

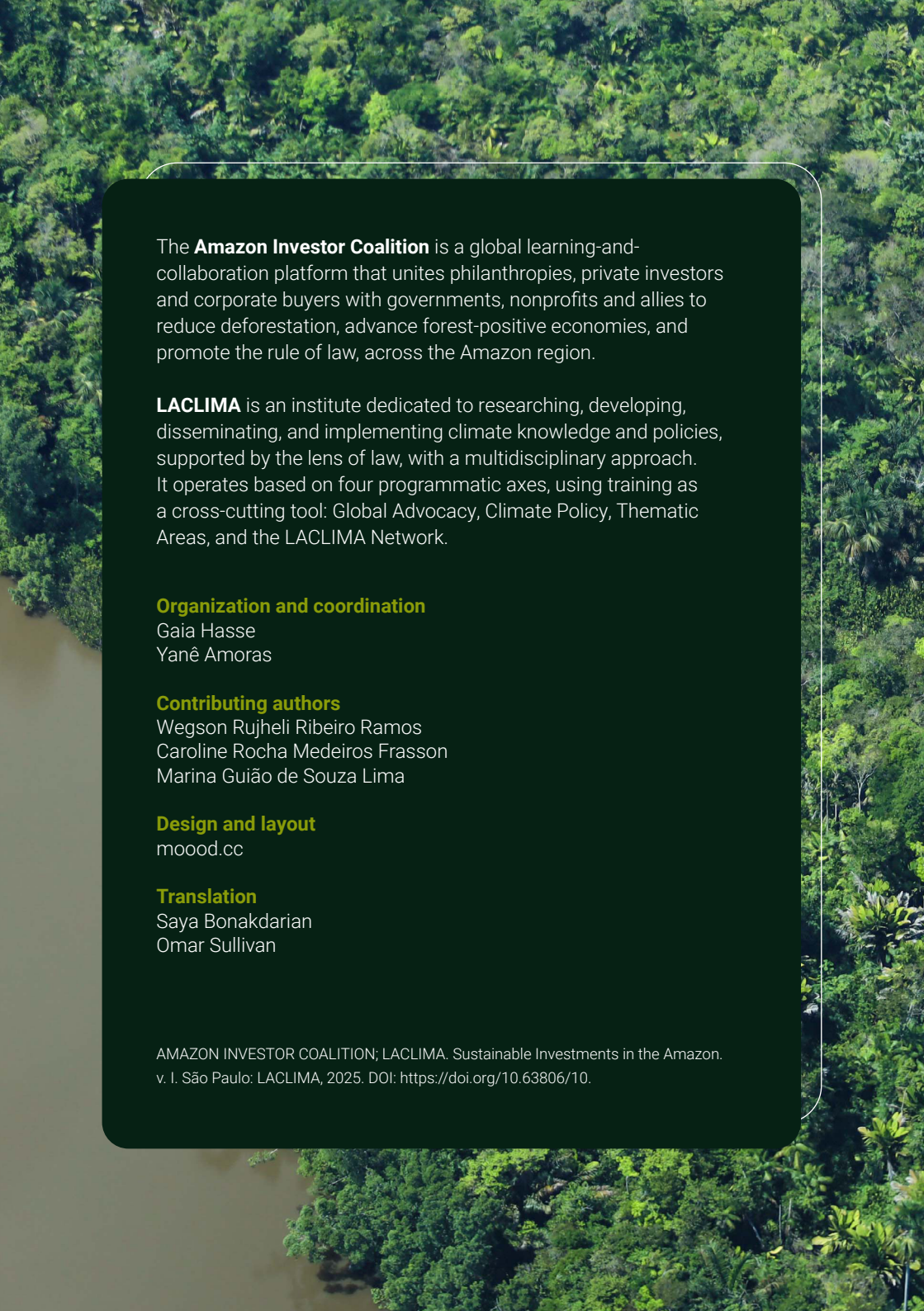
SUSTAINABLE INVESTMENTS IN THE AMAZON

VOLUME I



AMAZON INVESTOR COALITION





The **Amazon Investor Coalition** is a global learning-and-collaboration platform that unites philanthropies, private investors and corporate buyers with governments, nonprofits and allies to reduce deforestation, advance forest-positive economies, and promote the rule of law, across the Amazon region.

LACLIMA is an institute dedicated to researching, developing, disseminating, and implementing climate knowledge and policies, supported by the lens of law, with a multidisciplinary approach. It operates based on four programmatic axes, using training as a cross-cutting tool: Global Advocacy, Climate Policy, Thematic Areas, and the LACLIMA Network.

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AMAZON INVESTOR COALITION; LACLIMA. Sustainable Investments in the Amazon.
v. 1. São Paulo: LACLIMA, 2025. DOI: <https://doi.org/10.63806/10>.

WHY INVEST (RESPONSIBLY) IN THE AMAZON?

Although the Amazon inspires global fascination and fuels romantic narratives - sometimes seen as an untouched paradise, other times as an endless frontier of resources - these idealized images rarely capture the multiplicity of peoples, ecosystems, productive systems, and sociopolitical challenges that coexist in a territory of continental dimensions. Ignoring such nuances has proven costly: projects conceived based on imported models, without dialogue with local dynamics, tend to fail or generate adverse impacts.

Therefore, successful investments into the region must be based on methodologies and strategies anchored in Amazonian realities, respecting cultural diversity, environmental complexity, and different community-based decision-making structures. This is the only way to foster a path of development that is inclusive, resilient, and capable of reconciling economic prosperity with the preservation of the standing forest and the well-being of its peoples.

The Amazon Investor Coalition, in partnership with the LACLIMA Institute, is pleased to make available to the public, private, and civil society sectors the Guide on Responsible Investments in the Amazon. Developed from interviews with a wide range of stakeholders active in the region, document analysis and literature review, the publication synthesizes decades of lessons learned on directing resources toward initiatives that combine socioeconomic returns, forest conservation, and climate justice.

