GREEN Coalition

CASE STUDY #4

Sustainable Cacao CRA

NATIONAL BANK FOR ECONOMIC AND SOCIAL DEVELOPMENT (BNDES)

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SUSTAINABLE CACAO CRA OVERVIEW

Beginning in the 1990s Brazil progressively opened its rural sector to financial innovation, first with the Rural Product Note (CPR) in 1994, an early type of receivables finance for agricultural products.[1] In 2004, Congress passed Law 11.076, formalizing the Agribusiness Receivables Certificate (CRA), allowing for the securitization of receivables.

The market began to mature dramatically in the mid-2010s. CRA issuances climbed sharply from around R$ 1.2 billion (equivalent to USD $527 million)[2] in 2013 to R$ 13.3 billion (equivalent to USD $4.16 billion)[3] by 2017, prompting Brazil's Securities and Exchange Commission (CVM) to enact Instruction 600 (2018), later incorporated into CVM Rule 60 (2021), to formalize processes, enable revolving CRA offerings, and limit CRAs to agribusiness activities.[4] Consequently, CRA issuance reached approximately R$ 41.5 billion (equivalent to USD $7.6 billion)[5] in 2024.[6]

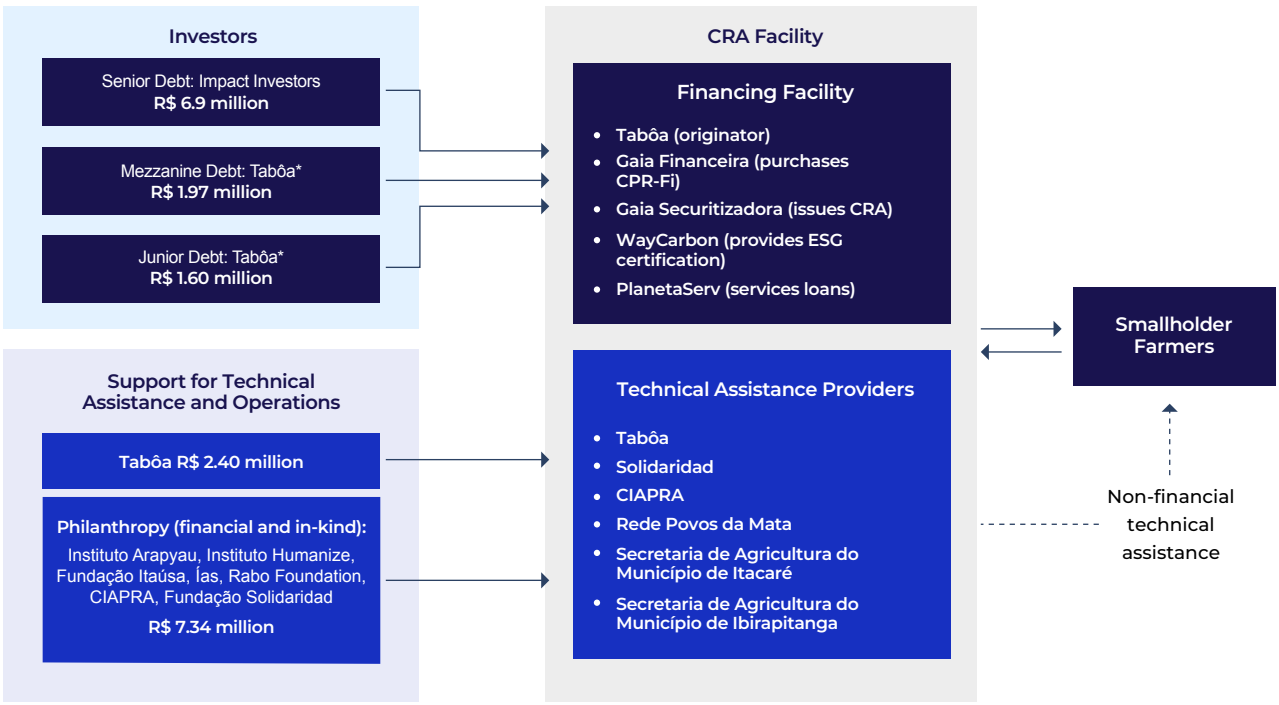
More recently, CRAs have begun to serve as a vehicle for green and inclusive finance. In 2020 Tabôa, a Brazilian financial inclusion non-profit, organized a consortium of partners to design and issue a pilot green CRA called "CRA Sustentável na Mata Atlantica." The pilot, a roughly R$1.37 million note (equivalent to USD $261,670)[7], paid a fixed 5% coupon and blended philanthropic first-loss capital with market funds to finance smallholder cacao agroforestry producers in southern Bahia.[8,9] The successful performance of this pioneering product laid the groundwork for the Sustainable Cacao CRA proposal presented by Tabôa to the National Bank for Economic and Social Development (BNDES) under their Blended Finance public call in May 2022. The public call aimed to support financial structures employing hybrid or blended finance models that are potentially replicable and/or scalable. The initiative focused on sustainable projects and socio-environmental initiatives within the areas of forest bioeconomy, urban development, and circular economy. Tabôa's Sustainable Cacao CRA was ranked first in the forest bioeconomy category and second overall, among 26 proposals submitted in this category during the application phase.

