PPA ACCELERATION THESIS

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INITIATIVE

PPA PARCEIROS PELA AMAZÔNIA

EXECUTION

QUINTESSA

PPA PARCEIROS PELA AMAZÔNIA

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PPA PARCEIROS PELA AMAZÔNIA

QUINTESSA

PPA PARCEIROS PELA AMAZÔNIA

1 INTRODUCTION

INTRODUCTION

Partnership Platform for the Amazon (PPA) is a collective action platform led by the private sector that seeks to build innovative solutions for developing a sustainable economy and conserving biodiversity, the forests, and the Amazon natural resources; as well as improving rural and traditional communities' socioeconomic status and quality of life.

One of the main initiatives created by PPA and its partners was the Acceleration and Impact Investments Program. Led by Idesam, the program cooperated with businesses with socio-environmental impact established in the Amazon. Approved by PPA'S Deliberative Council, the platform planning for 2021 aims to foster a greater number of support and development initiatives to social-environmental businesses in the Amazon, including the work with different audiences, regions, and chains of values related to the forest. This targeting reinforces PPA's core value of advancing the Amazon impact ecosystem.

Thus, PPA aims to **identify new possibilities for accelerating different types and stages of businesses with a socio-environmental impact that operate in/with the Amazon.** Given this new context and the need to contemplate greater complexity and diversity of the impact ecosystem in the Amazon, PPA's Executive Office identified the need to build an Acceleration Thesis for the platform. This document aims to structure the multiple possibilities of action under the umbrella of a larger impact business acceleration strategy, working as a portfolio of support possibilities for different types/stages of business with social and environmental impact in the region.

The partner for this task was Quintessa, an impact accelerator. Founded in 2009, it drives growth, structures management and captures investment for high-impact businesses. Quintessa works directly with entrepreneurs and their teams, through customized programs for each business, and also in partnership with large companies, institutes, foundations and investors who wish to approach and relate to impact businesses. In over ten years of experience, Quintessa has identified and supported more than 100 outstanding impact businesses in education, health, environment, and inclusion.

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2 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

PPA Acceleration Thesis formulation began with **comprehending the Amazon context** to deepen understanding of the various existing Amazons, considering environmental, socioeconomic, and territorial aspects (see 'Contextualization of the Amazon). Hence, it was established that a territorial cutting should be considered, given the magnitude and specificities of the Amazon.

Also, as part of this effort, a specific standpoint was set for the theme of businesses with a socio-environmental impact in the region. In this sense, it was carried out a **typification and mapping of existing initiatives for developing and strengthening them** (see 'Ecosystem of Impact Businesses in the Amazon'). Therefore, the proposals for acceleration programs were designed to encompass the different types of businesses complementing what exists in the region, not overlapping it.

A careful look at the central subject of the PPA Acceleration Thesis, Biodiversity, allowed the definition of k**ey themes of businesses to be supported, related to this topic and trends in the Amazonian context: Bioeconomy, Forest Regeneration and Restoration, Climate/ Carbon and Sustainable Supply Chains**. Furthermore, it served as the basis for defining search and selection criteria for these businesses, so that the Thesis guidelines can foresee impact **analysis in the selection regarding the magnitude and probability of impact related to Biodiversity; in addition to the business socio-economic issues.** Finally, instructions were formulated for the process of follow-up and monitoring of this topic (see more in 'Biodiversity').

The selection of the Acceleration Thesis programs was made from a **large process of listening to actors in the Amazon ecosystem and collective construction with PPA member companies** and its Advisory Board. **The prioritization and choice of programs focus were made taking into account the Amazonian reality and its gaps, as well as the objectives of PPA with the Acceleration Thesis,** notably:

IMPACT

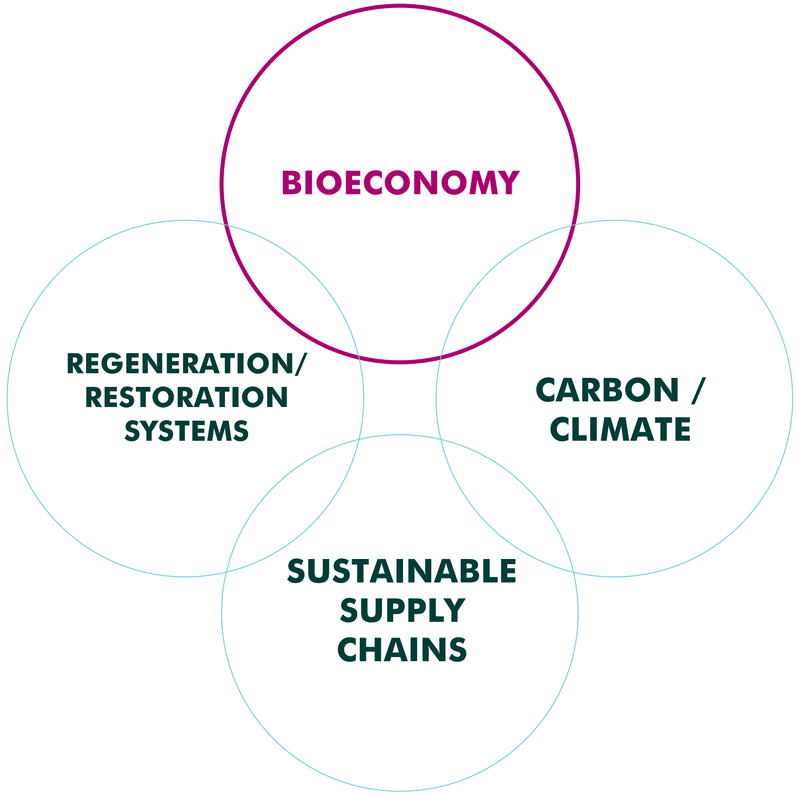
- Contribute to the conservation and regeneration of biodiversity in the Amazon
- Stimulate local/community empowerment via business approaches (with financial sustainability)

PPA STRATEGY

- Generate an impact business pipeline to address the Amazon socio-environmental challenges
- Strengthen the impact business ecosystem in the Amazon (via support for facilitators, services, and data)

The axes defined for the programs of the PPA Acceleration Thesis are: Businesses with socio-environmental impact **in early stages and in mature stages; related to forest regeneration and restoration; and undertaken collectively and by local populations.** For each of these programs, guidelines were described in relation to scope, format, key content, search and selection and capital contribution (see more in 'PPA Acceleration Programs').

KEY THEMES



AXES:

- Early Stages
- Mature Stages
- Forest Restoration
- Traditional Populations

TERRITORIES:

- Related to deforestation
- Related to the territory type
- Related to socioeconomic or demographic factors
- Related to key sectors/chains of the Amazon
- Related to geographic issues
- Related to the area of activity of PPA members or interested investors

The intention was to create guidelines for **PPA to consider in supporting (financially and/or institutionally) programs, which will be executed by implementing organizations (third parties).** These directives, then, work as a guide for PPA to use when choosing the implementing organization as well as once designing the specific program with these third parties.

Finally, it is important to mention that the **PPA acceleration programs will be conducted through partnerships with PPA member companies or with other associations that are interested in some of the Thesis' axes.** Hence, each PPA acceleration program will be customized according to the partner, with the possibility of financial contribution from both parties - combined financing).

Institutional support will also be considered from the communication standpoint that can give visibility to outstanding initiatives in the ecosystem. Thus, it is expected that each specific program has particular characteristics designed by PPA along with the funding partner(s) and funding company(ies), or eventually with an implementing organization (which will run the program).

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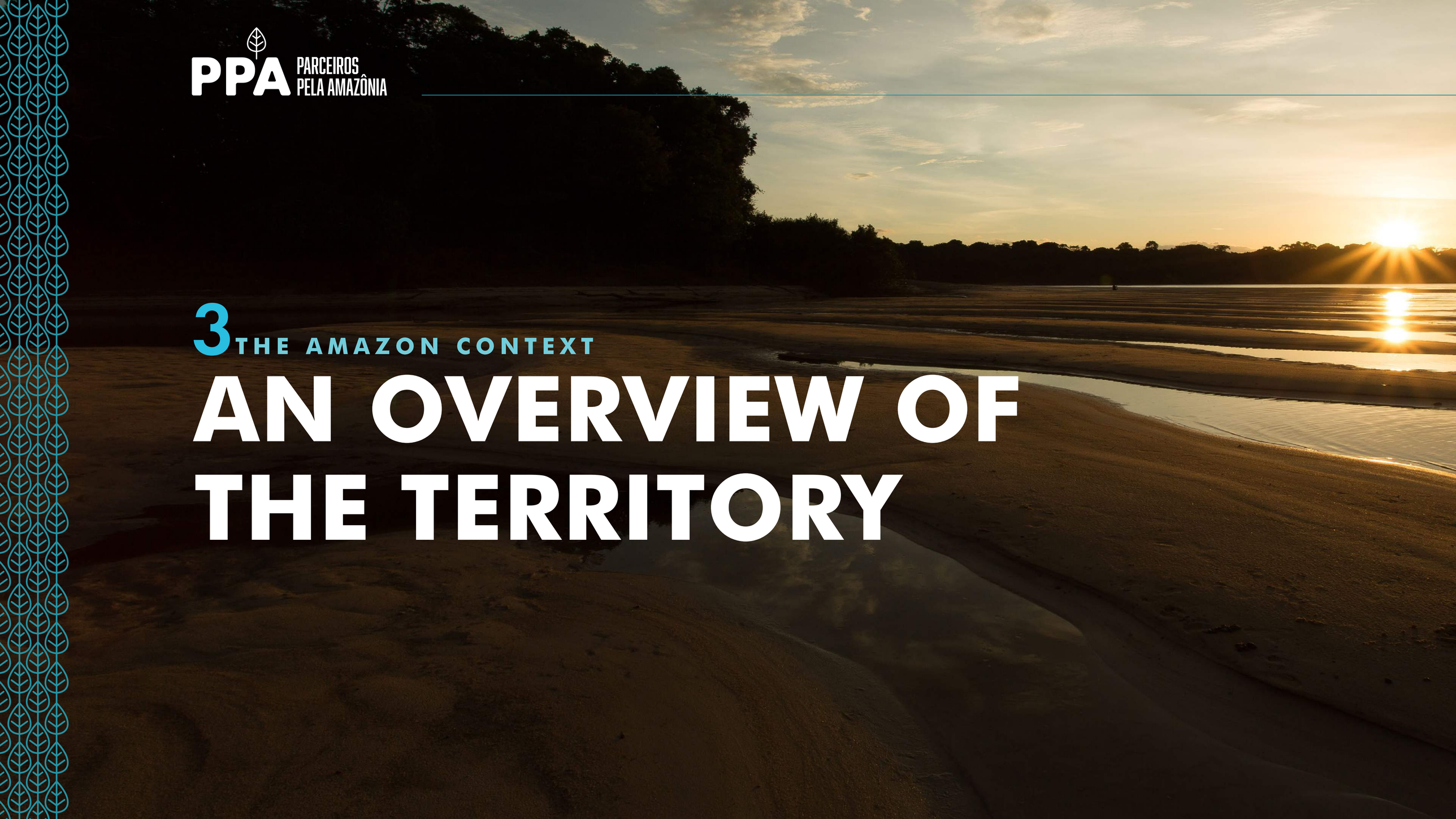
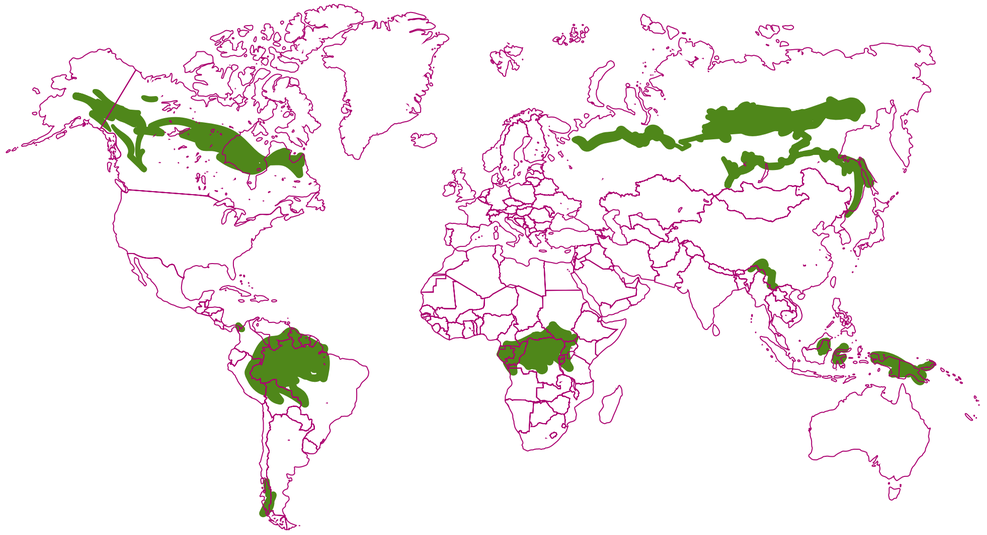


3 THE AMAZON CONTEXT

AN OVERVIEW OF THE TERRITORY

THE VARIOUS EXISTING AMAZONS:
ENVIRONMENTAL AND SOCIOECONOMIC ASPECTS

This initial block brings elements to compose an overview of the territory in an attempt to encompass the specificities, complexity, history and magnitude of the Amazon, not viewing it as a 'single block', but without the pretension of exhausting the theme. Still, the panorama focuses on environmental aspects of the Amazon, given the positioning of Biodiversity as the central axis of the PPA's Acceleration Thesis. Moreover, socioeconomic and demographic aspects are also addressed since they are inseparable from the territory and a vision of sustainable development, which goes through the environmental, economic, and social tripod. Also reinforcing PPA's strategy as an organization that aims to stimulate local and community empowerment through business approaches, fostering businesses with socioenvironmental impact—which, in turn, have as their core the social issue.



Intact Forests Landscapes in the World (WRI, 2016)

At the national level, **Brazil has committed to zero illegal deforestation and restoring 12 million hectares by 2030 through the Paris Agreement**, signed during COP 21 in 2015, ratified by the National Congress in 2016, and promulgated in 2017 (Decree 9,073). This NDC (Nationally Determined Contribution) is the instrument for measuring and communicating these commitments to the UNFCCC (United Nations Framework Convention on Climate Change). In this context of international glances and assumed commitments, the Amazon will have a relevant role in the creation of needed strategies. Largely through the encouragement of deforestation reduction strategies and, on the other hand, with positive strategies. For instance, identifying production chains and businesses with socio-environmental impact in the region that deserve to be replicated and gain scale.

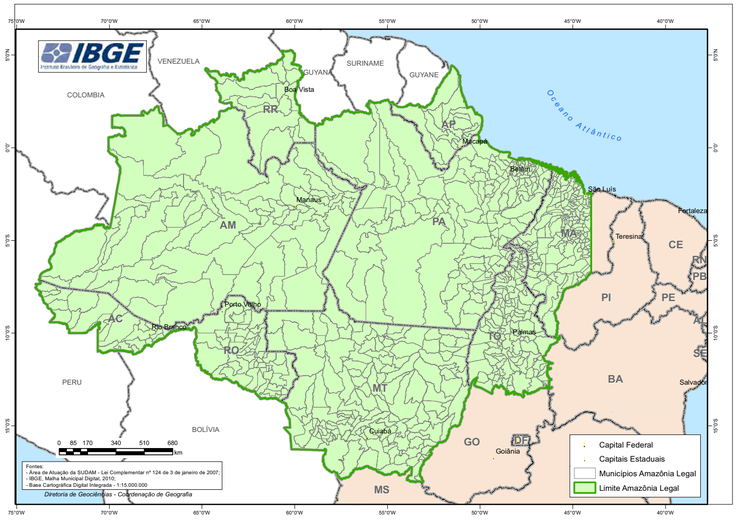
THE AMAZON

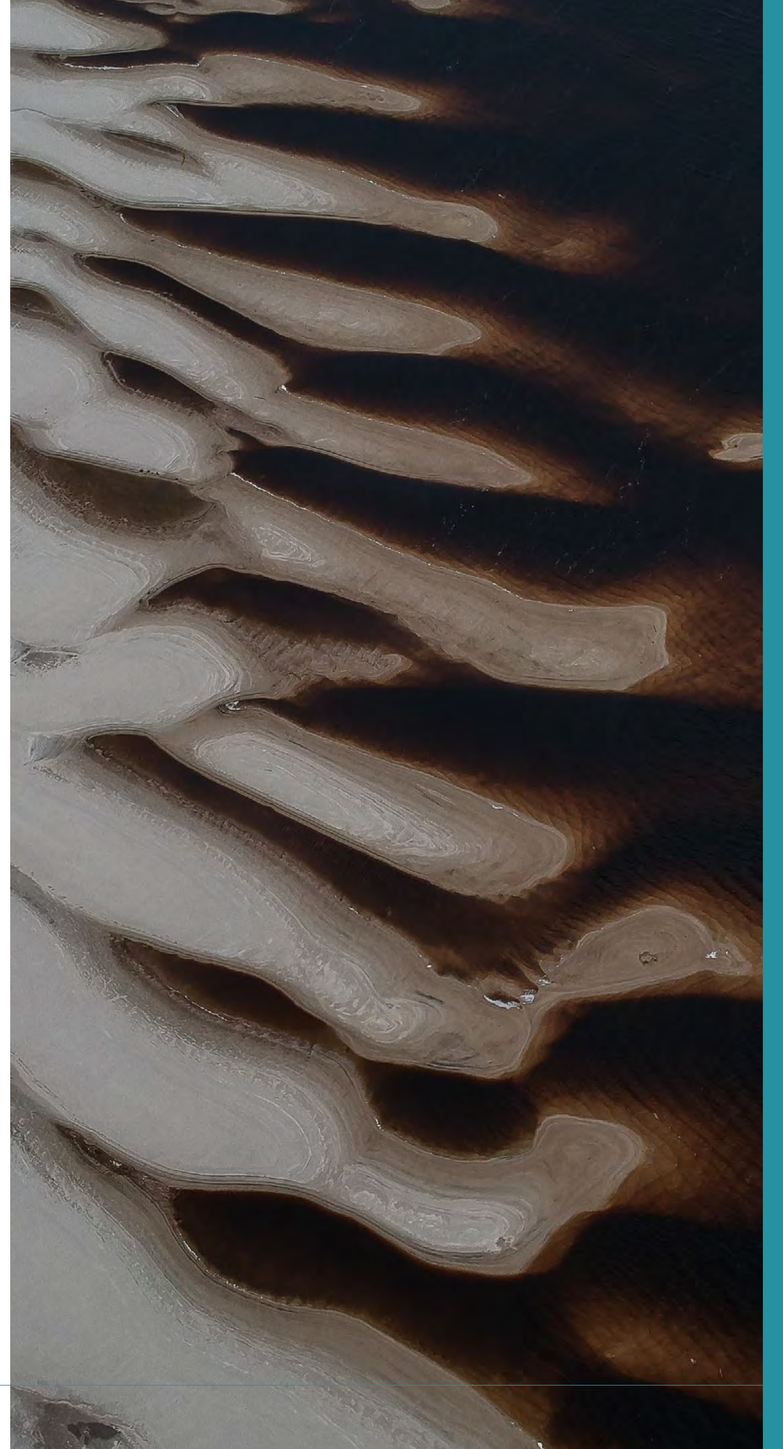
OF RIVERS, ROADS AND URBAN CENTERS

The Legal Amazon, a political definition instituted by the government, goes through 9 Brazilian states, divided between the Western Amazon (Amazonas, Acre, Rondônia e Roraima) and the Eastern Amazon (Pará, Maranhão, Amapá, Tocantins e Mato Grosso). The territory has an approximate surface of 5 million km², representing about 60% of the Brazilian territory, going through 772 municipalities: 52 in Rondônia, 22 in Acre, 62 in Amazonas, 15 in Roraima, 144 in Pará, 16 in Amapá, 139 in Tocantins, 141 in Mato Grosso, as well as 181 municipalities in the State of Maranhão.

Given this magnitude, the Amazon comprises different landscapes and vegetation types. The region is home to terra firme (“solid ground”), várzea ("floodplain"), and igapó forests, as well as plowed areas ("lavrados") and many other vegetation forms. There are both conserved forest areas and deforested ones, as well as transition areas between the two. It also includes municipalities that resemble other urban centers in Brazil. Thus, the reflection on paths for sustainable development in the Amazon requires, in the first place, the recognition of this heterogeneity.

In the western portion of the Amazon, an extractivist-based economy still predominates, while industrial agriculture and mining reign in the zones of modern occupation. In the last two decades geography of the Amazon occupation derived mainly from two expansion fronts, both from the forest periphery to the center, and essentially coming from the Northeast and South-Southeast of Brazil. These occupations defined a contiguous and binary geographic pattern (forest and non-forest), growing from the periphery to the center of the forest, originating what is conventionally called the "Arc of Occupation and/or Deforestation". From this Arch, several linear infrastructures entered the interior of the forest, expanding an occupation model tipically associated with highways.





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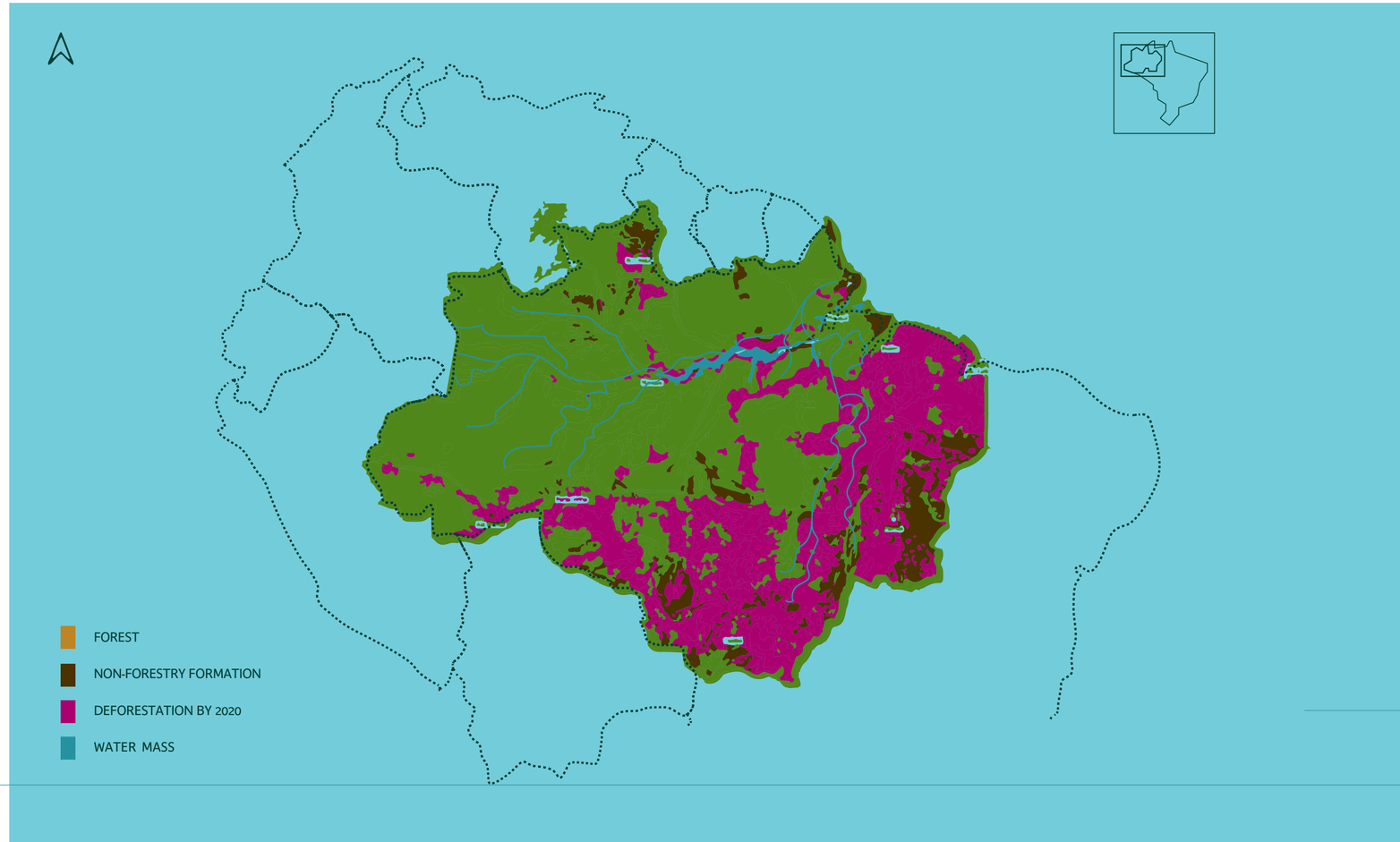
"The Amazon of the rivers" and "the Amazon of the roads": these two great patterns of Amazonian landscapes define different ways of life, culture, use of resources, provision of services, and modes of transport. Moreover, there are urban centers created from historic cities and industrial enclaves, where services gain a certain quality and scale.

"The Amazon of the rivers" considers the design of the watershed and has as its main axis the channel of the Amazon River. The traditional development centers located on the banks of the main river and its strongest tributaries have waterway transport as the pilar for transport logistics. There is a hierarchical network of cities, communities,and agglomerations, in its riverside groups whose greatest resource and source of life are forestry and fishing resources. Extractive communities, traditionally arranged according to the supply of forest and fisheries resources, are distributed along the floodplains. Remnants of the last rubber-based extractive cycle (see more about the rubber cycle in XYZ), these riverside dwellers experience a process of agglomeration in larger communities capable of providing basic education and health services.The simple manufacture of these forestry and fishery products, when they constitute a production surplus, it can serve the small businesses and as a complement to family income.Extractivism is still the basis of the economy in these regions, where forest and water resources are abundant. A transforming factor among the riverside communities was the creation of Extractive Reserves (RESEX) or Sustainable Development Reserves (RDS), which aimed to guarantee land tenure, as well as access to forest and fisheries resources.

These reserves have also contributed to promoting small community clusters, where currently a productive and pre-industrial potential is "hidden" to be exploited by the wave of bioeconomy (see more on Bioeconomy in XYZ). Among settlement projects, small cities, towns, villages, and indigenous peoples, there are thousands of communities with the challenge of incorporating the potential benefits of this "new economy of forest and biodiversity". The challenges range from practical and infrastructure issues such as isolation, lack of energy, signal, internet, logistical difficulties, complex processing, lack of instruction, training, and equipment. As for management issues, low production volume, product quality control, market access, and commercial strategies, among others. It is in light of this context that programs to encourage enterprises in these territories have a high value for the Amazon.



The **"Amazon of the Roads"** was built to meet the military government's colonization projects and the stated purpose of national integration. The opening of roads such as the Transamazônica, BR-163, and BR-364 gave way to a new pattern of occupation and circulation in the Amazon. A new model of agglomerates and urbanization emerged along the roads and, in their surroundings, services such as gas stations and industrial production centers for wood products. A model for the exploitation of natural resources based on the logistical offer of roads, logging, and deforestation was expanded, which gave way to cattle-raising and areas for agroindustrial grain production.

Livestock was the main cause of deforestation in the region. If, on the one hand, livestock is a profitable investment with high liquidity and little demand for work or supervision, on the other hand, the expansion is due to a series of factors not related to production itself, but related to land speculation, stimulated by the rapid appreciation of land purchased at meager prices. In addition, many landowners or land grabbers use illegal wood, "slave" work, diversion of cheap credit, tax evasion, and money laundering, among other illicit maneuvers (Margulis, 2003). Livestock thus became a more speculative than a productive activity – and, therefore, its control does not depend only on environmental policies.

Moreover, several agrarian reform settlements were also arranged along these roads (see more in xx on settlements), establishing other configurations of deforestation and territory occupation in the form of "fish spines," as conventionally called in the State of Rondônia . In the settlements, deforestation was even more accelerated, given the requirement of INCRA (Instituto Nacional de Colonização e Reforma Agrária) that the title of ownership of the property would only be granted to those who deforested at least 50% of its area. After opening the area and selling the wood, the economic activity that took place and that continues to this day is the production of calves to serve the extensive cattle-raising that developed around the settlements.

Currently 30-45% of deforestation in the Amazon comes from small properties, averaging less than 300 hectares (see more in xx on deforestation), which are often rural settlements. There is a lack of technical assistance, value addition, and access to lines of credit and markets for the small rural producer in this situation of need.

In some differentiated settlements, it is possible to promote enterprises that **keep the forest standing, linked to socio-biodiversity chains**. In contrast, in older settlements and built on the logic of deforestation, the regeneration and reconstruction of landscapes through agroforestry systems (AFS), crop-livestock-forest (ICLFS), crop-livestock (CLS), or Silvipastoril (SPS) integration systems can be promising projects.

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3.1 CONTEXTUALIZATION OF THE AMAZON

TERRITORIAL DYNAMICS

TERRITORIAL DYNAMICS

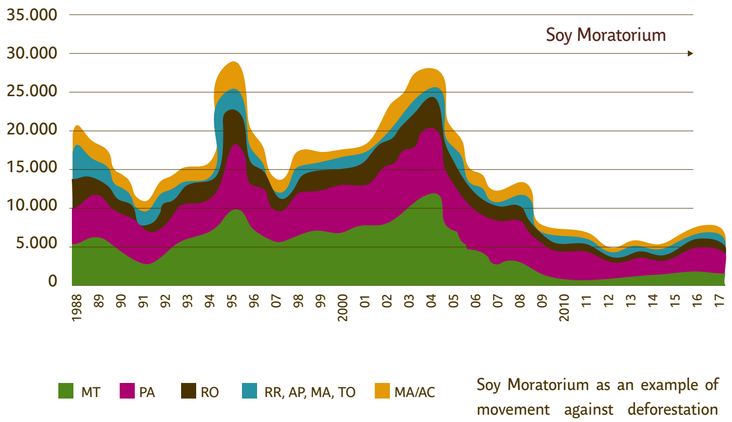
AND DEFORESTATION IN THE AMAZON (1988-2020)

The Brazilian Amazon is a key scenario in which several approaches were tested, making the region a laboratory of innovation in terms of governance. Thanks to many ambitious policies, the three levels of the Brazilian government (federal, state and municipal), the Academia, the private sector and Civil Society Organizations (CSOs) have been able to make unprecedented commitments to reduce deforestation in the region.

Federal policies such as the PPCDAM (Action Plan for the Prevention and Control of Deforestation in the Legal Amazon), created in 2004, and state initiatives such as Pará's Green Municipalities Program, in 2011, were significant advances in terms of public policies. In parallel, agreements from the private sector and CSOs such as the 2006 Soy Moratorium and the 2009 Livestock Agreement have given new impetus to the fight against deforestation.

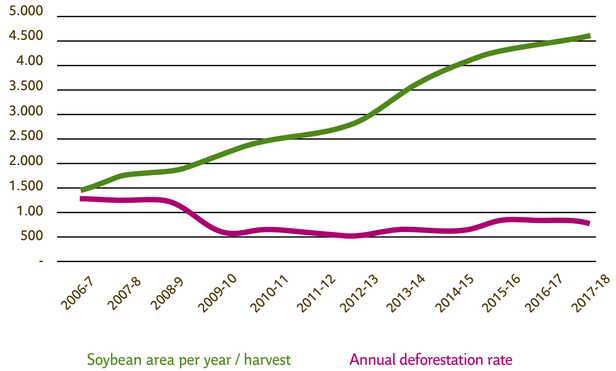
Moreover, many police operations were conducted in the Amazon, allowing for the dismantling of certain organizations that propagated illegalities in wood, land, gold mining and other chains, despite still representing a major issue in the region. Together, these efforts have reduced deforestation in the Amazon by more than 70% since its peak in 2004, making Brazil the world's largest contributor to emissions reductions in this period.

DEFORESTATION RATE (km2/year)

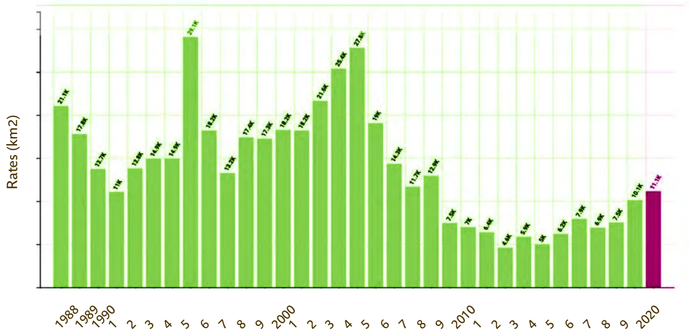


Soy Moratorium as an example of movement against deforestation (PRODES – INPE, 2017)

AREA IN THOUSANDS OF HECTARES



ANNUAL DEFORESTATION RATE IN THE AMAZON (INPE) 1988-2020



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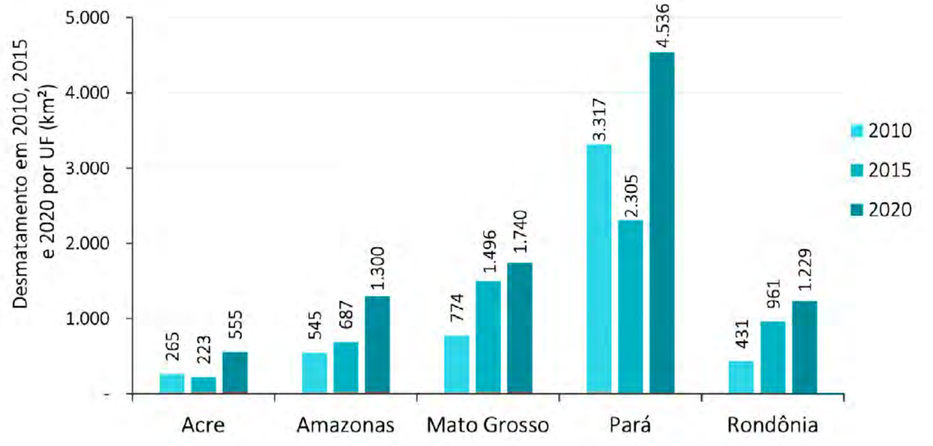
In general, the two great peaks of deforestation in the Amazon were linked to local and global economic movements: 1995, at the time of the Real Plan, when Brazilians gained power in consumption, and in 2004 due to the strength of China's economy demanding from Brazil. Although in the last decade there has not been a major peak, in the last 2 years (2019-20) deforestation has increased again, due to a series of factors, combined with the lack of priority given to the country's environmental policies. The aforementioned efforts have not been able to contain continued deforestation and have lost their effectiveness over time (Seymour and Harris, 2019) and, unfortunately, the pressure on the Amazon is increasing. If the forecast made by INPE for the year 2020 comes true, we will have doubled deforestation since 2014, going from 5,000 to 11,000 km2 per year.

According to several experts, changes in land use in the region combined with global climate change (elevation of temperature and water scarcity) could generate the "savannization" of the Amazon Forest, without differentiating a degraded forest from a true savanna, as it exists in the Cerrado ecosystems. The models diverge as to the level of deforestation that would represent a point of no return, an 'inflection point' (Nobre et al., 2008).

Currently, the highest risk places in the Amazon are the South and Southeast (regions of Pará, Mato Grosso and Rondônia), as shown above in the Arc of Deforestation maps, but there are also pressures arising in new locations. There are renewed fears that the Amazon is not too far from this "inflection point" on this east-south axis (Lovejoy, 2019).

By analyzing deforestation in the Amazon biome by state, it is possible to comprehend more about this dynamic in the region. The State of Pará stands out negatively for its recent growth, given its eastern location in the Amazon and its relationship with the Arc of Deforestation. Amazonas, despite representing a smaller amount of deforestation, also shows an increase in the last 5 years (doubled the amount between 2010 and 2020). Mato Grosso remains stable between 2015-2020, driven by the PCI (Produce, Preserve and Include) policy, but it is a State that has already deforested a lot historically (prior to 2010, which is the start date of the chart) and has in the territory other biomes that were also deforested, such as Pantanal and Cerrado.

DEFORESTATION RATE OF THE AMAZON BIOME, BY STATE (INPE, 2020)



Still, it is possible to draw some conclusions when investigating the relationship between property sizes, category of land and deforestation. The history of deforestation in the Legal Amazon, when analyzed by categories of land, highlights that the Indigenous Lands (TIs) and the Full Protection Conservation Units (CUs) are the land categories with the lowest deforestation rates (Inpe, published by the Ministry of the Environment). Therefore, the centrality of these protected areas in the deforestation control strategy is notorious. In order for these areas to remain as vectors for forest preservation, it is strategic that they have a support structure that protects the integrity of these lands. And that development models be created to provide financial sustainability for the population, while 'keeping the forest standing', reducing deforestation pressures in favor of conservating biodiversity and the climatic functions of its forest resources.

Endowing these populations and inhabitants of protected areas with better living and income conditions has been a thesis defended and, in this sense, it is essential to promote businesses aimed at the development of economic activities for the sustainable use of the forest and biodiversity, which bring together initiatives with /developed by traditional communities and family producers.

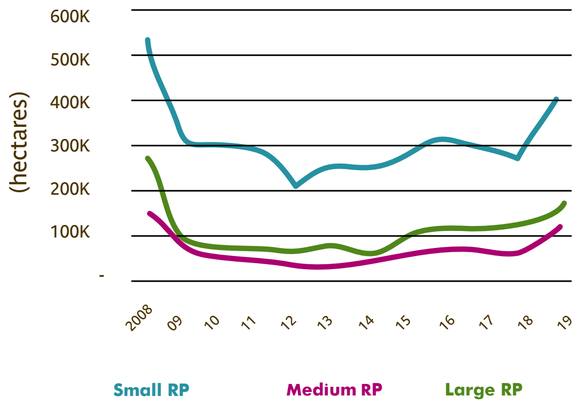
When analyzed from the perspective of property size, small properties (less than 300 hectares) currently represent 30-45% (depending on the source) of deforestation, as mentioned above in the initial context of the Amazon. These properties are often rural settlements (see distribution of settlements in y), in which there is a huge population contingent lacking social and productive inclusion. Again, these data show the importance of development policies for the region look to small properties and contribute to the transition and expansion of new business models that keep the forest standing and/or regenerate it.

