

# Activity Report

## 2021

### Espaço ECO Foundation

Espaço ECO Foundation Headquarters  
in São Bernardo do Campo (SP, Brazil)



Established by

**BASF**  
We create chemistry

# Summary

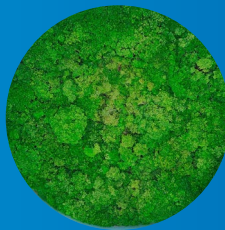
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## FINANCIAL STATEMENTS



INSTITUTIONAL

# Who we are

**W**e are a Foundation formed by restless people, who challenge themselves to reinvent their own lives in order to evolve and influence the world every day. Since 2005, we have been working to build the one true future we believe in: sustainability. We have taken the path of strategic knowledge, measurement, and innovation to pursue our mission of promoting sustainable development in the business environment and in society.

We connect people and companies for a purpose, aiming at the future. We combine science with information for decision-making by companies based on the ESG strategy. We work with intelligence and innovation to generate and disseminate cutting-edge knowledge, which promotes changes in people, strengthens the business sector, and creates a positive impact on the world.

We are established and maintained by BASF, and we operate independently as a sustainability consultancy to guide and drive the sustainable journey of companies across South America. We understand and respect the journey, challenges and context of each of our clients, which is why we are flexible, providing customized services to add economic, social, and environmental value to companies. We translate sustainability into the language of business, broadening the impact and adding even more people to the ESG agenda.

We work as a Civil Society Organization of Public Interest (OS-CIP). Therefore, we generate positive impacts by reinvesting the financial resources we obtain through commercial projects in relevant causes for society.

## Our commitments

We have obtained the ISO 9001:2008 (Quality Management System) and ISO 14001:2004 (Environmental Management System) certifications, which guarantee the transparency, technical strictness, and commitment of our governance.

We are members of the Global Compact. Our business strategy is based on the Sustainable Development Goals (SDGs) of the United Nations (UN).

Through Annual Activity Reports, we render accounts audited by Ernst & Young and approved by the Fiscal Board and the Public Prosecutor's Office.

**We contribute to the development of our customers' sustainable journey, supporting them with their sustainability strategy through scientific and engagement methodologies.**

**Our experts are driven by restlessness, courage, and creativity, fostering customized and innovative projects.**

**We participate in and promote public debate on issues that impact and transform society.**

## MESSAGE FROM THE BOARD OF CURATORS

### How we continue on our journey

**W**e, from Espaço ECO Foundation, believe it is possible to combine prosperous organizations with a performance based on meaning and purpose for the environment and for people. We believe that sustainability is not an arrival point, but rather a path that challenges us to reinvent ourselves and evolve every day. And to which we contribute with innovation and metrics that make each step and decision more assertive.

Supported by this belief, we act as consultants to drive sustainable journeys that increasingly rely on dynamism, constant learning, and articulation to evolve the positive impact of organizations in society. We study, promote, value, and encourage the sharing of knowledge in sustainability with the goal of being a reference center, inspiring and multiplying science-based knowledge.

Guided by the United Nations (UN) Sustainable Development Goals and through connections, we seek to collaborate, guide, lead and impact people and organizations to build a favorable environment for economic, social and environmental development in an integrated manner, further strengthened in the market with ESG practices.

In 2021, with a focus on innovation, we reformulated the Foundation's Advisory Board. Currently, it has a diverse constitution - in terms of gender (50% men and 50% women), nationalities and generations - which connects us with our responsibility and with our truth in the practice of sustainability. Thus, our governance, which includes the Board of Trustees, the Fiscal Council and the Executive Board, ensures connection, innovation, openness and transparency.

Our performance is focused on people. Only through them we can transform business and the environment. Therefore, we invest in the development of our team and partners network. We connect business and academy; specialists and society; people and companies in Brazil and, increasingly, in the various countries of South America.

We assess that, in 2021, we have achieved the goals we set for ourselves and, most importantly, we have advanced in our aspiration to share our knowledge in sustainability, which is based on the support and experience of a company with more than 155 years in the world and a highly specialized and innovative team, which generates positive results in the present and contributes to the legacy of future generations.

Through this report, we invite you to learn a little more about this work. We hope to contribute to inspiring the co-creation of projects with positive impacts on business, society and the environment.

**Enjoy your reading!**



**Cristiana Xavier de Brito**

BASF's Director of Corporate Affairs and Sustainability for South America and Chairman of the Board of Trustees of Espaço ECO Foundation

## MESSAGE FROM THE EXECUTIVE BOARD

# A world in transformation: environment, relationships and companies

**P**eople and companies have changed. After the COVID-19 pandemic, which began in 2019, the interconnections became evident, further emphasizing the importance of caring for the environment – as a unique and emerging resolution for life. Companies and citizens have strengthened their responsibility for preservation: considering their possibilities and goals. The ESG agenda has become emerging in most companies, which have evolved in their purposes and strategies, setting financial and non-financial goals to their sustainability criteria.

Our mission, which started in 2005, has become even more important and evident. Based on our knowledge of sustainability, we promote discussions with different people in order to add a new dimension of value to the business.

We create and strengthen relationships with our customers, the academic community, the market, and society. We promote discussions and disseminate information in webinars, podcasts, guides and in our social networks. We invest in innovation and digitalization – in our structure and in the tools we make available to customers. Thus, we increase our reach, increase our voice and

strengthen our role as a source of knowledge, an agent of mobilization and awareness. conhecimento, agente de mobilização e conscientização.

Internally, we welcome the new members of the Advisory Board with great pleasure and optimism: they are renowned professionals governance, digitalization, circular economy, and agribusiness. They will certainly make a decisive contribution to the continuity of our strategy.

The United Nations Conference (COP 26), held in Scotland, wrapped up 2021 confirming a trend we had already foreseen and were prepared for. The central topic, climate change, raised immediate reflections around the world, in addition to the development of practical actions to face global warming and accelerate the low carbon economy. Companies have already started to do their part, therefore we see an increasing demand for our scientific methods to evaluate the life cycle and measure the social, environmental, and economic impacts of companies, products, and processes.

In 2021, we challenged ourselves to reinvent our own lives and evolve every day, inspiring and transforming people; innovating and generating business value. The year represented new eras, with new players in sustainability discussions and new public corporate commitments. For us, these are new opportunities for evolution. For companies, it may be the right time to internalize sustainability in their businesses.

In this Activity Report, we aim not only to show what we did, but more importantly, how we did it, understanding the challenge of each sector and each company to support the journey of every one of our customers and partners.

**Enjoy your reading!**



**RODOLFO VIANA**

CEO of the Espaço ECO Foundation



**RAFAEL SELVAGGIO VIÑAS**

Manager of the Espaço ECO Foundation

# How we add value

## SUSTAINABLE JOURNEY

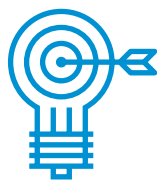
AFEE promotes a sustainable journey along the value chains in an integrated manner, aiming to offer ESG solutions and add a new dimension of value to the business.



## US, IN 2021



Project revenues in 2021:  
**R\$ 1.9 million**



NPS (satisfaction with projects executed):  
**91%**  
of customers  
**2020: 94%**



**36 projects**  
in progress  
**164%**  
of projects executed  
(started and completed in 2021)  
**2020: 116%**



**64 completed projects**  
**2020: 47**  
15 professional experts

### **We operate with an ESG focus**

Part of 2021 was dedicated to improving our knowledge and technical capacity in ESG, bringing substantiation and innovation to our concepts and tools. The in-depth study of the topic and the availability of information for all people through different channels allowed us to strengthen our ecosystem and our communication as avant-garde and relevant source of knowledge, agent of mobilization and awareness.