As the first transaction under the BNDES Blended Finance public call, launched in 2024, the Sustainable Cacao CRA provides accessible and low-cost financing and technical assistance (TA) to enable smallholder cacao operators to implement sustainable agroforestry approaches. It fosters sustainable land use by improving livelihoods, reducing pressure on standing forests, and improving carbon sequestration capacity of a critical agricultural system. This product is made possible by a partnership between BNDES, Tabôa, Gaia, Instituto Arapyaú, Instituto Humanize and Rabo Foundation playing key roles (see Graphic 1, next page).

The CRA employs a blended three-tier – senior, mezzanine, and junior –debt structure, with the senior and mezzanine tranches funded through Brazil's capital markets. It embeds rigorous social and environmental standards and a full TA package coordinated by Tabôa. The inaugural issuance in March 2024 mobilized R$ 20.21 million (equivalent to USD $3.77 million)[10] for CRAs, operations, and technical assistance, and has already financed 462 loans to family farmers at concessional rates of ≤1 % per month.[11]

The cacao producers targeted by the CRA are farmers who are typically excluded from formal financial systems due to a combination of structural, economic, and institutional barriers such as lack of collateral, low financial literacy and formal documentation, remote location and high transaction costs, and perceived credit risk. It reduces participants' cost of capital (for those able to access formal capital), extends loan duration (up to 42 months), and delivers crucial extension services that support producers in designing and adopting environmentally friendly practices.

Graphic 1: Sustainable Cacao CRA Flowchart



* Loan from Rabo Foundation
** Funded by a non-reimbursable grant from BNDES under the Blended Finance call

In the graphic above, Tabôa plays a dual role, acting as the CRA originator, identifying and onboarding eligible smallholder cacao farmers, issuing CPR-Fs (Financial Rural Product Notes)[12], and coordinating ongoing TA to ensure farmers have adequate knowledge and capacity to achieve the sustainability outcomes sought by BNDES. These CPR-Fs, in contrast to CRAs, are not listed financial instruments, making them simpler to issue.[13] PlanetaServ, an independent loan servicing company, manages repayments from producers to the facility. This arrangement provides consolidates the cashflow from repayments and mitigates risk to the senior investors, enabling BNDES to 'crowd-in' private finance. Family farmers receive loans with favorable conditions, including a 0.948879% monthly interest rate, a 36-month term with up to 6 months of grace, technical assistance, and a guarantee provided through either a borrower solidarity group or a co-signer.

Once issued, Tabôa transfers the CPR-Fs to the financial intermediary, Gaia Financeira, which works with its sister organization Gaia Securitizadora to pool and securitize them, backing the issuance of the Sustainable Cacao CRA as a listed investment product with a 60 month term.

Through a R$4,000,000 (equivalent to USD $747,119)[14] grant to Tabôa, BNDES provides the junior tranche of the financing facility's capital stack (R$ 1,596,296 in first-loss capital, equivalent to USD $298,155)[15], an additional R$ 2,403,703 (equivalent to USD $448,963)[16] for field operations and TA delivery, and the remaining in initial issuance expenses of the CRA and expenses related to loan origination. The facility's mezzanine tranche is indirectly financed by the Rabo Foundation, which provided a R$ 1,972,000 (equivalent to USD $368,329)[17] loan at the concessional rate of 7% to Tabôa. Finally, the senior tranche is raised in the capital market from ESG-oriented private investors who receive near market rate returns of 12%.

An independent sustainability auditor, WayCarbon, certified the CRA's alignment with green and sustainability bond principles, providing an industry accepted ESG label pro bono.

ELIGIBILITY CRITERIA

The CRA is strictly targeted at family farmers located within specific landscapes - Southern Bahia's Atlantic Forest region and Pará's Trans-Amazonian corridor.

