



Global Innovation Lab
for Climate Finance

AMAZONIA SUSTAINABLE SUPPLY CHAINS MECHANISM

INSTRUMENT ANALYSIS
SEPTEMBER 2021



Amazônia Sustainable Supply Chains Mechanism

LAB INSTRUMENT ANALYSIS
September 2021

DESCRIPTION & GOAL —

Leverages off-take agreements for forest-compatible products to provide upfront finance, technical assistance, and structural community resources that catalyzes the bioeconomy and keeps forests standing in the Brazilian Amazon

SECTOR —

Land use and agriculture

FINANCE TARGET —

Off-takers of Amazon non-timber and forest-compatible ingredients; DFIs; Commercial investors

GEOGRAPHY —

Amazonian region, Brazil

The Lab identifies, develops, and launches sustainable finance instruments that can drive billions to a low-carbon economy. The 2021 Lab cycle targets three specific sectors: sustainable food systems, sustainable energy access, and sustainable cities, in addition to two regions: Brazil and Southern Africa.

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SUMMARY

There is growing global demand for non-timber bioeconomy products from the Brazilian Amazon, but the region faces many barriers in transitioning to a low-carbon, sustainable, and high biodiversity economy. To leverage the market and accelerate this transition, the Amazônia Sustainable Supply Chains (AMSSC) Mechanism will support smallholder cooperatives to strengthen the value chains of these products, building sustainable livelihoods and reducing pressure to deforest in the region.

Proposed by Natura (the world's largest B corp and the fourth-largest pure play beauty company), and by Mauá Capital (an asset manager committed to impact investing), AMSSC tackles the main obstacles associated with scaling bioeconomy value chains in the Amazon by providing the needed enabling conditions and upfront financing to suppliers. AMSSC's two branches include a receivables fund that leverages offtake agreements to advance financing to producers, and an enabling conditions facility that provides two distinct areas of support: (1) technical assistance to Amazonian cooperatives to support forest-compatible products and practices that meet international standards; and (2) investments in suppliers' communities to overcome socio-economic barriers and contribute to sustainable development. The pilot has the potential to reach three million hectares of the Brazilian Amazon by 2030 (approximately the size of Belgium), reducing the pressure to deforest and indirectly avoiding 1.4 billion tons of CO₂ emissions roughly 2.7% of the total annual amount of global emissions (51 billion tons).

As one component of Natura's broader strategy towards the Amazon region, AMSSC's objective is to leverage Natura's presence to bring in other off-takers, amplifying investments in the forest-compatible bioeconomy, increasing market demand and linkages, and ultimately building the resilience of these communities.

This instrument meets the Lab's four endorsement criteria:

- **Innovative:** The combination of leveraging offtake agreements to advance financing for sustainable ingredients plus investment in broader community enabling conditions addresses key barriers to expanding bioeconomy value chains in the Brazilian Amazon. It presents a model for off-takers willing to take on a role historically held by financial institutions to contribute to the sustainability of their supply chains, as well as of the communities involved.
- **Actionable:** AMSSC will benefit from Natura's extensive familiarity of the Amazon region, as well as its wide network of existing suppliers for a pipeline of projects. With the fund manager, Mauá Capital, actively participating in its structuring, AMSSC is primed to quickly deploy funds and technical support after initial funding.
- **Catalytic:** The fund can reach three million hectares and over 10,000 households in the Brazilian Amazon through its pilot with primarily Natura suppliers. Its design allows for a combination of different sources of capital, making philanthropic capital more effective.
- **Financially Sustainable:** Natura's participation as off-taker and investor in the subordinated tranche works to de-risk the instrument and create confidence for investors to enter into the fund. The enabling conditions further contribute to reducing risks by supporting productive and management capacity.

Next steps: The proponents will continue conversations with other off-takers and evolve their strategy to involve them in the fund; begin an information campaign for suppliers on

the new financing options and to better understand their needs; develop a monitoring and evaluation strategy based on the systems in place already at Natura; and continue discussions with other possible investors, including for the mezzanine and senior tranche.

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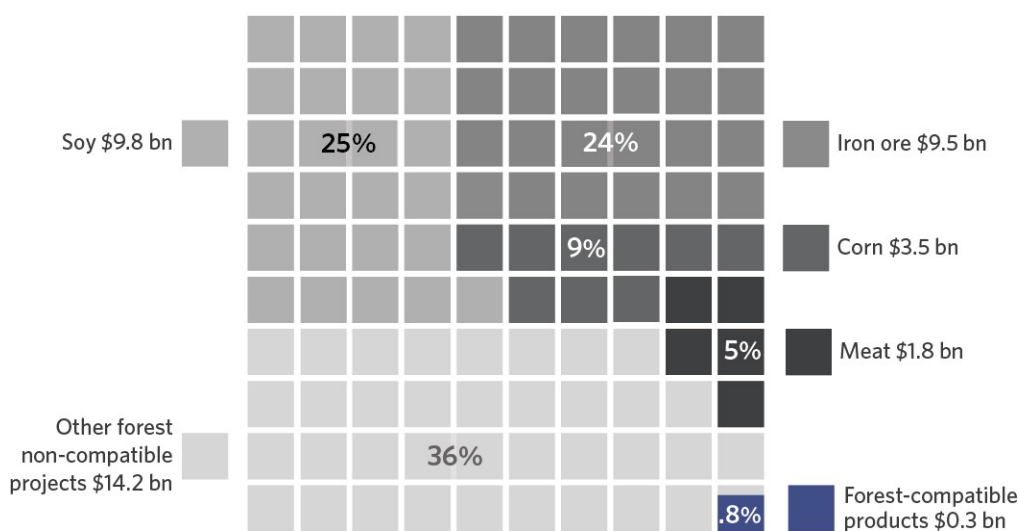
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CONTEXT

Cooperatives in the Brazilian Amazon are unable to take advantage of the growing global demand for forest-compatible bioeconomy products due to lack of financing and weak value chains.

A growing global market for non-timber, forest-compatible products¹ presents a significant opportunity for the Amazon region, which contains 67% of the world's tropical forest cover (Imazon, 2013). The Brazilian Amazon covers 59% of the country's territory, spread over 772 municipalities (IBGE, 2021). Yet the region contributes to not even 0.2% of the USD 175 billion global market for forestry-compatible products which include açai, Brazil nut, passion fruit, pepper, babaçu, and cacao, among many others: all found in the Amazon rainforest (Coslovsky, 2021).

Figure 1: Exports from the Amazon



One reason for this is that current sustainable or bioeconomy value chains are weak, lacking productive capacity, infrastructure, and financing, and cannot compete with value chains that are often associated with deforestation (beef, soy, wood). Livestock, for instance, gets most of the available credit in the region: 81% of the number of contracts for rural credit in the Amazon in 2019/20 were related to livestock (Souza et al., 2021). Lack of economic alternatives cause pressure for local producers and agro-extractivists² to switch to products with stronger markets, clearing native vegetation in the process.

