
CLIMATE TRANSITION PLAN





Global warming is currently the main challenge faced by humanity. Due to the rise in temperature, the planet is already experiencing unprecedented wildfires, droughts, floods, and other extreme weather conditions. These threats will only intensify as the world continues to warm, and the effects of climate change will have a greater impact on the poorest and most marginalized communities.

In this sense, in 2015, countries around the world agreed that, to avoid the impacts of climate change, it is necessary to limit the temperature increase to 1.5°C above pre-industrial levels. This means reducing greenhouse gas (GHG) emissions by half by 2030 and reaching net-zero emissions by 2050. To reach these goals, countries and companies need to bolster initiatives to meet the goals of the Paris Agreement, considering that there is still a dramatic gap in climate mitigation and adaptation.

The objective of **Klabin's Climate Transition Plan** is to describe how the organization will direct its operations and entire value chain towards a trajectory aligned with the latest and most ambitious recommendations of climate science, i.e., halving GHG emissions by 2030 and reaching net-zero emissions by 2050, thus contributing to limiting global warming to 1.5°C.

Additionally, integrated management elements for soil, water and biodiversity help to accelerate the necessary transition towards a sustainable future. For this reason the document also contains the Company's Biodiversity Plan (under development), with guidelines and governance presented.

This document details to stakeholders Klabin's ambition, and action plans in addressing the impacts of climate change, by analyzing scenarios as a central element to support decision-making in the Company. Additionally, it aims to inform the process of identification and assessment of climate-related risks and opportunities, as well as the respective strategies for resilience, adaptation, and mitigation, aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

For inquiries, comments, and suggestions about Klabin's Climate Transition Plan, please visit:

<https://klabin.com.br/fale-conosco>

METHODOLOGIES AND STANDARDS USED



TASK FORCE ON
CLIMATE-RELATED
FINANCIAL
DISCLOSURES

Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)



DRIVING SUSTAINABLE ECONOMIES

CDP Technical Note: Reporting on Transition Plans (CDP)



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi Net-Zero Standard (SBTi)
SBTi's Supplier Engagement Guidance (SBTi)



wbcspd

Transition planning and climate scenario analysis: Food, Agriculture and Forest Products (WBCSD)



Pacto Global
Rede Brasil

Global Business Ambition for 1.5°C Campaign (Global Compact)

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CONTEXTUALIZATION AND HISTORICAL CLIMATE COMMITMENTS

Klabin is Brazil's largest producer and exporter of packaging paper, leader in the corrugated cardboard and industrial bags markets, and the only company in the country to offer solutions in short-fiber, long-fiber, and fluff pulp. In addition, it holds an important share of the paper recycling market in the country, which positions the Company as the largest user of cardboard scraps in the market, promoting the recycling chain, an integral part of the circularity strategy.

Management of climate-related aspects is part of the Company's business strategy and one of the main subjects of the Klabin 2030 Agenda, which includes the Klabin Goals for Sustainable Development (KODS).

With over

124 years

of history, Klabin operates



23

industrial units,



22

in Brazil



1

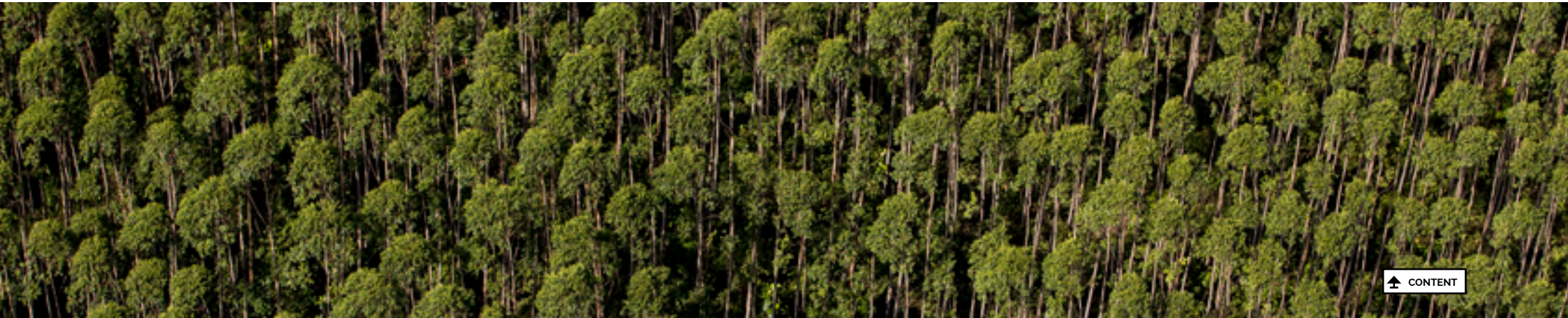
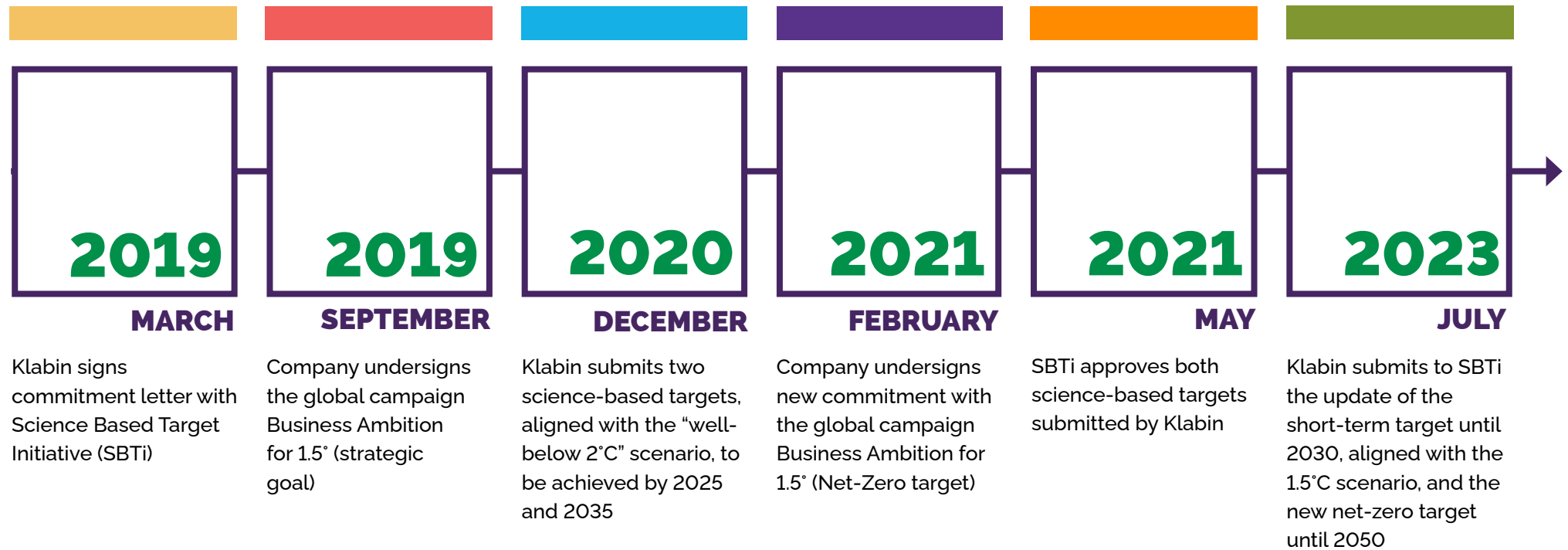
in Argentina

Science-Based Approach

Among the KODS is the commitment to meet science-based emissions reduction targets. Klabin was the first company in the Latin American pulp and paper sector to have its targets approved by the Science Based Targets Initiative (SBTi), which establishes standards to support companies in developing targets aligned with climate science and sustainable economic development.

Managing climate-related issues is an essential part of Klabin's Sustainability Policy, guiding the company's actions as articulated in the Guidelines for Climate Change Management – Mitigation and Adaptation. These guidelines draw upon climate science to propose a development model that ensures a sustainable future. Klabin's climate management is further driven by the Business Ambition for 1.5°C, a global campaign by the United Nations (UN), as well as the commitment to reduce and neutralize emissions by 2050.

KLABIN'S HISTORICAL COMMITMENT TO THE GLOBAL CLIMATE CHALLENGE





GOVERNANCE

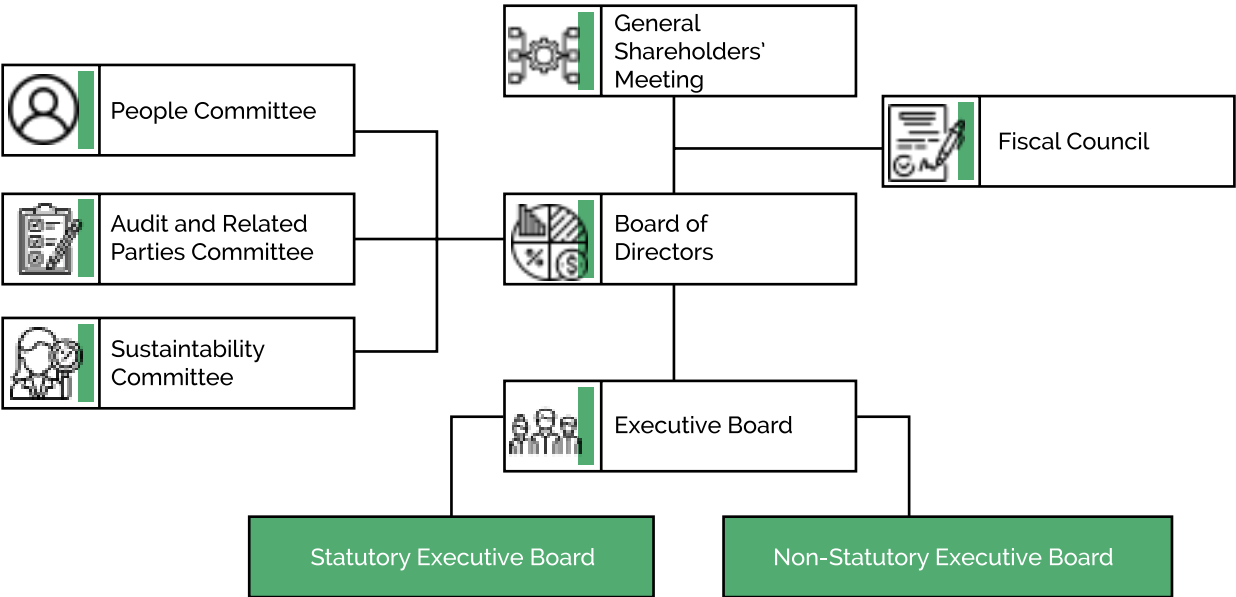


OVERSIGHT OF THE BOARD OF DIRECTORS

Klabin's main governance bodies include the General Shareholders' Meeting, the Board of Directors, the Executive Board, and the Board of Directors Advisory Committees. Working in synergy, these bodies aim to achieve the company's economic, social, and environmental results.

