



SUSTAINABILITY REPORT

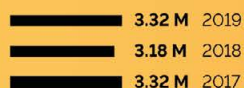
OUR PERFORMANCE IN 2019



MAIN RESULTS

3.32 M

TONS OF PRODUCTS SOLD



42 %

MARGIN EBTIDA



7 %

MORE OPERATIONAL CASH GENERATION COMPARED TO 2018



HIGHLIGHTS

PUMA II

EXPANSION WORKS STARTED.

25 anos

WAREHOUSE CONCESSION IN THE PORT OF PARANAGUÁ (PR), EXTENDABLE FOR +45 YEARS.

US\$

1.2 bi

ON *GREEN BONDS* ISSUED WITH A 30-YEAR MATURITY.



ADDITIONAL INDICATORS

43 %

OF FOREST AREAS PRESERVED

258,000 ha. of planted forests
240,000 ha. of native forests
90 trees planted/min.

4 M

TONS OF CO₂ EQ POSITIVE CARBON BALANCE, AS SCOPE 1 EMISSIONS, IN ONE THOUSAND TCO₂ EQ:



89,54%

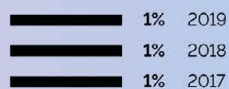
OF THE ENERGY MATRIX CONSISTING OF CLEAN AND RENEWABLE SOURCES, AS FOLLOWS:

65.4% Black liquor
33.6% Biomass
1% Others

82,5%

OF WATER FROM THE PUMA UNIT IS REUSED.

With respect to the total consumed by Klabin, the % of water withdrawn from areas with water stress is as follows:



REDUCTION IN 10 %

REPRESENTING, COMPARED TO THE TOTAL WASTE GENERATED:



BRL 22.84 M

IS THE TOTAL AMOUNT OF KLABIN'S SOCIAL INVESTMENT.

12.89 M donations/sponsor (own resources)
4.99 M proj. Klabin (own resources)
4.96 M incentive-based resources

RECOGNITION

76 %

FAVORABILITY

IN THE CLIMATE SURVEY, 85% FOR THE ENGAGEMENT FACTOR AND 83% FOR WELL-BEING AND RESPECT.

A List CDP'S

FOR WATER MANAGEMENT, CLIMATE CHANGE, SUPPLIER ENGAGEMENT RATING AND A-FOR FORESTS.

1st place

IN THE EXAME SUSTAINABILITY GUIDE AMONG ALL THE COMPANIES IN THE PAPER AND PULP INDUSTRY

ÍNDICE

STATEMENT FROM THE BOARD.....	5
PRESENTATION.....	8
HOW THE CONTENT IS ORGANIZED.....	9
MATERIALITY.....	9
MATERIAL TOPICS.....	10
CONTACT POINTS.....	11
GLOSSARY.....	12
ASSURANCE STATEMENT.....	15
ASPIRATION.....	16
ABOUT US.....	17
FORESTRY BASE.....	17
UNITS AND OPERATIONS.....	18
PRODUCTION DESTINATIONS.....	19
PARTICIPATION BY SECTOR.....	21
RECOGNITION.....	22
GOVERNANCE STRUCTURE.....	23
RISK MANAGEMENT.....	25
ETHICS AND INTEGRITY.....	27
GRIEVANCES AND COMPLAINTS.....	31
ENGAGEMENT INITIATIVES.....	32
CONTINUOUS VALUE CREATION.....	35
VALUE CHAIN.....	42
COMPETITIVENESS AND RESULTS.....	48
BUSINESS EXPANSION.....	56
ENVIRONMENT.....	60
PEOPLE MANAGEMENT.....	91
LOCAL DEVELOPMENT.....	124
ANTICIPATING AND RESPONDING TO MARKET.....	146
RESEARCH AND TECHNOLOGY IN FOREST PRODUCTION.....	148
INNOVATION WITH A PURPOSE.....	149
MUCH MORE THAN JUST PACKAGING.....	152
CUSTOMER FOCUS.....	153
NEW BUSINESS.....	153
E-COMMERCE.....	154
CERTIFICATIONS.....	154
SUMMARY OF GRI CONTENT.....	155



STATEMENT FROM THE BOARD



GRI 102-14

Klabin announced positive figures at the end of 2019, mainly driven by results achieved over the last quarter, despite the hardships faced both in global markets and in Brazil. Major accomplishments were attained over the period, as the Company celebrated its 120th anniversary by announcing the largest investment ever made in its history and continued to revamp its journey. Throughout 2019, in addition to approving significant investments in business expansion, our flexibility and operational efficiency were leveraged to help us overcome economic challenges and maintain the high performance of our indicators.

As the largest producer and exporter of packaging paper in Brazil, the only company in the country offering the market solutions in hardwood, softwood and fluff pulps, and the national leader in corrugated packaging and industrial bags, we are currently experiencing an attractive and consistent moment for the industry – “Paper is cool again”. We are geared up to keep pace with the latest market movements and trends.

THE INTEGRATED PRODUCTION CHAIN – FROM WOOD TO PACKAGING – IS ONE OF THE KEYS TO OUR BUSINESS SUCCESS, ALLOWING FLEXIBILITY IN SALES AND THE DEVELOPMENT OF A DIVERSIFIED PRODUCT PORTFOLIO.

The expansion of the portfolio also reflects the operation of the Puma Unit, one of the most modern pulp mills in the world, inaugurated in 2016, which significantly enhanced the size of the Company. In April 2019, we announced the Puma II Project, historically, Klabin's largest investment, with total estimated gross value of BRL 9.1 billion.

Our new expansion cycle involves the construction of two packaging paper machines, with integrated pulp production, to be installed at the industrial unit of Ortigueira (PR), the same site as the Puma Unit. The implementation of the new production line will allow the manufacture of coated white-top Kraftliner paper and Eukaliner paper, made exclusively from the eucalyptus fiber, which is unprecedented worldwide, with superior quality and generating value for the customer.

Also in 2019, we purchased an industrial plant in the city of Horizonte, state of Ceará, to expand the production of corrugated cardboard packaging and to meet the demands of the growing fruit and industry market in Brazil's North and Northeast regions. The paper packaging segment showed strong growth towards the end of the year, with a record amount of orders in the last quarter.

We won a public bid for a pulp terminal at the port of Paranaguá (PR), which will allow us to optimize the operations' logistics conditions. Another important event in 2019 was the beginning of operations at the Pilot Facility Park, in Telêmaco Borba (PR), aimed at the development of research and innovative solutions for the market. Studies and tests are now carried out on fronts such as microfibrillated cellulose (MFC) and lignin.

With a focus on operational efficiency, care for people and for the environment, we have been increasingly developing products from renewable, recyclable and biodegradable sources, fostering a circular economy model and actively participating in the construction of a sustainable consumption future.

AN IMPORTANT RECOGNITION FOR KLABIN'S MANAGEMENT CAME WHEN THE COMPANY RANKED FIRST AMONG THOSE IN THE PULP AND PAPER SECTOR FOR THE 2019 EDITION OF THE EXAME SUSTAINABILITY GUIDE. THE PUBLICATION PRESENTS A THOROUGH PERFORMANCE ASSESSMENT OF MAJOR COMPANIES IN BRAZIL.

Klabin's Sustainable Development Goals (KSDGs) reinforce such commitment by aligning our strategic priorities with the United Nations 2030 Agenda, together with the promise we have undertaken to be signatories to the UN Global Compact, since 2003.

In 2020, amidst the current coronavirus pandemic with impacts in Brazil and the world, our work is focused on caring for the preservation of the health of our employees, their families and society as a whole, which has led us to review processes and working methods. We have reduced operations to the technical limit to assure a safe fulfillment of our mission of protecting life, while also meeting our commitment as part of a production chain that provides papers and packaging so that essential products, such as medicines, food and hygiene and cleaning materials, reach the entire population at such a delicate time.

These are some of the many reasons we have to thank everyone who contributed to the Company's positive results in 2019. Particularly, the Board of Directors and the Controllers, who believe in the capacity of their employees, committed to the generation of value, shared with the achievement of the best possible results. Our gratitude also goes to our entire team for their engagement, attitude and resilience in view of the critical situation we all face regarding the Covid-19 outbreak. We will continue to work in a responsible and sustainable manner to maintain Klabin in its proper growth path. We are also grateful to investors, customers, suppliers and partners, who believe in the perpetuation of the company.

Cristiano Teixeira
Chief Executive Officer





REPORT



PRESENTATION

GRI 102-40, 102-50, 102-51, 102-52, 102-54

This is our 21st Sustainability Report, published annually. The document gathers the main information on the Company's performance and management practices in the environmental, social and economic areas from January 1 to December 31, 2019, as well as updated information from 2020.

It is focused on business partners, customers, employees, suppliers and communities, among other stakeholders, and presents results, facts, important initiatives, perspective for the future, and practices adopted for the handling of issues that were relevant to Klabin and its stakeholders during the period.

This report was prepared in accordance with as GRI Standards: Essential Option.

HOW THE CONTENT IS ORGANIZED

GRI 102-45, 102-48, 102-56

This report elaborates on 23 material topics considered relevant for the management of sustainability at Klabin. They were prioritized after intense work to define a correlating agenda between the Company's strategy and the UN Sustainable Development Goals (SDGs) (learn more in [Materiality](#) and [Klabin's agenda for sustainable development](#)) and are distributed across five chapters: Governance; Sustainability; Performance; People; Research, Development & Innovation; and Quality. Klabin's management initiatives and methods for the related topics and GRI disclosure items are described throughout the chapters.

The financial indicators refer to all our operating units in Brazil (Klabin S.A.) and Argentina (Klabin Argentina S.A.). Social and environmental information, however, refers only to the Brazilian operations. The [The financial statements](#), audited by Ernst & Young, abide by Brazilian standards and International Financial Reporting Standards (IFRS), as determined by the Brazilian Securities and Exchange Commission (CVM) instructions 457/07 and 485/10. Any revisions of data published in other years are flagged and clarified throughout the Report. Any revisions of data published in other years are flagged and clarified throughout the Report.

The non-financial information contained in this report was verified by Conecta Consultores, according to standard AA1000AS: 2008, under license No. 000-234. Please refer to the [Assurance Statement](#).

MATERIALITY

GRI 102-40, 102-43, 102-46

We reviewed our materiality in 2019, considering the [UN Sustainable Development Goals \(SDGs\)](#). The work encompassed consultations with over 30 corporate and business unit managers and groups of external [stakeholders](#) (mainly customers and suppliers). A total of 23 priority [material topics](#) were outlined regarding environment, society and governance, which are to be considered in the Company's growth strateg.

Such topics also guided the elaboration of the [the KSDGs](#) – Klabin's Sustainable Development Goals, structured in short-, medium- and long-term goals up to 2030, representing the values the Company must deliver for society and the prosperity of the planet, in line with the UN 2030 Agenda.

The process including consultation, prioritization of topics and elaboration of the KSDGs is detailed in [Klabin's agenda for sustainable development](#).

MATERIAL TOPICS

GRI 102-44, 102-47



INCREASED FOREST
PRODUCTIVITY



BIODIVERSITY



FOREST CERTIFICATION



ETHICAL CONDUCT/INTEGRITY



KLABIN'S CULTURE



SUPPLIER SOCIAL AND
ENVIRONMENTAL
PERFORMANCE



HUMAN CAPITAL
DEVELOPMENT



LOCAL DEVELOPMENT



WOOD AVAILABILITY



DIVERSITY



EFFLUENTS AND WASTE



RISK MANAGEMENT



IMPACT ON COMMUNITIES



INNOVATION INITIATIVES



CLIMATE CHANGE



PRODUCTION AND LOGISTICS



RETENTION OF
PROFESSIONALS



CUSTOMER SATISFACTION AND
PRODUCT QUALITY



OCCUPATIONAL HEALTH AND
SAFETY



INFORMATION SECURITY



ENERGY USE/ENERGY
EFFICIENCY



WATER USE



MULTIPLE USES OF WOOD
COMPONENTS

CONTACT POINTS

GRI 102-53

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Carime Kanbour

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GLOSSARY

APP: Permanent Preservation Area. As set forth by Law No. 12,651/2012, it means a protected area, covered or not by native vegetation, with the environmental role of preserving water resources, the landscape, geological stability and biodiversity, facilitating fauna and flora gene flow, protect the soil and ensure the well-being of human populations.

BEKP: Bleached Eucalyptus Kraft Pulp. Used as raw material for several paper types.

BOD: Biochemical Oxygen Demand: standard test, performed at a constant temperature and during an incubation period of five days. It is measured by the difference of the amount of Dissolved Oxygen (DO) found before and after the incubation period.

Brazilian National Solid Waste Policy: brings together the set of principles, objectives, instruments, guidelines, goals and actions adopted by the Federal Government, either independently or in cooperation with states, the Federal District, cities or individuals, to promote integrated and environmentally sound solid waste management.

CDP: An international non-profit organization that analyzes and recognizes the efforts of companies worldwide to manage the environmental impacts of their activities.

CERFLOR: Brazilian Forestry Certification Program. The CERFLOR forestry management certification attests that the enterprise conducts its forest management in accordance with environmental, social and economic requirements. Standards were developed within the scope of the Brazilian Association of Technical Standards (ABNT) and the application of the Certificate is managed by the National Metrology Institute (INMETRO).

COD: Chemical Oxygen Demand: an indispensable parameter for studies on sanitary sewage and industrial effluents. It assesses the amount of dissolved oxygen (DO) consumed in an acid medium that leads to the degradation of organic matter.

Common Shares (ON): shares that ensure whoever holds them the right to vote on matters during General Shareholders' Meetings, provided all legal restrictions are complied.

CONAMA: National Environment Council. Advisory and deliberative body of the National Environment System composed of federal, state and municipal bodies, as well as business sector and civil society representatives. Among its duties is the definition of norms and criteria for the licensing of activities that are effectively or potentially polluting and criteria and standards related to the control and maintenance of the quality of the environment.

COSO: *The Committee of Sponsoring Organizations.* Non-profit organization dedicated to improving financial reporting through ethics, effectiveness of internal controls and corporate governance.

Due Diligence: Process of searching for information about another company to assess purchase risks or other transactions. The assessment includes financial, accounting, tax, labor, environmental, legal, intellectual property and even technological aspects.

EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization is a financial indicator that represents a company's operating cash generation, disregarding financial and tax impacts. It corresponds to the net income before income and social contribution taxes, depreciation and amortization expenses and the financial result.

ECO-92: United Nations Conference on Environment and Development, held from June 3 to 14, 1992, in the city of Rio de Janeiro, Brazil. The event took stock of the existing problems and the progress achieved and produced documents that are references for environmental discussions.

Energy intensity: the final energy intensity is an economy efficiency indicator that shows the relationship between the final energy consumed and the production of goods. A high energy intensity indicates low efficiency in converting energy into wealth.

EPCI: *Environmental Paper Company Index 2019.* Index created by the WWF (World Wide Fund for Nature), which assess over 50 indicators of environmental policies, commitments and environmental performance of companies in the production of paper, fabric, packaging and cellulose products.

ESG: Environmental, Social and Governance. Priority indicators for Klabin, in line with the Company's growth plan, and establishing the values it committed to delivering to society.

FSC®: The Forest Stewardship Council® (FSC®) is a global, not-for-profit organization dedicated to the promotion of responsible forest management worldwide. FSC defines standards based on agreed principles for responsible forest stewardship that are supported by environmental, social, and economic stakeholders.

Fossil fuels: non renewable resources whose burning provides the production of energy. They are formed by processes of organic material decomposition over thousands or millions of years. Examples of fossil fuels include oil, mineral coal and natural gas, largely responsible for impacts on the environment due to greenhouse gas emissions.

GHG: Greenhouse gases are those that absorb part of the sun's rays and redistribute them in the form of radiation in the atmosphere, heating the planet in a phenomenon called the greenhouse effect. Carbon Dioxide (CO₂); Methane (CH₄); hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) used in aerosols and refrigerators are examples.

Global Compact: initiative promoted by the United Nations (UN) to engage companies and organizations in the adoption of 10 universal principles in the fields of Human Rights, Labor, Environment and Anticorruption and to develop actions that contribute to addressing society's challenges.

Green bonds: so-called green bonds are used to raise funds for the purpose of implementing or refinancing projects and purchasing assets capable of generating environmental benefits. When acquiring these bonds, therefore, investors are lending money for a particular company to develop sustainable projects. The investor receives the return based on an interest rate defined at the time of issuance.

GRI Standards: standards developed by the international and non-profit organization GRI (Global Reporting Initiative) to guide companies, governments and other organizations to understand and communicate the impact of their businesses on critical sustainability topics, such as climate change, human rights and anti-corruption. In the Essential version, the information necessary to understand the nature of the organization, its material topics and impacts is disclosed. In the Comprehensive version, companies must disclose in a broader manner their impacts and all specific disclosure items for each material topic covered by the Standards.

IFC: International Finance Corporation. Global development institution focused on the private sector in developing countries, a member of the World Bank Group.

Industry 4.0: also referred to as the fourth wave of the industrial revolution, in which digital technologies and the Internet of Things are applied to manufacturing. In such scenario, all machines, for instance, are digitally interconnected within a single system, allowing real-time monitoring of processes for a more appropriate decision making.

IPCC: Intergovernmental Panel on Climate Change. Created by the United Nations Environment Program (UN Environment) and the World Meteorological Organization (WMO), it aims to provide policy makers with regular scientific assessments of climate change, its implications and possible future risks, as well as propose adaptation and mitigation options.

ISE: the Corporate Sustainability Index is a tool for the comparative assessment of the performance of companies listed on the Stock Exchange (B3) from the corporate sustainability perspective, based on economic efficiency, environmental balance, social justice and corporate governance. It also broadens the understanding on companies and groups committed to sustainability, distinguishing them in terms of quality, level of commitment to sustainable development, equity, transparency and accountability, nature of the product, in addition to business performance in the economic, financial, social, environmental and climate change dimensions.

ISO 14001: standard that specifies the requirements of Environmental Management Systems and allows organizations to develop a structure to protect the environment and quickly respond to changes in environmental conditions. It takes into account environmental aspects influenced by the organization and others that can be controlled by it.

ISO 31000: international standard that provides general guidelines for managing risks in any activities, including decision making at all levels.

ISO 50001:2018: standard that specifies the requirements for establishing, implementing, maintaining and improving energy management systems (EMS). The intended result is to allow organizations to follow a systematic approach to achieve continuous improvement in energy performance and the EMS.

KSDGs: short-, medium- and long term objectives set forth by Klabin to complement the company's growth strategy, in line with UN's 17 UN Sustainable Development Goals.

Lignin: complex organic polymer that binds cellulosic fibers, increasing stiffness of the plant cell wall, constituting, together with cellulose, most of the wood in trees and shrubs.

LPG: Liquefied Petroleum Gas. It is usually formed by the mixture of propane and butane gases and is widely used for cooking.

Material topics: topics that reflect the most significant economic, environmental or social impacts of the organization; or that substantially influence stakeholder assessments or decisions.

MFC: acronym for Microfibrillated Cellulose, a natural and renewable, uniform and highly crystalline raw material obtained by the mechanical and/or chemo-mechanical process of cellulose, which generates a disintegration of the cell wall of the wood and modifies its structural and surface properties, as well as its size. Used in papers, paints, cosmetics and fabrics.

Net indebtedness: difference between how much the company owes (loans and financing) and how much it currently has available for settlement (cash and cash equivalents).

NOx: Nitrogen oxides. These are hazardous gases to health and the environment. They are mainly formed from the burning of fossil fuels. Nitrogen dioxide (NO₂) and Nitric Oxide (NO) are some examples.

Packaging School: American post-secondary education institution that aims to bridge the gaps between academia and the industry through partnerships with companies, specialists and associations.

PCD: People with Disabilities.

Preferred Shares (PN): preferred shareholders have a greater claim to values. They have priority over common shareholders of the same company when it comes to receiving dividends and other compensation. At Klabin, those who own them can vote in the case of Company transformation, incorporation, merger or spin-off, approval of contracts between the Company and its controller or other entities, as long as they are matters regarding the General Meeting, valuation of assets that apply for capital increase and choice of a specialized firm to determine the Company's economic value.

RAC: Acronym for Critical Activity Requirements. These include a group of requirements for the performance of activities that may pose a risk an employee's physical integrity and health. The purpose is to preserve people's lives.

RL: Legal Reserve. Percentage portion of the property where native vegetation must be maintained, restricted to use. Its purpose is to ensure the sustainable economic use of the natural resources in rural properties, assist in the conservation and rehabilitation of ecological processes and promote the conservation of biodiversity, as well as the shelter and protection of wild fauna and native flora.

Roadmap: visual and descriptive methodology that indicates what a specific product or project will look like in each period of its development.

ROIC: acronym for Return on Invested Capital, which indicates how much the company generates in relation to all invested capital (shareholder capital plus third-party capital).

RPPN: Natural Heritage Private Reserve is a conservation unit (UC) private domain category, intended to conserve biological diversity. The creation of a UC does not affect the ownership of the property. In addition to contributing to the expansion of protected areas in the country, the Reserves help to protect the biodiversity of Brazilian biomes.

SBT: Science Based Target. The initiative establishes methodologies to help companies design an emission reduction target in line with climate science and sustainable economic development. It is a collaboration between CDP, the United Nations Global Compact, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF).

SDGs: Sustainable Development Goals. Listed by the United Nations (UN), the objectives are a universal call for action against poverty, protection of the planet and to ensure that all people have peace and prosperity. The 17 goals provide clear guidelines and targets for all countries to adopt in accordance with their environmental priorities and challenges across the planet. Reaching them requires the establishment of partnerships among governments, the private sector, civil society and ordinary citizens to ensure that we leave a better planet for future generations. Learn more at: <https://www.br.undp.org/content/brazil/pt/home/sustainable-development-goals.html>

SPI: Social Progress Index. Measures quality of life items in a given territory, independently of its economic development. Learn more about the indicator at www.progressosocial.org.br.

SOx: Sulfur oxides. Gases can react with other compounds present in the atmosphere, forming small particles that are harmful to human health. These substances are also found in acid rain. They are generated from burning fuel oil or coal, for example.