Adequate financing, technical assistance, and investment in enabling conditions can build forest-compatible value chains in the Amazon, allowing for cooperatives to take advantage of the growing market demand and eliminating pressure to deforest. Structured with a major off-taker, the Amazônia Sustainable Supply Chains (AMSSC) mechanism will provide the necessary tools to strengthen the forest bioeconomy, supporting cooperatives in increasing their supply of forest-compatible products from the Amazon, while also generating sustainable livelihoods in the region.

¹ From this point forward, referred to just as "forest-compatible products", but indicating that these products do not include timber. See Annex 1 for glossary of terms used in the report

² For the purpose of this report, defined as people whose livelihoods depend on agriculture as well as extractivism, which is defined as the collection of fruit, leaves, and nuts from trees and plants. See glossary in Annex 1

CONCEPT

1. INSTRUMENT MECHANICS

With participation of a major off-taker, the Amazônia Sustainable Supply Chains Mechanism provides upfront finance to bioeconomy ingredient suppliers in the Brazilian Amazon, as well as other technical assistance resources to build the enabling conditions necessary for strong forest bioeconomies and communities.

1.1 MECHANICS

The AMSSC mechanism is proposed by Natura (the world's fourth largest pure-play beauty company) and Mauá Capital (an asset management company that offers high value-added alternative investment products), with the purpose of financing forest-compatible and bioeconomy suppliers and strengthening these value chains and their communities. The instrument provides a new model for off-taker corporate responsibility, where companies play an active role in not only guaranteeing the quality of their supplies but also supporting the communities of their suppliers, by taking on a role that historically has been held by financial institutions. This new model benefits the system as a whole, as the off-taker's commitment with the development of sustainable supply chains acts as a de-risking mechanism for the financial instrument.

The mechanism has two components:

- A **receivables fund** (either a FIDC or a Fiagro³) that pays suppliers upfront in exchange for receivables, with the off-taker then repaying the fund for the offtake purchased. The receivables fund contains both a subordinated and senior tranche, with the off-taker participating in the subordinated tranche. There is also a possibility that a mezzanine tranche will be constituted allowing more concessional capital to enter into the mechanism, whereby investors in this tranche would get repaid the principal. The mezzanine tranche will also reduce costs for financial products.
- An **enabling conditions facility** (ECF) that will work alongside the fund to improve suppliers' capabilities to deliver quality products and ramp up their productive capacity by providing technical, financial, and productive assistance to smallholder cooperatives. In addition, the ECF will provide a broader set of investments to communities involved in standing forest-based economies, including in education, healthcare, access to internet and infrastructure, to contribute to their sustainable development. The ECF will begin with non-returnable grants, but with potential to also receive funds from the mezzanine tranche.

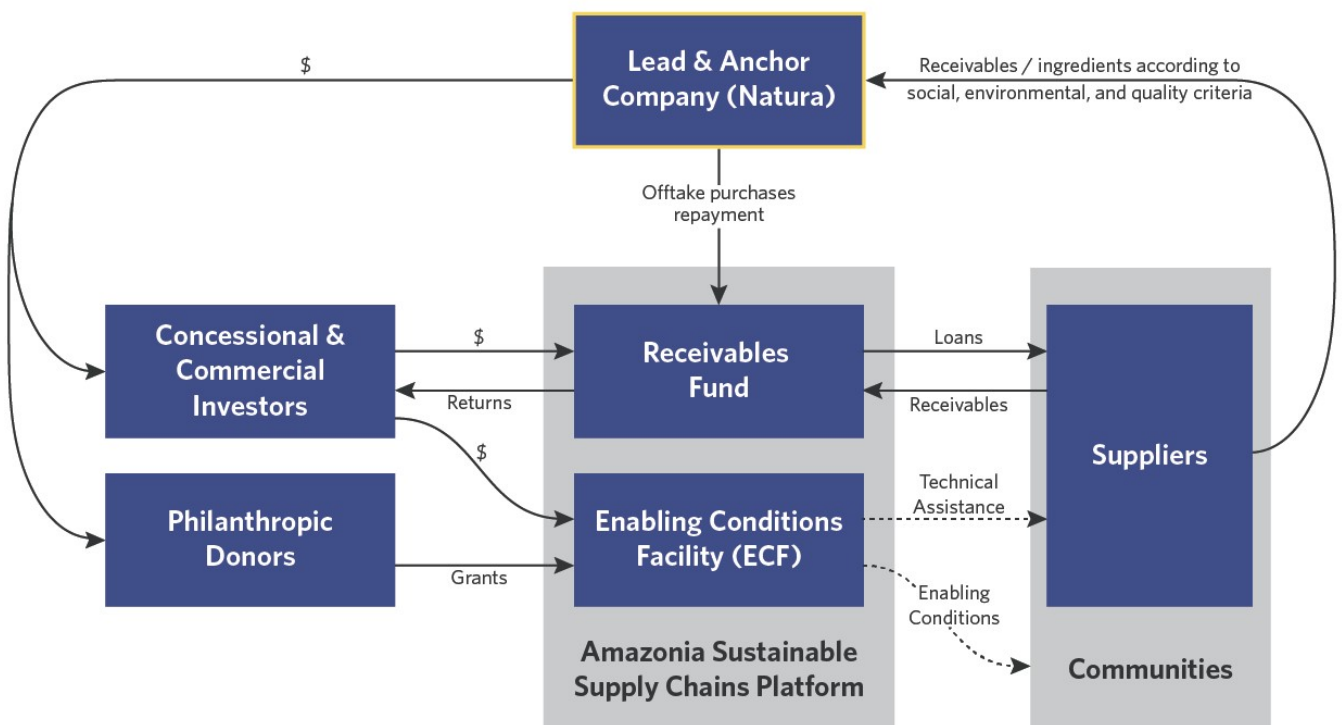
The ECF is built around a strategy to strengthen resilience and capabilities of forest communities and smallholder cooperatives. The conditions that Amazonian communities face today limits their ability to respond to market shifts like the demand for forest-compatible products, let alone to guarantee sustainable livelihoods for future generations. Setting these communities up with the appropriate enabling conditions can allow financing and impact investments to flow more freely into sustainable projects, scaling the Amazon's bioeconomy, and offering economic opportunities and livelihoods based on standing forests. The structural resources provided by ECF will further de-risk the instrument by

³ FIDC is a Brazilian receivables fund, or Fundo de Investimentos de Direitos Creditórios, according to the Brazilian Securities and Exchange Commission. Fiagro (*Fundo de Investimento para o Setor Agropecuário*) are investment funds for the agriculture and livestock sector in Brazil.

increasing the productive capacities of suppliers and their ability to deliver quality products. Financing will come from philanthropic sources and from grants the off-taker already uses to invest in the region. Annex 2 outlines details relating to the ECF and technical assistance provided.

