services of the Amazon are essential for the rain that falls in the rest of Brazil and in much of South America. In a simplified way, we can say that the forest works as a water processing plant. It sucks, like a huge bomb, the moisture from the Atlantic Ocean. The rain that falls in the eastern region is dampened by a complex forest sponge, composed of leaves, branches, trunks and the soil, rich in organic matter, earthworms and millions of other small animals. The water that falls quickly turns into water vapour, which leaves enriched by chemical compounds, called volatile organic compounds. These compounds act as accelerators for the formation of new rains, acting on low-altitude clouds. The second generation rains repeat the same process as those that started the processing of water, from the coast of the Atlantic Ocean to the slopes of the Andes



Mountains. In the middle of this walk, the forest produces some jets that carry excess moisture out of the Amazon. This phenomenon, called low-altitude jets, takes billions of cubic meters of water to the southwest (Argentine and Paraguayan Chaco) and southeast of South America (South, Southeast and Central-West Brazil). Throughout the year, the moisture exported by the Amazon to other regions is on the order of 1.7 trillion cubic meters of water vapor, according to an estimate by Professor Enéas Salatti.

We can say that the rain that falls in other regions of Brazil is significantly influenced by the water processing carried out by the Amazon forest. If we see that rain is essential to feed the plants in our agriculture and livestock, as well as to fill the rivers that supply our cities and power plants, we can say that the Amazon is essential for the future of Brazil.

Changes in rainfall variability – with increased floods and droughts – are predicted by most climate change models. If we deforest the Amazon, this variability is likely to increase, with serious social, environmental and economic consequences. We can therefore say that conserving the forest is a strategic part of the national interest. Furthermore, the environmental services provided by the Amazon rainforest have value for industrialized societies. We need to be smart and strategic enough to transform the interest of the international market into a flow of financial resources that allow us to finance the region's sustainable development.

It is important to translate this scientific rationality of the Amazon's environmental services into coherent and serious public policies. The challenge is to build a national project truly committed to a strategic vision for the future and the well-being of current and future generations. This project must reconcile the social, environmental and economic components, within the paradigm of sustainable development. This is the main challenge of the 2010-2020 decade: building and implementing a National Project for the Amazon. It is not a project to respond to international or political party demands, but a strategic project for the future of the region, Brazil and the planet.

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Institutional Partnership:





Implementation Partners:







