



THE AMAZON FOOD&FOREST BIOECONOMY FINANCING INITIATIVE

INSTRUMENT ANALYSIS
SEPTEMBER 2024



The Amazon Food&Forest Bioeconomy Financing Initiative

LAB INSTRUMENT ANALYSIS

September 2024

DESCRIPTION & GOAL

A vehicle that provides affordable loan products to small businesses and Indigenous and local community-led socio-bioeconomy ventures in the Amazon biome. Through a proprietary fintech platform, it also promotes partnerships and impact assessment tools that contribute to climate mitigation and strengthen community adaptation and resilience.

SECTOR

Land Use/AFOLU, Sustainable Agriculture, Forestry

FINANCE TARGET

Commercial and impact debt, philanthropic, and guarantees providers

GEOGRAPHY

Brazil, Amazon biome

The Lab identifies, develops, and launches sustainable finance instruments that can drive billions to a low-carbon economy. The 2024 Lab cycle targets four thematic areas (mitigation, adaptation, high-integrity forests, and sustainable agriculture and food systems) and five geographic regions (Brazil, East & Southern Africa, India, Latin America & the Caribbean, and the Philippines).

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SUMMARY

The Amazon rainforest faces an urgent threat from land-use conversion, which has severe climate and biodiversity impacts and is currently the main source of Brazilian greenhouse gas emissions. The situation also increases the social vulnerability of Indigenous Peoples and Local Communities (IPLCs) residing in the Amazon biome that rely on the healthy maintenance of its landscapes for their livelihoods.

Socio-bioeconomy ventures in the Amazon, such as non-timber forest product sourcing, community-based tourism, clean energy development, and arts and crafts, can play a significant role in supporting regenerative practices in the region. However, local, market and financial barriers hinder capital flows to the sector, creating resistance to private sector investments. These barriers range from lack of financial access to challenges in local engagement.

As investors and companies undertake measures to meet their sustainability goals, the Amazon Food&Forest Bioeconomy Financing Initiative finds, assists, de-risks, and finances local regenerative businesses within the socio-bioeconomy. Mobilizing private capital, the vehicle provides affordable debt products to businesses and communities local to the Amazonian biome, aiming to achieve climate mitigation and strengthen community adaptation resilience in the region.

The Lab Secretariat recommends endorsing this instrument as it meets its four criteria.

- **Innovative:** The idea provides capital and the enabling conditions for investments in Amazon's socio-bioeconomy, powered by its proprietary application platform¹ (digital platform) that targets a dual small business and local community client base within the local development ecosystem.
- **Actionable:** The proponents have established a robust coalition of on-ground partners and a wider network with 17 pilots underway and +USD2M deployed.
- **Financially Sustainable:** The proposed blended structure will establish a first-loss tranche to adjust risk-return. As a track record is proven, the built investor confidence can attract more commercial investment over time.
- **Catalytic:** The model creates a horizontally scalable and adaptable solution for sustainable development and financial inclusion across similar regions.

¹ More information on the platform can be found [here](#).

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CONTEXT

The Amazonian socio-bioeconomy offers a solution for forest conservation while improving livelihoods, but investors still struggle to find risk-controlled and impactful opportunities.

“A new bioeconomy of healthy, standing forests and flowing rivers will only emerge if it is part of a broad process of improving the living conditions of those who live in the Amazon” ([Abramovay et al., 2021](#)).

The Amazon rainforest faces an urgent threat from land-use conversion. This process primarily involves turning forests into farmland, urban areas, and mining sites. It is the main source of Brazilian greenhouse gas emissions, accounting for 48% of total emissions. This representation increases to 79% when evaluating Amazonian states ([SEEG, 2024](#)). Additionally, as a major carbon sink, the Amazon Rainforest plays a critical role in sequestering carbon emissions. Further deforestation of the rainforest jeopardizes this critical function. Land-use conversion also has wider negative social impacts, such as community displacement, loss of livelihoods, and land tenure issues. If the land use conversion trend continues, it could create a domino effect, where deforestation in certain areas induces a systemic land degradation process in other regions due to changes in rainfall patterns ([CPI, 2023](#)). This could lead to a point of no return with global consequences and heightened social vulnerability for local IPLCs residing in the Amazon biome that rely on the healthy maintenance of its landscapes for their livelihoods.

IPLC-led sustainable ventures such as forest product sourcing, community-based tourism, clean energy development, and arts and crafts are examples of businesses that make up the socio-bioeconomy, which can significantly support regenerative practices in the region. This sector aligns economic activities with the biome's biocapacity, which avoids disrupting the complex ecological balances essential for the health of the forest and rivers, which are vital for the population's livelihood. Market research on the Brazilian Amazon, centered on 13 key native products, reveals a current gross output value of USD 5.1 billion ([Nobre et al., 2023](#)). However, financing for these products between 2021 and 2023 amounted to just USD 0.3 billion on average per year ([CPI, 2024](#)). Local, market, and financial barriers hinder capital flows to the sector, creating resistance to private sector investments.

Encouragingly, the latest update in Brazil's Nationally Determined Contribution (NDC) highlights the government's commitment to zero deforestation by 2030 ([Brazil, 2023](#)). This goes beyond existing regulations and emphasizes the creation of resilient livelihoods, especially for women and IPLCs, setting the stage for the private sector to support socially conscious financial instruments that strengthen Amazon's socio-bioeconomy.