Sponsor: person or group that provides the resources and support for the project, program or portfolio and contributes for the positive results.

SPOTT Timber & Pulp: English international organization that assesses the best environmental, social and corporate governance practices of Companies in the wood and pulp industry.

Stakeholders: any individual or organization that impacts or is in any way impacted by the actions of a particular company. Klabin considers the following groups of stakeholders: employees, customers, suppliers, regulatory bodies, certifying agencies, public entities, educational institutions, the press, labor unions, civil entities, social organizations and communities surrounding its operations.

Team Building: set of techniques and activities designed to strengthen ties between members of a group, for the purpose of transforming it into a cohesive, collaborative team with common goals that shares information and knowledge.

Tons of CO2 equivalent (tCO2eq): unit of measure used to compare the emissions of various greenhouse gases based on their global warming potential. For example, methane gas global warming potential is 21 times greater than the potential of carbon dioxide (CO2). So we say that methane CO2 equivalent equals 21.

Turnover: employee turnover rate in an organization over a period of time.

Units: assets comprising more than one class of securities traded jointly. These are Klabin's most liquid assets in the stock market. Each of them is composed of one common share and four preferred shares.

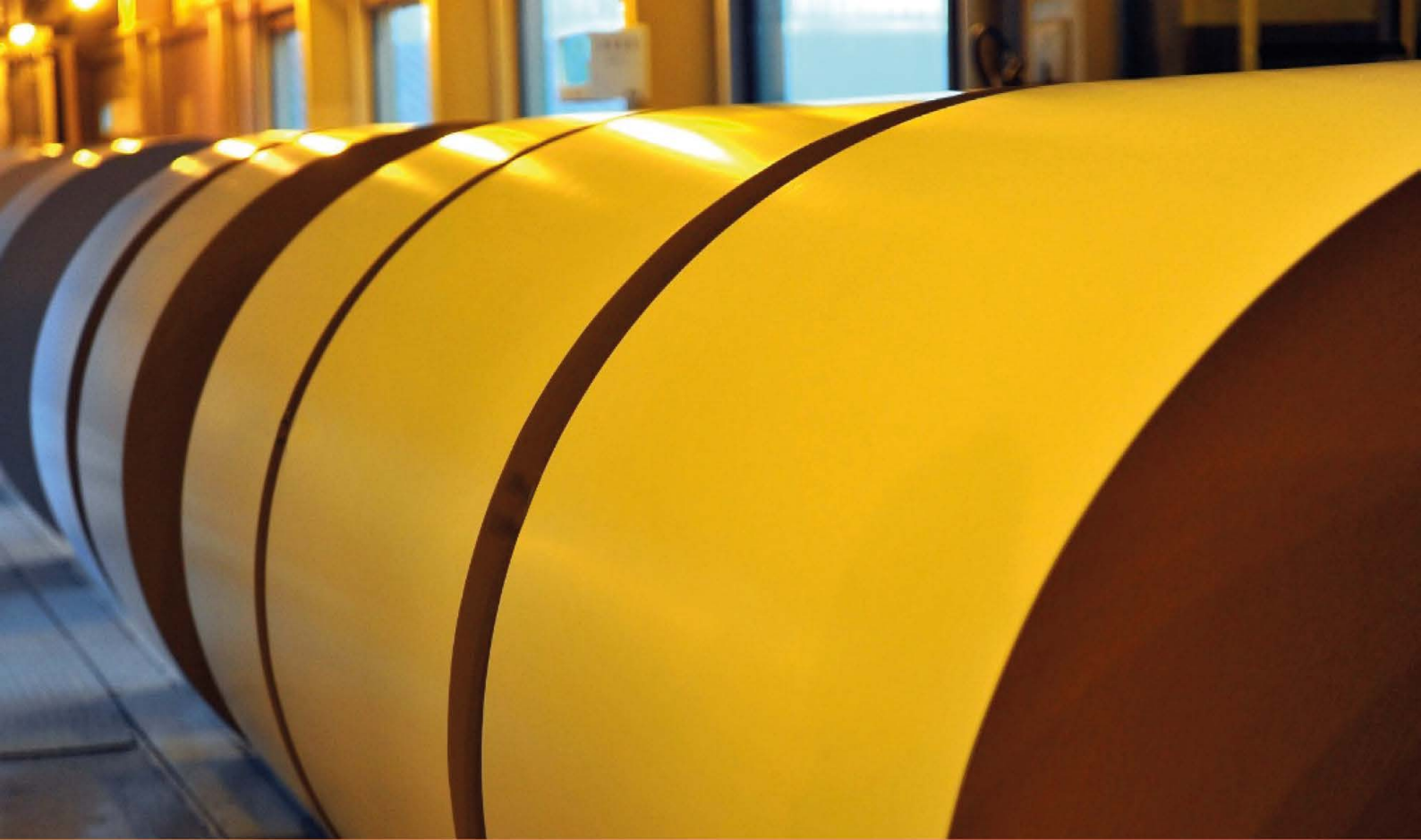
VOC: Volatile organic compounds. Chemical components present in different types of synthetic or natural materials. They have a high vapor pressure, which causes them to change into gas upon contact with the atmosphere.

Water body: generic designation for any water source; watercourse, river stretch, artificial or natural reservoir, lake, pond or underground aquifer.

ASSURANCE STATEMENT

ASSURANCE STATEMENT

Conecta Consultores carried out an independent verification of Klabin S.A.'s 2019 Sustainability Report. The report was prepared in accordance with the Global Reporting Initiative (GRI) Standards, self-declared Essential option. The verification of the sustainability report aims to provide stakeholders an independent view of compliance with AA1000AP 2018 (Accountability Principles), by applying AA1000AS 2008 (2008 Assurance Standard), to confirm integration of the elements relevant to sustainability in defining strategy, management and reporting within the Company. The purpose of the independent verification process is to present conclusions on how the report was prepared, validating qualitative and quantitative information and enhancing the credibility of the reported information and indicators.



KLABIN



ASPIRATION

To become a **global benchmark for responsible solutions** that respond to the constant transformations of society, with multi-purpose, **renewable, recyclable and biodegradable forestry products**.

In order to contribute to the **development of a sustainable economy** and inspire final consumer choices, Klabin prioritizes the prosperity of the planet, generating value for its investors, employees and business partners.

ABOUT US

GRI 102-1, 102-2, 102-5, 102-10, 102-12

Klabin S.A. is a publicly traded company founded in 1899, operating 18 plants in Brazil¹ and one in Argentina.

Largest producer and exporter of packaging paper in Brazil, leading producer of cardboard, corrugated cardboard packaging and industrial bags in Brazil, it is also the country's only company to offer the market the finest solutions in hardwood, softwood and *fluff* pulps.

Commitment to sustainable development is a premise for Klabin's business deals. . In line with the new macro consumer trends, the Company is prepared to offer the market solutions based on secure, lightweight, efficient and recyclable packaging, resulting from renewable, biodegradable and flexible sources.

Klabin has been included in the B3 Corporate Sustainability Index (ISE) since 2014.

It is also included in CDP's "A List" for its programs on Water Management, Climate Change and Supplier Engagement Rating. . The company's Forest program also deserves highlight A-, according to the CDP.

The Company is also featured in the WWF Environmental Index, with a 90.5% score in the Packaging category.

Learn more about indexes, *rankings* and awards in Recognition.

¹The Horizonte Unit in Ceará, purchased in 2019, is included in the total units of this report, but other data were disregarded since operations began in 2020.

FORESTRY BASE

GRI 102-7

In an integrated production chain, pulpwood used to manufacture paper and packaging or sold to the market comes from own or third-party planted pine and eucalyptus forests. One of the highest productivity rates in the world and located in areas close to the plants, which makes the operations very competitive.

Klabin's respect for the environment is closely linked to the essence of its business. A global benchmark in responsible management, the company maintains 43% of its forests for the preservation and maintenance of biodiversity.

258

THOUSAND
HECTARES OF
PLANTED FORESTS.

71 km 90

BETWEEN ITS OWN
FORESTS AND THE
PULP AND PAPER
MILLS.

90

ARE PLANTED BY
KLABIN.

43 %

PRESERVED: 258,000
HECTARES
PLANTED/557,000
HECTARES OF TOTAL
AREA UNDER
MANAGEMENT.

UNITS AND OPERATIONS

GRI 102-2, 102-3, 102-4, 102-6, 102-7



PRODUCTIVITY

Forestry: responsible for the management of forests planted by Klabin, which includes the planning, planting, harvesting and transporting to supply raw material to the company's pulp and paper mills.



PULP

Pulp: responsible for the production of hardwood pulp (eucalyptus), softwood pulp (pine) and *fluff* pulp. . Manufactured from pine softwood pulp, *fluff* pulp is an important input for the production of diapers, disposable absorbents and other products.



PAPER

Paper: the company produces paperboard for liquids and for the food, hygiene and cleaning, electronics and consumer appliances industries, among others. Supported by state-of-the-art technology, Klabin manufactures kraft paper used in corrugated board packages and industrial bags, as well as recycled paper.



PACKAGING

Packaging: converts Kraftliner and sack Kraft paper into corrugated cardboard and industrial bags, respectively, to be used by the food, beverage, fruit and vegetable, health and personal hygiene, electronics and consumer appliances and construction sectors.

[For more information on business units, visit klabin's website.](#)

19

PLANTS

(18 in Brazil and one in Argentina) and administrative headquarters in the city of São Paulo.

8

BRAZILIAN STATES

hosting commercial offices, a branch office in the United States, an office in Austria, as well as representatives and commercial agents in several other countries.

2

MILLION TONS

of annual paper production capacity.

1.5

MILLION TONS

of market pulp production capacity per year.



PRODUCTION DESTINATIONS

GRI 102-6

Klabin's products are mainly aimed at industries in the industrialized and *fresh food segments* (milk, frozen meat, fruits, among others), health and personal hygiene (toilet paper, tissues, diapers, toothpaste, among others), hygiene and cleaning (washing powder and soap, for example), construction and electronics. In addition to spearheading the Brazilian market, the company also ships its products to 89 countries worldwide.

PARTICIPATION BY SECTOR

GRI 102-13

Klabin's participation in national and international associations and organizations as an associate, committee or commission member, and as a member of the entities' boards strengthens the company's sustainability governance and commitment to the open dialogue with all stakeholders.

Through its certification system, FSC acknowledges the responsible production of forest products. Klabin was the first company in the paper and cellulose sector in the Americas to have its forests certified by the FSC® (FSC-C022516) – Forest Stewardship Council®, in 1988. In 2019, Klabin's Forestry Sustainability consultant, Ivone Namikawa, was elected as a member of the FSC® (Forest Stewardship Council®) International Governing Board. The FSC® the most renowned forest certification system in the world. It incorporates, on an equal basis, the interests of social, environmental and economic groups.

Sectoral entities, associations and unions	Participation in governance bodies	Participation in committees
Brazilian Tree Industry	x	x
Brazilian Technical Association of Pulp and Paper	x	
Brazilian Packaging Association		x
SAP Users Association of Brazil	x	
Paraná Pulp and Paper Industry Union	x	
São Paulo State Cardboard Industry Union	x	
São Paulo State Paper, Pulp, and Wood Pulp Industry Union	x	
Paraná Association of Forestry-based Companies	x	
São Paulo Association of Planted Forest Producers	x	
Association of Owners of Private Reserves of Natural Heritage of Santa Catarina	x	
Working Group for Environmental Education of River Basin Region 4 of the state of Santa Catarina	x	
Santa Catarina Association of Forestry Companies	x	
Research partnerships in Brazil		
Forest Studies and Research Institute (IPEF)	x	x
Society for Forest Research – Universidade Federal de Viçosa	x	x
FGV – Center for Sustainability Studies	x	x
Universidade do Estado de Santa Catarina (Udesc)	x	x
Universidade Estadual de Ponta Grossa	x	
Universidade Federal de Campina Grande	x	
Universidade Federal de Lavras	x	
Universidade Federal do Rio de Janeiro	x	
Paraná Forestry Research Foundation Association	x	
Research Project for the Management of Capuchin Monkeys in Forest Plantations	x	

Other entities		
Management Committee of the Canoas River Basin	x	
Tibagi River Basin Committee	x	
Consortium for Environmental Protection of the Tibagi River (COPATI)	x	
Global Compact – Thematic Group on Energy and Climate	x	
Brazilian GHG Protocol Program (PBGHGP)	x	
National Energy Balance	x	
Business Commitment to Recycling	x	
FSC International	x	x
Forest Dialogue– PR/SC Forum	x	
Forest Dialogue – SP Forum	x	
National Forest Dialogue	x	
The Forests Dialogue	x	x
Overseas research partnerships		
Forest Productivity Cooperative (FPC)	x	
Cooperativa Central America and Mexico Coniferous Resources (Camcore), Carolina do Norte (EUA)	x	x
University of Toronto	x	
Melodea	x	
North Carolina State University (NCSU)	x	x
Research Institutes of Sweden (RISE)	x	x
Producers Committee – Tappi Nano	x	x
Oregon State University	x	
SweTree	x	
Trees for the future LLC	x	

RECOGNITION

The recognition received from various organizations and entities endorses and acknowledges our practices, initiatives, our products and processes. Our sustainability-oriented practices have earned mention in several indexes and *rankings* for several years, such as the B3 Corporate Sustainability Index (ISE), since 2014, and a 90.5% score on the 2019 edition of the *Environmental Paper Company Index 2019 (EPCI)*, thus recognizing Klabin’s efforts on sustainability for the fourth time in a row. – published every two years by the WWF –

In 2019, Klabin was also included in CDP’s “A List” for the second time for its programs on Water Management, Climate Change and *Supplier Engagement Rating*. ’s Forestry program Company was rated A-. Such recognition places Klabin among the leading companies when it comes to transitioning to the new sustainable economy.

We also ranked second among the companies in the global *ranking* of the *Spott Timber & Pulp*, which evaluates public information regarding policies, operations and commitments to the best environmental, social and governance practices of 50 pulp and wood producers in the world.

[For more on these and other awards and recognitions earned in 2019, visit Klabin’s website.](#)



GOVERNANCE



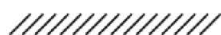
GOVERNANCE STRUCTURE

Klabin's main governance bodies are the Board of Directors, the Audit Committee and the Executive Board, which operate jointly to achieve economic, financial, social and environmental results.

Board and Committee members meet every two months to evaluate results and discuss strategies. They also meet extraordinarily whenever necessary, to debate and approve topics of greater urgency. The Company's results are disclosed to the market on a quarterly basis; the audited financial statements and the Sustainability Report are also published annually.

In 2018, Klabin established *Permanent Committees*. Structured by topics, their role is to discuss, plan and validate business support strategies, while keeping track of the Company's growth cycle, improving its operational efficiency and contributing to the mapping of business opportunities.

BOARD OF DIRECTORS (2019)



GRI 102-18

PERMANENT MEMBERS

Daniel Miguel Klabin, Armando Klabin, Pedro Oliva Marcilio de Sousa, José Luis de Salles Freire, Horacio Lafer Piva, Israel Klabin, Paulo Sérgio Coutinho Galvão Filho, Roberto Klabin Martins Xavier, Roberto Luiz Leme Klabin, Joaquim Pedro Monteiro de Carvalho Collor de Mello, Sérgio Francisco Monteiro de Carvalho Guimarães, Vera Lafer, Mauro Cunha, Amaury Bier.

ALTERNATE MEMBERS

Amanda Klabin Tkacz, Wolff Klabin, Alberto Klabin, Francisco Lafer Pati, Francisco Amaury Olsen, Celso Lafer, Vivian do Valle S. L. Mikui, Lilia Klabin Levine, Marcelo Bertini de Rezende Barbosa, Camilo Marcantonio Junior, Olavo Egydio Monteiro de Carvalho, Vera Lafer Lorch Cury, João Verner Jeunemann, Luis Eduardo Pereira de Carvalho.

The Company's Annual General Meeting is scheduled for July 31, 2020 to approve the accounts and elect the new members of the Board of Directors and the Audit Committee for a one-year term.

EXECUTIVE BOARD (2020)

Cristiano Teixeira – Diretor-geral; Alexandre Nicolini – Diretor do Negócio Celulose; Arthur Canhisares – Diretor Industrial de Papéis; Douglas Dalmasi – Diretor de Embalagens; Fábio Medeiros – Diretor Jurídico, Integridade e Gestão de Riscos; Flávio Deganutti – Diretor do Negócio de Papéis; Francisco César Razzolini – Diretor de Tecnologia Industrial, Inovação, Sustentabilidade e Projetos; Gabriella Michelucci – Diretora de Papelão Ondulado; José Soares – Diretor Comercial de Papéis; José Totti – Diretor Florestal; Marcos Paulo Conde Ivo – Diretor Financeiro e de Relações com Investidores; Sandro Ávila – Diretor de Planejamento Operacional, Logística e Suprimentos; Sérgio Piza – Diretor de Gente e Serviços Corporativos.

EXECUTIVE BOARD (2019)*

Cristiano Teixeira – Diretor-geral; Arthur Canhisares – Diretor Industrial de Papéis; Douglas Dalmasi – Diretor de Embalagens; Fábio Medeiros – Diretor Jurídico, Integridade e Gestão de Riscos; Flávio Deganutti – Diretor do Negócio de Papéis; Francisco César Razzolini – Diretor de Tecnologia Industrial, Inovação, Sustentabilidade, Projetos e Negócio Celulose; Gabriella Michelucci – Diretora de Papelão Ondulado; José Soares – Diretor Comercial de Celulose; José Totti – Diretor Florestal; Marcos Paulo Conde Ivo – Diretor Financeiro e de Relações com Investidores; Sandro Ávila – Diretor de Planejamento Operacional, Logística e Suprimentos; Sérgio Piza – Diretor de Gente e Serviços Corporativos.

*Find here a roster of all directors still elected on 12/31/2019.

Visit the Investor Relations [website](#) for the resume all Board and Executive Board members.

RISK MANAGEMENT

GRI 102-15, 102-20, 102-30, 103-1, 103-2, 103-3

Klabin's Risk and Internal Controls Management, created in 2018, seeks to ensure best practices to support business units in analyzing their processes, with a focus on controls and risk assessment. The goal is to strengthen the Company's preventive actions and security in decision-making processes, based on the principles of transparency and sustainable growth.

Risks are assessed according to impact and vulnerability criteria, following the classification devised by the Risk and Internal Controls area, process after which they are managed according to their criticality. With regard to methodology, the approaches to risks may be: reduce, transfer, accept or exploit. According to the *Risk Management Policy*, risks are classified into five categories: strategic, financial, operational, regulatory and socio-environmental.

Main risks monitored (medium and long term: 3 to 5 years)	Control and mitigation actions and procedures
<ul style="list-style-type: none"> • Execution of business strategy • Maintenance of operational activity • Asset insurance coverage • Court rulings • Input prices • Compliance with environmental legislation • New technologies 	<ul style="list-style-type: none"> • Approval of the Budget Plan by the Board, to be monitored, when appropriate; • Procedures for continuous and preventive maintenance of assets, including general plant shutdowns and constant employee development; • Active insurance policies for assets and lost profits (partial); • Formal contingency update procedure supported by legal advisors; • Supplier development, without concentration, through formal quotation processes and approval levels; • Planning & Development area to monitor the strategies and the markets in which the Company operates; • Internal Audit to review and monitor Company processes, in a joint effort with Integrity; • Audit Committee established, elected at the General Meeting to defend shareholders' rights.

In addition, the risk mapping identified two risks related to human rights issues (decent work in the supply chain and discrimination). These risks' due monitoring and mitigation actions are managed by the directly related areas.



CONSTANT MONITORING



Some risks are permanently on the Company's monitoring radar due to its vertical business structure, such as **operational risks** in the production process **cyber risks**.

Operational risks in the production process	
Associated with	Mitigation measures
<ul style="list-style-type: none"> • Use in the production of chemicals; • Storage and disposal of chemical waste; • Explosions, fires, wear over time and exposure to weather and natural disasters; • Potential mechanical failures, time required for maintenance or unscheduled repairs, interruptions in transportation, remediations, leakage of chemicals and other environmental risks. 	<ul style="list-style-type: none"> • Monitoring critical activities such as health, safety and environmental protocols, monitoring the energy grid and respective voltage loads, effluent treatment • Defining action plans and controls when applicable, in addition to periodic monitoring by the Internal Risk and Control Management and Internal Audit; • Procedures for continuous and preventive maintenance of assets, including annual plant shutdowns and constant employee development; • Active insurance policies for assets and lost profits (partial); • Planning & Development area to monitor the strategies and the markets in which the Klabin operates;
Cyber risks	
Associated with	Mitigation measures
<p>The protection model adopted by Klabin takes into account potential offenders to the occurrence of cyber attacks:</p> <ul style="list-style-type: none"> • <i>Insiders</i> (employees, service providers etc.), whether by accidental or deliberate misuse (for example, when threatened by terrorists or criminals); • Terrorists who are interested in obtaining and using sensitive information to carry out a conventional attack; • Unfair business and intelligence services competitors, interested in obtaining economic advantages for their companies or countries; • <i>Cyber criminals</i> interested in making money by fraud or by selling valuable information; • <i>hackers</i> who set out to interfere in companies' systems, just as a personal or collective challenge; • <i>Cyberwar: hackers</i> with a great deal of resources at their disposal, due to state support and who are qualified; • <i>Hacktivists</i> who fight for a cause (such as political or ideological reasons); • Organized crime seeking (<i>ransomware</i>). 	<p>Como mitigação, a Segurança da Informação da Klabin utiliza-se de padrões como ISO 270001 e a IEC 62.443 e atua nas seguintes frentes:</p> <ul style="list-style-type: none"> • Segurança de perímetro: tecnologia para reforçar as soluções de segurança de borda (primeira proteção do mundo externo) e segregação da infraestrutura. • Network security: solutions for network monitoring and management including protection against threats, secure and controlled access, content filtering and segregation of the environment • Endpoint security (<i>endpoint</i>): protection of servers, workstations, <i>smartphones</i> and <i>tablets</i> against advanced threats. • Application security: protection of critical applications. • Data security: technology to protect critical information throughout its life cycle, as well as where it is located. • Monitoring and response: process responsible for monitoring technologies and information security process through incident management, performance indicators and forensic analysis. • Prevention and management: based on risk management, governance, architecture, training, awareness and <i>compliance</i>. • <i>patch</i> management advanced threats and incident prevention and response through <i>cybersegurança</i> and <i>Hardening</i>. • Access security: responsible for the user access life cycle, service and administrative accounts and password safe.