This document aims to serve as a bridge between capital, science, and traditional knowledge, inviting all readers to turn principles into practice and to build, together, an inclusive, resilient, and prosperous Amazonian bioeconomy. More than being just a compendium of perspectives and experiences, this guide is a call to action and co-responsibility: investing in the Amazon requires attentive listening, respect for local timelines, and agreements that value local leadership. We hope that the reflections gathered here will serve as a guide for investment decisions that reconcile economic returns, community empowerment, and the protection of one of the planet's greatest socio-environmental treasures.

Echoing Eduardo Galeano, who saw in the 'open veins' of a Latin America drained by its own abundance the source of its misery, we affirm that the Amazon will break this fate when we replace the narrative of exploitation with one that transforms its natural and cultural wealth into shared prosperity and regeneration for peoples, forests and futures.

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INTRODUCTION

Investing in the Amazon demands more than financial resources: it requires deep familiarity with the social, environmental, and cultural realities of the biome. This booklet is based on this premise. It consolidates research and field interviews to inform governments, investors, and communities in building an inclusive bioeconomy capable of generating prosperity without compromising forest integrity.

Our framework deliberately prioritizes situated knowledge. We adopted a qualitative approach to our research grounded in three complementary pillars: semi-structured interviews with key stakeholders, document review, and analysis of academic and institutional sources.

A total of 62 invitations were sent to community leaders, entrepreneurs, representatives of cooperatives and investors. The interviews, conducted via video conference, produced a diverse and anonymized sample, ensuring that a diverse range of territories, ethnic groups and organizations were represented. The testimonies were transcribed, coded into thematic blocks, and processed using the Taguette software, ensuring transparency and traceability throughout the interpretive process.

The research was further supplemented by a review of documents including regulations, public policies and technical reports, as well as bibliographic analysis rooted in transdisciplinary academic and institutional literature. The results are organized into several sections - recurring errors and best practices, legal milestones and enabling conditions, safeguards and community autonomy, risks and opportunities, and recommendations for fair and sustainable practices. The content is organized into two complementary volumes. The primary goal of Volume I is to build a shared understanding of investing in the Amazon among investors, policymakers, entrepreneurs, and Amazonian stakeholders.

This first volume serves a primarily diagnostic function: it maps historical roots of issues, logistical bottlenecks, institutional barriers, and other “recurring errors” that have hindered successful investment in the Amazon. These dimensions are essential for understanding the context into which investments are made, highlighting lessons and structural challenges in the region. The text offers a “contextual X-ray”: investing wisely in the Amazon means recognizing historical, territorial and institutional factors that determine costs, deadlines and risks - and No strategy can be truly sustainable unless it is based on this shared assessment.

BETWEEN ROOTS AND RIVERS: A HISTORICAL- TERRITORIAL PORTRAIT



Photo: Ver-o-Peso Market - Belém/PA

The history of the Amazon is marked by a long trajectory of human occupation, extractive economic cycles, and both state and private attempts to incorporate it into the national development model. Archaeological evidence indicates more than 10.5 thousand years of human presence in the region - the Amazon was home to complex civilizations whose ways of life involved sophisticated resource management, agricultural production adapted to the seasonal floods and droughts conditions, and unique territorial organization. From the refined ceramics of the *Marajoaras* to anthropogenically enriched "terra preta" soils, these practices reflect peoples who mastered seasonal floods and droughts of the rivers with deep ecological intelligence (Neves, 1999), conceiving of the forest as an ally, not an obstacle.

However, the Amazon's history and reality are also shaped by other narratives that have transformed both the landscape and the perceptions surrounding it. With the arrival of colonizers in the 17th century, the first phase of "simplifying" the landscape began - driven by river-

based access - and continued into the mid-20th century, contributing to the de-structuring of traditional territories (Lui & Molina, 2009). This was followed by cycles of "drogas do sertão," when Amazonian spices and oils were extracted for European markets under an exploitative colonial model (Gomes, 2018).

Between 1879 and 1912, the rubber boom transformed Manaus and Belém into sophisticated urban centers - complete with electric trams, public lighting, and palatial architecture - but these advances were underpinned by a cruel system of debt bondage known as "aviamento," which trapped workers, rubber tappers and indigenous peoples in exploitative economic relationships (Silva & Scudeller, 2022).

When the rubber cycle waned after 1910, crushed by Asian competition, the Amazon's main economic engine stalled (Rocha, 2025). In 1953, in an attempt to reignite this economic pulse and reaffirm national presence in the heart of the forest, the government created SPVEA (Superintendence of the Economic

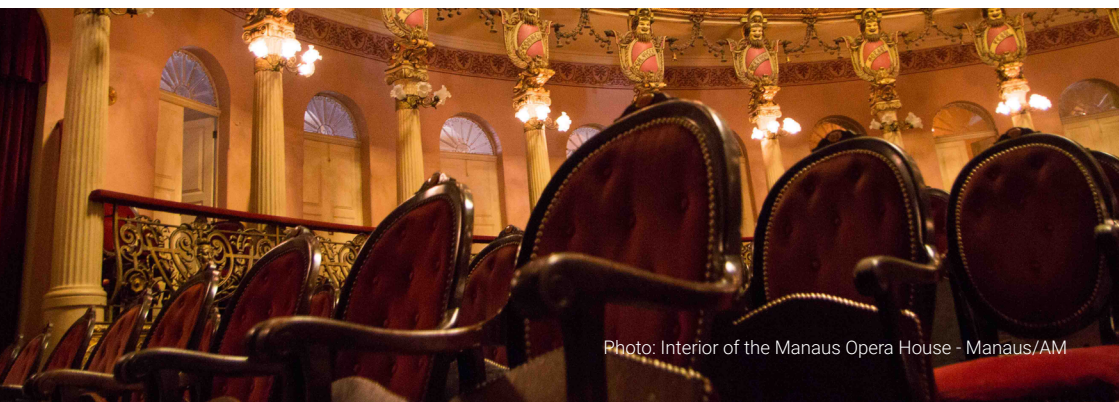


Photo: Interior of the Manaus Opera House - Manaus/AM

Valorization Plan of the Amazon). Thirteen years later, that responsibility passed to SUDAM (Superintendence of Amazon Development), designed to reshape the regional economy and strengthen national borders (Brazil, 2024). Yet these state strategies continued the prior pattern of suppressing traditional occupation of the territory (Lui & Molina, 2009).