The Amazon Food&Forest Bioeconomy Financing Initiative, developed by Impact Bank and The Nature Conservancy Brazil (TNC), provides financial support through a fintech platform to enhance the bankability of local regenerative businesses. The initiative aggregates cross-sectoral projects and fosters partnerships with ecosystem enablers to help promote the development of local regenerative businesses. Additionally, it offers impact assessment tools for monitoring and traceability to ensure that the initiatives have measurable and transparent outcomes. The instrument can build investor confidence and pave the way for private capital involvement by providing initial capital and demonstrating successful outcomes.

CONCEPT

1. INNOVATION

The Amazon Food&Forest Bioeconomy Financing initiative seeks to overcome barriers to support IPLC-led ventures' increasing demand for financing and know-how by leveraging its proprietary fintech technology.

The development of the socio-bioeconomy in the Amazon is impeded by insufficient private capital and ineffective engagement with local communities. This situation limits micro, small & medium enterprises (MSMEs), cooperatives, associations, and producers (the foundation of the socio-bioeconomy) from accessing the necessary capital for their operations. Additionally, investors face challenges in identifying risk-mitigated and impactful investment opportunities, where the illiquidity and lack of a proven track record of its proponents hinder the scaling of these investments. The Amazon Food&Forest Bioeconomy Financing Initiative seeks to overcome these barriers supported by its proprietary fintech technology.

1.1 **BARRIERS ADDRESSED: FINANCIAL ACCESS, TRANSACTION COSTS, AND IPLC ENGAGEMENT**

Financial access. IPLCs in the Amazon face familiar challenges that hinder their ability to gain access to funding, such as lack of credit history, property rights, limited financial and general infrastructure, marginalization (isolation), systemic biases, and risk perception. In addition, these groups lack the know-how to gain further market access and structure and develop proposals to clarify their revenue streams and provide a demonstrable viable return on investment.

Transaction costs associated with small-ticket sizes. The IPLC customer segment may command high administrative costs, where the funder faces issues such as excessive processing, underwriting, and servicing of small loans, which can be disproportionately high compared to the revenue generated from these loans. This includes costs for documentation, approval processes, and account management. This leads potential funders to conclude that they may not achieve economies of scale with small ticket sizes, making them less efficient and less profitable.

IPLC Engagement. IPLCs are critical stakeholders in socio-bioeconomy projects, as their cooperation and participation are essential for the success and sustainability of these initiatives. However, building trust can be difficult due to past experiences of exploitation, lack of communication, and cultural differences. Effective engagement requires a meaningful presence in the region, directly or through partnerships, to build relationships and ensure projects align with community needs and priorities.

1.2 **INNOVATION: A DIGITAL BANKING PLATFORM WILL STREAMLINE OPERATIONS, REDUCE COSTS, AND SUPPORT COMMUNITY ENGAGEMENT**

The Amazon Food&Forest Bioeconomy Initiative overcomes the primary barriers impeding funding for IPLCs in the Amazon biome. Table 1 outlines the solutions provided by the instrument.

Table 1: Amazon Food&Forest Bioeconomy Initiative’s Solutions to the Primary Barriers Impeding Financing the Socio-bioeconomy in the Amazon Biome

Barrier	Solution
Financial Access	The mechanism will leverage Impact Bank’s digital banking platform, offering an accessible and comprehensive system for financial services. This platform streamlines account creation and ensures transparency, accountability, and digitalization throughout all stages, from the initial setup to repayment and the delivery of impact outcomes, centralizing all decision-making, financial, and impact monitoring processes. Additionally, a philanthropic component will play a pivotal role in nurturing the ecosystem, creating enabling conditions for bankable opportunities through partnerships with local organizations.
Transaction Costs	A diversified portfolio approach aggregates multiple small projects at different development stages to raise higher investment amounts, thereby increasing the overall investment size and diversifying risk.
IPLC Engagement	The Amazon Food&Forest Bioeconomy Initiative will maintain a substantial regional presence, either directly or through partnerships, ensuring: <ol style="list-style-type: none"> <li data-bbox="475 987 1378 1048">(1) Collaboration with local organizations and leaders to build trust and align projects with community needs and priorities. <li data-bbox="475 1072 1386 1162">(2) Providing governance, management, technical and financial assistance support, and other local needs to empower communities and ensure their active participation.

The success of initiatives aimed at developing the socio-bioeconomy in the Amazon depends on effectively addressing these interrelated barriers. Designed to address local challenges while enabling private investment, the instrument reduces costs, simplifies bureaucracy, and ensures efficiency. Furthermore, the initiative operates with deep respect and adherence to rigorous procedures regarding indigenous peoples and local communities, following "The Voice, Choice and Action Framework" (VCA) from [The Nature Conservancy \(2022\)](#). It is deeply committed to respecting their rights and cultural heritage.

The project ensures that all financed initiatives are developed closely with these communities, adhering to Free, Prior, and Informed Consent (FPIC) protocols. This approach guarantees that their voices are heard and that their knowledge and traditions are integral to the project design and implementation. Furthermore, it prioritizes sustainable practices that align with the communities' values, ensuring their livelihoods and ecosystems are preserved and enhanced through the project's activities.

1.3 INNOVATION: PROPRIETARY TECH AND STRONG INSTITUTIONAL RELATIONSHIPS

The table below outlines similar instruments operating in the socio-bioeconomy sector in Brazil and The Amazon Food&Forest Bioeconomy Initiative's differentiation,

Table 2: Comparable Instruments and Differentiators

Similar Instruments	Overview	Amazon Food&Forest's Differentiation
<u>Pronaf Bioeconomia (Brazilian Development Bank)</u>	The program subsidizes finance for registered family farmers in Brazil and supports sustainable practices and environmental technologies.	Strengthens sustainable value chains in the Amazon by attracting private capital for MSMEs and providing technical assistance. It focuses on local communities without access to commercial or subsidized credit.
<u>Amazonia Impact Fund I (Amazonia Impact Ventures)</u>	A USD 25 mn blended finance debt-vehicle with senior and subordinated tranches to invest in high-impact agricultural and forest businesses, providing technical assistance. An experienced team working in 3 Amazonian countries: Peru, Ecuador, and Colombia.	Amazon Food&Forest is a similar-sized debt-vehicle (USD 23.12 million) but focused on the Brazilian Amazon. Also, Amazon Food&Forest features private debentures with a philanthropic fund, a structure lighter and less expensive than regulated capital markets funds.
<u>Amazônia Sustainable Supply Chains Mechanism (Lab Alumni 2021)</u>	Debt bond mechanism leveraging offtake agreements for forest-compatible products to provide upfront finance, technical assistance, and community resources that catalyze sustainable socio-bioeconomy.	Enhanced outreach to remote areas and amplify off-takers (beyond Natura) to improve capillarity by combining: (1) On-ground presence through trustworthy local partners to conduct data-driven market research to align initiatives with market demands. (2) Digital platform for managing operations, finances, and impact.
<u>Conexus Impact Fund (Lab Alumni 2020)</u>	A fund designed to facilitate access and redirect federally subsidized credit programs targeted at family farmers (PRONAF) to sustainable production systems that keep forests standing.	Amazon Food&Forest focuses on leveraging public and philanthropic capital to attract commercial investments rather than focusing on PRONAF loans.
<u>CRA Verde (Santander, Conexus e Belterra)</u>	A debt instrument designed to provide credit to local ILPC cooperatives and associations for sustainable production systems that protect forests.	Although they share a similar pipeline-building approach, Amazon Food&Forest sources investment through private debentures, which it considers more cost-effective.
<u>CRA Tabôa (Grupo Gaia)</u>	A debt bond mechanism offering fair credit for family farmers for cocoa production with technical assistance, promoting high-quality agroecological production in the Atlantic Forest biome.	Amazon Food&Forest has a wider customer reach, focusing on local communities in the Amazon biome and targeting multiple value chains.
<u>Multi-biome Fund (fama re.capital/ Grupo Gaia)</u>	Invest in socio-bioeconomy financial assets (e.g., CRA Conexus/Belterra, CRA Tabôa, CPR Amazonbai)	It complements this initiative, acting as a pipeline generator for this fund.

2. INSTRUMENT MECHANICS

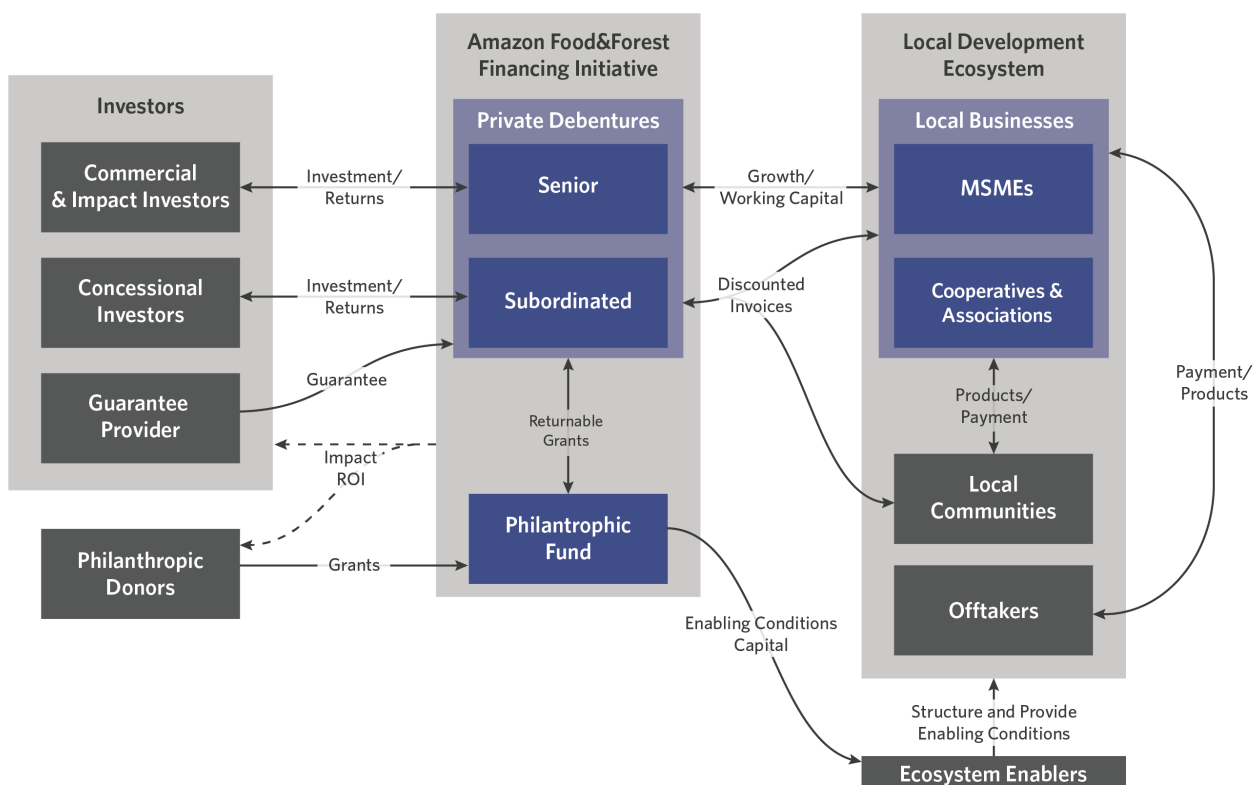
An innovative approach of sourcing funding through private debentures with a philanthropic fund to finance businesses and communities, providing a holistic solution for the local development ecosystem.

The Amazon Food&Forest Bioeconomy Financing Initiative was co-developed by Impact Bank and The Nature Conservancy Brazil (TNC). Impact Bank is a global impact finance platform offering end-to-end solutions that ensure efficiency and transparency for impact initiatives in Brazil. TNC is a global environmental non-profit dedicated to the conservation of land and water resources. The proponents have the relevant expertise for deploying this initiative with capabilities such as issuing private asset-backed securities, providing cutting-edge fintech solutions, impact monitoring, reporting, and verification, and the successful management of philanthropic funds.

The Initiative is composed of two features:

- **Private debentures issued in two tranches:** This debt instrument will have (1) a senior tranche for commercial and impact investors seeking commercial returns and (2) a subordinated tranche for concessional investors.
- **Philanthropic fund:** Managed by the proponents, the fund will support (1) set-up costs and operational expenses of the whole mechanics, (2) technical assistance funding for ecosystem enablers, (3) additional funding for the subordinated tranche as returnable grants, to incentive private capital and a (4) loan loss reserve.

Figure 1: Instrument Mechanics



This dual structure is essential for the local development ecosystem. While some MSMEs can assume debt, the underlying communities, associations, and cooperatives require philanthropic capital to improve governance, management, and other local needs. The combination of private debentures and the philanthropic fund will allow the Amazon Food&Forest Bioeconomy Financing Initiative to create the right incentives for locally grounded socio-bioeconomic development.

Investors in the debentures will range from commercial, impact, and concessional funders. The proponents envision implementing a development finance institution guarantee to de-risk and address potential loan defaults. The existence of a guarantee can serve to reduce the need for the subordinated tranche and/or the returnable grants provided by the philanthropic fund. Donors will fund the Philanthropic Fund.

The right-hand side of Figure 1 illustrates the goal of this initiative. By providing growth and working capital loans to local businesses and discounted invoices to local businesses and communities, the initiative will incentivize and promote activities and interventions that prevent land-use change, support conservation, and achieve mitigation, adaptation, and resilience. Impact Bank's digital platform underpins these efforts, making the successful operation of this scale possible by aggregating multiple small-scale debt needs into an investable pipeline for investors.

The philanthropic fund will provide funding for technical assistance provided by ecosystem enablers. These enablers will focus on building trust and cooperation with IPLCs by providing governance and management support, particularly for pre-commercial communities. Key interventions include effective communication, capacity building, and aligning projects with community needs. Additionally, the fund will support the subordinated tranche when required to incentivize private capital and serve as a loan loss reserve for loss not covered by the guarantee.

2.1 POTENTIAL CHALLENGES TO INSTRUMENT SUCCESS

While the benefits are clear, the associated risks below can affect a successful deployment and impact.

- **Technical risks:** Structuring and implementing a blended finance model for the Amazon biome's socio-bioeconomy involves navigating several complexities. These include designing effective funds allocation strategies, monitoring the impact of investments, and delivering technical assistance to MSMEs and IPLCs. Impact Bank's strong local presence, in collaboration with various organizational partners for each project, ensures effective delivery of technical assistance and seamless navigation within the local context.
- **Interest misalignment between investors and donors:** Donors and investors in the debenture's subordinated tranche must be aligned in their objectives, as their capital is pivotal in attracting commercial investments, especially given the early stage of investments in the Amazon socio-bioeconomy. This can be effectively managed by clearly delineating the outcomes of the investment structure and aligning them with the specific mandates of each investor and donor.
- **Financial risks** include cash flow issues, currency fluctuations, and investment illiquidity. A portfolio approach is essential to address these risks, incorporating robust financial planning, diversification of pipelines and funding sources, and technical assistance to

local businesses. This strategy aims to enhance financial stability, ensure sufficient capital flow, and effectively manage default risks within the pipeline.

- **Pipeline risks:** In this context refers to challenges in engaging with IPLCs and ensuring a steady flow of viable projects that align with its goals. Risks include social issues such as community opposition, land rights concerns, and limited demand for socio-bioeconomic products. The technical assistance provided by the ecosystem enablers will serve to mitigate this risk by addressing supply chain inefficiencies and enhancing market access.
- **Political and regulatory risks** The initiative benefits from Brazil's commitment to zero deforestation by 2030, which provides a supportive regulatory framework. However, political instability or policy shifts could threaten project continuity. To mitigate these risks, the initiative should actively engage with policymakers, analyze the regulatory environment thoroughly, and develop contingency plans. Diversifying investments and aligning them with national sustainability goals can reduce exposure to political and regulatory uncertainties.

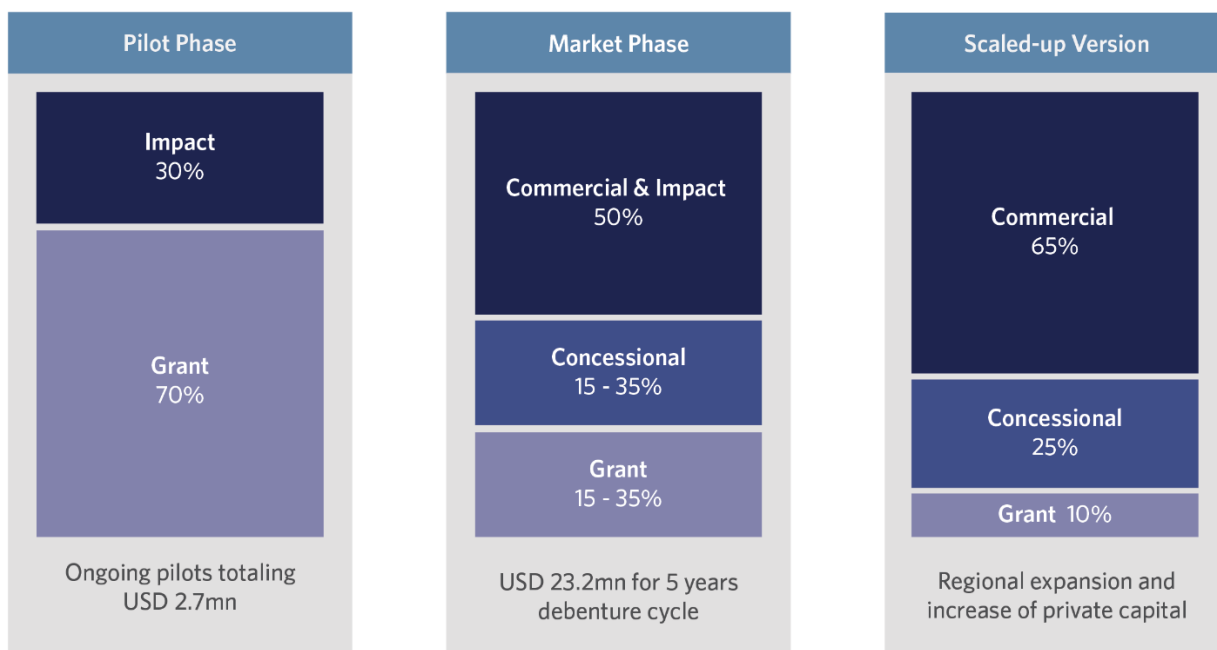
MARKET TEST AND BEYOND

3. IMPLEMENTATION PATHWAY AND REPLICATION

The Amazon Food&Forest Bioeconomy Financing Initiative has 17 pilots planned across conservation units and IPLCs lands. After the model is proven, the initiative aims to raise USD 23.12 million for the market phase.

The initiative's implementation strategy is divided into three sequential development phases. Figure 2 illustrates these phases with the envisioned capital allocation requirements for each.

Figure 2: Implementation strategy



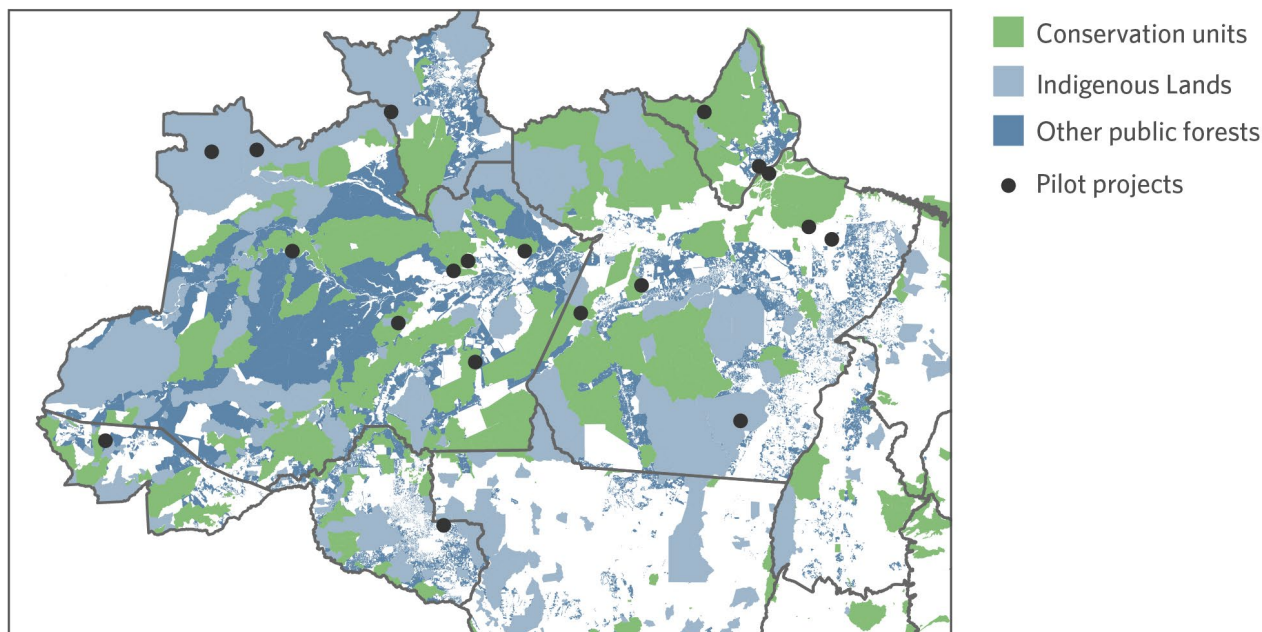
3.1 PILOT PHASE

Pilots to test the Amazon Food&Forest Bioeconomy Financing Initiative's main value chains are set to target IPLCs in the Amazon biome. Figure 3 shows the location of 17 pilots spread across different conservation units and IPLCs lands.