### **We elaborated an ESG Glossary**

We prepared the [ESG Glossary](#), which democratizes the topic and clarifies around 180 terms, words and expressions used among corporations, such as: GHG Protocol, green taxonomy, displacement of emissions, shared value, among hundreds of others.

### **We conducted a series of webinars**

The series of five webinars “When in doubt between ESG or sustainability, do both”, launched in 2021, was attended by experts from the Foundation and guests from different sectors to promote the exchange of ideas on the themes and

exemplify how this is in practice, impacting society and business in a positive way. The topics covered reflect demands and trends, such as climate change, sustainable finance, circular economy, and corporate governance.

### **We launched podcast platform**

We launched the [Ecoar Podcast](#) series, which addresses topics related to companies sustainability journey. It enables connection and exchange of experiences, promoting co-creation. The initiative aims to articulate and strengthen the debate on the main topics related to sustainability in a format and language that is accessible and understandable to all.

### **We held thematic studies**

To direct our ESG studies, we spoke to BASF representatives in Germany, Argentina, Brazil, Chile, Colombia, Paraguay, and Peru, as well as well-known professionals from companies in different sectors. Therefore, we formed ESG Working Groups specialized in the following themes: carbon credit protocol; biodiversity and natural capital; [sustainable finance](#); social; and governance.



Espaço ECO Foundation Headquarters in São Bernardo do Campo (SP)

# Our Governance

We show the way for companies to achieve the best corporate governance practices. Therefore, we are also an example, being committed to transparency, fairness, accountability, and corporate responsibility.

Our governance structure is made up of an executive board and three boards (Curator, Fiscal and Advisory) that together ensure the transparency, reliability, competence, and agility required for decision-making.

The Executive Board and the Boards (Curator, Fiscal and Advisory) meet periodically to address strategic management issues, ensuring effective and proactive action.

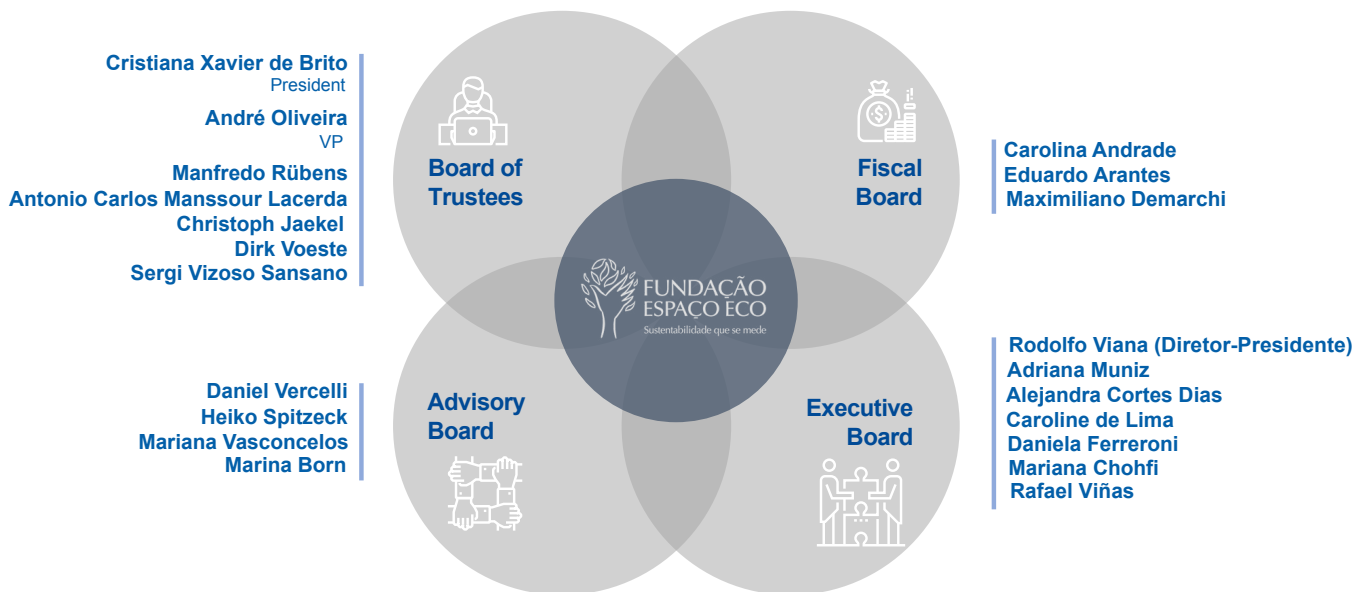
The Foundation's main decision-making body is the Board of Trustees, which ensures compliance with our bylaws, approves the Annual Work Plan, discusses and approves our accounts and

financial statements. It also appoints the other governing bodies. The Board is chaired by Cristiana Xavier de Brito, BASF's Institutional Relations and Sustainability Director for South America, who also leads the company's Sustainability Committee for the region.

The Fiscal Board examines the accounting books and other documents, as well as provides its opinion on the balance sheets and financial and accounting reports, thus supervising the management of the Espaço ECO Foundation. It verifies compliance with legal and statutory duties.

The Executive Board is led by the CEO of the Espaço ECO Foundation, Rodolfo Viana. It operates together with BASF's sustainability board (creator and maintainer of the Foundation), which enables the exchange of experiences and an increasing current and innovative performance. The Executive Board assists the Foundation to operate in accordance with its purpose and social function. In addition, it enables and disseminates the purposes and principles of the Espaço ECO Foundation.

## Current and new members of the Boards





# Learn more about its members: Advisory Board:

The Advisory Board was formed in 2021 and, like the other Boards, has three-year mandates. Formed by external experts who are references in their areas of activity, it advises and provides insights to the other Boards, considering best practices, trends, risks and changes in the scenario.

It also contributes to expanding the Foundation's ecosystem and, when necessary, participates in the solution of technical issues. Together with the Advisory Board, we can expand partnerships in the region - working in consultancy and projects with social interest, -, connecting (in innovative ways) businesses and organizations in their sustainability journeys.



### Mariana Vasconcelos

Agrosmart Founder, a company dedicated to providing farmers with strategic data through artificial intelligence (AI). Its weather models and irrigation recommendations allow farmers to increase the productivity of their crops by saving water.



### Heiko Spitzack

Professor and manager of the Sustainability Center at *Fundação Dom Cabral* - FDC. Experienced in Corporate Counseling and Doctorate in Business Ethics from the University of St. Gallen, as well as a Master in Business Administration (European Studies) from the University of Bamberg.



### Daniel Vercelli

General Manager of Manuia, consultancy with expertise in disruptions, generation of sustainable growth strategies, stakeholder management and implementation of cultural changes.