[Learn more on Information Security, in this chapter.](#)

ETHICS AND INTEGRITY

GRI 102-16, 102-17, 103-1, 103-2, 103-3

Ethical conduct and integrity is one material topics Klabin's. The Integrity Program includes a series of activities aimed at preventing, identifying and remedying conduct that may expose the company to undesirable situations that are contrary to the Company's principles and values.

The creation of the Integrity Committee in 2019 lent even more strength to the management and governance of the Program. Comprised by directors, the person in charge of the Integrity area and a representative of the Internal Audit team, it focuses on the discussion of relevant topic-related aspects, such as considerations on investigated complaints, enforcing the application of corrective measures and recommendations.

This cycle's improvements also include: the launch of *Klabin's Integrity and Ombudsman Channel* which, unlike the previous reporting channel, is managed by an independent third party; expansion of training audiences and topics (Anticorruption, Code of Conduct and Competition Policy); enhancement of our communication, specifically focused on our internal audience; expansion of the Ethics Week schedule – an enterprise-wide event held annually at Klabin and covering a broad variety of topics and activities in 2019; the presentation of integrity risks by board, based on assessment work started in 2018 and feedback to each director; and the proposal of action plans to be launched in 2020, comprising a review of policies and procedures, among other actions. Most of these initiatives are supported by indicators linked to specific goals for each area.

Read our policies to learn more: [Política de Diversidade e Promoção da Empregabilidade](#) and [Policy for Fundamental Rights in Labor Relations](#).

INTEGRITY PROGRAM



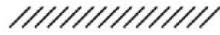
GRI 103-1, 103-2, 103-3

Klabin's Integrity Program is based on six pillars: Senior Management Commitment and Support, Risk Assessment, Communication and Training, Policies and Procedures, Reporting and Remediation Channel, Third Party Assessment and Continuous Monitoring.

In line with the Sustainable Development Goals (SDGs) the Program is supported by instruments such as the Code of Conduct, the Anticorruption Manual, and the Integrity and Ombudsman Channel, which together with the engagement of everyone in the Company, strengthen the Integrity culture in all internal and external interactions and also represent global best practice initiatives related to the matter.

Highlights in 2019 included: greater involvement and engagement of senior management with the topic, through individual meetings and the inclusion of the topic on the Board's agenda, in addition to the presence of a member of the Integrity staff in the Audit Committee meetings.

POLICIES AND CODES



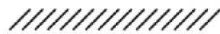
GRI 102-16, 103-1, 103-2, 103-3

Values such as morality, dignity, liberty, integrity, loyalty, transparency and justice guide decisions made at Klabin. In support of best practices and consistent standards of conduct throughout the Company, Klabin relies on a Code of Conduct, an Anticorruption Manual (drafted in compliance with Anticorruption regulations) and specific policies, such as the Competition Policy.

All corporate policies are subject to review by the Internal Controls area as to form and aspects and for final approval before publication. Although it is not a mandatory flow, the area is also consulted to assist in the review of specific topics discussed in these materials when necessary, which emphasizes the commitment and diligence of the other areas of the Company with respect to Integrity.

Click [here](#) to read the Code of Conduct, the Anticorruption Manual and the policies adopted by Klabin.

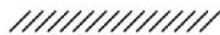
CONFLICTS OF INTEREST



GRI 102-25

Klabin complies with the regulations enforced by regulatory bodies in case situations regarding any conflict of interest are identified. Certain measures will soon be implemented to further enhance the Company's management practices with regard to the matter, including a specific policy, which is currently under discussion; the implementation of the *Know Your Vendor* questionnaire – a methodology widely used to monitor the supply chain; and the acquisition of a specific risk assessment and third-party management system.

FIGHT AGAINST CORRUPTION



GRI 205-1, 205-3

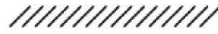
The mapping process carried out by the Company, including risks related to corruption, comprised workshops and interviews with all directors, as well as questionnaires applied to the managers of all Klabin units in Brazil, Argentina and Austria, concerning 100% of the operations.

The risks identified are those pertaining to any interactions with the Public Power, mitigated through policies, procedures, training and monitoring.

The Integrity area also performs *Due Diligence* in organizations that are granted sponsorships and donations from Klabin, in order to identify potential corruption risks.

In 2019, no complaints or violations of the Code of Conduct related to corruption were reported, nor were public lawsuits related to the matter filed against the enterprise or employees.

ANTICORRUPTION TRAINING AND COMMUNICATION



GRI 205-2

Anticorruption training, available to all employees with access to the platform, is sorted into two categories according to length and complexity: general training intended for all employees, offered on an annual basis; and specific training for areas and managers most commonly exposed to such risk. Communications, in their most diverse formats, are general in nature, to advise and guide all employees on the matter.

New hires also gain access to mandatory anticorruption training, which is integrated into their corporate education trail. On the day of integration, they receive, through a protocol, a copy of the Code of Conduct and the Anticorruption Manual.

93%

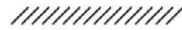
of Klabin's direct employees were informed on anticorruption procedures and policies. 37% of them were trained on the topic.

100%

of the directors were informed and 92% were trained on the topic.

99%

of business partners received communications on the topic.



Direct employees trained and informed on anticorruption policies and procedures by region¹

		2017		2018		2019	
		Informed	Trained	Informed	Trained	Informed	Trained
Northern Region	Total	32	15	33	14	224	26
	Percentage	16,00%	7,50%	13,64%	5,79%	100,00%	11,61%
Northeastern Region	Total	135	116	427	116	1.281	164
	Percentage	10,76%	9,24%	33,13%	9,00%	100,00%	12,80%
Southeastern Region	Total	2.266	841	2.531	835	3.077	937
	Percentage	72,70%	26,98%	86,71%	28,61%	100,00%	30,45%
Southern Region	Total	6.657	3.942	6.873	4.156	7.534	4.450
	Percentage	67,71%	40,09%	69,99%	42,32%	75,48%	44,58%
Total	Total	9.090	4.914	9.864	5.121	12.116	5.577
	Percentage	63,11%	34,12%	69,12%	35,89%	83,20%	37,10%

¹The company did not have employees in the Midwest region in the period.

Direct employees trained and informed on anticorruption policies and procedures by employee category¹

2019		Informed	Trained
Executive Board	Total	12	12
	Percentage	100,00%	100,00%
Management and coordination	Total	608	531
	Percentage	100,00%	87,34%
Technical	Total	1.274	976
	Percentage	100,00%	76,61%
Administrative	Total	1.110	714
	Percentage	100,00%	64,32%
Operational	Total	8.752	3.186
	Percentage	85,84%	28,45%
Apprentices	Total	235	101
	Percentage	100,00%	42,98%
Interns	Total	125	57
	Percentage	100,00%	45,60%
Total	Total	12.116	5.577
	Percentage	83,20%	37,10%

¹Monitoring for this indicator started in 2019. The group of professionals identified as "Board of Directors" was not considered in the indicator.

Directors trained and informed on anticorruption policies and procedures¹

	2017		2018		2019	
	Informed	Trained	Informed	Trained	Informed	Trained
Total	14	14	13	12	12	12
Percentage	100,00%	100,00%	100,00%	92,31%	100,00%	100,00%

¹All directors are in the Southeast region.

Business partners trained and informed on anticorruption policies and procedures¹

	2017		2018		2019	
	Informed	Trained	Informed	Trained	Informed	Trained
Total	873	0	998	0	1.097	0
Percentage	90,84%	0,00%	94,42%	0,00%	98,90%	0,00%

¹This item reports the total number of service providers (considering all regions) and, of this total, the number whose contracts include an Anticorruption Clause. The difference between the numbers corresponds to price agreements, software, contracts, partnership contracts, leases, contracts with real estate companies and airline operators.

GRIEVANCES AND COMPLAINTS

GRI 102-17, 103-2

The independent Ombudsman channel is available at [Klabin's website](#), anyone can report suspected violations of the Code of Conduct, laws or internal regulations. The channel enables anonymous and fully secure contacts. A protocol number will be generated for status tracking. Another point of contact is the [Fale.com a Klabin](#), with a focus on the forestry areas.

1,752 COMPLAINTS WERE FILED IN 2019 THROUGH THE INTEGRITY AND OMBUDSMAN AND FALE.COM A KLABIN (SANTA CATARINA, ANGATUBA AND PARANÁ) CHANNELS

CLASSIFICATION OF THE MAIN COMPLAINTS:

- Behavior
- Conflicts of interest
- Non-compliance with standards and policies
- Impacts of the forestry operation:
 - Dust
 - Damage to rural roads
 - Traffic-related deviations (speeding and dangerous overtaking maneuvers)
- Impacts of plant operations:
 - Odor occurrence
 - Sporadic noises

Complaint mechanisms¹

GRI 102-17

Complaints	2017	2018	2019
Total	2.197	2.338	1.752
Addressed	2.197	2.338	1.703
Resolved	2.027	2.162	1.384
Pending	170	176	368
Filed before the reporting period and resolved during the year	45	112	114

¹Information that violates Klabin's Code of Conduct

ENGAGEMENT INITIATIVES

GRI 102-40, 102-42, 102-43, 102-44

Recent challenge for Klabin's Communication is the expansion of its base of individual investors (private individuals) in 2019, reaching 110,000 persons and prompting the Company to seek more efficient interaction channels to provide these *stakeholder* with the most relevant information. Digital media has proven to be useful. A good example was the announcement of the acquisition of the Horizonte Unit, in the state of Ceará, disclosed through one of the company's social network channels and whose comments, in large part, were from individual investors expressing their pride in investing in Klabin.

Also among the Company's *stakeholders* groups are: employees, customers, suppliers, regulatory bodies, certifying agencies, public entities, educational institutions, the press, unions, civil entities, social organizations and communities surrounding its operations.

Learn more about relationship actions in [Local Development](#).

To define our *stakeholders*, we have adopted the following process:

Analysis of internal documents, such as policies, procedures, relationship reports and interviews with leaders.	Consultations with representatives of the identified groups to understand their needs and expectations.	Data are consolidated and groups arranged in order of priority according to their degree of criticality, dependency and impact
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Based on the definition of our priority audiences, engagement actions are planned and implemented:

Employees	Customers	Suppliers	Regulatory bodies	Investors	Communities
Meetings or direct contact; intranet; Daily Safety Dialogues (DDS)	Contact by phone and e-mail; audits; technical visits; presence of the Klabin team at the customer's facilities (occasional) Customer Portal	Contact by phone and e-mail; negotiation meetings	Contact by phone and e-mail; Contact by phone and e-mail; submission of online forms; Investor Report Financial statements; investor portal;	Meetings or direct contact; IR website; periodic information disclosed by the CV; capital market events; visits to operating units	Communication Channels (e-mail, hotlines, letters, interaction with field employees); face-to-face meetings; annual survey with communities
Daily	Daily and on demand	Periodic and on demand	Periodic and on demand	Daily	Daily
Positive relationships, no conflicts	Positive relationships, insights for innovative solutions and increased transparency	Positive relationships, long-term contracts and established partnerships	Positive relationships, long-term contracts and established partnerships	Positive, mostly long-term relationships Insights, suggestions, recommendations and complaints are referred to Management	Close and transparent relationships, open for complaints, suggestions and compliments. Engagement with communities for the management and mitigation of impacts through
Meeting labor demands (wages, benefits and improving work environment infrastructure); ensuring health and safety in the workplace; training and development; career plan	Product quality; price reduction; meeting deadlines; technical assistance; innovation and development of new solutions; transparency in the relationship	Revenue (within the deadline); compliance with the terms of the contract; expansion of products offered and units served; higher market value	Payment of taxes and fees; job and income generation; support for social projects; compliance with legislation, standards and technical standards; improving the relationship to a more frequent and consolidated partnership	Evolution of results and prospects, understanding Klabin's markets, long-term strategy	Direct impacts on people's daily lives, related to vehicle traffic associate with operations, traffic accidents, noise, odor and dust generation, interference in the use of water, shading in agricultural crops, absence or material damage to fences and borders.

Consultations to survey topics and concerns and to promote engagement actions have been carried out since 2014 and are continuously monitored and updated:



COMMUNITIES ATTENTIVELY HEARD



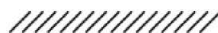
Annual perception surveys are also conducted in certain cities. Analysis of diagnoses are carried out in Paraná, for example, in harvesting and wood transportation areas to characterize neighboring communities, potential impacts, identify leaders and other representatives.

Based on the assessment, meetings are held – Pre-Operational Dialogues, or individual meetings –, as well as house-to-house communications.

We also lead the Anthropic Monitoring Committee, in Paraná. Through monthly meetings, we monitor and discuss socioeconomic data with public managers in the cities in the Area of Direct Influence of the Monte Alegre and Puma Units. The goal is to monitor impacts and act to eliminate or minimize them.

In 2019, the "Communities" category was added to the Fale com a Klabin channel to optimize the process of determining and responding to community complaints.

NEW COMMUNICATION PLATFORM



An extranet – online communication platform with controlled access, intended for investors, suppliers, the community and customers –, was structured at Klabin and will be incorporated over time. The channel allows the consultation of information, clarification of doubts and access to self-services.

With such solution, Klabin intends to gain productivity, reinforce its positive brand image and provide a positive experience for the public.

INFORMATION TECHNOLOGY FOR KLABIN OF THE FUTURE

In 2019, we promoted technological updates of our information systems to enhance synergy and strengthen the management of costs, budgets and information security, among other fronts. Noteworthy initiatives include:



Implementation of a unified communication and collaboration platform for videoconferences and information sharing through the cloud, as a solution to the limited capacity of email boxes. Gain by reducing travel costs and risks. During the Covid-19 crisis, employees' remote work implementation.



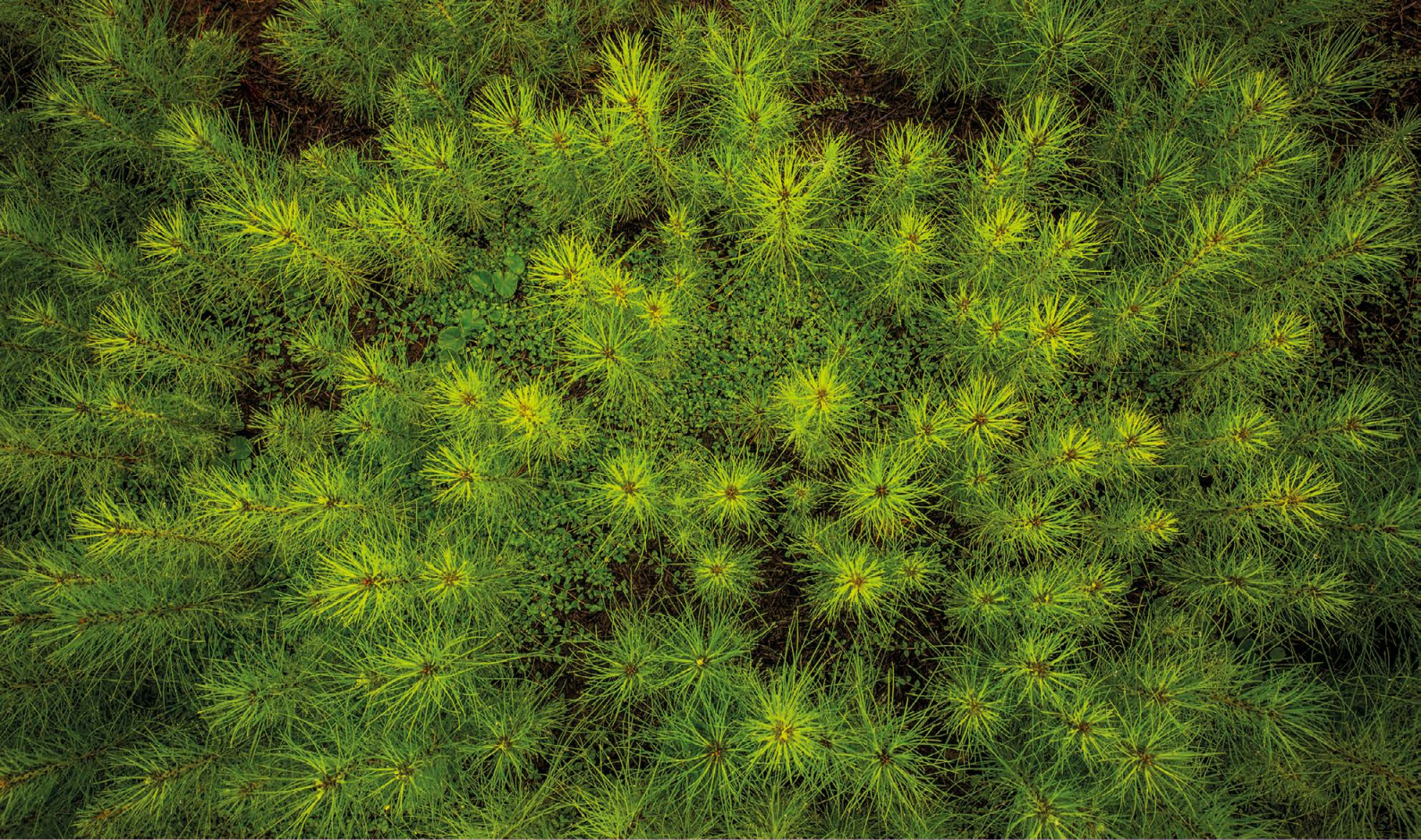
Implementation of the Minha Klabin Portal, intended for direct and indirect employees. It provides streamlined access to documentation, information and tools to simplify processes and services for employees.



Enabling the Jornada Cloud for cloud data storage, significantly expanding the processing and storage capacity.



Expansion of Wi-Fi network in the operational areas of the plants in Monte Alegre, Ortigueira, Goiana and Lages. In Angatuba, the network will be implemented in 2020.



SUSTAINABILITY

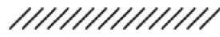
SUSTAINABLE DEVELOPMENT GOALS	
DECENT WORK AND ECONOMIC GROWTH	RESPONSIBLE CONSUMPTION AND PRODUCTION
 8	 12



CONTINUOUS VALUE CREATION

Sustainability is an essential foundation to Klabin's management, at placed the core of its strategic decision-making. With its operations focused on sustainable development – and internationally recognized for its best practices – the Companydirects its efforts to projects and initiatives capable of generating value across the entire chain, maintaining its commitment to the public to which it relates.

SUSTAINABILITY VISION



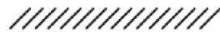
We believe that Sustainability is a continuous creation of value, focusing on the balance between the economic, social and environmental spheres. We are a unique and responsibly managed forestry company committed to the principals of biodiversity. We work collaboratively with our customers and suppliers, constantly striving to innovate and improve our products and processes. We encourage the engagement and development of our collaborators and the communities in which we operate, promoting the sustainable improvement of results across the entire value chain, in an integrated manner.

Learn more on Klabin's Sustainability Policy.

KLABIN SUSTAINABILITY POLICY

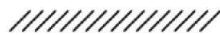
1. Seek to consistently and competitively improve results by researching, developing and continuously improving both new and existing processes, products and services, to meet the expectations of customers, employees, shareholders, the communities, suppliers and other stakeholders.
2. Promote cooperation with customers, suppliers, academia and other stakeholders in the quest for innovation in products and processes and value chain improvements.
3. Guarantee the appreciation of the forest holdings from their transformation into sustainable and competitive products.
4. Ensure the supply of planted timber to its industrial units in a sustainable manner, without harming associated natural ecosystems, in the company's own operations and those of developed producers.
5. Practice and promote the recycling of cellulose fibers across the production chain.
6. Avoid and prevent pollution by reducing environmental impacts related to wastewater, solid wastes and atmospheric emissions, constantly considering these factors in the maintenance and improvement of production processes, product development and improvement, forestry and logistical operations, and the monitoring of the economic and socio-environmental aspects of critical suppliers.
7. Seek to apply the most efficient and current technologies and engineering solutions in the implementation of new projects and ventures, ensuring the protection of human health, natural resources and the environment.
8. Promote the personal and professional growth of its employees and the search for continuous improvement in working conditions, health and safety.
9. Promote an ethical company culture and develop the best practices of corporate governance.
10. Observe the United Nations (UN) Sustainable Development Goals (SDG) and direct the company's actions and investments to support its objectives, acting positively in favor of the social and environmental development of the areas in which it operates.
11. Practice social responsibility with principals of private social investment, directed towards local development and education.
12. Comply with the legislation and standards applicable to its products, the environment, health and safety.
13. Ensure that the company's operations are constantly seeking to reduce Greenhouse Gas Emissions (GHG).

MANAGEMENT SUSTAINABILITY COMMITTEE



The creation of the Sustainability Management Committee, comprised by five managers, also reinforced governance practices regarding the topic. Its mission is to previously analyze issues related to sustainability for later referral and validation with the Permanent Sustainability Committee. The latter, made up of directors from five areas and a technical officer, is responsible for defining guidelines and assessing the need for investments and prioritizing initiatives, submitting issues for review and final approval by the Executive Board. Learn more about the Permanent Commissions in [Governance Structure](#).