As seen in Figure 2, the instrument uses a blended finance structure, with Natura acting as the initial off-taker and investor to the fund's subordinated tranche. Natura's presence catalyzes the participation of others in the fund, including other off-takers who can invest in both the receivables fund and the ECF.

Figure 2: Instrument Mechanics



1.2 VALUE PROPOSITION FOR SUPPLIERS

The proposed financing structure may change existing agreements between off-takers and their suppliers. For instance, since Natura currently provides their suppliers with a percentage of upfront payments, the proposed financing presents a significant change in how suppliers operate within the business, turning them into credit takers. Natura and the Lab Secretariat mapped out reasons for why these cooperatives would be interested in adopting this new financing, with the knowledge that this value proposition for this transition must be well explained to existing suppliers. (see Annex 3).

The main value proposition is that there is appetite for supplier transition financing which is currently under-served by local financial institutions. Individuals in forest-compatible value chains face many obstacles in unlocking credit (see Annex 3 for a set of stated reasons for experiencing this difficulty). AMSSC will offer financial products that are attractive to these cooperatives, since they will be more aligned with the on-the-ground reality and will be tailored to forest-compatible value chains.

2. INNOVATION

AMSSC provides a new model for companies' relationships with suppliers. It is the only fund in Brazil to leverage bioeconomy off-take agreements with a holistic focus on strengthening forest-compatible value chains in the region.

2.1 BARRIERS ADDRESSED: GROWING THE AMAZONIAN BIOECONOMY IN BRAZIL

Understanding the many complexities and difficulties that exist in operating in the Amazonian region, AMSSC offers a unique approach to addressing the main barriers that bioeconomy and forest-compatible product suppliers face today in growing their productivity and meeting market demand. The table below describes the main barriers that exist, and how AMSSC addresses these barriers.

Table 1: Barriers Addressed by AMSSC

| Barriers Addressed: Challenges to Growing Amazonian Bioeconomy in Brazil | |
|--|---|
| Barrier | AMSSC Solution |
| Banks' limited knowledge and capacity to originate deals with forest-compatible suppliers | Strong existing off-taker with familiarity of actors in the region eliminates necessity to go through banks or local finance institutions. Loans are also provided with off-taker guarantee that is specific to needs of cooperatives in forestry-compatible value chains. |
| Suppliers' difficulty to meet banks loan requirements | |
| Limited awareness of, and access to, forest bioeconomy ingredients market | Off-taker brings demand and market for forest bioeconomy ingredients, with objective of scaling to increase demand by adding more off-takers |
| Suppliers' limited management, operational and structural capacity | Advance payments through offtake provide resources for CAPEX in order to support transition, and ECF increase productivity and meet demand for expanding forest-compatible value chains. Suppliers receive technical assistance in order to meet off-taker's quality criteria. |
| Poor infrastructure and socio-economic conditions in communities that can incentivize a transition to more guaranteed income yet unsustainable activities (i.e. cattle, soy) | ECF technical assistance component builds suppliers' financial management, operational, and structural capacity and allows them to service increased market demand. Investments through ECF will also improve digitalization and education, among other initiatives, part of the off-taker's greater strategy to build capacity in the region |

2.2 INNOVATION: UNIQUE OFF-TAKER-LED FUND FOR FOREST BIOECONOMY PRODUCTS IN THE AMAZON

AMSSC brings a new model for companies to interact with their suppliers differently, contributing to the betterment of suppliers' communities. It offers a systemic approach to change throughout the supply chain, and an opportunity for companies to take on a role traditionally held by financial institutions, but in a way that brings more value add to suppliers and maximizes the potential of the entire supply chain and its communities. While other funds investing in sustainable value chains in the Amazon do exist, AMSSC is unique in having

the participation of the fund manager and a strong off-taker in the structuring of the fund, as well as having the off-taker investing in the fund with skin in the game and acquiring inputs from the communities. In addition, the instrument distinguishes itself in being only one component of a much larger and more encompassing strategy to generate global value for these products and contribute to sustainable livelihoods in the Amazon.

Other differentials of AMSSC include:

- Focus on value chains of forest-compatible and bioeconomy products in the Amazon, including outside of food ingredients and products. Most existing instruments targeting forestry-compatible products in the Amazon have a focus on food products.
- Direct link to the market. AMSSC differentiates itself from other funds operating in the Amazon by having a proponent that directly purchases the products being produced, giving the suppliers a direct link to the market.
- Significantly reduced bureaucratic challenges in accessing financing, as is the case with federal subsidized rural credit lines like Pronaf or Programa ABC.
- Upfront payments. Considering the instrument is structured around the involvement of the off-taker, suppliers who are already part of their supply chains or that will be in the future will have the option to receive a percentage as upfront payments. Existing financial products for forestry-compatible cooperatives in the Amazon rarely offer this and, according to a Natura survey of suppliers, many experience delays when receiving payments from other lines of credit.

See Annex 4 for a full list of comparable instruments.

MARKET TEST AND BEYOND

3. IMPLEMENTATION PATHWAY AND REPLICATION

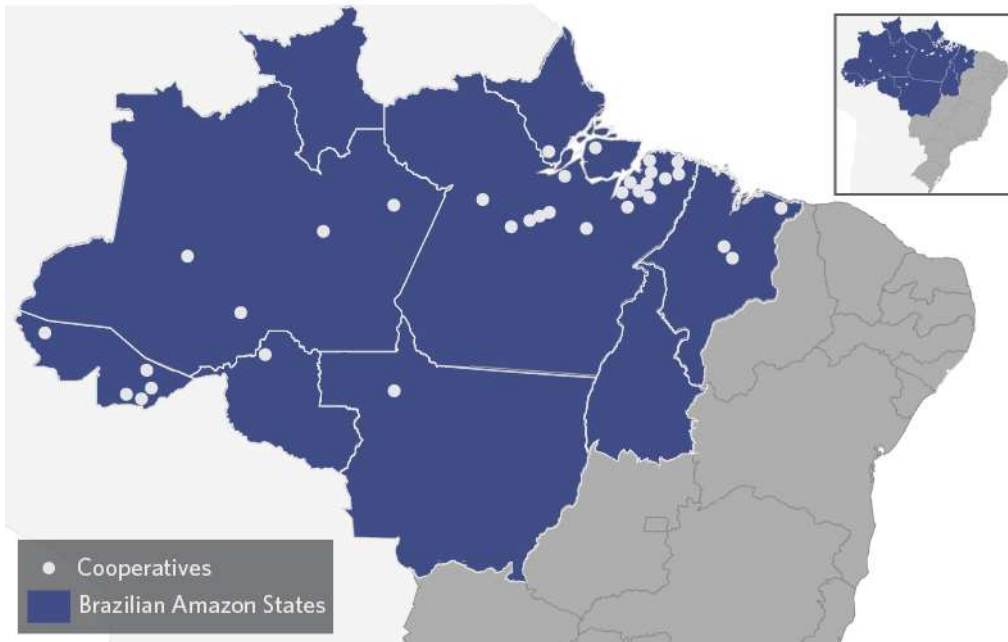
AMSSC will be piloted with Natura's forest-compatible suppliers with the objective of scaling to include other off-takers as investors.