The Board of Directors is responsible for guiding the organization towards its objectives, meeting bimonthly or whenever it is necessary. The Board of Directors is advised by three committees - the Audit and Related Parties Committee, the People Committee, and the Sustainability Committee. Each committee follows up on assigned matters in accordance with their respective Bylaws, subjected to the Board of Directors.

ADMINISTRATIVE COUNCIL



GOVERNANCE

Issues related to climate change are approved by the Executive Board. Which receives advice from the Risks and Internal Controls Committee and the Sustainability Committee. Furthermore, reports on sustainability topics are made to the Board of Directors by the Board and Sustainability Committee.

- The committees assess and monitor information provided by the boards and managers responsible for the theme of Climate Change in the Company.

- The management departments aim to identify, analyze, address, and continuously monitor climate-related risks and opportunities that could influence the company's activities and strategy, proposing measures for adaptation, risk mitigation, and enhancement of opportunities, linked to action plans and financial planning. Further reinforcing Klabin's commitment to the

subject, CEO Cristiano Teixeira is the current ambassador for SDG 13 (Action against Climate Change) of the United Nations Global Compact's Brazilian Network, engaging the private sector to reduce GHG emissions by establishing science-based targets and participating in the ImPacto NetZero and Race to Resilience campaigns.

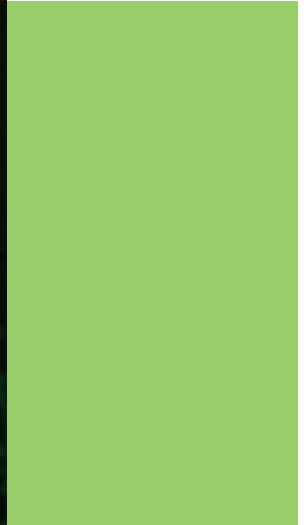
PAY LINKED TO CLIMATE COMMITMENT

Since 2022, 100% of the officers signed commitments related to climate change (GHG emissions reduction, CO₂ removal from the atmosphere, and/or increased participation of renewable sources in the energy matrix) linked to an ESG Index that prioritizes themes based on risk and relevance for the year. Part of the variable pay of employees is linked to Klabin's long-term commitments through the "ILP para Todos" Long-Term Incentive Program. These initiatives demonstrate the relevance of the sustainability, including the climate commitments in the daily lives of senior leadership and employees.





CLIMATE RISK AND OPPORTUNITY MANAGEMENT



SCENARIO ANALYSES

Scenario analyses allow Klabin to identify and assess the impact of climate-related risks and opportunities on its forestry and industrial operations. The analyzed scenarios encompass physical and transition variables based on the following references:

- Representative Concentration Pathways (RCP);
- Intergovernmental Panel on Climate Change (IPCC); and
- International Energy Agency (IEA).

The time horizons for **probability analyses** are 2030 (short term) and 2050 (long term), while the time horizons for **impact analyses** are short term (current), medium term (2 to 3 years) and long term (4 years and higher).

CLIMATE SCENARIOS

	IEA CP+ RCP SSP3-7.0	IEA SDS+ RCP SSP1-2.6	IEA NZ 2050+ RCP SSP1-1.9
Physical risks	<p>Average global temperature rises 2.1°C by 2060 and 3.6°C by the end of the century.</p> <p>Average sea levels rise 0.6m.</p> <p>Extreme events become more frequent.</p>	<p>Average global temperature rises 1.7°C by 2060 and 1.8° by 2100.</p> <p>Average sea levels rise 0.4m.</p>	<p>Average global temperature rises 1.6°C by 2060 and 1.4°C by the end of the century.</p> <p>Average sea levels rise 0.3m.</p>
Transition risks	<p>Probable scenario of the evolution of greenhouse gases in the atmosphere and socioeconomic Evolution</p> <p>Paris Agreement not fulfilled.</p> <p>Rising GHG emissions throughout the 21st century.</p>	<p>Scenario of international cooperation for sustainable development, neutralizing CO2 emissions between 2070 and 2080.</p> <p>Paris Agreement fulfilled, maintaining global average temperature below 2°C by 2100</p>	<p>Scenario of very low GHG emissions, with net-zero CO2 emissions by 2050.</p> <p>Paris Agreement fulfilled, maintaining global average temperature below 1.5°C by 2100</p>

SSP - Share Socioeconomic Pathways

CLIMATE RISK AND OPPORTUNITY ASSESSMENT



TRANSITION RISKS

Risk Factor	Risks
Regulatory changes	Carbon pricing market in Brazil
	Carbon cost pass-through on inputs due to carbon pricing market in Brazil
	Foreign taxation due to carbon leakage risk



PHYSICAL RISKS

Risk Factor	Risks
Water Shortage	Increase in energy tariff
	Increase in water tariff
	Incidence of new water collection and usage tariffs
	Reduction of industrial activity due to changes in water availability
	Reduction of industrial activity due to changes in energy availability
	Postponed seedling planting due to changes in water regime
Temperature Increase	Acceleration of forest pest outbreaks
	Decrease in forest productivity
	Increase in the frequency and severity of wildfires
	Increase in the frequency and severity of frosts

OPPORTUNITIES



Opportunity Factor	Opportunities
Resource Efficiency	Cost reduction due to the use of new technologies
Market	Commercialization of permits
	Commercialization of carbon credits in commercial production areas
	Commercialization of the company's surplus
Products/ Services	Use of lumber instead of steel and concrete in civil construction
	Development of new products replacing materials with higher carbon footprint
	Higher production potential of recycled products
Energy Sources	Energy sale to the SIN
	Reduction in energy consumption due to higher energy efficiency
Resilience	Reforestation targets established by the Brazilian NDC for the Paris Agreement
	Availability of more accessible financing and credit lines for more sustainable companies



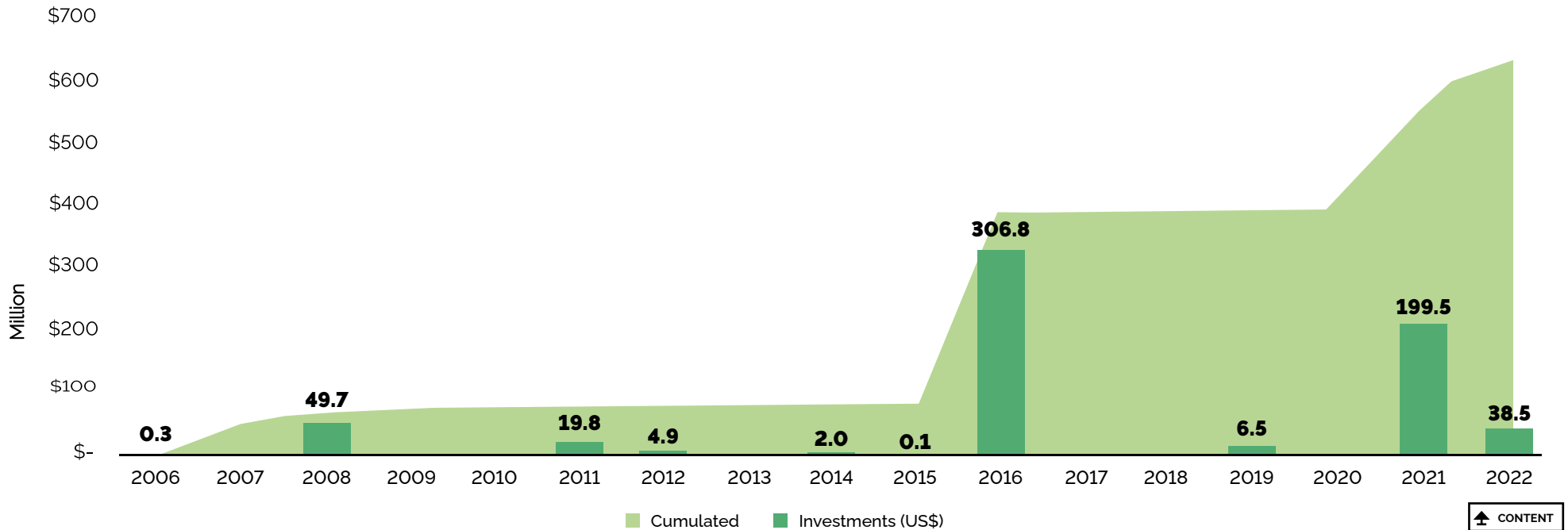


TRANSITION RISKS
Regulatory changes

FINANCIAL PLANNING AND RESILIENCE STRATEGY

Between 2003 and 2022, Klabin reduced 68% of its specific GHG emissions (scopes 1 and 2) by replacing non-renewable fuels with renewable fuels, contributing to the transition to a low-carbon economy. To achieve this, the company has already invested US\$ 627,877,364 in low-carbon equipment to expand its energy matrix from renewable sources and reduce GHG emissions.

INVESTMENTS IN LOW-CARBON TECHNOLOGIES (USD)



Klabin has implemented an internal carbon price, considered in the feasibility analysis of internal projects with potential to reduce GHG emission. These analysis adopt a shadow price of BRL 40/tCO₂eq. In addition, Klabin developed the Marginal Abatement Cost Curve (MACC), in which it estimates, for all analysis of projects with the potential to significantly impact GHG emissions reductions, the cost/revenue, in R\$/tCO₂eq, and the potential for reducing GHG emissions in tCO₂eq.