KLABIN'S AGENDA FOR SUSTAINABLE DEVELOPMENT

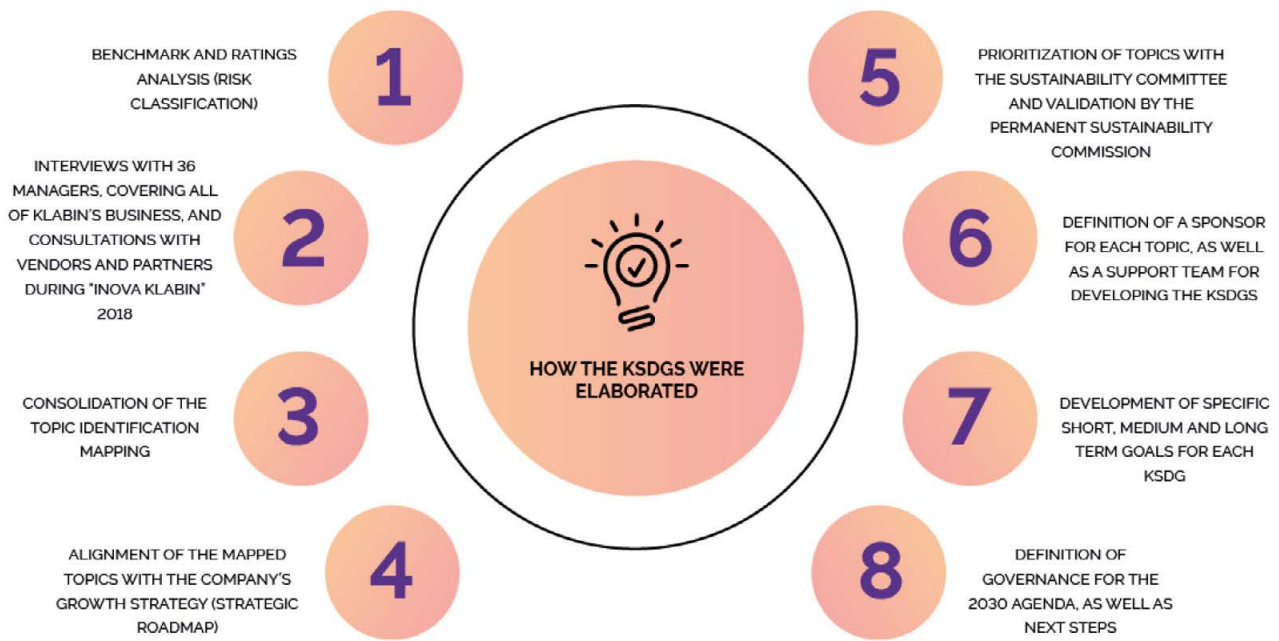


THROUGHOUT 2019, WE MADE PROGRESS IN ESTABLISHING OUR OWN SUSTAINABILITY AGENDA BY DEVISING KLABIN SUSTAINABLE DEVELOPMENT GOALS (KSDGS), IN LINE WITH THE COMPANY'S GROWTH PLAN AND THE UNITED NATIONS (UN) 2030 AGENDA.

It is an action plan that guides the milestones and progress for the most urgent Environment, Social and Corporate Governance ([ESG](#)) goals in the short-, medium- and long-terms, in line with the Klabin's aspiration and establishing the values the Company is committed to delivering to society.

The KSDGs were devised based on consultations with hundreds of *stakeholders*, internally discussed in workshops with representatives from several areas. The KSDG Agenda, including 25 short-, medium- and long-term goals, addresses 14 of the 17 SDGs established by the UN. Validated by Klabin's Permanent Sustainability Commission, the Agenda is awaiting approval by the Executive Board for later referral to the Board of Directors. Throughout 2020, the work gained strength with the development of the agenda's governance proposal, the thematic organization of the 25 KSDG and the proposition and development of the goals for 2030. The approval of this agenda was still pending upon the publishing of this report due to the social distancing measures implemented to help fight the Covid-19 outbreak, which affected the Company's administrative activities. Such content will be appropriately updated.

To learn more about the SDGs, visit this [website](#).



KSDGs	2030 Value proposition to society	SDG
Occupational health and safety	Safe and protected work environments to promote people's integrity, health and physical and psychological well-being in the performance of their duties and in the course of their lives.	
Impact on communities	Positive influence on the (environmental, socioeconomic) dynamics of the communities, safeguarding the quality, the way of life and the local social relations.	
Local development	Strengthened economic, social and environmental agendas in the communities where the Company operates, fostering collaborative planning capacities for the public management towards sustainable development.	
Energy use/energy efficiency	Active and leading proposition to contribute to the improvement of the national renewable energy standard.	
Water use	Protected and restored water-related ecosystems (forests, aquifers and rivers), generating water security for societies.	
Strengthened and resilient value chain in its most vulnerable parts, composed of suppliers who make use of responsible social and environmental practices to ensure good practices throughout the productive life cycle.	Strengthened and resilient value chain in its most vulnerable parts, composed of suppliers who make use of responsible social and environmental practices to ensure good practices throughout the productive life cycle.	
Effluents and waste	Full optimization of resources in which waste generates value when reintroduced in production systems.	
Climate change	Proactive performance of businesses in building a low-carbon and climate-resilient society.	

Biodiversity	Sustainable and restorative management of forests, integrating ecosystems and biodiversity values, to improve their ability to generate and disseminate benefits among society.	
Human capital development	Substantial professional training to maintain relevant and updated skills.	
Diversity	Value generation to its fullest extent from the naturalization of human diversity in safe and inclusive environments that allow the free and creative expression of individuals.	
Retention of professionals	Leaders committed to the continuity of Klabin's strategic guidance and values.	
Klabin's culture	Authentic model devised by Klabin to align appreciation and care for the people with economic growth, the highest levels of productivity and job satisfaction.	
Innovation management	Business model that drives and welcomes new processes to transform performance and strengthen innovation ecosystems among society.	 
Increased forest productivity	More efficient use of forest areas, with broad knowledge on the unwanted effects of species management and less stress on ecosystems.	
Multiple uses of wood	Alternative to the use of non-renewable materials with new bioproducts produced from wood components.	
Wood availability	Highly productive forest ecosystems with sustainable management of landscapes that generate value and disseminate capacities among society, considering the social and environmental challenges for land use.	
Customer satisfaction and product quality	Products and patterns of production and consumption that are essential for the sustainable development of society, as well as lifestyles that value harmony with nature and its resources.	
Production and logistics	Higher and integrated levels of productive capacities, optimizing financial, natural, intellectual and infrastructural resources, self-owned and belonging to business partners, in the consumption, production and logistics processes.	
Forest certification	Sustainable production and consumption of wood, strengthening rural landowners' productive capacities for the responsible management of forests.	
Ethical conduct/Integrity	Fairness and transparency in the Company's relationships, protecting fundamental freedoms and in compliance with national legislation and international agreements.	
Risk management	Responsible performance and operations, with individuals of all levels committed and able to act in a responsive and participatory manner in decision-making processes.	
Information security	Technological capabilities strengthened and suited to protect individuals and institutions that relate to Klabin, considering the new ethical challenges arising from the development of artificial intelligence.	

OTHER VOLUNTARY COMMITMENTS



Global Compact, since 2003

An international group of companies that supports the United Nations' (UN) espousal of ten principles that bring together fundamental values in the areas of environment, human rights and labor, and anti-corruption. . The Global Compact counts on the voluntary participation of companies with the search for a more sustainable and inclusive global economy. Learn more at <http://omundoquequeremos.org> <http://omundoquequeremos.org>



Sustainable Development Goals (SDGS), since 2015

They constitute a global development agenda with 17 objectives and 169 goals set out by the United Nations (UN) for governments, civil society and the private sector.



UN Women's Empowerment Principles, since 2018

Para reforçar o compromisso com a diversidade e promover um ambiente inclusivo, a Klabin aderiu, em 2018, aos sete Princípios de Empoderamento das Mulheres (WEPS, na sigla em inglês). A iniciativa da Organização das Nações Unidas pela Igualdade de Gêneros (ONU Mulheres) orienta as empresas no empoderamento das mulheres dentro da organização, da cadeia de valores e nas comunidades. [Learn more at http://omundoquequeremos.org](http://omundoquequeremos.org).

Corporate Movement for Integrity and Transparency, since 2018

Created by the Ethos Institute, this movement aims to define strategies and priorities for engaging business leaders in the integrity agenda, with a special focus on improving public-private relations and strengthening prevention and the fight against corruption in Brazil.



Carbon Disclosure Project (CDP), since 2006

Global initiative to facilitate dialogue between investors and companies that seek to minimize the environmental impacts of their businesses within a context of climate change.

FGV Center for Sustainability Studies, since 2009

With the mission of turning sustainability challenges into opportunities for value generation, we have joined the FGVces Business Initiatives challenges, which bring together the agendas of the Business for the Climate (EPC) Platform and the Local Development and Large Projects Initiative (IDLocal), among others. Our engagement, since 2009, is intended to promote the articulation of climate management with business leaders. Klabin's participation in IDLocal since 2013 is aimed at the exchange of experiences and building local development guidelines.

ISEB3
2019

Corporate Sustainability Index (ISE), since 2013

Created in December 2005 by the former BM&FBovespa, currently B3, the index seeks to evaluate different aspects of sustainability in an integrated manner. Its objective is to induce good practices in the Brazilian business environment. The companies are selected based on criteria established by the School of Business Administration of São Paulo, at Fundação Getúlio Vargas (EAESP-FGV).



National Pact for the Eradication of Slave Labor, since 2013

Launched in 2005, it brings together Brazilian and multinational companies that have made a commitment not to negotiate with those who exploit slave labor. In addition to economically restricting employers who commit this crime, the Pact provides for the promotion of honest work, the social integration of vulnerable workers and the fight against unlawful recruiting for forced labor. Companies that are signatories to this initiative participate in the process of monitoring the Pact and are committed to making the results of their efforts to fight slave labor public.



Business Pact for Integrity and Anti-Corruption, since 2013

The Pact was launched in June 2006, by the Ethos Institute of Business and Social Responsibility, Uniethos – Training and Development of Socially Responsible Management, Patri Government Relations & Public Policy, the United Nations Development Program (UNDP), the United Nations Office on Drugs and Crime (UNODC) and the Brazilian Committee of the Global Compact. The main commitments expressed in the text are: information on legislation; disclosure, guidance and answers on legal principles applicable to its activities; prohibition against bribery; transparent and lawful contribution to political campaigns; propagation of principles of the Pact; open and transparent investigations; and performance in the production chain. Klabin is committed to following ethical principles and joining the fight against corruption, adopting aspects reviewed annually by the Pact as a means of improving its integrity program. In the assessment carried out in 2017 by InPacto, an institute that monitors the member companies, Klabin was mentioned as one of "the companies most committed to the fight against slave labor". The work continuously promoted by the company, approved by its Board of Directors, gained recognition as a relevant indicator of "how seriously the issue is addressed".



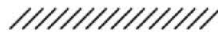
VALUE CHAIN

In addition to complying with legal requirements, one of Klabin's strategic points of supply is the proximity of our forests to the industrial units: an average radius of 71 km, since the costs of wood transport logistics are key to business competitiveness.

Most of the wood used to supply our plants comes from our own plantations. In addition, we purchase part of the production from members of the *Programa de Fomento Florestal* or from independent producers with whom we maintain contracts that cover criteria such as quality, delivery timeliness, compliance with the applicable laws and the adoption of measures to protect the environment, among others.

Learn more about relationship and development initiatives with rural producers in [Local Development](#).

TECHNOLOGY IN FAVOR OF FORESTRY OPERATIONS



We started using satellites to monitor forests in 2019. They facilitate the monitoring of forest growth and the identification of adverse situations, such as the occurrence of pests and diseases, and allow us to act in mitigating of risks.

Since 2014, we have been using drones in our operations to capture aerial images in real time, helping to prevent pests, diseases and possible fires. . We were granted an authorization from the National Civil Aviation Agency (Anac) in January 2020 to operate the equipment without the need for constant visual contact with a ground crew, allowing flights up to 120 meters.

SUPPLY CHAIN



GRI 103-1, 103-2, 103-3, 407-1, 408-1, 409-1

The hiring of suppliers at Klabin follows a number of criteria to ensure that legal and sustainability aspects are extended to the Company's value chain.

In addition to requiring minimum levels of quality and timely delivery, tax compliance, compliance with applicable labor and environmental legislation, and standards and principles related to human rights are non-negotiable conditions.

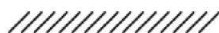
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WOOD SUPPLIERS



The certification, FSC[®] (FSC-C022516) – Forest Stewardship Council[®] has had since 1998, requires solid and transparent raw material tracking processes to ensure that there are no violations of environmental, labor and human rights legislation across the supply chain. If an audit process identifies cases of non-compliance, supply is suspended until the issue is resolved and appropriate measures are taken.

The forestry units follow the Controlled Wood Program, in which suppliers are assessed by the Forestry area based on specific methodology related to the FSC[®] chain of custody certification. [®]. In 2019, 650 visits were made to certified and uncertified wood suppliers in Paraná, and 501 visits were made in Santa Catarina.

We have maintained the Small Producers' Forest Certification Program in Paraná, since 2015, and in Santa Catarina, since 2017, contributing to generate greater added value to the wood traded by these partners, through the adoption of best forest management practices. In 2019, we attained the mark of 126,000 FSC[®] certified hectares. [®]. Of this total, 102,000 hectares in 42 cities – mostly in Paraná – are owned by producers that supply to Klabin's unit in Paraná; another 24,000 hectares in over 15 cities belong to producers from Santa Catarina.

Klabin is also a signatory to the Global Compact complies with the provisions of the Universal Declaration of Human Rights, the guidelines of the Guiding Principles for Business on Human Rights and the declaration of the International Labor Organization (ILO). Thus, the safeguard of human rights in the supply chain is reinforced. In 2019, no real or potential risks of violation of were identified in Klabin's or suppliers' operations.

EXPRESS GUIDELINES FOR PURCHASING PRACTICES



CODE OF CONDUCT: COVERS THE RELATIONSHIP AND BEHAVIOR PATTERNS EXPECTED IN THE BARGAINING PROCESSES



GENERAL SUPPLY CONDITIONS: DISCLOSURE OF THE REQUIREMENTS APPLICABLE TO ALL SUPPLIERS



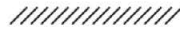
ANTICORRUPTION MANUAL: GUIDES THE FIGHT AGAINST CORRUPTION



SOCIAL AND ENVIRONMENTAL RESPONSIBILITY POLICY FOR THE HIRING OF SUPPLIERS

Learn more about the documents at this [website](#).

PROFILE OF OUR SUPPLIERS



GRI 102-9, 204-1

7,000

ACTIVE SUPPLIERS,

spread throughout Brazil, integrate Klabin's supply chain.

102

OF THIS TOTAL,

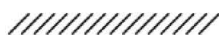
1,102 companies are monitored by the Criticality and Sustainability Matrix, of which an average of 64,7% are considered local businesses, contracted in the states in which we operate (see table).

PRODUCTS AND SERVICES PROVIDED:

- o forestry inputs, commodities and chemical specialties for pulp and paper production;
- o fuels, electricity and packaging for finished products;
- o provision of logistics services, materials management, storage and rental of forklifts;
- o supply of auxiliary materials for production;
- o outfits e Personal Protective Equipment (PPE);
- o bearings and pumps;
- o provision of cleaning, security and maintenance services, among other tasks;

	2017	2018	2019
Amazonas	77.80%	38.70%	71.40%
Bahia	28.30%	56.60%	37.80%
Minas Gerais	39.20%	45.90%	55.50%
Paraná	79.50%	65.00%	66.80%
Pernambuco	48.70%	50.60%	37.40%
Santa Catarina	49.80%	56.00%	58.30%
São Paulo	85.00%	87.60%	78.10%
Rio Grande do Sul	14.50%	14.70%	60.00%
Average	60.90%	64.30%	64.70%
	60,90%	64,30%	64,70%

CRITICALITY AND SUSTAINABILITY MATRIX



Since 2013, critical suppliers in the industrial area are assessed through a criticality matrix which enables the identification of the risks they pose to the Company, both financially and regarding sustainability.

The impacts identified by the matrix are related to ecoefficiency initiatives, greenhouse gas inventories (GHG), operation sites, water consumption and effluent generation, labor relations, compliance with legislation, training on environmental standards and Occupational Health and Safety (OHS), control of injury rates, diseases, absenteeism, deaths, anti-discrimination and corruption prevention practices, legal and labor compliance, incidence of slave labor in the supply region, environmental licensing, type and hazard of supplied material, type of supplier and participation in discussions with communities for local development.

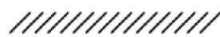
Although social and environmental criteria are not fundamental for the selection of new suppliers, failure to fully meet such criteria can be an impediment to approval.

As a signatory to the National Pact for the Eradication of Slave Labor, Klabin is committed to crossing its base of active and inactive Suppliers, multiple times a year, with the entries of the Employers' Register that have submitted workers to slave-like labor (popularly known as the "Dirty List of Slave Labor").

Thus, in the event of any mention, the following actions are taken by the Company: identification of the supplier and service provided (date, location, among other data) and formal notification to the party demanding clarification and declaration on the corrective measures implemented (and improvement suggestions, if necessary). From this stage, it is evaluated whether the supplier will be monitored or if the service will be interrupted. In 2019, there were no cases of suppliers in Klabin's chain mentioned in such list.

IN 2019, 147 SUPPLIERS THAT MEET THE CRITERIA OF THE CRITICALITY MATRIX WERE HIRED BASED ON SOCIAL AND ENVIRONMENTAL CRITERIA. OVER THE PERIOD, THERE WERE NO REPORTS OF COMPLAINTS RELATED TO NEGATIVE SOCIAL AND ENVIRONMENTAL IMPACTS BY SUPPLIERS

SUSTAINABLE PRACTICES IN THE SUPPLY CHAIN



GRI 103-1, 103-2, 103-3, 308-2, 414-2

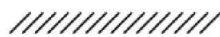
We took an important step in improving supply chain management in 2019 with the adoption of the *EcoVadis* methodology for supplier assessment, aimed at classifying sustainability in several aspects: financial, human rights, labor and social issues.

Based on a criticality screening criterion encompassing representativeness, size and activity, 472 companies from our portfolio (accounting for 54% of the financial transactions in the supply chain) were selected to participate in the assessment, which considers questions grouped into four topics: Environment, Labor and Human Rights, Ethics and Sustainable Procurement.

Sorted into three groups, 110 companies were selected for the first phase in 2019. Adherence reached 77% (89 companies), a result considered above average by EcoVadis itself. Participation is voluntary and requires an investment by suppliers. For this reason, Klabin financed the participation of smaller companies.

The process involved prior communication, preparation and, after the assessment, joint action plans were drawn up for the critical issues identified, whose implementation is monitored by Klabin, with indicators linked to the purchasing managers' goals. A new evaluation cycle has already begun in 2020.

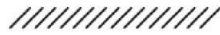
STRATEGIC VISION



In order to achieve a more strategic and integrated approach to business, the Procurement area underwent a reorganization process in 2019, which involved restructuring the departments and the management model, allowing more speed and operational efficiency, necessary for Klabin's business growth.

A matrix management model, in which purchasing managers were responsible for certain accounts or processes across the Company, gave way to a vertical structure, with procurement "towers" focused on Klabin's businesses. . Each tower has specialized teams responsible for specific purchases for each business, strategic purchases, material receipt and inventory. The new model brings the area closer to the units and adds further technical expertise to the process.

CLOSER TO SUPPLIERS



Part of the work to reorganize the Procurement area sought to improve Klabin's relationship with its suppliers. The matter was at the core of management focus in 2019, with the promotion of regional meetings, bringing together about 150 suppliers each. At the end of each event, the team was available to talk to the participants and also to approve new suppliers.

Another opportunity to further develop the contact with suppliers was the first supplier award event. A pilot event was carried out with national transport companies, bringing together over 30 suppliers, classified according to the assessment of service and safety levels, among others. Those who received the highest scores were awarded. O programa deve ser estendido a outros setores de atuação.



LOGISTICS

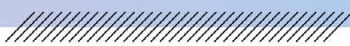
To distribute our production volumes for export, we use road, rail and sea transportation. Through a 23,5 km long railway branch, the Puma Unit, in Paraná, connects to the Paraná Central railroad, covering 441 km until it reaches the Pulp and Paper Logistics Unit, in Paranaguá (PR), where over 900.000 tons of pulp are handled annually. The 5-km route between the Logistics Unit and the Port of Paranaguá is traveled by trucks.

Seeking new and more efficient technologies in the transport of wood with reduced consumption of fossil fuels, the use of triple semi-trailer trucks was adopted. This is a new modality within our operations in Paraná, which, between July and December 2019, was adopted for the transport of 10% of all wood to supply the Monte Alegre Unit.





PERFORMANCE



COMPETITIVENESS AND RESULTS

GRI 103-1, 103-2, 103-3

The year 2019 was marked by the optimization of the Klabin’s assets, with an increase in the industrial utilization rate and dilution of operating costs. Once again, the Company managed to overcome the challenges of an adverse economic scenario through its flexibility and operational efficiency and its diversified product portfolio. We also started a new investment cycle in 2019, with the approval of the Puma II Project.

Klabin’s economic goals are strictly linked to the generation of long-term value for its shareholders. Return on Invested Capital (ROIC) is one of the main indicators that guide decision making in the economic field. The Company’s economic performance is constantly assessed by top management, with a breakdown into goals and variable compensation for the Executive Board.

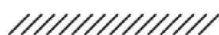
ACQUISITION OF INTERNATIONAL PAPER'S OPERATIONS IN BRAZIL



On March 29, 2020, Klabin announced the purchase of International Paper (IP)'s packaging paper and corrugated cardboard packaging businesses in Brazil. The acquisition, effected after a long negotiation period, reinforces the Company's belief in the Brazilian market and confirms its long-term strategic vision.

The operation, totaling BRL 330 million, will increase our installed capacity of corrugated cardboard packaging to over 1 million tons per year. The investment also includes the purchase of three packaging paper units (virgin and recycled fibers), with total capacity of 310,000 tons per year. With the deal, the company will operate in Brazil's five regions, as one of the acquired plants is located in Rio Verde (GO). The other assets are in São Paulo and Amazonas. By the closing of this report, the transaction was under assessment for approval by the Brazilian Administrative Council for Economic Defense (Cade).