3.1 PILOT IMPLEMENTATION

The instrument will pilot as a USD 50 million fund, financing Natura's own suppliers of bioingredients such as andiroba, cupuaçu, murumuru, ucuúba, babaçu, tucumã, and maracujá (passion fruit). The pilot plans to reach at least 34 cooperatives in the Amazon region (see map in Figure 3 and annex 5), starting with the purchase of 39 different ingredients but with the objective of expanding to 55 bioingredients that are forest-compatible. Natura expects its bioingredients off-taking to reach approximately USD 12 million (BRL 60 million)⁴ by 2030.

⁴ In this report, USD equivalent of the Brazilian real (BRL) is calculated using the exchange rate of 1 USD = 5 BRL

Figure 3: Map of target pilot area



The pilot will also expand Natura's purchase of palm oil (*óleo de dendê*) from agroforestry systems, as a part of Natura's SAF Dendê project, a transition that is being carefully researched and developed over the past ten years, with the support from the Brazilian agricultural research institute Embrapa and the World Agroforestry (ICRAF). Palm oil makes up the base of many of Natura's soap products, and the company's goal is to transition its entire palm oil supply to agroforestry systems by 2030 (reaching 41,000 hectares of land in the Amazon). Natura's demand for palm oil is expected to grow to over USD 27 million by 2030. The AMSSC pilot for SAF Dendê will take place in Tomé-Açu, Pará beginning with CAMTA, a well-established cooperative.

3.1.1 LAND USE AND TRADE STANDARDS

Natura is co-founder and a member of the Union for Ethical Bio Trade (UEBT) and its bioingredient suppliers are currently required to meet the criteria for UEBT certification (although they are not required to be specifically certified by UEBT). The UEBT standard builds on the BioTrade Principles and Criteria as developed by the UNCTAD BioTrade Initiative and promote 100% traceable supply chains. It contributes to the post-2020 global biodiversity framework and consists of seven principles covering social, environmental and economic issues including:

- Conservation of biodiversity
- Sustainable use of biodiversity
- Equitable sharing of benefits derived from the use of biodiversity
- Socio-economic sustainability
- Compliance with national and international legislation and agreements
- Respect for the rights of actors involved in BioTrade activities
- Clarity about land tenure, use, and access to natural resources and knowledge

Suppliers providing bioingredients to Natura with financing from AMSSC will have to comply to the UEBT standards. In addition, as Natura currently limits its purchases of palm oil to supplier's with Roundtable on Sustainable Palm Oil (RSPO) certified plantations, the RSPO Principles and Criteria for Sustainable Palm Oil Production standards will also be used in

producing and purchasing the ingredient from agroforestry systems, in addition to the UEBT standards.

3.2 IMPLEMENTATION PATHWAY

The pathway to implementation is composed of three main phases, with various milestones along these phases:

| Phase 1 | Phase 2 | Phase 3 |
|---|--|--|
| <ul style="list-style-type: none"> - Set up AMSSC fund structure and constitute the fund with fund manager - Set up initial ECF - Conduct information campaign to Natura's current suppliers - Engage potential investors - Develop strategy to engage other off-takers - Establish a monitoring plan and methodology | <ul style="list-style-type: none"> - Include one to two other off-takers in the mechanism - Continue discussions with other off-takers - Raise USD 6 million between the subordinate and senior tranches - Increase pipeline and opportunities with other suppliers - ECF begins to be financed with Natura's returns from subordinated tranche and can participate in the mezzanine tranche - Identify pathways for ECF to generate return and phase out from donations - Cooperatives receive financing | <ul style="list-style-type: none"> - Other off-takers enter the fund - Additional commercial capital - Cooperatives continue to receive financing - ECF continues to be financed with returns from subordinated tranche but also from other investors; other financial instruments are developed and used by ECF |

3.3 SCALING UP AND REPLICATION POTENTIAL

With growing global market demand (USD 175 billion global market for forestry-compatible products, Coslovsky, 2021), the objective of AMSSC is to bring in other off-takers into the fund (subordinated tranche) and ECF. The proponents are in conversations with other off-takers and defining the best strategy of how to engage and select other companies that will enter into the instrument. The two sectors prioritized for partner off-takers are the pharmaceutical and food sectors (non-competitive sectors), specifically looking for companies with similar volumes of purchase from the region as Natura. The proponents envision that another off-taker can come into the mechanism in as early as year two. Proponents will also seek other off-takers to enter into the ECF, specifically those that are already operating in the region.

Another possibility for scale up is to include cooperatives themselves as investors in the fund through resources they receive annually from the benefit-sharing agreement (repartição de benefícios). In the case of Natura's own suppliers, there is a potential of at least USD 3 million from which resources could come.

Lastly, the proponents are studying the possibility of augmenting the mechanism to also incorporate payments for ecosystem services, including for biodiversity, water, and carbon (based on Natura's carbon market pilot in the region).

4. FINANCIAL IMPACT AND SUSTAINABILITY

4.1 QUANTITATIVE MODELING

4.1.1 MODELING INPUTS AND METHODOLOGY

The instrument is modeled as a 10-year receivables fund, equivalent to 90% of off-take purchases. The model includes two groups of Natura purchases (bioingredients and SAF Dendê), as well as one other off-taker that enters in year two.

Interest rates offered by the fund will be competitive compared to similar products in the region. Possible default will be absorbed by Natura in the subordinated tranche. The fund manager has already committed to using an attractive rate for managing the fund (0.75%). See annex 6 for main assumptions used.

4.1.2 TYPES OF CAPITAL AND RETURNS

Two scenarios were modeled:

- 1) Two tranche fund: a subordinate tranche making up 30% of the fund and a senior tranche with 70% of the fund. The fund's base scenario provides a return of CDI + 1% (currently 5.3%) to the senior tranche, and a return of CDI + 3.5% (7.9%) to the subordinated tranche.
- 2) Three-tranches: subordinate (20%); mezzanine (10%) and senior (70%) tranches. In this scenario, the mezzanine tranche would be constituted in a concessional fashion, allowing for more options for different appetites. Investors in the mezzanine tranche would receive back the principal invested. The senior tranche returns would be at CDI + 1% (5.3%), while the subordinated tranche would see a return of CDI + 3.6% (8.0%).

In both scenarios, the fund will grow with time, as volume of purchases grow, but the proportion of subordinated and senior tranche will remain the same. The model uses a conservative growth rate of off-taker purchases of 5%.

4.2 RISKS TO FINANCIAL SUSTAINABILITY

There are several potential risks that the instrument may encounter in becoming operational and financially sustainable. Below is a table with these risks, along with their management strategies.