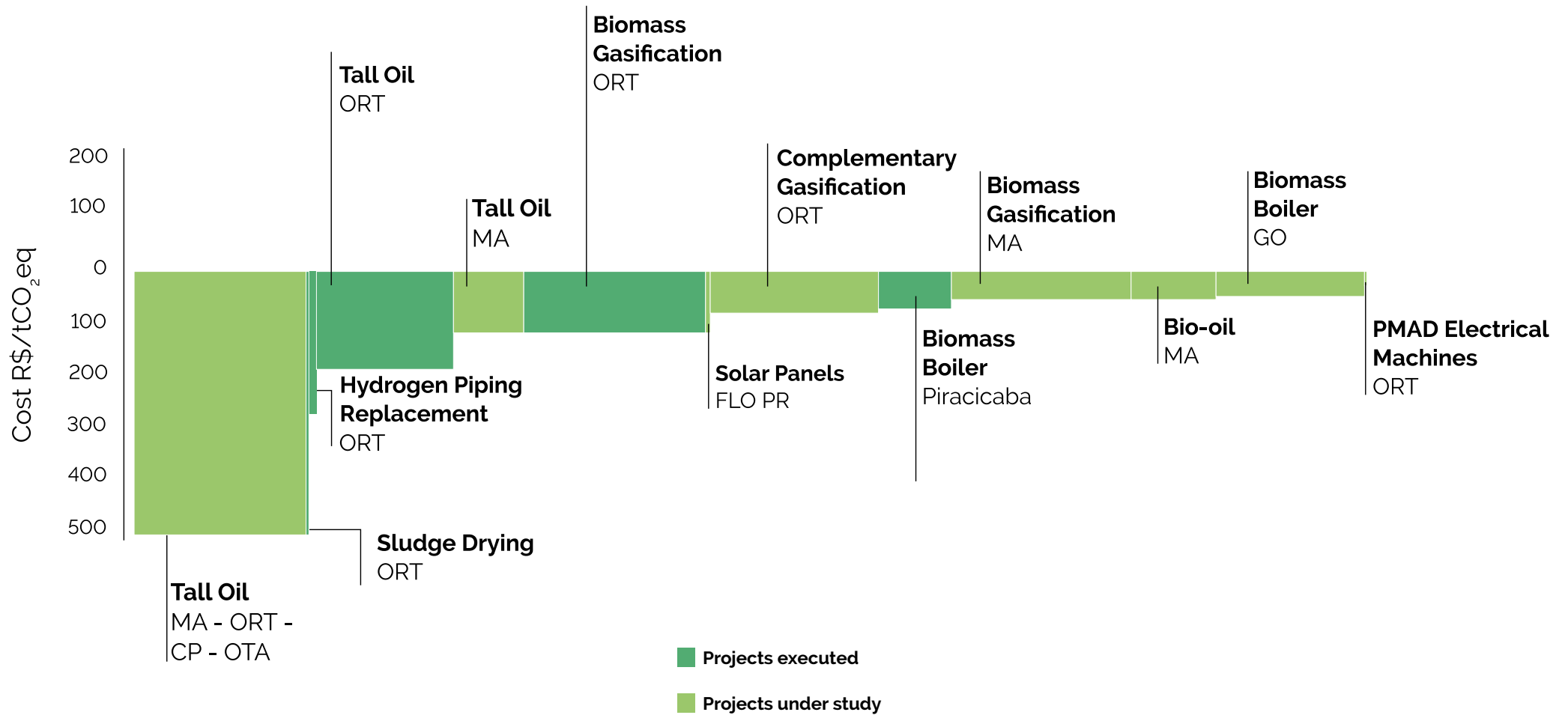
INTERNAL PRICING IS PART OF KLABIN'S RESILIENCE STRATEGY, ANTICIPATING POSSIBLE CARBON REGULATION IN BRAZIL.

BASED ON THE PRIORITIZATION ANALYSIS, **THREE MAJOR PROJECTS** WERE IMPLEMENTED BETWEEN 2020 AND 2022: THE BIOMASS BOILER AT THE PIRACICABA UNIT, AND THE TALL OIL AND BIOMASS GASIFICATION PLANTS AT THE PUMA UNIT.

TOGETHER, THESE THREE PROJECTS REDUCED **OVER 150,000 tCO₂eq PER YEAR.**



MACC CURVE





PHYSICAL RISKS

Temperature increase

Water shortage

INDUSTRIAL STRATEGY

Klabin internally generates more than 82% (2022) of the electricity consumed in its units, making it less susceptible to short-term changes in energy tariffs. Additionally, it has long-term contracts with energy generators and traders, further helps minimizing the impact of tariff increases on its operations.

Initiatives

- Monthly monitoring of reservoir levels and thermal energy generation volumes in the country, to assess potential medium-term impacts.
- Investment of US\$ 479 million to the installation of liquor and biomass recovery boilers at the Puma Unit (considering Puma I and Puma II), which allowed the Puma unit to be self-sufficient in energy and still make the surplus available to the Brazilian market. The Company is evaluating new projects to expand its own energy generation, as well as replace generation with low-carbon technologies.

- Seeking to reduce water use in all industrial units to mitigate the impacts of water tariff increases.
- Exploring alternatives for units with only one water source to avoid potential impacts on production. Currently, 0.2% of Klabin's total water consumption comes from public utilities, representing the main impact due to water tariff increases. Some units that use surface water also incur costs for this purpose, but this is still relatively small compared to the total water consumed by the company.
- Increasing internal water pricing within the units, passing on the costs of water collection and treatment, mainly to the areas that actually use the water, reinforcing the importance of reducing water consumption in all units.
- Monitoring by the Sustainability area of units located in water-stressed regions, updating these areas based on the Aqueduct Water Risk Atlas of the World Resources Institute (WRI).

RESILIENCE STRATEGY MITIGATION ACTIONS FOR PHYSICAL RISKS:

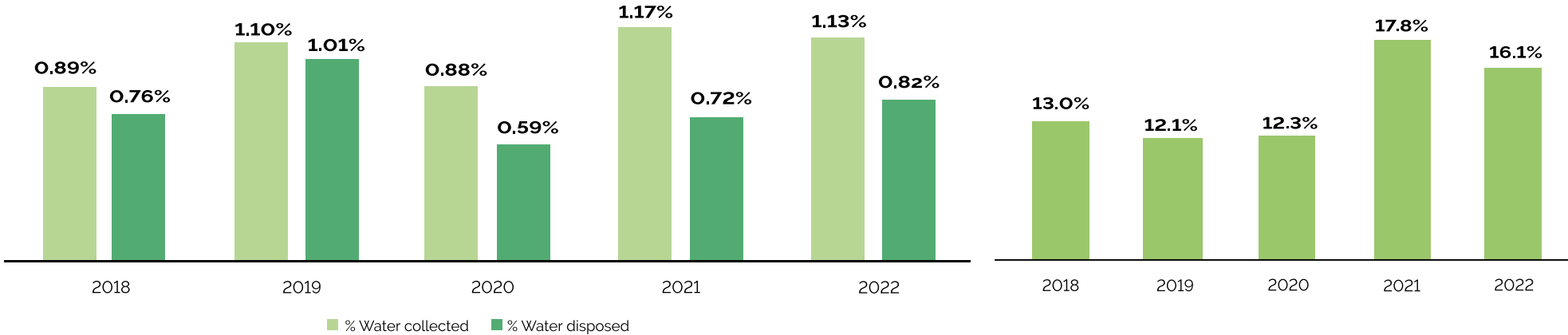
- ✓ Water shortage
- ✓ Temperature increase

INDUSTRIAL STRATEGY

INDICATORS MONITORED BY THE WRI TOOL

PERCENTAGE OF WATER COLLECTION AND DISPOSAL IN WATER-STRESSED REGIONS BASED ON THE TOTAL OF KLABIN S.A. (%)

PERCENTAGE OF REVENUE CORRESPONDING TO UNITS LOCATED IN WATER-STRESSED REGIONS



SUSTAINABLE FINANCE STRATEGIES

38% OF THE
COMPANY'S
DEBTS ARE
TIED TO ESG
PERFORMANCE

Klabin's Sustainability roadmap is integrated into the Company's strategy based on the association between ESG performance and financial planning. The instruments in force are divided as follows:

Financial Instrument	Green Bond	Sustainability-linked Bond	Revolving Credit Facility (RCF)*	IFC/BID Loan
Total value (USD MM)	1,200	500	500	800
Proven value (USD MM)	716.29	Performance-based	Performance-based	Performance-based
Maturity (year)	2027 e 2049	2030	2026	2032
Related KSDG Target	Use of resources	1. Biodiversity 2. Water consumption 3. Waste	Waste	Biodiversity

Learn more. [Click here.](#)

*Amount issued not withdrawn.

SUSTAINABILITY-LINKED BONDS

Klabin issued US\$ 500 million in senior debt securities with full warranty, tied to sustainability performance targets with a deadline in 2030, and 2025 as the trigger for the next interest rate pricing.

The Key Performance Indicators (KPIs) of the operation are aligned with three Klabin Sustainable Development Goals (KODS), which in turn are linked to the company's growth plan. The bonds related to this issuance are subject to interest rate adjustments based on whether or not the targets set by the company in 2025 are achieved, as defined by the Sustainability Performance Trigger (SPT).

WATER, WASTE AND BIODIVERSITY

The goals selected by Klabin for this operation, related to water, waste, and biodiversity, are in line with the company's ambition to increase the resilience and rationality of its model for extracting, transforming, reusing, and regenerating resources. Klabin's influence on these three areas directly impacts its cost-efficiency, its ability to maintain constructive relationships with society, and ultimately, the capacity of the ecosystem where the Company operates to respond positively to stimuli for increased productivity, both for forestry and industrial operations.



FORESTRY STRATEGY

Klabin's forestry strategy for climate-related risks and opportunities involves research and development, firefighting, silviculture, and forest management.

Research & Development

- Research and development of forestry solutions to mitigate the impacts of climate change. Led by Klabin's Forestry Research Department, this work encompasses different lines such as biotechnology, genetic enhancement, phytosanitary, and forest management, developing pine and eucalyptus clones to increase forest productivity and species resilience to climate change impacts.
- Creation and evaluation of Climate Scenarios, based on a data model related to exposure to climatic parameters, assessing the impact of changes on planted forests and recommending necessary measures in case of adverse effects.
- Projects related to the variation of pest populations throughout different seasons and

forest regions were initiated in 2021. The goal is to create indicators for each forest pest's occurrence, their preference for genetic materials, the influence of forest mosaics, and the influence of climate-related dynamics on their dispersion and infestation in plantations.

For the coming years, Klabin aims to expand the creation of natural enemies in laboratories to be widely dispersed in strategic points of forestry operations, as well as continuous research projects to identify other potential control methods, such as microbiological and macrobiological agents, chemical components, or genetic resistance. To achieve this goal, the company plans to increase forest monitoring throughout the forest base and expand on-site monitoring staff.

Currently, field survey indicators associated with forest pest occurrences are monitored through different bases. Research is also conducted to ensure the protection of plants from attacks by pests and diseases that could reduce forest productivity.