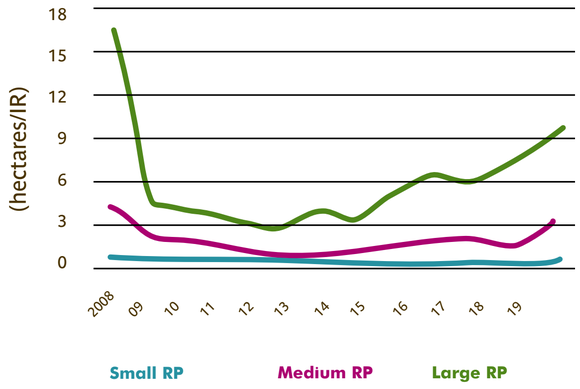
These numbers may surprise the popular imagination that deforestation in the Amazon comes only from large producers. Large properties (larger than 1,250 hectares) represent approximately 35% of deforestation, and medium properties (between 220 and 1250 hectares) represent the remaining 1/3.

PROPERTY SIZE AND
DEFORESTATION IN THE AMAZON (Trancoso, 2020)

Furthermore, in quantity, small properties represent 94% of the number of properties in the Amazon (approximately 700 thousand), followed by 4% medium-sized (30 thousand) and 2% large-sized (16 thousand). Seen in isolation, these numbers can transform the small into big drivers of deforestation. They are relevant, and it is necessary to develop strategies and policies with this approach. However, it is important to note that the small ones do not represent so much in terms of area and proportion of deforestation. According to The Nature Conservancy (TNC), when the more than 730,000 small properties in the Amazon are taken into account, the average area converted annually is 0.4 ha/property, about 15 times less than the average deforestation of 16 thousand large rural properties (6.2 ha/property/year) and five times less than the 31 thousand medium-sized properties (4.7 ha/property/year).

ANNUAL DEFORESTATION





Annual deforestation trend in rural properties (RP) and per rural property in the Amazon, between 2008 and 2019 (TNC based on data from Prodes - INPE and SICAR -SFB)

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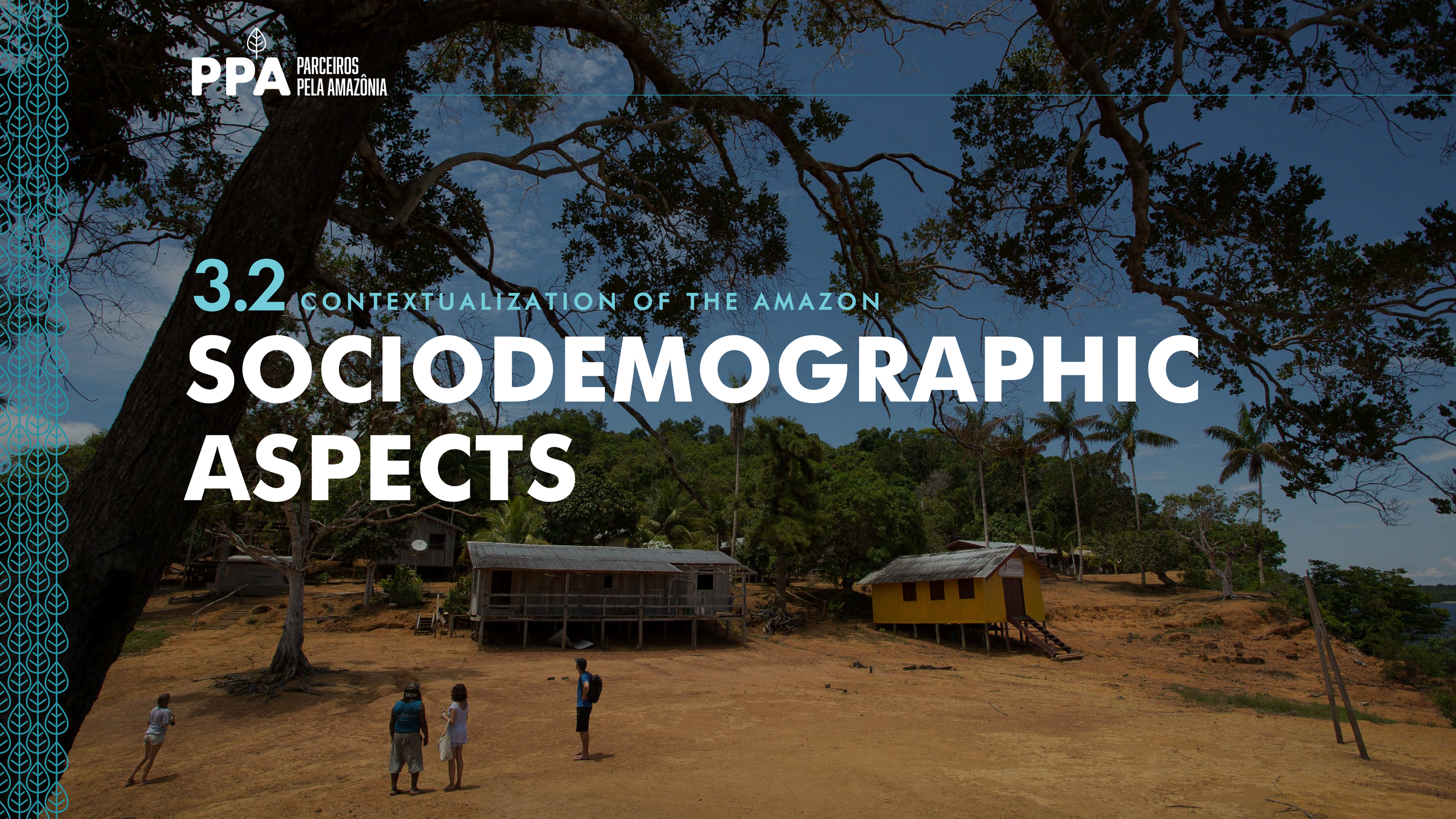
3.2 CONTEXTUALIZATION OF THE AMAZON

SOCIODEMOGRAPHIC ASPECTS



In terms of population, the Amazon has unique characteristics that should be carefully observed. First, the region encompasses most of the country's indigenous population: it is estimated that around 60% of the total number of indigenous people in Brazil live in the region, totalizing around 400 thousand people from more than 180 different indigenous communities. However, there is no updated data on this population (the last Census was carried out in 2010).

As mentioned above, in the context of deforestation in the Amazon, indigenous peoples have been a great example of a territorial occupation that maintains large preserved forest areas. Studies show that these areas were fundamental for the formation of the biodiversity found in South America (several products are the result of indigenous forest management techniques, such as Brazil nut, peach palm, cocoa, babassu, yuca and araucaria). To the present day, these regions are better conserved than their surroundings and contribute to the preservation of this Biodiversity (in the period 2000-2014, the deforestation rate in Indigenous Lands was 2% - while in the surrounding areas, which are not protected, it was more 19%, according to IPAM).

The importance of Indigenous Lands in the conservation of biodiversity gave rise to a legal framework to promote the environmental management of indigenous territories via the Brazilian Policy for Territorial and Environmental Management of Indigenous Lands (PNGATI). Today, Indigenous Lands are demarcated and occupy about 100 million hectares in the Amazon. There are more than 400 Lands, which represent more than 20% of the Amazon territory and 60% of Indigenous Lands in Brazil (ISA) – see more in 'Maps and Cutouts.' These lands are intended to guarantee the protection of the rights and identity of these peoples, keeping the forest standing. But it is known that even with these demarcations, which are currently under questioning, this population lives in constant territorial – and life – threat, given the complex context of territorial disputes, land grabbing and deforestation in the Amazon.

Considering that a large part of the Indigenous Lands is located in the Legal Amazon and its relevance for maintaining the forest standing, it is crucial to have an attentive look at this population within the scope of the PPA Acceleration Thesis, which has Biodiversity as its central thematic axis. The challenge is to design joint strategies taking into account indigenous ways of life, the environmental agenda, and income-generating possibilities. In this sense, besides public policies, the promotion of businesses with a socio-environmental impact that have this population as an entrepreneur or partner/supplier can be one of the paths.

In addition to indigenous peoples, **rubber tappers** are another relevant local population that lives off the biome, evidenced by the struggle of Chico Mendes in the 1980s. (RESEX), located largely in Acre and Pará – see more in 'Maps and Cutouts.'

Moreover, it is important to highlight the **quilombola and riverside communities** that live in the region -. In the New Brazilian Social Cartography project, supported by the Amazon Fund (see more in 'Amazon Fund'), more than 1,000 quilombola communities in the Legal Amazon were mapped: around 750 in Maranhão, more than 400 in Pará, almost 100 in Tocantins and dozens in Amapá, Amazonas, and Rondônia.

Riverside people, a traditional population that lives on the rivers banks and is linked to fishing activities, were recognized by the federal government in 2007 through the National Policy for the Sustainable Development of Traditional Peoples and Communities (PNPCT). But there is no up-to-date data on the number of communities and total population in the region (see with FAS).

This vast ethnic and population diversity dialogues with the sustainability and conservation of biodiversity. Traditional peoples and communities align their way of life with the knowledge that contributes to the conservation of the standing forest and maintenance of the ecosystem services it provides. Thus, understanding these populations and proposing models and new ventures that combine forest protection, income generation aimed at local development, and better living conditions are essential.

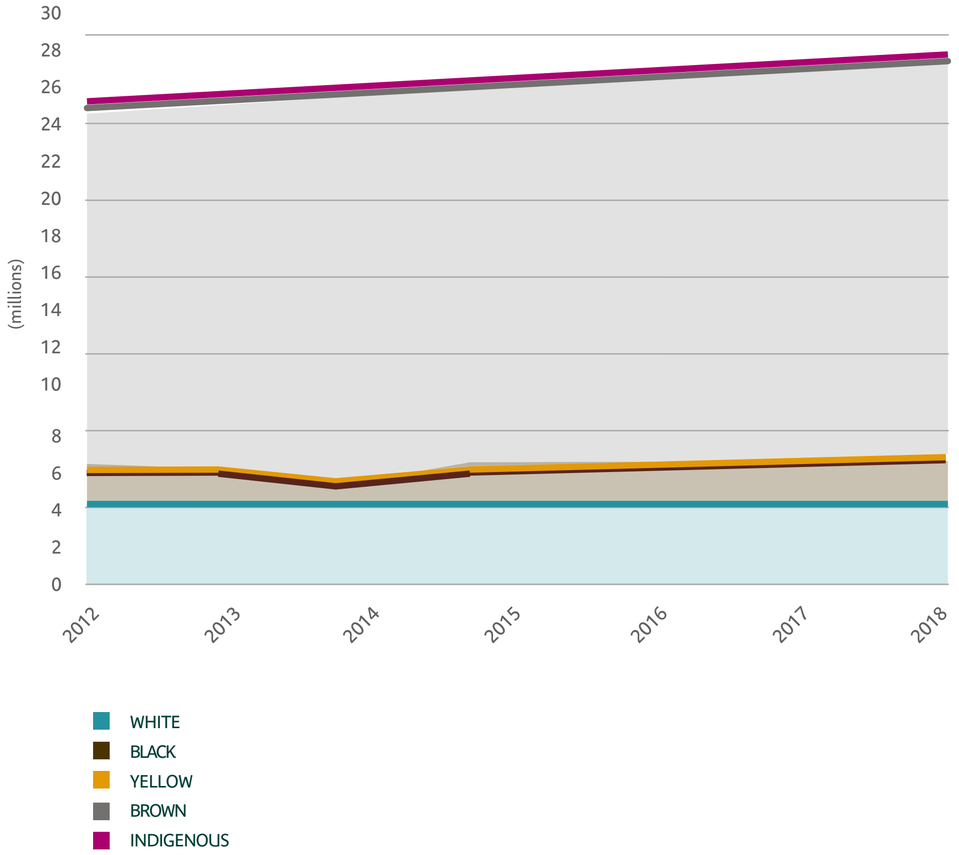
There is a lot to be done in the fight for preserving the forest, but also for the issue of sexuality and diversity in the region. The subject of gender identity and sexual orientation is still considered taboo, and there is no systematic and updated data on the LGBTQIAP+ issue (lesbian, gay, bisexual, trans, queer, intersexual, asexual, pansexual, or others) in the Amazon. It is known that this issue is rarely addressed in schools, families, and communities, especially due to the growing presence of evangelical churches in the region, which, in general, adopt conservative positions.

Another topic that needs to be addressed is gender, in which the distribution of roles between men and women is asymmetric and there are reports of violence and sexual abuse. It is important that there is a gender lens in the region, bringing to light the issue of women, in intersection with forest preservation and income generation for the family. There are increasing initiatives to promote female entrepreneurship in Brazil and around the world so it is to be expected that this type of incentive will also advance in the Amazon, in the sense of supporting socio-environmental entrepreneurship programs with female leadership and/or that seek to contribute to re-signify the role of women in income generation initiatives.

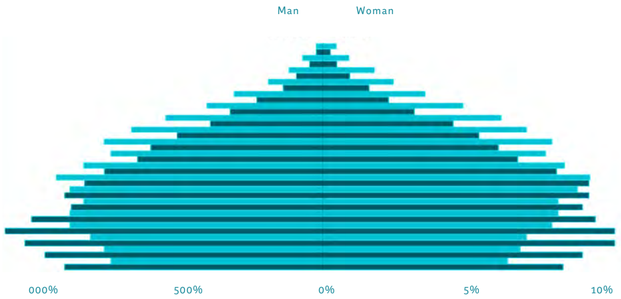
Regarding the dimension of race, the population of the Legal Amazon is

MOSTLY BROWN (70%), FOLLOWED BY THE WHITE POPULATION (20%)AND BLACK (9%).

RACE/COLOR OF THE LEGAL AMAZON POPULATION (PNAD, extracted from Portal da Amazônia Legal em Dados)

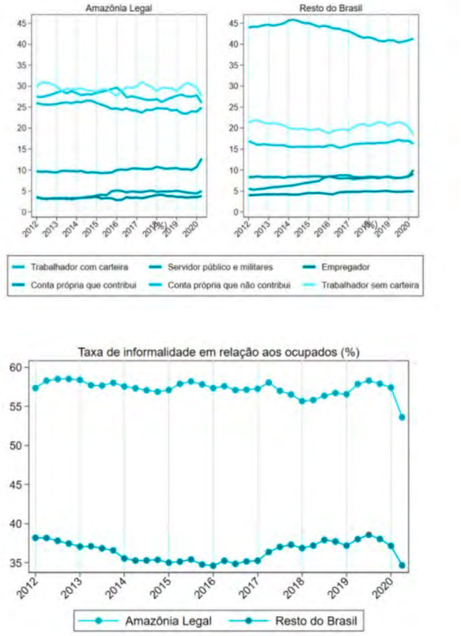


The age pyramid of the Legal Amazon is still young: most of the population is between 10 and 34 years old. Regarding longevity, life expectancy in Maranhão is the lowest in Brazil (71), followed by Rondônia (72). The region is experiencing a demographic bonus, in which there is an increase in the proportion of people of working age in relation to the dependent population (Gonzaga et al. 2020). However, opportunities are lacking: in the State of Amazonas, for example, 250,000 young people do not study or work (PNAD, 2018).



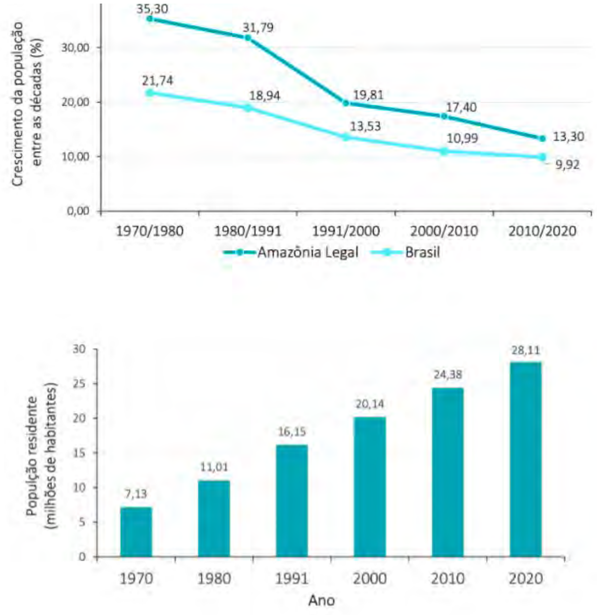
Source: PNAD Continuous. Extracted from Portal da Amazônia Legal em Dados. Note: To calculate the region's share, the 9 states that make up the Legal Amazon were considered. * Brazil without the states of the Legal Amazon region.

Also, **working conditions and income in the Amazon are quite informal.** The work informality rate is significantly higher than in Brazil. A relatively large proportion of the region's income and employment comes from federal government transfers, industrial mining, mechanized agriculture, and industries based in the Manaus Industrial Pole. This opens up a window of need and opportunity to work with young people, for example, via new businesses and socio-environmental entrepreneurship, despite the challenges of basic education and little support for an entrepreneurial culture.



Work and informality in the Amazon (based on PNAD and IBGE data; Gonzaga, Alfenas and Cavalcanti, 2020)

Between 1972 and 2020, the population of the Legal Amazon increased from 8.2 million to 28.1 million inhabitants, representing today 13% of the Brazilian population. The demographic density in the region is still low: 5.6 inhabitants per km². Concerning the states, Pará is the most populous, with 8.8 million, followed by Maranhão (5.9 million) and Amazonas (4.2 million). On the other hand, Amapá (862 thousand) and Roraima (631 thousand) are the least populated states in the region (Santos et al., 2021).



Population growth (%) and Inhabitants of the Amazon (IBGE, 2020)

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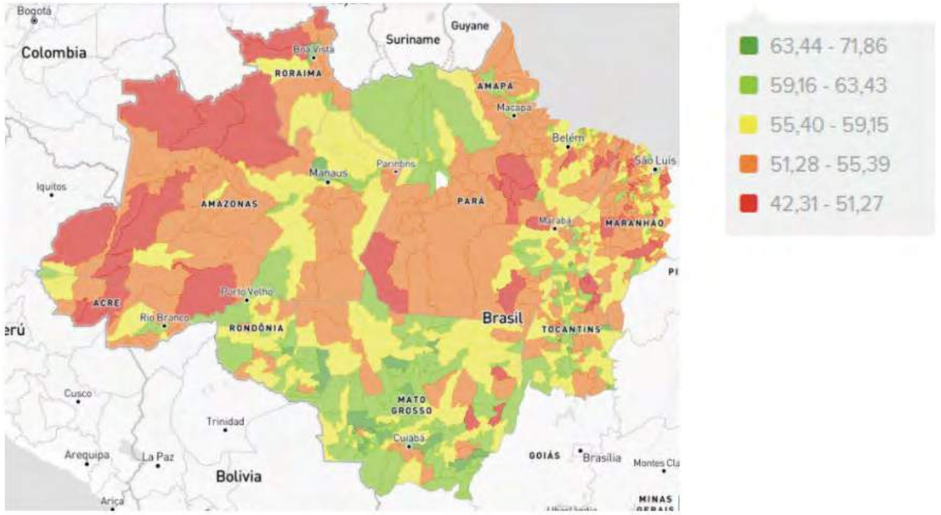
The Amazon lives with high population growth rates: between 2000 and 2010, the population grew 2.09% per year, higher than the rate registered for Brazil (1.17%), and with a degree of urbanization of 72.6% (IBGE, 2010). These data reveal the strength of the urban issue in the contemporary Amazon. This process happened in an endogenous way, in which the lack of structural policies associated with a forest economy or rational exploitation of its natural capital generated poverty in the interior of the Amazon and migration to urban centers in search of new opportunities.

Regarding social indicators, the picture is challenging. The nine states that make up the Amazon have HDI-M (Municipal Human Development Index, a measure of quality of life that takes into account education, income and longevity) below 0.750 - while Brazil's HDI-M is 0.778 (2017, Ipea).

Another measure that can be used is the **Social Progress Index (SPI)**, an index created in 2013 by the Social Progress Imperative (SPI), published by Imazon in 2014 and updated in 2018. The index, which considers basic human needs, foundations of well-being, and opportunities, presents a social diagnosis in 772 municipalities in the Amazon. In 2018, the average SPI for the Amazon (56.52) remained well below the national average (67.18). The states of Amazonia, Mato Grosso (59.13), Rondônia (58.51) and Tocantins (57.44) had the best results in the Amazon SPI of 2018. However, none of the nine states surpassed the national average. Of the 772 Amazon municipalities, only Cuiabá (67.22), in Mato Grosso, slightly (67.18) did it.

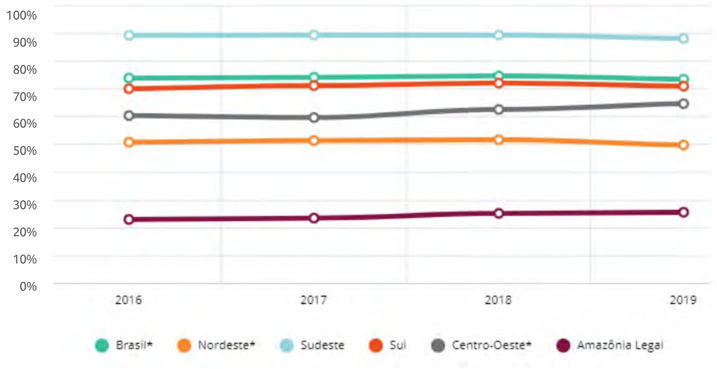
The data reveal that the situation is not positive for the region – and once again demonstrates the need to think of new development models capable of generating greater local development and generating income for the population without compromising environmental assets.

INDEX OF SOCIAL PROGRESS IN THE AMAZON (2018 - IMAZON)



These indicators are linked to key critical themes for the region, such as basic sanitation. A little more than one in four households in the Legal Amazon region have adequate basic sanitation (2019), a number well below the Brazilian reality. The worst performance is in Rondônia: one in every ten households has basic sanitation. The percentage rises to 42% in the State of Amazonas but remains below the Brazilian average.

THERE ARE +2 MILLION PEOPLE IN THE LEGAL AMAZON REGION LIVING WITHOUT ADEQUATE SANITATION (2019).



Adequate sanitation (PNAD, extracted from Portal da Amazônia Legal em Dados). Note: In the urban area, it was considered adequate: water supply through the general distribution network; garbage collection directly by cleaning service or in cleaning service cart; sanitary sewer by general network, rainwater network or cesspool connected to the network. In rural areas, it is added: water supply by a deep or an artesian well; shallow well, water table, water-hole, or spring; and sanitary sewer by septic tank not connected to the network. * Brazil without the states in the Legal Amazon region. Midwest without MT. Northeast without MA.

ONLY
57,1%
OF ALL AMAZON POPULATION HAVE ADEQUATE ACCESS TO WATER

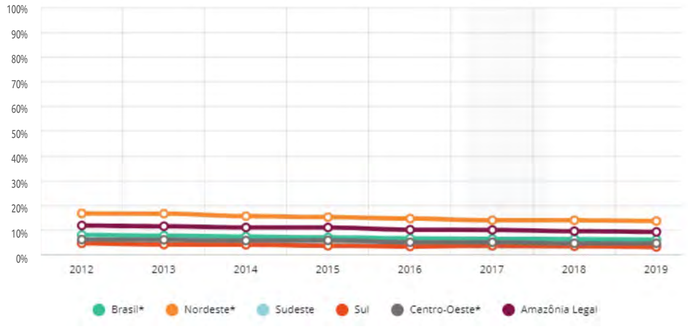
990K
PEOPLE WITHOUT ACCESS TO ELECTRIC ENERGY IN THE LEGAL AMAZON

The water coverage in the Amazon is one of the lowest in Brazil. Only 57.1% of the entire population has adequate access to water. Mato Grosso is the state that stands out (89.3%), compared to Amapá, which has the worst index, 34.9% (Painel Saneamento, Trata Brasil 2020). The issue in the region arises from the type of housing and form of water collection, in which access to surface water depends on the level of the closest rivers, which varies according to the droughts and floods in the region. During the dry season, river water travels far from the houses. During the flood, it can even enter them, making any fixed water collection method impossible and difficult to drill wells. New solutions are urgently needed and could be via innovative business models that address this challenge.

Moreover, access to electricity in the Amazon is a challenge. The region has several specificities, such as large distances, logistical difficulties, and high installation costs, which are obstacles to guaranteeing formal access to the public electric energy service. Therefore, innovations and decentralized solutions are necessary. As a result, the Amazon concentrates many of the places where this service is still scarce or precarious, configuring the last frontier of access to electricity in Brazil. Results found point to about 990 thousand people without access to electricity in the Legal Amazon region, with estimates that 19% of the population living in Indigenous Lands in the Amazon is without access to electricity, versus 22% in Conservation Units and 10% of rural settlers (Institute of Energy and Environment, 2020).

Another aggravating point is the e**ducational data for the region**, which also has a performance below that of Brazil. Some data help to understand this scenario, such as the illiteracy rate, performance on IDEB, proficiency in Portuguese and Mathematics, years of study, and people with higher education.

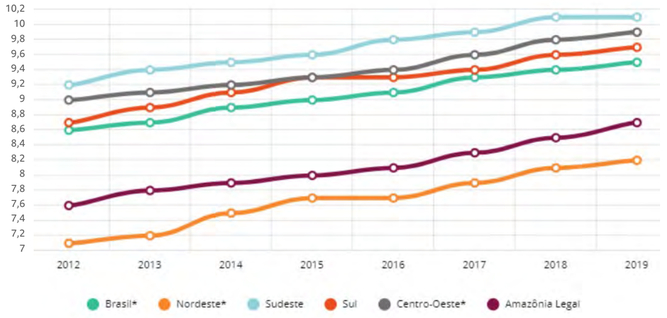
The illiteracy rate in the Legal Amazon draws attention: on average, one in 10 people aged 15 or over cannot read and write (2019). This rate is below the Brazilian average, reaching 9.4% of the population aged 15 or over, higher than in other country regions, except for the Northeast. The lowest percentage is observed in the State of Amapá (5%), while Maranhão has almost triple illiteracy (15%).



Illiteracy rate (%) 15 years or more (PNAD 2012-19, extracted from Portal da Amazônia Legal em Dados). *Brazil without the states in the Legal Amazon region. Midwest without MT. Northeast without MA.

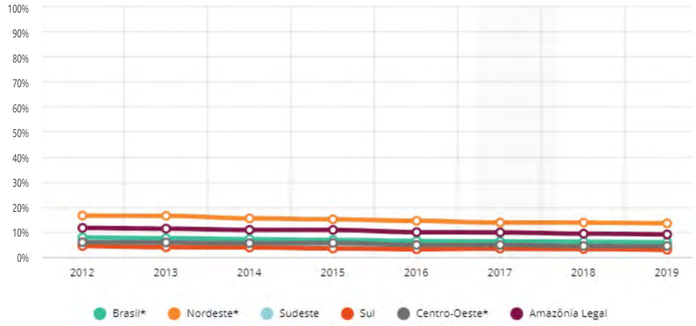
Regarding the **IDEB** (Basic Education Development Index) practically all the states in the region are below the average grade in Brazil from the 1st to the 9th grade of elementary school. Concerning Portuguese and Mathematics, the same happens: in Mathematics, for every 100 9th grade students in the region, less than 10 have adequate performance (versus 14.8 in the national average), and the Portuguese language is dominated by less than 15% of students region (versus 26.3% of the Brazilian average).

Despite its growing, the average number of years of study of the population in the Amazon aged 25 years or more is only 8.7 years (2019), lower than in all other regions of the country, which is already considered low, except for the Northeast. The lowest average is in the State of Maranhão, with 7.7 years of schooling, and the best performance is in Roraima, with 10.1 years of average schooling (matching the average in the Southeast, for example).



Average education (years of study) of the population aged 25 or over (PNAD, 2012-19; extracted from Portal da Amazônia Legal em Dados). * Brazil without the states in the Legal Amazon region. Midwest without MT. Northeast without MA.

Taking higher education as a measure, the percentage of **young people aged 25 to 29 with higher education** is 14.3% (2019), close to the Northeast region and lower than the Brazilian average again. The lowest percentage is from Maranhão (9.9%), while Mato Grosso has twice the percentage (20.3%), but all States in the Legal Amazon are below the national average, despite the regional heterogeneity.

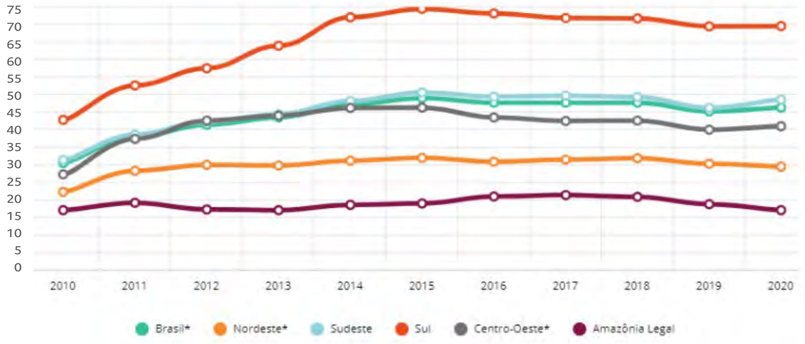


Percentage of young people with higher education (PNAD, 2012-19; extracted from Portal da Amazônia Legal em Dados). * Brazil without the states in the Legal Amazon region. Midwest without MT. Northeast without MA.

Finally, there is a latent challenge regarding the issue of science and technology in the Amazon. Using as a proxy for this theme information provided by Amazônia Legal em Dados, which are (i) the rate of masters and doctors, (ii) the percentage of people with technical-scientific occupations, (iii) the generation of patents, and (iv) the investments by the states in science and technology, it is observed that there is still much to advance, even though Brazil is far from international reference standards.

The rate of masters and doctors per 100,000 inhabitants can be taken as an indicator of the potential of scientific activity in the region. The Amazon had a rate of 17.2 per 100,000 inhabitants (2020), much lower than the rest of the country (46.4). All states in the region had a rate of masters and doctors per 100,000 inhabitants lower than the Brazilian average. The highest rate is observed in Mato Grosso with 26.3 – and, at the other extreme, Maranhão has 6.7 masters and doctors per 100,000 inhabitants.

MASTERS AND DOCTORS RATE

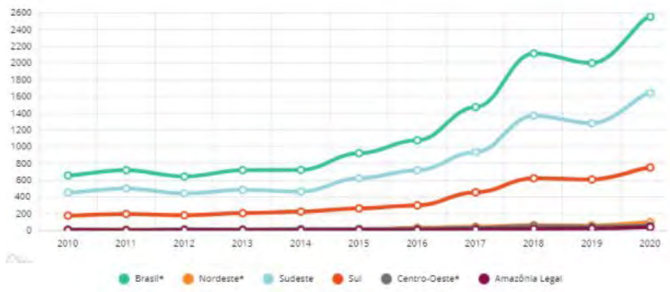


Using technical-scientific occupations in companies to observe the business effort for innovation, it appears that this is also not a positive indicator in the region: 0.84% of the jobs are related to technical-scientific occupations. In Brazil, the average of this percentage is 1.68%, and the Southeast is the region that stands out with 2.05% (2019, Relação Anual de Informações Sociais, based on the codes of Classificação Brasileira de Ocupações). Approximately 70% of employment relationships are concentrated in three states in the region, with Amazonas standing out with 1.21% (2019).

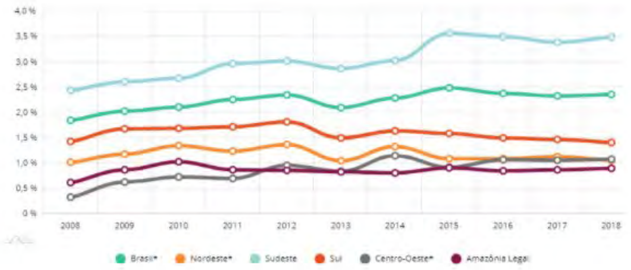
Patents, the result of the competence and innovation effort of R&D Centers (research and development) and companies, are also below the Brazilian average, despite the positive growth between 2010-2020, from 6 to 43 patents. Of these, almost half are from Amazonas, while Amapá, Rondônia, Roraima, and Tocantins did not have patents granted in 2020. Finally, representing the stimulus to activities in this area, the investments of the Amazon State governments in S&T (science and technology) are the lowest in Brazil: 0.9% (2018). Amazonas has the highest index in the region with 1.5%, while Amapá spent 0.1% of its total revenue on S&T.

The issue of innovation in the Amazon has a good path ahead. It requires a budget, support for scientific initiation, scholarships, internalization, lines of support for research (which has a potential to be explored, according to the CERTI Foundation, a reference in ecosystems of innovation and currently studying the Amazon context). Fostering research related to technology and biodiversity, a major asset in the Amazon, can be a way forward for this theme, giving power to the link between academia and the market and generating more innovative businesses with a socio-environmental impact. The innovation lens must be transversal when working on the theme of new businesses and socio-environmental entrepreneurship.

NUMBER OF PATENTS GRANTED



PERCENTAGE OF TOTAL SPENDING ON S&T



The number of patents granted and Percentage of total spending on S&T (MCTIC/INPI, data extracted from Portal da Amazônia Legal em Dados). * Brazil without the states in the Legal Amazon region. Midwest without MT. Northeast without MA.

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3.3 CONTEXTUALIZATION OF THE AMAZON:

ECONOMIC CYCLES AND ECONOMY

IN THE AMAZON, AS IN OTHER REGIONS OF BRAZIL, THE ECONOMIC HISTORY WAS MARKED BY CYCLES OF RESOURCES EXPLOITATION.

Some authors consider that the Amazon economic cycles had as many curves as its rivers. These economic cycles have always had expansion limits, with a continuous transfer of ills and problems to the next cycle, without achieving their effective consolidation. The existence of "technological lag," the failure to generate technology to overcome short-term problems, the adoption of wrong policies and subject to fluctuations, strongly supported by nature's subsidies, are some of its limitations.

Considering production cycles, the Amazon region played an important role in the cocoa cycle. The extraction of lowland cocoa, associated with empirical cultivation, had great weight in the regional economy from the 18th century until the independence of Brazil. Then followed the rubber cycle, which had two important historical moments, at the beginning of the 20th century and during World War II.

The first rubber cycle lasted more than 30 years (1879 to 1912) and connected the Amazon, in economic terms, with automotive industrialization, inaugurating the era of urban transport. The great drought in the Northeast in 1877 and the attraction of high rubber prices culminated in advance of migration and the process of occupation of the floodplains to the ends of the Western Amazon. Following the natural supply of the rubber tree resource, the population that arrived in Belém and Manaus was immediately transported and dispersed along the floodplains of the great rivers. This first phase of occupation of Amazonian interiors leaves its marks to the present day. The decline of this first cycle was motivated by the success of homogeneous and productive plantations in Asia.

The second rubber cycle, during World War II, emerged as an emergency action to assist the allied forces that were running out of supplies as a result of the military situation in Asia, which interrupted their production. A new wave of Northeastern migrants was welcomed in the region as “rubber soldiers”, equally dispersed by the floodplains ("várzeas") of the great fluvial axes. With the fall of the rubber economy, migration to the Amazon was reduced and the populations that remained there, disconnected from any national economy, began to devote themselves to a subsistence economy, essentially along the river banks. This is where the logging cycles of rosewood trees, Brazil nuts and other forest species originated.

The Amazon changed its dynamics in the 60's and 70's, with the opening of the highways, passing from a civilization only of floodplains (“Amazon of the Rivers”) to also the “Amazon of the Roads” in the years that followed. Hence new economic cycles such as the Manaus Free Trade Zone, as well as mining, industrial farming, and timber projects.

The cycle of large hydroelectric constructions consolidates a new model of granular occupation, which grows in the form of urban agglomerations that have established themselves around these projects known as “development” projects.

Urban centers continued to gain population, given the endogenous migration process. Several isolated communities and residents, remnants of the rubber cycles, gradually descended the rivers and thickened the modest outskirts of riverside towns. In the case of the state of Amazonas, the expectation of employment, income and services led some groups to Manaus.

The predominant occupation model in the region (predatory logging and land conversion for agriculture) tends to result in a local economy that follows the “boom-collapse” pattern. In other words, in the first years of economic activity, there is rapid and ephemeral growth – boom, followed by a significant decline in income, employment and tax collection – collapse (Celentano & Verissimo, 2007). Income falls due to the collapse of logging and the economic conversion of land to agriculture, an activity that does not maintain the generation of income and jobs.

ECONOMIC INDICATORS OF THE AMAZON

Regarding economic indicators for the Amazon, the Gross Domestic Product (GDP) of the region totaled R$ 613.3 billion in 2018, corresponding to only 8.8% of the national GDP. The GDP per capita reached approximately R$ 22.3 thousand per inhabitant in 2018, while it reached R$ 33.6 thousand per inhabitant for Brazil. Pará, the most deforested state, has an even more dramatic situation: just over half of the national GDP per capita, with R$19,000 per inhabitant (Santos, 2021). Over the last decade, the per capita GDP of the Legal Amazon peaked in 2014 (R$ 24,64 thousand per inhabitant) and has fluctuated since then.

Mato Grosso has a much higher Real GDP per capita than other states, with R$ 39.9 thousand per inhabitant in 2018, while Maranhão has the lowest (R$ 14 thousand per inhabitant). This discrepancy also occurs in the distribution between municipalities. Among the states, Pará (R$ 161.3 billion in 2018), Mato Grosso (R$ 137.4 billion), and Amazonas (R$ 100.1 billion) are the ones with the greatest contribution to the regional GDP. On the other hand, Amapá (R$16.8 billion), Acre (R$15.3 billion) and Roraima (R$13.4 billion) are the states with the lowest participation.