Table 2: Risks to financial sustainability

| Risks to Financial Sustainability | |
|--|---|
| Risk | Mitigation Measure |
| Default and side-selling: Non-payment from borrowers; products being sold to other buyers | Fund supports a percentage default with subordinated tranche; Anchor company provides intelligence/information to determine portfolio of borrowers; Suppliers receive TA to engage with off-taker supply chains |

| | |
|---|--|
| Limited investments into the fund: High perceived risk of the overall structure | Fund carries anchor company and off-takers' receivables; Anchor company also invests in the fund's subordinated tranche; Structure carries a TA facility that mitigates possible default risk |
| Insufficient or inadequate supply of products: Insufficient supply to meet off-takers' demand and quality criteria | TA facility to provide productive technical assistance in order to meet off-taker's quality criteria; Based on graduating from TA facility, the fund can provide resources for CAPEX in order to increase productivity and meet demand; Enabling conditions fund helps in improving infrastructure for productivity capacity |
| Limited demand for financial products: Suppliers not up taking credit | Enabling conditions and off-taker demand for bioeconomy products and services to then stimulate demand for credit; Provide economic value proposition of supply chain partnership |

5. ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT

AMSSC's pilot has the potential to keep three million hectares of forests standing, strengthen 40 cooperatives in forest-compatible value chains, and reach 10,000 households in the Amazon.

5.1 ENVIRONMENTAL IMPACT

The objective of AMSSC's pilot with Natura is to reach three million hectares of forest (approximately the size of Belgium) conserved in the Amazon by 2030, a 50% increase from the two million that Natura already helps to preserve through the purchase of bioingredients across 34 cooperatives. By financing and purchasing forest-compatible products in these areas and providing other structural resources for support from the ECF, AMSSC can contribute to reducing the pressure to deforest on this land, and thus **avoid a potential 1.4 billion tons of CO₂ emissions** roughly 2.7% of the total annual amount of global emissions (51 billion tons) that could be emitted if this native vegetation were deforested.⁵ See Annex 7 for mitigation potential calculations.

By leveraging Natura's existing SAF Dendê project (which supports the transition from monocultures and degraded lands to agroforestry systems), AMSSC will convert 41,000 hectares of degraded or monocrop areas to agroforestry systems. By doing so, the pilot can contribute to an increase in the capacity of the soil to store almost 700,000 tons of carbon, given the improved ability of agroforestry systems to act as a carbon sink compared to regrowth forest or degraded land (Embrapa, 2021; annex 5). Through implementation of agroforestry systems through Natura's SAF Dendê project, the fund has the potential to sequester over 2 million tons of carbon (7.3 million tCO₂ that is roughly 1.5% of the total annual amount of Brazilian emissions) just in the soil alone, compared to 1.2 million tons of carbon on 41,000 hectares of degraded land (the case of business as usual) (Ramos et al., 2018; Carvalho et al., 2014; Annex 7).

In addition, the fund will enhance ecosystem resilience to climate change. Preserving the integrity of native vegetation and implementing agroforestry systems in degraded areas will improve soil water retention capacities and soil health. Moreover, agroforestry systems with the palm plant (dendê tree) can result in three times more value in ecosystem services than

⁵ One hectare of native forests in the Amazon can store on average 132 tC per hectare, or 485 tCO₂ per hectare. (Pinto, 2020).

monocultures (USAID, 2018). Lastly, AMSSC will contribute to preserving biodiversity by conserving native vegetation through its operations with the bioingredient suppliers.

5.2 SOCIAL AND ECONOMIC IMPACT

As a part of Natura's strategy for 2030, the AMSSC's pilot project estimates to **benefit 40 cooperatives and 10,000 families in the Amazon** by the end of the decade. The receivables fund and ECF will support these cooperatives and their communities, providing structural resources to improve not only productivity and financial management, but also investing in basic infrastructure and services in these communities including education, healthcare, and sanitation. The ECF will build on Natura's current involvement in the region and contribute to the company's long term strategy of strengthening forest-based livelihoods in the Amazon, and achieving measurable gains in income, education, and health.

AMSSC's pilot by Natura will also result in several economic benefits through the implementation of agroforestry systems in the region, particularly when compared to monocrop and degraded /regrowth lands. One such positive impact is income diversification, where producers will benefit from producing various crops on one plot: SAF dendê or agroforestry systems with dendê also include cultivation of açai, cacao, andiroba, banana, maracujá, and wood. The dendê plant is also proven to be more productive when used in an agroforestry system, as compared to monocropping: in agroforestry systems it is shown to result in at least 30% more fruit as compared to in monocrop plantations (Miccolis et al., 2014; Langford, 2014; Embrapa, 2021), with the fruit from agroforestry systems generating up to 30% more oil than those from conventional plantations (Embrapa, 2021).

Natura has a strong track record of monitoring and evaluating its impact, which the proponents plan to pull from when developing impact monitoring methodologies for AMSSC. Mauá Capital is also very familiar with impact investing, which will help in communicating the instrument's impact back to investors. To further support the proponents in the first steps of crafting monitoring methodologies, the Lab Secretariat has identified a set of possible indicators that the proponents can use to measure and demonstrate AMSSC's impact over time, in addition to those already used by Natura (see Annex 8).

AMSSC is aligned and contributes to achieving several of the Sustainable Development Goals (SDGs), including:

- **SDG 8: Decent Work and Economic Growth.** The mechanism will contribute to the promotion of sustained, inclusive and sustainable economic growth, showing that decoupling economic growth from environmental degradation is possible in accordance with target 8.4. The instrument together with the help from the ECF strengthens value chains that keeps the standing forest while also enabling smallholders to expand their economic activities with decent work standards.
- **SDG 12: Responsible Consumption and Production.** The mechanism will support the achievement of targets 12.2, 12.6 and 12.a as it will encourage companies to adopt sustainable practices and value chains, taking part in the structure as an off-taker, supplier and/or investor. The mechanism combined with the ECF also facilitates a transition towards more sustainable patterns of consumption and production fostering scientific and technological capacity in alignment with the efficient use of natural resources.
- **SDG 13: Climate Action.** The mechanism has the ambition to significantly decrease the pressure to deforest thus contributing to the preservation of standing forests with

the potential to sequester, even on pilot phase, over 2.9 million tonnes of carbon. Besides mitigation efforts, the fund and the ECF will also contribute to the climate adaptation capacity and resilience of small holders as it also focuses on livelihood improvement.

- **SDG 15: Life on Land.** The mechanism also tackles targets 15.a and 15.b mobilizing and significantly increasing financial resources through this blended mechanism and the ECF to conserve and sustainably use biodiversity and ecosystems, while also promoting incentives to sustainable forest management.
- **SDG 17: Partnerships.** The implementation of the AMSSC mechanism and ECF relies on establishing effective partnerships in alignment with targets 17.3, 17.16 and 17.17 fostering multi-stakeholder partnerships mobilizing not only financial resources but also sharing expertise, technology and knowledge.