To qualify, farmers must hold a valid producer registry, maintain either formal land title or demonstrable, uncontested occupation of the land as recognized under Brazilian land tenure norms (called 'peaceful possession' in Brazil), and possess relevant environmental licenses. Properties located in Indigenous Lands or within strict-use conservation units are explicitly excluded to ensure legal compliance.[18]

Participants must demonstrate compliance with Brazilian labor laws, specifically prohibiting child and forced labor. They also must adhere to environmental regulations such as Rural Environmental Registry (CAR) registration and forest conservation mandates in the Forest Code (2012).[19] Credit agents and rural technical assistants are required to notify the CRA if they detect any environmental irregularities, though the responsibility for enforcement rests with public authorities.

Importantly, applicants are encouraged to join solidarity-guarantee groups, coordinated by Tabôa, which collectively ensure repayments. While solidarity group guarantees are not mandatory, they currently secure 81.2% of the CRA's CPRs and remain the principal form of guarantee, a small proportion of credit is instead backed by individual guarantors. Non-compliance with any of these criteria results in disqualification and exclusion from future credit cycles.[20]

The CRA must be used to implement and/or improve agroforestry practices. Eligible uses are broadly defined but must fall under an eligible activities list provided by Taboa, which is used by Taboa's extension agents to help individual producers define their management plans and the uses of their credit through the CRA.[21]

These eligibility criteria ensure the CRA serves only smallholder farmers actively engaged in sustainable cacao agroforestry, while upholding legal, environmental, and labor standards. The average contract value is R$22,685 (equivalent to USD $4,220)[22] across the portfolio, but the average is larger in the Amazon at R$38,276 (equivalent to USD $7,120).[23] The difference between the average ticket sizes represents the management capacity and repayment ability of smallholder farmers in the Amazon as opposed to Bahia. In Para, producers have a stronger repayment track record because they cultivate cacao and raise livestock therefore are able to access more credit. The activities are all underpinned by rigorous monitoring, peer guarantees, and capacity-building support.

FUNDING SOURCES AND COMMERCIAL TERMS

A total of R$ 20.21 million (equivalent to USD $3.77 million)[24] has been mobilized.[25] This includes R$ 10.47 million in CRA notes (from senior, mezzanine, and junior investors) and R$ 9.74 million from other sources including a R$ 2.40 million BNDES grant and R$ 7.34 million from philanthropic and other civil society organizations to support technical assistance and operations. Tabôa is currently negotiating an additional R$ 3.55 million (equivalent to USD $662,832) investment into the initiative.

Table 1. Summary of Funding Sources

Tranche / Source	Amount (R$)	Amount (USD)	Return	Role in Capital Stack
Senior Investors (impact/family offices)	6.90 million	1.29 million	12% p.a.	Senior (market-rate)
Tabôa via Rabo Foundation (mezzanine)	1.97 million	0.37 million	7% p.a.	Mezzanine (catalytic)
Tabôa via BNDES Blended Finance Grant (junior tranche)	1.60 million	0.30 million	2% p.a.	Junior (first-loss)
Sub-Total	**10.47 million**	**1.96 million**		
BNDES TA Grant	1.25 million	0.23 million	N/A	Outside of capital stack
BNDES Expenses (initial issuance and loan origination)	1.15 million	0.21 million	N/A	Outside of capital stack

Table 1. Summary of Funding Sources (continuation)

Tranche / Source	Amount (R$)	Amount (USD)	Return	Role in Capital Stack
TA Co-investment and philanthropic support (TA and operations)	7.34 million	1.37 million	N/A	Outside of capital stack
Sub-Total	**9.74 million**	**1.81 million**		
Grand Total	**20.21 million**	**3.77 million**		

TECHNICAL AND OPERATIONAL PARTNERSHIPS

A network of partners supports technical and operational delivery. In Para, Solidaridad delivers TA in partnership with Tabôa. In Bahia, Rede Povos da Mata, CIAPRA, and several municipal agriculture secretariats fill this role. Engaging the right TA partner in each focal geography is crucial to the CRA's success as these partners play the on-the-ground interface role between the facility and the individual producer.

Instituto Arapyaú, a Brazilian philanthropy that fosters just transition initiatives, provided grant support to Tabôa and led the design of the proposal to the BNDES Blended Finance call. They were also responsible for mobilizing philanthropic contributions including from Itaúsa, which had previously supported the initiative through early-stage grants and ecosystem convening. Instituto Humanize contributed additional philanthropic support to strengthen the initiative's implementation.