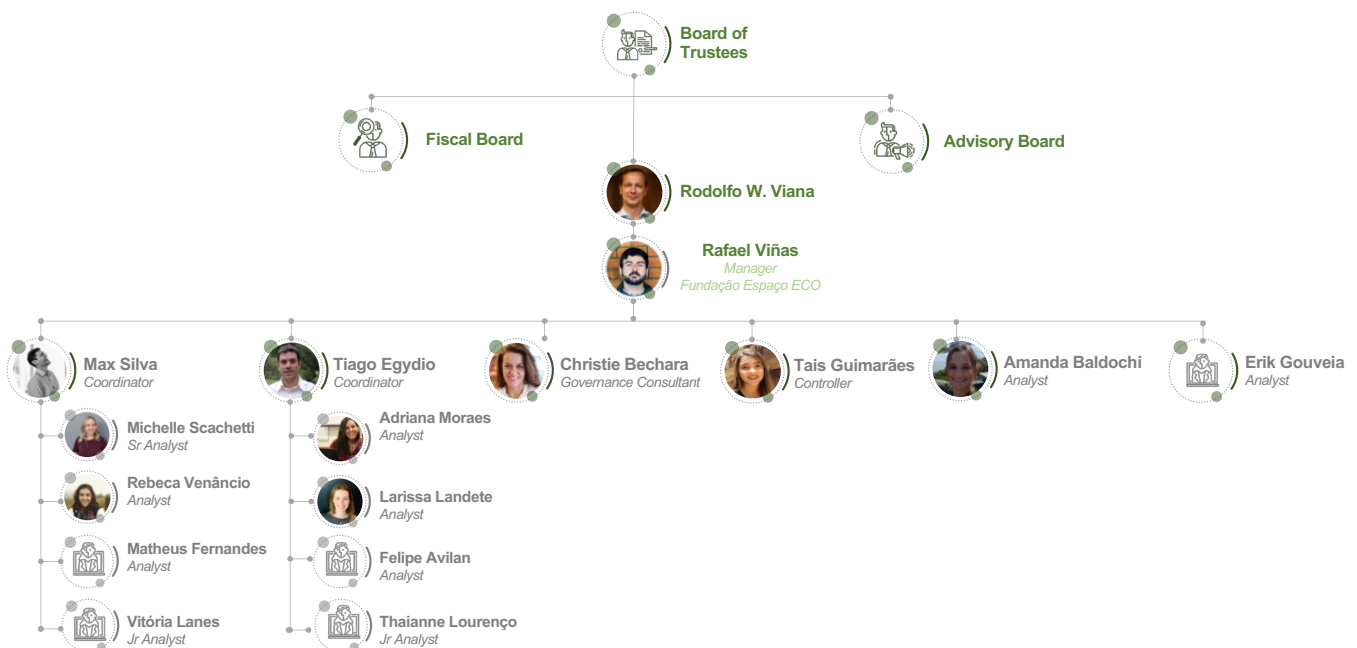


### Marina Born de Engels

Former executive director of Caldenes and former president of RTRS, she is very involved with Sustainability and Biotechnology, as it impacts food production in food producing countries in Mercosur and around the world. Strong supporter of the Circular Economy.

## Structure

Our team of experts translates science into the language of business, bringing sustainability into the daily lives of organizations.



<sup>1</sup> This is the representation of the structure of the Espaço ECO Foundation prevailing in 2021. Analysts Michele Scachetti, Felipe Avillan and Matheus Fernandes were succeeded by other professionals throughout the second half of the year.

# Our contributions to customers and society



We support and drive companies sustainability journey. We follow the main concept that involves Life Cycle Analysis (LCA): reflecting what comes before the development of a product or service and its impacts after use. Therefore, we develop commercial and public interest projects focused on four strategic pillars: Circular Economy, Value Chain, Bioeconomy, and Natural Capital, which correlate supply management, natural resources, and new business models.

# Circular economy

**C**ircular economy is a new way of thinking. It goes far beyond the reuse of waste as raw materials: it aims to transform the processes of reduction, reuse, recovery, and recycling of materials and energy. We create the transition dynamics as we develop more circular solutions and change the perspective on waste to understand it as a resource in the form of raw material. This learning is essential for companies to co-create solutions, joining production and consumption systems in order for them to function as a cycle, making processes more inclusive and efficient, and long-lasting solutions.

## Our role

Combining science and measurement, we support sustainability strategies and product innovations

During 2021, we analyzed the environmental impacts for the production of one type of toilet paper. We assessed how we could contribute to innovation (with environmental gains), based on the study of different scenarios in the Paper Life Cycle<sup>(1)</sup> - including the impacts of raw materials, industrial activities, use, and final disposal of the toilet paper.

The results of the study supported the Sustainability and Marketing team of an American multinational personal care company to develop possible product innovation trajectories based on sustainability criteria. In this way, we contributed to support the company in making decisions that strengthen its positive impact on the environment. In addition, we supported them in building the brand sustainability strategy, as well as in communicating the main attributes to their stakeholders.



<sup>1</sup> Life Cycle Analysis = assessment of the environmental performance of a product and/or service aiming at generating subsidies for decision making at different levels. The methodology is based on the ISO 14040:2009 standards series.

# More awareness, less plastic

We optimize processes and assess products towards innovation driven by reducing the impact of plastic on the environment

Companies have emerged the need to innovate to minimize the impact of plastic on the environment. After all, out of the 79 million tons of garbage produced in Brazil in 2020, 16.8% are plastic<sup>2</sup>.

Stellantis approached Espaço ECO Foundation to help them map out opportunities, solutions and strategies to reduce or replace the use of plastics in their production plants. We based the choices on life cycle studies.

- We assessed disposable paper and plastic alternatives, as well as reusable plastic and steel alternatives to replace the disposable cups used in the company's restaurants and pantries, in the production unit of Betim (MG, Brazil). In this way, besides proposing reusable alternatives, we strove to contribute to cost reduction.
- We assessed and proposed different materials for packaging (metal boxes protected by plastic tarpaulins) used in products transported from Betim to Córdoba (Argentina). When they arrived at their destination, the tarpaulins were disposed of, while the metal containers returned empty to Betim. Other material options were then assessed, with different compositions, so that they could be reused and returned along with the metal packaging.

With these studies, we were able to contribute to the diagnosis regarding the use of plastics. The initial results of the project showed that Stellantis reduced plastics disposal and also reduced costs. In addition, it can identify possibilities for improvements in relation to plastic consumption to idealize new projects.



# Aligning knowledge

Based on science, we generate strategic knowledge to communicate and engage diverse audiences regarding the circular economy

We further strengthened our partnership with the Brazil-Germany Chamber of Commerce (AHK) in promoting the circular economy in Brazil, in various industry sectors. Through this project, we developed an online course (with a 40-hour duration) for the supply chain.

The course provided the conceptual foundations (theoretical and practical) of the circular economy concept, and presented the best practices and trends in relation to the topic. In addition, the training aimed to support the participant to:

- Disseminate knowledge in circular economy to identify potential and new business models, technical and practical knowledge (new recycling techniques, how to manage a circular economy value chain). Considering the pandemic, also note health aspects and Covid-19.
- Understand the importance of the supply chain/recovery chain.
- Emphasize the importance of innovation, new technologies and new business models for the development of circular projects.
- Understand project management tools.
- Understand the main impact measurement tools to design or measure results of circular projects.



<sup>2</sup> Source: overview of solid waste in Brazil 2020 (Abrelpe) and Brazilian Institute of Geography and Statistics (IBGE)

# Social impact in indicators

By understanding and measuring the social impact of this project, BASF can gather strategic information to guide and support its sustainable journey and reflect on how it generates value for society

The Connect to Transform BASF Public Notice selects and supports projects developed by organizations with an impact on the communities where the company has manufacturing facilities. Among the projects supported, focused on waste management, are:

- the Cool Plastic project (from The Waves Company, a Chilean company) implements circular economy processes in the city of Quintero and the Comuna de Concón, by transforming waste into raw material and elaborating products for later commercialization.
- the *Reciclador* project (Chile) offers a comprehensive recycling service, including reuse modules manufactured by the company.