KLABIN IS INVESTING IN
A CENTRALIZED FIELD
SURVEY SYSTEM TO CREATE
A UNIQUE RECORD BASE OF
OCCURRENCES, ENHANCING
AGILITY IN RESPONDING TO
OCCASIONAL PEST INCIDENTS.

Forest Firefighting

Klabin relies on the Structuring Program for the Prevention and Control of Forest Fires, with trained brigade members, investments in expansion of machines for fighting fires, such as water trucks and helicopters, and in improvements to the system of monitoring towers, with the inclusion of digital system of automatic detection of outbreaks also of alerts via satellite.

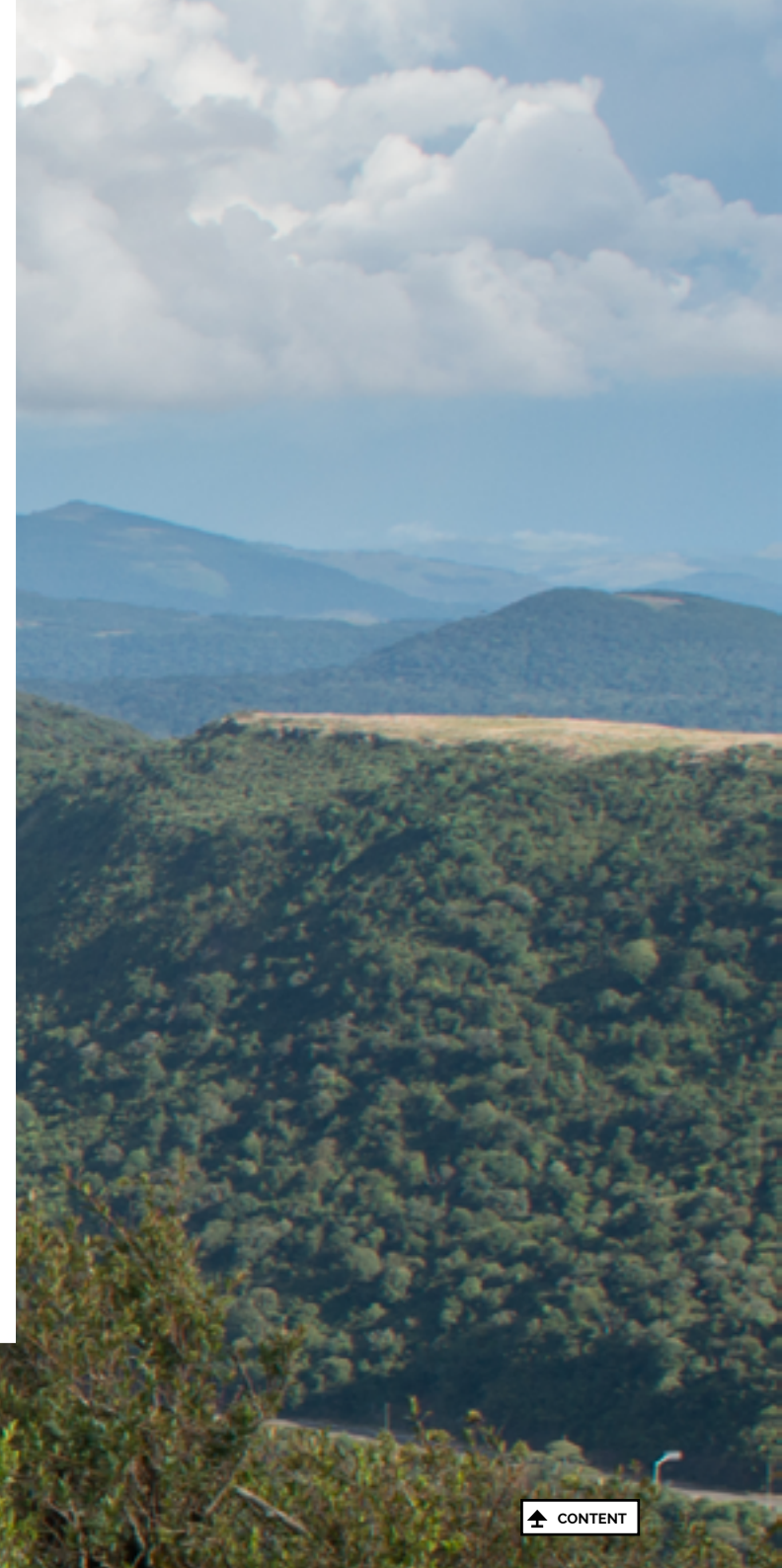
Silviculture

The company operates with a tactical silviculture planning process (S&OP), responsible for conducting the Planting Plan (PP), which indicates, based on availability, constraints, and restrictions, the ideal species to be planted in each plot and the period (month) of the year. Considering the potential damage from frost, a restriction has been developed to limit the species suitable for

planting in higher-risk areas, focusing on those more resistant to frost impacts. Additionally, as a preventive measure, Klabin does not plant eucalyptus in cold zones during the most critical period of the year (April to August).

Hydrosolidarity Management

Across its forest areas, Klabin operates with the concept of Hydrosolidarity Management: a management model that searches for the balance between forest production and water production. This allows integrating the different needs of this input, including those of neighboring communities and ecological processes. This activity begins in the forest planning stage, taking into consideration the hydrographic microbasins and water capture points of neighboring areas as planning units. Currently, 97.3% of Klabin's areas consider this model in their forestry operations. The objective is for 100% of forestry operations under Klabin's management to implement this practice.



PROCESSES FOR CLIMATE RISK MANAGEMENT

RISK MANAGEMENT

The Risk Management Policy approved by the Board of Directors has as its principle the alignment of the Company's strategic objectives and its structure with the best market practices.

IDENTIFICATION

Risks are identified based on data, transactions and systems analysis, assessment of business scenarios and/or operational and market conditions, among other conditions that imply a relevant impact for the company.

ASSESSMENT

Risks are evaluated according to their level of criticality, which is defined based on two aspects: impact and vulnerability. The results of this assessment are plotted in **Klabin's Risk Matrix**.

TREATMENT

Definition of treatments of these risks aiming whenever it is possible to mitigate or reduce exposure to risk. The treatment of Risks may involve the creation and implementation of Action Plans by the respective Business Areas and Boards involved.

GOVERNANCE

The Risk Committee, made up of multidisciplinary members, advises the Executive Board on the assessment and consolidation of prioritized risks for presentation to the Audit Committee and the Board of Directors.

IDENTIFICATION, ASSESSMENT AND MONITORING OF THE COMPANY'S RISKS AND IMPACTS



According to the Risk Management Policy, risks are classified into five categories: strategic, financial, operational, regulatory and socio-environmental.

Potential risk identification follows a specific procedure and is coordinated by the Risk and Internal Controls Management with the participation of the Boards, business managers and corporate areas. Initially, questionnaires and/or interviews are also conducted with employees who have extensive technical knowledge of their respective areas to help define the main aspects to be monitored, in addition to the assessment of internal documentation and, if applicable, third-party assessments.

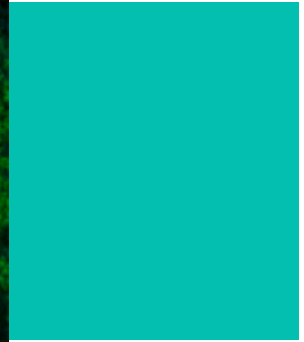


The identified potential risks are assessed regarding their criticality, which depends on the degree of impact and vulnerability defined in the internal Risk Management procedure. After determining these aspects, the risk is incorporated into a "heat-map" to determine its criticality and due treatment. Criticality degree may be low, medium, high and critical. At this stage, the mapping is presented to the Risks Committee for ratification and establishment of the priority risks to be addressed. Together with the business areas, the Risk Management area makes and follows up on action plans and/or including new risks.

For further information and updates related to aspects regarding integrated risk management, access the **ESG Portal** page in the material topic **Risk Management**.