ALIGNMENT WITH PUBLIC POLICIES

The BNDES Blended Finance public call explicitly aimed to channel resources toward the federal Bioeconomy-Forest agenda and the Plan for Adaptation and Low Carbon Emission in Agriculture (ABC+)[26]. The Sustainable Cacao CRA is a direct expression of government policy to "crowd-in" private finance through catalytic capital.

The transaction also helps to operationalize the Forest Code, because every loan requires a signed commitment to comply with key provisions including entry into the CAR and to preserve permanent protection areas defined by the Forest Code. Additional commitments include implementation of agricultural systems that raise carbon stocks while meeting strict labor and biodiversity safeguards.[27] These safeguards mirror national commitments under the *Action Plan for Deforestation Prevention and Control (Plano de Ação para Prevenção e Controle do Desmatamento)* and the country's Nationally Determined Contributions (NDC) target of conserving native vegetation.

Although the broader New Industry Brazil Action Plan 2024-2026 (*Nova Indústria Brasil*)[28] was launched two years after the BNDES Blended Finance public call, both the call and the Sustainable Cacao CRA align with the policy's green-credit pillar.

Finally, BNDES stipulates that project spending must align with federal social and environmental statutes, from the Statute for People with Disabilities to Brazil's data-protection rules, and with the international treaties the country has ratified. These contractual clauses elevate the CRA from a pure credit vehicle to a delivery mechanism for public policy, ensuring that every Real invested advances Brazil's multi-layered sustainability agenda.

SUSTAINABLE CACAO CRA ANALYSIS

1. The Amazon Dimension

Overview of Cacao in the Amazon

Covering 5 million km² in Brazil alone, the Amazon hosts one-tenth of the planet's known species and acts as a critical carbon sink, yet its forest frontier remains contested. Satellite alerts from the National Institute for Space Research (INPE) DETER (Real-time Deforestation Detection System) system show deforestation fell 24% between January-August 2024 compared to the same period in 2023, marking a six-year low. Still, more than 2,800 km², an area twice the size of São Paulo, vanished in eight months.[29,30] Frontier dynamics are shaped by cattle expansion, informal land markets, and infrastructure corridors such as the Trans-Amazonian Highway, which lower transport costs and accelerate forest conversion. Of the 462 loans closed thus far under the Sustainable Cacao CRA, 77 went to smallholders living in the Trans-Amazonian area of Para State, the remainder to producers in Bahia.

Cacao cultivation demands substantial upfront investment and specialized knowledge and inputs to establish productive agroforestry systems. Farmers must purchase disease-resistant seedlings, particularly to combat persistent threats like witches' broom and frosty pod rot, and often need improved rootstock varieties for better resilience.[31] Initial planting requires careful land preparation and shade-tree integration requiring machinery and labor for pruning, planting, and ongoing maintenance. Post-harvest processing is equally resource-intensive; pods must be manually harvested using machetes, fermented for several days, sun-dried, and stored properly to preserve quality. Each step involves labor and equipment that smallholders must finance out of pocket.

Cacao agroforestry establishment and operational costs can reach over US $1,000 per acre, making cacao a capital-intensive crop compared to traditional slash-and-burn agriculture.[32] Provision of rural financial and technical services are even scarcer in the Amazon than elsewhere in Brazil, making the Amazon a particularly important focal geography for concessional products such as the Sustainable Cacao CRA.

Sustainable Cacao CRA: In the Amazon Biome

The sustainable CRA model was first piloted outside of the Amazon in Bahia's Atlantic Forest in 2020. The pilot developed was a collaboration between Tabôa, Gaia, and the Arapyaú and Humanize Institutes, which financed cacao agroforestry farmers. The pilot supported 270 farmers, delivering strong results: a 60% increase in average income, a low default rate (~0.28%), and measurable socio-environmental outcomes.[33] It demonstrated that bundled finance and extension services could both uplift livelihoods and promote forest-friendly cacao production.

Building on that success, the second issuance extended the model into the Amazon by including small producers in Para's Trans-Amazonian corridor. The instrument had to be adjusted to reflect Amazon-specific realities. In Para rural smallholder farms are more remote than in Bahia, creating logistical challenges and increasing the cost of TA provision. This means that credit agents and extensionists must travel farther between producers, thus each extensionist can support fewer producers in Para than their counterparts can in Bahia. Producers are often close enough in Bahia to allow combined trainings and visits, whereas this is rarer in the Amazon. Additionally, because the definition of "smallholder" varies between regions (<20 hectares in Bahia versus <80 hectares in Para), the general trend thus far has been for the producers in Para to be better able to absorb larger loans (average of R$ 38,276 in Para versus R$ 19,566 in Bahia). Finally, it is more common for Amazonian producers to also have livestock, which provides a separate revenue stream that makes it easier for them to repay loans and contributes to their ability to absorb larger ticket sizes compared with producers in Bahia.