NEXT STEPS

Next steps for the proponents include:

- Continuing the conversation with other off-takers and creating a strategy to engage other off-takers into the fund;
- Beginning an information campaign for suppliers on the new financing and technical assistance options and understand their needs;
- Developing a monitoring and evaluation strategy based on the systems in place already at Natura; and
- Continuing discussions with other possible investors, including for the senior and mezzanine tranche.

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ANNEX

Annex 1: Glossary

For the purpose of this report, the following terms are defined in this way:

agro-extractivist: People whose livelihoods depend on agriculture as well as extractivism, which in Brazil is defined as the collection of fruit, leaves, and nuts from trees and plants (ex. Brazil nut, açai, andiroba, copaiba), as well as the extraction of oil from these fruits and nuts. In this case extractivists do not cut down trees, but rather depend on standing forests for their livelihoods.

bioeconomy: Knowledge-based production and utilization of biological resources, biological processes and principles to sustainably provide goods and services across all economic sectors. Source: National Academies of Sciences, Engineering, and Medicine, 2020.

enabling conditions: Factors that facilitate the mobilization of investment into the land-use area, and in this particularly case, the scaling up of bioeconomy value chains and sustainable development of Amazonian communities.

non-timber, forest-compatible products: Extractive products from the forest, native, uncultivated and non-timber. Includes açai, brazil nut, honey, cumaru, natural rubber, passion fruit, pepper, babaçu, cacao, ornamental fish, other essential oils, jute and other fibers, as well as simple products but not finished products. Includes lightly processed foods (e.g. pulps) based on extractive products (e.g. nuts without shell). Also, other bioeconomy ingredients that Natura purchases from the region (for example: andiroba, cupuaçu, murumuru, ucuúba, babaçu, tucumã). Source: Coslovsky, 2021.

sustainable livelihoods: Livelihoods that can cope with and recover from stress and shocks, as well as to maintain or enhance earning capacity with a decent and living wage, thus providing sustaining and inclusive livelihood opportunities for the next generation. Sustainable livelihoods are in alignment with the SDGs, contributing to economic growth that is beneficial for both people and the planet.

Annex 2: Enabling Conditions Facility and Technical Assistance

Understanding that resilient value chains also depend on enabling environments and resilient infrastructure, AMSSC's enabling conditions facility (ECF) will not only support technical assistance to improve the productivity of cooperatives producing forest-compatible products, but also improve infrastructure, productive technologies, financial management, and governance. Setting up these enabling conditions is critical to attract and leverage further investment into these projects, scale up the Amazonian bioeconomy, support sustainable development in these territories, and end deforestation in the region. Proponents imagine AMSSC, with the ECF, could bring systemic change and impact to supply chains in the Amazon.

Proponents also envision the ECF to evolve into a facility that could also provide loans for capex. Along with a processing partner, Natura was involved in a prototyping project to identify new technology and innovation that could improve the quality of raw materials. These prototypes are examples of infrastructure that could be financed by the ECF.

While the ECF (including the TA) will initially be financed with philanthropic sources (including from Natura itself), in the medium term, AMSSC will use the returns from the subordinated tranche to finance it. In addition, Natura's idea is to bring in other investors into the region with a strategic goal of the 1:3 ratio where every BRL R\$ 1 invested in the region by Natura is met by BRL R\$ 3 invested by co-investors (currently ratio is 6:1, according to Natura). The ECF will be based on Natura's internal "Territórios Sustentáveis" and "Nós da Floresta" strategies.

Finally, in the financial modeling technical assistance and structural resources never go to zero. The idea is that early participants will graduate from needing TA, and the mechanism will begin to provide TA to other, new suppliers, giving purpose for the ECF to continue.

Annex 3: Value proposition for Natura's suppliers & reasons documented for difficulty in accessing credit lines

The main reasons that suppliers would be interested in obtaining financial products offered by AMSSC include:

- Cooperatives and suppliers currently have difficulty in accessing lines of credit for forestry-based value chains. In addition, the existing financing options often have high interest rates or entail a very bureaucratic process to access (i.e., Pronaf). Lastly, repayment rates are not aligned with on-the-ground reality, and are not tailored to forestry-compatible value chains.
- Such a fund would be able to finance planned projects within cooperatives and communities
- Suppliers would have the possibility of receiving more than 30% in advance (as is the current situation)
- The fund would offer a place to invest resources from "access and benefit sharing" programs (ABS or "repartição de benefícios" in Portuguese) based on the Nagoya Protocol. Natura currently provides between USD 1.2 and 1.4 million per year (BRL 6 to 7 million) in benefit sharing programs to communities in the Amazon.

Natura interviewed six of the cooperatives with whom they operate to understand the specific reasons for why they experience difficulty in accessing regular credit lines. The reasons stated include:

- Documentation requirements (demonstrating land proprietorship; requirements of fiscal receipts for expenses; registration and land coordinates; quotations for purchases - three quotations often needed)
- Structural requirements (access is limited to associations and thus individual producers are unable to access them and have to go through cooperatives)
- Costs related to arriving at banks from remote areas
- Limited lines with attractive rates and conditions (often just for livestock)
- Difficulty in adhering to proposed timelines, unaligned with forestry-based production systems
- Limited lines of credit for working capital
- Complex forms to fill out, particularly related to financial and technical details of production

Annex 4: Comparable Instruments

| Instrument | Instrument Attributes | Geography |
|--|--|--|
| Conexus Impact Fund (Debt /grants) | <ul style="list-style-type: none"> Enables cooperatives to have access to Pronaf funds No offtaker involved in the structuring of the fund Offers technical assistance | Amazon and Northeast regions of Brazil |
| Sustainable Agriculture Finance Facility – SAFF (Debt /grants) | <ul style="list-style-type: none"> Provides loans to cooperatives attending medium/large scale ICLF producers Offers a specialized certification and technical assistance | South-Central and Northeast regions of Brazil |
| Moringa Fund (Private Equity Investors) | <ul style="list-style-type: none"> Equity and quasi-equity investments targeting profitable large scale agroforestry projects No offtaker involved in the structuring of the fund Offers technical assistance through a parallel grant-based mechanism | Worldwide (including Brazil) |
| Rural Prosperity Bond (Debt /grants) | <ul style="list-style-type: none"> Provides small size loans to SMEs working in land restoration SMEs can only apply for credit after graduating from an entrepreneurship program Offers technical assistance through a parallel grant-based mechanism | Africa, South Asia and Latin America |
| Root Capital (Debt /grants) | <ul style="list-style-type: none"> Focus on financing agricultural SMEs such as farmer cooperatives Offers technical assistance | Worldwide (not in Brazil yet) |
| PRONAF (BNDES) | <ul style="list-style-type: none"> Federal subsidized credit lines targeted at smallholder producers and enterprises Highly bureaucratic and can be hard to access No technical assistance or specific focus on sustainable agriculture practices Does not help structuring commercial partnerships/agroforestry supply chains | Brazil |
| Linha de Crédito ABC (BNDES) | <ul style="list-style-type: none"> Federal subsidized credit line for low carbon technologies and initiatives in Brazil Low interest rates available for smallholders and cooperatives Bureaucratic, banks have limited capacity to evaluate proposals at the local level Does not offer technical assistance | Brazil |
| ABC Fund managed by Bamboo | <ul style="list-style-type: none"> Provides loans and equity investments to cooperatives and agri-SMEs Focuses on investments that can drive economic and social development Offers capacity building through its Technical Assistance Facility | Sub-Saharan Africa, the Caribbean and the Pacific |
| Clarmondial Food Securities Fund (regulated open-ended investment fund) | <ul style="list-style-type: none"> Provides loans to responsible local agricultural aggregators (cooperatives, processors, traders) in emerging markets - particularly smallholders operating in agroforestry systems Partners with agriculture corporates who have existing supply chain links to aggregators | Global emerging markets (initial focus Sub-Saharan Africa) |