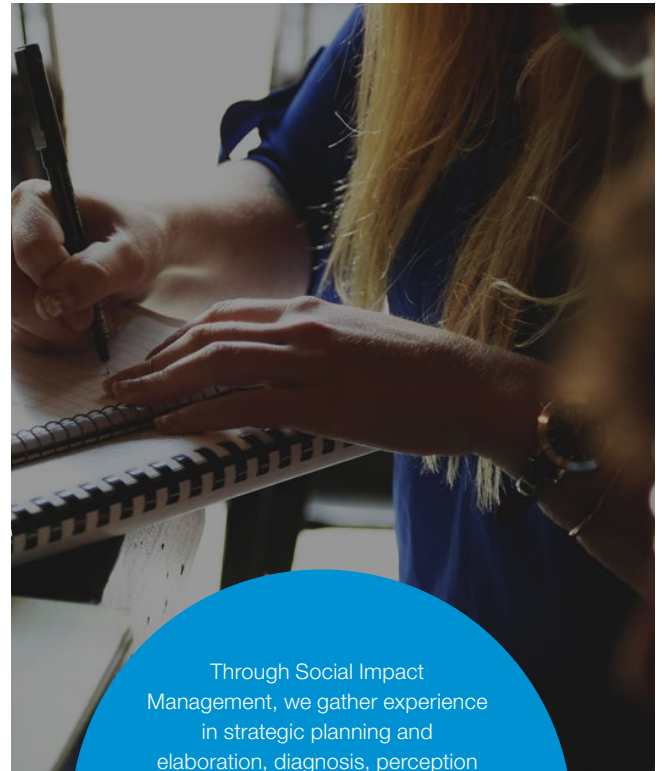
We performed a study to analyze the social impact of the Public Notice, with the aim of understanding its effectiveness and also answering the following questions:

“What would have happened if there was no intervention/investment through the Public Notice?” “What impact has BASF brought to the region?”

Through this measurement, it was possible to understand some benefits directly and essentially related to the investment applied.

We also started the analysis of the social impact of the NGO Ecolmeia project, called *Água Viva*, with environmental conservation actions in the Billings Reservoir (São Paulo, SP) and communities.

We made progress on the subject, conducting training to internalize the evaluative culture and strategic use of the social impact on BASF's business. 25 professionals directly linked to these social programs participated, with a view to expanding these training courses for BASF leaders and strategic areas such as Innovation and the Value Chain.



Through Social Impact Management, we gather experience in strategic planning and elaboration, diagnosis, perception analysis, and impact measurement for an efficient management of social projects through methodologies that are already well known and that show the tangible and intangible value of these initiatives.

## MEASURED RESULTS



**+13**  
workstations  
(in both projects)



**86%**  
report being more  
qualified to  
undertake



**+ 2**  
partnerships  
with international  
markets



**42%**  
report an increase in  
family income (above 20%)  
due to the project

# Blockchain to scale the circular economy

We create an innovative solution that adds a new dimension of value to the business

We supported nine companies - BASF, Henkel, Natura, Solvi, Recicleiros, Wise, Braskem, Bomix and Triciclos - in creating a collaborative network that allows mapping, through a digital platform, which materials were collected and separated to be recycled.

The material we delivered to the group aims to help the stakeholders involved in how to promote best practices and results of reverse logistics programs.

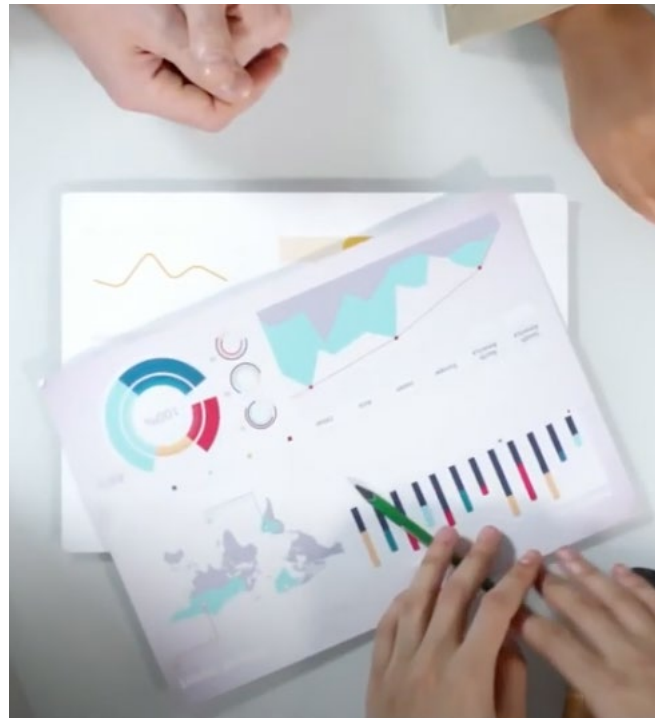
Based on blockchain, [reciChain](#) provides a safe, transparent and reliable environment for sharing information on reverse logistics programs among the members of the recycling chain, allowing the adoption of best practices. For example:

- Investment in additional capacity for recycling materials (e.g. plastic);
- Valid documentation for issuing reverse logistics certificates;
- Origin and quality of post-consumer materials (reducing the amount of waste sent to landfills or dumps).

In this way, the platform called reciChain contributes to encouraging the transition to a circular economy throughout the value chain by increasing the installed capacity for recycling waste, especially plastic. At the same time, it has a positive social impact by formalizing inclusive jobs in cooperatives and other sorting facilities, recyclers, new packaging converters, industry, and product manufacturers.

## Business impacts from the pilots and proofs of concepts delivered:

- Reverse logistics program sorting center digitally transacting more than 5 tons of recyclable materials with more ease and credibility, allowing to understand paths for greater volumes of recyclable material, as well as having reliable information about the quality of its origin.
- Finished product manufacturers involving their business partners in new business models to fulfill their legal obligations in order to add value to their circular economy strategies.



## Did you know?

According to a survey held by the Brazilian Association of Special Waste and Public Cleaning Companies (Abrelpe), in Brazil, about

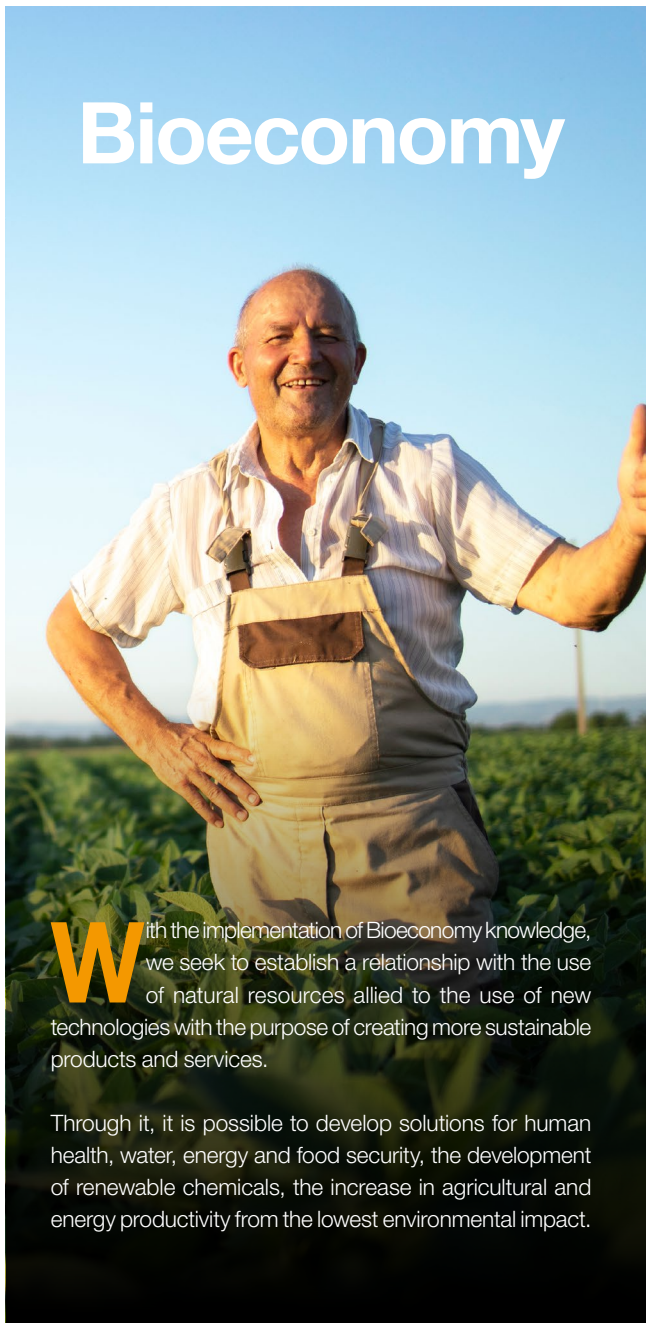
**40% of waste**

is still sent to dumps and another

**68% of packaging**

is not properly recovered.