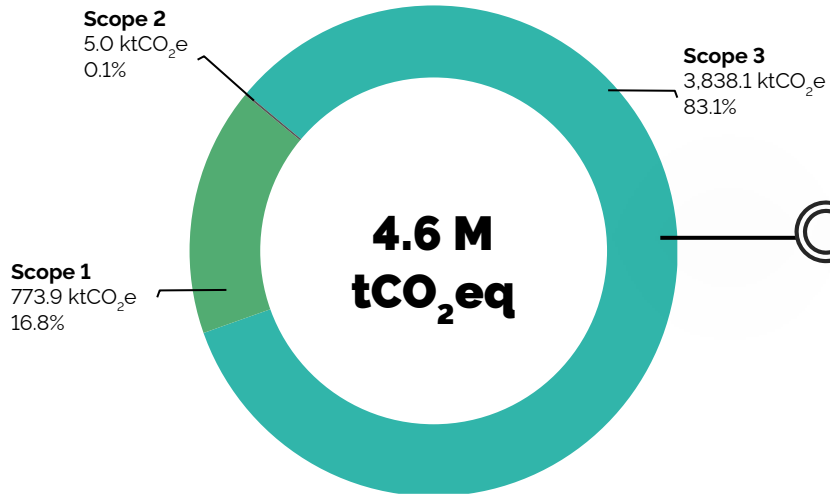


METRICS AND TARGETS



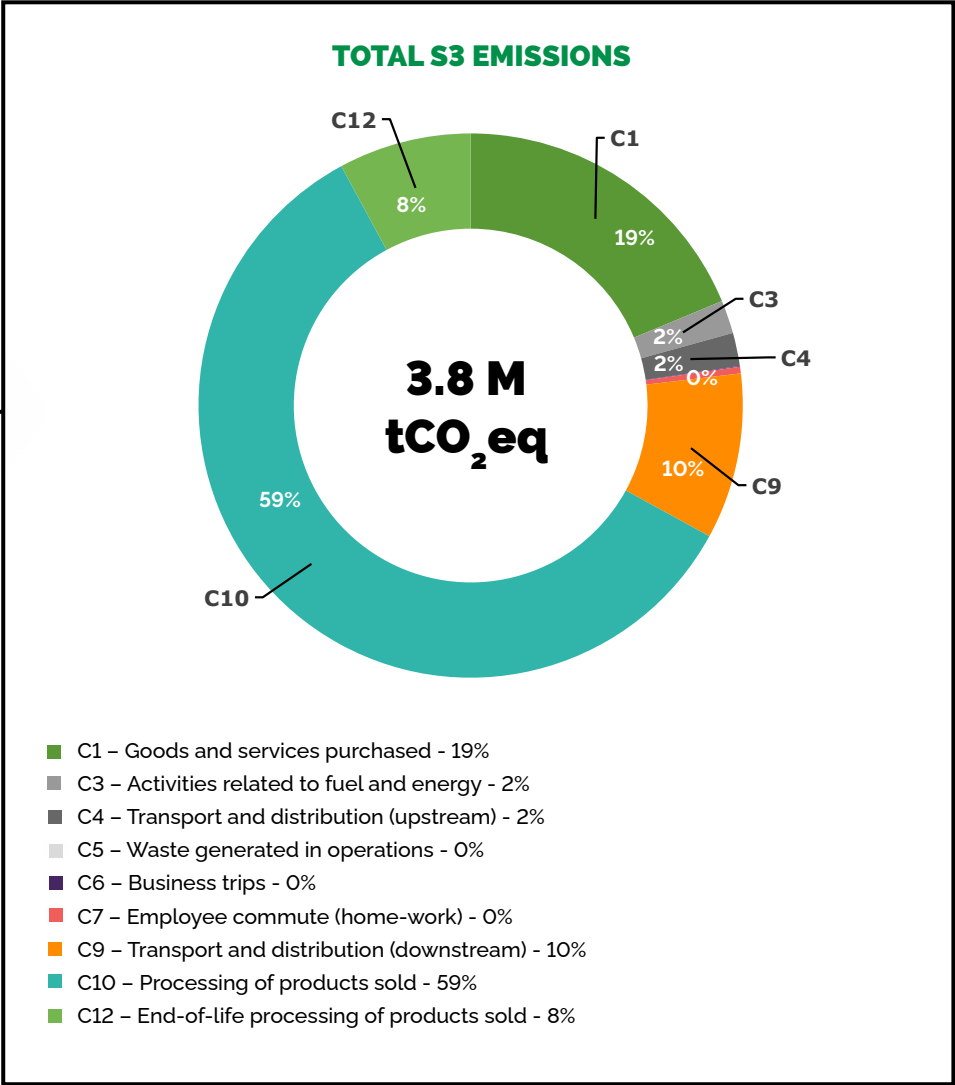
**GHG EMISSIONS (SCOPES 1, 2 AND 3)
AND THIRD-PARTY VERIFICATION**

TOTAL S1+2+3 EMISSIONS (2022)



- Scope 1**
Direct emissions
- Scope 2**
Indirect emissions from purchased energy
- Scope 3**
Indirect emissions from Klabin's value chain

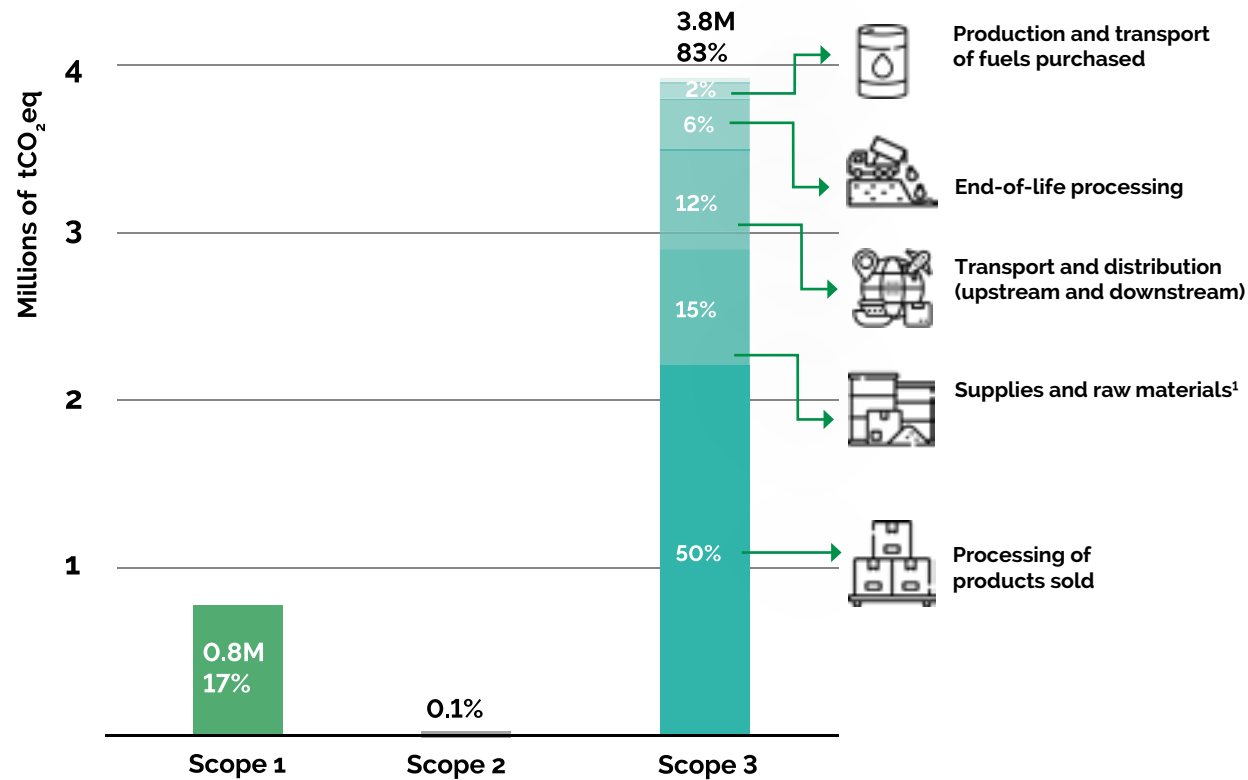
TOTAL S3 EMISSIONS



- C1 – Goods and services purchased - 19%
- C2 – Energy use in owned and controlled facilities - 0%
- C3 – Activities related to fuel and energy - 2%
- C4 – Transport and distribution (upstream) - 2%
- C5 – Waste generated in operations - 0%
- C6 – Business trips - 0%
- C7 – Employee commute (home-work) - 0%
- C8 – Leased assets - 0%
- C9 – Transport and distribution (downstream) - 10%
- C10 – Processing of products sold - 59%
- C11 – Leased assets - 0%
- C12 – End-of-life processing of products sold - 8%

SCOPE 3 SHARE

% OF TOTAL ABSOLUTE EMISSIONS (S1+S2+S3)



Scope 1

Direct emissions

Scope 2

Indirect emissions from purchased energy

Scope 3

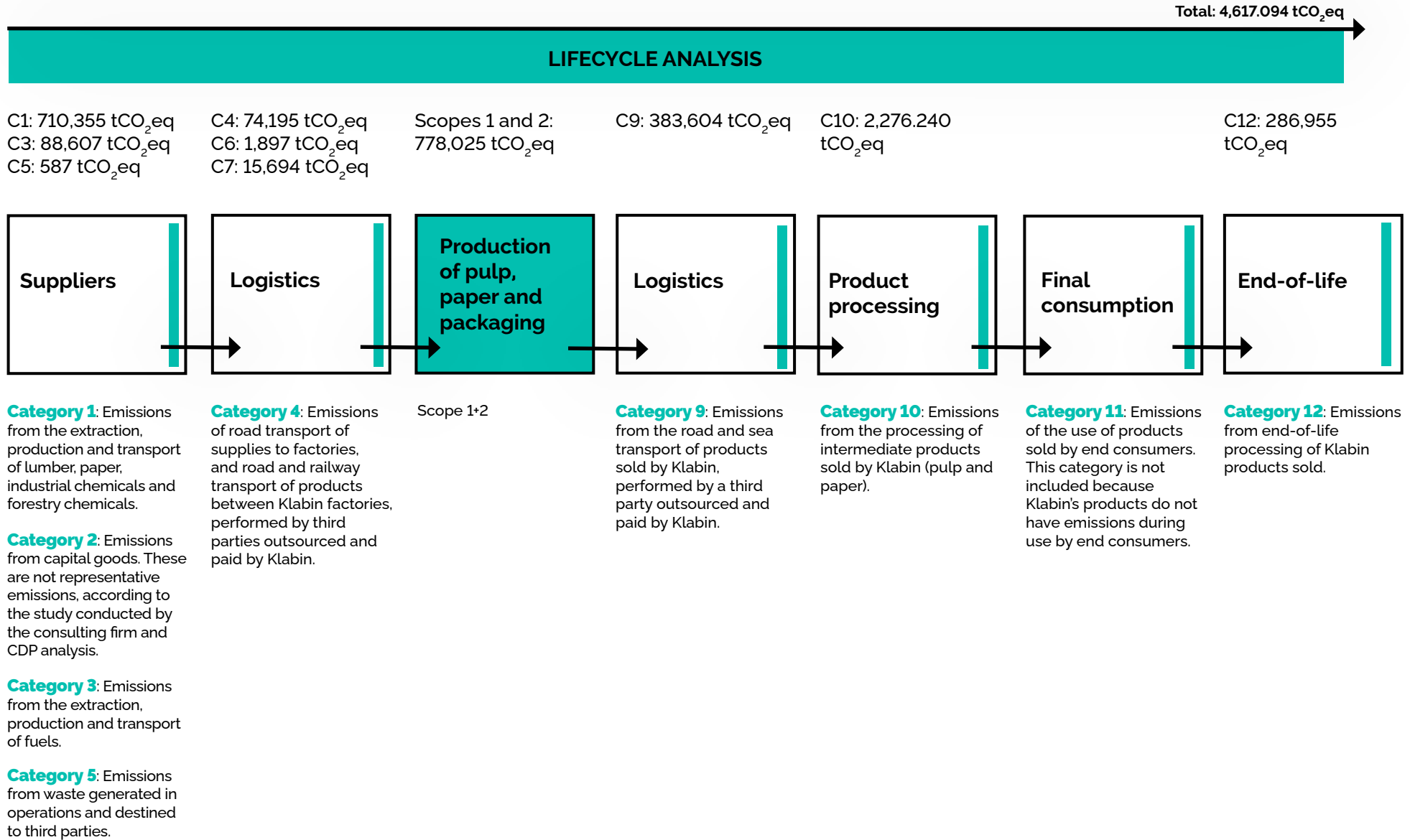
Indirect emissions from Klabin's value chain

¹including emissions arising from the extraction, production and transport of acquired supplies to Klabin