| | | |
|--|---|--------|
| | <ul style="list-style-type: none"> Loans are conditional to strict ESG performance in addition to financial criteria | |
| FIRA Supplier Development Program (Investment grants) | <ul style="list-style-type: none"> Offers credit to smallholders through banks and other intermediaries Offtaker involved in the structuring of the fund Provides non reimbursable technical and financial assistance with guarantee schemes | Mexico |
| CPR (Rural Product Ballot, law 8.929/94): | <ul style="list-style-type: none"> Any rural producer, including cooperatives Provides guarantees | Brazil |
| CDA/WA (Certificate of Agricultural Deposit and Agricultural Warrant, law 11.076) | <ul style="list-style-type: none"> Credit bond that represents future the delivery of agricultural products. CDA and WA can be collateralized by the bank guarantee or insurance and be traded individually or group. Subject to IOF. | Brazil |
| CDCA (Certificate of Agribusiness Credit Rights) | <ul style="list-style-type: none"> The CDCA is a nominative credit bond that can be freely traded, representing expected cash payments related to credit rights originating from business done with farmers, cooperatives and third-parties, including financing or loans. | Brazil |
| CRA | <ul style="list-style-type: none"> Less robust governance structure but could also complement the receivables carried by FIDC | Brazil |

Annex 5: Name and location of the cooperatives

| Cooperative Acronym | Territory | Cooperative Name |
|-------------------------------|-------------------------------|---|
| ADINCOOMA | Marajo | Associação de Desenvolvimento Intermunitário dos Rios Corredor, Furo dos Chagas, Maniva, Cutias e Regoão do Furo Seco |
| AMOPREAB - RESEX CHICO MENDES | Acre - Alto Madeira | Associação dos Moradores e Prdutores da Reserva Extrativista Chico Mendes |
| APOBV | Salgado/ NE Paraense | Associação de Produtores Orgânicos de Boa Vista do Acará |
| APROCAMP | Salgado/ NE Paraense | Associação dos Produtores e Produtoras da Comunidade Rural de Campo Limpo |
| ASSOAB | Entorno de Manaus | Associação dos Agropecuários de Beruri |
| ATAIC | Marajo | Associação dos Trabalhadores da Ilha da Cinzas |
| AVIVE | Entorno de Manaus | Associação Vida Verde da Amazônia |
| CAEPIM | Baixo Tocantins/ NE Paraense | Cooperativa Agrícola dos Empreendedores Populares de Igarapé-Miri |
| CAMTA | Tome-Açu/ NE Paraense | Cooperativa Agrícola Mista de Tomé-Açu |
| CAMTAUA | Salgado/ NE Paraense | Cooperativa mista agroextrativista de Santo Antônio do Tauá |
| CART | Baixo Tocantins/ NE Paraense | Cooperativa Agrícola Resistencia de Cameté |
| CEPOTX | Xingu | Cooperativa central de produção organica da Transamazônica e Xingu |
| CODAEMJ | Medio Jurua | Cooperativa de desenvolvimento agroextrativista e de energia do Médio Juruá |
| COFRUTA | Baixo Tocantins/ NE Paraense | Cooperativa de Fruticultores de Abaetetuba |
| COMARU | Sul do Amapa e Baixo Amazonas | Cooperativa Mista dos Produtores e Extrativistas do Rio Iratapuru |
| COOMAC | Bragantina/ NE Paraense | Cooperativa mista dos agricultores familiares dos Caetés |
| COOMAR | Bragantina/ NE Paraense | Cooperativa Mista dos Agricultores entre os Rios Caeté e Gurupi |
| COOMFLONA | Tapajos | Cooperativa Mista da Flona do Tapajos |
| COOPAESP | Medio Mearim | Cooperativa dos Pequenos Produtores Agroextrativistas de Esperantinópolis |
| COOPAVAM | Noroeste Mato Grosso | Cooperativa dos Agricultores do Vale do Amanhecer |
| COOPERECA | Acre - Alto Madeira | Cooperativa Agropecuária e Florestal do Projeto Reça |
| COPCAO | Xingu | Cooperativa de Produtores de Cacau Orgânico |
| COPOAM | Xingu | Cooperativa de Produtos Orgânicos da Amazônia |
| COPOPS | Xingu | Cooperativa de Produtos Organicos de Perpétuo Socorro |
| COPOTRAN | Xingu | Cooperativa de Produtores Orgânicos da Transamazônica |
| COPOXIN | Xingu | Cooperativa dos Produtores Orgânicos do Xingu |
| COPPALJ | Medio Mearim | Cooperativa dos Pequenos Produtores Agroextrativistas de Lago do Junco LTDA |
| COPRONAT | Entorno de Manaus | Cooperativa dos produtores naturais da Amazônia |
| D'IRITUIA | Salgado/ NE Paraense | Cooperativa Agropecuária dos Produtores Familiares Irituiens |

| | | |
|--------------|------------------------------|--|
| JAUARI | Baixo Tocantins/ NE Paraense | Associação de Moradores e Agricultores de Jauari - Caminhando com Cristo no Baixo Rio Moju |
| MMIB | Salgado-Belem/ NE Paraense | Movimento das Mulheres das Ilhas de Belém |
| TURIARTE | Tapajós | Cooperativa de turismo e artesanato da Floresta |
| TUTOIA | Medio Mearim | Associação dos Artesãos Esperança do Bairro Monte Castelo e Adjacências |
| VER AS ERVAS | Salgado-Belem/ NE Paraense | Associação Ver-as-Ervas das Erveiras e Erveiros do Ver-o-Peso |
| COOPERCINTRA | Acre - Alto Madeira | COOPERATIVA DOS PRODUTORES DE AGRICULTURA FAMILIAR E ECONOMICA SOLIDARIA DE NOVA CINTRA |
| ASPACS | Acre - Alto Madeira | ASSOCIACAO DOS PROD. AGRO EXTRATIVISTA DA COLONIA DO SARDINHA-ASPACS |