Despite a history marked by interventions that often disrupted the forest's own pace, since the 1990s, the Amazon has been reinventing itself as a true laboratory of bioeconomy and the valorization of sociobiodiversity. Value chains grounded in the territory have gained strength, sustained by community-based management of natural resources and by the demarcation of areas that guarantee Indigenous peoples and traditional communities the right to use and protect the forest (Lopes et al., 2023).

TERRITORY AND LOGISTICS: GEOGRAPHY AS A CONDITIONING FACTOR

Brazil's Legal Amazon spans nine states and approximately 5 million km², with an estimated population of 28.1 million distributed among isolated urban centers, regional hubs, and remote areas - highlighting its vastness and relatively low population density (Santos et al., 2021). Historical settlement routes have created persistent logistical bottlenecks.

The Amazon, Solimões, and Madeira rivers and their tributaries have long been the region's logistical arteries for centuries. For example, in the third quarter of 2023, the Amazon Waterway moved over 20 million tons of cargo - accounting for the majority of interior transport in Brazil (Brazil, 2023). Although this mode of transport is central to the movement of cargo and people in the Amazon, its effectiveness is limited by structural issues such as insufficient dredging, poor navigational aids and vulnerability to increasingly frequent and severe climate events, such as prolonged droughts – which are increasingly frequent and intense.

Meanwhile, federal highways play a key role in agricultural frontier areas, but they have unequal structural conditions, and can also be associated with serious socio-environmental problems. For instance, BR-163 (Cuiabá–Santarém) is a reliable highway that drives agribusiness and connects to the Tapajós waterway, while BR-319 (Manaus–Porto Velho) suffers from seasonal degradations, accessibility challenges, and stalled construction due to licensing issues and public concerns over its environmental impacts (Neto, 2020).

These logistical challenges directly affect the everyday life of Amazonian communities. The lack of integration of waterways, roads, airports and rail systems drives up transportation costs, makes it difficult to transport perishables in a timely manner, and restricts access to resources, education, health and technical assistance. For family farmers, extractivists, and entrepreneurs, these bottlenecks make it hard to generate profits and deter sustainable investment initiatives.

The precariousness of the infrastructure, especially in transport logistics, sanitation, and telecommunications, reduces the capacity to add value to local production and inhibits the attraction of sustainable investments. In this context, it is necessary to scale up investments in integrated and territorially sensitive logistical solutions (BRASIL, 2020). The Amazônia 2030 project identifies terrestrial logistics as a critical barrier to development, emphasizing the importance of investments in river transport, the modernization of ports, transshipment points, and multimodal systems to integrate producers with consumer and export centers (Veríssimo et al., 2023). Recognizing the historical trajectory of exogenous interventions and the current emergence of a bioeconomy anchored in socio-biodiversity, it becomes clear that the Amazon's future depends on combining adequate infrastructure with inclusive territorial governance — making the forest a viable and socially just economic asset, rather than a barrier to development.

GUARDIANS OF THE FOREST: THE ORIGIN OF THE SOCIO-BIOECONOMY

Brazil, as a megadiverse country, is home to a socio-biodiversity of inherent value. In the Amazon, this cultural and natural wealth is reflected in the multitude of Indigenous peoples and traditional communities - river dwellers, Brazil nut gatherers, rubber tappers, quilombolas, fishers, babaçu nut breakers, among others - who preserve ancestral knowledge of forest management and agro-extractivism (Lopes et al., 2023). Their ways of life form a cultural, social, scientific, and economic heritage that, as biotechnology advances, is attracting the interest of various industries (Reid, 2009; Ribeiro & Brito, 2018).

This interest does not always translate into benefits for the communities. On the contrary, the threat of biopiracy has grown, defined as the appropriation of genetic resources or traditional knowledge without prior consent or fair benefit sharing (Dawkins, 2017; Torres, 2015). The protection of this knowledge, therefore, is an essential condition for any inclusive bioeconomy strategy.

Since the 1990s, community-based bioeconomy arrangements have emerged, combining cutting-edge science with traditional knowledge — notably in the value chains of açai, essential oils and native fibers. These

models reinforce that safeguarding Indigenous and community territories is an ethical and legal imperative, not just another land management option. In this context, the Amazonian bioeconomy can be divided into three categories (Lopes et al., 2023):

→ SOCIO-BIOECONOMY

Fair trade of standing forest products;

→ FOREST-BASED BIOECONOMY

Sustainable management and restoration of vegetation;