Estados	PIB em 2018 (R$ bilhões)	PIB per capita em 2018 (R$ mil)	População ocupada em 2019 (mil habitantes)
Acre	15,3	17,6	306
Amapá	16,8	20,2	329
Amazonas	100,1	24,5	1.651
Maranhão	98,2	15,1	2.278
Mato Grosso	137,4	39,9	1.698
Pará	161,3	19,0	3.541
Rondônia	44,9	25,6	815
Roraima	13,4	23,2	221
Tocantins	35,7	22,9	653
Amazônia Legal	**613,3**	**22,3**	**11.492**
Brasil	**7.004,1**	**33,6**	**94.642**

Real GDP per capita in the states of the Legal Amazon, between 2010 and 2018 (IBGE, 2020)

In the Amazon, the export basket is still concentrated and timid for socio-biodiversity products. On average, for the period between 2017 and 2019, the ten products with the highest export revenue accounted for 86% of the total value exported by the region.

The main export products of the Amazon during this period came from mechanized agriculture (soybeans, corn, cotton), mineral extraction (iron, aluminum, copper, gold), livestock, wood pulp, and paper (Coslovsky, S., 2020). Hence, it is evident the detachment of production and export from what is conventionally called the Amazonian natural vocation, which is the exploitation of resources based on its natural capital.

During the period between 2017 and 19, the main export products from the Amazon came from mechanized agriculture (soybeans, corn, cotton, pie), mineral extraction (iron, aluminum, copper, gold), livestock, and wood pulp and paper. Together they accounted for 50% of the export basket, estimated at 39 billion (US$).

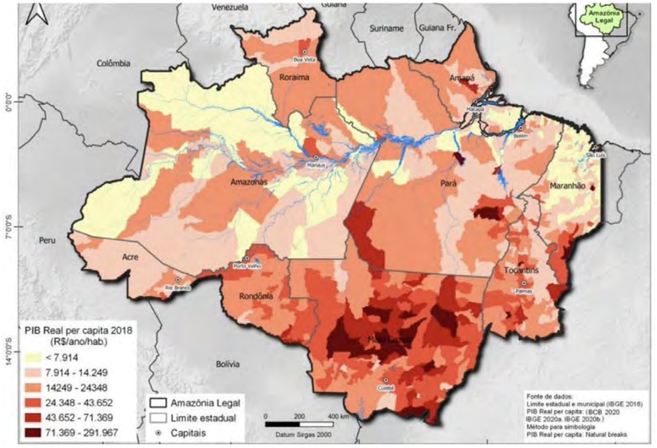
Produto	Valor (US$)	% Amazônia
Soja, mesmo triturada, exceto para semeadura	9,8 bilhões	25%
Minérios de ferro não aglomerados e seus concentrados	9,5 bilhões	24%
Milho, exceto para semeadura	3,5 bilhões	9%
Óxidos de alumínio, exceto corindo artificial	2,5 bilhões	6%
Tortas e outros resíduos sólidos da extração do óleo de soja	2,1 bilhões	5%
Minérios de cobre e seus concentrados	2,0 bilhões	5%
Carnes de bovino, desossadas, congeladas	1,8 bilhão	5%
Algodão, não cardado nem penteado	1,2 bilhão	3%
Pasta química de madeira de não conífera, à soda ou sulfato	743 milhões	2%
Ouro (incluído o ouro platinado) em outras formas	475 milhões	1%
Subtotal - 10 principais produtos exportados	***33,8 bilhões***	***86%***
Valor total – todos os produtos	**39,0 bilhões**	**100%**

Main Products Exported by the Legal Amazon – 2017-2019 (Coslovsky, 2021)

THE 10 MAIN EXPORT PRODUCTS ON SCALE IN THE AMAZON EXPLAIN GEOGRAPHICAL DISTRIBUTION AND THE CONCENTRATION OF GDP

Agricultural commodities such as soybeans, corn, cotton and the cake originated from these same products define a pattern of GDP concentration in the southern portion of the Amazon, in the state of Mato Grosso and Rondônia. Extensive livestock farming explains the more diffuse distribution pattern in northern Mato Grosso and the states of Pará, Rondônia, and Roraima.

Mineral commodities, concentrated in a few municipalities, define a more granular pattern around the exploitation areas in Pará, Mato Grosso, and Amapá.



Real GDP per Capita by Municipalities in the Legal Amazon, 2018 (IBGE, 2020)

More recently, with the super cycle of commodities (cattle, soybeans, and ore), which lasted until 2012, the volume of taxes collected in the country grew strongly, with positive results in the collection of municipalities in the Amazon, thanks to local taxes and transfers from the Municipalities Participation Fund.

At the time, the federal government had a large volume of resources, which made room for agreements with city halls and state governments. Purchase of agricultural products and school supply programs (Food Acquisition Program - PPA and the National School Feeding Program - PNAE) also generated good business in short food production chains. The volume of income transfers grew, with programs such as Bolsa Família, Seguro Defesa, and rural pensions, impacting household consumption and accelerating the production of motorcycles, cell phones and televisions in the Manaus Free Tarde Zone.

This economy in the Amazon, based on agriculture and livestock and with high rates of deforestation, makes the region highly relevant in terms of the emission of greenhouse gases (GHG) in Brazil, with the country being the sixth largest emitter in the world. Brazilian data show that the main sources of GHG in the country are Agriculture (28%) and Land Use (44%, mainly due to deforestation), activities that are very present in the Amazon, versus other sources such as Energy (19%), Waste (4%) and Industry (5%). For this reason, Amazonian states (Mato Grosso, Pará, Amazonas and Acre) are responsible for a large part of emissions, with higher emission values than Southeastern States, for example, São Paulo and Minas Gerais (Greenhouse Gas Emissions Estimation System – SEEG, 2019).

Finally, another aspect to be considered in the region's economy is the granular development and the Manaus Free Trade Zone. Granular development is understood as the fact that the transformations observed in the Amazon in the last three decades have been concentrated in state capitals and, with rare exceptions, in medium-sized cities. These are distributed indistinctly across the Amazon from rivers and roads, constituting a unique and localized population occupation and concentration pattern.

Despite these considerations, the Amazon is still strongly perceived as a rural region. But population data bring out the urban phenomenon. The Amazon has become an urbanized agricultural frontier, an “urbanized forest,” with 18 million urban dwellers, almost the population of the metropolitan region of São Paulo (Sawyer, 1987; Becker, 1995).

One of the examples of granular development to consider is the Manaus Free Trade Zone (ZFM). Created in 1969, it established an electronics assembly pole in the heart of the Amazon rainforest with the objective of being a free port for the storage, processing, and removal of products from abroad.

Among the criticisms made to the ZFM model is the lack of connection with regional vocations. The model based on tax exemptions-incentives, established an industrial park based on the assemblage, a true building line of parts that come from the southeast of Brazil, are only assembled in the city of Manaus. Once assembled, they return to national consumer markets, wherever they are. Motorcycles, cars, TVs and electronic devices, among others, participate in this feast of subsidies that have lasted 50 years and which is intended to extend until 2053.

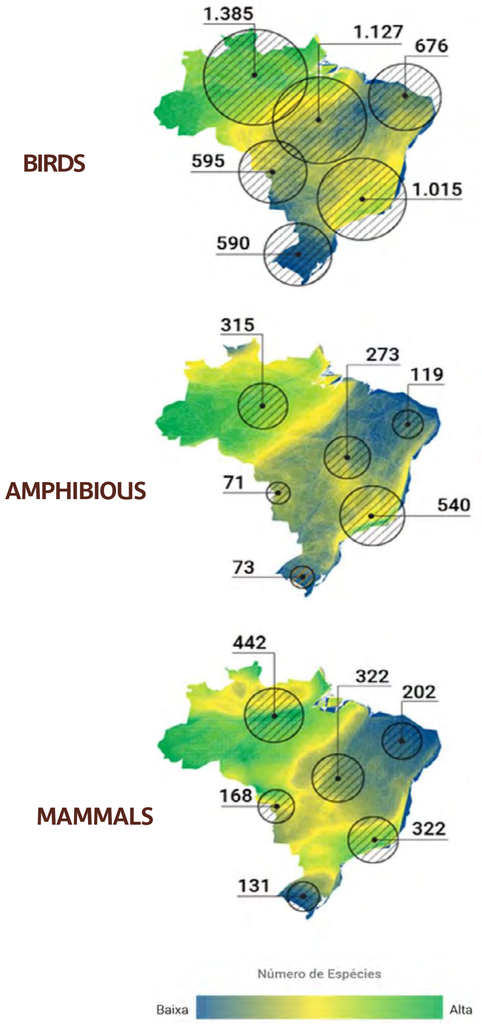
As important as the Manaus Free Trade Zone is today, a study on economic diversification in Amazonas (Instituto Escolhas, 2020) shows that it suffers from central problems, related to inefficient allocation of resources, distortion of markets and production chains and dependence on subsidies. The social gains from these subsidies are small, as the expectation of employment in the industrial hub attracted population contingents to Manaus, generating frustration and exclusion. The population has practically doubled in the last 5 decades, and unemployment rates are quite high. The study also presents axes of opportunities that would allow connecting the acquired industrial culture and the associated subsidies allocated there: Bioeconomy and a Pole of Digital Transformation Economy, as well as other activities in the Amazon region, such as Ecotourism and Fish Farming.

An encouragement to the topic is the Information Technology Law: companies located in the Free Trade Zone are required to allocate at least 5% of their sales to R&D (research and development). Historically, these resources were used for innovations within the factories themselves to improve products and internal processes. However, a guideline created in 2018 and initiated in 2020 provides for five priority programs in which ZFM companies can invest in third-party businesses. One of them is the PPBioeconomia, aimed at research and innovation for an economy based on the sustainable use of forest resources. Despite being positive, convincing companies to allocate part of the R&D budget to PPBio is not easy for reasons related to incentives and other bureaucracies. The PPBio is not included in the mandatory destinations (2.7% of the companies' revenues, of the 5% total) or of the 0.14% that must go to projects outside the metropolitan region of Manaus.

BIOECONOMICS IN THE AMAZON

The Amazon today is not the same as it was thirty years ago. The regional context, immersed in a new world context and a new national dynamic, has been changing. New projects and businesses bring a new paradigm: consolidating old experiences through impact investments or even establishing a new trend of entrepreneurship, which deepens the relationship between development and conservation.

Brazil is home to the greatest biodiversity on the planet - more than 20% of Earth's total number of species. As an example, there is the study carried out in 2021 by Rede Amazônia Sustentável (RAS), composed of researchers from more than 30 institutions from Brazil and abroad, such as Embrapa Amazônia Oriental, created with the objective of producing and applying scientific evidence as a way to strengthen sustainability in the Amazon region. The study indicates the relevance of the Amazon in the Brazilian and global biodiversity scenario. Having as an example species in the Brazilian context, there are:



Number of species per biome. Hyperdiversity Page - Rede Amazônia Sustentável (2021).

This diversity can make the Amazon reach a relevant competitive advantage in the bioproducts market. Based on the premise that rational, consistent, and long-term economic development for the Amazon must be based on knowledge of nature and the understanding that Amazonian biodiversity is the backbone of this transformative process, there is the narrative of bioeconomy as a matrix of sustainable economic development that avoids the excessive simplification of nature that usually occurs when seeking to increase production.

The advance of the bioeconomy presupposes (i) infrastructure, but it is not fundamentally about building roads and ports for the shipment of grains and meats, but an infrastructure aimed at sustainable development and (ii) the strengthening of local scientific organizations, their link with forest peoples and an educational process that values the region's cultural heritage.

The **Amazon Fund** was created in 2008 to raise donations for non-reimbursable investments to prevent, monitor, and combat deforestation and promote the conservation and sustainable use of the Legal Amazon. It supported the multiplication of entrepreneurial actions in the form of pilot projects, leveraging small-scale business chains, empowering social groups for entrepreneurship, and promoting a true cloud of new businesses in the Amazon. The program, which ended after 10 years (in 2019), for political reasons and suspension of transfers from the largest donors, such as the government of Norway and Germany, encouraged the creation of innovative projects to promote sustainable development in communities in the Amazon, resulting in in a reach of 30,000 families and 70,000 local producers, who received support for their own economic activities. Although dispersed throughout the territory and located in regions often devoid of transport logistics, this allowed for the establishment of a culture of small businesses in the Amazon and the emergence of new chains. Many of these initiatives were reinforced by later projects, became self-sustaining and managed to survive to the present day.

A new bet for this agenda is **Amazon 4.0**, a movement by the renowned scientist Carlos Nobre, which rescues and brings together idealism and realism in a powerful and innovative concept. It opts for sustainable economic and social development based on respect for biodiversity, traditions, and local lifestyles, while harnessing the potential of industry 4.0's cutting-edge technologies. The proposal is that biological and biomimetic actives (related to functions and processes present in nature) be used for the preparation of pharmaceutical, cosmetic, and food products, or even in the search for new products, materials, energy solutions, and mobility, all with significant potential of new business. The Amazon 4.0 project is still under development and foresees the implementation of biofactories in production chains, such as açaí, cupuaçu, and cocoa. In addition, it provides for the people training to work in these biofactories as well as a research institute.

The Amazon 4.0 concept appears to operationalize the innovative transformations proposed by the “Third Amazon Way.” The **first way**, chosen by the government 20 years ago, corresponded to the Brazilian government's delimitation of vast protected areas such as Indigenous Lands and Conservation Units (national parks and forests), as a way to guarantee that a sufficiently large area of the Amazon biome was preserved. However, although protected by law, these areas are not immune to invasions, illegal exploitation and degradation of their inmates. The **second way** proposes a model of regional development with activities such as grain production in a monoculture system and extensive cattle raising, as well as controlled mining or even logging. Brazil has become a global leader in this area, however, this model puts the Amazon's future at serious risk.

Combining economic production of wood, meat, and soybeans per area, we have an average yield of 125 USD per hectare/year, which is quite low (compared to productivity in other regions of Brazil and the world). Therefore, reinforcing the conservation model proposed in the first way and, at the same time, increasing the efficiency of commodity production (the second way) through "integrated crop-livestock-forest systems," the so-called "sustainable intensification," is a possibility to be explored. But it does not by itself guarantee the sustainable development of the Amazon in the medium and long term. In this context, besides the climate crisis and the global threat to biodiversity, the **third Amazon way** emerges, proposing a new sustainable development paradigm for the region. A model that uses all the knowledge provided by science, technology, innovation and strategic planning for a bioeconomy based on the idea of a "standing forest," valuing biodiversity and the sustainable work of local communities."

The Amazon Concertation, which seeks dialogue with all sectors of society for a plural and democratic debate focused on the sustainable development of the Amazon region, has as its working groups the bioeconomy. The construction of references for the theme is made from the 'forests, rivers and people' of the Amazon, recognizing the region's diversity. The movement proposes a **typology for the Amazonian bioeconomy**, according to different approaches and production systems.

In Brazil, the economy has always been related to the use of natural resources, from the exploitation of pau-brasil in the colonial period to the current production of agribusiness, corresponding to almost a third of the national GDP. However, a trajectory was historically marked by predatory use, with environmental and social impacts and, to date, there is no strategic program for the sustainable use of biodiversity in the Amazon, where the largest tropical forest on the planet is located.

Over the last few decades, the Amazon economy has increasingly distanced itself from the comparative advantages provided by its access to the forest, navigable rivers, estuary, and ocean coast with a hot and humid equatorial climate. Today, a relatively large proportion of the region's income and employment comes from federal government transfers, industrial mining, mechanized agriculture, and industries based in the Manaus Industrial Pole (Gonzaga et al., 2020).

Bioeconomy makes it possible to strengthen the relationship between activities in the primary sector, such as agriculture and extractivism, with manufacturing and service industries activities, making them segments of the same process and thus contributing to economic development on a regional basis (IPEA, 2017).

Aiming to understand which activities compatible with the forest can boost the economy of the Legal Amazon in this decade, a study (Coslovsky, S. – 2020, for Amazon 2030) reveals some export activities and their respective markets. Some of them are multi-billionaires, in which the exporters in the Amazon maintain a share that is so far negligible.

Analysis of export data reveals that enterprises based in the Amazon exported 955 products between 2017 and 2019. Among these products, only 64 come from non-timber forest extraction, agroforestry systems, tropical fishing and fish farming, and tropical horticulture. In the context of this article, these 64 products are classified as “forest compatible” and generated an annual revenue of US$298 million, with the global market for these same products moving US$176.6 billion per year. This means that companies in the Amazon kept a share of only 0.17%. In this sense, there is a great opportunity to be explored.

Produtos Compatíveis com a Floresta	Valor (US$)	% Produtos Compatíveis
Pimenta (do gênero piper), seca, não triturada nem em pó	108 milhões	36%
Outros peixes, exceto fígados, ovas e sêmen	33 milhões	11%
Óleos de dendê, em bruto	27 milhões	9%
Suco (sumo) de qualquer outra fruta ou produto hortícola	24 milhões	8%
Cabeças, caudas e bexigas natatórias, de peixes	20 milhões	6%
Outras frutas e partes de plantas, preparadas ou conservadas	19 milhões	6%
Castanha-do-pará, fresca ou seca, sem casca	16 milhões	5%
Castanha-do-pará, fresca ou seca, com casca	12 milhões	4%
Peixes ornamentais de água doce	5 milhões	2%
Outras frutas congeladas, não cozidas ou cozidas em água...	4 milhões	1%
Filés de outros peixes, congelados	3 milhões	1%
Outros sucos de abacaxi, não fermentados	3 milhões	1%
Outros camarões, congelados	3 milhões	1%
Mel natural	3 milhões	1%
Outros óleos de dendê, mesmo refinados ...	2 milhões	1%
Subtotal – 15 principais produtos compatíveis	*281 milhões*	*94%*

Forest Compatible Products Exported by the Amazon: 2017-2019 (Coslovsky, S. – 2020, for the Amazon 2030)

SOCIO-BIODIVERSITY PRODUCTS

There are several socio-biodiversity products with already recognized business chains that lack structuring and articulation in relation to the capacities and expectations of the various actors involved in the chain. Access to Amazonian socio-biodiversity products is essential to keep the forest standing and to meet the growing market for sustainable products. In this way, PPA can make programmatic cuts for its acceleration programs according to certain socio-biodiversity chains (see 'PPA Acceleration Programs').

There is still not enough data and clarity on which sectors and bioeconomy chains compatible with the Amazon forest have the greatest potential. Studies are being carried out on supply and demand in this regard. It is important to note that business opportunities with new forest products must be evaluated based on demand and not on supply, as is commonly done. By excessively raising the potential of Amazonian products, there is an eventual false expectation of business. Furthermore, to work with chains, the limitations and bottlenecks that these chains have as a whole must be analyzed, in particular what is its weakest link: human material, production, innovation, management, marketing, investment attraction, among others.

At first glance, there is a technical cooperation project carried out in 2019 by the Ministry of Agriculture (MAPA) and the German cooperation (GIZ), which selected Amazonian products that reach local, regional, national, and eventually export markets. The list is not exhaustive, but it does provide examples with some commercial relevance and market value.

AÇAÍ » Euterpe Oleracea

Açaí is considered a food of great nutritional value, and its national and international consumption has increased vigorously in recent years. In the Amazon region, it plays an important socioeconomic and cultural role, as the food obtained from its fruits has a high regional consumption. Açaí can be sold in natura, processed into pulp or even powder, as an ingredient for other products. The natives extract its pulp, which is consumed pure or accompanied by yuca flour or tapioca (you can make the porridge), and roasted fish or dried shrimp. In addition, the pulp is used in the preparation of desserts, juices, wines, liqueurs or ice cream.

COCOA» Theobroma Cacao

Cocoa is distributed in the tropical regions of South and Central America, comprising the Orinoco and Amazon basins. It has significant economic importance, and its almonds are known throughout the world. By local populations, cocoa is used for culinary purposes, in particular for the consumption of fresh pulp. The pulp is rich in sugars, and can be consumed in the form of a soft drink or liqueur. Almonds are used in the manufacture of homemade or industrial chocolates, beverages and as an ingredient in other foods such as cookies, cakes, and bars. Cocoa butter is also extracted from the seeds. It is widely used in the pharmaceutical industry and cosmetics manufacture.

VEGETABLE OILS

The extraction of vegetable oils without felling trees enhances standing forests and constitutes an important income alternative for local people. Traditional extraction techniques maintain the natural properties and characteristic flavor of the valuable oils. In the industrial refining process, most of these properties would be lost. Cold extracted oils contain a high proportion of thermosensitive vitamins (A, B, and D), antioxidants, carotenoids and hormones. Oils extracted from “Copaíba” (Copaifera spp), “Andiroba” (Carapa guianensis), “Murmuru” (Astrocaryum murumuru), “Bacuri” (Platonia esculenta), Brazil nuts (Bertholletia excelsa) and “Babaçu” (Attalea speciosa), among others, are increasingly used as inputs for national and international cosmetic and pharmaceutical industries.

BRAZIL NUTS» Bertholletia Excelsa

Brazil nuts are consumed fresh or roasted and used as an ingredient in the composition of numerous sweet and savory recipes, such as breads and cakes. Nuts can be used fresh, processed, or in oil. The commercialization of nuts encourages the extractive economy in the Amazon and contributes to income generation and the maintenance of the forest standing.

HEART OF PALM » Eurterpe Oleracea or Bactris Gasipaes

Several cooperatives promote agroforestry systems as a sustainable form of production while helping to protect ecosystem services. The hearts of palm can be consumed as an appetizer, in salads, as cream, pies, and "bobós." The heart of palm can be harvested by selecting just a few of the stems, year after year, without killing the individual plant as it develops new shoots. Removing older stalks corresponds to a form of sustainable management for palm trees.

GUARANÁ » Paullinia cupana

Guaraná adapted and started to be cultivated in several other regions of Brazil. Despite this, it is still in the Amazon forest that it can be found in the wild, especially, and in great concentration in the region comprised of the Madeira, Tapajós, Amazonas rivers, and headwaters of the Maraú and Andirá rivers. In cooking, one can obtain by processing the seed: guarana powder, stick, extracts, and syrups. The fruit is a product rich in caffeine. The caffeine content in guaraná seeds can vary from 2% to 5% (dry weight), higher than coffee (1% to 2%), mate (1%) and cocoa (0.7%) .

FISH» Pirarucu and Tambaqui

Fishing stands out as a socio-environmental and cultural way of life for the traditional peoples and communities of the Amazon. The pirarucu (Arapaima gigas), a freshwater giant, and the tambaqui (Colossoma macropomum) stand out among the Amazonian fish with high nutritional and commercial value. They are fish found in the Amazon basin and from which meat and oil are used.

CUPUAÇU » Theobroma grandiflorum

Cupuaçu is one of the most popular fruits in the Amazon, and it has also been commercially deployed in southeastern Bahia. Cupuaçu pulp is used in the preparation of ice cream, juices, jellies, sweets, mousses, chocolates, candies, biscuits and yogurts. The seeds, after drying, are used in the manufacture of white chocolate or "cupulate".

ACEROLA » Malpighia glabra

It is widely cultivated in several Brazilian regions, especially in the North and Northeast of the country. The pulp can be used to prepare juices, ice cream, wines, liqueurs, sweets and vitamin C tablets. The harvest of acerola fruit intended for fresh consumption or for processing the juice for export purposes must be done very carefully. . The growing consumption of this fruit is basically due to its high content of ascorbic acid (vitamin C). In some varieties, it reaches up to 5,000 milligrams per 100 grams of pulp. This index is up to 100 times greater than that of oranges and lemons.

HONEY » The honey of socio-biodiversity conservation

In the Amazon, crops such as açaí, cupuaçu, Brazil nuts, and passion fruit directly depend on pollinators such as melipona. The production chain of honey from stingless and stinging bees (meliponiculture and apiculture, respectively) in the Amazon depends on easy access to inputs for this creation, such as appropriate wooden boxes, hives for reproduction, technical assistance, among others. Thus, the sustainable production of honey in the Amazon is an important source of income for traditional communities and enterprises, as well as a valuable contribution to biodiversity, in addition to providing a product with an extraordinary flavor.

PPA PARCEIROS PELA AMAZÔNIA

RUBBER » Hevea brasiliensis

Brazil is the origin of the rubber tree, and the original rubber extraction technique remained in Brazil. While in Asia production is mostly standardized on large plantations, traditional Amazonian peoples still collect rubber in the more traditional way of extractivism. Through sustainable use, the forest remains in its natural composition. Production is carried out by traditional communities living in various protected areas, especially those located in the Amazon. Providing income to thousands of families in local communities, part of the natural rubber production is sold to industries. The other part is used in the manufacture of various products, such as shoes, slippers, gloves, bags, dishes, sculptures, tire industries, rubber artifacts and clothing accessories.

BACURI » Platonia insignis

Bacuri is one of the most popular fruits in the Amazon region, being slightly bigger than an orange. It contains sweet and sour pulp, rich in potassium, phosphorus, and calcium. This tree exists naturally from Marajó Island, at the mouth of the Amazon River, to Piauí, following the coast of Pará and Maranhão. Its wood is considered noble and has many uses. The oil extracted from its seeds is used as an anti-inflammatory and healing agent in folk medicine and the cosmetics industry. As the bacurizeiro is a cross-fertilized plant by ornithophily, pollination conducted by birds, the production of the fruits depends on the presence of these, pipiras e periquitos ("parakeets") in particular. The fruit is consumed directly or used in the production of sweets, ice cream, juices, jellies, liqueurs and other delicacies. Its bark is also used in regional cuisine.

PEACH PALM » Bactris gasipaes

The peach palm is a fruit with excellent energy value and high vitamin A content, with a fleshy, thick, and sometimes fibrous pulp. The peach palm is native to the humid tropics of the Amazon. In cooking the peach palm fruit is consumed the extracted seed, served as a snack or with coffee, accompanied with honey, sugar or natural. Another culinary use for cooked fruit is in the preparation of a variety of homemade foods, or ground for flour production.

ORGANIC FRUITS AND VEGETABLES

More and more projects in the Amazon have focused their activities on the production of organic vegetables, whether in agroforestry systems or other forms of sustainable production. Noteworthy: coriander, chives, spinach, arugula, pacovan banana, lemon, cashew, coconut, pineapple, and yuca flour. Several products already feature seals of origin and organic product certification.

BACABA » Oenocarpus bacaba

Bacaba pulp produces a sweet edible oil for cooking. With a creamy-milk color and pleasant flavor, “bacaba wine” is produced and used in much the same way as “açaí wine.” Both are even nutritionally similar. They have a high oil content, and caution is recommended when consuming. The “bacaba wine” can be used with savory foods served in everyday meals. It is also used to make a porridge, consumed with flour or preparing it in the form of juices and soft drinks.

FOREST PROTECTION AND PAYMENT FOR ENVIRONMENTAL SERVICES

A structuring step for the forest protection agenda in the Amazon was the P**PG-7 (Pilot Program for the Protection of Tropical Forests)**, an initiative created within the G-7 that intended to participate in the conservation of tropical forests developed in 1994 and 2009.

The program, financed with US$ 428 million, was favorably received by Brazil, pledging to finance a series of projects that should respect five lines of action: (i) experimentation and demonstration of activities aimed at reconciling conservation and development; (ii) conservation of protected areas; (iii) the demarcation of indigenous lands; (iv) the consolidation of public institutions responsible for environmental policies; (v) scientific research.

Among the most relevant results, we highlight the creation of more than 100 million hectares of protected areas in the Atlantic Forest and the Amazon Rainforest, including 2.1 million hectares of extractive reserves, 44 million hectares of demarcated indigenous lands, and 72 million hectares of ecological corridors.

Also, there was the establishment of areas for the conservation and management of natural resources. The idea was to strengthen the regulation of land use in forest regions. This allowed for the demarcation of 2.1 million hectares of forest, monitored by a system capable of warning about deforestation and degradation in the nine Amazon states (PRODES and DETER).

The PPG7 also included a science and technology component, which financed important research centers such as INPA, Embrapa, Museu Paraense Emílio Goeldi, and more than 100 studies on Brazilian forest ecosystems.

In recent decades, **protecting forests and ecosystems has been addressed considering the ecosystem services they provide.** Permeating the various sectors of society, the ecosystem approach from the perspective of services is being more incorporated into political agendas, sector planning and organized civil society debates. The increased interest and impact of this area of knowledge arises from the better understanding that humanity and nature are intimately connected and interdependent (Haines-Young and Potschin 2018).

The commitment to the provision of environmental services generates impacts not only to ecology and economy but also to health, human well-being, and society's operation. Thus, the scientific community has been evaluating and systematizing information on PES, recognizing the need and urgency of taking innovative measures to protect ecosystems, reconciling their conservation with economic development. In this theme, the agricultural and forestry sectors deserve to be highlighted, as they can contribute both to the supply and suppression of ecosystem services.

Since the late 1990s, Payments for Environmental Services (PES) have gained prominence as a market instrument to enable environmental protection. They have been incorporated into public policies in several countries, especially in Latin America (Wunder, 2006). This instrument emerges in a context of economic liberalization, to make up for the deficiencies of the states and find new sources of financing for conservation and development. The PES justification lies within the limits of the command and control instruments in, alone, containing the advance of deforestation.

In 2021, Law 14.119/21 was enacted, which regulates payment for environmental services. It is a way of encouraging conservation and sustainable development through remuneration in exchange for the preserved goods. The text creates a payment policy for environmental services, which determines objectives and guidelines, and a federal payment program for these services (PFPSA), focusing on actions for the maintenance, recovery, or improvement of vegetation cover in areas considered priority for conservation , in actions to combat the fragmentation of habitats and to create corridors for biodiversity and conservation of water resources (Presidency of the Republic, 2021). However, some discussions and vetoes have still mobilized Congress related to taxation.

It is also worth mentioning that environmental services have been gaining attention from the private sector, given the growing representation of the concept in important corporate sustainability indices, such as the Dow Jones Sustainability Index family (New York) and FTSE4 Good Index Series (London). In Brazil, the ecosystem services rating is considered in the Corporate Sustainability Index of Brasil Bolsa Balcão (ISE-B3) since 2018. Thus, in order to meet the demand of investors and stand out in the financial sector, fiscal and economic stimuli can attract resources from the private sector both to feed environmental funds that finance the PES, and to increase the scale of projects (Brazilian Coalition on Climate, Forests and Agriculture, 2021).

Another important aspect of PES programs is that, in addition to the positive impact on landowners' income, there may be benefits associated with the ecosystem service itself, such as the possibility of marketing non-timber products, the reduction in water treatment costs, and the issuance of credits for capturing or reducing greenhouse gases, among others. Therefore, enabling private investments and international cooperation is crucial, even more in a scenario of post-pandemic economic recovery.

Payment for environmental services can take place in several ways: direct (monetary or not); provision of social improvements to rural and urban communities; compensation linked to a certificate for reducing emissions from deforestation and degradation; lending; green-bonds and Environmental Reserve Quota established by the Forest Code. Revenues obtained from charging for the use of water resources referred to in Law 9,433/97 (Institutes the National Water Resources Policy), may also be used to pay for these environmental services but will depend on the decision of the river basin committee. Other forms of payment may be established by normative acts of the Brazilian Institute of the Environment and Renewable Natural Resources (Ibama), the managing body of the national policy (Agência Câmara de Notícias, 2021).

It is interesting to mention the PES Forest+Amazon project, which is the result of a partnership between the Ministry of the Environment and the United Nations Development Program (UNDP) and is being designed in the second half of 2021. The project aims to encourage activities conservation and restoration of native vegetation in the Legal Amazon, providing monetary incentives for owners of small rural properties, indigenous peoples and traditional communities. Four types of resource distribution are expected, with specific objectives and requirements for the beneficiaries' participation: (i) Forest+Conservation, Forest+Recovery, Forest+Communities, and Forest+Innovation.

Despite the creation of the law and new projects at the governmental level, Brazil still does not have a national PES implementation strategy. There is a need for greater promotion by national, state, and municipal governments, encouraging the private sector to participate and also be one of the payers. Brazil has a large concentration of forestry assets or other forms of natural vegetation in the Amazon and Cerrado biomes (83%). However, most of the existing PES initiatives are concentrated in the South and Southeast of Brazil, imbued with protecting the scarce remnants of natural vegetation, whether they are forest islands or highland fields.

The Atlantic Forest egion is the one where the PES stands out the most. Given the various water crises, the growth of big metropolises in the South and Southeast stimulates a local demand for ecosystem services, mainly for water conservation. A study by the Ministry of the Environment (MMA) surveyed around 80 PES projects in this biome by 2010 (Pagiolla et al., 2013), the majority being aimed at protecting water resources. Several organizations work with the theme in the region, among which the MMA, FUNBIO, German Cooperation, National Water Agency, World Bank, WWF, and The Nature Conservancy TNC) can be highlighted.

Still, in the Brazilian context, it is important to mention that the CAR (Cadastro Ambiental Rural - "Rural Environmental Registry") is essential for delimiting a minimum conservation area (which is 80%, in the case of the Amazon). For the properties to be able to adapt to the CAR, there is a deficit concerning Permanent Protection Areas (PPA) and Legal Reserves (LR) – and therefore the need for restoration or regeneration of areas, which can be encouraged via PES. CAR also allows for legal deforestation, but these are private areas that do not necessarily need to be deforested, hence the opportunity for payments for environmental services (PES) and to turn these forest deficits into a new business.

	PPA DEFICIT		LR DEFICIT		TOTAL DEFICIT	UNPROTECTED NATIVE VEGETATION
	Mha[1]	%	Mha[1]	%	Mha[1]	Mha1
BIOME						
Amazon	1.1	6%	3.6	4%	4.7	12
Caatinga	0.8	22%	0.2	2%	1.0	35
Cerrado	1.9	24%	4.2	9%	6.1	44
Atlantic Forest	4.1	56%	2.7	22%	6.8	0[2]
Pampa	0.3	46%	0.5	18%	0.8	4
Pantanal	0.0	6%	0.0	1%	0.1	8
BRAZIL	8.1	22%	11.3	7%	19.4	103

Imaflora from CAR, 2018

In the case of the Amazon, the abundance of forest assets and the risk associated with the low value of these assets versus deforestation make the implementation of PES essential. The increasing levels of deforestation are, above all, motivated by the patrimonial logic, in which the appropriation of land represents the value of the business and where forest assets only serve as leverage to finance the operational costs of opening and consolidating this appropriation.

In the Amazon region, the first PES were implemented under the Proambiente program, started in 2003. Proambiente encouraged the agroecological transition in agricultural frontier areas and, thus, provided technical support to producers and community planning (Britto et al., 2012). The project included 11 centers and 6000 families, and was led by social movements in partnership with the federal government. Nonetheless, Proambiente ended in 2010 due to a lack of resources and institutional framework at the federal level. Other PES were conceived to ensure the continuation of Agroforestry Systems, led by local organizations, with support from international cooperation programs, mainly the PPG7 (Dos Santos and Vivan, 2012).

Based on the REDD (Reducing Emissions from Deforestation and Forest Degradation) agenda, which was emerging at the international level, the States of Amazonas and Acre sought to raise funds for their environmental policies. In 2007, the State of Amazonas created the Bolsa Floresta as a form of individual and collective payment to influence practices in the use of natural resources within protected areas. These payments are subject to restrictions on the use of areas, but they imply few changes related to the traditional use made by residents of the PAs. Indigenous groups also saw in REDD an opportunity to obtain resources to guarantee the protection of their land, as in the case of The Surui Forest Carbon Project (Toni and Ferreira, 2011). Through the Amazon Fund, Brazil joined the REDD+ logic in which payments came from results (reduction of deforestation) and were managed by the BNDES. The resources were then distributed to projects that contribute to this reduction in deforestation.

Regarding private PES initiatives in the Amazon, in the context of large companies supporting smallholder producers in forest conservation, stands out the Payment for Social and Environmental Services for native rubber producers of the French company VEJA Fair Trade (Vert Shoes in Brazil), in the State of Acre, in the years 2017 and 2019, in partnership with Cooperativa Central de Comercialização Extrativista do Acre - Cooperacre. The objective is to stimulate the production of this raw material and, at the same time, create incentives for forest conservation where it is produced. Part of the innovation of VEJA's "PSES" mechanism is differentiating the value of the product from the value of the conservation services associated with it. In this way, detaching the cost of the "PSES" from the direct cost of the product. In the company's accounting, the "PSES" is considered as part of the costs of social and environmental governance practices, which are part of the company's mission and competitive edge.

For the agenda to move forward and more examples to emerge in the region, it is urgent to define regulatory and fiscal frameworks and bring companies that need environmental compensation to the owners of these assets in the Amazon, which can bring a new moment for PES in the Amazon.

MAPS AND TERRITORIES

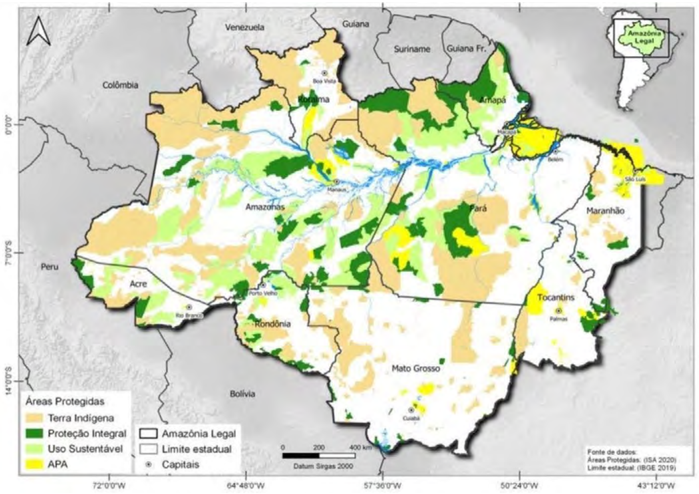
Finally, considering the size of the Amazon territory, it is interesting to locate geographically in the region and understand specificities and possible cuts, which may even be one of the criteria for certain calls for PPA acceleration programs (see more in 'Acceleration programs of the PPA). Some are highlighted as examples: Protected Areas, Indigenous Lands, Rural Settlements, regions with a high rate, or critical areas in relation to Deforestation.