# Bioeconomy



**W**ith the implementation of Bioeconomy knowledge, we seek to establish a relationship with the use of natural resources allied to the use of new technologies with the purpose of creating more sustainable products and services.

Through it, it is possible to develop solutions for human health, water, energy and food security, the development of renewable chemicals, the increase in agricultural and energy productivity from the lowest environmental impact.

## Partnership for the future

**We develop criteria and arguments for ranking the health impact of agrochemicals**

For 20 months, we and the Brazilian Agricultural Research Corporation (Embrapa) strengthened our partnership by joining multidisciplinary teams to assess the impact of agrochemicals on human health and the environment, considering the Brazilian scenario. With the analysis, we launched PestLCI Consensus v.1.0, a model that estimates the fractions of agrochemicals that are emitted to air, soil, surface, and groundwater. We used as a baseline specific information from the application scenario, such as application mode, crop and its stage of development, information from the treated area, and the physical-chemical properties of the agrochemicals.

While helping to reduce uncertainties regarding agrochemicals - by developing publicly available arguments - we launched an effective tool for both experts in Life Cycle Analysis and professionals with no experience in the subject. This is because the model allows for the expansion of studies of environmental impacts and provides subsidies for the development of safer technologies for the construction of public policies and programs to rationalize the use of agrochemicals in food production.

The project also contributes to the fulfillment of the United Nations 2030 Agenda and meets the Sustainable Development Goals (SDG 12 - more specifically goal 12.4, which seeks to “achieve the environmentally sound management of chemicals throughout their life cycle in order to minimize their adverse impacts on human health and the environment”).

**Click here to learn more about PestLCI Consensus v.1.0, in an article that we wrote together with Embrapa.**



# Agricultural productivity with sustainability

We develop classification criteria and integrate indicators that encourage best practices among soy producers

Between 2019 and 2021, we conducted an Eco-efficiency Assessment (AEE)<sup>3</sup> study for the Brazilian Soybean Strategic Committee (CESB) to adopt sustainability criteria in a contest promoted by the entity. We assessed producers who participate in the annual “CESB Maximum Productivity Challenge”. In addition to analyzing which farmers produce the most in Brazil – and, at the same time, are the most sustainable (producing better and more sustainably) – we compare individual results with the average production in the region (South, Southeast, Midwest, North and Northeast, based on Agrianual: market indicators referring to the consumption needed to produce a ton of soy in the region).

For the study, we customized our AEE tool, in partnership with professionals from BASF in Germany.

In addition to contributing to the award, the entity also promotes best practices, as a reference for the market.



## Certification obtained

Measurable data contributes to a careful and transparent evaluation for recognizing biofuels in the Brazilian energy matrix

The Foundation advises *Bio Óleo*, a Brazilian biodiesel producer in Mato Grosso, to help it obtain *RenovaBio*, one of the country's most important certifications in biofuel production. In February 2021, *Bio Óleo* received authorization from the *Agência Nacional do Petróleo, Gás Natural e Biocombustíveis* (ANP) to issue CBIOs<sup>4</sup>, the program's decarbonization credits.

We contributed to the achievement of *RenovaBio* by providing technical assistance in all the procedures necessary to enter the program, focusing on filling out the *RenovaCalc* - carbon emission calculator and calculating the Environmental Energy Efficiency Score (NEEA) and the total CBIOs that the plant can emit with the carbon dioxide emissions reduction.

The CBIO calculation is based on the volume of tons that the plant stops emitting in the production of biofuel. For every one ton of CO<sub>2</sub> that the plant stops emitting, it is entitled to 1 CBIO.

The certification obtained is valid for three years. We continue to support the plant by providing consultancy and support to the processes.

<sup>3</sup> Eco-efficiency Analysis verifies the environmental impact in proportion to the cost-effectiveness of a product. It also helps to identify ways to improve environmental impact and costs. The eco-efficiency analysis was most recently validated by NSF International in 2016. It complies with the ISO 14040: 2006 and 14044:2006 standards for environmental life cycle assessment. The life cycle costs and aggregation to an overall eco-efficiency assessment are based on the ISO 14045:2012 standard.

<sup>4</sup> According to the Ministry of Mines and Energy, 1 CBIO is equivalent to 1 ton of avoided emissions, which is equivalent to 7 trees in terms of carbon capture. By 2029, greenhouse gas emissions representing the planting of 5 billion trees will be offset, which is equivalent to all the trees in Denmark, Ireland, Belgium, the Netherlands, and the United Kingdom combined.



# Environmental performance of Sugarcane

Through indicators, we contribute to the analysis of environmental performance in the sugarcane production process, allowing for better communication and more assertive decision-making

We conducted a study for Raízen - an integrated energy company, present in the sectors of sugar and ethanol production, fuel distribution, and power generation - with two priority objectives:

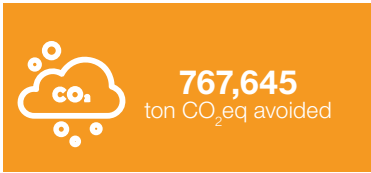
- analyze the environmental performance of the sugarcane production process. Our object of study was the 2019 and 2020 harvests in each industrial production unit (located in eight cities in São Paulo and one in Goiás). We assessed the environmental impacts and, specifically, the carbon footprint (the company's strategic focus, with bold carbon reduction goals).

- compare the environmental performance - of producing one ton of sugarcane - with and without management with products from BASF's portfolio (Muneo, Aprinza, Plateau, Regent Duo, and Opera).



## MANAGEMENT AT RAÍZEN USING BASF PRODUCTS AVOIDED:

**Climate Change**  
(CO<sub>2</sub>eq)



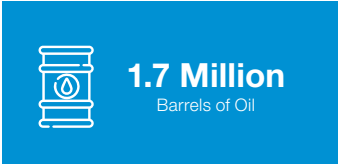
Equivalent to:



**Loss of Fossil Resources**  
(MJ)



Equivalent to:



**Loss of Water Resources**  
(m<sup>2</sup> H<sub>2</sub>O eq)



Equivalent to:



# Partnership for low carbon agriculture

We offer ways to manage carbon in agriculture, from measurement to offsetting emissions and generating carbon credits

From the partnership with the digital platform AgroSmart and SustainableCarbon, we developed a tool to support rural producers in the carbon management of their productive activity. We created, then, a partnership that unites knowledge and innovation.

By proving carbon emission reductions and certifying best practices, we support farmers to position themselves in the market as agents for promoting decarbonization in agriculture. In addition, we enable their properties to be included in the voluntary carbon market, we assess the technical and economic feasibility of agricultural management within the context of the voluntary carbon market, generating a new source of financial resources for professional farmers committed to sustainability.