LIFECYCLE ANALYSIS

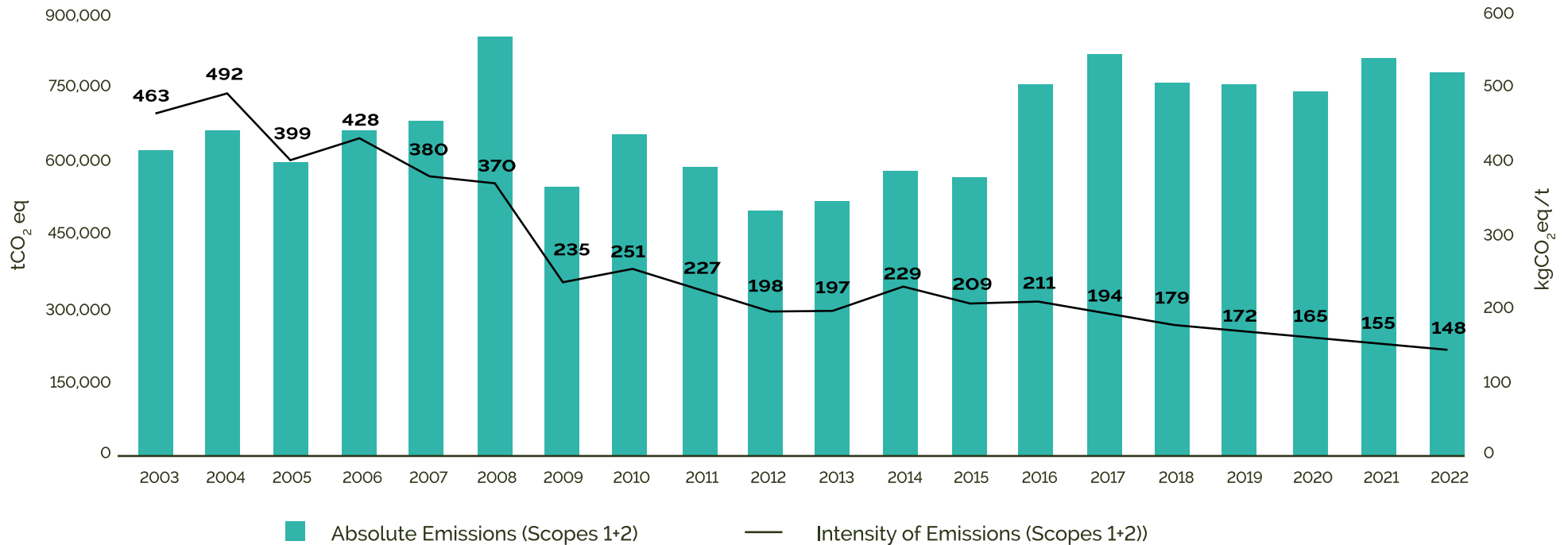
APPROACH BASED ON KLABIN'S VALUE CHAIN (2022)



GHG INVENTORY

Klabın's GHG inventories are based on the GHG Protocol methodology and are verified annually by an independent third party. [Click here](#) to access the latest GHG inventory statement.. Since 2003, Klabın has invested in low-carbon technologies, which have allowed a 68% reduction in GHG emission intensity (Scopes 1 and 2) until 2022. In further commitment to this cause, the Company has approved two ambitious GHG reduction targets, aligned with the global challenge to limit global warming to 1.5°C.

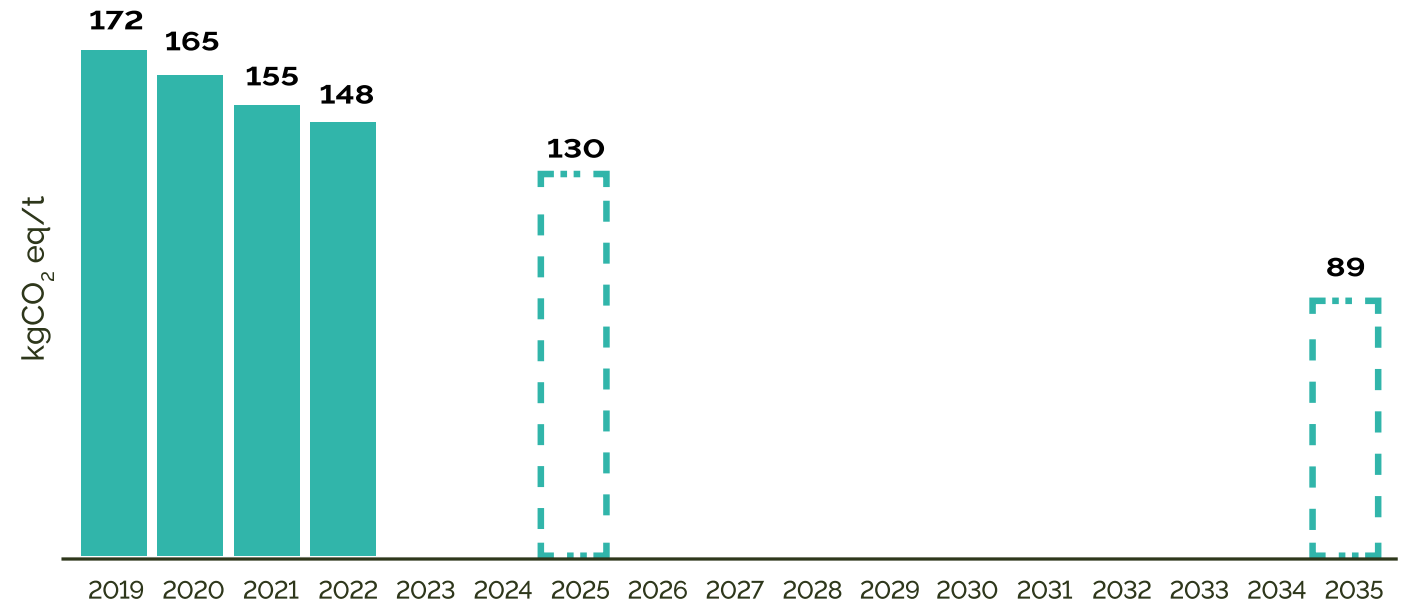
GHG-SPECIFIC EMISSIONS (SCOPES 1+2) – KLABIN S.A.



SCIENCE-BASED TARGETS APPROVED BY SBTi: “WELL BELOW 2°C” SCENARIO

The science-based targets approved by the SBTi in May 2021 are:

- 25% reduction in Scope 1 and 2 emissions per ton of pulp, paper, and packaging by 2025 (base year: 2019).
- 49% reduction in Scope 1 and 2 emissions per ton of pulp, paper, and packaging by 2035 (base year: 2019).



UPDATES ON SHORT-TERM TARGET AND NET-ZERO TARGET

To increase the ambition of its approved targets, Klabin has been working to update the targets validated by the SBTi, considering the 1.5°C scenario and expanding the inclusion of Scope 3 emissions, including new categories based on their relevance to the business. In this regard, with the expansion of the category of goods and services purchased and with the inclusion of the processing categories of products sold and end-of-life treatment, the Company's scope 3 increased to 3.8 million tCO₂eq in 2022, representing 83% of total GHG emissions. Furthermore, Klabin presented to SBTi a long-term target (net-zero), approved by the Board of Directors and informed to its Board, and is working on the preparation of the plan that consists of reducing absolute scope 1, 2 emissions by 90%. and 3 by 2050.

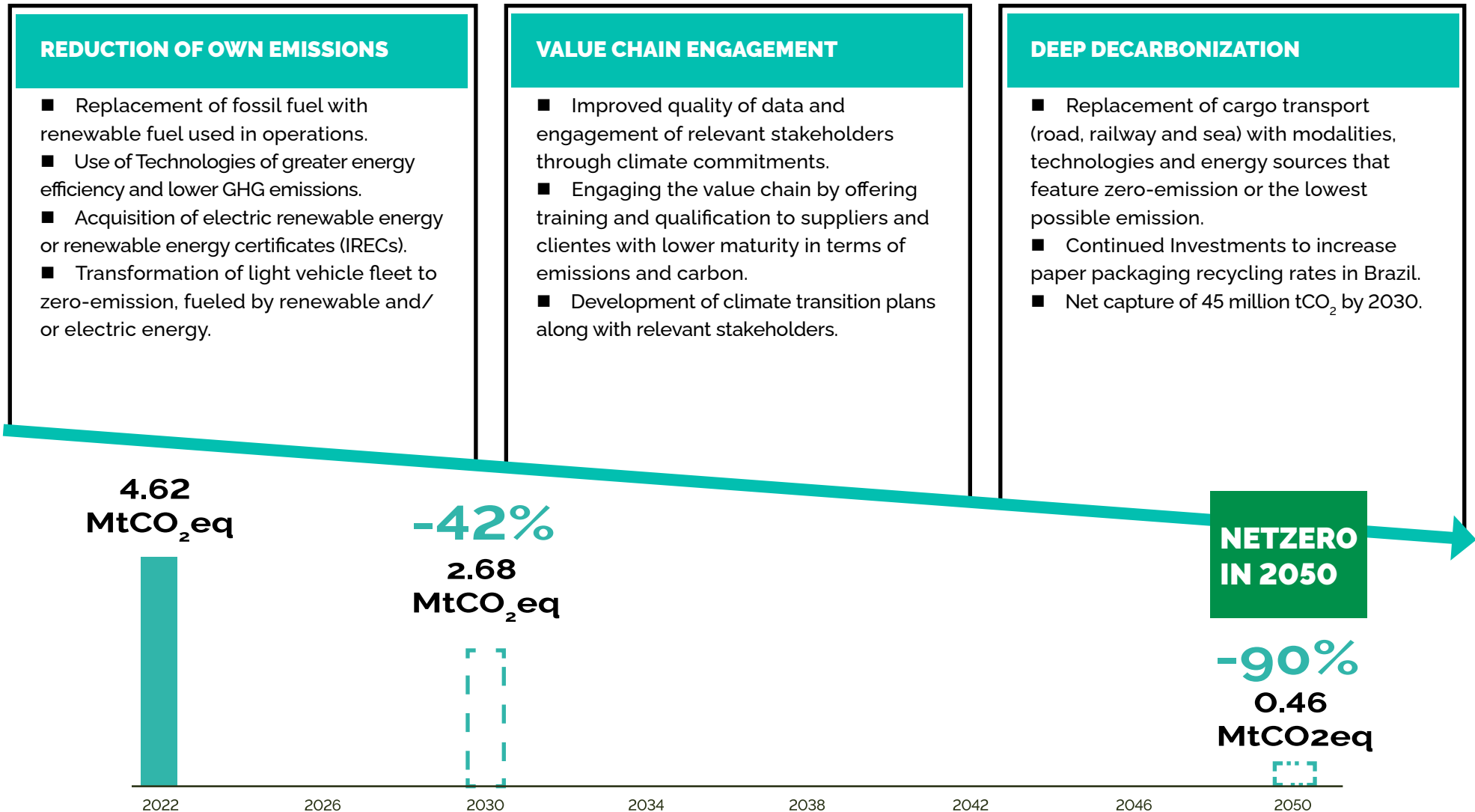
The expansion of Scope 3 coverage is mainly due to the inclusion of two new categories related to product processing (Category 10) and end-of-life treatment (Category 12). Additionally, the Company expanded the categories of purchased goods and services (Category 1) and activities related not included in Scopes 1 and 2, considering inputs and products that represent at least 90% of emissions in these categories, based on the product carbon footprint studies already carried out by Klabin.