To better serve Amazon producers, Tabôa enlisted the NGO Solidaridad as a lead technical assistance partner for the Amazon. Solidaridad's deep regional knowledge and long-term presence were essential for building trust and for successful implementation across dispersed settler communities. Solidaridad provided technical assistance, aiding producers in accessing loans, implementing improved agroforestry techniques, and monitoring outcomes. Importantly, alignment with Solidaridad's existing initiatives allows them to provide a portion of their TA as in-kind contributions to the Sustainable Cacao CRA, reducing the financial burden of the technical services on the product.

2. Market Differential and Financial Innovation

There are various ways that agricultural producers can finance their operations in Brazil. Table 2 lists illustrative options, highlighting the comparative attractiveness of the Sustainable Cacao CRA from the producers' perspective.

Table 2. Illustrative Agricultural Finance Options in Rural Brazil

Typical source	Approx. Annual Rate	Accessibility for target farmers	Pros	Cons
BNDES Sustainable Cacao CRA	12% (nominal)	High – Taboa extension agents support onboarding; no formal collateral, backed by solidarity groups	No hard collateral requirements, Technical service provision, long tenors (3 years)	Low credit ceiling of R$ 40k
Pronaf ("Bioeconomia", "Mais Alimentos" etc.)	2 – 3%; some agro-eco lines 0.5%	Moderate/Low – requires CAR regular, land title and bank paperwork; small ceilings (≤R$ 250 k)	Federally subsidized rural credit, (0.5 – 3% yearly); long grace (up to 3 yrs)	Paperwork, land-title hurdles; often slow disbursement
Banco da Amazônia / FNO Amazônia Rural	up to 12%, fixed rate	Low – normally asks for hard collateral or co-obligation,	Larger tickets; dedicated Amazon budget	Collateral, strict risk scoring; equal or higher cost than CRA

Table 2. Illustrative Agricultural Finance Options in Rural Brazil (continuation)

Typical source	Approx. Annual Rate	Accessibility for target farmers	Pros	Cons
PNMPO / community-bank micro-credit	13-57%	High – but limits ≤R$ 15 k and maximum 24 month tenor,	Simple onboarding; funds reach informal producers	Small ticket (≤ R$ 15 k); very short tenor (≤24 months); rates up to 4%/month
Ag-fintech & buyer pre-finance	27-34%	Moderate – requires crop insurance or warehouse receipts; no TA	Fast digital approval; no public-budget cap	Needs crop insurance, warehouse receipts; high cost; variable tenor and rate
Off-taker advance (exporter/chocolate maker)	~27%	High—embedded in supply contract	Easily accessible; may include bonus pricing	Price-hedge or exclusivity clauses; repayment deducted from harvest
Traditional bank working-capital (recursos livres)	>20 % on average	Low – often inaccessible for smalholders due to lack of formal assets and high risk premium charged	Flexible use of funds	Very high rates when SELIC >10%

In the context of other available credit products in Brazil the Sustainable Cacao CRA has clear advantages in terms of interest rate, eligibility criteria, and technical support offered. The Pronaf (National Program for Strengthening Family Agriculture) products offer steeply discounted rates, but the administrative burden of applying, limited federal subsidies, and land tenure requirements make these products less accessible than the Sustainable CRA, while delivering less on-the-farm technical assistance. Other financing options present barriers to small rural producers that can be insurmountable, including hard collateral requierments and prohibitively high interest rates.

Key differentiators of the Sustainable Cacao CRA

The blended finance structure of the product, which crowds in private capital while facilitating positive social and environmental outcomes, is a clear market differentiator. While not unique in the Brazilian Amazon, blended finance products that seek social and environmental impacts alongside financial returns are small compared to generally available agricultural financing and play a critical role in promoting sustainable land use. Beyond the structuring of the product, key market differentiators to highlight include:

Borrower solidarity groups: To manage borrower risk without hard collateral, Tabôa organizes clients into solidarity-guarantee groups of three to ten neighbors. These groups have been a core feature of Tabôa's credit methodology since operations began in 2017. The peer-pressure mechanism, common in microfinance arrangements but not often integrated with formalized fixed-income products, kept delinquency at just 0.28% through multiple drought years under the pilot CRA Sustentável na Mata Atlantica.[34] The innovation of the CRA Sustentável do Cacau, compared to the CRA Sustentável na Mata Atlantica, lies in its expansion to Pará, its larger scale, and its integration of technical assistance from partner organizations. By adopting this best practice from microfinance approaches and the previous CRA, the Sustainable Cacao CRA utilizes a powerful mechanism to improve financial performance and reduce risk.[35]