The total funding deployed in the pilots is currently USD 2.7 million. Project pipeline was developed through engagement with the proponents' current local organization network with deep experience working with IPLC and their territories.

To continue to build a trustful, impactful, de-risked, and assisted pipeline, Amazon Food&Forest has been developing partnerships with local actors who have been structuring value chains and accelerating forest-related businesses for decades and have been providing technical assistance for different purposes (management, governance, best production practices, branding, product, logistics, certifications and licenses, and market access). These actors include organizations such as incubators, accelerators, NGOs, consultancies, and companies, like the Sustainable Amazon Foundation (FAS), Idesam and AMAZ.

Figure 3: Amazon Food&Forest Bioeconomy Financing Initiative Pilot Location



Pilot projects have been structured on a 70-30 Philanthropic to Impact investment basis. These pilots are providing the critical track record, data collection, and expertise required to move on to the next implementation phase. Box 1 below showcases examples of two implemented projects.

Box 1: Pilot project case studies of the Amazon Food&Forest Bioeconomy Financing Initiative

Case study 1

- Partners: Muda Meu Mundo.
- Size: USD 52.1 thousand (BRL 260 thousand).
- Structure: Financed 40 small family farmers through 375 discounted invoice operations over six months through Impact Bank's accounts.
- The pilot focused on structuring the invoice discounts operation (regulatory, agreements, market fit, and revenue streams) and on developing the impact monitoring framework.
- KPIs include (i) 202 ha of cultivated area with sustainable practices, (ii) 80 tons of healthy food produced, (iii) 22.4 tons of food waste avoided, and (iv) 50% (BRL 1,398, USD 280) increase in monthly income per producer, which is equivalent to Brazil's minimum wage (2024).

Case study 2

- Partners: Conexsus (Lab Alumni), a large international non-profit, a large rubber off-taker, and a local technical assistance provider.,

- Size: USD 295 thousand (BRL 1.4 million).
- Structure: Financed 10 rubber tapper associations, which demonstrated enormous potential for reducing defaults when using Impact Bank's escrow accounts to guarantee receivables. Eight across 10 associations utilized Impact Bank's escrow accounts and had zero defaults. The cases of default occurred in the absence of escrow accounts.
- The 2024 season is financing 12 associations, initially with more than USD 601 thousand (BRL 3 million), and Impact Bank's escrow accounts have become a basic requirement.
- Conexsus and Impact Bank are now replicating the solution for other trade finance operations, starting with the açai supply chain, in collaboration with a large açai off-taker and a community-based cooperative.

The next step is to include private capital and implement the blended finance mechanism as designed.

The continued pilot phase aims to (i) demonstrate the feasibility of the financial mechanism, (ii) the ability of MSMEs to repay the debt, (iii) the market fit with off-takers, (iv) raise private capital and provide returns, (v) increase track record, and (vi) demonstrate the instrument's potential to finance different value chains. Table 3 provides an overview of planned pilots across different economic sectors in the Amazon region:

Table 3: Planned Amazon Food&Forest Pilots

Sectors	Value/Initial resource	Overview
Agroforestry	USD 32,500 (BRL 162,300)	One pilot financing irrigation systems for agroforestry coffee in Indigenous Territory Sete de Setembro in partnership with cooperative COOPAITER.
Community-based tourism	USD 246.9 thousand (BRL 1.23 million)	Seven pilots for developing sustainable tourism initiatives promoting cultural heritage and environmental conservation. Revolving funds will be developed in cooperation with the Sustainable Amazon Foundation (Fundação Amazônia Sustentável – FAS), aiming to finance 35-40 businesses during the 5-yr timeline.
NFTPs	USD 1.93 million (BRL 9.67 million)	Four pilots to provide working capital to MSMEs, facilitating the delivery, purchase, or export of NFTPs like fruits, rubber, and nuts. Pilots are conducted in partnership with Conexsus, 100% Amazonia, Sementes do Marajó cooperative, Lush, and Amazon Investor Coalition.
Indigenous handicrafts	USD 939,000 (BRL 468.8 thousand)	One revolving fund in partnership with Tucum Brasil and Idesam for the acquisition of indigenous arts, thus facilitating local artisans to scale their businesses and reach broader markets.

Payment for Environmental Services (PES)	USD 655,000 (BRL 327,000)	Partnership with ReSeed to implement three pilots for payment for environmental services in three communities.
Productive Infrastructure	USD 293,000 (BRL 1.46 million)	Partnership with Treesistance for financing IPLC-led small-scale renewable energy projects to meet local businesses' energy needs and strengthen the organizations in their productive activities.
Total	USD 2.67 million (BRL 13.3 million)	-

Note: Official FX conversion rates for BRL to USD from the World Bank. Exchange rate (Year – BRL/USD): 2023 – 4.99

3.2 MARKET PHASE

The market phase introduces the instrument structure outlined in Section 2, combining philanthropic and concessional capital to de-risk commercial and impact investments. This approach, modeled to increase ticket sizes, aims to attract private investments through portfolio risk management. The phase aims to expand activities across various socio-bioeconomy value chains within conservation units and IPLCs territories in the Brazilian Amazon biome.