Annex 6: Initial assumptions for the financial model

1. The financial model developed considers 1-year periods for 10 years
2. Estimated volume of purchases from suppliers in region was based on the following assumptions:
 - o Natura
 - Estimated volume of purchases of bioingredients in 2022: R\$ 40 mm. 5% annual growth rate.
 - Estimated volume of purchases of SAF Dendê: payment of purchases starts in 2024 (R\$ 25 mm, equivalent to 5% of Natura current estimate for purchase in 10 years)
 - o Additional offtaker entering in 2023. Volume of purchases of such offtaker equivalent to 80% of volume of purchases of bioingredients of Natura
3. Estimated volume of Credit Rights originated to FIDC/FIAGRO equivalent to 80% of the sum of:
 - o total volume of bioingredients purchased by Natura and by additional offtaker
 - o 20% of estimated volume to be delivered by suppliers of SAF Dendê in 2 years summed to 80% of estimated volume to be delivered by suppliers in the respective year.
4. Average allocation in credit rights by Fund estimated at 90%
5. Credit right term estimated to 1-year.
6. Subordination assumption: 30% senior collateral
7. Fund costs assumptions: 1% p.a., including management fee, administration fee, and custody fee.
8. Capital calls: it was assumed that during the offering a few capital calls may happen according to origination of Credit Rights.
9. Senior quotas benchmark: DI+[2%]p.a.; [Mez quotas benchmark: [0% p.a.]]
10. Estimated average DI: for simplification purposes, a flat interest curve equal to 4,5% p.a. was presumed.
11. No default was presumed (based on great credit risk profile of Natura, a AAA credit rating by S&P in local scale). Estimated credit risk of senior quotas: AAA in local scale.
12. Technical assistance fund estimated as 30% of volume of Credit Right originated annually
13. Exchange considered: USD1 = BRL 5

Annex 7: Calculation of climate mitigation potential

AMSSC's potential climate impact was calculated based off Natura's own objectives for the mechanism, that are aligned with the corporate strategy for 2030. The company aims to have three million hectares of the Amazon under conservation influence, half more than what is currently under conservation influence based on Natura's purchases. Based on this objective, the Lab Secretariat calculated that this would equal to 396,000,000 tons of carbon (based on the lower/conservative range provided in literature of how much carbon one hectare of native vegetation in the Amazon can store or 132 tons of carbon per hectare, or 485 tons of carbon dioxide per hectare) (Pinto, 2020). At a rate of 485 tons CO₂/hectare, three million hectares is equivalent to 1,455,000,000 tCO₂.

Moreover, to calculate the potential for carbon storage in the SAF dendê (agroforestry), project, the Lab Secretariat used literature from Embrapa and ICRAF related to the studies done in partnership with Natura. According to these studies, dendê agroforestry systems can store 17 tons of carbon more in their soil than compared to regrowth forests (47.5 tC compared to 31 tC). Considering that Natura's objective is to implement agroforestry systems on 41,000 hectares, this equals to an additional almost 700,000 tons of carbon (or 2.5 million tCO₂), compared to business as usual secondary (regrowth) forests (Ramos et al., 2018; Carvalho et al., 2014). Thus, using a conservative rate of soil carbon stock, AMSSC through the implementation of agroforestry systems on 41,000 hectares, has the potential to sequester over 2 million tons of carbon just in the soil alone – or 7.3 million tCO₂ (as compared to 1.2 million tC or 4.4 million tCO₂ on secondary forest or degraded land) (Ramos et al., 2018; Carvalho et al.).

Annex 8: Possible indicators for measuring impact

The Amazônia Sustainable Supply Chains mechanism will contribute to improving sustainability and resilience in different ways:

COOPERATIVE BENEFITS

- Increased productivity
- Increased access to quality inputs
- Increased access to markets
- Improved working conditions (gender balance, livable wages, no child labor, no corruption)
- Improved financial, management, and governance knowledge
- Improved knowledge in sustainable practices (including SAF)
- Increased jobs & wages
- Climate change mitigation

COMMUNITY BENEFITS (FROM ECF)

- Increased resilience (to economic losses, climate shocks) via additional income & diversification
- Access to basic infrastructure (electricity, sanitation, health)
- Food security
- Access to education & basic health services
- Protected indigenous rights and traditional knowledge

This will be measured through: selection criteria; lending conditions; and monitoring with use of incentives (possible decrease in cost of financial products if the cooperative can demonstrate that it has improved on different themes related to sustainability).

In addition to Natura's own socio-economic indicators, the Lab Secretariat compiled a list of other metrics and indicators to be used for measuring impact:

| Environmental Indicators |
|---|
| Hectares deforestation avoided |
| Greenhouse gas emissions mitigated (metric tons of CO ₂ e) |
| Carbon sequestration |
| Hectares HCVA conserved |
| Hectares of dendê monocropping transitioned to agroforestry systems |
| Hectares agroforestry systems implemented |
| Hectares reforested |
| Sustainable Production: Hectares under Sustainable Production |
| Hectares of landscapes that meets national or international third party certification that incorporates biodiversity considerations |
| Ecosystem services and ecosystem value (\$/hectare) |
| Biodiversity: Number of ETP Species Targeted for Conservation |
| Water availability (also a climate change adaptation indicator) |
| If practicing farming, farmers should practice conservation agriculture practices such as minimum tillage, intercropping, permanent soil cover, crop rotation |
| Socio-Economic Indicators |
| Number households reached |
| Percentage of women in informational trainings |
| Number of direct beneficiaries, disaggregated by gender |
| Indigenous peoples reached |
| Gender equality in hiring |

| |
|--|
| Percentage access to basic sanitation |
| Percentage access to education |
| Percentage access to electricity |
| Sustainable Production Revenue |
| Wages paid |
| Percentage change sales of forestry-based products |
| Income diversification |
| Additional income generated |
| Percentage change in yields |
| Percentage change in market access |
| Informal/formal lending ratio |
| Lending interest rates |
| New investment capital |
| Business partners in the supply chain |
| Payments to business partners |
| Percentage women access to credit |
| Percentage change yield variability / Increased agricultural productivity (\$ or crop yield) |
| Number full-time equivalent jobs created and retained |
| Number Value Chain Partner companies committed to facilitating loans to linked to borrowers through the Fund |
| Number of cooperatives trained in business / financial management |
| Number of cooperatives with access to improved inputs |
| Number of cooperatives with access to improved technology for production/extraction |
| Finance - Total value of funds invested in the organization |
| Number of ingredients / commodities covered |
| Number of cooperatives trained in agroforestry systems |
| \$/% farmer financial loss due to extreme weather |