Technical assistance delivery: Producers are provided with comprehensive TA that includes financial orientation, business planning, and administration of resources in addition to agricultural support. While technical assistance has proven to be pivotal for the success of the program, Tabôa highlighted how expensive it can be and the importance of working with service providers with presence on the ground and a high level of local knowledge. BNDES also emphasized the critical role of technical assistance in ensuring producer orientation and project success. However, they also noted that the transaction costs of such operations can be very high due to the complexity of the instrument, upfront financial and monitoring costs, and the relatively small contract size by BNDES standards. To address this, it was suggested that scaling up to considerably larger instruments would be important to enable a dilution of both financial and non-financial transaction costs.

Impact monitoring and third-party impact audit: All receivables are screened against eligibility filters including no child labor, full CAR compliance, and tax clearance, and the bond carries a WayCarbon independent opinion that certifies gender, carbon-storage, and forest-protection KPIs written directly into the securitization term sheet. These features set a new bar for ESG rigor in Brazil's CRA market and will help ensure investor and regulator trust in the product after negative press coverage of other green CRA products emerged in 2023.[36]

Competitive Advantage

For producers, the loans offer a rare combination of affordability and long-term support: credit is priced at ≤1% per month with a tenure of 36 months and grace period of up to 6 months, well below market rates, and paired with robust TA delivered throughout the loan cycle. Repayments are scheduled semiannually to align with cacao harvests, ensuring resources are available when payments come due. The credit is used primarily for working capital, such as fertilization and small equipment to ease management, but some borrowers also channel funds into expanding fruit trees in agroforestry systems. Since newly planted cacao only begins producing in its third year, part of the credit effectively serves as investment rather than short-term working capital. Producers in Para also tend to take on higher average loan amounts than those in Bahia, reflecting their greater cacao productivity. While these conditions meet immediate production needs, longer-term investment needs would require extended maturities. For capital market investors, the CRA provides a de-risked ESG-compliant investment option that yet allows for competitive financial returns.

Competitive Disadvantage

Despite its promise, the CRA model carries notable challenges. Structuring and issuing CRAs under Brazilian capital market rules requires registration with the CVM and compliance with complex securitization procedures, raising legal and transaction costs. Additionally, the model is heavily dependent on grant funding to cover the TA, a feature that is difficult to scale without continued concessional support. In regions like Pará, land-tenure insecurity further limits expansion, as producers without regularized property rights may be ineligible or face onboarding barriers.

Innovative Features

The Sustainable Cacao CRA is the first CRA in Brazil to fully integrate a blended capital stack, combining public grant funding (via BNDES), philanthropic grant financing (various philanthropic partners), philanthropic mezzanine investment (Rabo Foundation via Tabôa), and private senior capital from ESG investors. This layered structure distributes risk and preserves affordability for smallholder farmers who would otherwise be excluded from formal credit markets. The CRA model is further distinguished by its embedded TA component and borrower solidarity groups that allow for timely intervention and ensure farmer success. This CRA use-case plays an important role in building a track record for the mechanism that investors can use to make informed decisions based on data and modeled risks.

3. Operationalization

- **Origination and Structuring:** In Para, Tabôa and Solidaridad extensionists identify eligible farms and secure farmer interest through direct engagement with producer associations, cooperatives, and family farming networks, distributing brochures and videos to raise awareness of the product and the support provided. Interested and eligible farmers then co-create investment plans with the extension agent, and Tabôa issues CPR-F notes in farmers' names. Gaia Financeira purchases these notes, while Gaia Securitizadora pools them into CRAs. PlanetaServ handles repayment servicing and back-office operations.
- **Loan Management and Monitoring:** While loans are app-based, with payments from Gaia via direct bank transfer to loan recipient, final approval occurs in the field through semi-annual extensionist visits that provide technical advice and monitor ESG compliance. GPS-tagged farm photos feed directly into Gaia's securitization database for investor reporting, with field agents uploading geo-referenced plot data that generates investor dashboards tracking KPI compliance and early-warning indicators.
- **Technical Assistance:** The same extensionists deliver comprehensive on-farm support covering pruning, soil management, and post-harvest fermentation - financed largely by BNDES, Rabo Foundation, and philanthropic grants. A portion of the TA cost is covered by the TA partners, who provide some services as in-kind contributions to the initiative. This technical package drives the enterprise's value proposition by upgrading productivity and strengthening repayment capacity.
- **Risk Management:** The granular digital monitoring system provides senior-note holders with confidence to price risk below ordinary unsecured rural micro-credit rates.