PROTECTED AREAS

The Amazon is the biome with the most Conservation Units in Brazil (27.7% of the territory - ICMBIO, 2018). The federal and state National System of Conservation Units (SNUC) has some categories considered as of sustainable use (RESEX – Extractive Reserves and RDS – Sustainable Development Reserve), created with the clear intention of protecting territories from predatory practices, ensuring safety land ownership for traditional populations and their practices in the use of natural resources.

Together, these areas add up to 530,511km2, comprising 10.6% of the Amazon surface and mainly dispersed between Amazonas, Pará, and Acre. Many of these areas, particularly those that approach the expansion and deforestation fronts, are or are under threat to their physical integrity, by the invasion of illegal loggers or other illegal practices.

In these areas, and under the tutelage of a management plan, a list of opportunities for small forest-based businesses opens up. The challenge of implementing business, social and productive inclusion agendas is urgent and can even contribute to reducing the number of illegal deforestation practices, bringing health and well-being to the population.



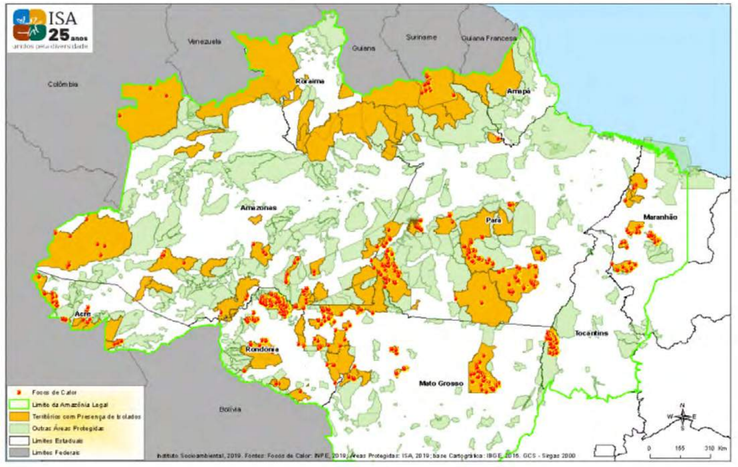
Sustainable Use Conservation Units (based on ISA data, 2020)

INDIGENOUS LANDS

Indigenous Lands were created with the intention of protecting indigenous populations and ensuring that their areas of use and ancestral practices are similarly protected. The area totals 1,151,920 km², comprising 23% of the Amazon surface and spread mainly between Amazonas, Pará and Acre (ISA, 2021).

Many of these areas, in particular those that approach the expansion and deforestation fronts, are also found or under threat to their physical integrity, by the invasion of illegal loggers or other illegal practices.

Usually, a good part of these territories have management plans and, together with indigenous communities, an inventory of natural resources and cultural practices. These assets can support the structuring of community-based businesses. Associations created in these territories have been the bridge for the formation of young leaders, open to entrepreneurship and eager for training processes aimed at sustainable business.

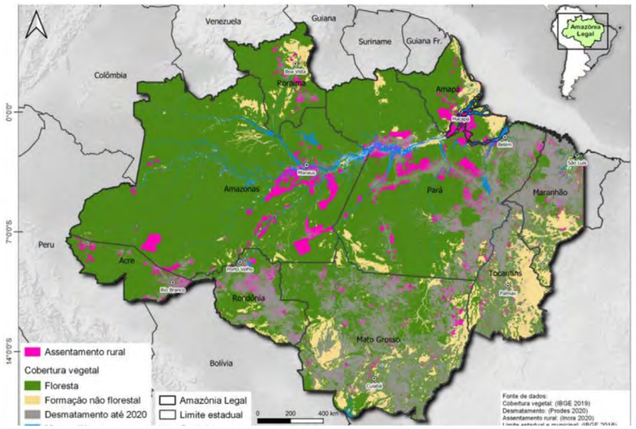


Indigenous Lands in the Brazilian Amazon (ISA, 2020)

RURAL SETTLEMENTS

Rural settlements are implemented by the National Institute for Colonization and Agrarian Reform (Incra). In the Legal Amazon, the settlements occupy 392,196 km2 (8% of the region), an area larger than the territories of the states of São Paulo and Santa Catarina combined. Pará is home to a third of the area of settlements in the region, reaching 135,684 km2. Next are the states of Amazonas with 23% and Mato Grosso with 12% (Incra 2018). The 2,269 rural settlements in the Amazon are home to 460,312 families of small producers (INCRA, 2018). Deforestation in rural settlements in the Legal Amazon reached 2,097 km2 in 2020 (22% of the total deforested). Considering the accumulated deforestation, Pará, Rondônia, and Mato Grosso have the largest deforested area in rural settlements, respectively. In total, 180,946 km2 of the area of rural settlements suffered deforestation by 2020, 45% of the total area (Inpe, 2020 and Incra, 2018).

Historically, the lack of technical assistance, basic services, difficulties in accessing technologies, public policies, knowledge transfer, and better logistical conditions placed the family farmer in the Amazon on the sidelines of the region's development process. According to Castro and Pereira (2017), family farmers were neglected by different government spheres throughout the modernization process of Brazilian agriculture. This led to the need for constant clearing of forested areas for the establishment of productive activities such as slash-and-burn agriculture and low-productivity extensive cattle raising. This cycle of impoverishment in areas did not generate better living conditions for the population. Furthermore, it has made family farming increasingly vulnerable to the effects of climate change, putting families' food security at risk.

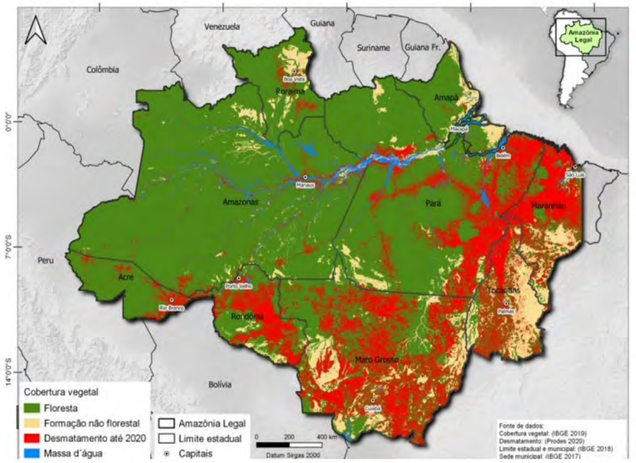


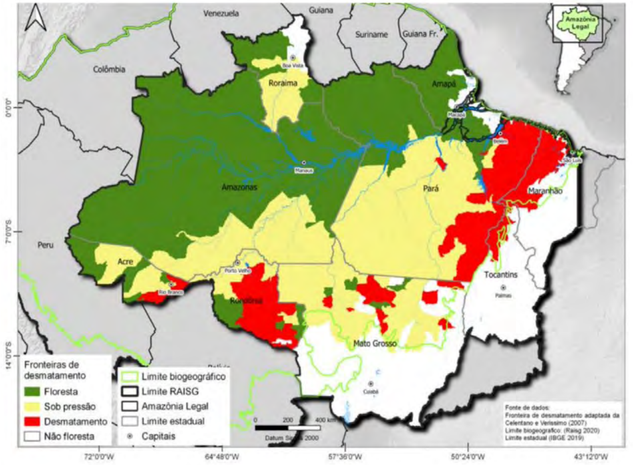
Rural settlements in the Amazon (based on INCRA data, 2020)

DEFORESTATION

It is possible to spatially visualize the dynamics and regions of deforestation in the Amazon. One of the focuses of the Action Plan for Prevention and Control of Deforestation in the Legal Amazon (PPCDAM) is to guide structural policies in municipalities with high annual deforestation rates. Priority municipalities are defined based on data from the annual monitoring promoted by INPE (National Institute for Space Research).

Considering the easy access to these data, offered by the Terrabrasilis platform (2021), PPA can choose priority sections for its programs related to this theme, that is, when it involves the dynamics of deforestation. Possible processes to accelerate sustainable business in these territories can have a direct impact on deforestation in the region.





Coverage and Deforestation in the Legal Amazon until 2020 and Critical areas under pressure from deforestation in the Legal Amazon (INPE)

As a conclusion to this 'Contextualization of the Amazon' block, it is noteworthy that, having the magnitude and specificities of the Amazon, the guidelines of the proposed PPA Acceleration Thesis foresee possible territorial cuttings. Notably: related to deforestation (e.g., deforestation pressure areas or with high rates), to the type of territory (e.g., Indigenous Lands or with a concentration of settlements), to socioeconomic and demographic factors (in regions with more or less development location and certain population characteristics, such as concentration of young people), sectors/chains of Amazonian socio-biodiversity (places with possible production or potential), geographic issues (certain municipalities, states or basins). Adding up to the area of activity or interest of PPA member companies or partners interested in developing business acceleration programs with a socio-environmental impact in the region.

Furthermore, several issues from the Amazon region presented in this section (i) solidified the programs' focus choices (see more in 'PPA Acceleration Programs) and (ii) anticipated the key themes and subsectors of the PPA Acceleration Thesis (see more in 'Biodiversity - Key Themes), such as the urgent issue of forest restoration and regeneration, the potential of the bioeconomy, the lack of access to water, energy, and sanitation, the need for services and logistical solutions for the consolidation of Amazonian sustainable supply chains; or, yet, (iii) brought to light the selection criteria and impact business analysis to be supported by the PPA programs (see more in 'Biodiversity - Selection Criteria), such as the area restored and conserved by the business, resource efficiency in its value chain or how it contributes to socio-economic issues in the region in which it operates.

POSSIBLE TERRITORIAL CUTTINGS FOR THE PPA ACCELERATION THESIS:

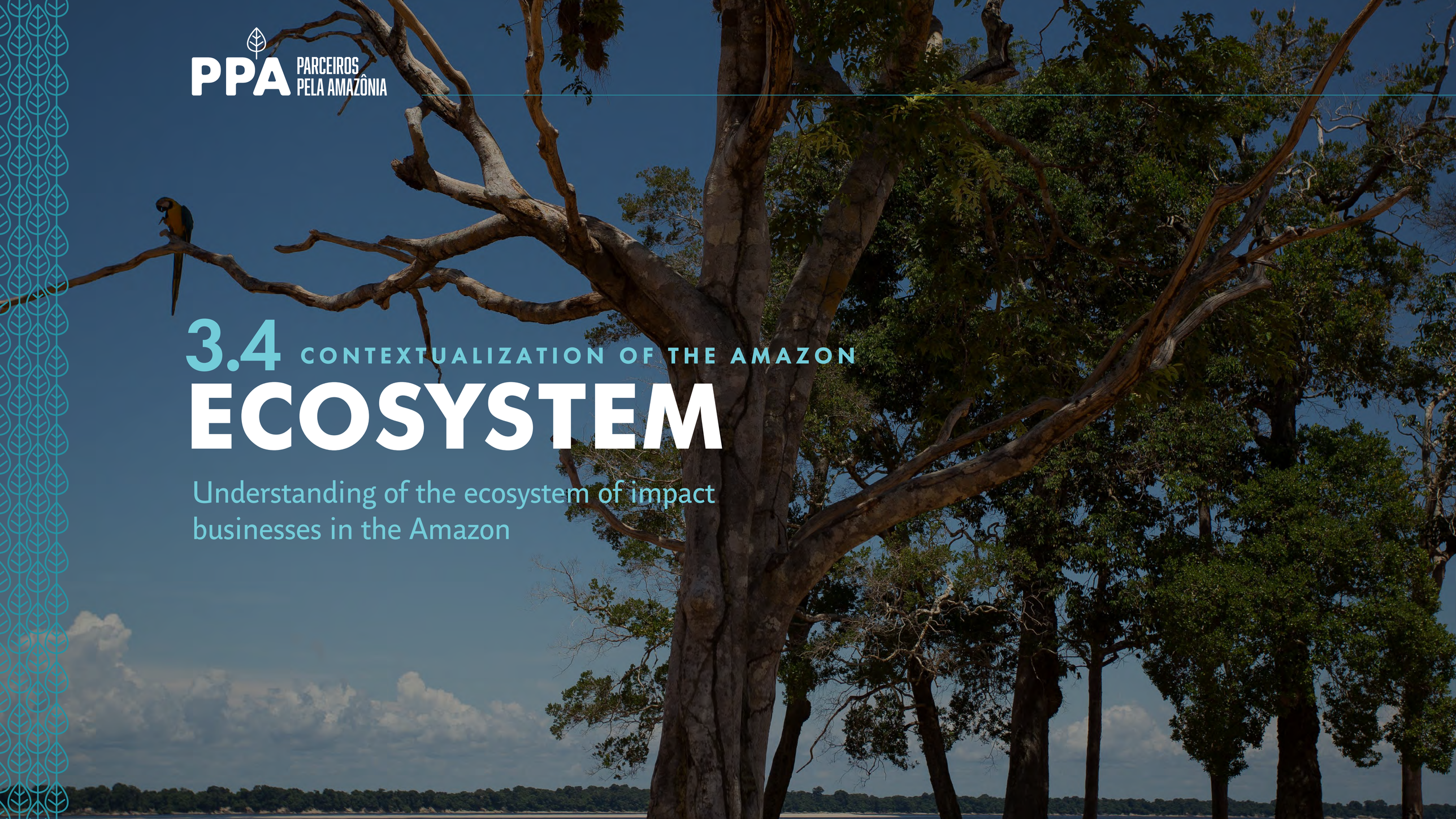
- Related to deforestation
- Related to the territory type
- Related to socioeconomic or demographic factors
- Related to key sectors/chains of the Amazon
- Related to geographic issues
- Related to the area of activity of PPA members or interested investors

PPA PARCEIROS PELA AMAZÔNIA

3.4 CONTEXTUALIZATION OF THE AMAZON

ECOSYSTEM

Understanding of the ecosystem of impact businesses in the Amazon



CONCEPT OF BUSINESS WITH IMPACT IN THE AMAZON CONTEXT

The premise that businesses can and should have a positive socio-environmental impact in their center is a long-standing one, with different nomenclatures and concepts created in several countries. In Brazil, the term and impact business ecosystem began to advance from the 2000s onwards, when the first businesses, organizations supporting its development, and investors with this specific approach emerged.

The concept of impact business was formally created in Brazil in 2015 (**Guiding Principles for Impact Business**)—and updated in 2019 by the Brazilian Alliance for Impact Investment and Impact Businesses. According to this new definition, "the aim of the entire ecosystem is to see innovations that create new markets, cause social impact and—simultaneously—deliver financial sustainability."

It is common in the ecosystem to use the term 'social impact business'. Within the scope of this publication, the term **'social and environmental impact businesses'** will be used, also emphasizing the environmental issue, given the growing relevance of this theme in the impact ecosystem in Brazil and its relevance in the Amazon context.

Observing the terms used by actors in the Amazon that, in some way, are connected with the ecosystem of business with a socio-environmental impact, one can see the **use of several variants and related concepts. Each initiative uses a nomenclature that emphasizes certain aspects.** Terms such as: socio-environmental business, business with impact, sustainable forest business, sustainable business, forest economy business, sustainable, productive activities, standing forest business, business in socio-biodiversity chains, forestry ventures, sustainable initiatives are used (since for certain local populations the terms 'business' or 'enterprise' are exclusively linked to the financial aspect, exploration and profitability); or those that emphasize the community issue, such as community businesses, sustainable community businesses, or community-based value chain businesses.

Considering the Amazon context, it is pertinent to make adjustments and, in a certain way, expand the concept of business with socio-environmental impact so that it adapts to the local reality and encompasses the wide spectrum of organization types.

In this sense, the proposal for typifying Amazonian socio-environmental impact businesses is as follows:

IN THE COUNTRYSIDE (RURAL/FOREST)

A. Ventures of forest agro-extractivism

Usually, community organizations (cooperatives or associations) or companies dedicated to sustainable agriculture or extractivism in rural/forest environments (with any level of improvement and processing)

B. Impact business related to innovation and new models for forest restoration and regeneration

Businesses that emerged to solve social and environmental issues related to scenarios of degradation, whether using technologies/innovations or new models for restoration or productive regeneration; adherent and applicable in the Amazon reality.

NOT NECESSARILY IN RURAL AREAS (MAY BE URBAN)

C. Small businesses and processing networks of agroforestry products (not necessarily produce, but benefit, process, and add value)

Businesses that buy inputs from ventures of forest agro-extractivism industrialize and market them (for local consumption, or sell to a third party that distributes it broadly); are in places close to the forest or in ports

NOT NECESSARILY BASE IN THE AMAZON

D. Businesses with a socio-environmental impact, related to the sale of socio-biodiversity products (they do not necessarily produce)

Businesses that buy inputs from ventures of forest agro-extractivism (with fair relationship, development, and sustainable practices), eventually industrialize them (or already buy industrialized ones) and sell them.

E. Businesses with socio-environmental impact, related to services that address Amazon challenges

Businesses that offer relevant, innovative, and adhering services to the reality and challenges of the Amazon, with or without technology (in the final product). Examples include logistics, tourism, finance, traceability.

F. Technology-based socio-environmental impact businesses related to Biodiversity

Technological-based businesses that add value to the Amazon's biodiversity, with a socio-environmental impact. The technology can be at the molecule/enzyme level (biotechnology), raw material processing, or in the process.

Examples are: (A) a sustainable extractivism business, or organic and/or agroecological agriculture of Amazonian socio-biodiversity products; (B) a seedling protection technology business to foster restoration; (C) a business that buys from small producers and processes açaí, in the port of Belém; (D) a business that sells on an online platform Amazonian socio-biodiversity products with high nutritional properties, produced sustainably and with fair trade; (E) a community-based sustainable tourism business or (F) a cosmetic biotechnology business based on inputs from Amazonian socio-biodiversity, produced sustainably and with fair trade.

The classification is relevant not only to represent and encompass the diversity of existing businesses in the region but also to direct support to these organizations, understanding that each type of business has different and specific challenges of particular nature and depth. In this way, programs designed to promote their development must be tailored to the kinds of business that will be supported.

It is important to emphasize that the typification is dynamic, that it can and should be adjusted over time and that it can present nuances in practice, which will be addressed in the implementation of the PPA Acceleration Thesis (see more in 'PPA Acceleration Thesis Programs ').

Furthermore, the concepts and definitions of the maturity stages of the socio-environmental impact businesses in the Amazon deserve attention and adjustments. Mainly for businesses types D (marketing), E (services), F (technological base related to biodiversity), and, eventually, for B (forest restoration and regeneration), it is possible to apply a rule more similar to the development of startups. **The proposed phases are as follows:**

	INITIAL			CONSOLIDATION		
1. IDEA	**2. CONCEPT TEST** UNDERSTANDING THE PROBLEM AND PROPOSING SOLUTIONS	**3. PROTOTYPING** PRODUCT TESTING	**4. MARKET LAUNCH** TESTED PRODUCT, IN THE MARKET LAUNCH PHASE	**5. MARKET EXPANSION** AND START OF A STRONGER INTERNAL STRUCTURING	**6. TRACTION** BUSINESS STRUCTURING AND LEVERAGING	**7. SCALE** EXPANSION OF PRODUCTS, MARKETS AND REVENUE
I am at the beginning of my entrepreneurial trajectory. It's time to explore potential business ideas.	I have defined my business idea. It's time to get to know my client better, their needs and refine the concept. (Validation of the customer-focused business model: problem-customer fit)	I have a hypothesis of the solution I will offer. It's time to prototype my product/service so that your value proposition addresses the customer's needs. (Validation of the business model with a focus on the solution: problem-solution fit)	My product/service already exists. It's time to make my first sales and validate it in the market, in order to have evidence that it is creating value for the customer and gaining strength in the market. (Validation of the business model with a focus on market access: product-market fit).	I made my first sales. It's time to understand how to expand commercially (prioritize segments, draw sales channels with recognized potential, understand how to invest in communication), create a logistics model for transportation given the distances in the Amazon	I validated my product/service on the market. It's time to structure the organization's management, create a robust team and refine the business model, in order to have evidence that my value proposition is embedded in a scalable and profitable business model. (Business model fit).	My business is structured and ready to grow. It's time to expand.

Stage 5, "Consolidation - Market Expansion," was added to the ruler to suit the Amazonian context, given the challenges related to forecasting demand for Amazonian products and services, market access, commercial partnerships and distribution logistics, given the infrastructure in the region.

There is even an ecosystem initiative in the region that works precisely with this focus of market expansion, **Palladium's Partnerships for Forests**, a global socio-environmental impact consultancy, with resources from the UK Aid Direct, funded by the UK Government's Foreign, Commonwealth & Development and the Department for Business, Energy and Industrial Strategy - BEIS). The initiative operates in East, West and Central Africa, Southeast Asia, and Latin America – thus including the Amazon, seeking business related to sustainable forests and land use. The project provides businesses with philanthropic resources (donations) and technical support for the creation of a business plan, pilot project execution, and commercial growth strategy. The project ranges from large companies, which want to expand their supply and markets of sustainable forest products, to small rural businesses, which need support in expanding the market. An example is the Xingu Seeds Network, an association created in 2007 in Mato Grosso to meet demands for seeds for the restoration of degraded ecosystems and which offers, in addition to seeds, the implementation of restoration projects through Direct Seeding – Muvuca.

For types 1 (ventures of forest agro-extractivism) and 3 (processing), which are generally community-based organizations (association or cooperative), or to other kinds of business that are configured in this way, the rule above does not necessarily apply. For these organizations, the maturity stage concerns structuring and advancing, in a non-sequential way, in regards to aspects like:

- **Socio-Environmental:** sustainable production practices (such as agroforestry, integrated systems, organic production), occupational health and safety, in addition to the definition and measurement of social and environmental indicators
- **Business:** business model, financial sustainability, formalization, and financial controls
- **Management, governance, and team:** decision making, planning, team (professionals, hired or volunteers)
- **Production:** productivity, understanding of costs and expenses, improving production, processing, and industrialization
- **Market:** commercial structure and clarity regarding how to sell your products, to whom, and which market (domestic, Brazilian, or export)

Thus, for these specific ventures types, the definition of the organization's maturity level between Initial, Consolidation, Expansion, or Scale, for example, must be evaluated according to the aspects described above.

The proposed PPA Acceleration Programs (see more under 'Description of PPA Acceleration Programs) are linked to these diverse types and stages of maturity of social and environmental impact businesses, as well as key themes that connect to trends for the Amazon region and Biodiversity, which is the central axis of the PPA's Acceleration Thesis (see more in 'Biodiversity – Key Themes').

ACTORS OF THE AMAZON SOCIO–ENVIRONMENTAL IMPACT BUSINESS ECOSYSTEM

Organizations and initiatives have emerged in the Amazon, promoting specifically businesses with a socio-environmental impact in the region, called 'intermediate' or 'dynamizing' organizations, that are those that support entrepreneurs and investors on their journey. Moreover, several are connected with the new business development agenda as a way to generate income and social and environmental impact. Still, they do not necessarily connect with the impact business theme and do not recognize themselves as part of this ecosystem or as 'accelerators' or 'incubators'. There is, then, a possibility for dialogue so that they identify more with this field of impact business and, eventually, explicitly include this lens in their positioning, communication, and performance.

Below, some organizations that operate in the Amazon will be mentioned, with a focus on socio-environmental impact businesses or related concepts, by way of illustration, not intending, therefore, to be exhaustive. It is important to emphasize that this is a perspective built from public information and conversations with representatives of several organizations and not a systematic analysis and self-reported data.

A group of intermediaries works to encourage the generation of income for local populations (indigenous and riverside people, for example), aiming at socio-environmental impact, mainly through agro-extractivism and socio-biodiversity chains.

EXAMPLES:

PROJETO SAÚDE E ALEGRIA (PSA), a non-governmental organization, founded in 1987, headquartered in the municipality of Santarém-Pará. It works with riverside communities in Pará with the following lines of action: (i) community health, (ii) territorial development, (iii) education, culture and communication and (iv) forest economy, the latter being connected with the theme of businesses with social and environmental impact. It has projects to promote socio-productive units, community-based tourism and crafts, renewable energies, in addition to the socio-environmental business incubator, held at its Active Forest Experimental Center – CEFA, in partnership with the Federal University of Oeste do Pará (UFOPA), the WTT (World-Transforming Technologies), the Invento Institute and MIT Lab (the Massachusetts Institute of Technology), encouraging the development of technologies by the communities themselves.

ASSOCIAÇÃO SOS AMAZÔNIA, a non-governmental organization, created in 1988 in Rio Branco – Acre, by professors, university students and representatives of the rubber tapper social movement, including the activist Chico Mendes, in the context of the rubber tappers movement to stop the devastation of pastures and guarantee the right of tenure land. The Association intends to defend the extractive cause and protect the Amazon Forest, supporting traditional populations. Among the lines of action is the Sustainable Forestry Business program, which encourages the generation of work and income for Amazonian communities, keeping the Forest standing. Also it aims to strengthen the value chains of socio-biodiversity products through the socio-productive organization of these ventures, as well as processing, market access and fair trade.

INSTITUTO DE PESQUISAS ECOLÓGICAS (IPE), Founded in 1992, at cios Sustentável (UNS), specializing in creating alternatives for social participation and involvement in favor of biodiversity through projects with communities and business partnerships. With more than ten years of experience in the Amazon, it develops initiatives related to sustainable tourism, creation, and development of sustainable production chains in the Amazon (Eco Pólos do Baixo Rio Negro) and effective management of protected areas (Conservation Units and Indigenous Lands), with the Integrated Legacy of the Amazon Region (LIRA) project, which involves support to other intermediary organizations that work with this theme, in addition to direct support to local, community and indigenous institutions to implement complementary actions that promote social participation in management territory and the bioeconomy.

INSTITUTO SOCIOAMBIENTAL (ISA), civil society organization founded in 1994, it is a national reference in the production, analysis, and dissemination of qualified information about indigenous peoples in Brazil. It has sub-headquarters in the Amazon region, in Manaus (AM), Boa Vista (RR),

São Gabriel da Cachoeira (AM) and Altamira (PA). Among its initiatives are the Xingu River Basin Program, which considers the expressive socio-environmental diversity that characterizes it and the importance of the corridor of protected areas covering 28 million ha, and which includes Indigenous Lands and Conservation Units; and the Rio Negro Basin Program (PRN), which promotes and articulates processes and multiple partnerships in order to improve the quality of life, the appreciation of socio-environmental diversity, food security, development of a responsible economy and collaborative and intercultural knowledge production . Both initiatives aim to contribute to the development of new models of income generation and financial sustainability for these populations, and the organization has been reinventing itself, testing different approaches to the subject, given the profound existing challenges.

IMAFLORA, INSTITUTO DE MANEJO E CERTIFICAÇÃO FLORESTAL E AGRÍCOLA, is a non-profit civil association founded in São Paulo in 1995. It currently operates in several Brazilian biomes. In the Amazon, it counted on the Amazon Fund for (i) the consolidation and expansion of the origin guarantee system called "Origens Brasil", contributing to the strengthening of production chains and the valorization of socio-biodiversity products in protected areas of the Amazon and (ii) sustainable cocoa production around the Xingu territory.

INSTITUTO DE PESQUISA AMBIENTAL DA AMAZÔNIA (IPAM) is a civil society scientific organization, established in Belém do Pará, Brazil, in 1995. The organization has, among its action focus, the themes of (i) protected natural territories, (ii) low-carbon agriculture, and (iii) sustainable family production, which are somehow related to the income generation agenda and enterprised of local populations. As an example, there is the project with Ideflor-Bio (Institute for Forestry and Biodiversity Development of the State of Pará), which promotes training for family farmers in the recovery of permanent preservation areas (PPAs) in their rural properties with techniques that expand their income.

INSTITUTO OURO VERDE (IOV), a non-governmental organization founded in Mato Grosso in 1999 that has social participation as the basis for sustainable development. They are focused on (i) support for the structuring of productive activities, (ii) support for the commercialization process and (iii) solidarity finance. Among its projects is 'Agroforestry in the Amazon', which aims to promote the agroecological production of family farmers, increasing food and nutritional security, income generation with environmental preservation, family involvement, and the well-being of local communities, through management collective and integration of actions.

INSTITUTO PEABIRU, founded in the 2000s, it is a civil society organization, a member of PPA. It intends to promote the role of social groups in the Amazon to promote full access to their fundamental rights. It operates mainly in the Amazon biome, with headquarters in Belém, Pará (Greater Belém, Marajó and the Northeast of Pará) with the value chains of the Amazon bee, açaí, artisanal fishing, and community-based ecotourism.

FOUNDATION FOR AMAZON SUSTAINABILITY (FAS), a civil society organization founded in 2008 and headquartered in Manaus (AM). Among its frames of action is the work with riverside and indigenous people, in the sense of fostering socio-environmental entrepreneurship and sustainable economic alternatives associated with reducing deforestation and social vulnerability. Among its projects, there are several that are somehow related to the socio-environmental impact business agenda and with local populations, such as the 'Edital Floresta em pé' (between 2017 and 2019, in partnership with the Amazon Fund, to promote sustainable economic alternatives , associated with the reduction of deforestation and social vulnerability) and the Sustainable Development Solutions Network for the Amazon (SDSN Amazônia) Award.

NESsT, founded in the 2000s in the US, it operates globally by incubating and investing with patient capital in social enterprises: businesses created to promote social purpose in a financially sustainable way. Present in Brazil for several years, it began operating in the Amazon in 2021, seeking institutions led by traditional communities that have a history of sales and a high positive social and environmental impact. Associations, cooperatives or companies involved in sustainable chains in the Brazilian Amazon that contribute to forest conservation were chosen to receive an average investment between R$ 50 to 200 thousand and thus become part of the NESsT Portfolio. These projects benefit from 1 to 3 years of incubation, personalized training and mentoring, access to a network of partners, exposure to new commercial partnerships, and social and environmental impact monitoring. Also in 2021, NESsT launched "Edital de Economia Indígena,"which is part of the Amazon Indigenous Rights and Resources Activity (AIRR),

funded by USAID and led by WWF and NESsT, with the support of COIAB, FEPOIMT, FEPIPA, OPAN, ICV and IPAM. The public notice selected two categories of indigenous economic initiatives (below and above R$100,000 in revenue per year) that strengthen peoples, culture, territory protection, the environment, and biodiversity. They offered prizes ranging from R$20-40 as well as collective or individual technical support, mentoring, among other forms of aid.

Other intermediaries and organizations also promote agro-extractivism in the region and socio-biodiversity chains but focus on community-based organizations (associations or cooperatives).

EXAMPLES:

INSTITUTO CENTRO DE VIDA (ICV), Founded in Mato Grosso in 1991, it is a civil society organization that aims to build shared solutions for the sustainable use of land and natural resources. Among its programs, there is the Social Business initiative, which, based on agroecology tools and advice to family farming associations and cooperatives, intends to strengthen sustainable production chains in the Amazon through four pillars: (i) Organic and agroforestry production, (ii) Support in the management of family and community businesses; (ii) Participatory Organic Certification and (iv) Marketing platform: coordination between supply and demand among different actors, and feasibility of sales in diversified markets.

INSTITUTO DE SOCIOECONOMIA SOLIDÁRIA (ISES), currently called Mandu Inovação Social, active since 2004, enables community businesses to build resilient local economies. Among its lines of action is the development of Community Businesses related to family farming, selective collection, creative economy, and community-based tourism. It operates mainly in the Southeast and Northeast, but also with projects in the Amazon region (Amazonas and Pará).

SUSTENTAL, an organization created in 2014, headquartered in Manaus – Amazonas and acting mainly in the Resex Médio Purus (Extractivist Reserve of Médio Purus, conservation unit for sustainable use of nature located in the west of the state of Amazonas). Among its Amazonian solutions is the development of micro-regions from traditional communities and sustainable agro-extractivism, the implementation and regularization of community-based organizations and the promotion of sociobiodiversity production chains.

CONEXSUS, an organization that has had systemic contributions to the theme of sustainable community business in several regions of Brazil, including the Amazon, with the support of the PPA. Its performance is broad, including mapping existing grassroots organizations, fostering connection with the market, business modeling, training sessions, and access to credit. Founded in 2016 and headquartered in Rio de Janeiro, Conexsus is focused on 'Sustainable Community Businesses' (community-based and sustainable agro-extractivism) and has achieved capillarity and relevant performance in the Amazon via local partners. Its current objective is to build a service platform for community organizations to improve their business models and gain autonomy and financial sustainability.

INTERELOS, created in 2017 with headquarters in São Paulo, it focuses on implementing community-based value chains. In the Amazon, it works in (i) sustainable strengthening and expansion of the Açaí value chain in the Bailique Archipelago – Amapá and (ii) in Resex Verde Para Sempre (Porto de Moz – Pará), through technical support to local actors in productive, organizational, management and marketing processes.

Furthermore, there is another group of promoters who are international civil society organizations with an environmental focus and acting in Brazil in several biomes, including the Amazon. The performance of these organizations is generally systemic, with long-term projects, multi-sectorial articulation, monitoring and data generation, capacity building and training, and cutting-edge work with farmers, fostering new models, such as regenerative agriculture (agroforestry systems - AFSs) and integrated systems (such as the integration of farming, livestock, and forestry, ICLF).

EXAMPLES:

THE NATURE CONSERVANCY (TNC), a non-governmental organization working on a global scale to conserve the environment, founded in 1951 in the USA.

In Brazil, it operates in the Cerrado, the Atlantic Forest, and the Amazon. The work in the Amazon region involves Indigenous Peoples, to offer tools that complement their land management capacity; Farmers, with whom TNC develops pilot projects to increase productivity in already open areas and to restore forests in parts of the properties; Collaboration with companies from different sectors to strengthen more sustainable production chains, including soy, beef and cocoa; and with municipal, state and federal governments to improve territorial planning and monitoring of deforestation. Highlight for the Cocoa Forest Project, in São Félix do Xingu and Tucumã (PA), which aims to promote Agroforestry Systems with cocoa as an income and forest restoration alternative and thus mitigate deforestation in this region.

SOLIDARIEDAD, an international non-profit organization, founded in the 1980s in the Netherlands. Currently, it operates globally in the development of sustainable and inclusive markets. It started operating in Brazil more than 10 years ago and today it is present in all biomes, focusing on cocoa and cattle raising in the Amazon. Along with the company Cargill, a PPA member, it has a program in Pará to develop sustainable cocoa in the Amazon through agroforestry models that combine cocoa cultivation with other native species as a means of income for small businesses family farmers.

WORLD RESOURCES INSTITUTE (WRI), a non-governmental organization founded in 1982 in the USA that is a global research institution with operations in more than 60 countries, including Brazil. In the Amazon, in Mato Grosso and Pará, it has assisted natural regeneration projects, in partnership with Instituto Centro de Vida (ICV), Institute of Man and Environment of the Amazon (Imazon), Suzano, a PPA member. The series 'Faces of Restoration', shows the profiles and stories of those who restore in Brazil, among them in the Amazon, in partnership with the Alcoa Foundation, another PPA member. There is also the Earth Acceleration initiative, with programs in Africa, Asia and Latin America (for the first time in 2021), which offers on-site, online, and personalized training, support in structuring the business, and marketing its products (coming from productive regeneration).

CONSERVATION INTERNACIONAL (CI), founded in 1990 in the USA. In Brazil, it operates in the Cerrado, the Atlantic Forest, and the Amazon. In the Amazon region, it has projects with an indigenous theme, such as the Nossas Futuras Florestas - Amazônia Verde project, which selected indigenous women from the Amazon Basin as part of a new Indigenous Women Leaders Development Program. Just like the Amazonia Sustainable Landscapes project, it involves integrated landscape management and has among the main lines of action: structuring innovative arrangements for the integrated management of Conservation Units; developing value chains related to biodiversity; strengthening the production of native species seeds and seedlings; expanding the rural sector focusing on the management/recovery of private and public protected areas; restoring degraded areas with native species, and supportting for the use of sustainable agricultural practices.

Changing the focus a little bit, there is a group of intermediaries that work with the cut of businesses with socio-environmental impact related to innovation and technology in the context of bioeconomy in the Amazon.

EXAMPLES:

The organization **CERTI** is a reference in the creation of the innovation ecosystem in Florianópolis, which, after mapping and carrying out studies on the region, launched in 2021 the Jornada Amazônia initiative. Jornada aims to activate and enhance the innovation ecosystem in the Amazon, through innovative entrepreneurship in scale, strengthening and multiplying connections between ecosystem actors, and potentializing the bioeconomy as the main strategy to keep the forest standing, with its biodiversity recognized for its relevant and irreplaceable value. In addition to the 'Origination' moment, which encourages new businesses by transforming ideas into ventures involving financial support and mentoring, there is a previous 'Activation' moment (aimed at awakening and activating the entrepreneurial potential of Amazonian talents, through personal development opportunities) , and the next of 'Evolution' (creates value connections between existing businesses and large industries, seeking to generate innovative solutions for the bioeconomy in the territory), as well as a strategic and transversal dimension of 'Vital Signs' (active chains production monitoring to identify the best actions for the sustainable development of the forest and its value chains). Among the goals for the next five years are the preservation of one million hectares, R$400 million moved with sustainable production, 400 innovative projects with impact created, in addition to 40 thousand talents influenced by the impact entrepreneurship theme.

INCUBATORS AND TECHNOLOGICAL PARKS OF UNIVERSITIES IN THE REGION, but that do not necessarily have the business bias of socio-environmental impact, such as the incubators of the State University of Amazonas (UEA), Federal Institute of Education, Science and Technology of Amazonas (IFAM), Federal University of Pará (UFPA), among others .