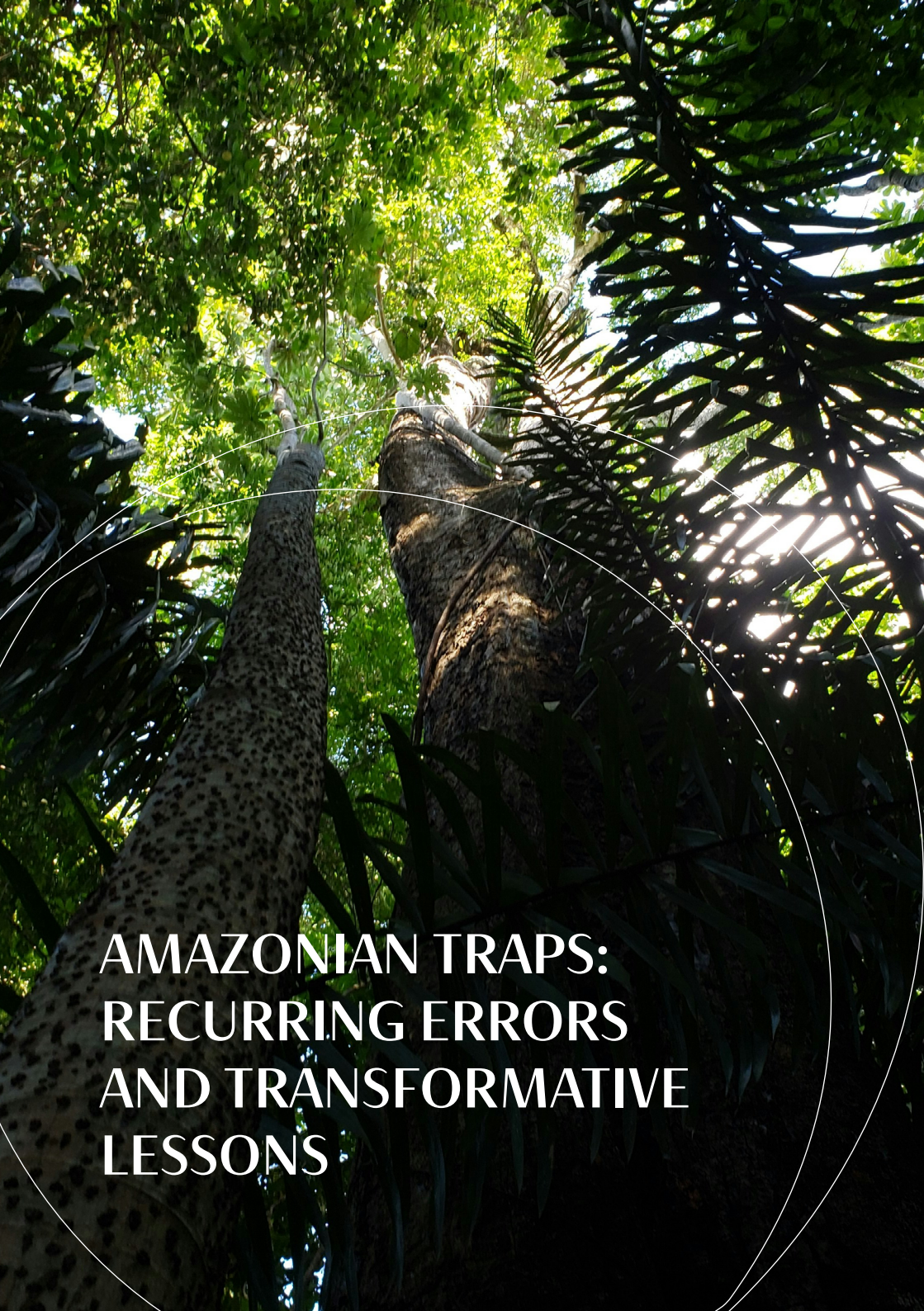
→ AGRO-BIOECONOMY

Regenerative systems in already anthropized areas.

So far, evidence confirms the potential of an Amazonian bioeconomy: in 2019, local product value chains generated about R\$ 5.4 billion and sustained 224,000 direct jobs (Costa et al., 2021). However, structural obstacles persist — land tenure insecurity, inadequate access to credit, deficient logistics, and fragmented regulatory systems. Although the region received R\$ 16.6 billion per year in investments from 2021–2023, only 12% was directed to bioeconomy initiatives based on socio-biodiversity. The largest share of funding went to bioenergy and eucalyptus, sectors poorly aligned with community models (Chiavari et al., 2024).

These challenges highlight the urgency of institutional and financial support aligned with local realities: collective land ownership policies, tailored lines of credit, and regulatory frameworks adapted to regional contexts. Furthermore, these challenges demand the active involvement of traditional communities and Indigenous peoples, as well as the legal recognition and guaranteed protection of their territories and systems of knowledge. Such measures are essential to avoid the mistakes of centralized interventions based on traditional approaches — a theme we will examine in the next chapter — and to adopting strategies capable of promoting a truly inclusive and sustainable bioeconomy.



A low-angle photograph looking up at several tall tree trunks in a dense tropical forest. Sunlight filters through the thick canopy of green leaves, creating a dappled light effect. The image is framed by a thin white circular line.

AMAZONIAN TRAPS: RECURRING ERRORS AND TRANSFORMATIVE LESSONS

There is a consistent set of factors that explain the failure of many projects in the Amazon. They appear in many forms and degrees, but share the same root cause: the structural discrepancy between what is proposed and what the territory actually encompasses. Confronting these patterns requires intelligence, flexibility, territorial sensitivity and ethical commitment from all those who wish to efficiently and sustainably operate in the biome. Generally speaking, failure doesn't stem from bad faith, rather from inconsistencies between external expectations and the local circumstances. From these failures, however, arise valuable lessons - opportunities for collective learning and starting points for new strategies. This chapter presents these patterns, identified by means of active listening and literary review, examining its causes, impacts and, above all, the lessons that are exacted from them.

IMPORTED MODELS, DISREGARDED TERRITORIES

One-size-fits-all, pre-designed projects with generic solutions, tend to have tight schedules, strict goals and business jargon. Whereas, time in the Amazon flows to the rhythm of the river. When the tool doesn't fit the local context, the result is extra costs, mistrust and delays. It's common to see generic proposals, designed from the outside in, which ignore productive aptitudes and capacities, infrastructural limitations, diversity of community arrangements and the time needed for the development of the results.

Commercial approaches, for example, often cause confusion: talking about trademark registration, cost tables, or cash flow to producers who are still struggling for the basics, creates noise and

resistance. The contrast reveals the gap between the technical and institutional language of "educational" materials, and the actual stage of organisational maturity of the local businesses. Even when there is great endogenous potential, it is necessary to consider geography, available infrastructure, operational capabilities, social capital, and the time required for structural changes (Teixeira, Neves & Costa, 2011).

A recurring turning point is the underestimation of the actual costs of operating in the Amazon, be they logistical, cultural or institutional. Together, these factors form what is called the "Amazon Cost". It derives from the poor conditions of transportation, communication and

energy: long distances, rainfall, isolation and lack of services all directly impact the execution and continuity of projects, requiring flexibility and financial contingency.