4. Scalability Opportunities and Challenges

CRAs are not inherently scalable, as they are fixed income products, though revolving CRAs can multiply the original capital investment. However, they are easily replicable (see section 5 below), and all future experiences of issuing green CRAs can learn critical lessons from the challenges and successes of this product. the model (Phase II, launched in 2025, expands the footprint to 25 municipalities across both biomes and aims to finance 2,000 hectares of new cacao while conserving an additional 3,000 hectares of forest.[37]

Investor appetite seems to support that ambition. The inaugural senior tranche was oversubscribed, and family-office ESG desks have indicated demand for investments that combine fixed income with measurable biodiversity impact. At the farm level, Solidaridad's mapping has already identified more than 2,000 credit-ready producers, giving the pipeline necessary volume.

Yet scale will not be automatic. Despite the promising results of the Sustainable Cacao CRA, several scalability challenges could constrain replication and expansion without targeted interventions. A key structural barrier is the continued need for concessional capital to enable commercial capital to flow to sustainable land use investments on small farms. While future CRA issuances may eventually benefit from stronger repayment histories and lower risk premiums, most investors still require a blended finance structure to make the economics work for smallholder borrowers. Without this subsidy layer, the cost of capital would likely exceed what farmers can sustainably repay, threatening both uptake and long-term viability.

Additional complexity arises from the CRA's capital market structure. Because the CRA is issued as a public security registered with the CVM, it must be listed and updated on formal bond market platforms, which imposes administrative costs and legal oversight obligations that may deter less experienced originators. Moreover, for foreign investors like the Rabo Foundation, currency hedging and inflation volatility in Brazil present persistent exposure risks, particularly for long-dated mezzanine capital. Unless mitigated by public guarantees or FX solutions, these macro-financial factors may limit the pool of catalytic investors willing to participate in scaled versions of the model.

5. Replicability and Financial Sustainability

Green Coalition members can learn critical lessons from this case study, and replicate aspects of this successful blended finance model by adapting its core structural elements to their local contexts. The fundamental architecture of this blended finance approach can be implemented through various instruments beyond Brazil's specific CRA structure. Development banks can utilize existing tools like guarantee funds, linked credit lines, or warehouse receipt financing to achieve similar risk distribution and affordability outcomes. The key is maintaining the layered capital approach where catalytic capital (public, philanthropic, or impact focused private) funds absorb first-loss risk, enabling private capital to participate at acceptable risk-adjusted returns while keeping borrowing costs affordable for smallholder farmers.

A persistent challenge for financing small agricultural producers across the Amazon is the small loan size relative to the fixed administrative and operational costs of running a small loan program. Onboarding a producer for a R$ 38,000 loan costs approximately the same as for a R$ 19,000 loan. Efficient TA and blended finance can overcome this barrier, as in the Sustainable Cacao CRA. However, to ensure financial sustainability beyond and reduce the need for concessional capital, being able to highlight other projects' outcomes (i.e., how TA reduces default rates), and achieving economies of scale by reaching larger numbers of borrowers, can help reduce banks' risk premium and improve overall financial sustainability.

An important element of the Sustainable Cacao CRA is the increasing value of cacao in commodity markets, which likely contributed to the low default rate for the pilot in Bahia. The approach will work best for similarly high value crops, but maybe face additional challenges if implemented with a focus on lower value commodities.

The integration of comprehensive technical assistance with credit delivery emerges as a critical success factor that Green Coalition members should prioritize in replication efforts. The CRA model demonstrates that bundling technical assistance, financial planning, and business development services with loan products significantly reduces default rates while improving socio-economic and environmental outcomes.

Development banks can partner with established extension organizations, cooperatives, or NGOs that have deep local knowledge and field presence. This investment in capacity building proves essential for both financial performance and achieving meaningful environmental and social outcomes, particularly in frontier regions where farmers may lack experience with sustainable production practices.

Coalition members should also adopt the solidarity guarantee mechanism and rigorous ESG monitoring framework that distinguished this product in the market. Peer-based guarantee groups of 3-10 neighboring farmers can effectively substitute for traditional collateral requirements, enabling access for producers without formal land titles, a common barrier in many developing countries. The independent third-party verification of environmental and social impacts, as provided by WayCarbon, builds investor confidence and regulatory credibility while ensuring genuine sustainability outcomes. Development banks can leverage existing certification bodies or impact measurement organizations in their regions to provide similar validation, creating a robust framework that attracts ESG-oriented private capital while maintaining accountability for conservation and livelihood improvements.