PRIVATE INITIATIVE AND TECHNOLOGY FOCUSED COMPANIES, but again not necessarily with a socio-environmental bias, such as Samsung Creative Startups, an acceleration program in partnership with Anprotec (National Association of Entities Promoting Innovative Enterprises) and the Korean CCEI (Center for Creative Economy and Innovation) at the Brazilian level, but with good reach in the Amazon region; or the Samsung Ocean Lab, an acceleration program that exclusively contemplates the Western Amazon and Amapá regions of training and mentoring to develop technology and entrepreneurship projects that offer innovative solutions for the states of Acre, Amapá, Amazonas, Rondônia, and Roraima.

In regards to developing talent for the region, there are other intermediaries for businesses with a socio-environmental impact in the Amazon, focusing on young people and university students. The issue of rural exodus is a reality in the Amazon, even more for the young public, given the challenges of youth in the construction of life projects, conflict with previous generations with a predominantly rural history, and few possibilities of acting in the formal labor market, tending to migrate to urban centers in search of better living conditions (see more in 'Contextualization of the Amazon'). In this sense, social and environmental entrepreneurship can be an approach. **EXAMPLES:**

The **AMAZÔNIA UP** initiative, by Centro de Empreendedorismo da Amazônia (CEA), a pre-acceleration program aimed at businesses in early stages in Pará linked to the forest, biodiversity, and land use, focuses on students from technical schools, the university, and recently-graduated ones.

TECHNICAL COURSE ON SUSTAINABLE DEVELOPMENT MANAGEMENT, FROM the FOUNDATION FOR AMAZON SUSTAINABILITY (FAS), for young people living in the riverside. Launched in 2021 along with Petrobras, the Center of Technological Education in Amazonas (Cetam) and other partners, it involves qualification and training on the matter and the creation of a business plan.

ASHOKA'S YOUTH CHANGEMAKERS PROGRAM IN THE LEGAL AMAZON, which seeks young people aged 12 and 19 in the region who have (i) an Idea (sensitized to a social or environmental problem that affects people's lives and developed an idea to solve it); (ii) a Team (formed a team with others around this idea); (iii) Impact (commitment to generate change for the good of their community and (iv) Movement co-leadership (encourages people to recognize themselves as agents of change). As Ashoka Youth Changemakers, the youth has the opportunity to strengthen themselves and their team, accessing resources and networks to achieve greater impact. Ashoka is an international non-profit organization focused on social entrepreneurship, founded in India by the American Bill Drayton in 1980.

THE YOUTH ENTREPRENEURSHIP PLATFORM OF PROJETO SAÚDE E ALEGRIA promotes young people's training for work and entrepreneurship, complementing the school deficit with courses, training and dynamics and providing contact with the concepts of entrepreneurship and the search for new alternatives for inclusive economics.

RAINFOREST SOCIAL BUSINESS SCHOOL (RSBS)/ UNIVERSITY OF THE STATE OF AMAZON (UEA), an innovative higher education school in the process of training human resources that employs participatory methodologies, experiences, and challenges inherent to business management situations in a perspective of building business knowledge and meanings that comprise the Amazon in its economic vocation and establish a horizon of new businesses or even the expansion and adaptation of existing ones. The initiative arose in 2019, from the interaction of UEA with the Institute for Advanced Studies (IEA/ USP). It currently has the Post-Graduate Course Lato Sensu Amazon Rainforest Business, focused on management and entrepreneurship associated with the conservation of the Amazon Biome.

YOUTH CLIMATE LEADERS (YCL), a youth movement related to the climate theme, created in 2018 by four Brazilian women. It currently has 14 hubs in Brazil (innovation-oriented spaces that act as platforms to coordinate, promote, and multiply climate solutions and activities locally), among them in Amazonas and the USA, Italy, and Portugal.

With another bias, there are intermediaries with an urban focus related to the theme of businesses with a socio-environmental impact.

IMPACT HUB MANAUS stands out in this regard, with several initiatives with this focus, such as Tribo Iniciação, to foster businesses in early stages, coworking, and community in Manaus. Also, in 2021, it launched the initiative Innovation and Acceleration in the Amazon Region (IARA), a platform that aims to support organizations and collectives focused on Pará that want to carry out campaigns to impact their communities. From the sectors of Mobility, Standing Forest Economy, Basic Sanitation, and Access to Water and Territory Defense, those selected undergo a three-month acceleration journey on 3 fronts: financial support, campaign development, and institutional strengthening. The initiative is part of Purpose's Climate Lab, a global organization that creates impactful solutions to accelerate the construction of a more open, fair and liveable world through innovative and creative communication campaigns.

Last but not least, there was the initiative of PPA itself to promote the ecosystem in the Amazon, which pioneered the creation of an acceleration program for businesses with a socio-environmental impact in the region, the **'PPA ACCELERATION PROGRAM'.** The program, launched in 2018, had 3 editions, accelerated 30 Amazonian businesses and invested in 12 of them. Almost R$7.9 million were invested in Amazonian businesses, bringing customized options adapted to different types of business, with a variety of sources (private and philanthropic capital) and financial mechanisms. Led by a group of PPA companies, the program was coordinated by the Institute of Conservation and Sustainable Development of Amazonas (Idesam) and had strategic support from USAID, Biodiversity Alliance & CIAT, Humanize Institute, Vale Fund, and ICS.

After just over two years of accelerating and investing in impact businesses in the Amazon, Parceiros Pela Amazônia (PPA) evolved into an impact accelerator, the **AMAZ**. The emergence of AMAZ can be seen as a n**atural evolution of the PPA Program, in which the initiative gained new contours and became independent—coordinated by the Institute for Conservation and Sustainable Development of Amazonas (Idesam).**

AMAZ positions itself as an accelerator in search of the 'Amazonian unicorn', in the sense of seeking innovative businesses that have the potential for rapid growth. With a fund of R$25 million, it wants to invest in 30 bioeconomy startups by 2025. Adhering to the incipient Amazon ecosystem, the fund's financial structure is based on hybrid finance, with a combination of venture capital and philanthropic capital (represents 50% from the fund and received contributions from the Vale Fund, the Humanize Institute, the Institute for Climate and Society-iCs, the Good Energies Foundation and the JBS Fund for the Amazon).

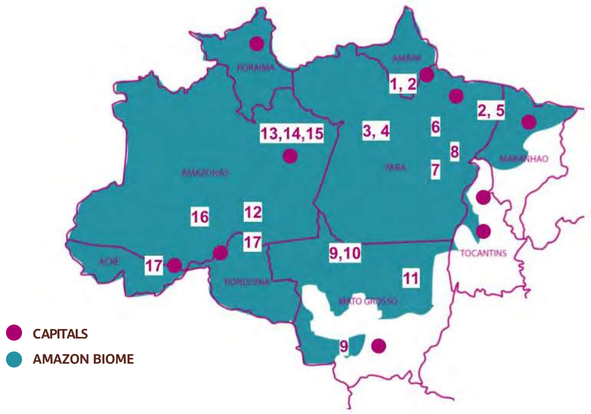
At the same time, **IDESAM** has a history of developing agroforestry coffee initiatives in the Amazon region, as well as fostering businesses with an impact in the region, aiming at the flow and sale of products from the Amazonian socio-productive chains, such as the Café Apuí Agroflorestal. The organization believes that one of the most complex links in the Amazon production chains is the flow and sale of products. This bottleneck can be solved by promoting businesses and services that aim to resolve this issue.

From the macro standpoint of the various actors in the business ecosystem with a socio-environmental impact, the regional issue draws attention: the local ecosystem is less mature, there are few local actors. There are some intermediary organizations that were created by people from the region and have a history in the region, such as Projeto Saúde e Alegria (PSA), Associação SOS Amazônia, Centro de Empreendedorismo da Amazônia (CEA), Impact Hub Manaus, Foundation for Sustainability of the Amazon (FAS) or Sustental. But there are, mainly, other profiles of organizations operating in the region, such as (i) international civil society organizations with an environmental focus (The Nature Conservancy - TNC, Conservation International - CI, Solidarity, World Resources Institute), or (ii) organizations from civil society that work with local populations, communication and socio-environmental impact organizations that were founded in other locations and operate throughout Brazil, but also in the Amazon (such as the Ecological Research Institute - IPE, Socio-environmental Institute - ISA, Imaflora, Mandu, Interelos, Conexus), or (iii) organizations that work with impact or business innovation and are entering the Amazon ecosystem, adjusting their programs and initiatives, such as CERTI, NESsT.

Furthermore, it is interesting to observe the **geographic distribution of the headquarters of the intermediary organizations and/or the focus regions of their initiatives.** Most active organizations have headquarters in the region. Given the size of the territory, there are organizations with initiatives focused on certain regions and others with transversal action in the

Amazon, such as Jornada Amazônia - CERTI, Amaz - Idesam; Aceleradora B - CEA, Conexus, and NEsST. The following are some of the aforementioned organizations plotted on the region map:

In addition to development support, when the focus is on investment and financing for businesses with a socio-environmental impact, new organizations and financial mechanisms are gradually emerging. **EXAMPLES:**



AMAPÁ
1. InterElos (operation in the Bailique Archipelago)
2. Instituto Peabirú (headquarter in Belém and operation in Amapá)

PARÁ
3.NEsST (headquarter in Santarém)
4.Saúde & Alegria (headquarter in Santarém)
5.CEA (headquarter in Belém)
6. TNC (operation with cocoa)
7. ISA (opreation in Terra do Meio)
8. Solidaridad (operation with cocoa)

ACRE
17. SOS Amazônia (headquarter in Rio Branco)

MATO GROSSO
9. ICV (headquarter in Cuiabá and Alta Floresta)
10. IOV (headquarter in Alta Floresta)
11. ISA (operation in Xingu)

AMAZONAS
12. Idesam (operation with coffee)
13. FAS (headquarter in Manaus)
14. Impact Hub Manaus (headquarter in Manaus)
15. CERTI (headquarter in Manaus)
16. Sustental (operation in Resex Purus)

RONDÔNIA
17. SOS Amazônia (operation in Rondônia)

SITAWI, a public interest social organization, was founded in 2008 and is a pioneer in the development of financial solutions for social impact and in the analysis of the social and environmental performance of companies and financial institutions. As a PPA member, in 2019 and 2020, it carried out two Amazon rounds in its Collective Lending Platform, focused on loans for businesses with a positive impact in the region. The Amazon rounds took place with the support of PPA (which directed investments by USAID (United States Agency for International Development) and CIAT (International Center for Tropical Agriculture) and the Humanize Institute. Through the SITAWI Collective Lending Platform, anyone can invest in one or more of the five businesses with a positive impact on the Amazon that participate in the round, which works through peer-to-peer lending, a modality in which a person lends money digitally to another person or company.

VALE FUND is a development and investment fund created in 2009 by Vale, which provides resources strategically to support and strengthen businesses with a positive socio-environmental impact. Initially dedicated to the Amazon, the region where Vale's main activities are concentrated, it has expanded its operations and also contributes to the social and environmental challenges of other regions in the country. It has already made seed capital investments in Amazonian businesses related to agroforestry coffee (Café Apuí), as well as businesses related to forest restoration and regeneration (Belterra, Caaporã, and Inocas), in the context of the Agroforestry Challenge, an initiative launched in 2020 that involves acceleration and investment for businesses of this thematic, in connection with Vale's Forestry Goal (a commitment made by the company to recover and protect 500 thousand hectares of areas by 2030).

MERIAKI IMPACT, a family office related to Grupo Fleury that also focuses on fostering business in forest regeneration. With global operations and headquartered in the Netherlands, it aims to catalyze investments for environmental regeneration, investing in funds that support innovative businesses that change the food chain to regenerative systems. In addition to investing in funds, he eventually invests directly in businesses such as Renature, a business also based in the Netherlands and founded by a Brazilian, which supports producers and companies in the transition to regenerative agriculture.

In 2019, Conexsus launched the **CONEXSUS SOCIO-ENVIRONMENTAL FUND**, which provides personalized financial services to rural and forest community businesses and small businesses. It has had the support of the Vale Fund, the Good Energies Foundation, and PPA (through the PPA Solidarity program) throughout its trajectory. The intention is for the fund to leverage other investments, especially from the National Program to Strengthening Family Agriculture – Pronaf. The fund provides innovative mechanisms such as (i) Credit guarantee (guarantee): facilitates the granting of official financing in banks, reducing the banks' potential risk, (ii) Credit recovery for cooperatives and associations that have small bank debts; (iii) Fast loans: designed especially for small companies and (iv) Social "equity": contribution of small investments to small and medium companies.

'ALTHELIA BIODIVERSITY FUND' (ABF) is managed by sustainable investment manager Mirova Natural Capital. The fund seeks to overcome financial challenges by offering long-term, flexible and patient capital, in order to address the challenges inherent in the

Amazon for sustainable businesses that can have a positive and transformative impact on biodiversity and Amazonian communities. The fund's term, launched in 2020, is of 11 years, and the estimation is to raise $100 million in this period, mainly of private capital. One of the businesses that received investment was Manioca, an organization accelerated by PPA that promotes food products from the Amazon; in addition to Horta da Terra, a company that produces dehydrated Non-Conventional Food Plants (PANCS)

KAETÉ INVESTIMENTOS, investment manager that has been investing in the Amazon since 2011. The Sustainable Companies in the Amazon Fund had the support and investment of BNDES (Brazilian Development Bank) and other institutional and private investors, totalizing R$100 million in committed capital. It focuses on investing in businesses in the Legal Amazon in the production chains of sustainable primary production (regional fruits, palm oil, fibers, gums, resins); food, fiber, cosmetics, oils/essences, textiles, gums, rubber, and biotechnology industries; pisciculture; wood and non-wood forest products; ecotourism; environmental services and technologies; recycling and waste treatment; renewable energy and logistics infrastructure. The fund invested in businesses such as Peixes da Amazônia and Tobasa Bioindustrial de Babaçu.

Furthermore, the Amazon region has a strong group of philanthropic supporters who fund several intermediary organizations and support the initiatives mentioned above, which are connected with the agenda of fostering businesses with a socio-environmental impact in the region.

This backing is extremely important for the maintenance and permanence of initiatives to support businesses with an impact in the region, since the financial sustainability of these organizations is also a challenge, given the complexity of assistance needed, the transportation logistics, and the incipient stage of businesses, who do not have the stability to pay for it, on the contrary, they need the support to develop and often require the donation of seed capital. It is interesting to note that in addition to national supporters and funders, there are also international supporters, linked to movements, governments or global philanthropic institutions, from various countries such as the USA, UK, France, Germany, Switzerland and Norway, given the relevance of the Amazon at the local and global level. In order for the region and this agenda to advance and invigorate, this support must be not only maintained but expanded, covering different aspects, such as focus regions, themes, stages and types of business.

Note: The Amazon Fund, created in 2018 in the context and proposal of Brazil at the 13th Conference of the Parties of the UNFCCC (2007), was very relevant for the strengthening and financing of various intermediaries and projects in the region. Over the past 11 years, the fund has received voluntary donations, mainly from the government of Norway and Germany, for non-refundable application (donation) in actions to prevent, monitor, and combat deforestation, and in the conservation and sustainable use of the Legal Amazon. The Amazon Fund has been at a standstill since April 2019, when the Brazilian government extinguished the Steering Committee and the Technical Committee, which formed the Fund's base.

SOME EXAMPLES OF THESE SUPPORTERS ARE:

NATIONAL SUPPORTERS

Institute for Climate and Society (iCs)
Humanize Institute
JBS Fund for the Amazon
Cargill Foundation
Vale Fund
Fundo Casa Socioambiental
Petrobras Socioenvironmental Program

INTERNATIONAL SUPPORTERS

Climate and Land Use Alliance (CLUA)
Climate Finance Lab
Ford Foundation
French Development Agency (AFD)
German Agency for International Cooperation (GIZ)
Global Environment Facility (GEF)
Good Energies Foundation
Gordon e Betty Moore Foundation
Green Economy Coalition (GEC)
Inter-American Development Bank (BID)
LEAF Coalition
Leopold Bachmann Foundation
Norwegian Agency for Development Cooperation (NORAD)
OAK Foundation
Porticus
Rainforest Foundation Norway
The Word Bank
UK Aid Direct
USAID
World Wild Fund (WWF)

Finally, there are movements, networks, and multi-sector articulations in the Amazon ecosystem that somehow touch the business agenda with a socio-environmental impact, the bioeconomy, entrepreneurship, and innovation in the region. **EXAMPLES:**

AMAZON 4.0: led by the climatologist Carlos Nobre, it is a new model of sustainable development based on the bioeconomy in which there is a union of scientific-technological progress with the experience of forest peoples. It is a bet to create a bioeconomy with market logic capable of keeping the forest standing, via the promotion of technologies capable of transforming bio-inputs into products with greater added value. The Amazon Creative Laboratories are being created, production units in the center of the forest that incorporate the technologies of the 4th Industrial Revolution (see more in 'Contextualization of the Amazon').

Amazônia em Casa, Floresta em Pé Campaign: seeks to provide visibility and access to Amazon products that generate income for local communities and value the standing forest, fostering a sustainable market. It supports small producers and builds a logistical, operational, and commercial arrangement that brings together strategic partners so that products travel from the forest to the consumers efficiently and at a fair price. It is the result of Lab Amazônia (Idesam and Climate Ventures), in partnership with Mercado Livre.

GREEN ECONOMY AND AMAZON BIOECONOMY HUB: with the executive secretary of the Foundation for Amazon Sustainability, in partnership with the Green Economy Coalition (GEC), it was established in 2020 and brings together more than 53 organizations (civil society, companies, workers , governments, UN international agencies, and academics) connected to seven other Hubs around the world, committed to accelerating the transition to a regenerative, green and inclusive economy in the Amazon.

REDE AMAZÔNIA DE INOVAÇÃO E EMPREENDEDORISMO (RAMI), headquartered in Manaus, aims to integrate agents of entrepreneurship and innovation systems in the North region to articulate and represent them with institutions that support regional and global development. It receives support from organizations such as the Amazonas State Research Support Foundation (Fapeam).

SDSN AMAZÔNIA: It is part of the Sustainable Development Solutions Network, SDSN), created in 2012 under the command of the United Nations Secretary-General, Ban Ki-moon. SDSN mobilizes global scientific and technological knowledge to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement. The Amazon Sustainable Development Solutions Network (SDSN Amazônia) was held in 2014 in the city of Manaus - Amazonas, as a regional SDSN Global network that aims to mobilize local knowledge in the search and creation of solutions and good practices for the related challenges to sustainable development. It involves and encompasses characteristics relevant to the realities of the 8 countries and one province in the Amazon Basin (Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela, and French Guiana).

AMAZON CONCERTATION: with the Executive Secretariat of Instituto Arapyaú, it seeks dialogue with all sectors of society in order to institutionalize a plural and democratic debate in Brazil aimed at sustainable development in the Amazon region. Its pillars are institutional strengthening of public and non-state organizations, governance in the region, development that reconciles natural capital and social justice, and business as one of the protagonists of the region. Its premise is the generation of knowledge via workgroups such as Bioeconomy, Advocacy, and the Private Sector, and 16 thematic axes (Governance, Armed Forces, Financial Resources, Public Policies, Business Performance, Civil Society, Science and Technology, Society and Culture, Indicators Development, Land Use and Deforestation, Land Regularization, Infrastructure, Communication and Media, Climate Change, International Agenda and Education). To share and disseminate the content generated, it has a partnership with Página 22 (multimedia magazine focused on sustainability), in addition to data systematization and transparency initiatives, such as Portal em Dados da Amazônia Legal.

PARTNERSHIP PLATFORM FOR THE AMAZON (PPA): PPA itself is a relevant actor for the region. As a platform for collective action by the private sector, it aims to foster entrepreneurship with a local impact and new models of sustainable development in the Amazon. Through its Thematic Groups, the Platform has developed and identified tangible and innovative solutions to contribute to the conservation of biodiversity and natural resources in the Amazon, as well as guaranteeing the quality of life of communities in the region.

PPA PARCEIROS PELA AMAZÔNIA

4 BIODIVERSITY

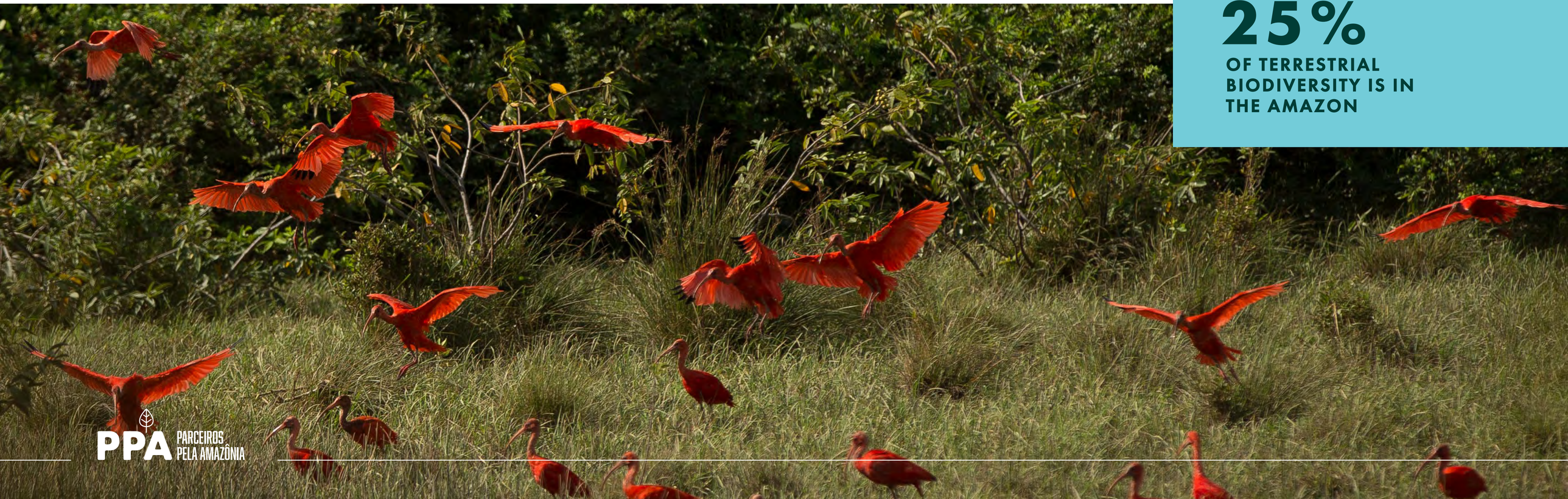
BIODIVERSITY

Contributing to the conservation and regeneration of biodiversity in the Amazon is one of the objectives of the PPA Acceleration Thesis and its central thematic axis. This perspective involves (i) t**he definition of key themes that connect with trends and biodiversity in the Amazon context** and that work as guidance for the search for businesses with social and environmental impact related to them, (ii) **the definition of eligibility criteria and analysis** in the selection of businesses to be supported by PPA linked to biodiversity and (iii) **considerations on monitoring and evaluation** of this aspect.

The relevance and contribution of the Amazon to biodiversity are extensive and profound. The region holds at least ten percent of the world's known biodiversity, with 25% of terrestrial biodiversity and more fish species than in any other river system (Lovejoy, 2019). In the region's context, biodiversity can be considered the critical variable for the maintenance of different Ecosystem Services - it is noteworthy that tropical forests provide the greatest flow of multiple **Ecosystem Services** among terrestrial ecosystems (Costanza et al., 1997). Influence occurs both on a regional and global scale, through climate regulation and habitat provision (Alamgir et al., 2016). Biodiversity loss can result in critical reductions in the resources provided by ecosystems, directly influencing local development, adequate health and housing conditions, income generation, and economic prosperity.

25%

OF TERRESTRIAL BIODIVERSITY IS IN THE AMAZON



PPA PARCEIROS PELA AMAZÔNIA

METHODOLOGICAL FRAMEWORK

Methodological references and global climate commitments that address the topic of Biodiversity were consulted. Considered references and their contribution to the proposal, are:

PERFORMANCE STANDARD 6: BIODIVERSITY AND NATURAL RESOURCE MANAGEMENT (IFC - INTERNATIONAL FINANCIAL CORPORATION)

IFC is an international organization from the World Bank Group and dedicated to private sector development. Its "Performance Standard 6" recognizes that the protection and conservation of biodiversity, the maintenance of ecosystem services, and the sustainable management of living natural resources are fundamental to sustainable development. This Performance Standard has three objectives: i) protect and conserve biodiversity; ii) maintain the benefits of ecosystem services; and iii) promote the sustainable management of living natural resources through the adoption of practices that integrate both conservation needs and development priorities.

The proposal is in line with these objectives. It also used the approach proposed by this Performance Standard to characterize habitats vis-à-vis their relevance for biodiversity conservation. The requirements for companies ' activities in these are different in distinct relevance categories that consider the existence of **modified, natural, or critical habitats.** In modified or natural habitats, a goal is set of no net losses in biodiversity, whereas in critical habitats there should be **net gains**.

SUSTAINABLE DEVELOPMENT GOALS 15 **"LIFE ON LAND"** (SDG, SUSTAINABLE DEVELOPMENT GOALS - UN, THE UNITED NATIONS)

The Sustainable Development Goals (SDGs), proposed by the United Nations (UN) for its member countries in 2015, are the new sustainable development agenda for the next 15 years. Called the 2030 Agenda, the initiative comprises 17 Sustainable Development Goals related to the areas of health, education, environment, inequality, among others.

SDG 15: Life on Land stipulates goals with direct correlations with Biodiversity, with the general objective of "protect, restore and promote sustainable use of terrestrialecosystems, sustainably manage forests, combat desertification,and halt and reverse land degradation and halt biodiversity loss". The goals of this objective that were selected for this work proposition are:

15.1. By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements;

15.2. By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally;

15.5. Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species;

15.6. Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed;

15.7. Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products;

15.8. By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species; and

15.c. Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities..

BRAZIL'S NATIONALLY DETERMINED CONTRIBUTION (INDC)

In the context of the Brazilian government's commitments to the United Nations Framework Convention (UNFCCC), the intended nationally determined contribution (iNDC) establishes the national commitments of each country associated with the Paris Agreement. From the original text, the following commitments refer to the proposals made:

. **In land use change and forests:** strengthening and enforcing the implementation of the **Forest Code**, at federal, state and municipal levels; strengthening policies and measures with a view to achieve, in the Brazilian Amazonia, zero **illegal deforestation** by 2030 and compensating for greenhouse gas emissions from legal suppression of vegetation by 2030; r**estoring and reforesting** 12 million hectares of forests by 2030, for multiple purposes; enhancing sustainable native forest management systems, through georeferencing and tracking systems applicable to native forest management, with a view to curbing illegal and unsustainable practices;

. **In the energy sector:** achieving 45% of renewables in the energy mix by 2030, including: expanding the use of **renewable energy sources** other than hydropower in the total energy mix to between 28% and 33% by 2030; expanding the use of non-fossil fuel energy sources domestically, increasing the share of renewables (other than hydropower) in the power supply to at least 23% by 2030, including by raising the share of wind, biomass and solar; achieving 10% efficiency gains in the electricity sector by 2030; and

. **In the agriculture sector:** strengthen the Low Carbon Emission Agriculture Program (ABC) as the main strategy for sustainable agriculture development, including by restoring an additional 15 million hectares of degraded pasturelands by 2030 and enhancing 5 million hectares of **integrated cropland-livestock-forestry systems** (ICLFS) by 2030;

CONVENTION ON BIOLOGICAL DIVERSITY: AICHI TARGETS

Similar to the SDGs and the iNDC, there are goals established and committed by Brazil in the context of the Convention on Biological Diversity. This Convention took place in 2010, during the 10th Conference of the Parties (COP-10) of the United Nations Framework Convention on Climate Change (UNFCCC) in Aichi Province, Japan. 20 proposals aimed at reducing the loss of biodiversity, called Aichi Targets. The following goals committed by Brazil were selected and included in the proposal:

. **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
. **Strategic Goal B**: Reduce the direct pressures on biodiversity and promote sustainable use;
. **Strategic Goal C**: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
. **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services; and
. **Strategic Goal E**: Enhance implementation through participatory planning, knowledge management and capacity building.

USAID AND PPA PUBLICATIONS

The guidelines and policies of the United States Agency for International Development (USAID) and the PPA that address the issue of biodiversity were also considered as references, notably:

. **USAID's "Biodiversity and Development Handbook"** and "Biodiversity Policy," which provide, among other topics: (a) the identification of the company's biodiversity intervention logic; (b) the expected results, and (c) the definition of the applicable Key Performance Indicators (KPIs) and also proposes that the KPIs be one-dimensional, measurable, with a temporal approach, specific and practical;

. The publication **"CAL-PSE Key Findings for Biodiversity Conservation"** from the initiative "Catalyzing and Learning through Private Sector Engagement (CAL-PSE) for Biodiversity Conservation." This is one of the main initiatives of the Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT) in Brazil, developed in 2017 in partnership with USAID, which seeks to transform the way biodiversity conservation in the Amazon is addressed and, at the same time, improve the quality of life of the local peoples. The Theory of Change described in the publication was considered for the proposed formulation, contemplating the guideline of the private sector role as a catalyst for sustainable industries. The publication's monitoring methodology regarding its evaluation and learning dynamics was also contemplated.

. **Background and indicators of previously established PPA projects** involving Basic Economics in Biodiversity, Livelihoods, and Welfare and Ecosystem Integrity.

KEY THEMES OF THE PPA ACCELERATION THESIS

Based on the objective of the PPA Acceleration Thesis of "Contributing to the conservation and regeneration of biodiversity in the Amazon," we sought to identify sectors and /or economic activities that function as key themes for prospecting businesses with a socio-environmental impact with potential positive contributions or greater adherence to this goal.

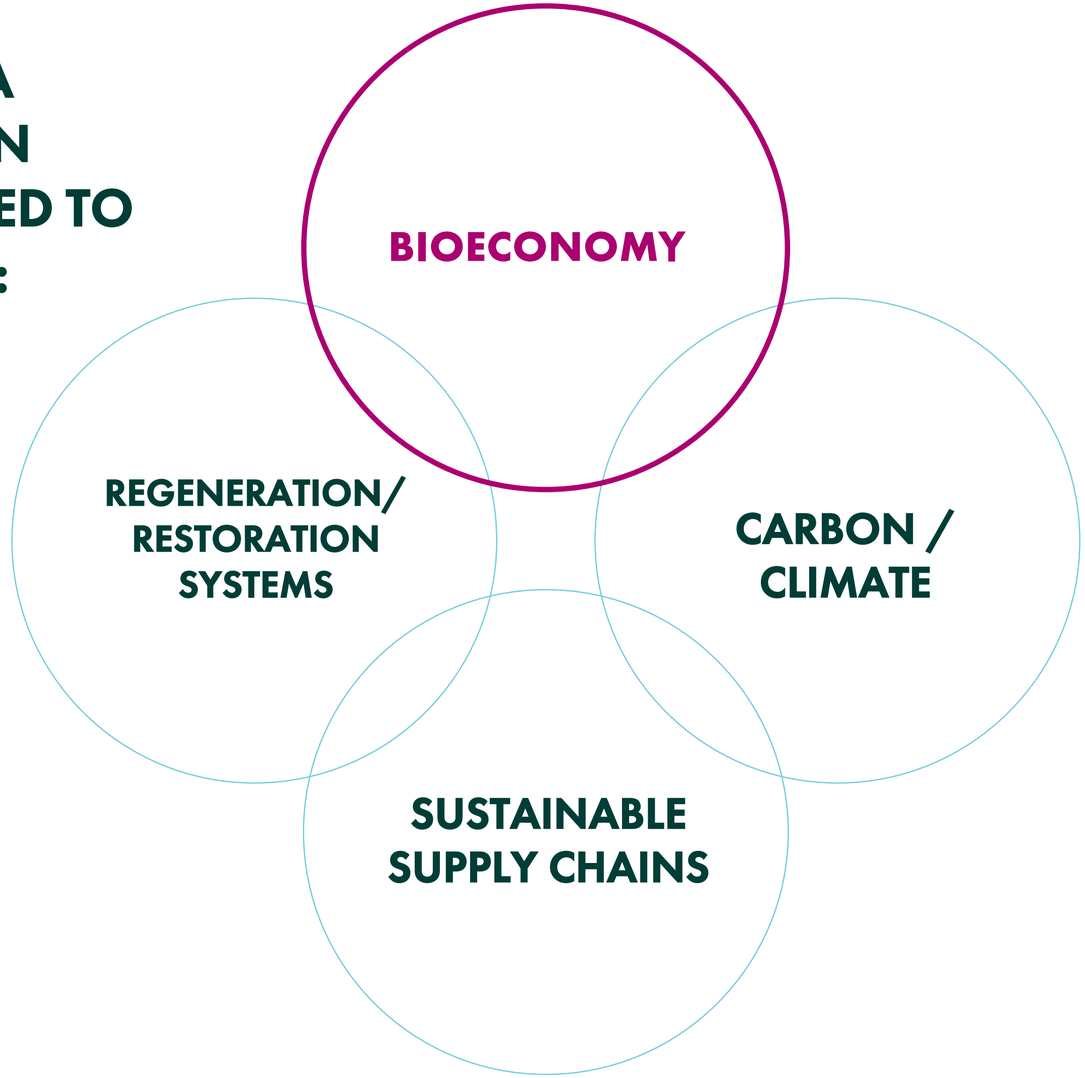
THE THEMES PROPOSITION CONSIDERED 2 ASPECTS:

1. Opportunities for economic use that promote the sustainable use of the forest (it keeps the forest standing)

2. Existence of areas that have already been altered and/or degraded (deforested), which have the potential and need for regeneration.

Additionally, trends and businesses with socio-environmental impact emerging in the Amazon context were also considered, as well as references and existing literature on the subject.

KEY THEMES FROM THE PPA ACCELERATION THESIS, RELATED TO BIODIVERSITY:



THE AXES OF THE PPA ACCELERATION PROGRAMS ARE DIRECTED TO:

- Socio-environmental impact businesses in early stages
- Socio-environmental impact businesses in mature stages
- Businesses with social and environmental impact related to forest regeneration and restoration
- Businesses with social and environmental impact undertaken collectively and by local populations

POSSIBLE TERRITORIAL CUTTINGS FOR THE PPA ACCELERATION THESIS:

- Related to deforestation
- Related to the territory type
- Related to socioeconomic or demographic factors
- Related to key sectors/chains of the Amazon
- Related to geographic issues
- Related to the area of activity of PPA members or interested investors

The proposed key themes, as well as the understanding of their definition, application in the context of socio-environmental impact businesses and eligible subsectors are:

BIOECONOMY

It refers to businesses that contribute to the **"maintenance of the standing forest"**, via economic alternatives, using inputs from the Amazon's biodiversity. These are economic activities that involve the production of goods and services from biological material as a primary resource. In this sense, an important aspect of the bioeconomy is applying mechanisms, technologies, and processes related to biological resources, from the creation or improvement of industrial processes to developing new products and services. It is noteworthy that it also includes aspects of local socioeconomic diversity (**sociobiodiversity**). The concept of bioeconomy is of relevant interest to the Amazon and to the context of business with a socio-environmental impact, in the sense of businesses that are aligned with the model of developing economic alternatives that enable the "maintanence of the standing forest", providing the involved agents with employment and income opportunities, equivalent to or greater than the opportunity cost associated with deforestation, and moving towards models that allow for an integrated economic, social and environmental challenge in the region (see more in 'Contextualization of the Amazon').

Eligible sectors (non-exhaustive examples):

. **Non-timber Forest Products:** Extractivism / sustainable use of native species and/or other important species in the food chain as inputs for food and beverages, fashion, crafts, cosmetics, health; including solutions for the sustainable use of forest areas and **Payment for Environmental Services (PES)**;

.Fishing and/or aquaculture: Extractivism as inputs for food, fashion, health, among others and sustainable primary production (innovative and sustainable **aquaculture** solutions, e.g., **fish farming**, **turtle farming**);

. **Community-based ecotourism**: Accommodation and services related to sustainable and **community-based tourism**.

REGENERATIVE SYSTEMS AND FOREST RESTORATION

It includes business to encourage the recovery of altered, degraded, or anthropized areas (modified habitats), which have the potential - and need - for regeneration. These are economic activities that involve interventions, productive or not, that focus on fertile soil regeneration, increasing biodiversity, and the ecosystem services flow (such as erosion regulation, improvement in the water cycle, and **carbon fixation**). In the Amazon context, such activities have huge relevance in historically deforested areas, as well as in the deforestation frontier ones. The regeneration of these areas provides important environmental gains and benefits to biodiversity such as the interconnection of fragments, formation of **buffer zones**, population increase, and local diversity (see more in 'Contextualization of the Amazon').

Forest restoration involves gradual forest reconstruction, restoring its biodiversity, ecological function, and sustainability over time. While forest restoration seeks to achieve parameters similar to a primary/original forest,

Forest recovery includes intermediate stages of this process. Within the scope of this publication, the concept 'restoration' is used, as it is coined and often applied in the field, to foster comprehension, understanding that recovery enters into this context.

In reforestation, the objective is to plant trees to form a forest (with native or exotic species), which does not need to have the same original forest structure as the deforested area. Furthermore, in reforestation, there may be future extraction of these trees for commercial purposes. Regeneration is a natural mechanism for the reconstruction of the environment, which can be assisted or done via regenerative agriculture (such as agroforestry systems - SAF, silvipastoris, or crop-livestock-forest integration - ILPF).

Eligible sectors (non-exhaustive examples):

. **Agroforestry and/or Integrated Systems:** integrated crop-livestock-forest (ICLFS), crop-livestock (CLS), silvopastoral (SPS) or agroforestry (AFS) systems;

. **Forest Restoration:** innovations and efficiency in seedling production and project development; technologies for large-scale restoration and sustainable use solutions for areas under restoration, involving Payment for Environmental Services (such as carbon and water provision).