Criticism of the approach also extends to the sociocultural aspect of time. While public notices impose tight deadlines, investors charge instant returns and governments measure results in mandates of four years, communities follow the pace of decision-making, consultation and production determined by ecological, climatic, and cultural cycles.

It is worth noting that the instability isn't just in the physical environment, but also in the regulatory milestones and the institutional architecture which should guarantee security to the projects. Therefore, the "Amazon Cost", is also the cost of operating in a space which has been historically neglected by social public policies, poor infrastructure, land titration and administrative continuity.

Factors such as climate instability, funding and territorial uncertainty, and political interference exacerbate the unpredictability and increase the cost of projects, programmes and initiatives in the region. Land conflicts, withdrawal or lack of implementation of public policies, change of direction of governments, or climate events all affect projects and create situations which oftentimes aren't foreseen in the risk models traditionally utilised by investors. The absence of prioritization criteria and disregard for territorial heterogeneity are factors that

reveal a disconnect between federal programmes and the local realities, jeopardizing the effective implementation of public policies and of investments in the Amazon (Chiavari, Cozendey & Antonaccio, 2025).

Calculating the "Amazon Cost" and incorporating it into planning - from the initial design to agreements with communities - is a challenge. The case of the Belo Monte hydroelectric power plant clearly showcases this: the sociopolitical complexity, the transactional costs, the technocratic processes and the lack of timely participation brought about delays, judicial challenges and great social vulnerability, reinforcing the need for adequate territorial governance (Pinto & Teixeira, 2023).

Projects that come with tight business models, short-term goals and requirements such as immediate legal finalisation, international accreditation, or drafting of detailed business plans, tend to be met with resistance or failure. Miraculous solutions, like engaging presentations, often aren't backed by reality, and the enforcement of a project without adequate conversations and relationship-building with those living on territory, and understanding of the context, end up facing challenges.

In the Amazon, communities frequently operate under collective logics, in bonds of kinship ties, reciprocity and trust, such aspects which often escape the market logic that structures many projects. In practice, this results in projects which

don't engage with the Amazonian way of life, disregard traditional knowledge and operate with timelines and metrics which aren't adapted to the social and ecological rhythms of the region. Paradoxically, it is precisely these community management practices that offer the most feasible alternatives to sustainable development (ISPN, 2025).

Participatory diagnosis and collective construction are not an accessory stage: they form prerequisites of efficiency and justice.

The lack of time for listening and co-construction, together with the rush to meet the deadlines of investors, undermines the confidence and compromises the sustainability of the actions, bringing about reputational and financial costs. Investing in the Amazon requires strategic vision, a culturally appropriate stance, continuous compromise and willingness to internalise risks specific to the territories.

To address this challenge, development strategies that are truly rooted in the territory must:

- a. Be based on active listening and participatory diagnosis;
- b. Recognise and strengthen pre-existing capabilities in communities;
- c. Provide for replanning margins in contracts and public notices, respecting territorial cycles;
- d. Evaluate and include provisions for climate, funding and logistical risks;
- e. Adjust the incubation and implementation period to the local pace;
- f. Include cultural mediation and appropriate technique for the needs of the community;
- g. Adopt accessible language and suitable teaching materials;
- h. Build governing structures that are flexible, and sensitive to institutional instability and to community autonomy.

MARKET PLANNING AND ECONOMIC VIABILITY

The reversal of production logic emerges as another critical and relevant factor: physical structures are frequently implemented prior to the clear defining of markets or the consolidation of stable commercial relationships. This results in projects which, even after years of investment in infrastructure, training and production, cannot find viable channels for their output.

This dynamic deepens the gap between the imported business models and the reality of the Amazon, and naturally, creates collective frustration. Untimely verticalisation of production, without consistent market planning, winds up compromising economic viability, placing communities under pressure in the face of competition with big manufacturers, which ends up disrupting the trust of the communities during new projects.

In order to minimize this gap, extensive market planning must precede the productive structuring, and connect to the building of commercial relationships based on stability, ethical coherence and social return. More so than integrating Amazonian products into competitive markets, it is necessary to guarantee the communities as active subjects of the

value chains, recognising and valuing their time, aptitudes, and ways of life. These chains involve intangible values such as traditional and cultural practices, which requires planning that is capable of overcoming simplistic views about the products, and promotes the participatory management of the market aligned with the local purposes (Maroccolo, Wadt & Diniz, 2023).

The lack of adequate planning also undermines the organizational sustainability, feeds unrealistic expectations about financial returns and creates cycles of dependence on external partners.

As such, it reinforces the idea that the roles of the communities would be simply to “supply primary material”, when the truth is that they [the communities] can (and must) lead territorial-based and joint networks.

Strategies which value endogenous resources and level economic and ecological flows, favour autonomy and avoid the transfer of political and economic power to external agents, breaking away from the logic dependent on the vertical networks of agricultural business (Schmitt et al., 2020).

To revert this framework, investors, project managers and partners must:

- a. Conduct preliminary market studies with the direct participation of communities;
- b. Avoid premature verticalisation, strengthen pre-existing productions bases;
- c. Establish long-term and transparent commercial partnerships, with fair distribution of values and benefits;
- d. Adopt commercial frameworks coherent with the pace of the territory, value the associated cultural practices.

COMMUNITY GOVERNANCE AND POWER ASYMMETRIES

The consolidation of sustainable projects in the Amazon frequently runs up against the fragility of local management. There is a lack of preliminary preparation, continuous support, and, above all, mechanisms to sustain governance after the initial funding ends. This phenomenon is simultaneously a cause and consequence of the mismatch between imported project models and the socio-political realities of the territories. The scarcity of participatory spaces, the low inclusion of representative actors, and the absence of ongoing capacity-building undermine both the implementation and the long-term sustainability of public policies (Santos & Silva, 2022).

In many initiatives, community organizations assume complex roles in management, commercialization, and political articulation without proper training or any medium - to long-term support. The result is that there is often a lack of transparency around the use of resources in these projects. Technical inexperience of managers and the general lack of accountability in many projects generates mistrust and can often paralyze projects.