Based on the blended finance structure, this phase will provide interest rates set to provide competitive and fair terms for MSMEs while meeting the return expectations of private and concessional investors.

The initiative seeks to extend its reach to additional Amazonian communities while gradually reducing reliance on concessional capital, demonstrating the market's maturity and readiness for more substantial private investment.

The fund aims to raise USD 23.12 million at this phase, requiring 50% of commercial and impact capital and estimates between 15% and 35% concessional debt for the first loss.

3.3 SCALE-UP VERSION

The proponents have confidence that the initiative can grow well past its market phase value. New indicators reveal that the bioeconomy is thriving in the Amazon. Even with limitations inherent to the collection of primary data and traceability of informal activities, it can be found that the bioeconomy already generates an annual gross value of production of BRL 15 billion (USD 3 billion) in the Brazilian Amazon. The bioeconomy will emerge as an important GDP component through different scenarios by 2050. The study was limited to only 13 primary products and their derivatives from the secondary and tertiary sectors – the bioeconomy's GDP in the Brazilian Legal Amazon can reach from BRL 22.3 billion to 38.5 billion (USD 4.5 billion to 7.7 billion) in 2050 ([Nobre et al., 2023](#)).

At the scale-up phase, the proponents aim to target 65% commercial capital, reduce the need for grant capital, and implement other commercial risk-mitigation structures, such as portfolio-level guarantees. The scale-up phase will target different socio-bioeconomy value chains and could potentially expand to different biomes within those value chains.

4. FINANCIAL IMPACT AND SUSTAINABILITY

4.1 QUANTITATIVE MODELING

MODEL INPUTS AND METHODOLOGY

The Lab secretariat developed an illustrative model of the instrument's market phase, as described in Section 3. Below are detailed lending characteristics and the source of funding for the 10-year facility.

Table 4. Lending Characteristics of the Instrument at Market Phase

Product	Allocation	Amount (USD)	~Ticket size (USD)	Payouts	Term (months)
Loans	5%	1,000,000	20,000	50	18
	10%	2,000,000	30,000	67	18
	10%	2,000,000	80,000	25	24
	25%	5,000,000	100,000	50	24
Discount Invoice	5%	1,000,000	15,000	67	2
	5%	1,000,000	20,000	50	2
	20%	4,000,000	50,000	80	3
	20%	4,000,000	100,000	40	3
Total	100%	20,000,000	~68,750	429	~12.5

Note: All product types are priced at a 12% Annual fixed interest. The default rate is set at 5% for loans and 1% for discount invoices.

The distinct product types are designed to meet the demand for target sectors described in Table 3.

Table 5. Source of Portfolio Investment Funding

Instrument	Amount (USD)	%	Indicative Interest
Debentures			
Senior Tranche			
Commercial & Impact	10,000,000	50%	8.0%
Subordinated			
Concessional	8,550,000	43%	4.5%
Philanthropic Fund	1,450,000	7%	1.0%
Total Debenture	20,000,000	100%	~6.0%

In practice, the 10-year facility portfolio funding will be split into two subsequent 5-year debentures, providing a reduced timeframe for investors to be comfortable. In addition, note that the philanthropic fund plays a crucial role in supporting the facility's ability to provide a higher rate of return for commercial capital.

In this phase, the instrument is anchored on the philanthropic fund element, which is detailed in Section 2. Table 6 below details the capital requirements at inception for the philanthropic fund.

Table 6: Capital Allocation – Philanthropic Fund

Philanthropic Fund	Amount (USD)
Setup costs	171.320
Operational costs	1.555.200
TA support	1.000.000
Catalytic tranche	1.450.000
Guarantee cost	400.000
Total	4.576.520

By absorbing all costs of the structure, the philanthropic fund also ensures that the whole capital raised from investors and the catalytic tranche (USD 20 million) is allocated towards portfolio investments. Important to note that the amount allocated for a portfolio guarantee cost can also be used to support defaults in the case that a guarantee provider is unwilling to provide an acceptable offer.

As presented in the tables above, at market phase the instrument aims to mobilize a total of USD 23.12 million.

4.2 PRIVATE FINANCE MOBILIZATION AND REPLICATION POTENTIAL

The mechanism has significant potential to mobilize private finance by demonstrating sustainable investment viability in the Amazon region's socio-bioeconomy. The market phase instrument assumes an estimated 429 deployments² supported with USD 20 million.

The proponents believe that if the following assumptions hold:

- i) the implementing partners have reached an operational learning curve and institutional maturity;
- ii) the market demand for socio-bioeconomy products has increased;
- iii) the business ecosystem is more developed (improved revenues, management, and creditworthiness); and
- iv) the workforce engaged in sustainable value chains is higher.

The estimated total potential deployment in the region is estimated at 595³ which translated into the mobilization potential of USD100 million.

Initially focused on the Brazilian Amazon, the instrument can potentially be replicated in other Amazonian countries, recognizing the particularities of each participating community.

² 192 loan and 237 invoice discount operations.