CARBON AND CLIMATE

It refers to businesses that contribute to reducing greenhouse gas emissions and mitigating climate change, besides the aforementioned items of Bioeconomy and Regenerative Systems and Forest Restoration, which also contribute in this regard. It includes activities related to energy (renewable, efficient, and accessible) and effluent treatment (autonomous and decentralized sanitation and clean water systems). In addition to the environmental issue, adequate access to energy, sanitation, and clean water are three aspects that are far from universal in the Amazon context, thus being a relevant social problem and also a local development one (see more in 'Contextualization of the Amazon).

It also includes activities directly linked to the carbon market through the generation and sale of credits, technical and technological support. Excluded are economic activities associated with conventional infrastructure projects, as well as sources of hydropower generation.

Eligible sectors (non-exhaustive examples):

. **Clean, efficient, and distributed energy:** Generation of renewable, distributed, small-scale energy from solar or biomass sources; Energy efficiency solutions;
. Sanitation and Effluents: Autonomous basic sanitation systems for remote and/or low-income regions, solutions to increase water reuse in industry, agriculture, and housing, rainwater use systems for domestic or agricultural consumption, and water treatment systems effluents developed from **nature-based solutions.**

SUSTAINABLESUPPLYCHAINS

It encompasses businesses that mitigate negative impacts, promote the efficiency of the region's value chains and address the typical challenges of the Amazon, such as the logistical issue (see more in Contextualization of the Amazon). It also includes solutions related to access to financial credit, as well as businesses focused on the principles of the circular economy.

. Waste and Reverse Logistics: Solutions focused on the principles of circular economy in the design, replacement, disposal, and reverse logistics of products; Zero-waste industrial technology/process solutions, single-use, recyclable/reusable waste collection, autonomous/low-cost waste treatment systems and by-products;

. **Logistics, Distribution, and Commercialization:** Solutions and technologies for the Amazon challenges of logistics, distribution and commercialization (such as traceability, marketplace);

. **Financial Services**: Inclusive and/or needs-adherent financial services and insurance solutions; Solutions for expanding credit/microcredit for producers; Financial services solutions for projects related to the aforementioned key themes (such as renewable energy, restoration, etc.).

POSITIVE AND NEGATIVE FILTERS FOR EACH KEY THEME

Besides the key themes and a typology of eligible sectors, the rationale of 'positive filters' and 'negative filters' is proposed to support the design and eligibility of businesses for each theme. The proposition is that the potential businesses to be supported are observed in the light of these positive or negative filters, which are elements that make the business approach or distance itself from the objectives of the PPA Acceleration Thesis in the scope of Biodiversity.

Filters are related to points such as mitigation of negative impacts, good practices, certifications, innovation and applied knowledge, environmental education and technical training, efficient management of resources, benefit-sharing, among others. They will then be used as the basis for selection reviews in a more systematic way, with a given weight and score (see the next item "Eligibility criteria and reviews in selecting businesses to be supported").

. **Positive filters**: seek to identify desirable points of business practices that contribute to the objectives of the PPA Acceleration Thesis;
. **Negative filters:** seek to identify points of attention or exclusion related to business practices that go against the objectives of the PPA Acceleration Thesis. In this sense, the practice of deforestation deserves to be highlighted, given the negative impact on biodiversity.

ACCELERATION THESIS KEY THEMES: BIOECONOMY

Businesses that contribute to keeping the forest standing, via economic alternatives, using inputs from the Amazon's biodiversity.

Descrição	Filtro Positivo	Filtro Negativo
PRODUTOS FLORESTAIS NÃO MADEIREIROS - Extrativismo / uso sustentável de espécies nativas e/ou de outras espécies de importância na cadeia alimentar como insumos para alimentos e bebidas, moda, artesanato, cosméticos, saúde etc. - Serviços ou equipamentos relacionados - Soluções de uso sustentável de áreas florestais, envolvendo de Pagamento por Serviços Ambientais (PSA)	- Práticas produtivas / extrativistas sustentáveis, como exemplos: cultivo orgânico, manejo sustentável (planos de manejo, enriquecimento, adensamento restauração etc.), sistemas agroflorestais - Certificações (orgânica, rastreabilidade, boas práticas, comércio justo) - Inovação tecnológica no uso de matéria prima, processo ou cadeia de valor (como exemplos: biotecnologia, nova espécie, novo produto) - Redução de perdas nos processos/cadeia - Desenvolvimento de conhecimento aplicado sobre conservação da biodiversidade - Capacitação técnica especializada - Extensão da área de abrangência direta e indireta da iniciativa	- Práticas de desmatamento e ou degradação ambiental (queimadas, sobre exploração) - Impactos ambientais não mitigáveis ** Produtos Madeireiros não são elegíveis*
PESCA / AQUICULTURA - Extrativismo como insumos para alimentos, moda, saúde, entre outros - Produção primária sustentável (soluções inovadoras e sustentáveis de aquicultura), como exemplos: piscicultura, quelonicultura - Serviços ou equipamentos relacionados	- Práticas produtivas / extrativistas sustentáveis (como exemplo, plano de manejo) - Certificações (orgânica, rastreabilidade, boas práticas, comércio justo, ambiental) - Inovação tecnológica no uso de matéria prima, processo ou cadeia de valor (como exemplos: biotecnologia, nova espécie, novo produto) - Redução de perdas nos processos/cadeia - Desenvolvimento de conhecimento aplicado sobre conservação da biodiversidade - Extensão da área de abrangência direta e indireta da iniciativa - Manejo integrado dos recursos hídricos (no caso de aquicultura)	- Impactos negativos sobre habitats críticos (como exemplo, efluentes) - Impactos negativos sobre espécies ameaçadas e/ou estoques pesqueiros (como exemplo, introdução de espécies exóticas)
ECOTURISMO DE BASE COMUNITÁRIA - Hospedagem e serviços diversos relacionados a turismo sustentável e de base comunitária	- Conservação de áreas críticas / espécies ameaçadas - Certificações (boas práticas sociais e ambientais, base comunitária) - Educação ambiental - Extensão da área de abrangência direta e indireta da iniciativa	- Introdução de espécies invasoras - Aumento do estresse em áreas ecologicamente sensíveis/habitats críticos (como exemplo, impactos em ambientes noturnos)

ACCELERATION THESIS KEY THEMES: REGENERATIVE AND FOREST RESTORATION SYSTEMS

Business promoting the regeneration of already degraded/altered environments.

Descrição	Filtro Positivo	Filtro Negativo
SISTEMAS AGROFLORESTAIS (SAFS) E/OU INTEGRADOS - Sistemas de integração lavoura-pecuária-floresta (ILPF), lavoura-pecuária (ILP), silvipastoril (SSP) ou agroflorestais (SAF) - Soluções de uso sustentável de áreas florestais, envolvendo de Pagamento por Serviços Ambientais (PSA) - Serviços ou equipamentos relacionados (como exemplos: ATER, projetos, maquinário, análise de solo)	- Certificações (orgânica, rastreabilidade, zero desmatamento, carbono, boas práticas, comércio justo) - Inovação tecnológica no uso de matéria prima, processo ou cadeia de valor (como exemplos: biotecnologia, nova espécie, novo produto, novo canal de comercialização) - Redução de perdas nos processos/cadeia - Desenvolvimento de conhecimento aplicado sobre conservação da biodiversidade - Capacitação técnica especializada - Extensão da área de abrangência direta e indireta da iniciativa - Combinação de espécies nativas e exóticas	- Práticas de desmatamento zero ou degradação ambiental - Impactos não mitigáveis -Potencial de abertura/desmatamento de novas áreas para prática produtiva
RESTAURAÇÃO FLORESTAL - Inovações e eficiência na produção de mudas e desenvolvimento de projetos - Tecnologias para restauração em larga escala - Soluções de uso sustentável de áreas em restauração, envolvendo de Pagamento por Serviços Ambientais (como exemplos: carbono, CRA, provisão de água) - Serviços ou equipamentos relacionados (como exemplos: ATER, maquinário, análise de solo)	- Restauração em áreas críticas - Uso / conservação de espécies ameaçadas e/ou locais - Certificações (carbono, biodiversidade, social) - Inovação e desenvolvimento de conhecimento aplicado sobre conservação da biodiversidade - Capacitação técnica especializada - Extensão da área de abrangência direta e indireta da iniciativa	- Práticas de desmatamento zero ou degradação ambiental - Uso de espécies exóticas fora dos parâmetros previstos no código florestal

ACCELERATION THESIS KEY THEMES: CARBON / CLIMATE

Businesses that contribute to reducing emissions and mitigating climate change.

[Besides the aforementioned items of Bioeconomy and Regenerative Systems and Forest Restoration, which also contribute in this regard.]

Descrição	Filtro Positivo	Filtro Negativo
ENERGIA LIMPA, EFICIENTE E DISTRIBUÍDA - Geração de energia renovável, distribuída, de pequena escala (>1 MW) a partir de fonte solar ou biomassa - Soluções de eficiência energética (como exemplos: geradores a diesel eficientes para sistemas isolados complementando energia solar) - Serviços e equipamentos relacionados (como exemplos: componentes, softwares)	- Redução do consumo de energia (ou água) por unidade de produto (>20%) - Instalação/alcance em regiões florestais e/ou rurais remotas que viabilizem outros negócios de impacto - Certificações (carbono, social, selos de equipamentos eficientes) - Extensão da área de abrangência direta e indireta da iniciativa	- Fontes de biomassa associadas a desmatamento ** Micro centrais de energia hídrica ou projetos de' infraestrutura convencional' não são elegíveis*
SANEAMENTO E EFLUENTES - Sistemas autônomos de saneamento básico para regiões remotas e/ou de baixa renda, (como exemplos: fossas sépticas, acesso à água potável e tratamento de efluentes de aquacultura) - Soluções de aumento do reuso de água na indústria, agropecuária e habitação - Sistemas de utilização de águas de chuva (cisternas) para consumo doméstico ou agrícola - Sistemas de tratamento de efluentes desenvolvidos a partir de soluções baseadas na natureza (SbN)	- Redução de quantidade e/ou carga poluente (>20%) - Aumento do acesso e instalação/alcance em regiões florestais e/ou rurais remotas - Capacitação técnica especializada - Extensão da área de abrangência direta e indireta da iniciativa	** Projetos de 'infraestrutura convencional' não são elegíveis*
DESENVOLVEDORES DE PROJETOS DE CARBONO - Elaboração de documentos para validação de projetos, soluções para *marketplace*, sensoriamento, monitoramento e outros	- Certificações (carbono, biodiversidade, rastreabilidade)	- Projetos associados a desmatamento ou degradação ambiental

ACCELERATION THESIS KEY THEMES: SUSTAINABLE SUPPLY CHAINS

Mitigation of social and environmental impacts and efficiency to strengthen sustainable supply chains in the Amazon.

[items that cut across other key themes]

Descrição	Filtro Positivo	Filtro Negativo
RESÍDUOS E LOGÍSTICA REVERSA - Soluções voltadas para os princípios da economia circular no desenho, substituição, descarte e logística reversa de produtos - Soluções de tecnologias/processos industriais zero resíduo, uso único, coleta de resíduos recicláveis/ reaproveitáveis, sistemas de tratamento de resíduos autônomos/baixo custo e coprodutos	- Certificações (destinação de resíduos, logística reversa, carbono, ambiental) - Desenvolvimento de conhecimento científico/aplicado - Mitigar impacto negativo em área de habitat crítico - Capacitação técnica especializada - Mitigação de risco de contaminação humana e de solo por gestão ineficiente de resíduos	- Práticas de desmatamento ou degradação ambiental -Risco de contaminação do solo e humana - Sobreposição habitats críticos com impactos não mitigáveis -Projetos com incremento na intensidade de emissão de Gases de Efeito Estufa (>20% da linha de base)
LOGÍSTICA, DISTRIBUIÇÃO E COMERCIALIZAÇÃO - Soluções e tecnologias para os desafios Amazônicos de logística e distribuição (como exemplos: *marketplace*, integração intermodal: *Mobility-as-a Service*) - Soluções e tecnologias para rastreabilidade (como exemplos: *blockchain*, *internet of things – IoT* etc.) - Soluções de comercialização para produtos Amazônicos (marketplace, entre outros)	- Certificações (comércio justo, rastreabilidade, orgânica) - Redução de perdas no processo/cadeia (>20%) - Capacitação técnica especializada	- Práticas de desmatamento ou degradação ambiental - Sobreposição habitats críticos com impactos não mitigáveis - Projetos com incremento na intensidade de emissão de Gases de Efeito Estufa (>20% da linha de base)
SERVIÇOS FINANCEIROS - Soluções de serviços financeiros e seguros aderentes às necessidades/inclusivos - Soluções para ampliação e capilarização de crédito/microcrédito para produtores - Soluções de serviços financeiros para projetos relacionados aos temas-chave citados (como exemplos: energia renovável, restauração etc.)	- Certificações (investimento responsável, social, microcrédito) - Capacitação técnica especializada	- Processo de diligência insuficientemente claro sobre risco ambiental dos investimentos - Histórico do negócio relacionado a desmatamento ou degradação ambiental

ELIGIBILITY CRITERIA AND ANALYSIS IN THE SELECTION OF BUSINESSES TO BE SUPPORTED BY PPA, RELATED TO BIODIVERSITY AND TO SOCIOECONOMIC ISSUES

RATIONALE

For selecting supportable businesses, the proposition is to analyze the application of guiding questions to the central elements. For each question, there is the description of response mechanisms (as examples, analysis of self-reported information by the entrepreneurs or database analysis), the weighting according to the answer (high, medium, or low; or yes/no), and finally, the score and weight of each item.

The questions aim to assess the business vis-à-vis its contribution to biodiversity and socio-economic issues, which are the two key impact axes that will be considered in selecting businesses to be supported by PPA.

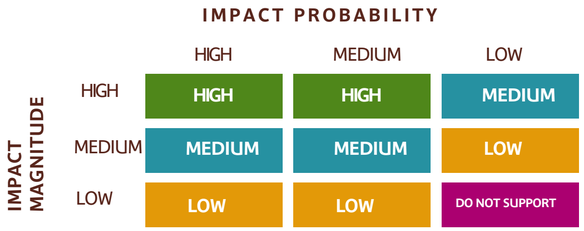
BIODIVERSITY

Para o item de biodiversidade, os elementos a serem analisados e as perguntas-guia foram divididos em 2 blocos:

. **Impact Magnitude:** Includes questions related to the size of the areas to be conserved or restored by the business, either directly and/or indirectly. For direct areas, those owned or directly managed (for example, leased areas) by the company are considered, and indirect areas are those associated with the value/supply chain. The areas' context regarding their relevance for biodiversity conservation is also raised through questions that address topics such as: i) conservation value/ presence of **biodiversity values** (priority areas); ii) pressure for deforestation; and iii) **connectivity.**

. **Impact Probability**: The proposed questions try to capture the likelihood of a company's positive contribution to biodiversity. Therefore, they seek to identify qualitative aspects (such as good practices) and safeguards (such as certifications) that potentially indicate greater robustness in the theme's management. The questions also seek to capture benefits with indirect positive impacts on biodiversity, such as environmental education and knowledge production. Finally, it is also worth mentioning the evaluation question referring to benefit-sharing, which consists of the division of benefits arising from the economic exploitation of a finished product or reproductive material developed from access to genetic heritage or associated traditional knowledge. It is understood that businesses with these practices contribute to and are aligned with commitments related to biodiversity.

Based on the answers, two grades are measured to locate the business prioritization matrix structured according to the two axes (impact magnitude x impact probability) to generate an indicator of “expected impact”.



The scores result, and the location within the matrix quadrants allow an adjusted assessment of the business impact probability (low, medium, and high). Businesses to be supported by PPA must have at least a High or Medium probability of expected impact adjusted for biodiversity.

Note: The distribution of values among the possible answers, the points attributed to each answer, as well as their weights, can and should be revised according to the programs, the target businesses, and the profile of those enrolled.

SOCIOECONOMIC ISSUES

In addition to issues related to biodiversity, business related to socioeconomic issues were observed, given the relevance of the socio-economic context surrounding the business and the Amazonian reality. The elements of this block, contrary to the previous one, have aspects to be observed and seen as differentials, and they are not exclusive criteria (unless there are programs with these specific cuts). There are three elements to be analyzed in this block:

. **Gender, Race, Sexual Orientation and Traditional Population:** understanding how much the business takes into account these aspects in leadership, team, and performance lens (if they are not considered, pay attention to the potential that exists and can be explored in acceleration programs)

. **Beneficiaries and Labor Practices:** understanding of (i) business scope in terms of beneficiaries and (ii) conditions of labor practices (ethical/fair)

. **Income Generation and Local Development:** understanding (i) the magnitude of the business in terms of increasing income for beneficiaries and (ii) the local development in which the business is inserted and operates (such as HDI or IDS - see more in ' Contextualization of the Amazon')

Biodiversidade						
Magnitude de Impacto						
	Pergunta-guia	**Forma de levantamento do dado**	**Ponderação**	**Tipo**	**Pontuação**	**Peso**
Tamanho da Área	- Qual o tamanho da área (ha) diretamente conservada por meio do negócio?	Delimitação dos limites da área de influência do negócio com coordenadas geográficas (poligonal georeferenciado)	Grande (>500 ha) Média (500 ha> projeto>200 ha)	Positivo	Grande = 5 Média = 3	2
	- Qual o tamanho da área (ha) indiretamente conservada por meio do negócio?	Delimitação dos limites da área de influência do negócio com coordenadas geográficas (poligonal georeferenciado)	Grande (> 2.000 ha) Médio - 1.000 a 2.000ha Pequeno (até 500ha)	Positivo	Grande = 5 Média = 3 Pequena = 1	1
	- A área conservada/restaurada é adicional ao requerido pelo código florestal?	Dados fornecidos pelo projeto (Cadastro Ambiental Rural - CAR)		Positivo	Sim = 1 Não = 0	2
	- Qual o tamanho da área (ha) diretamente restaurada por meio do negócio?	Delimitação dos limites da área de influência do negócio com coordenadas geográficas (poligonal georeferenciado)	Grande (>100 ha) Média (100 ha> projeto>20 ha) Pequena (20ha>projeto)	Positivo	Grande = 5 Média = 3 Pequena = 1	2
	- Qual o tamanho da área (ha) indiretamente restaurada por meio do negócio?	Delimitação dos limites da área de influência do negócio com coordenadas geográficas (poligonal georeferenciado)	Grande (>200 ha) Média (200 ha - 100 ha) Pequena (< 100ha)	Positivo	Grande = 5 Média = 3 Pequena = 1	1
Relevância da área para a conservação da Biodiversidade	- Está em área prioritária/de alto valor para conservação (UCs, Habitat Crítico, Terra Indígena, local de espécie ameaçada/endêmica)?	Banco de dados (Probio, iBat, IUCN, WWF, ICMBio, outros)	Sim/Não	Positivo	Sim = 5 Não = 0	2
	- Está em área de pressão (relacionado degradação e desmatamento)?	Banco de dados (Prodes)	Alto (>2%a.a.) Médio (2%>projeto>0.5%) Baixo (0.5%>projeto)	Positivo	Alto = 5 Médio = 3 Baixo = 1	1
	- Promove conexão entre áreas (fragmentos florestais) nativas (primárias ou secundárias)?	Banco de dados (Probio, iBat, IUCN, WWF, ICMBio, outros), além de visita de campo caso seja necessário	Sim, entre áreas prioritárias; Sim, etre áreas não prioritárias, Não	Positivo	Sim, prioritárias = 5 Sim, não prioritárias = 3 Não = 0	1
Probabilidade do Impacto						
Mitigação de impactos negativos	- O negócio contempla ações que evitam/reduzem práticas com impactos negativos sobre a biodiversidade (ex. prevenção a poluição, introdução de espécies exóticas, combate ao tráfego/caça espécies ameaçadas) ?	Dados do negócio	Sim, de alta relevância Sim, de média relevância Sim, de baixa relevância Não	Positivo	Alta = 5 Média = 3 Baixa = 1 Não = 0	2
Boas Práticas	- O negócio tem boas práticas socioambientais? Qual a efetividade esperada para a recuperação da biodiversidade em função da técnica proposta? (aplicável para restauro ou sistemas regenerativos)	Dados do Projeto (PRA, projeto técnico com descritivo de técnicas e número de espécies)	Alta, média, baixa (ex.: técnica, número de espécies, acompanhamento técnico, tempo de implantação, outros aplicaveis)	Positivo	Alta = 5 Média = 3 Baixa = 1	1
Certificações	- O negócio tem certificações? (ex. orgânica, desmatamento, manejo, rastreabilidade)	Dados do negócio	Sim, com relação direta com biodiversidade Sim, com relação indireta com biodiversidade Não	Positivo	Sim = 5 Não = 0	1
Inovação / conhecimento aplicado	- O negócio contempla inovação e/ou desenvolvimento de conhecimento aplicado relacionada a biodiversidade?	Dados do negócio	Sim, com relação direta com biodiversidade Sim, com relação indireta com biodiversidade Não	Positivo	Sim, direta = 5 Sim, indireta = 3 Não = 0	2
Educação Ambiental e capacitação técnica	- O negócio contempla educação ambiental voltada para biodiversidade ou capacitação técnica?	Dados do negócio	Sim/Não	Positivo	Sim = 5 Não = 0	1
Gestão eficiente de recursos	- O negócio contribui com o uso eficiente de recursos na cadeia de valor?	Dados do negócio	Sim, com relação direta com biodiversidade Sim, com relação indireta com biodiversidade Não	Positivo	Sim, direta = 5 Sim, indireta = 3 Não = 0	1
Repartição de benefícios	- O negócio remunera sua cadeia de valor levando em conta o acesso ao patrimonio genético e/ou ao conhecimento tradicional associado?	Dados do negócio	Sim, repartindo beneficios por remuneração acima de valores de mercado. Sim, repartindo beneficios com remuneração no valor de mercado Não	Positivo	Sim, acima de mercado = 5 Sim, valor de mercado = 3 Não = 0	1
= Resultado do somatório gera duas notas (magnitutde e probabilidade) que devem ser categorizados conforme matriz de probabilidade de impacto						
Magnitude do impacto (de 7 a 52 pontos) onde: i) de 7 a 23 - Baixo; ii) de 24 a 37 - Médio; e iii) maior que 38 - Alto						
Probabilidade do Impacto (de 1 a 45 pontos) onde: i) de 1 a 14 - Baixo; ii) de 15 a 29 - Médio; e iii) maior que 30 - Alto						

Socioeconômico						
	Pergunta-guia	**Forma de levantamento do dado**	**Ponderação**	**Tipo**	**Pontuação**	**Peso**
Gênero, Raça, Orientação Sexual e População Tradicional	- A equipe possui representatividade: mulheres, LGBTQIAP+, negros (pretos/pardos) ou população tradicional (indígenas, quilombolas, ribeirinhos, seringueiros ou grupos sociais que detêm grande conhecimento dos ecossistemas/biodiversidade da região)?	Análise dos dados enviados pelo empreendedor(a)	Alto = Maioria da equipe (nº / nº de funcionários) Médio = Minoria da equipe (nº / nº de funcionários) Baixo = Inexistente	Desejável	Alta = 5 Média = 3 Baixa = 0	1
	- A liderança (empreendedores/sócios/líderes) possui representatividade: mulheres, LGBTQIAP+, negros (pretos/pardos) ou população tradicional (indígenas, quilombolas, ribeirinhos, seringueiros ou grupos sociais que detêm grande conhecimento dos ecossistemas/biodiversidade da região)?	Análise dos dados enviados pelo empreendedor(a)	Alto = Maioria Médio = Pelo menos 1 Baixo = Inexistente	Desejável	Alta = 5 Média = 3 Baixa = 0	1
	- Há uma lente de gênero, raça, orientação sexual ou população tradicional no negócio? (ex. fomento de lideranças, fornecedores, parceiros, capacitação técnica)	Análise dos dados enviados pelo empreendedor(a)	Sim/Não	Desejável	Sim = 5 Não = 0	1
Beneficiários e práticas laborais	- Qual a amplitude de alcance do negócio (beneficiários afetados direta e indiretamente)?	Análise dos dados enviados pelo empreendedor(a)	Definido caso a caso entre alto, médio e baixo, ponderando o alcance direto e indireto	Positivo	Alto = 5 Médio = 3 Baixo = 1	2
	- Como são as práticas laborais do negócio? (no sentido de ser justa, ética, segura)	Análise dos dados enviados pelo empreendedor(a)	Definido caso a caso entre alto, médio e baixo	Positivo	Adequadas = 5 Medianas = 3 Inadequadas = 0	2
Geração de renda e desenvolvimento local	- Qual a magnutide do negócio na geração de renda para os beneficiários?	Análise dos dados enviados pelo empreendedor(a)	Definido caso a caso levando em consideração: a) Número de empregos: diretos e indiretos b) Média de remuneração c) Diferenciação do negócio na região que atua (gera valor agregado para a economia local ou é "mais do mesmo")?	Positivo	Alta = 5 Média = 3 Baixa = 1	2
	- Qual o contexto socioeconômico da região em que o negócio atua?	Sistema/dados, levantados pela PPA	IDH ou IPS - Índice de Progresso Social do(s) município(s) de atuação do negócio (pode ser parametrizado em relação à média Amazônica ou brasileira, a depender do contexto do programa)	Positivo	Alto = 1 Médio = 3 Baixo = 5	2
= Resultado do somatório gera uma pontuação para o eixo 'socioeconômico'						
Até 15 pontos para itens 'Desejáveis'						
De 40 a 6 pontos para itens 'Positivos', em que i) 6-17 Baixo, (ii) 18-29 Médio e (iii) 30-40 Alto						

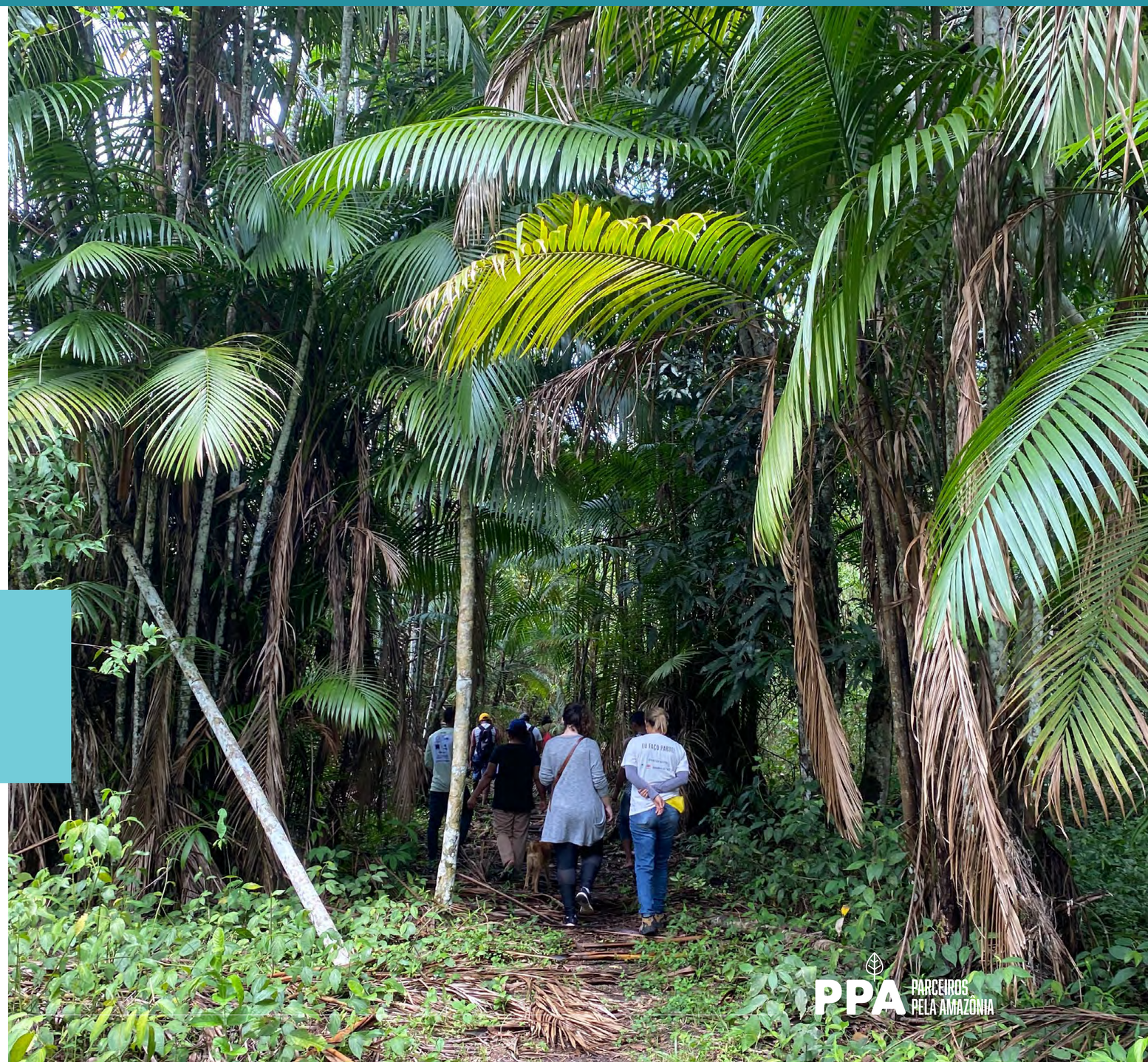
MONITORING AND FOLLOW-UP

The proposed methodology for business selection criteria and analysis allows for a prior assessment of businesses (ex-ante, of the intervention logic) while pointing to relevant indicators for subsequent monitoring (ex-post).

The evaluation criteria for Impact Magnitude (size of area and relevance of the area conserved or restored by the business) allow a transversal assessment of all businesses in the supported portfolio. Impact Probability allows the selection of business-specific metrics as applicable. There are also socioeconomic criteria, which are applicable depending on the context of business and programs.

> The proposal elaborated foresees greater robustness in the selection criteria and analysis, in order to guide the choice of businesses with socio-environmental impact to be supported.

The ground rule at this time was the premise that a good selection mitigates a series of unwanted negative aspects and impacts. In any case, there are guidelines for monitoring (i) basic impact indicators, (ii) customized impact indicators (further deepening of item i) and (iii) process indicators, essential for checking the impact of the supported business.



BASIC IMPACT INDICATORS

For all supported businesses, the monitoring indicators will be the same as those used as impact magnitude selection criteria, so the size in hectares of areas directly or indirectly conserved and restored will be monitored.

For indirectly impacted areas, such as businesses with indirect impacts related to marketing and the supply chain, the correlation between the company's activity and conservation and/or restoration must be made explicit. It may occur due to compliance requirements required by the company, payment for products and/or services from the areas, or others.

Area size indicators should also be collected in the different categories of relevance to biodiversity (**critical area, under pressure, or connection area**).

POSSIBLE WIDENING: CUSTOM IMPACT INDICATORS

For businesses located in priority areas for biodiversity conservation and/or with a specific positive impact thesis on biodiversity, PPA may choose to support the business in developing a Plan for Monitoring Biodiversity (PMB) and creating a case study. This should contain: (i) baseline for the selected biodiversity indicator (what would happen to it in the absence of the business in the territory), measures of the status of biodiversity values (such as frequency, distribution, and diversity) at the time of entry in the PPA acceleration program; (ii) process, monitoring the implementation of actions foreseen by the business; and (iii) results, monitoring the status of biodiversity values over the life of the project as compared to the baseline. It is recommended that the PMB be prepared and monitored by a trained professional with technical knowledge in the area (specialist).

The business is expected to develop a practical set of indicators/metrics for biodiversity values that require mitigation and management. Indicators and sampling design should be selected based on usefulness, that is, the ability to inform decisions on mitigation and management, and effectiveness, the ability to measure effects with adequate statistical power, given the estimated ranges of natural variability for each biodiversity value. Proxy indicators for some biodiversity values may be needed to satisfy these criteria.

It is desirable that the PMB be incorporated as a tool in the business management system to support decision-making.

PROCESS INDICATORS

Selection criteria related to Probability of Impact for Biodiversity and Socio-Economic Issues can also be monitored by PPA as positive contribution proxies of the business. Obtaining certifications, technical training in good practices in the use of biodiversity, number of people exposed to environmental education content, number of women in leadership are examples of actions to be monitored and reported by the businesses, the selection criteria table above exemplifies possible process indicators for these cases.

REPORTING AND INDICATORS FOLLOW-UP

It is proposed that for each PPA acceleration program/edition, the obligation to report selected indicators throughout the duration of the program – and follow-up – be aligned with the partners and businesses supported. The indicator measurement mechanism involves self-reported information from entrepreneurs, data collection and analysis. A field visit of selected implementers to carry out PPA programs is also suggested for due diligence, depending on the program and business supported.

GLOSSARY

AQUACULTURE: contemplates the production of aquatic organisms for human use (food or ornamental). In the Amazon context, it can include the production of fish (fish farming) and turtles (turtle farming).

PRIORITY AREAS (FOR BIODIVERSITY CONSERVATION): the definition of these areas includes environmental aspects such as the occurrence of species and ecosystems, diversity, abundance and/or endemism. It also includes social aspects such as costs and opportunities for conservation and areas under deforestation pressure or areas that promote a connection between forest remnants. As provided for by the Ministry of the Environment, it is "a public policy instrument aimed at taking decisions, in an objective and participatory manner, on planning and implementing appropriate measures for the conservation, recovery and sustainable use of ecosystems. It includes initiatives such as the creation of conservation units (UCs), the licensing of potentially polluting activities, inspection, promotion of sustainable use and environmental regularization". For the purpose of this publication, areas of critical habitats should be considered as priority areas.

NATIVE FOREST FRAGMENTS (PRIMARY OR SECONDARY): areas with remnants of native forests in different stages of conservation, which may be unexplored (primary) areas or where some kind of human interference (secondary) has already occurred.

FOREST CODE: provides for the protection of native vegetation in Brazil, as provided for in Law No. 12.651 of May 2012.

ILLEGAL DEFORESTATION: the one that occurs outside the parameters stipulated by the Forest Code.

GREENHOUSE GAS EMISSIONS: activities that contribute to climate change through the release into the atmosphere of gases that absorb a part of solar radiation promoting its heating in the phenomenon known as the greenhouse effect.

In the context of deforestation, it contemplates the release of carbon contained in the forest's biomass (biogenic carbon) into the atmosphere through its burning and the associated CO_2 emission.

RENEWABLE SOURCES: electric energy sources in Brazil considered renewable, include: i) hydraulics; ii) biomass; iii) solar; iv) wind power. In the context of this work, the following sources of renewable energy generation will be eligible: solar, biomass, biogas, and run-of-river micro-hydroelectric power.

CARBON FIXATION: capacity of forest ecosystems to fix carbon from the atmosphere into biomass through photosynthesis.

MODIFIED HABITATS: as defined in IFC Performance Standard 6 (para. 11), contemplates "areas that may contain a large proportion of plant and/or animal species of non-native origin and/or in which human activity has substantially modified the primary ecological functions and the species composition of an area. Modified habitats may include areas destined for crops and forest plantations".

NATURAL HABITATS: as defined in IFC Performance Standard 6 (para.13) contemplates "areas formed by viable associations of plant and/or animal species of predominantly native origin and/or in which human activity has not essentially modified ecological functions primaries and the species composition of the area."

CRITICAL HABITATS: as defined in IFC Performance Standard 6 (para. 16) contemplates "areas of high biodiversity value, including (i) habitat of significant importance to critically threatened and/or endangered species; (ii) habitats of significant importance to endemic and/or restricted species; (iii) habitats that provide significant concentrations of migratory and/or congregating species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes."

MITIGATION OF CLIMATE CHANGE: refers to anthropic actions to reduce the emission of greenhouse gases in order to reduce the impacts of climate change.

PAYMENT FOR ENVIRONMENTAL SERVICES (PES): include definition used in "Contextualization of the Amazon." Initiative that favor the maintenance, recovery or improvement of Ecosystem Services. In the context of this work, there are examples of PES actions related to increase in carbon fixation through biomass, water supply or through quotas of environmental reserves for the regularization of the Legal Reserve.

NET LOSSES OF DIVERSITY: As provided in IFC Performance Standard 6 (para. 15), this is "a single or cumulative loss of individuals that impacts the species' ability to survive at global and/or regional/national scales by many generations or over a long period". For businesses developed in areas of natural habitat, mitigation measures will be developed so that there is no net loss of diversity.

NET POSITIVE BIODIVERSITY BALANCES: As provided in IFC Performance Standard 6 (para. 18), these are "additional conservation outcomes that can be achieved for those biodiversity values for which the critical habitat was created." For businesses with activities in critical habitat areas, positive net balances can be achieved by developing a biodiversity offset to improve habitat and protect and conserve biodiversity.

ECOSYSTEM SERVICES: direct and indirect contributions of ecosystems to human well-being. They can be divided into four categories: provision, regulation, cultural, and support.

AGROFORESTRY AND/OR INTEGRATED SYSTEMS: are forms of land use or management, in which tree species (fruit and/or timber) are combined with crops and/or husbandry, simultaneously or in temporal sequence, and which promote economic and ecological benefits . Depending on the elements present, they can be categorized as: i) Livestock-Crop Integration; ii) Integration of Crop, Livestock and Forestry; and Silvipastoris.

NATURE-BASED SOLUTIONS: actions inspired and supported by nature, which provide environmental, social, economic benefits and help build resilience with an emphasis on climate change.

SUSTAINABLE TOURISM AND COMMUNITY-BASED TOURISM: "visitation management model led by the community, generating collective benefits, promoting intercultural experience, quality of life, valuing the history and culture of these populations, as well as sustainable use for us recrea vos e educa vos, from the resources of the Conservation Unit." (ICMBIO)

SOCIOBIODIVERSITY: a set of goods and services generated through the connection between biological diversity, the practice of sustainable activities, benefiting products extracted from the forest, and the management of these resources through cultural and ancestral knowledge of traditional populations.