SUMMARY OF THE ECONOMIC SCENARIO



BOTH ABROAD AND IN BRAZIL, TWO DIFFERENT ECONOMIC SCENARIOS PERVADED THE YEAR 2019.

The period up to September was marked by unclear contingencies raised by the trade war between the United States and China, and by the slower-than-expected growth of the Brazilian economy. Such scenario resulted in a price drop of pulp and packaging papers, a lower demand in certain regions and an increase in pulp inventories in ports, mainly in China and Europe.

In Brazil, uncertainties regarding the approval of the pension reform also slowed economic activity until mid-year, with cautious, below-expected results. The shipment of corrugated board boxes¹, for example, posted a modest growth of 0.6% up to September against the same period in 2018. A expedição de caixas de papelão ondulado¹, por exemplo, apresentou um modesto crescimento de 0,6% até setembro, em comparação com o mesmo período de 2018.

By the fourth quarter, however, expectations reversed both for the international pulp market and the Brazilian economic activity. Abroad, the slowdown of the trade war and consequent demand recovery from China, the drop on global pulp inventories and unscheduled production shutdowns, generated greater optimism and the first announcements of price increases, mainly in the softwood pulp market.

In the domestic market, the passing of the pension reform and structurally lower interest rates and inflation apparently boosted confidence, directly impacting the paper and packaging market.

EXPANSION IN THE SHIPMENT OF CORRUGATED

from 0.6% in September to 1.6% by the end of 2019¹.

INCREASE 3.5%

in the shipment of cement in 2019², putting an end to a four-year shrinking of the >-> Positive impacts in the industrial bags sector.

BOARD AND PULP SALES VOLUMES:

up 12% and 6%, respectively.

GROWTH 7%

growth in the adjusted EBITDA.

¹Data from the Associação Brasileira do Papelão Ondulado (ABPO) [Brazilian Association of Corrugated Cardboard]

²Data from the Sindicato Nacional da Indústria do Cimento - SNIC [National Union of the Cement Industry]

KLABIN'S MAIN RESULTS



GRI 102-7, 201-1



Sales volume: 3,327 million tons, 4% growth compared to 2018, notably the 12% and 6% increases in the board and pulp markets, respectively.



Announcement of the Puma II Project in April: with estimated gross investment of BRL 9.1 billion, it includes the construction of two paper packaging machines with a total capacity of 920,000 tons per year.



Extension of Klabin's average debt term from 48 to 96 months, under the same financial cost levels.



Adjusted EBITDA of BRL 4,322 billion, an increase of 7% compared to 2018.

Main financial results (in BRL millions)¹

	2017	2018	2019	Δ
				2019/2018
Sales volume (K tons)	3,320	3,189	3,327	4%
Domestic market	1,564	1,589	1,769	11%
Export	1,656	1,601	1,558	-3%
% Domestic market	49%	50%	53%	+ 3 p.p.
Net revenue (in BRL millions)	8,373	10,016	10,272	3%
Domestic market	5,020	5,534	6,114	10%
Export	3,353	4,483	4,158	-7%
% Domestic market	60%	55%	60%	+ 5 p.p.
Change in fair value of biological assets	790	628	390	-38%
Cost of goods sold	-6,427	-6,342	-7,241	14%
Gross profit	2,736	4,302	3,421	-20%
Sales	-657	-764	-910	19%
General & administrative	-528	-558	-601	8%
Other operating income (expenses)	-12	-2	610	Net profit
Total operating expenses	-1,197	-1,325	-902	-32%
Adjusted EBITDA	2,738	4,024	4,322	7%
EBITDA Margin	33%	40%	42%	+ 2 p.p.
Net profit	532	137	676	392%
Net indebtedness	11,278	12,399	14,355	16%
Net indebtedness/EBITDA	4.1x	3.1x	3.3x	+ 0.2x

¹Some figures may not express an accurate result due to rounding.

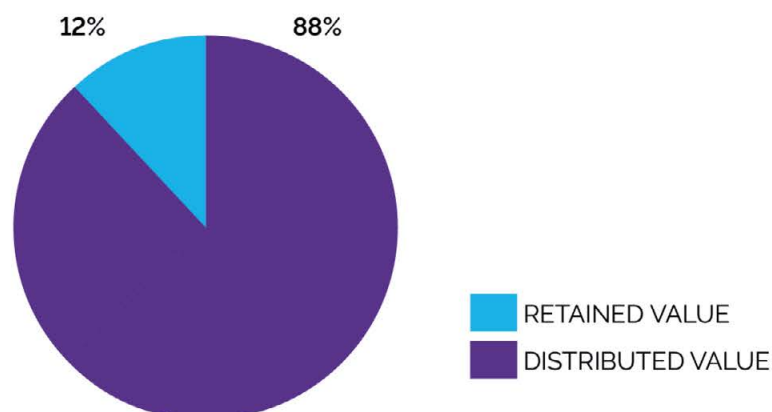
Distribution of economic value generated

GRI 201-1

Direct economic value generated (in BRL millions)	2016	2017	2018	2019
Gross revenues	8,204	9,727	11,516	11,886
Distributed economic value				
Shareholders (equity remuneration – income)	448	507	840	957
Employees (remuneration, benefits and charges for employees)	1,250	1,373	1,419	1,451
Government (taxes, fees and contributions)	1,378	1,032	391	884
Remuneration of third-party capital (interest and rent)	-1,099	1,548	3,704	3,003
Retained direct economic value (in BRL millions)				
Retained direct economic value	2,034	25	-604	-204

Note: Information on environmental and social investments is available in the Environment and Local Development chapters, respectively.

RETAINED ECONOMIC VALUE



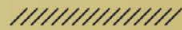
DEBT MANAGEMENT



Important debt management work carried out in 2019 enabled a reduction on the portion of Klabin's short-term debt from 11% at the end of 2018 to 5% at the end of 2019, increasing the average debt term from 48 to 96 months, with costs kept at the same level.

The work also improved the debt profile, with a consequent increase in the share of debts via the capital market, in addition to improving the Company's liquidity horizon by significantly reducing the average amortization for the period of higher disbursements in the Puma II Project. Thus, average amortization between the 2020 and 2022 dropped from BRL 2.5 billion/year by the end of 2018 to less than BRL 1 billion/year in December 2019.

BUSINESS PERFORMANCE



FORESTRY

Klabin handled approximately 15 million tons of logs and chips of pine and eucalyptus and waste for energy.

Third-party log sales of 1.7 million tons (saw mills and rolling mills), a reduction of 19% compared to 2018, due to the focus on the availability of wood to supply an increased domestic consumption of the pulp and paper operations. Net revenue of BRL 250 million.



PULP

Higher production volume, due to the positive operational performance of the pulp unit.

Price reduction, due to increases in global inventories: according to FOEX, average costs dropped 25% for bleached hardwood pulp and 28% for bleached softwood pulp, both delivered in China, in the year.

1,542 million tons produced: 3% above the nominal capacity of the Puma Unit and 7% above 2018's production.

6% increase in total sales volume compared to the previous period.

Net sales of BRL 3,49 billion, down 5% compared to 2018, as a result of falling prices in international markets, partly mitigated by a better sales mix and the devaluation of the Brazilian real against the US dollar.



PAPERS

Following the drop in Kraftliner prices, taking advantage of its ability to integrate vertically into packaging, Klabin reduced export volumes and put a greater focus on supplying the local market and converting into packaging.

Kraftliner sales volume: 389,000 tons, a 9% drop in exports and a 29% increase in local market sales.

Volume recovery in the board market in 2019 compared to 2018's drop: 12% shipment growth for coated boards.

Among the growth drivers, the highlights are the expansion of the geographical footprint and the strong growth in new innovation-related markets.



PACKAGING

Shipment of corrugated cardboard packaging and industrial bags recorded a 7% net revenue growth over 2018.

766,000 tons sold, with a BRL 3 billion net revenue.

Within a scenario of falling Kraftliner prices, operational flexibility in increasing vertical integration with own papers played a fundamental role to support the resilience of the Company's results.



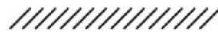
NEW PATHS

A milestone for the Pulp Business Unit in 2019 was the anticipated termination of the supply agreement with Fibria, following an evaluation of the market and strategic benefits of trading hardwood pulp.

The process took place in a gradual and planned manner, with the migration of volumes starting in April. We took on full responsibility for the trading as of August.

We have an adequate commercial structure, as well as proper logistics and expertise in the distribution of a wide range of products and, with that move, took a step forward to establish ourselves as an independent and competitive supplier in the international market of BEKP (Bleached Eucalyptus Kraft Pulp), foreseeing even better profitability, price and term conditions regarding sales of the product.

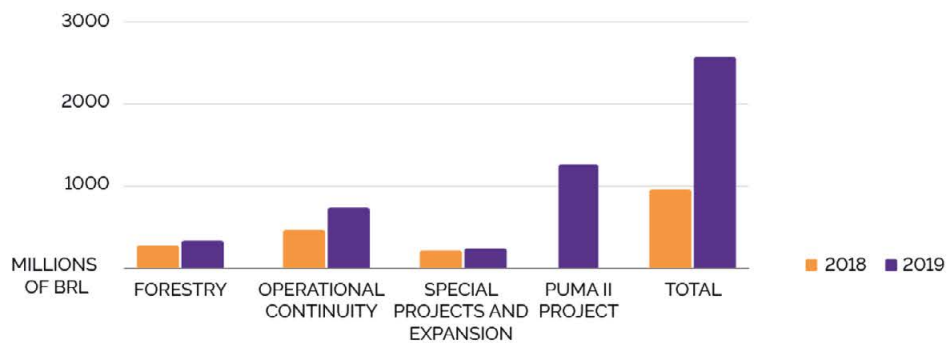
INVESTMENTS



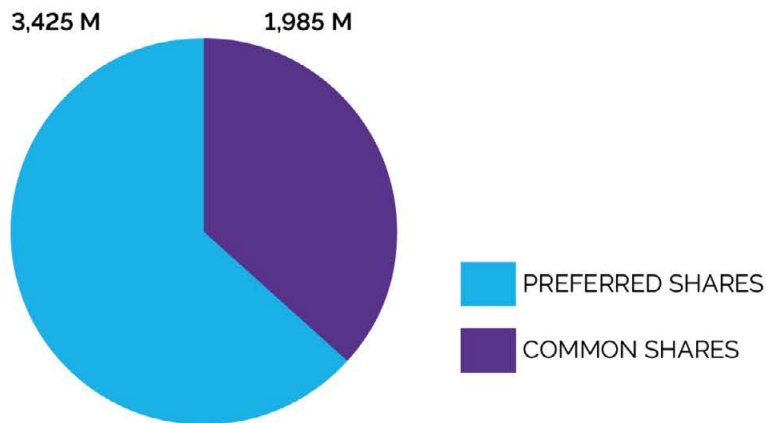
Of the BRL 2,574 million invested by Klabin in 2019, the amount earmarked for forestry operations and the operational continuity of the plants represents investments aimed at the Company's operational maintenance. Investments in special projects and expansions represent high and fast return projects.

Of the total estimated gross investment of BRL 9.1 billion for the Puma II Project, Klabin disbursed BRL 1.3 billion in 2019. By the end of 2019, the works were slightly ahead of schedule, with about 20% of the first phase already completed. Learn more about the Puma II Project in [Business Expansion](#).

INVESTMENTS



KLABIN'S CAPITAL STOCK



16%

advance in Klabin Units (KLBN11), compared to the 32% increase in the Bovespa Index.

UNITS TRADED

in all B3 trading sessions.

APPROXIMATELY

3 MILLION TRANSACTIONS MADE

over 1,014 million securities traded and an average daily trading volume of BRL 68,1 million.

FIXED INCOME MARKET:

Four issuances of active debt securities, maturing in 2024, 2027, 2029 and 2049, all with a nominal issue value of USD 500 million (those maturing in 2027 and 2049 are green bonds).

GREEN BONDS:

resources necessarily intended for use in eligible projects.

ADDITIONAL FUNDING OF USD 200 MILLION: US\$ 200 MILHÕES:

in January 2020, the green bond was reopened, maturing in 2049, with an additional funding of USD 200 million and yield of 6.10% per year. Learn more about green bonds in Business expansion.

CLOSER COMMUNICATION

Following the growing increase of small stock market investors, Klabin's investor base also registered a significant expansion of such profile in 2019. Such movement reinforces the confidence placed by capital market and investors in the Company as it strives to provide this public with relevant information, particularly with regard to ESG (Environment, Society and Governance) indicators.

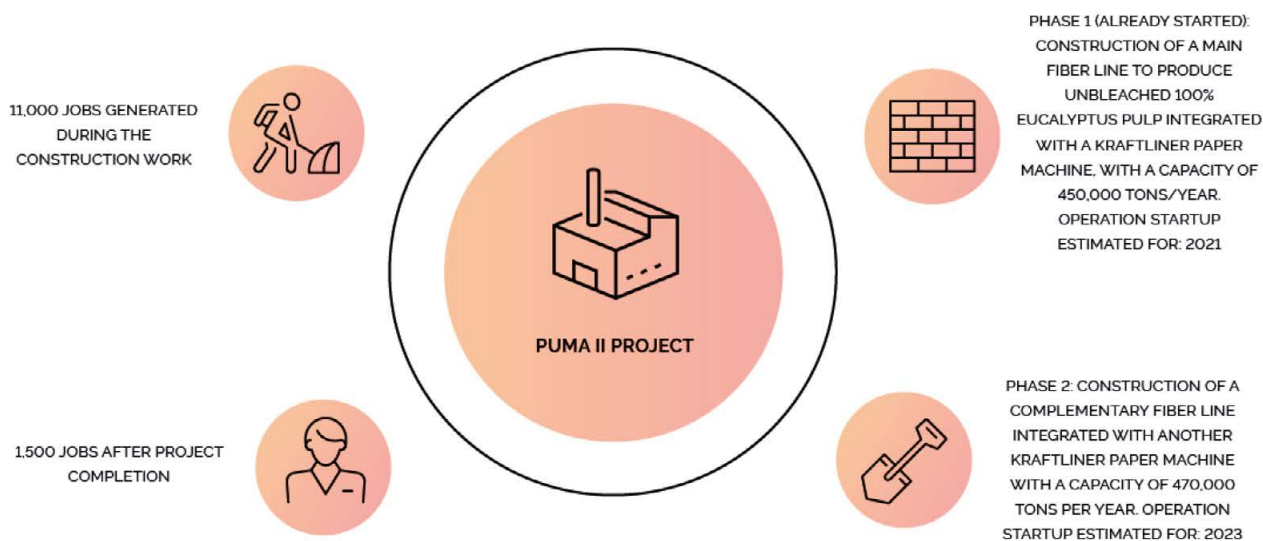
Click [here](#) to learn more about the disclosure of the use of green bond funds em 2019.

BUSINESS EXPANSION

GRI 102-10

We took an important step towards growth in 2019, as set forth in Klabin 2030 Strategic Roadmap with the approval of the Puma II Project, which will expand production capacity by 920,000 tons of packaging paper per year.

Approved in April 2019 and with a gross investment estimated at BRL 9.1 billion – the largest in our history – the Puma II Project comprises the construction of two packaging paper machines, with integrated pulp production, which will be installed in the same location as the Puma Unit (pulp mill opened in 2016).



STATE-OF-THE-ART TECHNOLOGY AT PUMA II WITH AN ENVIRONMENTAL BENEFIT: A WOOD GASIFICATION SYSTEM, UNPRECEDENTED IN BRAZIL, WILL ENABLE THE OPERATION OF THE LIME KILN WITH 100% RENEWABLE FUEL.





HORIZONTE UNIT

In 2019, also in line with the packaging expansion plan of Klabin's Strategic *Roadmap* we purchased an industrial plant in the state of Ceará, providing for the implementation of the Horizonte Unit, intended for the production of corrugated board packaging to meet the demands of the growing fruit market in the country's Northeast region. Located 35 km from Fortaleza and 90 km from the Pecém port, the plant, which started operating in January 2020, receives recycled paper from the Goiana Unit, in Pernambuco, and virgin fiber from Klabin's units in the states of Paraná and Santa Catarina.

Both the new capabilities and the expansion of our geographic footprint, added to investments in innovation, R&D and the constant search for sustainable solutions, open several new paths for growth at the present time and in coming years.

OVER

ONE MILLION

square meters of total area and more than 30,000 m² of built area.

TOTAL INVESTMENT

BRL 100 MILLION,

of which

BRL 48 MILLION

was initially invested.

EXPECTED GENERATION OF

240

direct and indirect jobs; 10% already generated at operation startup.

WOOD AVAILABILITY



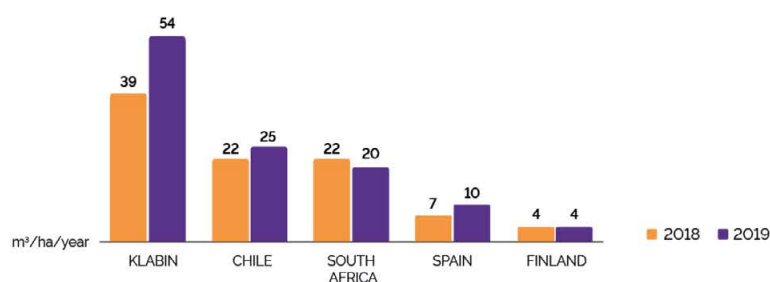
GRI 103-1, 103-2, 103-3

The foundation for our business expansion involves over 258,000 hectares of planted pine and eucalyptus forests, which provide access to high-quality raw material. The high productivity of our forests represents a major competitive advantage: we are world leaders in the production of pulp per planted hectare (see chart).

Our forestry operations have been evolving to address the higher production volumes of pulp, paper and packaging resulting from capacity increases. To meet the need for additional wood, we deployed a strategy, which is being implemented as planned, for the acquisition of standing forests and new areas for planting, in addition to encouraging the production of forests by independent and developed producers. Efforts are also directed towards ensuring the gold standard of our forestry operations.

IN 2019, WE WORKED ON STRENGTHENING FORESTRY PROCESSES AND METHODS, MAINLY TO IMPROVE COST CONTROL AND SUPPLY SECURITY.

FORESTRY PRODUCTIVITY



GREEN BONDS



The issuance of (*green bonds*) also demonstrates our commitment to sustainable growth, as the funds from these bonds are invested in *projects* aligning environmental priorities with efforts to reduce the impacts of our activities.

Examples include mosaic forest management, biodiversity conservation and clean energy production initiatives, as well as those on adequate waste disposal. Since 2017, the three issuances of such category of securities have amounted to USD 1.2 billion in securities issued and raised.

A report on the allocation of resources is annually published, which presents the investments made, the respective positive environmental impacts generated and the third-party verification opinion for the monitoring of the process. Reports are available in the [Investor Relations website](#).



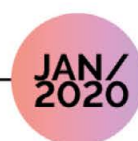
2017

KLABIN MAKES ITS FIRST ISSUANCE OF GREEN BONDS IN THE AMOUNT OF USD 500 MILLION, WITH A 10-YEAR MATURITY.



2019

SECOND ISSUANCE OF GREEN BONDS IN THE AMOUNT OF USD 500 MILLION, WITH A 30-YEAR MATURITY. THIS IS THE FIRST TIME A BRAZILIAN COMPANY RAISES FUNDS FROM THIS CATEGORY WITH A 30-YEAR MATURITY.



JAN/
2020

REOPENING OF THE NOTES 2049 ISSUANCE (GREEN BONDS WITH A 30-YEAR MATURITY), FOR AN ADDITIONAL FUNDING OF USD 200 MILLION.

MOST ROBUST LOGISTICS STRUCTURE



GRI 103-1, 103-2, 103-3

In 2019, an important progress of the logistics structure took place, which will support Klabin's new production capacities. The Company won a public bid to operate a warehouse at the port of Paranaguá, in an area of over 27,000 m² for a period of 25 years, subject to a 45-year extension. Investments of approximately BRL 145 million are estimated and the start of operations is scheduled for 2022.

Another 2019 highlight was the approval of the project to duplicate our railway operations in Paraná, which includes the purchase of new rail assets for container transportation (model not yet used by Klabin), the construction of a container depot, attached to the Puma Unit, with rail access and the purchase of modern equipment for movement within the yard, 100% electric and propelled by energy self-generated by the plant.

This mode of transportation, also brings important environmental benefits to Klabin, such as the reduction in the emission of Greenhouse Gases (GHG), one of the items featured in Klabin's Sustainability Policy. Currently, each railway composition transporting pulp from the Puma Unit to the port of Paranaguá replaces about 200 trucks and with the new container modality will replace over 90 trucks.

THE TERMINAL CONCESSION AT THE PORT OF PARANAGUÁ AND INVESTMENTS IN RAIL OPERATIONS WILL OPTIMIZE OUR INTEGRATION INTO THE GLOBAL PULP AND PAPER MARKETS, ENSURING GREATER SPEED, OPERATIONAL EFFICIENCY AND LOWER COSTS FOR PRODUCTION DISTRIBUTION

OPERATIONAL PLANNING



GRI 103-1, 103-2, 103-3

The new expected capabilities will generate opportunities to maximize chain results, although requiring deeper analyzes of the sales, production and logistics scenarios. Always seeking the best global results, the Company's entire S&OP process is currently under review, supported by the acquisition of a specific, robust and internationally recognized tool. This tool connects the company's entire sales, production and logistics chain, from the pulp and paper commercial strategy to the supply of the conversion units, ensuring a high level of service for customers at competitive costs.

ENVIRONMENT

GRI 103-1, 103-2, 103-3

We operate in compliance with laws and regulations, with parameters to control indicators, some of which are even stricter than those set forth in legislation. Aspects such as water, energy, air emissions, climate change and biodiversity are considered in all operations, revalidating our commitment to conserve natural resources and control and mitigate environmental impacts.