*We have the knowledge and technology to support farmers and companies to generate carbon credits for Reducing Emissions from Deforestation and Forest Degradation (REDD), Regenerative Agriculture, and other sustainable agricultural practices. In addition, we are also able to support farmers who want to offset emissions by purchasing carbon credits.*

**Marcelo Haddad,**  
Coordinator of Sustainable Carbon



**AgroSmart:**  
technology to support farmers to develop sustainable agricultural practices

**Espaço ECO Foundation:**  
experience in carbon footprint measurement

**SustainableCarbon:**  
meets market requirements for the generation of carbon credits



Low carbon agriculture represents another opportunity for Brazilian producers by associating sustainable production with the generation of environmental services and new business models that can represent a new source of income.

The three institutions together also launched a specific **Podcast** on the topic.

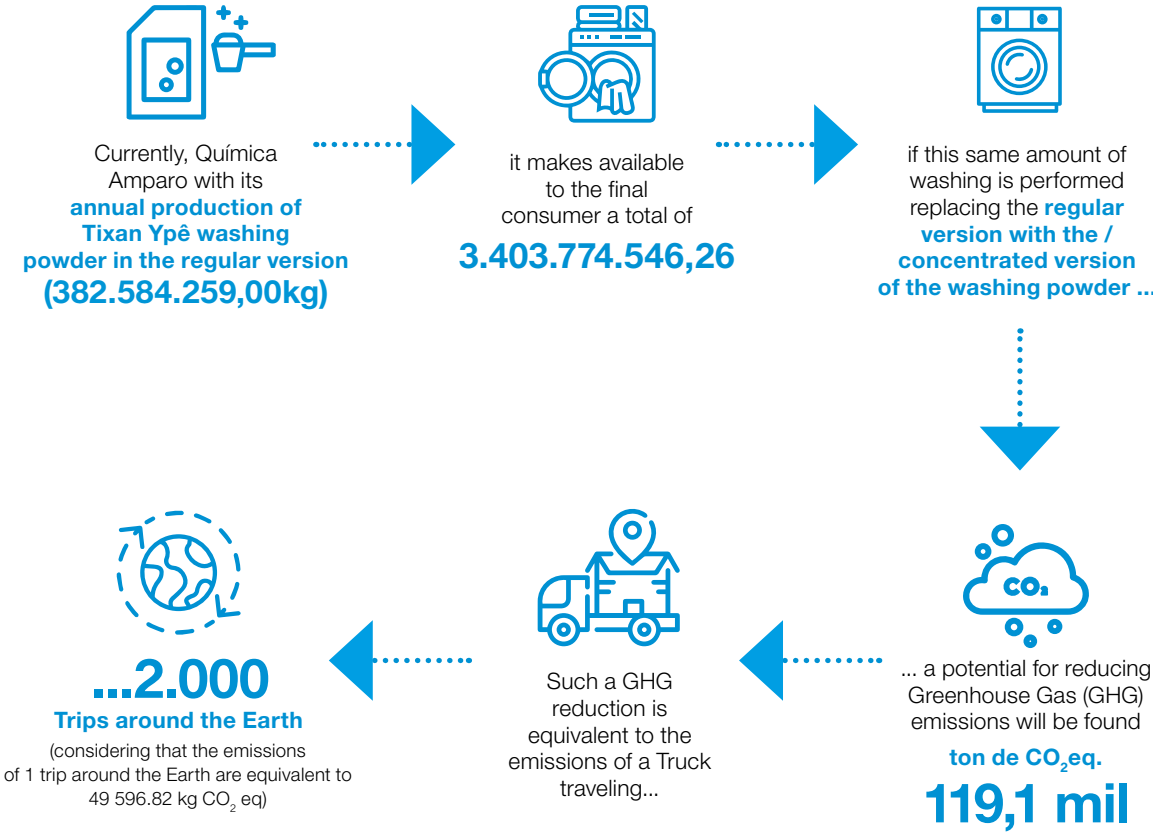
# Sustainability attributes in the communication strategy

With the Environmental Impact Assessment, we translate sustainability into communication with the market, assigning a new criterion of choice and generating value for the product

For three months, we performed the Eco-efficiency Analysis of Tixan Ypê washing powder – in its concentrated and regular versions. We also supported the company in sustaining its attributes for consumer communication, which resulted in a Life Cycle Assessment Completion Letter and a video, released on the company’s channels.



## Equivalences Climate Change





# Natural Capital

**T**hrough natural capital projects, we know, understand and value the relationship between business and natural capital, aiming to mitigate the risks of scarcity and structuring initiatives that promote brand value and the restoration of degraded areas, in addition to calculating and offsetting greenhouse gas (GHG) emissions.

## A Reserve in our backyard

Biodiversity mapping adds value by allowing the connection between the Suvinil Reserve and the most recognized ESG indicators in the world market

The biodiversity of the fauna, flora and water resources of the Suvinil Reserve can now be known by everyone. The Reserve is located in BASF's Industrial Complex of Coatings and Varnishes - located in São Bernardo do Campo (SP, Brazil) - and is connected to the Atlantic Forest of Serra do Mar. It is part of the São Paulo Green Belt Biosphere Reserve, internationally recognized by UNESCO.

We, from Espaço ECO Foundation, were in the field during the years 2020 and 2021 to identify, map and record the Reserve in photos and videos. Afterwards, we combined everything into a collection. We assessed how BASF can, from the Reserve, work aligned to 10 ESG indicators of the Corporate Sustainability Index (ISE B3), the Dow Jones Sustainability Index (DJSI), and also to five indicators of the Sustainable Development Goals (SDG) 6, 13 and 15.

In addition to contributing to the preservation of the Atlantic Forest and Brazilian biodiversity, we estimate that the Suvinil Reserve contributes to the reduction of 5,160.31 tons of CO<sub>2</sub>eq from the atmosphere<sup>5</sup>- the equivalent of a 14-ton diesel-powered truck, making 104 trips around the earth.

## Our journey in Suvinil Reserve

### Biodiversity survey

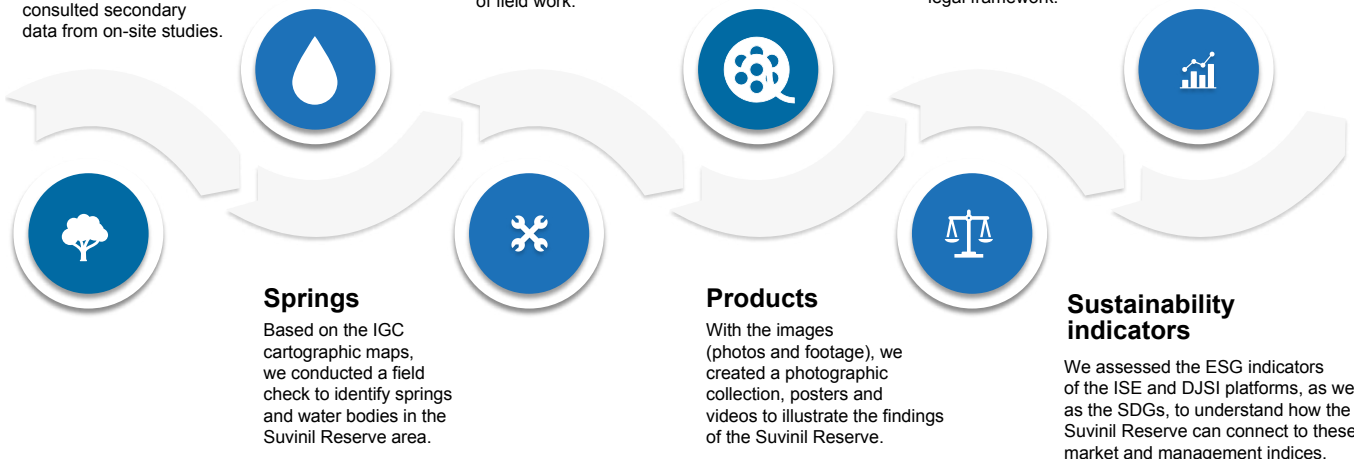
We surveyed the flora and fauna species using the active search and focal point method. We also consulted secondary data from on-site studies.