6. Social, Environmental, and Climate Impacts

By December 2024, the Sustainable Cacao CRA had financed 462 loans totaling R$ 10.47 million, directly benefiting 1,371 people. Of the total portfolio, 24% supported women producers and 32% reached agrarian-reform settlers, reflecting the program's strong inclusion mandate.

On the environmental front, the initiative supported the establishment of 344 hectares of certified cacao agroforestry, helped conserve 1,604 hectares of forest, and brought an additional 1,761 hectares under sustainable management. These practices resulted in the sequestration of 57,247 tCO_2e in cacao biomass and native canopy cover.

Most important for livelihoods, farmers' incomes are rising, (data is still being collected, however the pilot CRA launched in 2020 increased average income 60% over three years), while the default rate so far is 0%, demonstrating that ecological farming can yield benefits for people and the environment when paired with the right combination of finance and extension services.[38]

7. Lessons Learned

The Sustainable Cacao CRA has yielded several important insights. Most notably, bundling TA with credit access significantly reduces default rates by strengthening farmers' capacity to plan, manage, and commercialize agroforestry investments. When producers receive structured extension services and financial guidance alongside affordable loans, repayment improves and overall credit risk declines, supporting the use of blended capital strategies to reach underserved markets.

In regions with limited access to formal collateral, solidarity guarantees have proven to be a viable, culturally appropriate substitute. Organized in small peer groups, borrowers co-guarantee one another's loans, a model that functions well in Amazonian settlements when reinforced by trusted extensionists.[39] These social-finance mechanisms have helped overcome legal and logistical barriers to credit formalization in frontier areas.

However, structuring CRAs involves significant legal and regulatory complexity, particularly due to requirements for CVM registration, public listing, and multi-party securitization. For a large institution like BNDES, which typically deploys resources at scale, smaller instruments such as this may not justify the administrative overhead. The bank has signaled interest in identifying alternative instruments that could deliver similar impact with lower structuring costs.[40] In contrast, smaller public development banks may find this model more attractive. These institutions often work closer to the ground, with regional mandates that prioritize smallholder inclusion, value chain strengthening, and biodiversity-linked finance. In other contexts, such as state-led programs in agroforestry cacao in Pará or sustainable livestock transitions in Cerrado frontier zones, adapted models using simpler instruments like linked credit lines, guarantee funds, or CPR-backed warehouse lending may offer a more efficient path forward.

8. SWOT Analysis

STRENGTHS

- Blended capital stack mitigates repayment risk
- Robust technical assistance network
- Independently verified ESG metrics
- Market-driven approach is attractive to both farmers and investors
- Solidarity guarantees

WEAKNESSES

- High transaction costs
- Continued dependence on scarce grant funding
- Complex structuring requirements
- High costs of technical assistance

OPPORTUNITIES

- Growing demand for deforestation-free supply chains
- Opening of new sustainable markets
- Potential for replication and scaling

THREATS

- Policy swings affecting concessional budget availability
- Cacao price volatility
- Unresolved land-title disputes
- Risk of eroded momentum without continued institutional support

FINAL CONSIDERATIONS

The Sustainable Cacao CRA presents a compelling and practical model for public development banks and financial institutions seeking to scale forest-positive finance in Amazon regions. It demonstrates how a structured, multi-layered capital stack, combining public concessional funding, philanthropic mezzanine investment, and private senior capital, can successfully deliver long-term, affordable credit to smallholders often excluded from conventional finance. Crucially, this structure is embedded within a robust framework of technical assistance, ESG safeguards, and commercial integration, which together enable not only repayment but also meaningful gains in forest conservation, carbon sequestration, and rural livelihoods.

The instrument's early successes underscore its transformative potential. These outcomes are particularly relevant for Green Coalition members looking to deploy capital in ways that meet both climate and inclusion mandates. While CRA structuring under CVM rules may pose administrative challenges for some institutions, the model's fundamentals are transferable: peer guarantees, agroforestry-linked lending, and value chain alignment can be adapted through other instruments such as CPR-backed loans, blended guarantee facilities, or concessionally priced revolving funds.

This case reinforces a critical insight: when catalytic finance is combined with trusted technical partners and strong commercial anchors, public financial institutions can unlock nature-positive investment at scale, even in legally complex, socially diverse frontier areas. For those working to move the needle on sustainability in the Amazon, the CRA Sustentável do Cacau is not only a proof of concept, but also a roadmap for replication.

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