³ 190 loan and 405 invoice discount operations.

5. ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT

The support provided to businesses and IPLCs in Amazon's socio-bioeconomy will improve livelihoods and biodiversity and avoid land-use emissions measured and reported through Impact ROI.

The proponents take an integrated approach to screening and monitoring projects utilizing Impact Return on Investment (Impact ROI) to assess and value investments' social, environmental, and financial returns. Impact ROI incorporates established frameworks such as Social Return on Investment (SROI) and progress against selected metrics defined by the Global Impact Investing Network (GIIN), Impact Reporting and Investment Standards (IRIS), and the initiative's targeted SDGs

The proponents expect the impact metrics currently being achieved in the established pilots will be replicated and scaled through each of the instrument's implementation stages.

5.1 ENVIRONMENTAL IMPACT

Estimate the impact of the USD 2.7 million deployed in pilot projects, which will address land use emissions and maintenance of biodiversity enhancement, as illustrated in Table 7.

Table 7: Environmental Indicators

Impact	Sector	Indicators	Pilot estimate
Avoided Land-Use Emissions*	Climate Mitigation	<ul style="list-style-type: none"> # of carbon removals/avoided (tCo2eq/ha) 	<ul style="list-style-type: none"> 1,557,839 tCo2eq
Maintenance of Biodiversity Hubs	Biodiversity	<ul style="list-style-type: none"> # of hectares of forest protected from deforestation due to initiative-supported projects 	<ul style="list-style-type: none"> 647,102 ha

**Considers only projects that provide carbon removals/avoided emission methodologies*

5.2 SOCIAL AND ECONOMIC IMPACT

During the pilot phase, the proponents estimate that the venture will address gender integration, improved livelihoods, and market development, as illustrated in Table 8.

Table 8: Socio-economic Indicators

Impact	Indicators	Pilot estimate
Gender Integration	<ul style="list-style-type: none"> % increase in women's involvement in sustainable socio-bioeconomy activities 	<ul style="list-style-type: none"> 25% increase
Improved livelihoods	<ul style="list-style-type: none"> # of families impacted % revenue increase for families 	<ul style="list-style-type: none"> 1,820 families 136.34% increase
Market Development	<ul style="list-style-type: none"> % revenue increase of local MSMEs # of local MSMEs benefiting from the structure 	<ul style="list-style-type: none"> 191.4% increase 32 MSMEs

5.3 WIDER ENVIRONMENTAL AND SOCIO-ECONOMIC CONTEXT









The initiative addresses climate mitigation and adaptation by promoting sustainable socio-bioeconomy activities to protect the Amazon rainforest and empower local communities. Fostering practices such as community-based tourism, NTFP production, and clean energy development balances economic growth with environmental conservation, enhancing the Amazon ecosystem's resilience.

The Amazon Food&Forest Bioeconomy Financing Initiative can also be categorized as a Natural Climate Solution (NCS) based on the following key principles ([Griscom, Bronson, et al. 2024](#)):

- Nature-based: results from the human stewardship of ecosystems and does not move ecosystems further from their natural state.
- Sustainable: it sustains biodiversity, food production, fiber, and wood production and sustains climate adaptation services.
- Climate-additional: it provides additional climate mitigation that would not happen without human intervention through durable mitigation, and it is not used to compensate for readily abatable emissions.
- Measurable: quantified in terms of cumulative effects on radiative forcing.
- Equitable: it respects human rights and Indigenous self-determination.

By aligning the biome's biocapacity with improving livelihoods, the initiative addresses the above key principles contributing to several UN Sustainable Development Goals (SDGs), as provided in Table 9.

Table 9: Applicable Sustainable Development Goals

SDG	Description
	It prevents habitat loss and maintains ecosystem services by enhancing NTFPs, community-based tourism, and other non-harmful economic activities, ensuring sustainable forest management and biodiversity conservation in IPLC territories (15.1).
	<ul style="list-style-type: none"> • It promotes climate mitigation measures by reducing deforestation and supporting sustainable practices (13.2). • Strengthened communities are better equipped to adapt to extreme weather events and shifts in local ecosystems (13.1).
	It enhances economic stability and growth for IPLCs by improving access to finance, creating jobs, and increasing income (8.1, 8.2, 8.3).
 	It reduces economic inequalities (10.2) by providing financial support and opportunities to marginalized communities, reducing poverty, and enabling them to withstand and adapt to external pressures (1.3, 1.4)
 	It fosters the growth and integration of socio-bioeconomy MSMEs into financial markets (SDG 9.3) and supports businesses that adhere to sustainable practices of production (SDG 12.2)
	It promotes gender equality by ensuring women's participation and leadership in sustainable local businesses, enhancing their economic and social status (5.5, 5. a).

NEXT STEPS

Impact Bank and TNC plan to continue establishing and running pilots to further strengthen the instrument's investment thesis and develop relationships with potential off-takers and investors striving to align desired impact metrics.

After establishing the market phase instrument, the proponents will focus on hiring a law firm to issue a legal opinion on the proposed structure to ensure the structure is sound and resolve any issues that may arise with the conceived initiative's structure. In parallel, the proponents will be looking to get involved with a Development Finance Institution (DFI) to discuss a guarantee and stress-testing the financial model with private investors.

Finally, the proponents will further engage with donors to raise capital for the philanthropic fund, which is crucial in the instrument set-up and the initiative's ability to attract private capital.

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