BUFFER AND CONNECTIVITY ZONES: are respectively, areas in the surroundings or connecting areas of native forest. These areas play an important role in biodiversity conservation by reducing pressure on remnants of native vegetation (buffer zones) and facilitating the flow of species between isolated areas (connectivity).

PPA PARCEIROS PELA AMAZÔNIA

5 ACCELERATION PROGRAMS

ABOUT THE ACCELERATION PROGRAMS' CHOOSING PROCESS AND PPA'S FOCUS OF ACTION

The PPA Acceleration Thesis objective is to identify new possibilities for developing and strengthening different types and stages of businesses with a socio-environmental impact that operate in/with the Amazon. There are a number of possibilities for acceleration programs that can contribute in this regard. The prioritization and choice of which would be the acceleration programs and their focus of action were made through a broad process of mapping, listening, and collective construction with the PPA members.

The first stage consisted of mapping and understanding what already exists of initiatives that promote business with an impact in the Amazon (see more in 'The Amazon Socio-Environmental Impact Business Ecosystem'), to propose programs for relevant and complementary issues in the region, covering gaps and not overlapping those programs that already exist. Qualified conversations were held with more than forty organizations and initiatives, including intermediaries, investors, and businesses with a socio-environmental impact.

Then, listening sessions were conducted with PPA member companies to gather insights into possible focuses of the Acceleration Thesis. There were three consultation sessions: WG1 – Entrepreneurship (25 participants; such as SITAWI, IDESAM, Humanize Institute, Vale Fund, Dow, Climate Ventures, Mercado Livre), first open consultation (28 participants; such as IPE, Vale, Suzano, Denis Minev) and second open consultation (23 participants; such as ICS, MOV, CERTI, Ambev, Imaflora).

It is observed that the construction was carried out taking into account the territory's environmental, social, and economic factors, a triad that is inherent to the very concept of business with a socio-environmental impact. Furthermore, the process allowed refining large scale impact objectives and the PPA strategy:

IMPACT OBJECTIVES

- Contribute to the conservation and regeneration of biodiversity in the Amazon
- Foster local/community empowerment via business approaches (with financial sustainability)

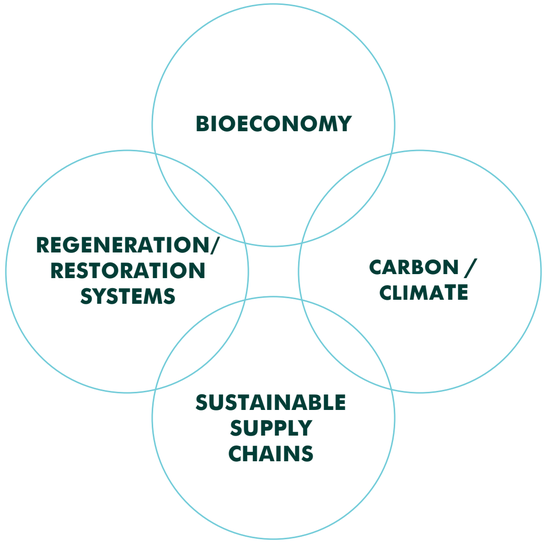
PPA STRATEGY OBJECTIVES

- Generate a constant flow of new businesses with a socio-environmental impact to address the Amazon socio-environmental challenges
- Strengthen the impact business ecosystem in the Amazon (via support to intermediaries, services, data, etc.)

Advancing in the definition of PPA's performance on this issue, the prioritization and the choice of possibilities for acceleration programs were made from those that had greater adherence to the proposed objectives and were more aligned with PPA's strategies and future vision, coordinated with the Deliberative Council.

MAPING ▶ **COLLECTIVE LISTENING** ▶ **DEFINITION OF OBJECTIVES** ▶ **PRIORITIZATION** ▶ **SELECTION**

At the end of the process, four axes were proposed for the PPA acceleration programs: businesses with socio-environmental impact in early stages, in mature stages, linked to environmental restoration/regeneration, undertaken collectively or by local populations (see more in 'PPA Acceleration Programs'). Furthermore, the programs are guided by thematic axes related to key themes for the conservation of biodiversity and trends in the Amazon context: Bioeconomy, Regenerative and Forest Restoration Systems, Carbon/Climate, and Sustainable Supply Chains (see more in 'Biodiversity – Key themes'). Another possible complementary approach is related to territories, given the magnitude of the Amazonian context and the possibility of making territorial cuttings (see more in 'Contextualization of the Amazon').



THE AXES OF PPA'S ACCELERATION PROGRAMS ARE FOCUSED ON:

- Socio-environmental impact businesses in early stages
- Socio-environmental impact businesses in mature stages
- Businesses with social and environmental impact related to forest regeneration and restoration
- Businesses with social and environmental impact undertaken collectively and by local populations

POSSIBLE TERRITORIAL CUTTINGS FOR THE PPA ACCELERATION THESIS:

- Related to deforestation
- Related to the territory type
- Related to socioeconomic or demographic factors
- Related to key sectors/chains of the Amazon
- Related to geographic issues
- Related to the area of activity of PPA members or interested investors

Notes:

(i) The focus on business in the Ideation Stage was not prioritized since it is less connected with our goal of pipeline generation and we believe that this point should be worked mainly by education for entrepreneurship and talent training (and there are already some organizations with initiatives for this focus), and not necessarily via an acceleration program;

(ii) Nor was it prioritized the focus on businesses in the Scale Stage, understanding that there are not many businesses in the scale stage in the Amazon - and the few existing ones, given their level of maturity, are able to access support via investment;

(iii) Innovation and technology were not highlighted because it is understood that it should be a transversal item to all programs. It is more related to the type of business, possibly technologically-based ones (see more in 'Amazon Environmental Impact Business Ecosystem – Classification of Business').

GENERAL GUIDELINES FOR ACCELERATION PROGRAMS

For each axis of the PPA Acceleration Thesis, notably for socio-environmental impact businesses (i) in Early Stages, (ii) in Mature Stages, (iii) linked to Environmental Restoration/Regeneration and (iv) undertaken collectively or by local populations, descriptions were made to guide the construction of the PPA programs, which will be carried out by implementing organizations (third parties). These guidelines, then, act as a model for the PPA to use when implementing the programs, both when choosing the implementing organization and designing the specific program with these implementers.

Descriptions and guidelines include: (ii) Examples of initiatives that act with a similar focus that already exist in the Amazon ecosystem (illustratively, not exhaustively), (ii) What PPA will consider when working on this possibility, (iii) Business type, internship, and primary focus (iv), Possible methodological approaches; (iv) Main content to be covered; (v) Business search and selection for this program (criteria and process); (vi) Capital contribution to the businesses participating in the program (not mandatory).

In the program implementation of the program by third parties, some points deserve attention, such as the care with the language and communication (approach and discourse alignment to dialogue with everyone involved), as well as with the nomenclatures and tools used, to be adherent to the local reality and correctly understood by the entrepreneurs; in addition to the accuracy in choosing who will minister the program's contents to entrepreneurs, targeting people who have legitimacy and local participation, to enable alliances and a legacy for the Amazon region.

Finally, it is important to mention that the PPA acceleration programs will be conducted through partnerships with PPA member companies or other organizations interested in some of the Thesis axes. In this way, each PPA acceleration program will be customized according to the partner, providing financial support from both parties (match funding). Thus, each specific program is expected to have its own characteristics, designed by PPA in conjunction with the member company(s) funding partner, and eventually, with the selected implementing organization (which will run the program).

Note: Acceleration is understood as a process that aims to support the development of businesses with impact in multiple dimensions - management, market access, product or service validation, among other aspects related to the strengthening of the enterprise, its products or services, and the positive impacts it generates for society. Although the term 'acceleration' has multiple meanings, it is assumed here in a broad sense - lato sensu - contemplating the various types of programs to support and strengthen impact businesses, in their different stages and legal formats, with the exception of the stage of ideation (see more in 'References').

GENERAL GUIDELINES FOR SEARCH AND SELECTION OF BUSINESSES TO BE SUPPORTED

About search and selection criteria
The proposed search and selection criteria involve:

Contributing to the conservation and regeneration of biodiversity in the Amazon is one of the objectives of the PPA Acceleration Thesis and its central thematic axis. **Biodiversity**, then, was the basis for defining key themes, as mentioned above, and **eligibility criteria and analysis for selecting initiatives**.

In this sense, for each key theme, eligible subsectors were defined, in addition to positive and negative filters. Positive filters seek to identify desirable points of business practices that contribute to the objectives of the PPA Acceleration Thesis. Negative filters identify points of attention or exclusion related to business practices that go against the objectives of the PPA Acceleration Thesis (hence, practicing deforestation deserves to be highlighted, given the negative impact on biodiversity). Moreover, criteria based on guiding questions and a scoring system were proposed to define the 'Probability and Magnitude of Impact on Biodiversity' and 'Sociodemographic Issues' of business impact, in order to help guide the choice of "if it should be a business to be supported or not" (see more in Biodiversity - Eligibility Criteria and Selection Analysis).

Besides this selection guideline based on Biodiversity, **general criteria related to the 'business' aspect** take into account:

ENTREPRENEURS AND TEAM

Entrepreneur Profile
Do entrepreneurs have the profile and skills necessary to make the business work?

Team with key talents
Does the team have the potential to make the business work?

MARKET AND DEMAND

Demand for the solution
Is there a demand for the solution in the present day? How relevant is it?

Market with room to grow
What are the growth and trend previsions for the market?

SOLUTION

The solution is effective
Does the solution actually solve the issue it proposes to?

A solução tem diferencial competitivo
Is the solution different from others on the market? To what extent?

BUSINESS MODEL

Financial sustainability
The model is market-oriented (aimed at financial sustainability), or at least have the intention or potential to?

Scalability
Does the model have scalability potential? What is the cost and expense structure?

Generation of social and environmental impact
How does the business model generate impact?

FIT WITH THE PROGRAM

Adherence between the business and the proposed program
Is there a fit between the business needs and the program's value proposition?

Also, points of attention were proposed in the specific search and selection criteria for each acceleration program:

EARLY STAGES:

(i) entrepreneurial profile, (ii) intentionality of the entrepreneur, (iii) business with innovation/ technology potential, and (iv) socio-environmental projects/organizations that want to develop their business aspect.

MATURE STAGES:

(i) team: key talents to grow, (ii) entrepreneurial profile, and (iii) market (size and trend).

UNDERTAKEN COLLECTIVELY OR BY LOCAL POPULATIONS:

(i) entrepreneurial profile, (ii) innovation in the product/service, or (iii) communities that are suffering great negative external pressure.

RELATED TO FOREST REGENERATION AND RESTORATION:

(i) team (understanding of productive field issues and systems design); (ii) innovation/technology potential; (iii) market potential (in the case of productive regeneration, but it is a point that can be worked on throughout the program); (iv) connection with PPA members' forestry challenges (if a specific partnership program for this purpose)

ABOUT THE SEARCH AND SELECTION PROCESS

The search and selection process must serve and be guided by each acceleration program's objectives, approach, and depth. For example: short-term and group programs may undergo a brief selection, whereas long-term and more personalized programs selection should be more thorough and extensive, ensuring that the right businesses are being elected to receive support, given the level of dedication and depth of aid that will be offered.

Concerning the PPA Acceleration Thesis, for the **business search process,** it is recommended to make, in most cases: (i) open calls, across the Amazon, with partners and sector organizations or (ii) calls and specific programs for certain territories, key themes/sectors/chains or challenges of PPA member companies that connect with social and environmental impact.

However, for cases like businesses undertaken collectively or by local populations, it is suggested to receive referrals and actively seek for partnerships with local and sector organizations. Moreover, there is the need to be cautious about the nomenclature to be used ('business' or 'enterprise' may not be a good or understandable term. 'Initiative' can be used instead). Also, for the program aimed at Forest Restoration and Regeneration businesses, the partnership with local actors, who are in the field and know about possible businesses, producers and properties adhering to the program is crucial.

The **selection process**, in turn, has the guidelines and criteria described above and must be designed program by program, according to its methodological and programmatic approach.

5.1 ACCELERATION PROGRAMS

EARLY STAGES

SOCIO–ENVIRONMENTAL IMPACT BUSINESSES IN EARLY STAGES

WHAT EXISTS IN THE AMAZON ECOSYSTEM

It is observed that there is a recent launch and/or expansion of initiatives in the region aimed at the emergence of new businesses with a socio-environmental impact and promotion of those in the initial stages, with specific cuttings and focuses (for example, regionality, entrepreneurs as target audience or business type).

By means of illustration, it is worth mentioning **Centro de Empreendedorismo da Amazônia – CEA** (an association that works in the promotion and articulation of sustainable business in the Amazon) which, since 2017, has been developing the **Amazônia Up** initiative, a pre-acceleration program for business models with focusing on forest, biodiversity and land use aimed at technical school students, university students, and recent graduates.

The target is on businesses related to priority chains in the State of Pará, such as açaí, cocoa, cupuaçu, non-wood forest products (fruits, oils, resins, fibers, etc.), agroforestry systems, gastronomy, fishing, tourism, sustainable agriculture, sustainable fashion and creative economy. Participants go through a series of content workshops (on topics such as the minimum viable product, business model, positive psychology, among others) and at the end of the program there is a business presentation, products exhibition, and connections with partners and investors.

Impact Hub Manaus, in turn, developed the **Tribo Conexão** online program to refine businesses with an impact value proposition in early stages. The program has as axes (i) Ideation and Business Validation, (ii) Management and Organization, (ii) Training and access to connections, and (iv) Futures and Impact. The methodology involves collective and individual mentoring, content, videos and networking/ events for connections. The program was created in 2020 and will be relaunched in the second half of 2021 with new features.

Last but not least, the organization **CERTI**, a reference in the creation of the innovation ecosystem in Florianópolis, launched in 2021 the Jornada Amazônia initiative. Among its objectives is to encourage new businesses that generate value for the standing forest (startups that sustainably use Amazonian biodiversity products or develop services and technologies that increase the competitiveness of production chains and the bioeconomy). The program, called 'Originação,' encourages new businesses by transforming ideas into ventures, involving financial support and mentoring.

OBJECTIVE

WHAT PPA WILL TAKE INTO ACCOUNT TO ACT ON THIS FRONT:

There is a gap in the emergence of new businesses of socio-environmental impact in the Amazon, so that initiatives targeted at supporting businesses in more advanced stages have found it difficult to find mature business volume. There is then a question of conception in the region's ecosystem. Still, there are several programs to foster new income generation initiatives in the Amazon. But, in general, they are not recognized as being part of this ecosystem of impact business and do not have a business agenda that is self and financially sustainable. Thus, **this front aims to generate a constant flow of new businesses with a socio-environmental impact in the Amazon.**

PPA does not intend to overlap what already exists in the territory, but rather support the emergence of new programs for this purpose, given the breadth of the Amazon territory, the complexity of this challenge and the various possibilities for programs and cuttings within the field.

When dealing with the emergence of new businesses, it is important to mention **the innovation issue, which should be transversal to this program to foster the emergence of technological and innovative businesses in the Amazon context**. Innovation is considered here in a broader context, in the sense that being innovative in the Amazon takes on other meanings, such as breaking away from an illegal market or having creative solutions to local challenges and bottlenecks.

It is recommended that this vision be incorporated in the selection criteria of supported businesses, especially in choosing the implementing partners and program mentors.

Moreover, it is important that, **from the business start** (or from the moment an existing project or organization begins recognizing itself as a business), **reflections and analyses about its social and environmental practices** are made. For example, the relationship with the community and suppliers (fair trade and profit sharing) and the business's environmental practices or its suppliers (agroforestry or integrated systems), aiming at local development and maintenance of the standing forest.

AGROFORESTRY PRODUCTS SALE (DOES NOT PRODUCE THEM)	**SERVICES THAT ADDRESS AMAZON CHALLENGES**	**TECHNOLOGY-BASED RELATED TO BIODIVERSITY**
Businesses that buy inputs from ventures of forest agro-extractivism (with fair relationship, development, and sustainable practices), eventually industrialize them (or already buy industrialized ones) and sell them.	Businesses that offer relevant, innovative, and adhering services to the reality and challenges of the Amazon, with or without technology (in the final product). Examples include logistics, tourism, finance, traceability.	Technological-based businesses that add value to the Amazon's biodiversity, with a socio-environmental impact. The technology can be at the molecule/enzyme level (biotechnology), raw material processing, or in the process.

This type of program focuses on businesses that have already passed the Ideation stage and are in (i) **Concept Test–** and need support to get to know their customer better, (ii) **Prototyping–** and need support in refining the solution, or (ii) **Market Launch**– and they need support to test whether the product makes sense in the market and, thus, make the first sales in a more robust and structured way. Furthermore, the program is adherent to **socio-environmental organizations/projects that are starting to recognize themselves as an impact business** and, although it eventually has the impact aspect well advanced, it is at an earlier stage in terms of being a business.

The objective of this type of program for businesses with a socio-environmental impact is to prove that the **pain is relevant, that the solution has value in the market and that customers are willing to buy it, and that it is valid to develop and invest in structuring the business.** The focus is on interaction with your customer and market, with information exchange and assumption validation, aiming to find a solution and business model that meet your needs.

KEY THEMES AND TYPES OF BUSINESS TO BE SUPPORTED

The key themes focused on this program are Socio-Environmental Impact Businesses related to ‘Bioeconomy,’ ‘Carbon’ and ‘Sustainable Supply Chains’ (see more in Biodiversity – Key Themes). Businesses focused on 'Forest Restoration and Regeneration' will have their own program, given the specificities of the theme, closely related to field practices.

According to the typification of socio-environmental impact businesses in the Amazon (see more in 'Amazon Impact Business Ecosystem'), the types of business this program focuses on are:

'Agroextractivist forestry ventures' are not considered the focus of this program because (i) they are generally configured as community-based organizations, which have another form of development and maturation (see more in 'Amazon impact business ecosystem'), (ii) because they are productive, and therefore have field issues that deserve to be observed and worked on; in addition to differences in languages and contexts. This type of business is the focus of the 'Business of Local and Community Populations' program.

POSSIBLE METHODOLOGICAL APPROACHES

Guidelines on program format and duration

[**Suggested format:** in groups, with individual support moments; hybrid between face-to-face and online]

[**Recommended duration:** At least 1 year; it can be split into a group and an individual follow-up part (for example, 8 months of group meetings, interspersed with individual support and 4 months of individual follow-up, with a community of practice in parallel)]

The general guideline is for the **program to be in a group, not just one-on-one support for a few businesses.** The group approach allows for a greater volume of supported business at a time and fits in the context of start-up businesses: since businesses are at the beginning of the trajectory, there is an inherent risk of not surviving the 'death valley' (concept used to refer to the critical moment in which the business is in activity, but is not yet profitable and sometimes ends its operations), in addition to being a natural process of creation, testing, error and success in the business maturing phases. Another interesting factor of the program being in groups is that it enables the formation of a network, either for exchanges between businesses and entrepreneurs regarding challenges and dilemmas - which are many at this initial moment of undertaking a business - or for opening contacts and commercial doors, extremely relevant for businesses in making their first sales.

Although the program is a group program, **it must be combined with individual monitoring to support the particularities of each business.** A possible proposal would be the first 6-8 months with group meetings with content and exercises (see more in 'Key Content'), interspersed with individual support. Individual support assists in working on the points brought up at the meetings, supporting the business to evolve, validating assumptions and document structures, understanding PPA's network and partners' opening demands, bringing content references, etc.

After these first months, around 4-6 months of follow-up should be considered for businesses that stood out and showed themselves to be potent throughout the program: with validated initial assumptions, ongoing prototyping or sufficient first sales that demonstrate that the product made sense in the market. It is important to define an objective/challenge per business as the focus of these 4-6 months, covered in individual follow-up sessions, for instance, every 20 days. In parallel, there may be a network mobilization to open contacts and group forums to address common business themes/challenges, such as **'Community of Practice'** for example, 4 forums over 4-6 months, to address topics such as patent and intellectual property, team building, logistics in the Amazon context, research, and development or any other relevant topic in that context). A network of mentors can also be made available to mobilize contacts and expertise during these 6 months.

It is also interesting that the program includes **(i) mentoring rounds with experts from the business areas** (for example 3 conversation rounds with mentors per business, each lasting 30 minutes), to exchange about business challenges) or **(ii) opening commercial doors** (rounds with potential customers and buyers, aiming to open new commercial possibilities for participating businesses) or even **(iii) rounds/presentations targeted at investment or financing.**

To prevent the program from being restricted to a specific region and requiring a lot of effort and expenses for transportation, the recommendation is that t**he model be hybrid: online group meetings** (it is then necessary to ensure that the entrepreneur has access to the internet, or require infrastructure/transport support to get to a place with access) **and individual face-to-face follow-up** (the team that supports each business individually is divided to move around and support businesses in a particular region). It is interesting to have a first 'Welcome' meeting in person, if possible, to create a sense of group and entrepreneurs can get to know each other and exchange about their business, challenges, and personal issues.

CONSIDERATION ON THE NUMBER OF BUSINESS PARTICIPATING IN THE PROGRAM

Given that the program is in groups but mixed with individual support to address the particularities of each business, it is necessary to weigh the number of businesses participating in the program with the number of people (team) available to support the businesses individually. A group can be composed of 15-20 businesses, for example, if there is a team structure of 5 people who have the availability to monitor 3-4 businesses each, plus a structure or person to coordinate this team.

KEY CONTENTS TO BE ADDRESSED

There are key contents that must be understood (and experienced) at the initial moment of concept testing, prototyping, and market launch for environmental impact businesses. Below is a proposal for the content that must be addressed in the program, in group meetings (and/or in individual follow-ups, mentoring rounds, or 'Community of Practice' forums). Adaptations can and should be made based on the specific focus of the program that will be implemented and the profile of the selected businesses to receive support.

. Listening to the Market and problem

Guidelines for the first listening to the market (with potential customers) about the problem that the business seeks to solve or need that it aims to attend.

. Market and target audience prioritization

Guidelines for the second listening to the market (with potential customers) about the solution that the business aims to offer/is offering.

. Competition analysis and definition of competitive advantage

Research guidelines to analyze the competition and understand what will be/is the competitive advantage of the business.

. Solution/Prototyping Refinement (MVP)

Guidelines for a third market listening (with potential customers) in order to test the solution, in the sense of minimum viable product (MVP). It is important that (i) there is individual monitoring in this aspect because each business evolves at different speeds, (ii) there is an innovation/technology partner or mentor if applicable, and (iii) socio-environmental impact indicators are established among the success criteria of the MVP.

. Strategy, management and team/society for early stages

Initial content on strategy (strategic planning), management (minimum rituals and routines) and team/society (importance of key leadership and complementary skills).

. Business model analysis

Analysis and refinement of the business model.

. Sales and Logistics Basics

Basic sales content (who is the customer, what are the sales channels, possible commercial and marketing approaches), as well as logistics, given the Amazon challenge.

. Impact: theory of change, indicators and socio-environmental practices

Basic impact content: how to develop a theory of change (connected to the theme/problem the business aims to solve and its socio-environmental impact) and which impact indicators to measure. In addition to reflections and analysis on the socio-environmental practices of the business, since its conception, e.g., relationship with the community and suppliers (fair trade and profit sharing), environmental practices of suppliers (agroforestry or integrated systems), aiming at local development and maintenance of the standing forest.

. Financing Alternatives

Basic content on funding possibilities and mechanisms for early-stage businesses.

ASPECTS ON BUSINESS SEARCH AND SELECTION

In addition to the general search and selection guidelines (see more in the item 'General Guidelines for Programs and Search and Selection'), for this business program , it is recommended that greater attention be paid to:

. **Entrepreneurial profile**: at the beginning, a good entrepreneurial profile is more relevant than a good idea or business model.

. **Intentionality of the entrepreneur:** an entrepreneur with the intention of solving a relevant problem, with experience/knowledge of this problem, and attention to the business social and environmental practices.

. **Businesses with innovation/technology potential:** to foster the emergence of innovative businesses in the Amazon context.

. **Social and environmental projects/organizations that want to develop their business aspect**

Regarding the search and selection process for this program, it is recommended to make **(i) open calls, across the Amazon,** with partners and sector organizations that allow capillarity and reach, or **(ii) calls and specific programs for certain territories, themes- key/sectors/chains or challenges of PPA member companies** that connect with social and environmental impact.

ABOUT CAPITAL INPUT TO BUSINESS

The program will not necessarily provide capital for the business, it is something that can be analyzed on a case-by-case basis. I**t is interesting that, depending on the need, businesses can receive seed capital (non-refundable donation) in the order of magnitude of R$25,000-R$50,000 to prototype their solution.** This seed capital donation makes sense in the context of supporting early-stage businesses, as they generally do not yet generate revenue and/or do not have enough resources to develop the first version of their product or service solution, so lack of resources may make them stop undertaking their business.

SOCIO-ENVIRONMENTAL IMPACT BUSINESSES IN

EARLY STAGES

GOALS

FOR PPA

Generate a steady stream of n**ew businesses with a socio-environmental impact** in the Amazon.

FOR SUPPORTED BUSINESSES

Prove that the pain you want to solve is relevant, that the solution has value in the market and that customers are willing to buy it, and **it is valid to develop and invest in structuring the business.**

STAGE

Concept test, **prototyping** or **market** launch

KEY THEMES

Bioeconomy, Carbon/Climate and Sustainable Supply Chains

TYPE OF BUSINESS

- Business with social and environmental impact, related to the **sale** of agroforestry products
- Business with social and environmental impact, related to **services** that address Amazon challenges
- **Technology-based** socio-environmental impact business related to Biodiversity

RECOMMENDED DURATION

At least 1 year; it can be split into a group and an individual follow-up part

(for example, 8 months of group meetings, interspersed with individual support and 4 months of individual follow-up, with parallel community of practice)

SUGGESTED FORMAT

Hybrid (online group meetings + face-to-face individual monitoring).

It is interesting to include group rounds **of mentoring, and of opening commercial and investment doors,** making use of PPA's own network of members and partners."

KEY CONTENTS

- Market and problem
- Prioritization and target audience
- Competition and differential
- Solution /
- prototyping (MVP)
- Strategy, management, and team for early stages
- Business model
- Sales and logistics
- Impact: theory of change, indicators, and socio-environmental practices
- Financing alternatives

ASPECTS ON BUSINESS SEARCH AND SELECTION

"In the criteria, pay attention to:

(i) entrepreneurial profile

(ii) intentionality of the entrepreneur

(iii) business with innovation/technology potential

(iv) Social and environmental projects/ organizations that want to develop their business aspect.

As a process, it is recommended to have:

(i) **chamadas abertas**, transversalmente na Amazônia, com parceiros e organizações setoriais

(ii) **chamadas e programas específicos para determinados territórios, temas-chave/setores/ cadeias ou desafios de empresas** membro da PPA que se conectam com impacto socioambiental."

ABOUT CAPITAL INPUT TO BUSINESS

It is interesting that, depending on the need, businesses can receive **seed capital** (non-refundable donation) in the order of magnitude of **R$25,000-R$50,000 to prototype their solution.**

PPA PARCEIROS PELA AMAZÔNIA

5.2 ACCELERATION PROGRAMS

MATURE STAGES

SOCIO-ENVIRONMENTAL IMPACT BUSINESSES IN MATURE STAGES

WHAT EXISTS IN THE AMAZON ECOSYSTEM

PPA itself pioneered the creation of an acceleration program for businesses with a socio-environmental impact in the Amazon, with the 'PPA Acceleration Program.' The program, launched in 2018, had 3 editions, accelerated 30 Amazonian businesses and invested in 12 of them. Almost R$7.9 million were invested in Amazonian businesses, bringing customized options adapted to different types of business, with a variety of sources (private and philanthropic capital) and financial mechanisms. Led by a group of PPA companies, the program was coordinated by Idesam and had strategic support from USAID, Biodiversity & CIAT Alliance, Humanize Institute, Vale Fund Vale, and ICS.

After just over two years of accelerating and investing in impact businesses in the Amazon, the PPA Acceleration Program evolved into **an impact accelerator, the AMAZ**. The emergence of AMAZ can be seen as a natural evolution of the PPA Program, in which the initiative gained new contours and became independent – coordinated by Idesam, with the support of strategic partners.

AMAZ's acceleration process differs from what was developed in the two years of the Acceleration Program, and this redesign was possible, assertively, thanks to this previous experience. Businesses continue to be selected through annual open calls, but the selection consists of two stages: (i) Pre-acceleration, in which registered businesses are classified based on interviews and analysis, and those selected participate in a workshop and intensive monitoring for a month, focusing on building the theory of change, business plans and building impact indicators. (ii) Acceleration, in which those with the best performance in the previous stage are accelerated (with a training journey of approximately 6 months) and will receive an initial financial contribution in the amount of up to R$ 200 thousand.

AMAZ has an extensive thematic thesis (food, extractivism, sustainable agriculture, and livestock, sustainable tourism, handicraft, fashion, transport, logistics, energy generation for rural areas and other areas of activity), and supports several stages (were considered eligible businesses with a developed prototype, in the market testing phase or with a tested product, in the market launch phase; or with a launched product, and in the capture or expansion phase). The new guidelines for the PPA acceleration programs, in turn, choose to further segment the programs according to maturity level (Early Stages and Mature Stages) and thematic axis (Bioeconomy, Carbon/Climate, Restoration and Forest Regeneration and Local Populations).

Moreover, by way of illustration, it is important to mention another initiative to promote and grow businesses with a socio-environmental impact in the Amazon, Amazônia B, from **Centro de Empreendedorismo da Amazônia (CEA)**, an association that works to promote and articulate sustainable business in the Amazon, headquartered in Belém – Pará. The Amazon B initiative identifies sustainable companies focused on forest products and socio-biodiversity that have market growth potential and foster their development via investors mapped and sensitized to this topic in the Amazon.

OBJECTIVE

WHAT PPA WILL TAKE INTO ACCOUNT TO ACT ON THIS FRONT:

Once a business with a social and environmental impact is established in the Amazon, there are several challenges for growth – and for survival. The objective of this PPA program is to promote the existence, growth, and permanence of good businesses with an impact in the region.

PPA does not intend to overlap what already exists in the territory, but rather support the emergence of new programs for this purpose, given the breadth of the Amazon territory, the complexity of this challenge and the various possibilities for programs and cuttings within the field.

When dealing with growing businesses, it is important to reflect and analyze their social and environmental practices. For example, the relationship with the community and suppliers (fair trade and profit sharing) and the business's environmental practices or its suppliers (agroforestry or integrated systems), aiming at local development and maintenance of the standing forest.

MATURITY STAGE

This program focuses on Social and Environmental Impact Businesses in more mature stages. The established business maturity level ruler applies (see more in 'Amazon Impact Business Ecosystem'), in which fit the following programs:

2. MARKET EXPANSION And the beginning of a strong internal structuring	3. TRACTION Structuring and leveraging the business
I made my first sales. It is time to understand how to expand commercially (prioritize segments, draw sales channels with recognized potential, understand how to invest in communication), create an outflow logistics model given the distances in the Amazon, and have greater robustness of team and operations.	I validated my product/service on the market. It is time to structure the organization's management, create a robust team and refine the business model in order to have evidence that my value proposition is embedded in a scalable and profitable business model. (Business model fit)

The program focuses on businesses that are in (i) Consolidation, need support to expand the market and initiate a more robust internal structuring of the team and operations, and (ii) Traction, and need support to leverage, refine the business model , management and team. It is possible to make the same program, including these two stages. For businesses that are in an even more mature stage of Scale, it is necessary to understand on a case-by-case basis whether the points to be developed in the business are in line with what is proposed by this program, or whether it would be the case to offer some other type of support. As there are not many businesses in the scaling phase in the Amazon (and the few that exist, given their level of maturity, are able to access support via investment), this was not the focus given in the PPA Acceleration Thesis.

The program objective for the socio-environmental impact business is to make them consolidate themselves in the market and have a robust internal structure, aiming at growth and greater socio-environmental impact. Thus, a range of contents can be worked on, such as strategy, management, financial, sales, team, impact, investment capture, among others.

KEY THEMES AND TYPES OF BUSINESS

The key themes focused on this program are Socio-Environmental Impact Businesses related to 'Bioeconomy,' 'Carbon' and 'Sustainable Supply Chains' (see more in Biodiversity – Key Themes). Businesses focused on 'Forest Restoration and Regeneration' will have their own program, given the specificities of the theme, closely related to field practices.

According to the typification of socio-environmental impact businesses in the Amazon (see more in 'Amazon Impact Business Ecosystem'), the types of business focused on this program are:

AGROFORESTRY PRODUCTS SALE (DOES NOT PRODUCE, BUT CAN PROCESS, ADD VALUE, AND/OR COMMERCIALIZE THEM)	**SERVICES THAT ADDRESS AMAZON CHALLENGES**	**TECHNOLOGY-BASED RELATED TO BIODIVERSITY**
Businesses that buy inputs from ventures of forest agro-extractivism (with fair relationship, development, and sustainable practices), eventually industrialize them (or already buy industrialized ones) and sell them.	Businesses that offer relevant, innovative, and adhering services to the reality and challenges of the Amazon, with or without technology (in the final product). Examples include logistics, tourism, finance, traceability.	Technological-based businesses that add value to the Amazon's biodiversity, with a socio-environmental impact. The technology can be at the molecule/enzyme level (biotechnology), raw material processing, or in the process.

'Agroextractivist forestry ventures' are not the focus of this program and are in turn included in the 'Program for businesses of local and community populations' so that there is a specific approach for this type of enterprise, which has particular elements related to (i) **production** (and therefore there are field issues that deserve to be observed and worked on, and (ii) **management and governance** (because they are grassroots organizations, such as associations or cooperatives) that must be worked with other methodological approaches and programmatic contents.

POSSIBLE METHODOLOGICAL APPROACHES

Guidelines on program format and duration

[**Suggested format:** in groups, with individual support moments; hybrid between face-to-face and online]

[**Recommended duration**: At least 2 years; it can be split into a group and an individual follow-up part (e.g., initial individual diagnosis + 1 year of group meetings, interspersed with individual support + 1 year of individual follow-up, with a community of practice in parallel)]

The general guideline is for **the program to be in a group - and not just one-on-one support for a few businesses.** The group approach allows for a greater volume of supported business at a time and fits in the context of more mature businesses because it enables the formation of a network, either for exchanges between businesses and entrepreneurs in relation to learning and challenges growth or for the opening of contacts and commercial doors, which encourage expansion.

Although the program is a group program, it must be combined with **individual monitoring to support the particularities of each business.** The proposal is that the program starts with an **individual diagnosis of each business,** which makes clear the challenges, points that must be structured, and bottlenecks for growth. The diagnosis has the function of directing both (i) the contents of the group meetings in the first year, and (ii) the subsequent individual follow-up.

The proposal is that the first year be composed of content meetings and exercises (see more in 'Key Content'), interspersed with individual support. Individual support assists in working on the points brought up at the meetings, supporting the business to evolve, validating assumptions and document structures, understanding PPA's network and partners' opening demands, bringing content references, etc.

After the first year, another year of individual monitoring must be considered for all participating businesses. In this second moment, it is important to define goals/challenges by business (two to three goals at most), dealt with in weekly individual follow-up sessions (preferably carried out by a team focused on management and related areas).

In addition, the business may have individual mentoring during this period (with different mentors, based on the demands that arise). Also, group rounds may be organized in the program for (i) opening commercial doors (rounds with potential customers and buyers, aiming to open new commercial possibilities for participating businesses) or even (ii) rounds/presentations targeted at investment or financing.

In parallel, throughout this year, it is interesting to mobilize the network to open contacts and group forums to address common themes/challenges in the business, such as 'Community of Practice, as examples, 8 forums throughout the year, to address issues such as team building, logistics in the Amazon context, investment or any other relevant issue.

To prevent the program from being restricted to a specific region and requiring a lot of effort and expenses for transportation, the recommendation is that the model be hybrid: online group meetings (it is then necessary to ensure that the entrepreneur has access to the internet, or require infrastructure/transport support to get to a place with access) and individual face-to-face follow-up (the team that supports each business individually is divided to move around and support businesses in a particular region). It is interesting to have a first 'Welcome' meeting in person, if possible, to create a sense of group and entrepreneurs can get to know each other and exchange about their business, challenges, and personal issues.

CONSIDERATION ON THE NUMBER OF BUSINESS PARTICIPATING IN THE PROGRAM

Given that the program is in a group but mixed with individual support to assist the particularities of each business, it is necessary to weigh the number of businesses participating in the program with the number of people (team) available to support the businesses individually. A group can be composed of 15 to 20 businesses, for example, if there is a team structure of 5 people who have the availability to monitor 3 to 4 businesses each, plus a structure or person to coordinate this team.

KEY CONTENTS TO BE ADDRESSED

There are key contents that must be understood and structured when expanding and attracting the environmental impact business. Below is a proposal for important content to be addressed in the program, in group meetings (and/or in individual follow-ups, in individual mentorships or in the 'Community of Practice' forums). Adaptations can and should be made based on the specific focus of the program that will be implemented and the profile of the businesses selected to be supported.

. Purpose, strategy, and management

Understanding of concepts about purpose, strategic planning, management routines and business model review.

. Finance

Understanding financial concepts. There must be individual monitoring in this aspect to review and refine this topic in the business.

. Commercial (B2C and B2B)

Sales structuring for businesses that sell to the end consumer (business to consumer – Business to Consumer: B2C) and/or sell to other companies (business to business – Business to Business: B2B).

. Logistics and operation

Structuring of logistics and operation, considering the Amazon challenges

. Team and people management

Concept and practices of team building and people management (incentives, remuneration, culture)

. Impact: theory of change, indicators and socio-environmental practices

Basic impact content: how to develop a theory of change (connected to the theme/problem the business aims to solve and its socio-environmental impact) and which impact indicators to measure. In addition to reflections and analysis on the socio-environmental practices of the business, since its conception, e.g., relationship with the community and suppliers (fair trade and profit sharing), environmental practices of suppliers (agroforestry or integrated systems), aiming at local development and maintenance of the standing forest.