The new short and long-term targets presented by Klabin to the SBTi in July 2023 now consider the scenario of limiting temperature increase to 1.5°C, as follows:

NET-ZERO PATH

SCIENCE-BASED AND DECARBONIZATION STRATEGIES: SCOPES 1, 2 AND 3



OTHER INTERNAL TARGETS

RENEWABLE ENERGY MATRIX

92% SHARE OF RENEWABLE SOURCES IN
THE ENERGY MATRIX

PURCHASE OF RENEWABLE ENERGY

100% purchase of certified energy from a
renewable source

WATER CONSUMPTION

REDUCE INDUSTRIAL WATER
CONSUMPTION BY 20%



DECARBONIZATION STRATEGY

LOW-CARBON INITIATIVES

Klabin developed a consistent decarbonization strategy covering emissions across its entire value chain.

DECARBONIZATION STRATEGY

Area	Transformation
Sustainable mobility and transport	Transformation of light vehicle fleet to zero-emission, fueled by renewable and/or electric energy.
	Promotion of cargo transport using modalities, technologies and energy sources that feature zero-emission or the lowest possible emission.
Production and energy	Replacement of fossil fuels with renewable fuels
	Application of technologies with greater energy efficiency and lower GHG emissions
	Purchase of renewable electric energy or Purchase of certificates (IRECs)
Circularity	Investment and application of the concept of Circular Economy
	Increase of the recyclability rate of paper products

ENGAGEMENT OF THE VALUE CHAIN

Klabin has developed a value chain engagement strategy focusing on its suppliers and customers.

OUT OF TOTAL SCOPE 3 EMISSIONS IN 2022:

59%

RELATE TO THE CATEGORY
OF PROCESSING OF
PRODUCTS SOLD
(CATEGORY 10)



ARISING FROM **91**
CLIENTS WITH RELEVANT
GHG EMISSIONS.

AMONG THEM,

82 CLIENTS RELATE
TO SHORT, LONG, AND FLUFF
FIBER PULP,

4 TO PAPERBOARD,

3 TO KRAFT PAPER, AND

2 TO LPB PAPER.

21%

RELATE TO THE CATEGORIES OF GOODS AND SERVICES PURCHASED (CATEGORY 1) AND ACTIVITIES RELATED TO FUELS AND ENERGY, NOT INCLUDED IN SCOPES 1 AND 2 (CATEGORY 3).



ARISING FROM
45
RAW MATERIALS
AND **7** FUELS
WITH RELEVANT
GHG EMISSIONS.

WITHIN THESE INPUTS,
62 RELEVANT
SUPPLIERS WERE
IDENTIFIED



39 INDUSTRIAL
CHEMICALS SUPPLIERS,
10 LUMBER SUPPLIERS,
7 FOREST CHEMICALS
SUPPLIERS,
5 FUEL SUPPLIERS AND
1 PAPER SUPPLIER.

12%






CAME FROM
SUPPLIERS
OF THE
UPSTREAM AND
DOWNSTREAM
TRANSPORT AND
DISTRIBUTION
CATEGORIES
(CATEGORIES 4
AND 9).

ALTHOUGH
THE EMISSIONS
CALCULATION FOR
THESE CATEGORIES
IS ALREADY FROM
PRIMARY SOURCES,
THESE

32

SUPPLIERS ARE
DIVIDED BETWEEN
ROAD, RAIL
AND MARITIME
TRANSPORTERS..

The engagement strategy with these stakeholders is composed of five main stages, which may vary according to the emissions management maturity of each supplier and customer:

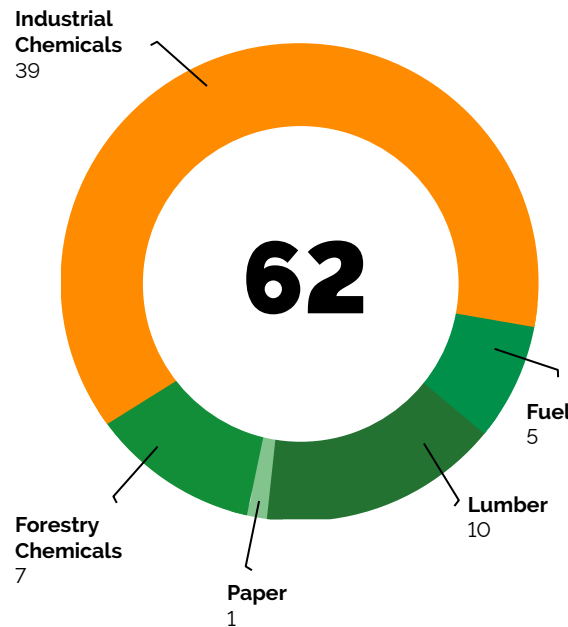
ENGAGEMENT STAGES	1  Prioritization	2  Evaluation	3  Commitment	4  Training	5  Follow-up
FOLLOW-UP INDICATORS	<ul style="list-style-type: none"> ■ Total number of relevant suppliers and customers 	<ul style="list-style-type: none"> ■ Number of relevant suppliers evaluated in terms of carbon management via the EcoVadis platform (applicable to eligible suppliers). ■ Percentage of relevant suppliers evaluated in terms of carbon management via the EcoVadis platform, among all relevant suppliers. ■ Number of relevant clientes evaluated in terms of carbon management by Klabin (directly or indirectly). ■ Percentage of relevant clientes evaluated in terms of carbon management by Klabin (directly or indirectly), among all relevant clients. 	<ul style="list-style-type: none"> ■ Percentage of relevant suppliers committed to the Klabin Climate Commitment, among all relevant suppliers. 	<ul style="list-style-type: none"> ■ Number of relevant suppliers participating in the Klabin Knowledge Track. ■ Percentage of relevant suppliers participating in the Klabin Knowledge Track, among all relevant suppliers. ■ Number of relevant clients participating in the Klabin Knowledge Track.. ■ Percentage of relevant clientes participating in the Klabin Knowledge Track, among all relevant clients. 	<ul style="list-style-type: none"> ■ Number of relevant suppliers under follow-up in the EcoVadis platform. ■ Percentage of relevant suppliers under follow-up via the EcoVadis platform, among all relevant suppliers. ■ Number of relevant clientes under follow-up by Klabin. ■ Percentage of relevant clientes under follow-up by Klabin, among all relevant clientes.

The emissions management maturity of suppliers is based on the performance assessment of carbon and greenhouse gas emissions using the EcoVadis tool. Klabin has used this tool since 2019 for supplier sustainability evaluation and, since 2022, has included specific analysis of carbon and greenhouse gas emissions management.

Starting in 2023, all suppliers identified as relevant in greenhouse gas emissions by Klabin must sign a climate commitment with the company, committing to have greenhouse gas reduction goals, develop climate transition plans, and disclose their progress annually.

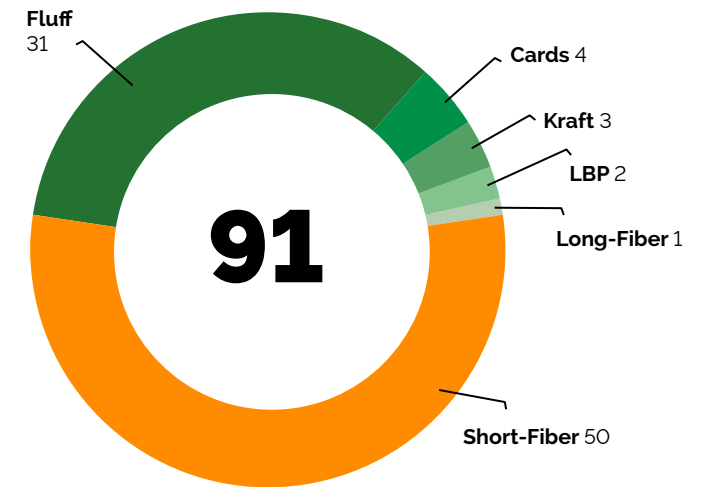
For relevant clients, Klabin relies on specific analysis of public data and meetings with clients to determine their level of maturity in climate-related issues and monitor metrics and goals.

RELEVANT SUPPLIERS (CAT 1 E 3)



45 INPUTS AND
7 FUELS

RELEVANT CLIENTS (CAT 10)



ENGAGEMENT CHALLENGE:
153 COMPANIES

CARBON OFFSETTING AND REMOVAL STRATEGY

To achieve our Net-Zero target by 2050, we have the offset strategy that will only be carried out for residual emissions (<10%) or in situations Where Klabin intends to promote carbon-neutral products and/or facilities.

Approaches will focus on carbon-removal technologies, such as reforestation, restoration and carbon capture technologies, or nature-based solutions, ensuring that such approaches comply with the criteria and guidelines of international standards, demonstrating the appropriate quality of carbon credits.

KLABIN HAS ONGOING CARBON CREDIT GENERATION PROJECTS IN PARTNERSHIP WITH INVESTORS AND PARTNER PROPERTIES. ALIGNED WITH THE TRANSITION TO A LOW-CARBON ECONOMY, THE COMPANY SEES CARBON CREDIT GENERATION AS AN OPPORTUNITY TO GENERATE ADDITIONAL REVENUE AND IMPACT ITS FINANCIAL INDICATORS.





BIODIVERSITY PLAN

INTRODUCTION

In 2016, the Brazilian government defined its Nationally Determined Contributions (NDC) to the Paris Agreement, which includes the following goals: a) Reduce deforestation; b) Restore and reforest up to 12 million hectares.

These items are strongly related to biodiversity conservation, where 10 million hectares of restoration are associated with fulfilling the obligations under Brazilian Law 12.651, i.e., restoration of Permanent Preservation Areas (APP) and Legal Reserves (RL) on rural properties. At Klabin, 42% of its areas are occupied by preserved native forests, well above what is necessary to comply with legislation, and which makes an important contribution to the conservation of biodiversity.