Objectives and Goals

Goal	2018 Results	2019 Results	Medium-term goal base year 2017 (from 3 to 5 years) – 2020 to 2022	2019 Analysis	Analysis of results
Reduce greenhouse gas emissions (Scope 1+2) per ton of product produced	178.677 kg CO ₂ /t product (Klabin S.A.)	185.33 kg CO ₂ /t product (Klabin S.A.)	185 kg CO ₂ eq/t paper (Klabin S.A.)	Goal not yet reached	The 7% posted growth is related to increases in fuel consumption; use of air conditioning gases; use of nitrogen compounds in the forest deployment operation.
Reduce direct emissions of greenhouse gases (Scope 1, absolute value)	6% reduction (direct emission of 669,341.61 tCO ₂ eq)	7% increase (direct emission of 713,885.93 tCO ₂ eq)	Reduce by up to 1%	Goal not reached	
Reduce purchased energy	1,150,437.53 MW-h/year	1,231,454.72 MW-h/year	Reduce by up to 5%	Goal not reached	There was an increase in the purchase of energy due to a growth in Klabin's production
Reduce water consumption	109,413.52 m ³ /year x 1000	109,710.76 m ³ /year x 1000	Reduce by up to 5%	Goal not yet reached	There was a reduction of 2% since the base year (2017).
Increase the participation of renewable sources in the energy matrix	89%	90%	88%	Goal reached	Increased consumption of biomass, black liquor and hydrogen in the energy matrix
Expand self-sufficiency in power generation	77%	74%	75%	Goal not yet reached	Energy generation available for sale must be equal to or greater than the purchase from the National Interconnected System (SIN). In 2019, self-sufficiency reached 74%
Reuse of solid waste	96.55%	96.55%	Maintain waste reuse (reuse and recycling) > 95%	Goal reached	Result of the reduction in the generation of hazardous waste, in addition to the increase in the reuse of waste, mainly energy recovery, due to the change in the accounting for biomass waste
Reduction of solid HAZARDOUS waste	0.05%	0.04%	Maintain hazardous waste generation < 0.50% of total waste generation	Goal reached	Reduction in the disposal of hazardous waste in all categories

ENVIRONMENTAL INVESTMENTS

	2016	2017	2018	2019
Waste management (purchase of bins, waste dumpsters, improvements in recycling plants)	42,169,278.68	292,527.43	1,108,059.11	3,685,551.38

Air emissions treatment (maintenance of electrostatic precipitators, gas scrubbers, incinerators and improvements in control equipment)	28,276,213.86	1,315,444.60	17,261,233.82	1,710,982.72
Prevention costs (investments, monitoring, training and environmental education) ¹	69,683,600.35	13,815,311.41	8,892,954.90	55,173,669.69
Environmental management costs (personnel costs, certification costs and environmental charges)	6,860,123.42	8,027,789.56	11,778,705.33	6,714,347.22
Total	146,989,216.31	23,451,073.00	39,040,953.16	67,284,551.01
Treatment and disposal of solid waste			26,466,032.04	31,489,284.86

ENERGY

GRI 103-1, 103-2, 103-3

EFFORTS TOWARDS ENERGY EFFICIENCY AND CONSUMPTION OPTIMIZATION ARE IMPLEMENTED IN OUR INDUSTRIAL UNITS ON A CONSTANT BASIS.

Environmental and climate change management, as well as energy efficiency promotion and encouragement are expressed in our **Environmental and climate change management, as well as energy efficiency promotion and encouragement are expressed in our**. At the Puma Unit, we count on the involvement of employees, through the Internal Energy Conservation Committee (CICE), which fosters opportunities to reduce energy, steam and compressed air consumption and the elimination of waste among workers.

The Company is also engaged in energy production and a progressive increase in the renewable energy matrix, produced from biomass and black liquor.

89.54% OF THE ENERGY MATRIX IS COMPOSED OF RENEWABLE SOURCES.

In this context, the Puma Unit is a highlight for its use of biomass for energy generation. Surplus energy is traded. In 2019, 911,854 Megawatt-hours (MWh) were delivered to the Brazilian Electric System, enough to supply the entire state of São Paulo for two and a half days¹.

Holder of the ISO 50001:2018, certification, the Puma Unit maintains a routine of internal and external audits of its Energy Management system. Initiatives such as the installation of piping from the extraction sieve to the top of the eucalyptus digester, contribute to reducing steam consumption in the fiber line production of hot water.

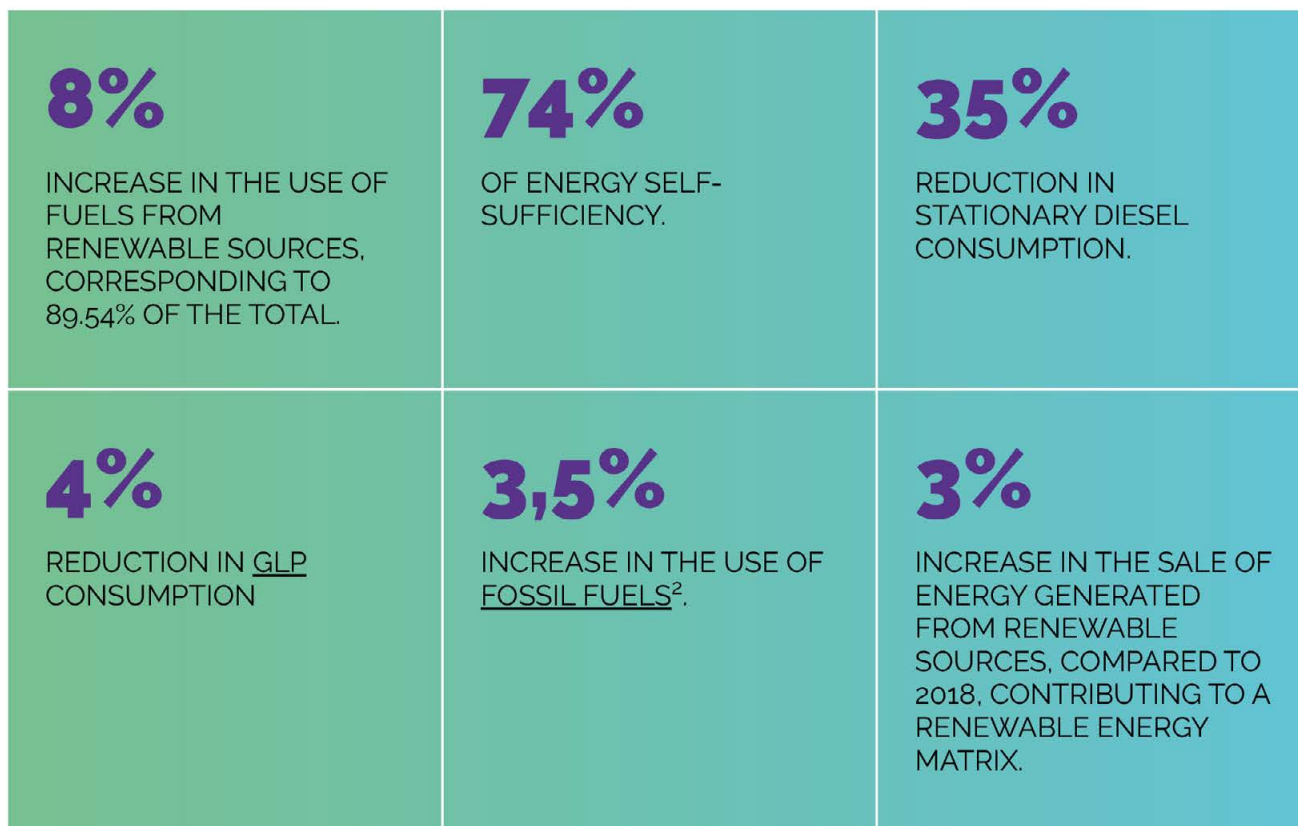
At the Puma Unit, energy-related targets impact the Profit Sharing Program (PPR).

Overall, in 2019, our energy intensity indicator was reduced in almost all businesses, except the Recycled Materials Business.

¹ *Considering consumption in December 2019, according to the Executive Summary released by the São Paulo State Department of Infrastructure and Environment. Available at: [6th bimester 2019](#)

INTERNAL FUEL CONSUMPTION IN 2019¹

GRI 302-1



* compared to 2018.

**related to the increase of 12% in natural gas consumption (replacement of the fuel oil boiler by a natural gas boiler in the Feira de Santana Unit (BA) and 1% in fuel oil consumption.

Consumption of fuel from non-renewable sources in Gigajoules (GJ)

	2016	2017	2018	2019
Natural gas	1,500,832.00	1,544,884.00	1,654,529.93	1,859,677.84
Fuel oil	5,347,095.00	4,695,937.00	4,119,543.39	4,165,393.55
LPG	360,188.00	446,586.00	460,608.87	444,240.63
Stationary Diesel	62,385.00	39,220.00	26,881.62	17,360.52
Non-renewable	7,270,500.00	6,726,627.00	6,261,563.81	6,482,968.14

Fuel consumption from non-renewable sources, in Megawatt-hour (MWh)

	2016	2017	2018	2019
Natural gas	416,897.78	429,134.44	459,591.65	516,577.18
Fuel oil	1,485,304.17	1,304,426.94	1,144,317.61	1,157,053.76
LPG	100,052.22	124,051.67	127,946.91	123,400.18
Stationary Diesel	17,329.17	10,894.44	7,467.12	4,822.36
Non-renewable	2,019,583.33	1,868,507.50	1,739,323.28	1,800,824.48

Consumption of fuel from renewable sources in Gigajoules (GJ)

	2016	2017	2018	2019
Biomass	19,829,173.00	21,128,715.00	17,568,544.99	18,627,631.41
Black liquor	25,922,799.00	31,420,144.00	33,096,853.86	36,304,324.98
Hydraulic energy	298,882.00	191,026.00	226,810.26	191,963.62
Tall Oil Tar*	–	210,117.00	256,008.69	173,187.23
Hydrogen*	–	152,970.00	148,342.96	161,575.47
Methanol	–	–	–	47,552.76
Renewable	46,050,854.00	53,102,972.00	51,296,560.76	55,506,235.47

	2016	2017	2018	2019
Biomass	19.829.173,00	21.128.715,00	17.568.544,99	18.627.631,41
Black liquor	25.922.799,00	31.420.144,00	33.096.853,86	36.304.324,98
Hydraulic energy	298.882,00	191.026,00	226.810,26	191.963,62
Tall Oil Tar ¹	–	210.117,00	256.008,69	173.187,23
Hydrogen ¹	–	152.970,00	148.342,96	161.575,47
Methanol	–	–	–	47.552,76
Renewable	46.050.854,00	53.102.972,00	51.296.560,76	55.506.235,47

¹ With the startup of the Puma Unit, hydrogen started to be considered a fuel. In addition, it became important to isolate tar fuel from black liquor; therefore, the report considers these two items separately as of 2017. Tar is a renewable fuel generated from processing Tail Oil, which is a by-product of the pulp industry.

Fuel consumption from renewable sources, in Megawatt-hour (MWh)₁

	2016	2017	2018	2019
Biomass	5,508,103.61	5,869,087.50	4,880,151.39	5,174,342.06
Black liquor	7,200,777.50	8,727,817.78	9,193,570.52	10,084,534.72
Hydraulic energy	83,022.78	53,062.78	63,002.85	53,323.23
Tall Oil Tar*	–	58,365.83	71,113.52	48,107.56
Hydrogen*	–	42,491.67	41,206.38	44,882.08
Methanol	–	–	–	13,209.10
Renewable	12,791,903.89	14,750,825.56	14,249,044.66	15,418,398.74

¹ With the startup of the Puma Unit, hydrogen started to be considered a fuel. In addition, it became important to isolate tar fuel from black liquor; therefore, the report considers these two items separately as of 2017. Tar is a renewable fuel generated from processing Tail Oil, which is a by-product of the pulp industry.

Total energy consumed and sold, in Gigajoules (GJ)

Total energy consumption (in GJ)*	2016	2017	2018	2019
Fuels from non-renewable sources	7,270,500.00	6,726,627.00	6,261,563.81	6,486,682.55
Fuels from renewable sources	46,050,854.00	53,102,972.00	51,296,560.76	55,506,235.47
Energy consumed	11,048,113.04	13,707,541.69	13,972,803.45	14,238,808.56
Energy sold	1,563,474.82	3,077,550.00	3,199,269.71	3,282,673.68
Total	62,805,992.23	70,459,590.69	68,331,658.31	72,949,052.90
Energy consumption (in GJ)	2016	2017	2018	2019
Electricity	11,048,113.04	13,707,541.69	13,972,803.45	14,238,808.56
Energy sold (in GJ)	2016	2017	2018	2019
Electricity	1,563,474.82	3,077,550.00	3,199,269.71	3,282,673.68

¹ Fuel data is generated through direct measurements and the conversion to GJ is calculated according to the conversion factors found in the spreadsheet of the Brazilian GHG Protocol, whose source is the IPCC. The conversion factors used are found in the spreadsheet of the Brazilian GHG Protocol, whose source is the IPCC (Intergovernmental Panel on Climate Change).

Total energy consumed and sold, in Megawatt-hour (MWh)¹

	2016	2017	2018	2019
Fuels from non-renewable sources	2,019,583.33	1,868,507.50	1,739,323.28	1,800,824.48
Fuels from renewable sources	12,791,903.89	14,750,825.56	14,249,044.66	15,418,398.74
Energy consumed	3,068,920.29	3,807,650.47	3,881,334.29	3,955,224.60
Energy sold	434,298.56	854,875.00	888,686.03	911,853.80
Total	17,446,108.95	19,572,108.53	18,981,016.20	20,262,594.03
Energy consumption (in GJ)	2016	2017	2018	2019
Electricity	3,068,920.29	3,807,650.47	3,881,334.29	3,955,224.60
Energy sold (in GJ)	2016	2017	2018	2019
Electricity	434,298.56	854,875.00	888,686.03	911,853.80

¹ Fuel data is generated through direct measurements and the conversion to GJ is calculated according to the conversion factors found in the spreadsheet of the Brazilian GHG Protocol, whose source is the IPCC. The conversion factors used are found in the spreadsheet of the Brazilian GHG Protocol, whose source is the IPCC (Intergovernmental Panel on Climate Change).

EXTERNAL ENERGY CONSUMPTION

GRI 302-2

There was a 21% increase in energy consumption outside the company, in the transportation of wood and delivery of products. This may be explained by the expansion of our forestry operations in Paraná. The fleet supplying the Monte Alegre and Ortigueira plants has nearly doubled and the average distance traveled has also increased compared to 2018.

External energy consumed¹

	2016	2017	2018	2019
Gigajoules (GJ)	1,331,268.63	2,484,497.85	2,397,656.83	2,906,892.76
Megawatt-hour (MWh)	369,796.84	690,138.29	666,015.79	807,470.21

¹ The premise adopted for the report is based on the fuel consumption volume of Scope 3, from the Brazilian GHG Protocol, converted into energy using the IPCC emission factors. The conversion factors used are found in the Brazilian GHG Protocol spreadsheet, whose source is the IPCC.

ENERGY INTENSITY

GRI 302-3

The energy intensity balance in 2019 is the result of our commitment to operate efficiently, aiming to reduce waste and losses. . The Papers, Pulp, Packaging and Bags Businesses posted reductions of 10%, 9%, 9% and 5%, respectively On the other hand, there was a 7% energy consumption increase (self-owned + purchased).

Energy intensity, in Gigajoules (GJ)

Energy intensity	2016	2017	2018	2019
Energy consumption within the organization	62,805,992.23	70,459,590.69	68,331,658.31	72,949,052.90
Energy intensity within the organization	17.46	15.79	16.13	16.70
Energy consumption outside of the organization	1,331,268.63	2,484,497.85	2,397,656.83	2,906,892.76
Energy intensity outside the organization	0.37	0.56	0.57	0.67
Energy consumption – organization total	64,137,260.86	72,944,088.54	70,729,315.15	75,855,945.66
Energy intensity – organization total	17.83	16.35	16.70	17.37
Tons produced – Specific metric – denominator	3,596,836.01	4,461,077.89	4,235,263.86	4,368,164.12

Energy intensity, in Megawatt-hour (MWh)

Energy intensity	2016	2017	2018	2019
Energy consumption within the organization	17,446,108.95	19,572,108.53	18,981,016.20	20,263,625.81
Energy intensity within the organization	4.85	4.39	4.48	4.64
Energy consumption outside of the organization	369,796.84	690,138.29	666,015.79	807,470.21
Energy intensity outside the organization	0.10	0.15	0.16	0.18
Energy consumption – organization total	17,815,905.80	20,262,246.82	19,647,031.99	21,071,096.01

Energy intensity – organization total	4.95	4.54	4.64	4.82
Specific tons – specific metric – denominator	3,596,836.01	4,461,077.89	4,235,263.86	4,368,164.12

Energy intensity by Business Unit, in Gigajoules/ton (GJ/ton)

	2016	2017	2018	2019
Papers	21.70	20.82	18.91	17.06
Pulp	21.18	18.28	17.63	16.02
Packaging	1.15	1.12	1.14	1.04
Recycled Materials	6.61	6.58	7.30	8.26
Sacks*	0.42	0.44	0.45	0.43

¹ The difference between the energy intensity of the Bags business is due to a change in the methodology to account for energy in the business.

Energy intensity by Business Unit, in Megawatt-hour/ton (MWh)

	2016	2017	2018	2019
Papers	6.03	5.78	5.25	4.74
Pulp	5.88	5.08	4.90	4.45
Packaging	0.32	0.31	0.32	0.29
Recycled Materials	1.84	1.83	2.03	2.29
Sacks ¹	0.12	0.12	0.13	0.12

¹ The difference between the energy intensity of the Bags business is due to a change in the methodology to account for energy in the business.

Ratio of energy intensity inside and outside the organization

2016	2017	2018	2019
47.18	28.36	28.50	25.09

The conversion factors used are found in the [Brazilian GHG Protocol spreadsheet](#), whose source is the IPCC

REDUCTION OF ENERGY CONSUMPTION

GRI 302-4

Reductions posted in 2019 are the result of process optimizations (in businesses such as pulp and paper) for the conservation and upgrade of the units' equipment. However, there was an increase in the total amount of energy consumption, due to Klabin's total production growth. Data is laid out on the following table:

Reductions in energy consumption by Business Unit, in Gigajoules (GJ)

Reductions in energy consumption obtained directly as a result of improvements in conservation and efficiency (GJ) ¹	2016	2017	2018	2019
Paper Business Unit	-	1,748,582.69	4,013,056.93	2,581,437.04
Pulp Business Unit	-	-	147,075.74	649,899.90
Packaging Business Unit	894,123.29	-	-	65,690.81
Recycled Business Unit	-	-	-	-
Bags Business unit	-	-	670.50	4,019.42

¹ Columns with "-" indicate that there was no energy reduction in the period.

Reductions in energy consumption by Business Unit, in MWh

Reductions in energy consumption obtained directly as a result of improvements in conservation and efficiency (in MWh)*	2016	2017	2018	2019
Paper Business Unit	-	485,717.41	1,114,738.04	717,065.84
Pulp Business Unit	-	-	40,854.37	180,527.75
Packaging Business Unit	248,367.58	-	-	18,247.45
Recycled Business Unit	-	-	-	-
Bags Business unit	-	-	186.25	1,116.50

¹ Columns with "-" indicate that there was no energy reduction in the period.

EMISSIONS

GRI 103-1, 103-2, 103-3

Technology has become Klabin's ally to reduce emissions. Truck drivers in the forestry operations in Paraná, for instance, started using the salvage device in vehicles in 2019, helping reduce diesel consumption and, consequently, gas emissions. An application is also under development to show drivers the best route to be taken in the forest area, with suggestions of routes of less fuel consumption or even alternative routes to avoid disturbing neighboring communities.

Seeking new and more efficient technologies in the transport of wood with reduced consumption of fossil fuels, the use of triple semi-trailer trucks was adopted in July 2019, in Paraná. With a higher volume of wood transported per travel, a 25% reduction is estimated in the number of trucks circulating on the highways. This also means a reduction in diesel consumption and emissions.

DIRECT (SCOPE 1) GREENHOUSE GAS EMISSIONS

GRI 305-1

With a 3% increase in production, the company increased specific emissions from 158 to 163 CO₂eq/t. On the other hand, there was an increase of 7% in Scope 1 emissions, which can be related to increases in fuel consumption (as indicated in GRI 302-1); use of air conditioning gases; use of nitrogen compounds in the forest deployment operation.

With a higher percentage of biomass burning in the boilers, there was also a 4% increase in Scope 1 biogenic emissions, as shown in the table below.

Direct Greenhouse Gas (GHG) emissions, in tons of CO₂ equivalent

Direct Greenhouse Gas (GHG) emissions, (tons of CO ₂ equivalent)*	2016	2017	2018	2019
Total gross CO ₂ emissions	657,265.86	709,560.47	668,952.44	713,885.93
Biogenic CO ₂ emissions (in tons of CO ₂ equivalent)	4,593,412.91	5,272,920.75	5,011,972.26	5,231,190.87

¹ The gases included in the calculations above are CO₂, CH₄, N₂O and HFCs Klabin follows the reference and methodology of the Brazilian GHG Protocol Program and used the operational control approach.

INDIRECT EMISSIONS RESULTING FROM THE PURCHASE OF ENERGY (SCOPE 2)

GRI 305-2

As a result of the increase in total production, in 2019, a 9% increase was posted in the energy purchased under the “location” approach. In the “purchase choice” mode, Scope 2 emissions totaled 39,207.29 tCO₂eq. It is worth mentioning that 60% of the energy purchased came from renewable and certified sources.

Indirect emissions from the purchase of energy, in tons of CO₂ equivalent

2016	2017	2018	2019
99,865.99	105,828.68	87,791.49	95,674.19

Purchase choice¹

	2017	2018	2019
Scope 2 emissions based on purchase choice (tCO ₂ eq)	43,664.220	36,448.514	39,207.288
% renewable energy purchase	58.9	60.5	60.6

¹ Information included in the report from the 2019 cycle, considering historical data for 2017 and 2018

OTHER INDIRECT (SCOPE 3) GREENHOUSE GAS EMISSIONS

GRI 305-3

There was a 21% increase in upstream transport emissions, responsible for supplying the pulp and paper mills. This is a result of the expansion of the forestry operation in Paraná. Besides the fleet having nearly doubled, the average travel distances also increased.