Community governance, defined here as the set of practices and rules that guide collective decision-making, goes beyond the legal formalization of associations or cooperatives. Effective community governance requires decentralization of power, accountability, and equity among actors - aspects of governance rarely promoted by systems focused solely on legal formalization (Espada & Sobrinho, 2015). Ignoring these dimensions reinforces power imbalances, amplifies internal friction, and hides conflicts that can erupt at critical stages of execution. When funding is involved, the lack of clear accountability rules and leadership rotation intensifies internal competition, hindering data collection and decision-making (Quintino, Franco & Pereira, 2024).

Another challenge is that many members have a limited understanding of the functions and structural limits of the cooperatives. Without clarity on roles, legal obligations, or legal risks, engagement weakens, power concentrates, and collective mobilization dissolves. Understanding what it means to be an associated member, the role of the fiscal council, the legal obligations, and potential risks is not always straightforward. Without this understanding, effective engagement tends to weaken, leading to power concentration and collective demobilization. Cooperativism in the Amazon functions not only as an economic model, but also as an instrument of social cohesion, territorial resistance, and inclusion. It therefore requires a more careful and detailed

approach in its structuring - but, without any doubts, it's a relevant and enabling model (Santos et al., 2025).

These fragilities are compounded by external practices of traditional knowledge appropriation. Initiatives branded under "acceleration" or "ESG" have historically exploited local knowledge without consent or fair benefit-sharing, converting cultural practices into market value without proportional returns. This phenomenon occurs when local knowledge, histories of life, and traditional practices are appropriated and used for commercial, institutional, or marketing purposes without proportional return, informed consent, or any form of symbolic or financial compensation. As a result, these practices reinforce historical inequalities - by exploiting local cultures for profit, they weaken trust in partnerships and perpetuate a logic of symbolic and economic exploitation (Lima & Bensusan, 2003).

The asymmetry in negotiation dynamics, the lack of contractual clarity, and the unfair sharing of benefits derived from the exploitation of local assets - be they products, images, or knowledge associated with traditional species and techniques - reveal failures in the ethical principles of partnerships. The absence of free, prior, and informed consultation, unfair contracts, and the lack of mechanisms to reimburse communities for the use of traditional knowledge constitute serious issues, aggravated in contexts where communities lack access to education and legal support.

Contractual and informational asymmetry
 - absence of prior consultation, use of obscure terminology, and lack of mechanisms for material or symbolic return - violates both international frameworks (such as ILO Convention 169) and Brazilian norms, including Law 13.123/2015, Decree 8.772/2016, and MMA Ordinance 144/2021 (BRAZIL, 2015; 2016; 2019; 2021).

Breaking this pattern requires more than technical adjustments: it calls for ethical shifts. Valuing traditional knowledge means recognizing its collective authorship, respecting its forms of expression, and ensuring that its use generates concrete benefits for the communities it originated from (Chêne Neto & Cardoso, 2020).

In short, strengthening community governance and correcting power asymmetries must be an integral part of any development strategy in the region.

Considering these dynamics, strengthening community governance should be an integral strategy of any project committed to promoting sustainable development in the region.

This requires:

- a. Invest in the political and management training of communities, as well as basic schooling, beyond just technical training, to strengthen community governance;
- b. Treating local rhythms and community trust as essential social capital;
- c. Establish institutional rules in advance, identifying and resolving latent conflicts;
- d. Establish procedural monitoring, not just outcome monitoring;
- e. Draft clear and accessible contracts that recognize collective authorship and provide for proportional financial and symbolic returns;
- f. Ensuring permanent legal and technical support.

A photograph of a traditional wooden boat, possibly a sampan, floating on a body of water. The boat is painted with blue and red, and has several wooden seats or benches inside. It is surrounded by water and some trees, with a large tree trunk visible on the left side. The water is dark and reflects the surrounding environment. The text "REGULATORY MAZE: LEGAL FRAMEWORK AND INSTITUTIONAL CONDITIONS" is overlaid on the bottom left of the image.

REGULATORY MAZE: LEGAL FRAMEWORK AND INSTITUTIONAL CONDITIONS

Although Brazil possesses an extensive and complex legal framework, the Amazon suffers from profound failures in implementation, inter-institutional articulation and accessibility. Obstacles are rarely due to the non-existence of laws; rather, they stem from their inadequacy to the context, the lack of connection between sectoral frameworks, and the absence of enabling mechanisms. The result is a mismatch between the complexity - and asymmetry - of regulatory requirements and the actual capacities of local actors.

This regulatory gap generates direct economic impacts. Without tax incentives for business models that support a standing forest, without exemptions that account for regional logistical costs, and without credit lines aligned with Amazonian production cycles, socio-bioeconomy initiatives face a competitive disadvantage compared to conventional supply chains.

PUBLIC POLICY IMPLEMENTATION & POLITICAL-LEGAL INSTABILITY

Existing legal frameworks and public policies, although often robust in their formulation, face a serious mismatch in their execution and applicability within the realities and territories of the Amazon. There is a disparity between the formal existence of laws and political programs and their practical implementation. In other words, the issue is not, as a rule, the absence of legal instruments, but rather the difficulty in putting them into practice.

Many public policies directed toward the Amazon, although formally well-structured, lack effective implementation mechanisms, creating mismatch between the legal framework and its execution in the territories (Araújo Júnior, 2015). In other cases, deficiencies in the functioning

of institutions, a lack of budgetary provision, or the inadequacy of regulatory frameworks for the multiple realities that exist in Brazil and the Amazon represent significant institutional barriers. For example, Law 13.123/2015, which regulates access to the genetic heritage of Brazilian species and associated traditional knowledge, not only establishes an overly complex and bureaucratic process for patenting that knowledge, but also includes a series of exemptions and conditions that ultimately fail to ensure the fair sharing of benefits (Hasse, Bruch & Stelzer, 2021).

Along these lines, public policies with transformative potential, consolidated or under development — such as PRONAF,

the Food Acquisition Program (PAA), the National School Feeding Program (PNAE), the Social Biofuel Seal, the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGM-Bio), and Payment for

Environmental Services (PES) programs — face serious limitations in scalability and accessibility in the Amazonian context (Vilhena, Alves Júnior & Freitas, 2019).