. Governance and Investment attraction

Contents about possibilities and mechanisms for attracting investment and financing and governance for businesses in more mature stages.

ASPECTS ON BUSINESS SEARCH AND SELECTION

In addition to the general search and selection guidelines (see more in the item 'General Guidelines for Programs and Search and Selection'), for this business program, it is recommended that greater attention be paid to:

. Team: observing whether the business has the right people (key talents) to grow

. Entrepreneur profile: observation of how the entrepreneur has dealt with the structuring, adversities, and growth of the business so far

. Market: understanding the size and trend of the market, to check for business potential

Regarding the search and selection process for this program, it is recommended to make (i) open calls, across the Amazon, with partners and sector organizations that allow capillarity and reach, or (ii) calls and specific programs for certain territories, themes- key/sectors/chains or challenges of PPA member companies that connect with social and environmental impact.

ABOUT CAPITAL INPUT TO BUSINESS

The program will not necessarily provide capital for the business, it is something that can be analyzed on a case-by-case basis. It is recommended that PPA establishes partnerships to design innovative financial mechanisms for the supported businesses, with a 'hybrid finance' rationale (combination of non-refundable donation with returnable capital). Donation capital can be used to develop and implement new social and environmental practices in the business (for example, developing suppliers, supporting them in the transformation of monocultures to agroforestry systems, etc.). In comparison, returnable capital can be used for other purposes to be strategically defined for the business, via loan or investment, such as working capital (when there is a difference between available cash resources and the sum of expenses and accounts payable in the business model , there is a need for cash injection), investment in productive machinery, commercial team or other demands that enable the growth and perpetuity of the business.

SOCIO-ENVIRONMENTAL IMPACT BUSINESSES IN

MATURE STAGES

GOALS

FOR PPA

Generate a steady stream of new businesses with a socio-environmental impact in the Amazon.

FOR SUPPORTED BUSINESSES

Prove that the pain you want to solve is relevant, that the solution has value in the market and that customers are willing to buy it, and it is valid to develop and invest in structuring the business.

STAGE

Teste de **conceito**, **prototipagem** ou ida a **mercado**

KEY THEMES

Bioeconomy, Carbon/Climate and Sustainable Supply Chains

TYPE OF BUSINESS

- Business with social and environmental impact, related to the **sale** of agroforestry products
- Business with social and environmental impact, related to **services** that address Amazon challenges
- **Technology-based** socio-environmental impact business related to Biodiversity

RECOMMENDED DURATION

At least 1 year; it can be split into a group and an individual follow-up part

(for example, 8 months of group meetings, interspersed with individual support and 4 months of individual follow-up, with parallel community of practice)

SUGGESTED FORMAT

Hybrid (online group meetings + face-to-face individual monitoring).

It is interesting to include group rounds **of mentoring, and of opening commercial and investment doors,** making use of PPA's own network of members and partners."

KEY CONTENTS

- Market and problem
- Prioritization and target audience
- Competition and differential
- Solution / prototyping (MVP)
- Strategy, management, and team for early stages
- Business model
- Sales and logistics
- Impact: theory of change, indicators, and socio-environmental practices
- Financing alternatives

ASPECTS ON BUSINESS SEARCH AND SELECTION

"In the criteria, pay attention to:

(i) entrepreneurial profile
(ii) intentionality of the entrepreneur
(iii) business with innovation/technology potential
(iv) Social and environmental projects/ organizations that want to develop their business aspect.

(i) **chamadas abertas**, transversalmente na Amazônia, com parceiros e organizações setoriais
(ii) **chamadas e programas específicos para determinados territórios, temas-chave/setores/ cadeias ou desafios de empresas** membro da PPA que se conectam com impacto socioambiental."

ABOUT CAPITAL INPUT TO BUSINESS

It is interesting that, depending on the need, businesses can receive **seed capital** (non-refundable donation) in the order of magnitude of **R$25,000-R$50,000 to prototype their solution.**

PPA PARCEIROS PELA AMAZÔNIA

5.3 ACCELERATION PROGRAMS

TRADITIONAL POPULATIONS

BUSINESS WITH SOCIO-ENVIRONMENTAL IMPACT UNDERTAKEN COLLECTIVELY AND BY LOCAL POPULATIONS

WHAT EXISTS IN THE AMAZON ECOSYSTEM

Historically, there are projects in the Amazon region to support local populations (indigenous and riverside people, quilombolas, among others) that eventually go beyond donations and encompass initiatives to promote income-generating activities directed to independence and financial sustainability. In general, these initiatives are coordinated by civil society organizations focused on the environmental area, which is not necessarily connect with the impact business theme and do not recognize themselves as part of this ecosystem. There is, then, a possibility for dialogue that allows greater identification with this field of impactful businesses and, eventually, include this lens when working with local populations, something that has somehow been happening naturally in recent years, but that could gain more strength.

As an example, it is possible to mention the **Instituto Socioambiental (ISA)**, a civil society organization founded in 1994, and a national reference in the production, analysis, and dissemination of qualified information about indigenous peoples in Brazil. It has sub-headquarters in the Amazon region, in Manaus (AM), Boa Vista (RR), São Gabriel da Cachoeira (AM) and Altamira (PA). Among its initiatives are the Xingu River Basin Program, which considers the expressive socio-environmental diversity that characterizes it and the importance of the corridor of protected areas covering 28 million ha, and which includes Indigenous Lands and Conservation Units; and the Rio Negro Basin Program (PRN), which promotes and articulates processes and multiple partnerships in order to improve the quality of life, the appreciation of socio-environmental diversity, food security, development of a responsible economy and collaborative and intercultural knowledge production . Both initiatives aim to contribute to the development of new models of income generation and financial sustainability for these populations, and the organization has been reinventing itself, testing different approaches to the subject, given the profound existing challenges.

IPÊ - Instituto de Pesquisas Ecológicas (Ecological Research Institute), **has the LIRA (Integrated Legacy of the Amazon Region) initiative,** a project conceived together with the Amazon Fund and the Gordon and Betty Moore Foundation to increase the effectiveness of managing protected areas (Conservation Units and Indigenous Lands) until 2023. The territory covered by the project is approximately 80 million hectares, which includes 86 protected areas grouped into six blocks: Upper Rio Negro, Lower Rio Negro, Northern Pará, Xingu, Madeira-Purus, and Rondônia-Acre. The institutional partners are the Chico Mendes Institute for Biodiversity Conservation (ICMBio), the State Secretariat for the Environment of Amazonas (SEMA-AM) and the Institute for Forestry and Biodiversity Development of the State of Pará (IDEFLOR-Bio). The lines of action include territorial and environmental management plans (PGTA); governance mechanisms; sustainable use of natural resources; monitoring and protection systems; integration with regional development and strengthening of public policies; in addition to direct support to local, community, and indigenous institutions to implement complementary actions that promote social participation in land management and the bioeconomy.

The **Foundation for Amazon Sustainability (FAS)**, in turn, is a civil society organization, founded in 2008 and headquartered in Manaus (AM), with the mission to “contribute to the environmental conservation of the Amazon by valuing the standing forest and its biodiversity and the improvement of the quality of life of riverside communities associated with the implementation and dissemination of knowledge on sustainable development.” Among its projects, there are several that relate to the business agenda with a socio-environmental impact and local populations, such as 'Edital Floresta em Pé' (between 2017 and 2019, in partnership with the Amazon Fund, to promote sustainable economic alternatives, associated with reduction of deforestation and social vulnerability), the creation of the 'Indigenous Agenda' in 2018

(which includes among its axes the promotion of sustainable production), the Sustainable Development Solutions Network for the Amazon (SDSN Amazônia) Award, which is part of the United Nations (UN) and governed by FAS; or technical course on sustainable development management, for riverside youth, launched in March 2021 by FAS, Petrobras, the Center of Technological Education in Amazonas (Cetam) and other partners, which involves the creation of a business plan.

IPAM - Instituto de Pesquisa Ambiental da Amazônia (Amazon Environmental Research Institute) is a civil society scientific organization established in Belém do Pará, Brazil, in 1995. The organization has, among its action focus, the themes of (i) protected natural territories, (ii) low-carbon agriculture, and (iii) sustainable family production, which are somehow related to the income generation agenda and enterprised of local populations. For example, there is the project with Ideflor-Bio (Institute for Forestry and Biodiversity Development of the State of Pará), which promotes training for family farmers in the recovery of permanent preservation areas (PPAs) in their rural properties with techniques that expand their income.

Conexsus, on the other hand, is an organization that has made systemic contributions to the theme of sustainable community businesses in several regions of Brazil, including the Amazon, with support from PPA. Its performance is broad, including mapping existing grassroots organizations, fostering a connection with the market, business modeling and training sessions, as well as access to credit. Founded in 2016 and headquartered in Rio de Janeiro, Conexsus has achieved capillarity and relevant performance in the Amazon via local partners. His focus is currently on building a service platform for community organizations to improve their business models and gain autonomy and financial sustainability.

Last but not least, we have **NESsT,** an organization founded in the 2000s in the US. It operates globally by incubating and investing with patient capital in social enterprises: businesses created to promote social purpose in a financially sustainable way. Present in Brazil for several years, it began operating in the Amazon in 2021, seeking institutions led by traditional communities that have a history of sales and a high positive social and environmental impact. Associations, cooperatives or companies involved in sustainable chains in the Brazilian Amazon that contribute to forest conservation were chosen to receive an average investment between R$ 50 to 200 thousand and thus become part of the NESsT Portfolio. These projects benefit from 1 to 3 years of incubation, personalized training and mentoring, access to a network of partners, exposure to new commercial partnerships, and social and environmental impact monitoring. Also in 2021, NESsT launched "Edital de Economia Indígena,"which is part of the Amazon Indigenous Rights and Resources Activity (AIRR), funded by USAID and led by WWF and NESsT, with the support of COIAB, FEPOIMT, FEPIPA, OPAN, ICV, and IPAM. The public notice selected two categories of indigenous economic initiatives (below and above R$100,000 in revenue per year) that strengthen peoples, culture, territory protection, the environment, and biodiversity. They offered prizes ranging from R $20-40 as well as collective or individual technical support, mentoring, among other forms of aid.

OBJECTIVE

WHAT PPA WILL TAKE INTO ACCOUNT TO ACT ON THIS FRONT:

The Amazon has a unique social fabric, made up of a vast diversity local populations. The region encompasses most of the country's indigenous population, has riverside people as a characteristic population that lives on the banks of rivers, as well as quilombolas, rubber tappers, and others. This vast ethnic and population diversit dialogues with sustainability and biodiversity conservation. Traditional peoples and communities combine their way of life with knowledge that contributes to the conservation of the standing forest and maintenance of the ecosystem services it provides. Thus, understanding these populations and proposing models and new ventures that combine forest protection, income generation for local development and better living conditions is essential (see more in ‘Contextualization of the Amazon’).

The challenge is to develop joint strategies considering the livelihoods of local populations, the environmental agenda, and income-generating possibilities. In this sense, in addition to public policies, the promotion of businesses with a socio-environmental impact that has this population as an entrepreneur or partner/supplier can be a relevant path.

Thus, this front aims to s**upport the strengthening and sustainability of businesses with a socio-environmental impact undertaken by local populations** (e.g., indigenous people, riverside people, and quilombolas) and communities (e.g., associations, cooperatives, and networks). However, the intention is not necessarily to escalate the business. The main objective is to contribute to improving its management practices so that **the business works as a subsistence and maintenance mechanism for the population in that location, which in and of itself contributes to territorial protection and the maintenance of the standing forest.**

PPA does not intend to overlap what already exists in the territory, but rather support the emergence of new programs for this purpose, given the breadth of the Amazon territory, the complexity of this challenge and the various possibilities for programs and cuttings within the field.

KEY THEMES AND TYPES OF BUSINESS

The key themes focused on this program are Socio-Environmental Impact Businesses related to **'Bioeconomy,' 'Carbon'** and '**Sustainable Supply Chains**' (see more in Biodiversity – Key Themes). Businesses focused on 'Forest Restoration and Regeneration' will have their own program, given the specificities of the theme, closely related to field practices.

According to the typification of socio-environmental impact businesses in the Amazon (see more in 'Amazon Impact Business Ecosystem'), the types of business focused on this program are:

VENTURES OF FOREST AGRO-EXTRACTVISM	**SMALL BUSINESSES AND PROCESSING NETWORKS OF AGROFORESTRY PRODUCTS** (DOES NOT NECESSARILY PRODUCE THEM, BUT BENEFIT, PROCESS AND ADD THEM VALUE)
Usually, community organizations (Cooperatives and Associations) or companies dedicated to sustainable agriculture or extractivism in the 'heart' of the forest	Businesses that buy inputs from ventures of forest agro-extractivism industrialize and market them (for local consumption, or sell to a third party that distributes it broadly); are in places close to the forest or in ports

These organizations have some differences in relation to other types of business, which are the focus of other programs. In this case, they are generally community-based organizations (associations and cooperatives), which do not necessarily have a business logic (in the sense of independence and financial sustainability) and therefore have management, governance, and financial challenges. Still, there is a question of legal configuration: they can be non-formalized organizations, configured as companies or as a third sector organization (cooperative or association).

MATURITY STAGE AND OTHER POSSIBLE CUTTINGS

The **program can encompass several stages** (except those that are still at the ideation stage), g**iven the premise that the main focus is with the type of business and local populations** - and the support provided is individualized, not in groups (See more in 'Possible methodological approaches'). But it is important to r**ecognize that there are different levels of maturity in these businesses, and that depending on them, support needs to be adjusted.** Maturity for this type of enterprise, which is generally configured as a community organization (association or cooperative), concerns the structuring and advancement, in a non-sequential way, about aspects like:

. **Socio-Environmental:** sustainable production practices (such as agroforestry, integrated systems, organic production), occupational health and safety, in addition to the definition and measurement of social and environmental indicators

. **Business:** business model, financial sustainability, formalization, and financial controls

. **Management, governance and team:** decision making, planning, team (hired or volunteers professionals).

. Production: productivity, understanding of costs and expenses, improving production, processing, and industrialization

. Market: commercial structure and clarity regarding how to sell your products, to whom, and to which market (domestic, Brazilian, or export)

The objective of the business program is to **improve management (in the sense of professionalization) and internal structuring (in terms of governance, finance, production,** for example), aiming at perpetuity and maintenance of the social and environmental impact.

Although the maturity level is not necessarily a cutting, other possible ones apply in this case. **The program can be segmented and focused on** certain (i) **Territories** (organizations of a certain territory in the Amazon, related, for example, to companies that seek to generate impact in their areas of intervention), (ii) **Audience** (for indigenous, riverside and quilombolas enterprises, or others) or (iii) **Value chains** (for projects related to specific chains, such as açaí, Brazil nuts, rubber). In this sense, the presence and partnership with local organizations with in-depth knowledge of these specific territories, publics, or chains are essential.

POSSIBLE METHODOLOGICAL APPROACHES

Guidelines on program format and duration

[**Suggested format:** individual coaching, with group practice community; hybrid between in-person and online)]
[**Recommended duration:** At least 3 years and follow-up may be more or less frequent during this period (for example, 1.5 years of more frequent individual support, for example, twice a month and 1.5 years of more distant follow-up, for example, once every 2 months; always with a community of practice in parallel)]

The proposal is that the program has the **individual support format and not content group meetings, given the specificities of each project and differences in challenges, language, and territoriality.** Moreover, in any case, there is the possibility of group formation because, in parallel with the individual support, there will be group meetings of 'Community of Practice', in which there is the network mobilization and the possibility of exchanges between the enterprises to deal with themes in common, such as the challenges of a specific chain, history and dilemmas of a territory, specificities of a determined audience, or any other relevant theme.

To prevent the program from being restricted to a specific region and requiring a lot of effort and expenses for transportation, **the recommendation is that the model be hybrid: face-to-face individual monitoring alternated with online** (the team that supports each business individually divides to move and support businesses in a particular region). Group meetings (community of practice) can also take place, sometimes face-to-face and others online. It is then necessary to ensure that the entrepreneur has access to the internet, or require infrastructure/transport support to go to a place with internet access.

If possible, it would be interesting to have a first face-to-face meeting for the 'Starting of the Program,' to create a sense of group, so that the entrepreneurs get to know each other and exchange about their projects, challenges, and personal issues. Furthermore, a good practice is to carry out **exchange rounds between actors in the chain and PPA members about this theme of business undertaken collectively and by traditional populations.**

CONSIDERATION ON THE NUMBER OF BUSINESS PARTICIPATING IN THE PROGRAM

Given that the program is individual to assist the particularities of each business, it is necessary to weigh the number of businesses participating in the program with the number of people (team) available to individually support the businesses. A group can be composed of 10 to 15 businesses, for example, if there is a team structure of 5 people who can monitor 2 to 3 businesses each, plus a structure or person to coordinate this team.

KEY CONTENTS TO BE ADDRESSED

There are key aspects in the socio-environmental impact businesses undertaken collectively and by local populations that must be structured and professionalized. Below is a proposal for important content to be addressed in the program, in individual follow-ups or in the 'Community of Practice' group forums. Adaptations can and should be made based on the specific focus of the program that will be implemented and the profile of the businesses selected to be supported.

. Management and governance
Basic aspects and professionalization of business management and governance
. Business model
Definition and projections of the business model, with financial sustainability and socio-environmental impact
. Productive design and implementation
Definition of business and production plan, involving issues of agricultural production, processing, industrialization, among others
. Operation and team
Understanding the form of operation and required team
. Financial and legal management
Understanding and implementing financial controls and legal formalization
. Impact: theory of change, indicators, and socio-environmental practices
Basic content on objectives and impact indicators, as well as social and environmental practices (forest preservation, fair trade, among others)

ASPECTS ON BUSINESS SEARCH AND SELECTION

In addition to the general search and selection guidelines (see more in the item 'General Guidelines for Programs and Search and Selection'), for this business program, it is recommended that greater attention be paid to:

. **Entrepreneurial profile:** orientation and capacity of the organization's leadership to undertake (however, it is something that can be worked on in the program
. **Product/service innovation:** organizations that are already somehow innovating and proposing new or different products/services
. **Communities that are suffering great negative external pressure** and that already have some projects with business potential, but are still fragile and need support in terms of management, finances, and market access
* Caution with the nomenclature to be used: 'business' or 'enterprise' may not be a good or understandable term for certain audiences and types of organizations, but rather 'initiative.'

Regarding the search and selection process, i**t is not recommended to make open calls. A better approach is to actively seek and receive nominations from eligible businesses** for possible program cuttings (territorial, public, and/or chain, via partnerships and sector organizations that allow for capillarity and reach. Open calls tend not to work because they are unable to reach the target enterprises, besides the fact that they may not initially recognize themselves as fit for 'acceleration programs'.

ABOUT CAPITAL INPUT TO BUSINESS

The program will not necessarily provide the business with capital. This is something that can be analyzed on a case-by-case basis. It is recommended that PPA establishes partnerships with organizations operating in the region to analyze case by case the need for **capital donation (non-refundable, to support the business structural difficulties and the applicability and construction of PES (Payment for Environmental Services)** mechanisms, which enable income to enter the business and maintain a standing forest, possibly combined with other financial mechanisms and patient capital.

BUSINESS WITH SOCIO-ENVIRONMENTAL IMPACT UNDERTAKEN BY

TRADITIONAL POPULATIONS

GOALS

FOR PPA

Generate a steady stream of new businesses with a socio-environmental impact in the Amazon.

FOR SUPPORTED BUSINESSES

Prove that the pain you want to solve is relevant, that the solution has value in the market and that customers are willing to buy it, and it is valid to develop and invest in structuring the business.

STAGES

Concept test, prototyping or market launch

KEY THEMES

Bioeconomy, Carbon/Climate and Sustainable Supply Chains

TYPE OF BUSINESS

- Business with social and environmental impact, related to the **sale** of agroforestry products
- Business with social and environmental impact, related to **services** that address Amazon challenges
- **Technology-based** socio-environmental impact business related to Biodiversity

RECOMMENDED DURATION

At least 1 year; it can be split into a group and an individual follow-up part

(for example, 8 months of group meetings, interspersed with individual support and 4 months of individual follow-up, with parallel community of practice)

SUGGESTED FORMAT

Hybrid (online group meetings + face-to-face individual monitoring).

It is interesting to include group rounds **of mentoring, and of opening commercial and investment doors,** making use of PPA's own network of members and partners."

KEY CONTENTS

- Market and problem
- Prioritization and target audience
- Competition and differential
- Solution / prototyping (MVP)
- Strategy, management, and team for early stages
- Business model
- Sales and logistics
- Impact: theory of change, indicators, and socio-environmental practices
- Financing alternatives

ASPECTS ON BUSINESS SEARCH AND SELECTION

"In the criteria, pay attention to:

(i) entrepreneurial profile
(ii) intentionality of the entrepreneur
(iii) business with innovation/technology potential
(iv) Social and environmental projects/ organizations that want to develop their business aspect.

(i) **chamadas abertas**, transversalmente na Amazônia, com parceiros e organizações setoriais
(ii) **chamadas e programas específicos para determinados territórios, temas-chave/setores/ cadeias ou desafios de empresas** membro da PPA que se conectam com impacto socioambiental."

ABOUT CAPITAL INPUT TO BUSINESS

It is interesting that, depending on the need, businesses can receive **seed capital** (non-refundable donation) in the order of magnitude of **R$25,000-R$50,000 to prototype their solution.**

PPA PARCEIROS PELA AMAZÔNIA

5.4 ACCELERATION PROGRAMS

FOREST RESTORATION

BUSINESS WITH SOCIO-ENVIRONMENTAL IMPACT RELATED TO FOREST RESTORATION

The themes of restoration and regeneration in the Amazon gain strength. As a response, initiatives appear in various spheres (civil society, companies, and government) with different focuses, such as development, articulation, investment, etc.

The **mining company Vale and the Vale Fund,** PPA members, are examples of institutions that work on this issue by assuming the commitment to recover and protect 500,000 hectares of areas beyond their borders, with at least 100,000 hectares through businesses with social and environmental impact, with special emphasis on Agroforestry Systems (AFS). Focused on seeking innovative solutions in Agroforestry Systems (AFS), through the acceleration, implementation and validation of Proofs of Concept (PoC) of business models with social and environmental impact, Vale's Agroforestry Challenge emerged in 2019 as an additional contribution in response to the challenge of recovering areas on a large scale.

As a support program, we have the **WRI (World Resources Institute),** which globally launched the Land Accelerator initiative, with programs in Africa, Asia and Latin America (for the first time in 2021). The initiative, through on-site, online training and personalized guidance, enables entrepreneurs in forest impact businesses to structure their business and market their products (coming from productive regeneration, for example). By promoting entrepreneurship, the initiative offers a cost-effective approach to restoring – and developing – rural areas worldwide.

Other international civil society organizations such as **Solidariedad, Conservation International (CI), and The Nature Conservancy (TNC)** have also been working on this theme, through the support of associations, cooperatives and rural producers in the Amazon, in the development of agroforestry systems with the production of cocoa or crop-livestock-forest integration systems, for example.

Also, in recent years, movements and articulations on this theme have emerged, such as the **Alliance for Restoration in the Amazon**, a multi-sectoral initiative established in 2017 with the Executive Secretariat of Conservation International (CI), whose objective is to promote, qualify and expand the scale of forest landscapes restoration in the Brazilian Amazon. Or the **Restoration and Reforestation Observatory,** an initiative launched in March 2021, which combines data from ongoing restoration initiatives and projects in Brazil with satellite monitoring data (Brazilian Coalition on Climate, Forests, and Agriculture, with the support of WRI Brazil, Institute of Man and Environment of the Amazon (Imazon), The Atlantic Forest Restoration Pact (Pact) and The Nature Conservancy (TNC)).

But there is still a long way to go in the ecosystem. F**ew businesses with a socio-environmental impact in the Amazon work on the specific agenda of forestry businesses, with relevant sizes and/or scale bias.** As an example, there are businesses such as Renature (which supports producers and companies in the transition to regenerative agriculture – and is invested by Meraki Impact, an investment fund focused on environmental regeneration), Caaporã (implementation of silvopastoral systems) or Belterra (support to small producers in the implementation of agroforestry business, combining financing, technical assistance and market access). There are also some associations and cooperatives that are reference in the Amazon region on this subject, such as Reca (association of small agroforestry farmers in Rondônia, which has more than 1,000 hectares), Campta (agricultural cooperative of Tomé Açu, Pará, founded in 1931 and marked by the Japanese influence, produces pulp and fruit derivatives in agroforestry systems) or the Xingu Seed Network (association created in 2007 in Mato Grosso to meet demands for seeds for the restoration of degraded ecosystems and which offers, in addition to the seeds, the implementation of restoration projects through Direct Seeding – Muvuca).

OBJECTIVE

WHAT PPA WILL TAKE INTO ACCOUNT TO ACT ON THIS FRONT:

The issue of restoration and regeneration in the Amazon is latent (see more in 'Contextualization of the Amazon' and 'Biodiversity – Forest Restoration and Regeneration in the Amazon'). Some areas have already been altered, anthropized, deforested and linked, for example, to land grabbing, pasture or mining. There are also deficits in Permanent Protection Areas and Legal Reserve (an instrument for the protection of natural spaces provided by the Native Vegetation Protection Law) on the properties, which must be restored to comply with the Rural Environmental Registry – CAR legislation.

Several mechanisms and different solutions can be used to advance this agenda, such as natural restoration (which can be by abandonment or assisted, with human and technological support and impetus) or native vegetation recovery projects, having no economic value at first (but there are new solutions, such as payment for environmental services – PES or carbon market). Or the approach to restoration with economic value, via reforestation (planting trees for monetary purposes, whether native or exotic - usually pine and eucalyptus, for the pulp market, which does not enrich biodiversity as much) or productive regeneration (via integrated systems , such as agroforestry systems – AFS, silvipastoral or integrated crop-livestock-farming forest – ICLFS).

For the restoration and regeneration agenda to advance, effort and articulation between civil society, companies and the government are necessary. With this program, PPA aims to increase the participation of the private sector and entrepreneurship in new scalable and innovative businesses in this area. The objective of this program is, therefore, to strengthen and expand businesses with a socio-environmental impact linked to the theme of forest restoration and regeneration in the Amazon; in addition to encouraging the development of the various links in this chain (e.g., service providers, technologies, machinery, inputs).

KEY THEMES AND TYPES OF BUSINESS

The key themes focused on this program are Businesses with social and environmental impact related to forest regeneration and restoration. The other themes (Biodiversity, Carbon/Climate, and Sustainable Supply Chains) are covered in the other programs. According to the classification of socio-environmental impact businesses in the Amazon (see more in 'Amazon Impact Business Ecosystem'), the type of business this program focuses on is:

IMPACT BUSINESSES RELATED TO INNOVATION AND NEW MODELS FOR FOREST RESTORATION AND REGENERATION

Businesses that emerged to solve social and environmental issues related to scenarios of degradation, whether using technologies/innovations or new models for restoration or productive regeneration; adherent and applicable in the Amazon reality.

It is observed that businesses may have community models (associations or cooperatives), and adjustments in the program may eventually be necessary to consider their particularities.

MATURITY STAGE

The program can encompass several stages (except those that are still at the ideation stage), given the premise that the main focus is concerning the key theme of the business, related to forest restoration and regeneration. But it is important to recognize that there are different levels of maturity in these businesses, and that depending on them, support needs to be adjusted.

The program's objective for the socio-environmental impact business is to model its operation by observing biases in scale, financial feasibility, technical knowledge – and connection with the market (in the case of productive regeneration). For that, there is a range of contents that can be worked on, such as articulation between the actors in the chain, business model, financial modeling, design and production, commercial and logistical implementation, among others.

Within the definition above, the program may contemplate, for example, start-up restoration and regeneration businesses that need to gain more strength or that are in the proof-of-concept phase; productive projects of this theme that have business potential; agroforestry associations and cooperatives that want to incorporate the logic of financial sustainability into the business model; and organizations that provide inputs for this chain (such as seeds, seedlings, machinery, technical support) or that have developed new technologies (e.g., that increase the chance of seedling success, optimize resources, labor, etc).

POSSIBLE METHODOLOGICAL APPROACHES

Guidelines on program format and duration

[**Suggested format: i**n groups, with individual support moments; hybrid between face-to-face and online]

[**Recommended duration:** At least 2 years, that can be split into a group part and an individual part (for example 1 year of group meetings, interspersed with individual monitoring and 1 year of individual monitoring, with a community of practice in parallel)]

The general guideline is for the **program to be in a group, not just one-on-one support for a few businesses.** The group approach allows for a greater volume of supported business at a time and the formation of a network, either for exchanges between businesses and entrepreneurs about challenges and dilemmas - which are many in this environmental theme - or for opening contacts and commercial doors, highly relevant to businesses to be able to increase their sales.

Although the program is in groups, **the proposal is that it be mixed with individual monitoring to support the specifics of each business.** The plan is that the first year be composed of content meetings (see more in 'Key Content'), interspersed with individual ones. Individual support assists on the points brought up in the discussions to support the business to evolve, and organize field trips, understanding PPA's network and partners' opening demands, bringing content references, etc.

After the first year, it is interesting to predict another 1 year of follow-up. **It is recommended to define an objective/challenge per business as the focus of this first year of monitoring**, discussed in the individual monitoring sessions, let's say, every 20 days. In parallel, the contact network is expected to be mobilized to open contacts and group forums to address common themes/challenges in business, as a 'Community of Practice' (for example, 4 meetings throughout the year to address topics such as environmental regulation, design of production models, use of technology, logistics in the Amazon context). A mentor network can also be made available to mobilize contacts and expertise during this year.

To prevent the program from being restricted to a specific region and requiring a lot of effort and expenses for transportation, **the recommendation is that the model be hybrid:** online group meetings (it is then necessary to ensure that the entrepreneur has access to the internet, or require infrastructure/transport support to get to a place with access) and individual face-to-face follow-up (the team that supports each business individually is divided to move around and support businesses in a particular region).

It is interesting to have a first 'Welcome' meeting in person, if possible, to create a sense of group and entrepreneurs can get to know each other and exchange about their business, challenges, and personal issues. Furthermore, **meetings and exchange rounds on the theme of forest restoration and regeneration can be of great value between businesses and other actors, suppliers in the chain, and PPA member companies.**

CONSIDERATION ON THE NUMBER OF BUSINESS PARTICIPATING IN THE PROGRAM

Given that the program is in a group but mixed with individual support to assist the particularities of each business, it is necessary to weigh the number of businesses participating in the program with the number of people (team) available to support the businesses individually. A group can be composed of 15 to 20 businesses, for example, if there is a team structure of 5 people who have the availability to monitor 3 to 4 businesses each, plus a structure or person to coordinate this team.

KEY CONTENTS TO BE ADDRESSED

There are key contents that must be understood and structured in the context of businesses with social and environmental impact related to forest restoration and regeneration. Below is a proposal for content that must be addressed in the program group meetings (and/or in individual follow-ups or in 'Community of Practice' forums). Adaptations can and should be made based on the specific focus of the program that will be implemented and the profile of the businesses selected to be supported.

. Business model
Analysis and design of the business model focused on financial sustainability and social and environmental impact
. Financial modeling
Preparation of the business future financial projection and assumption comprehension (e.g., short, medium, and long term production; market access and sales)
. Productive design and implementation
Content related to the technical aspects of validation, implementation, and/or scaling of regenerative or restoration models that the business is developing.
. Regulatory issues
Contents related to Brazilian environmental legislation, fieldwork, regulation of rural property, etc.
. Commercial and Logistics
Contents related to commercial structuring, demand analysis, and possible contracts and logistics considering the Amazon context (for productive regeneration)
. Impact: theory of change, indicators, and socio-environmental practices
. Primary content on impact: short, medium, and long-term objectives, measurement and analysis of the business' indicators and socio-environmental practices
. Investment and financing
Basic content on investment, financing possibilities and mechanisms for businesses that work with this theme

ASPECTS ON BUSINESS SEARCH AND SELECTION

In addition to the general search and selection guidelines (see more in the item 'General Guidelines for Programs and Search and Selection'), for this business program, it is recommended that greater attention be paid to:

. **Team:** understanding of field production issues and design of agroforestry and restorative productive systems
. **Businesses with innovation/technology potential:** new solutions, technologies and services for this theme
. **Market potential** (in the case of productive regeneration, but it is a point that can be worked on throughout the program)
. **Connection with PPA members' forestry challenges** (if it is a specific partnership program for this purpose), adherent to Amazon challenges

Regarding the search and selection process for this program, it is recommended (**i) open calls across the Amazon**, with partners and sector organizations that allow capillarity and reach, or **(ii) calls and specific programs for certain territories and PPA member companies' challenges.** In this case, it is crucial to partner with local actors and know about viable businesses, producers, and properties adhering to the program.

ABOUT CAPITAL INPUT TO BUSINESS

The program will not necessarily provide capital for the business. This is something that can be analyzed on a case-by-case basis. It is recommended that PPA establishes partnerships to enable seed capital (non-refundable donation) to drive productive business issues (e.g., purchase of inputs, equipment; contracting of specific production design, labor or market research); combined with other financial mechanisms ('hybrid finance') of patient capital.

SOCIO-ENVIRONMENTAL IMPACT BUSINESS OF

FOREST RESTORATION

GOALS

FOR PPA

Generate a steady stream of new businesses with a socio-environmental impact in the Amazon.

FOR SUPPORTED BUSINESSES

Prove that the pain you want to solve is relevant, that the solution has value in the market and that customers are willing to buy it, and it is valid to develop and invest in structuring the business.

STAGES

Concept test, prototyping or market launch

KEY THEMES

Bioeconomy, Carbon/Climate and Sustainable Supply Chains

TYPE OF BUSINESS

- Business with social and environmental impact, related to the **sale** of agroforestry products
- Business with social and environmental impact, related to **services** that address Amazon challenges
- **Technology-based** socio-environmental impact business related to Biodiversity

RECOMMENDED DURATION

At least 1 year; it can be split into a group and an individual follow-up part

(for example, 8 months of group meetings, interspersed with individual support and 4 months of individual follow-up, with parallel community of practice)

SUGGESTED FORMAT

Hybrid (online group meetings + face-to-face individual monitoring).

It is interesting to include group rounds **of mentoring, and of opening commercial and investment doors,** making use of PPA's own network of members and partners."

KEY CONTENTS

- Market and problem
- Prioritization and target audience
- Competition and differential
- Solution / prototyping (MVP)
- Strategy, management, and team for early stages
- Business model
- Sales and logistics
- Impact: theory of change, indicators, and socio-environmental practices
- Financing alternatives

ASPECTS ON BUSINESS SEARCH AND SELECTION

"In the criteria, pay attention to:

(i) entrepreneurial profile
(ii) intentionality of the entrepreneur
(iii) business with innovation/technology potential
(iv) Social and environmental projects/ organizations that want to develop their business aspect.

(i) **chamadas abertas**, transversalmente na Amazônia, com parceiros e organizações setoriais
(ii) **chamadas e programas específicos para determinados territórios, temas-chave/setores/ cadeias ou desafios de empresas** membro da PPA que se conectam com impacto socioambiental."

ABOUT CAPITAL INPUT TO BUSINESS

It is interesting that, depending on the need, businesses can receive **seed capital** (non-refundable donation) in the order of magnitude of **R$25,000-R$50,000 to prototype their solution.**

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6 CONCLUSION

CONCLUSION AND NEXT STEPS

The PPA's Acceleration Thesis guidelines **consider the Amazon magnitude and its specificities and then foresee possible territorial cuts** (related to deforestation rates, type of territory, socioeconomic and geographic factors, among others). They are **based on key themes related to Biodiversity** (Bioeconomy, Forest Regeneration and Restoration, Carbon/Climate and Sustainable Supply Chains) and propose four **axes of acceleration programs for various types and stages of business with socio-environmental impact:** those on Early Stages and Mature Stages and those related to Forest Restoration and Regeneration or undertaken collectively by Local Populations.

These definitions were made from prioritizing possibilities that took into account the actors of local impact ecosystem and PPA member companies' opinion, adherence to the PPA strategy, and the Biodiversity' thematic refraining from overlapping with what already exists in the ecosystem. Therefore, it is important to mention that **there is room for several other program types and cutting, which may be relevant to the Amazonian reality.**

Furthermore, the proposal was prepared with special attention to the supply side, in the sense of dialoguing with intermediary organizations, promoting existing businesses, and attending to key themes that needed to be addressed.

However, it would be interesting to take a closer look at two other axes: the capital supply side (investors) and the demand side (impact businesses), to raise how many there are, what type they are, what are their success points and challenges. Nonetheless, there is not a lot of systematic data about the Amazon context.

As a next step, in line with PPA's value proposition of fostering the ecosystem of impact in the Amazon, the PPA Acceleration Thesis aims to build a comprehensive disclosure campaign to contribute to the **knowledge production on the subject and the Amazon reality.** The proposal consists of mobilizing actors and expanding discussions, thematic dialogues, and valuable connections. More than that, it represents public feedback for all organizations that have strategically and collaboratively contributed to its realization (see more in 'Acknowledgments').

This work creates the conditions for several acceleration programs to be conceived, launched, and executed, together with implementing and financing organizations. In releasing the document, PPA intends to **encourage partners to actively propose periodic rounds of conversation or possible people interested in the Thesis's main axes to investigate means of sharing the support for programs.** Again, it is important to mention that the PPA acceleration programs will be carried out through partnerships or joint ventures; thus, the programs will be created admitting design processes that can meet the partners' customized demands. In this case, all parties' strategic, financial, and institutional commitment to the design and execution of the program is incited. Hence, it is possible to guarantee the necessary resources so that the selected implementing organizations can fully execute the projects.

PPA does not position itself as an impact accelerator. The Acceleration Thesis reinforces its vision as a platform to leverage opportunities.

The focus is to promote impact programs that can address the Thesis's various dimensions identified in this material.

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