We also recorded a 22% increase in downstream transport emissions, reflecting Klabin's market expansion in Brazil and Mercosul.

Other Greenhouse Gas emissions, in tons of CO₂ equivalent

Other Greenhouse Gas emissions (in tons of CO ₂ equivalent) ¹	2016	2017	2018	2019
Upstream				
Upstream transportation and distribution	33,054.58	85,539.32	62,558.65	75,417.09
Waste generated in operations	716.50	527.34	435.18	356.18
Business travel	2,493.20	1,256.17	729.74	938.90
Employee transportation	1,614.35	1,983.68	2,363.61	1,944.99
Subtotal	37,878.63	89,306.51	66,087.18	78,657.16
Downstream				
Downstream transportation and distribution	62,997.77	86,061.59	104,378.81	127,330.06
Subtotal	62,997.77	86,061.59	104,378.81	127,330.06
Total	100,876.40	175,368.10	170,465.99	205,987.22

¹ Klabin had no upstream emissions related to assets acquired, capital goods, energy-related activities and leased assets. Klabin had no downstream emissions related to the processing and use of products sold, handling of products sold at the end of their shelf life, leased assets, franchises and investments.

Biogenic CO₂ in tons of CO₂ equivalent

GRI 305-3

2016	2017	2018	2019
2,023.87	12,893.64	15,760.52	21,830.46

INTENSITY OF GREENHOUSE GAS EMISSIONS

GRI 305-4

Gross emissions increased 10% compared to 2018, reflecting the increased consumption of fossil fuels, presented in GRI 302-1, and the expansion of the forestry operation, registered in GRI 305-3. Due to such factor, the intensity of Scope 1 and Scope 1+2 greenhouse gas emissions increased by 3% and 4%, respectively.

Intensity of Greenhouse Gas emissions, in tons of CO₂ equivalent*

Greenhouse gas emissions intensity	2016	2017	2018	2019
Total GHG emission (in tons of CO₂ equivalent)	858,008.25	990,757.25	927,209.92	1,015,547.34
Intensity of greenhouse gas emissions (Scope 1+2+3)	238.68	235.17	218.93	232.49
Intensity of greenhouse gas emissions (Scope 1)	182.84	168.42	157.95	163.43
Intensity of greenhouse gas emissions (Scope 2)	27.78	25.12	20.73	21.90
Intensity of greenhouse gas emissions (Scope 3)	28.06	41.63	40.25	47.16
Intensity of greenhouse gas emissions (Scope 1+2)	210.62	193.54	178.68	185.33

¹Specific denominator metric, in tons produced: **2016:** 3,596,836.01; **2017:** 4,461,077.89; **2018:** 4,235,263.86; **2019:** 4,368,164.12.

REDUCTION OF EMISSIONS OF GREENHOUSE GASES

GRI 305-5

As shown in the topics GRI 305-1, 305-2 and 305-3, there was no emission reduction in 2019. The targets for the topic are listed in GRI 305-4.

Reductions in greenhouse gas (GHG) emissions obtained as a direct result of emissions reduction initiatives, in tons per CO₂ equivalent

Reductions in GHG emissions obtained as a direct result of emission reduction initiatives (in tons of CO ₂ equivalent)	2016	2017	2018	2019
Reductions from direct (Scope 1) emissions	0.00	0.00	40,608.03	0.00
Reductions from indirect (Scope 2) emissions from the purchase of energy	40,455.70	0.00	18,037.63	0.00
Reductions from other indirect (Scope 3) emissions	5,901.85	0.00	0.00	0.00
Total GHG emission reductions	46,357.55	0.00	58,645.66	0.00

NO_x, SO_x AND OTHER SIGNIFICANT AIR EMISSIONS

GRI 305-7

We applied federal legal requirements to all sources of emissions, except for units where specific state legislation applies and/or emission limits are stipulated in environmental licenses. The selection of emission limits complies with the legislation of the state where the unit is located. Changes in 2019 include:

- 39% increase in NO_x emissions in the Pulp and Paper segment, due to an increase in burning field waste and DNCG.
- 48% increase in SO_x emissions in the Pulp and Paper segment, mainly due to the increased flow of treated Diluted Non-Condensable Gas (DNCG) and the end of the service life of Incinerator 2 at the Monte Alegre unit.
- 24% reduction in OM emissions in the Pulp and Paper segment.

At the end of 2019, we completed the installation and began operations for the new non-condensable gas incinerator (CNCG and DNCG) at the Monte Alegre unit. With this new equipment, we expanded the GNC treatment system, reducing atmospheric emissions and improving air quality in the region.

Significant air emission reductions, tons

Significant air emission reductions (tons)*	2016	2017	2018	2019
NOx	4,685.76	5,437.03	4,374.83	4,654.33
SOx	3,949.68	1,789.18	2,813.06	4,036.17
Volatile organic compounds (VOC)	3.65	87.45	18.05	2.29
Particulate Matter (MP)	6,356.76	5,708.38	5,243.06	5,178.12

¹ The source of the emission factors is the sum of the results of the air emissions monitoring campaigns for Klabin emission sources, performed via isokinetic monitoring. This information was obtained from sampling reports carried out by third-party laboratories, certified to provide such service. For these gases, emission is measured directly in the chimneys, obtaining gas concentrations and flow rates. The emission rate is thus calculated and extrapolated for the entire year to obtain the absolute value. Sampling was carried out according to the standards of the Brazilian Association of Technical Standards (ABNT), using the isokinetic monitoring methodology and in accordance with other CETESB references.

Persistent organic pollutants (POP) and Hazardous air pollutants (HAP) have not been determined as legal constraints to the business.

CLIMATE CHANGE

GRI 103-1, 103-2, 103-3

WE BELIEVE THAT PRIORITIZING BUSINESS STRATEGIES TAKING OUR STAKEHOLDERS INTO ACCOUNT IS FUNDAMENTAL TO BUILDING A SUSTAINABLE, RESPONSIBLE AND CONSENSUAL FUTURE.

Such an extensive consultation helps to point out priorities that the company should address in its short-, medium- and long-term sustainability strategies. In our last study cycle, in 2019, climate change and the consequent impacts related to water, energy and biodiversity were mentioned by stakeholders as critical points of concern.

One of the goals for the corporate Sustainability area is the daily management of the issue as part of their role to monitor global and national climate agendas and map risks and opportunities. In addition, matters related to air emissions are included in the environmental indices of Klabin's main units, under monthly monitoring and review.

The definitions and major action plans to meet the defined goals involve the operational and strategic levels. Risks and opportunities are on the top management's permanent agenda. The topic is discussed by the Permanent Sustainability Committee, comprised by the Director of Industrial Technology and Sustainability, sponsor, and the directors of the Legal, Forestry, People and Management, and Industrial Papers areas; in addition to the Executive Sustainability and Environment manager. The strategies and actions aligned and defined by the Committee are overseen by the Financial, Legal, Social and Environmental areas. All items taken into account at these meetings are relevant for the definition of the company's growth strategy, considering the use of new technologies and projects aligned with the UN Sustainable Development Goals.

CLIMATE MANAGEMENT

The company has a comprehensive matrix of weather-related opportunities and risks, including the internal mapping of impacts experienced due to weather and main future risks and opportunities, as well as observations from the Climate Conference (COP) and the Intergovernmental Panel on Climate Change (IPCC). The Company also contributes to the NDC Brazil goal of “restoring and reforesting 12 million hectares of forests by 2030, for multiple uses” (a Brazilian commitment to fulfilling the goals of the COP 21 Climate Agreement). [Learn more here.](#)

One of the mapped risks, for instance, is temperature rise and the frequency of intense heat waves that may impact the spread of forest pests due to enhanced thermal stress on plantations. Such risk prompted the company to create the **Department of Productivity and Forest Ecophysiology**, which monitors possible future climate scenarios, developing data modeling related to climate parameters and assessing the impact of planted forests. The Department recommends the necessary measures in case of adverse effects.

Potential mapped risks include increasing temperatures; increased levels of rainfall, which may have negative impacts by accelerating the growth rate of forest pests; the need for more forest irrigation; and changes in the phenology (biological cycle) of pine and eucalyptus species, impacting forest improvement programs.

The constant search for the reduction of Greenhouse Gas (GHG) emissions is one of the items in the Sustainability Policy, which guides action planning for the company. The Company’s commitments regarding the topic, therefore, stem from such Policy and the KSDGs:

CONTINUOUS INVESTMENT

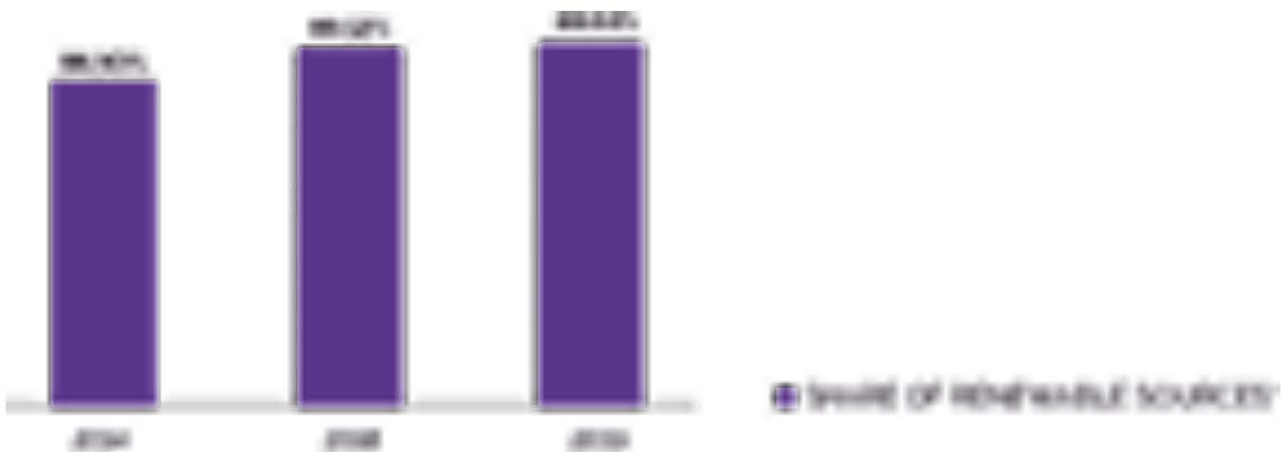
TO INCREASE THE SHARE OF RENEWABLE SOURCES IN THE ENERGY MATRIX AND CONSEQUENT DEVELOPMENT OF PRODUCTS WITH A LOWER CARBON FOOTPRINT.

POWER GENERATION

FROM RENEWABLE SOURCES SUCH AS BIOMASS AND BLACK LIQUOR.

EVOLUTION

In recent years, we have gradually replaced fuel oil in the boilers with biomass, plant material from forestry operations. This increased the share of renewable sources in energy generation, exceeding the pre-establish 88% target:



REDUCTION OF GHG EMISSIONS

IN 2019, WE JOINED THE UN *GLOBAL BUSINESS AMBITION FOR 1.5 °C – OUR ONLY FUTURE* CAMPAIGN. AS A RESULT, WE TOOK ON THE COMMITMENT TO REDUCE GHG EMISSIONS, HELPING TO CURB THE PLANET'S TEMPERATURE INCREASE BY 1.5°C. A TOTAL OF 200 COMPANIES HAVE JOINED THE PACT WORLDWIDE. IN BRAZIL, WE ARE ONE OF THE 11 PARTICIPANTS IN THE INITIATIVE.

WE ALSO SENT A LETTER OF COMMITMENT TO THE SCIENCE BASED TARGETS (SBT) INITIATIVE TO REVIEW AND DEFINE NEW EMISSION REDUCTION TARGETS.

KLABIN'S WATER MANAGEMENT, CLIMATE CHANGE AND SUPPLIER ENGAGEMENT RATING PROGRAMS WERE RECOGNIZED BY CDP. THE COMPANY WAS PROMOTED TO CATEGORY A, WHICH REPRESENTS ITS LEADERSHIP IN THESE AREAS. CDP, AN INTERNATIONAL NON-PROFIT ORGANIZATION, ANALYZES AND RECOGNIZES THE EFFORTS OF COMPANIES WORLDWIDE TO MANAGE THE ENVIRONMENTAL IMPACTS OF THEIR ACTIVITIES.





FINANCIAL IMPLICATIONS AND OTHER RISKS AND OPPORTUNITIES ASSOCIATED TO CLIMATE CHANGE

GRI 201-2

The recommendations of the Task Force on Climate Related Financial Disclosure (TCFD) were gradually implemented. We have a survey of climate risks and opportunities, with an understanding of the category and magnitude of the financial impact, considering mitigation measures for risks and actions to enhance opportunities.

Risks and opportunities depend on changing climate variables in future scenarios. Thus, the time of occurrence of such events is still uncertain, but a horizon between 2020 and 2050 can be considered. Find below a summary of the main risks and opportunities mapped.

Risks and opportunities motivated by climate change¹

RISK/OPPORTUNITY			ACTION	FINANCIAL IMPACT		
Category	Event	Impact	Adaptation and investment measures	Category	Magnitude	Potential financial impact
Regulatory	Carbon emission regulation of carbon through the market mechanism: taxation and/or emissions trading system	Two of Klabin's industrial units – Puma and Monte Alegre – produce direct emissions above 200,000 tCO ₂ e. This indicates that these units can be regulated by carbon pricing schemes	Domestic carbon pricing – adoption of the shadow price for impact and investment analysis. The domestic carbon price is used based on the average carbon price in Latin America – around BRL 40. Sensitivity analyzes are also performed, as well as application scenarios for the regulation instrument. There is no need for additional investment.	Operating cost and revenues		The company invests in carbon reduction technologies, which decreases carbon cost and exposure to regulation. A regulated carbon market in Brazil is still expected to trade offsets, of forest origin, as a flexibility mechanism, which would generate revenue gains for the Company.
Physical	Climate change, such as increased temperature, shortage/excessive rainfall	Impact on forest productivity, especially on the growth of planted forest, in addition to changes in the incidence of pests.	Creation of the Forest Efficiency and Ecophysiology Department. Investment in forestry research and testing different pine and eucalyptus materials, which are more resistant to water deficit or pests. This investment is inherent to the general investment in the forestry research and development area.	Operating cost and revenues		Falling forest productivity may have an impact on revenue, with increased operating costs to mitigate such impact. However, an investment in forestry biotechnology may contribute to forest productivity gains.
Chronic	Water scarcity. Change in rainfall patterns.	A drop in the supply of such input can impact industrial productivity. Some units (Goiana, Jundiá I and TP) are located in areas with an expected future climate scenario of water scarcity.	Integrated/adaptive management of water resources, with measures to reduce water consumption and increase reuse. Water source diversification assessment, including reuse.	Operating cost		The water replacement cost analysis (which considers possible new measures for supplying the input) shows an increase in operating cost. However, these measures reduce the probability of water scarcity that interferes with productivity.
Technological	Development of industrial technologies for energy efficiency and reduction of carbon emissions.	Energy efficiency, bioenergy generation, savings/energy savings are examples of the positive impacts on the deployment of low carbon technologies.	The company makes robust investments in low-carbon technologies. Example: Capex of biomass gasification projects – BRL 132 MM; tall oil – BRL 25,4 MM	Capital and revenue		Low-carbon technologies contribute to reducing operating costs and to revenue gains, due, for example, to the opportunity to sell energy, in addition to reducing operating costs.

Market	Increased consumer demand for products/packaging with a low carbon footprint.	By offering products manufactured from renewable sources and a predominantly clean energy matrix (89.5%), the Company may benefit from the consumers' growing awareness on low carbon products.	Adoption of methodologies that help map and communicate the carbon footprint of Klabin's products. Approximately BRL 500,000 were invested in studies.	Competitiveness		It is not yet possible to estimate the increase in "low carbon" products and the consequent positive impact on Klabin's product sales. However, the Company is following this market trend, increasing its portfolio of bioproducts.
Reputational	Increased stakeholder perception on the importance and valuation of mitigation and adaptation measures to climate change.	Recognition of the company's stakeholders, as well as investors.	Klabin responds to reports and questionnaires that acknowledge and communicate the Company's investments and actions in the climate agenda, such as CDP.	Competitiveness		Positive return. Klabin is recognized on the market for its investment and good practices in climate management, which enabled part of the issuance of USD 1.2 billion green bonds, which will be allocated to projects directly and indirectly linked to the low carbon economy.

¹ The mapping considers the risks and opportunities described above in the 2020 to 2040 panorama, thus configuring short to long-term risks.



WATER AND EFFLUENTS

GRI 103-1, 103-2, 103-3

Water is one of the most important inputs for our processes, mainly in the production of paper and pulp.

The resource is also used in the entire value chain: from the manufacture of chemical inputs to the road and sea transport of final products. Whether by reducing captured water or reusing effluents, our focus is on reducing consumption.

As described in items 7 and 12 of our [Sustainability Policy](#), all units operate in compliance with current environmental laws and regulations, at the local, state and national levels. In addition, we seek continuous improvement in all processes, valuing the conservation of natural resources and fostering water reuse.

In addition to internal guidelines and policies, federal and state legislation on effluents and water resources are constantly monitored:

- [CONAMA Resolution No. 430/2011](#) – Conditions and standards for effluent discharge;
- [CONAMA Resolution No. 357/2005](#) – Classification of water bodies and framework environmental guidelines;

We participate in the Tibagi River Basin Committee, in Paraná; the Canoas River Basin Committee, in Santa Catarina; and the Piracicaba, Capivari and Jundiaí Rivers Hydrographic Basins Committee, in São Paulo. We also participate in other committees in the regions where our plants are located (Angatuba/SP and Goiana/PE). Company representatives actively participate in discussions on water use, water resource plans and the establishment of mechanisms for water use pricing/charging.

MANAGEMENT AND ASSESSMENT

GRI 103-1, 103-2, 103-3

One hundred percent of the effluents are treated at the Effluent Treatment Plants (ETP), before discharge to the water bodies. Treatment is monitored both internally and by a third party, in compliance with all legal requirements.

The units periodically undergo internal and external audits to assess the Management System, including the Water and Effluent System. In some units, water-related targets impact the Profit Sharing Program (PPR).

THE PUMA II PROJECT, STARTED IN 2019, WILL FEATURE NEW TECHNOLOGIES FOR THE TREATMENT OF WATER AND EFFLUENTS, INCLUDING THE TERTIARY TREATMENT OF 100% OF THE GENERATED EFFLUENT.

WATER FOOTPRINT

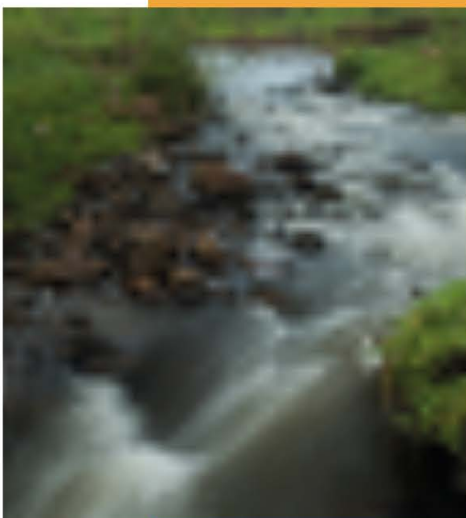
IN 2019, KLABIN PARTICIPATED IN THE *EL ÁGUA NOS UNE* INITIATIVE, A LATIN AMERICAN NETWORK THAT OPERATES IN THE BUSINESS MANAGEMENT OF WATER RESOURCES FROM THE WATER FOOTPRINT. IN BRAZIL, THE NETWORK IS IMPLEMENTED BY THE GETÚLIO VARGAS FOUNDATION (FGVCS). IN PARTNERSHIP WITH THE INSTITUTION, WE HAVE DEVELOPED THE PUMA UNIT'S PULP WATER FOOTPRINT, ACCORDING TO ISO 14046: 2014.

INTERACTIONS WITH WATER AS A SHARED RESOURCE

GRI 303-1

In addition to participating in Hydrographic Basin Committees in Paraná and Santa Catarina, we monitor potential conflicts with stakeholders due to increased pressure on natural resources.

BASED ON INTERNATIONAL BEST PRACTICE REFERENCES AND THE SDGS, OUR GOAL IS TO KEEP WATER ABSTRACTION BELOW 105,000.00 M³/YEAR X 1000 UNTIL 2022.



HYDROSOLIDARITY

In 2019, the work **Planejamento Florestal – Microbacias e Hidrossolidariedade** [Forestry Planning – Microbasins and Hydrosolidarity] was awarded by Diálogo Florestal, an initiative that brings together forest-based companies, environmental organizations and social movements. The project consists of verifying the best forest management practices to extinguish or minimize impacts on tertiary basins. Based on the studies, it is established whether it is more appropriate to plant eucalyptus or pine, for instance, considering the local water supply.

The work was also presented at the XXV IUFRO World Congress (the International Union of Forest Research Organizations), which took place in 2019 in Curitiba. The event, organized and coordinated by the Brazilian Forest Service (SFB) and the Brazilian Agricultural Research Corporation (Embrapa) is an important forum for exchanging experiences and knowledge on technological innovations in the sector.

MANAGEMENT OF IMPACTS RELATED TO WATER DISCHARGE

The minimum effluent disposal standards are based on municipal, state, and federal legislation for each unit. Klabin also compares its results with IFC/IPCC indicators, which are a benchmark for the pulp and paper sector. In order to determine the maximum discharge limits, the responsible environmental body requests studies on water dispersion and self-depuration of the water body to assess and determine the limits that do not change the quality and volume of the water body.



IMPROVEMENTS IN RIO NEGRO

In 2019, investments were allocated to restructure the Effluent Treatment Station in the Rio Negro Unit, in Paraná. Based on the implemented improvements, it was possible to reduce the generation of hazardous waste by over 100 tons. Treated effluents, thus, can also be used in Unit's glue production, closing the cycle.