PRONAF

- ✓ Significant impact on the commercialization of family farming products
- ✗ Does not solve historical and structural inequalities in logistics and market access.
- ✗ Success is associated with the implementation of technical assistance programs and improvement of infrastructure.

PAA E PNAE

- ✓ Guidelines focused on valuing sociobiodiversity.
- ✗ Highly bureaucratic processes, lack of metrics, and logistical and infrastructure problems pose barriers.

PSA

- ✓ Recent advances in the development of the legal framework represent an opportunity to scale up this mechanism.
- ✗ Regulation still under development generates uncertainties.
- ✗ Challenges in land tenure regularization and high transaction and monitoring costs are barriers.
- ✗ Difficulties in accessing and precarious connections impact potential adherence.

Institutional frameworks and regulatory proposals often fail to align with socio-territorial realities. Furthermore, there is a lack of simple metrics to capture the actual impacts of public policies on strengthening and promoting sustainable production chains, which remain less competitive than conventional ones (Vilhena, Alves Júnior & Freitas, 2019; Wesz Junior et al., 2021; CMAP, 2020; UNDP, 2021; Elias et al., 2025).

On the other hand, the high turnover of technical staff and administrative discontinuity in the public sector - which often severely affects specific projects - is a relevant factor in the ineffectiveness of policies and programs. This constant change erodes institutional memory and makes it difficult to consolidate structural agendas. In the Amazon region, this poses a roadblock to long-term planning, jeopardizes the continuity of public programs, slows down institutional learning, and directly affects the ability to conduct territorial planning and build long-term trust (Igarapé Institute, 2022).

Political disputes and the lack of inter-institutional agreements undermine the technical time needed to implement legal frameworks. Environmental science requires long-term horizons, yet electoral cycles, particularly in the Brazilian context, often prioritize short-term gains and immediate results. The efforts to rebuild and improve public policies and development strategies depend on long-term institutional strengthening (Losekann & Paiva, 2024).

The absence of integrated territorial planning and the lack of resources for implementing strategic plans, such as PARÁ 2050¹, ultimately hinder the execution of public policies aimed at enabling the development of activities in the region. This reinforces the diagnosis that institutional weakness, administrative discontinuity, and resource scarcity are obstacles to implementing development policies in Amazonian territories, even when formally robust strategic frameworks are created (INESC, 2023).

In other words, the main limitation does not lie in the absence of legal instruments but rather in administrative inconsistency, high turnover of technical staff, and political polarization, which prevent the continuity of medium- and long-term strategies.

Socio-environmental governance in the Amazon is characterized by administrative discontinuity, the absence of qualified technical teams, the fragility of municipal funds, and low civil society participation. These circumstances ultimately form significant barriers to the implementation of effective sustainable development policies (Santos & Silva, 2022).

¹PARÁ 2050 proposes a long-term project for the collective construction of a strategic plan to guide a set of structural projects aimed at promoting sustainable development.

That is, the fragility of execution deepens when political factors enter the scene. Routine changes in government, electoral polarization, and inter-institutional disputes block medium- and long-term agendas. Add to this the risk of institutional greenwashing - the rhetorical use of sustainability without practical correspondence, including in the financial sector - and the horizon of predictability shortens even further (Stand.earth & COICA, 2024).

Social participation mechanisms reveal another gap. Although public hearings, prior consultations, and sectoral councils are provided for in law, in practice, hasty, unilateral, or co-opted processes prevail. These processes do not respect community rhythms nor do they guarantee local autonomy. To overcome this reality, it is necessary to strengthen direct mechanisms for Prior Consultation, respecting its deliberative, and not just consultative, component—thereby improving the democratic quality of the process and reinforcing the participation of those directly affected by undertakings (Rodrigues, Galvão & Menezes, 2018).

This deficit goes beyond merely lacking formal spaces; it is a lack of qualified, continuous, and respectful listening where community knowledge and timeframes are genuinely taken into account. Information asymmetry aggravates the issue: data is scarce, hard to access, and seldom contextualized, resulting in poorly informed decisions and exposing communities to conflicts (Fujino & Fernandes, 2024). Furthermore,

the absence of qualified listening is also related to another theme already presented: the speed imposed by external actors, whether they are governments, companies, or even investors.

The Amazon is characterized by an ‘unequal accumulation of times,’ where the imposition of external rhythms, detached from local knowledge, compromises the construction of sustainable governance (Porto-Gonçalves, 2015).

It is essential to seek ways to harmonize the timelines driven by ecological, cultural, and community cycles with the deadlines and roadmaps set by external institutions.

Institutional instability and political roadblocks are central to understanding the slow pace and discontinuity of public policies geared towards sustainable development in the Amazon. Even as the legal framework progresses, as indicated by various environmental milestones and strategic programs, its effectiveness is stalled by political shifts and the weakness of governance structures. Thus, implementation fragility is not merely a reflection of resource scarcity or a lack of political will, but also an expression of structural incompatibilities between the legal framework and the Amazonian reality - a long-standing, recurring critique that remains largely unaddressed.

POORLY CALIBRATED ECONOMIC INCENTIVES

Fiscal distortions and structural asymmetries in the tax treatment of sustainable production chains in the Amazon are also identified as obstacles that contribute to the competitive disadvantage of socio-biodiversity products compared to conventional agribusiness. Disparities in incentives, in volumes and prices of competing products, and tax distortions exacerbate economic difficulties and compromise the development of Amazonian value chains.

For example, a study by ÓSocioBio (2024) indicated that, in the draft bill for the reform of the Brazilian tax code (PLP 68/2024), products like açaí, Brazil nut, pequi, and macaúba could be taxed at rates of up to 27.97%, while chains such as conventional agribusiness remain supported by significant tax incentives - which clearly evidences the structural disparity between production models. In the case of the Amazon, this distortion is expressed not only in selective tax incentives but also in the absence of compensatory policies for activities that keep the forest standing.