### Field effort

Throughout 2020, we performed 8 expeditions of 8 hours each, throughout autumn, winter and spring, totaling 64 hours of field work.

### Legal aspects

We assessed the various existing legislation to understand how the Suvinil Reserve area is included in the legal framework.



<sup>5</sup> Considering the Second Brazilian Inventory of Anthropogenic Greenhouse Gas Emissions and Removals (GHG)

## Biodiversity survey study at Suviniil Reserve revealed

- 05** springs, which form small streams - and contribute to the maintenance of the springs that supply the São Paulo metropolitan region.
- 176** plant species, belonging to
- 55** families and 117 botanical genera
- 135** trees
- 41** herbs, vines and ferns
- 85** bird species, belonging to 31 families and 76 genera
- 08** species of mammals,
- 08** Reptiles:  
At least 5 snakes and 3 lizards



### The forest

It has an area of approximately 30 hectares, equivalent to 30 soccer fields. Its vegetation can be divided in two groups:

#### Vegetation in regeneration (50% of the area)

- Natural regeneration of some eucalyptus forests

#### Native vegetation in advanced stage (50% of the area)

- Atlantic forest with a forest structure composed of large trees, biodiverse and with natural regeneration without the presence of grasses

# Guide to Maturity in Natural Capital

Tool provides a reflection on how your company is promoting the management of Natural Capital issues

In 2050, three Planet Earths would be needed to meet the demand for resources for our current lifestyle<sup>6</sup>. Companies are beginning to address this scenario, integrating the governance of natural resource use into their sustainability strategy.

With the conclusion of COP26, countries and the private sector now need to develop effective actions so that the outlined objectives are achieved. Based on the environmental indicators existing in the most relevant ESG indices on the market (such as B3, GRI, Itau Asset, and S&P Dow Jones Index, for example) in their dimensions, we developed a public tool that points out how companies are promoting their management for the following topics: biodiversity and ecosystem services; environmental governance and management; climate changes; circular economy and management of waste and water resources, entitled Guide to Maturity in Natural Capital. With this tool, companies fill out a qualitative questionnaire and receive a diagnosis prepared by categories. In addition, the tool positions the company's performance in five categories, from degenerative to regenerative, considering the organization's practices and engagement in Natural Capital initiatives. With this, we demonstrate the organization's position on the subject, supporting companies to see if their performance is contributing to the construction of regenerative practices (improving existing environmental conditions) or if they still have practices with important challenges for improvement.

The project is registered in the ISBN (International Standard Book Number).



[Guide to Maturity](#)



[How it all began](#)



[Learn more about our backyard](#)

<sup>6</sup> source: World Bank

# Southern Muriqui monkey needs help



With the Emissions Compensation Program, we intend to ensure the life of the largest monkey of the Americas in Brazil

Since 1984, BASF has contributed to the recovery of the riparian forest on the Paraíba do Sul River (located in the Guaratinguetá Chemical Complex, in São Paulo, SP) through the Mata Viva® Program. In 2008, with the project's expansion to partners (rural producers and agricultural cooperatives), Espaço ECO Foundation also added its [emissions offset](#) program to the initiative, calculating the carbon footprint of individuals and companies, and planting native tree seedlings.

Since 2020, the Mata Viva® Program has been offsetting emissions in the Barreiro Rico Forest (Anhembi, SP). It was impacted by three fires in less than six years. This forest is home to the Southern Muriqui, the largest monkey of the Americas, which is critically endangered, according to the International Union for Conservation of Nature (IUCN).

Through partner companies and individuals who donated to the Program, in 2021 we planted 10.000 tree seedlings, contributing to the restoration of an area of 5 hectares at Fazenda São Francisco, where important parts of the of the Barreiro Rico forest is located. In addition, with the resources acquired by the Program in 2021, we were able to connect large forest fragments, which are the home of the Muriquis. In addition to preserving the Southern Muriqui habitat, it is estimated that reforestation will allow the removal of 1,200 tons of carbon from the atmosphere throughout its development cycle.

## Emission Offset Program



### 1. CONTACT

Those interested in offsetting their emissions access the emissions calculator / offset form.

### 2. CARBON CALCULATION

Performing the equivalent CO<sub>2</sub> emissions calculation, called Carbon Footprint, through the data entered by the interested party.

### 3. CALCULATION OF TREES/RESTORED AREA

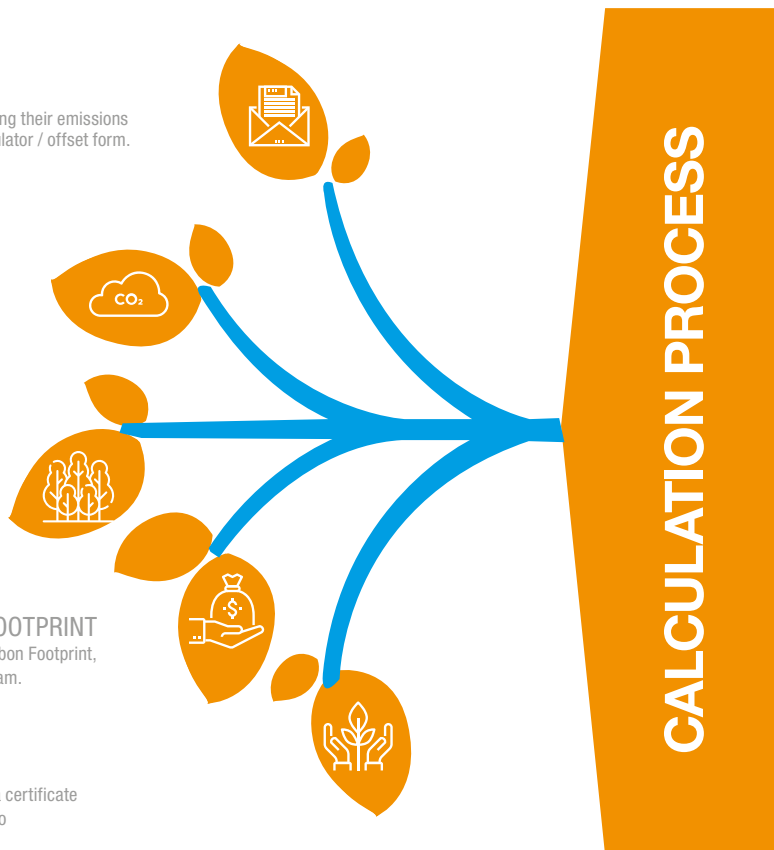
Quantification of trees or area needed to be planted, aiming to offset emissions according to the interested party Carbon Footprint.

### 4. DONATION/COMPENSATION OF THE FOOTPRINT

Total or partial compensation of the interested party's Carbon Footprint, with the option to donate 1 or more seedlings to the program.

### 5. PROGRAM FOLLOW-UP

After the interested party supports the Program, we send a certificate of the contribution performed, follow-up reports, and Imk to visualize the forest restoration site.



# Impact of producers on water availability

We contribute to the strategy and the achievement of sustainability goals of companies

The Water Producer Incentive Program, implemented by the Municipality of Guaratinguetá (SP) and supported by BASF and the Espaço ECO Foundation, in addition to other partners,

encourages rural producers to take care of permanent protection areas existing on their properties. The objective is to increase the availability of water in the Ribeirão de Guaratinguetá Hydrographic Basin through soil conservation practices and management, the recovery of riparian forests and the protection of remnants of native vegetation and springs. In 2021, we performed a study to assess the program's impact so far. We found that, annually, the Program promotes the reduction of 3.4% of superficial water runoff and 18.9% of soil erosion.