At Klabin, biodiversity is recognized as one of the stakeholders on which the company has a significant impact and influence, integrated into its business strategy, as stated in its Sustainability Policy, item 7.14, transcribed below:

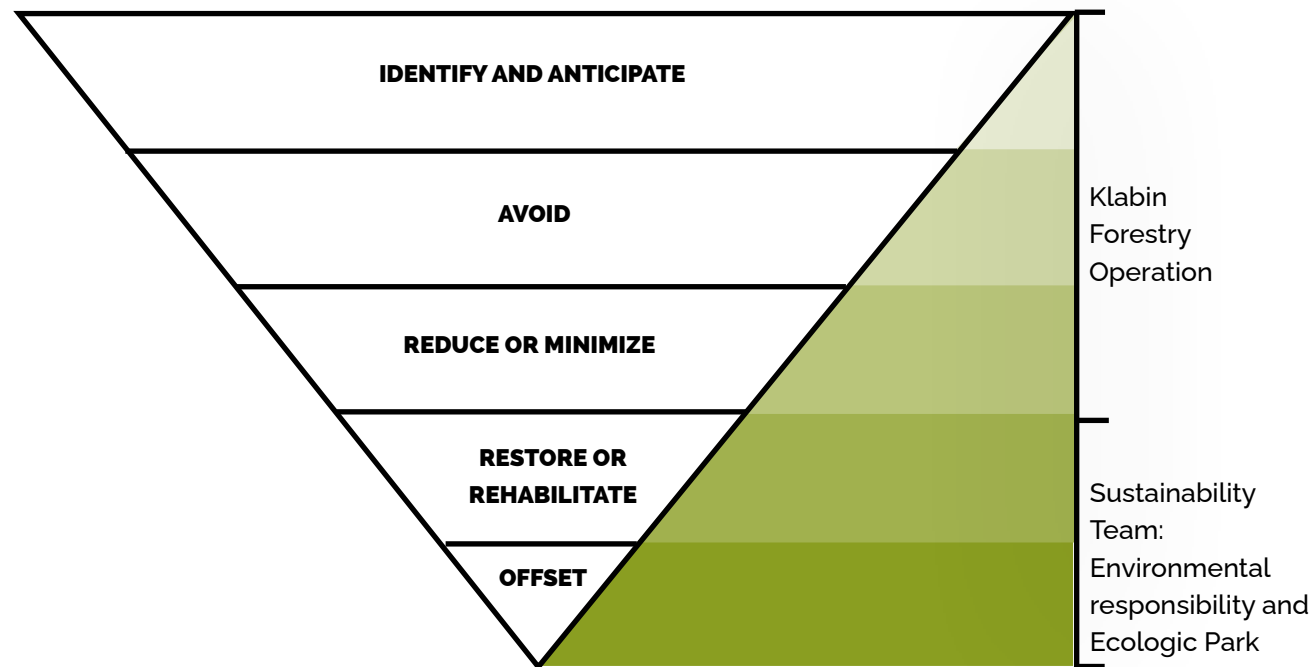
Promote biodiversity conservation through the development of practices that ensure an increase in ecosystem balance, encouraging research and partnerships with academia, and committing to the use of recognized forest management techniques. This includes

preserving attributes and avoiding operations in areas of natural heritage preservation and/or containing species relevant to national and global biodiversity.

Also based on the methodological guidelines and premises:

1. Principles 6 and 9 of the FSC®, on Environmental Impact and Maintenance of High Conservation Value Forests, and the Requirement for the Maintenance of an Ecologically Sufficient Conservation Area Network.
2. IFC Guidance Note 6, on Biodiversity Conservation and Sustainable Natural Resource Management.
3. Legal and political context, including the federal environmental legal system with implications in this Biodiversity Plan.
4. Internal Protocol for the Physical Valuation of Ecosystem Services, for the Habitat, Support Service, and Regulation Service functions.
5. World Conservation Monitoring Centre of the United Nations Environment Programme (WCMC).





The company adopts the approach of **impact mitigation hierarchy** to systematically and structurally manage environmental and social risks and impacts, considering areas of its own operations, suppliers, and partners.

Among the prioritized risks identified, long-term risks of biodiversity loss and natural resource crises are highlighted. They appear among the global risks listed for the next decade according to the World Economic Forum's report, as can be seen in Emerging Risks.

This Biodiversity Conservation Plan was approved by the Sustainability Commission, aiming to guide actions under a unified vision aligned with the Company's business strategy, Klabin 2030 Agenda, other voluntary commitments made by Klabin externally, and national and global biodiversity strategic plans and policies.

OBJECTIVE

The main objective of the Klabin Biodiversity Conservation Plan is to achieve a positive net impact on biodiversity within a timeframe yet to be defined. To achieve this, the following guidelines have been established:

- i. Avoid/mitigate the impacts resulting from the Company's activities on biodiversity;
- ii. Increase/protect biodiversity through conservation and sustainable forest management initiatives;
- iii. Promote the restoration of mapped conservation areas and improve the connectivity of existing areas;
- iv. Offset residual impacts.

Each of these guidelines is related to the defined programs presented below..

POSITIVE NET IMPACT



1. AVOID AND MITIGATE IMPACTS



2. FOSTER AND PROTECT BIODIVERSITY



3. RESTORE AND CONNECT AREAS



4. OFFSET IMPACTS



PROGRAMS

	PROGRAMS	ASSOCIATED WITH WCMC*	ACTIONS	GUIDELINE	ACTION PLAN
PROGRAM 1	Conservation, Recovery and Protection of Native Vegetation	Nature Restored; Nature-Based Solutions	1.1 Recovery of degraded areas (including the control of exotics with invasive characteristics); 1.2 Conservation of native vegetation;	1 – Avoid and mitigate impacts 3 – Restore and Connect areas 4 – Offset impacts	Strategy for different Phyto physiognomies and biomes Silviculture of native species
PROGRAM 2	Landscape and Connectivity Management (integration of soil, water and biodiversity)	Nature-Based Solutions; Conserved Nature; Policy.	2.1 Hydrosolidarity Management; 2.2 Kaigang Corridor **; 2.3 Road ecology	1 – Avoid and mitigate impacts 2 – Foster and protect biodiversity	Partnerships to improve ecological corridors) Integration of researches that reinforce the integrality of elements on soils, biotic controls and integration of planted and native forests
PROGRAM 3	Environmental and ecosystem functions and services	Preservation of nature	3.1 Validate Biodiversity appreciation protocol; 3.2 Expand physical valuation of services beyond the Monte Alegre farm.	2 – Foster and protect biodiversity 4 – Offset impacts	Certification of ecosystem services in one of the areas in PR
PROGRAM 4	Sustainable uses of biodiversity	Preservation of nature	4.1 Phytotherapy program 4.2 Extension of <i>Matas Legais e Sociais</i>	2 – Foster and protect biodiversity 4 – Offset impacts	Identification of chains and promotion of the use of native species for businesses and chains compatible with the socioenvironmental characteristics of small rural properties
PROGRAM 5	Biodiversity monitoring and research	Science; policy	5.1 Organization of the database 5.2 Biodiversity Inventory 5.3 Integration of planted and native forests (forestry R&D)	1 – Avoid and mitigate impacts 2 – Foster and protect biodiversity	Monitoring of impacts from associated climate changes
PROGRAM 6	Education and Communication	Science; Digital Transformation	6.1 Guided visits Ecologic Park 6.2 <i>Caiubi</i> Program 6.3 <i>Bacia Escola Jaguaraiá</i>	1 – Avoid and mitigate impacts 2 – Foster and protect biodiversity	Development of impact indicators

*World Conservation Monitoring Centre of the United Nations Environment Programme.

**Ecological corridor connecting the areas of the Klabin Ecological Park (Telêmaco Borba municipality) and the Mococa and Queimadas indigenous lands (Ortigueira municipality).
The programs are in approval stage

The action plans linked to the programs also contain goals that will soon be made public. Currently, Program 1 - Conservation, Recovery, and Protection of Native Vegetation already includes the commitment not to convert native forests into productive areas for the purpose of increasing wood production for industrial purposes, raw materials for all of Klabin's businesses, as stated in the Company's Zero Deforestation Declaration and historical practice of being FSC®.

The next steps involve analyzing risks, dependencies and impacts, and approving individual targets for all 6 programs. The studies

are progressing, but the company chose not to publicly disclose the steps that have not yet been completed and approved by the highest governance institutions.

Additionally, the Company commits not only to zero illegal deforestation in these native areas but also to maintain their state of conservation, controlling exotic species with invasive characteristics, including grassland and cerrado areas, by 2040.

Moreover, the 2030 KODS Biodiversity targets are linked to the action plan detailed below.

From 2023 to 2024, the Company is conducting a third-party evaluation to assess the compliance of its conservation actions and practices based on the European Union Taxonomy. It also internalizes methodology studies to apply dependency and impact analysis based on the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD).

SUBJECT	2030 KODS TARGET	GUIDELINE	PROGRAM
Biodiversity	Have 100% of wildlife roadkill hotspots mapped with initiatives to reduce accidents	1- Avoid and mitigate impacts	Program 5
Biodiversity	Maintain and enhance the number of fauna species dependent on high environmental quality forests	1 - Avoid and mitigate impacts 2 - Improve environmental quality 3 - Restore areas	Program 5
Biodiversity	Have at least six partnerships/research per year based on nature conservation and biodiversity studies	1 - Avoid and mitigate impacts 2 - Improve environmental quality	Program 6
Biodiversity	Conduct the reintroduction of at least two species that are locally extinct and promote population reinforcement of four other threatened species	1 - Avoid and mitigate impacts 3 - Restore areas 4 - Offset impacts	Program 5
Biodiversity	Provide 1 million native tree seedlings to recover degraded land in partners areas	1 - Avoid and mitigate impacts 3 - Restore areas 4 - Offset impacts	Program 1
Water use	100% of forestry operations under own management with hydrosolidarity management	1 - Avoid and mitigate impacts 2 - Improve environmental quality	Program 2

FINAL NOTES

In addition to all the efforts made by Klabin to reduce greenhouse gas emissions throughout its value chain, some political and economic issues are considered to meet the Climate Transition Plan and the long-term goal. Among them, it is important to list:

COMPLIANCE WITH BRAZILIAN
NDCS UNDER THE UNFCCC.

IMPROVEMENT OF THE
REGULATORY SCENARIO FOR
INVESTMENTS IN RENEWABLE
ENERGY.

CREATION OF A REGULATED
CARBON MARKET IN THE
COUNTRY WITHIN THE NEXT
YEARS.





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