This creates a paradoxical institutional situation that harms initiatives aimed at promoting the bioeconomy. A scenario is thus constructed that compromises the viability of sustainable businesses,

since tax policies fail to recognize the added environmental value of non-timber forest products, agroforestry systems, and community-based extractivism.

The mismatch between public rhetoric and tangible incentives is reflected in three main areas:

- 1. fiscal and legal insecurity:** entrepreneurs and cooperatives operate under ambiguous or outdated legal frameworks, which complicates medium- and long-term planning;
- 2. loss of competitiveness for sustainable products:** the tax cost associated with socio-biodiversity products makes access to large consumer markets unfeasible;
- 3. disincentive to formalization:** given the complexity of the system and the fiscal burden, many producers and organizations remain informal.

The effectiveness of initiatives aimed at transforming the economy and promoting sustainable economic models depends, especially in the Amazonian context, on policies and instruments adapted to local realities that help overcome the disconnect between pro-sustainability discourse and the reality on the ground (Chelala, 2012, p. 45).

The problem is not limited to taxation. The country's financial architecture, designed for large-scale agribusiness, rarely aligns with the profiles of small sociobiodiversity enterprises. Documentation requirements, real collateral and cost structures alienate cooperatives and traditional producers from official credit lines; even PRONAF remains inaccessible to the majority due to a lack of sufficient and qualified technical assistance (Macedo et al., 2019). In practice, "those who have more, access more," perpetuating a silent exclusion.

Some experiences suggest alternative pathways. The BB Amazônia program, coordinated with the Inter-American Development Bank under the Amazônia

Forever Strategy, has been testing guarantee funds and blended-finance models to reduce historical credit barriers and strengthen local value chains (IDB, 2025). To achieve scale, however, it is necessary to rethink the engineering of public and private mechanisms, adopting strategies that incorporate economic justice, gradual scalability, and community leadership.

In short, without a tax framework adapted to the Amazonian reality and "tropicalized" financial instruments, any bioeconomy program will continue to stall.

Adjusting tax rates, creating specific incentives for selling forest products, and establishing accessible guarantee funds are not merely matters of fiscal equity: they are necessary to turn a standing forest into a genuine competitive advantage (and not an additional burden) for those who choose to do business sustainably in the Amazon.



Photo: Palace of Justice - Manaus/AM

STRUCTURAL INFORMALITY AND LEGAL INSECURITY

Structural informality and legal insecurity remain central obstacles to sustainable initiatives in the Amazon. These factors are reflected across multiple scales and have various consequences - ranging from difficulty to obtain basic documentation, a lack of clarity regarding processes and competencies, to the absence of secure land tenure, which contributes to a scenario of institutional fragility that compromises access to public policies, financing and basic rights.

Reports on land-governance in the region show that, although technically structured, land tenure initiatives are vulnerable to institutional capture by private land interests and historical disputes. This contributes to the perpetuation of a land commodification logic, which aggravates legal insecurity and exacerbates the exclusion of indigenous peoples and traditional communities, as well as small producers, from formal land access and the guarantee of territorial rights (Ribeiro, 2022). The absence of effective land tenure protection mechanisms, in addition to generating institutional instability, also discourages potential investment and paralyzes the

development of incentive policies, such as carbon markets and payments for environmental services (PES).

Beyond the land issue and persistent threats, which are deepened by the proliferation of irregular or illegal practices, the lack of objective conditions for accessing the State is also a harsh reality - one that affects the ability to obtain resources and meet investor requirements. Regularizing the Rural Environmental Registry (CAR), enrolling in the Family Farming Registry (CAF), or obtaining a simple rural producer registration requires internet access, travel, and infrastructure, all of which are scarce in the most remote territories.

The government itself lacks the resources to be fully accessible: local agencies operate with reduced staff, limited budgets, and a shortage of equipment. It is no surprise that CAR implementation advances slowly and, in some cases, even legitimizes land-grabbing (Ferreira Júnior et al., 2023). In this context, informality is no longer an isolated phenomenon but emerges as a socially ingrained structure, sustained by logistical, institutional, and historical shortcomings, directly affecting access to credit, technical assistance, and the regularization of sustainable projects.

The consequences are stark. Only 9% of family farmers in the north region of Brazil accessed formal rural credit in 2023, compared with 29% in the south region; and the crops that are a priority for these families get much less financing than commodities like soy (Souza & Albuquerque, 2023). Bureaucracy thus transforms into a cultural barrier: the goal is not to suppress formal requirements, but to build local capacities that allow them to be met in a proportional and culturally appropriate manner.

Until land tenure, economic, and cultural formalization is consolidated, the community-based bioeconomy remains stuck in a soil of symbolic and regulatory insecurity.

The guarantee of rights - be they land, cultural, or economic - is an indispensable condition for the flourishing of a community-based bioeconomy and for the strengthening of Amazonian citizenship.

Photo: Combú Island - Belém/PA



FINAL CONSIDERATIONS AND AN INVITATION TO CONTINUE READING

We have reached the end of this first volume with a clear purpose: to show, without disguise, the threads that weave the Amazonian reality. We examined the past that still weighs heavily, the historical roots that intertwine peoples and rivers, the costly shortcuts imposed by geography, the grating normative machinery, and, above all, the missteps that have already frustrated well-intentioned projects. In other words, we offered a map of the promises and challenges surrounding investment in the Amazon.

However, as we well know, a map does not make the journey. Therefore, we invite you to proceed to Volume II, where we will dive into three decisive areas for transforming ambition into action: robust socio-environmental safeguards, careful management of territorial risks, and practical pathways to prosper without sacrificing the forest and the purpose.

It is in this second volume that the lessons now learned take tangible shape, converting into tools to guide both institutional investors and local cooperatives, always driven by the principles of climate justice and the leadership of the communities who live here. May this sequel strengthen us all in the task of forging transparent, resilient partnerships committed to the standing forest, opening space for a truly inclusive bioeconomy to flourish - for the benefit of the Amazon and its peoples, and consequently, our entire planet.

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