Through resources donated by Program Partners, such as BASF and SAEG, the Secretary of Agriculture of Guaratinguetá makes Payments for Environmental Services (PSA) to producers, to invest in the care of water treatment, adopting conservation practices. In 2021, 14 producers participated in the Project.



# Value Chain

**W**e connect, through governance principles, different links of a value chain - towards responsible care and consumption - aligned to the information/perception obtained in our studies.

## Technology for sustainability in the supply chain

We map sustainability indicators and ESG criteria in BASF's value chain, allowing the recognition and valuation of suppliers

We developed an automated tool (SustenBOT) for BASF's purchasing department to perform the manage suppliers: considering risk mapping, managing ESG indicators and recognizing good socio-environmental practices in each of the links that make up the value chain. The tool also contributes to promoting the traceability and transparency of information. In 2021, the questionnaire was sent to 113 suppliers, with 50% of responses obtained and analyzed according to criteria applied by the tool.

In order to develop the tool, we conducted a process of listening to product and service suppliers, addressing Management (with emphasis on governance); Environment – focus on management of greenhouse gas emissions (GHG) and PCF (Product Carbon Footprint); and Social (with emphasis on diversity).

We also performed approximately eight hours of training and qualifications to prepare the Purchasing team for the technical management of the tool (landbot), in addition to meetings to create integrated management mechanisms and generate value for acting with integrity, ensuring that suppliers comply with social and environmental requirements and governance.

### Main advances with the project:

Build and implement a selection of sustainability criteria for assessing categorized suppliers.

- Operate a technological tool that allows the Purchasing department to perform suppliers' "diagnosis"/ assessment (Purchasing SustenBOT).
- Understand and apply assessment mechanics (scores, levels and ranking mechanisms).
- Prepare the Purchasing team to perform any automation adjustments.



# Sustainable Finance

We work as a source of knowledge and innovation, an agent of mobilization and awareness, aligning sustainability with business

What is sustainable finance? What are the rules of the market? What is taxonomy? To clarify these, and many other questions in the sector, we launched the Sustainable Finance e-book.

We understand that the topic is essential to align sustainability with business. Therefore, through a series of in-depth studies, interviews, and research on national and international materials, we analyzed new concepts and scenarios that make sense for new business models.

We met with BASF, Climate Bonds Initiative, Ecoagro, PwC, Rabobank, REABCV, Sitawi and Votorantim Cimentos, as well as other renowned professionals in sustainability and the finance sector and, based on our studies, we published the e-book, which works as a guide and direction for companies.

In addition, we performed the webinar “Viability for Sustainable Finance: commitment, alignment and focus”, with the participation of professionals from Votorantim Cimentos and PwC Brasil. Together with experts, we sought to answer: what risks to take into account in Sustainable Finance or ESG initiatives? Are there concrete elements for communication? What about the ESG agenda in small and medium enterprises? What advances are needed? Thus, we support companies in the development of sustainability strategies, which aim to guarantee transparency and in the identification of which are the topics that society is prioritizing.



[Click and see ebook](#)



# Sustainability performance management in industrial production

We optimize processes and innovate towards an increasingly eco-efficient management

Aiming at an increasingly eco-efficient management in the production of coatings at BASF's Industrial Complex of Coatings and Varnishes, the company implemented Demarchi+Eco-Efficient, which measures impacts and optimizes processes. The Brazilian plant - by Suvinil and Glasul - was the first in the world to carry out an eco-efficiency process throughout the unit.

The initiative encompasses 11 sustainable practices with relevance to the business, based on studies and analyzes presented by Espaço ECO Foundation®. In addition, it quantifies performance with metrics and indicators monitoring, performed through Life Cycle Analysis of the entire supply chain, from the extraction of around 1,100 raw materials to production.

Located in São Bernardo do Campo (SP), the Industrial Complex has a production capacity of up to 330 million liters of coatings, enamels, varnishes and resins per year.

In 10 years, the Demarchi+Eco-Efficient program has already avoided, through applied improvements, the emission of 3.29 million tons of CO<sub>2</sub> into the atmosphere, the equivalent of 62 trips around the Earth by a truck.

In the period, even with the increase in production, there was a 16% reduction in power consumption, contributing to a 21% reduction in greenhouse gases. In addition, the initiative improved its eco-efficiency by 20%, that is, combining the best environmental and economic performance. Currently, a study by FGV shows that, over these years, the Program has obtained a return on investment: for every R\$ 1 invested by BASF, the project returns R\$ 9 in savings to the company.

## We can mention some of the main positive outcomes:

- Less impact on the environment
- Preservation and creation of value by the company
- Optimization of the use of natural resources
- Identification of risks and opportunities
- Motivation for behavior change

# Financial Statements



## INDEPENDENT AUDITOR'S REPORT ON THE FINANCIAL STATEMENTS

### Opinion

We have audited the financial statements of Espaço ECO Foundation ("Foundation"), which comprise the balance sheet as of December 31st, 2021, and the respective income statements, comprehensive income, changes in equity and cash flows for the year ended on that date, as well as the corresponding explanatory notes, including a summary of the main accounting policies.

In our opinion, the aforementioned financial statements adequately present, in all material respects, the equity and financial position of Espaço ECO Foundation as of December 31st, 2021, the performance of its operations, and their respective cash flows for the year ended on that date, in accordance with the accounting practices adopted in Brazil for small and medium-sized enterprises - Technical Pronouncement CPC PME - "Accounting for Small and Medium-sized Enterprises" and for Non-Profit Entities - Technical Interpretation ITG 2002 - "Non-profit entity".

### Basis for Opinion

Our audit was conducted in accordance with Brazilian and international auditing standards. Our responsibilities, in accordance with those standards, are described in the following section entitled "Auditor's responsibilities for the audit of the financial statements". We are independent towards the Foundation, in accordance with the relevant ethical principles set out in the Code of Ethics for Professional Accountants and in the professional standards issued by the Federal Accounting Council, and we comply with other ethical responsibilities in accordance with these standards. We believe that the audit evidence obtained is sufficient and appropriate to provide a basis for our opinion.

São Paulo, April 25th, 2022

ERNST & YOUNG  
Auditores Independentes S.S.  
CRC-2SP034519/O-6

**Klaas Johnsen**  
Accountant CRC-1SP267150/O-0

## Espaço ECO Foundation

BALANCE SHEETS ON DECEMBER 31, 2021 (IN BRL)

	2021	2020
<b>ASSETS</b>		
<b>CURRENT</b>		
Cash and cash equivalents	750,216	1,299,192
Accounts receivable	209,277	459,289
Advance payments	30,705	24,478
Taxes recoverable	53,068	117,045
<b>Total Current Assets</b>	<b>1,043,266</b>	<b>1,900,005</b>
<b>NON-CURRENT</b>		
Fixed Assets	2,726	3,115
	<b>2,726</b>	<b>3,115</b>
<b>Total Assets</b>	<b>1,045,992</b>	<b>1,903,120</b>
<b>LIABILITY AND EQUITY</b>		
<b>CURRENT</b>		
Accounts payable	212,226	809,061
Tax obligations to be collected	139,249	88,503
Advance payments	5,086	10,484
<b>Total current liabilities</b>	<b>356,561</b>	<b>908,047</b>
<b>OWNERS' EQUITY</b>		
Equity	300,000	300,000
Accumulated Surplus	389,431	695,073
	689,431	995,073
<b>Total liabilities and equity</b>	<b>1,045,992</b>	<b>1,903,120</b>

# ACTIVITY REPORT 2021 - ESPAÇO ECO FOUNDATION

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