O trabalho também foi apresentado no XXV Congresso Mundial da IUFRO (sigla em inglês para União Internacional de Organizações de Pesquisa Florestal), ocorrido em 2019 em Curitiba. O evento, organizado e coordenado pelo Serviço Florestal Brasileiro (SFB) e pela Empresa Brasileira de Pesquisa Agropecuária (Embrapa) é um importante fórum de troca de experiências e conhecimento em inovações tecnológicas do setor.

WATER WITHDRAWAL

GRI 303-3

Even with a 3% production increase, water abstraction from 2018 to 2019 rose only 0.3%, which demonstrates the units' water efficiency. In units with water stress, which represents 1% of the total water withdrawn by Klabin in the period, water abstraction grew 23%. This is due to the change in the classification of the Jundiá Distrito Industrial and Jundiá Tijuco Preto Units, in São Paulo, which are now featured in the water stress list.

WATER MANAGEMENT IN THE SUPPLY CHAIN

ALSO IN 2019, WE STARTED EVALUATING SUPPLIERS THROUGH THE ECOVADIS PLATFORM. A TOTAL OF 110 COMPANIES WERE SELECTED IN THE FIRST CYCLE OF SOCIAL AND CORPORATE RESPONSIBILITY ASSESSMENT, INCLUDING WATER-RELATED MAPPING AND EVIDENCE. OF THE TOTAL, OVER 72% PROMOTE WATER MANAGEMENT INITIATIVES.

Total water withdrawal, In Megaliter (Ml)

Total water withdrawal, broken down by the following sources (in Ml - Megaliter)*	2016		2017		2018		2019	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
Surface water, including wetlands, rivers, lakes and oceans	92,413.75	0.00	111,151.20	830.20	108,177.69	955.86	108,306.42	1,110.84
Groundwater/water tables	91.96	0.00	80.57	21.21	89.99	20.64	49.87	69.00
Third-party water	179.55	0.00	186.12	0.00	169.34	0.00	153.06	21.57
Total	92,685.26	0.00	111,417.89	851.42	108,437.02	976.50	108,509.34	1,201.42

¹All withdrawn water is from freshwater sources ($\leq 1,000$ mg/L of total dissolved solids). Klabin does not withdraw produced water (water retained in underground formations, brought to the surface).

Total water withdrawal, in cubic meters (m³)¹

Total water withdrawal, broken down by the following sources (in Ml - Megaliter)*	2016		2017		2018		2019	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
Surface water, including wetlands, rivers, lakes and oceans	92,413,753.00	0.00	111,151,197.10	830,202.90	108,177,687.79	955,860.00	108,306,415.30	1,110,841.00
Groundwater/water tables	91,962.00	0.00	80,574.14	21,212.86	89,988.57	20,640.00	49,870.43	69,004.80
Third-party water	179,547.00	0.00	186,117.00	0.00	169,342.76	0.00	153,055.76	21,570.00
Total	92,685,262.00	0.00	111,417,888.24	851,415.76	108,437,019.12	976,500.00	108,509,341.49	1,201,415.80

¹All withdrawn water is from freshwater sources ($\leq 1,000$ mg/L of the total dissolved solids). Klabin does not withdraw produced water (water retained in underground formations, brought to the surface).

DISCHARGE OF EFFLUENTS

Manufacturing units follow the limits established by the legislation in force in each state and country for reference and monitoring of effluents. Parameters such as Biochemical Oxygen Demand (BOD5) and BOD5 removal efficiency are priorities. In the pulp and paper mills, the concentrations of Chemical Oxygen Demand (COD) and phosphorus in effluents are also of great importance. Indices are often compared with global benchmarks, such as the IPPC and IFC.

Between 2018 and 2019, there was an increase in the discharge of effluents by only 2%. In the units with water stress, the rate grew 36% due to the inclusion of the Jundiáí Distrito Industrial and Jundiáí Tijuco Preto Units.

There are no defined goals for the topic, since the target set for water consumption decrease directly impacts the reduction of effluent generation.

A GOOD EXAMPLE

A UNIDADE PUMA, EM ORTIGUEIRA, NO PARANÁ, POSSUI UM DOS MAIORES MONTANTES DE DESCARTE DE ÁGUA NO RIO TIBAGI. ISSO PORQUE SEU PROCESSO DE TRATAMENTO É UM DOS MAIS SOFISTICADOS E ROBUSTOS DA KLABIN. COM TRATAMENTO TERCIÁRIO, O EFLUENTE LANÇADO NO CORPO RECEPTOR APRESENTA QUALIDADE SUPERIOR AOS LIMITES AMBIENTAIS EXIGIDOS. DEVIDO À ÓTIMA QUALIDADE DO EFLUENTE TRATADO, A UNIDADE FAZ A CAPTAÇÃO DE ÁGUA A JUSANTE DO PONTO DE LANÇAMENTO DE EFLUENTE.

Total water discharge¹ in megaliters (ML)

Total of water discharge, broken down by the following destinations (ML – megaliter) ²	2016		2017		2018		2019	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
Surface water, including wetlands, rivers, lakes and oceans	74,195.94	0.00	99,251.94	661.86	89,888.04	686.90	91,389.50	914.70
Third-party water, and the volume of this total sent for use in other organizations, if applicable.	0.00	0.00	100.70	0.00	102.61	0.00	99.31	17.22
Total	74,195.94	0.00	99,352.64	661.86	89,990.65	686.90	91,488.82	931.92

¹ Effluent discharge data are monitored in all units. The company uses its own platform to compile and analyze all indicators of environmental performance and sustainability.

² Klabin does not dispose of effluent into groundwater. All discharge is of freshwater ($\leq 1,000$ mg/L of total dissolved solids). The Goiana/PE, Jundiáí TP and Jundiáí DI units are located in areas with water stress.

Total water discharge, in cubic meters (m³)

Total water discharge, broken down by the following destinations (ML – megaliter) ²	2016		2017		2018		2019	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
Surface water, including wetlands, rivers, lakes and oceans	74,195,940.18	0.00	99,251,940.00	661,860.00	89,888,040.00	686,900.00	91,389,502.40	914,702.00
Third-party water, and the volume of this total sent for use in other organizations, if applicable.	0.00	0.00	100,700.00	0.00	102,609.64	0.00	99,314.17	17,216.00
Total	74,195,940.18	0.00	99,352,640.00	661,860.00	89,990,649.64	686,900.00	91,488,816.57	931,918.00

¹ Effluent discharge data are monitored in all units. The company uses its own platform to compile and analyze all indicators of environmental performance and sustainability.

² Klabin does not dispose of effluent into groundwater. All discharge is of freshwater ($\leq 1,000$ mg/L of total dissolved solids). The Goiana/PE, Jundiáí TP and Jundiáí DI units are located in areas with water stress.

WATER CONSUMPTION

GRI 303-5

The lower consumption recorded in 2019 shows that we are focused on reducing impacts on water resources, returning more water to water bodies and further increasing reuse of such resource in the plants. Reported water consumption indicators refer to water abstraction minus the discharge of treated effluents.

Total water consumption¹, in Megaliters (ML)

2016		2017		2018		2019	
All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
18,489.32	0.00	12,065.25	189.56	18,446.37	289.61	17,020.52	269.50

¹We use the following equation to calculate Klabin's water consumption: Water consumption = Total water withdrawal – Total water discharge. The Goiana/PE, Jundiá TP and Jundiá DI units are located in areas with water stress. The total water consumed by these three units in 2019 was 269.5 megaliters.

Total water consumption¹, in millions of cubic meters (m³)

2016		2017		2018		2019	
All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
18.49	0.00	12.07	0.19	18.45	0.29	17.02	0.27

¹We use the following equation to calculate Klabin's water consumption: Water consumption = Total water withdrawal – Total water discharge. The Goiana/PE, Jundiá TP and Jundiá DI units are located in areas with water stress. The total water consumed by these three units in 2019 was 269.5 megaliters.

Specific water consumption by business and by unit, in m³ per ton (m³/t)

Water consumption reported in the indicators below refers to water capture less the discharge of treated effluents (advisory use).

Specific water consumption/water intensity (m ³ /t), by business	2017	2018	2019
Papers	6.53	3.64	4.22
Pulp	3.49	8.32	6.23
Packaging	0.26	0.25	0.21
Recycled Materials	1.55	1.63	1.29
Sacks	0.03	0.00	0.02
Specific water consumption/water intensity (m ³ /t), by unit	2017	2018	2019
Angatuba	1.34	1.27	2.48
Betim	0.25	0.24	0.22
Correia Pinto	8.33	6.92	2.96
Feira de Santana	0.13	0.20	0.15
Goiana	0.63	0.91	0.72
Itajaí	0.29	0.23	0.22

Jundiaí DI	0.18	0.22	0.21
Jundiaí TP	0.14	0.28	0.34
Lages 1	0.01	0.00	0.00
Manaus	0.68	0.62	0.54
Monte Alegre	8.90	4.25	6.06
Otacílio Costa	0.87	1.18	0.64
Piracicaba KE	0.23	0.15	0.16
Piracicaba KR	2.32	1.63	1.29
Puma	3.49	8.32	6.23
Rio Negro	0.20	0.38	0.01
São Leopoldo	0.25	0.25	0.22

WASTE MANAGEMENT

GRI 103-1, 103-2, 103-3

Items **6, 7, 10 and 12** of our Sustainability Policy encompass pollution prevention through the reduction of the impacts of solid waste generation; the search for the most efficient technologies and solutions; guidance by the SDGs; and compliance with legislation and standards applicable to the product, environment, health and safety. Environmental management is also based on the guidelines set forth by ISO 14001, in which most of our units are certified.

In addition to internal guidelines and policies, federal (Law No. 12.305/2010 – National Policy on Solid Waste), state and municipal legislation related to solid waste are constantly monitored, accompanied by actions to demonstrate compliance with the guidelines of these standards.

Environmental indicators are a pillar considered when calculating bonuses for employees and senior management. The restructuring of the Sustainability area, mentioned at the beginning of this chapter, also strengthens management of the issue.

WASTE BROKEN DOWN BY TYPE AND DISPOSAL METHOD

GRI 306-2

We reduced hazardous waste generation by approximately 10% when compared to 2018, driving the hazardous waste percentage down from 0.11% in 2018 to 0.04% in 2019. In addition, the percentage of non-hazardous waste reuse is at 96.7%, reinforcing the commitment and focus on achieving the goal of maintaining waste reuse > 95% until 2022.

It is worth stressing that there was a significant increase in the amount of forestry residues (bark, branches, chips) for energy reuse due to changes in their accounting method (barks were previously not considered as waste for energy use).

Disposal of hazardous waste, in tons

Destination	2016	2017	2018	2019
Reuse	-	10.32	73.82	41.19
Recycling	152.82	185.78	219.22	196.86
Recovery (including energy recovery)	37.42	38.73	22.62	31.93
Incineration (mass burn)	0.45	9.90	9.21	0.00
Other (class I landfill)	378.28	318.89	620.20	576.26
Other (decontamination)	56.22	47.42	0.00	0.00
Total	625.19	611.03	945.07	846.24

Disposal of non-hazardous waste, in tons

Destination	2016	2017	2018	2019
Reuse	134,661.72	103,526.98	81,683.49	146,818.67
Recycling	74,737.58	215,958.75	220,816.15	229,456.70
Composting	95,453.06	133,301.74	139,788.52	148,678.14
Recovery (including energy recovery) ¹	1,344,362.55	1,414,677.67	1,448,094.02	1,574,435.08
Incineration (mass burn)	0	167	0	0
Class II-A landfill	62,246.01	112,770.43	67,405.53	72,620.91
On-site storage	14,457.89	19,433.57	15,998.40	12,367.61
Total	740,112.02	956,181.04	852,619.13	2,184,377.11

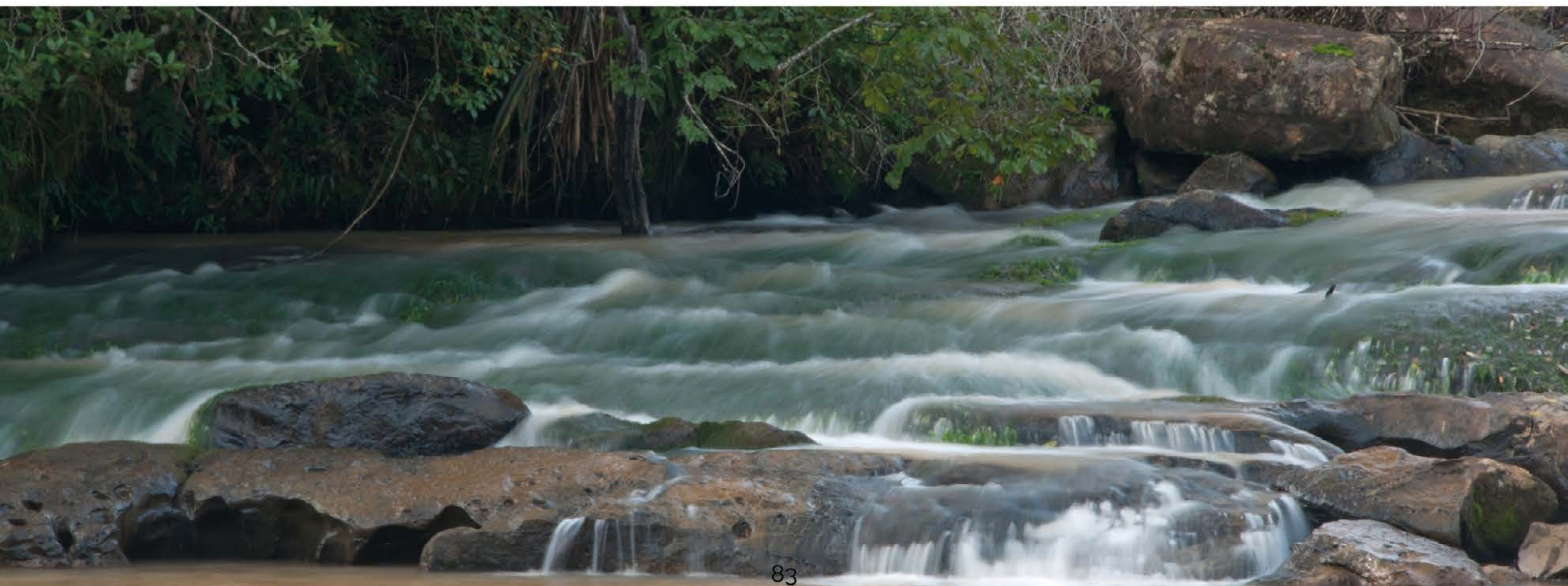
¹As of 2019, we began to consider as waste all the barks generated and burned in the boilers as biomass.

Total weight of treated hazardous waste, in tons

Total weight of each of the following types of waste (in tons) ¹	2016	2017	2018	2019
Treated hazardous	625.19	608.04	945.07	846.24

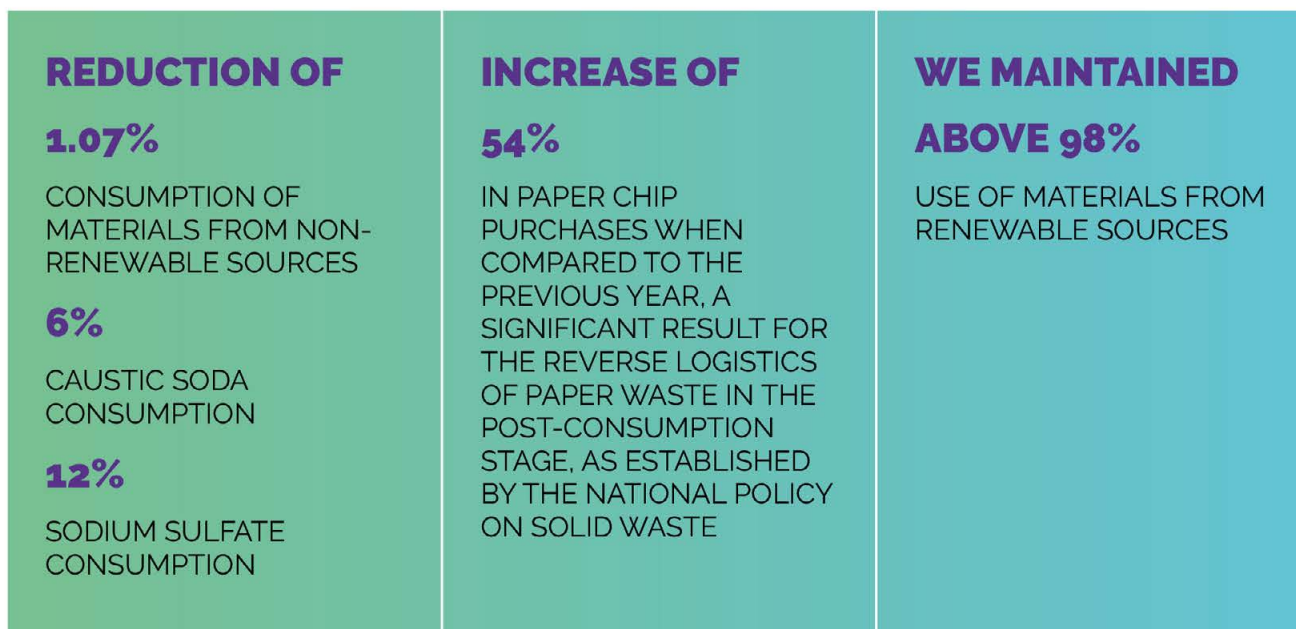
¹ Waste is classified according to the NBR 10004 standard.

Klabın does not use chemicals controlled by international Substances of Very High Concern (SVHC) standards



MATERIALS USED BY WEIGHT OR VOLUME

GRI 301-1



Total volume or weight of materials that are used in production and packaging, in thousands of tons

Total volume or weight of materials that are used to produce and package the primary products and services (in thousands of tons):

Source	Material	2016	2017	2018	2019
Renewable source	Wood for processing	10,697.00	12,400.00	12,076.48	12,284.77
	Chips purchased on market (recycled)	173.00	116.00	217.00	335.06
	Purchased pulp (cellulose and CTMP)	26.00	32.00	14.00	26.41
Non-renewable source	Sulfuric acid	24.15	32.91	36.33	37.19
	Caustic soda	47.48	66.19	64.77	61.12
	Sodium sulfate	15.25	14.05	19.35	16.94
	Aluminum sulfate	36.58	48.54	43.10	47.47
	Lime	49.84	36.18	93.61	93.21
	Kaolin	17.63	20.57	18.76	17.03
Total renewable	-	10,896.00	12,548.00	12,307.48	12,646.23
Total non-renewable	-	190.93	218.44	275.92	272.96

BIODIVERSITY MANAGEMENT

GRI 103-1, 103-2, 103-3

Conserving biodiversity is a value applied across all our operations..

This care gains even more strength in forestry activities. All procedures include items that help preserve biodiversity and minimize environmental impacts.

Forestry units are audited annually by Sustainable Forest Management standards. We are certified by FSC® in our three units: Paraná, Santa Catarina and São Paulo; and also by CERFLOR in the Paraná unit. Audits are also conducted on clients and financing institutions. The Company's commitments to the issue are widely publicized and evaluated by its own team in internal inspections and monitoring of action plans, when appropriate.

Several actions include minimizing the risks to biodiversity. One of them is the analysis of operational processes and the establishment of rules to avoid or mitigate damage (learn more in [Hydrosolidarity](#)). Fauna and flora are monitored by a specialized third party for the purpose of maintaining a sustainable forest management system.



NATURE INTERPRETATION CENTER

GRI 103-1, 103-2, 103-3

The inauguration of the Nature Interpretation Center in March 2019 strengthened support for biodiversity research. The space, located at a strategic point of the Natural Heritage Private Reserve (RPPN) in the Serra da Farofa Complex of Santa Catarina, has the capacity to accommodate up to 40 researchers. With over 420 species of flora and 190 of fauna identified throughout 5,000 hectares of Atlantic Rainforest and High Altitude Fields, the Conservation Unit is an essential location for developing studies.

We are signatories to the Global Compact, CDP, Companies for the Climate, GHG Protocol, Brazilian Forest Dialogue and different international agreements maintained based on annual forest management certifications. For the CDP Forest program, we aim to be recognized as a leading company (A+). In 2019, Klabin received the "A-" score.



Adoption of the mosaic concept: mixing planted and native forests and forming ecological corridors, which contribute to the conservation of biodiversity and the protection of water resources.



Planting and harvesting periods are different and phased.

OPERATIONAL SITES OWNED, LEASED, MANAGED IN, OR ADJACENT TO PROTECTED AREAS AND AREAS OF HIGH BIODIVERSITY INDEX OUTSIDE PROTECTED AREAS

GRI 304-1



FAROFA COMPLEX

State Natural Heritage Private Reserve (RPPNe) located in Santa Catarina, in an extractive operation area of 49.87 km². With araucaria and high altitude forests, it houses the springs of the Caveiras and Canoas rivers. It is devoted to scientific research, the management of natural resources and the upholding of climatic and ecological equilibrium.



MONTE ALEGRE RPPN

Located at Fazenda Monte Alegre in Telêmaco Borba, Paraná, in an area of 45.23 km², it is also a space for scientific research and protection of local biodiversity and water resources.

ECOLOGICAL PARK

Klabin's Ecological Park, which spans 9,852 hectares and is located at Fazenda Monte Alegre (PR), promotes biodiversity conservation, rehabilitation and animal welfare activities. Created in the 1980s, the space is closed to leisure and recreation activities, specifically intended for the development of scientific research and support for environmental education projects.

91,6% OF THE PARK IS MADE UP OF NATIVE FORESTS.

Units with a high biodiversity index

Category	Serra da Farofa Complex (RPPNe)	RPPN Monte Alegre	AAVCs
Geographic location	SC	PR	In the 3 Forestry units
Surface and underground land that may be owned, leased or managed by the organization	Owned – surface	Owned – surface	Owned – surface
Position in relation to the protected area (in the area, adjacent to, or containing portions of the protected area) or the high biodiversity value area outside protected areas	Within the area	Within the area	Within the area
Type of operation (office, manufacturing/production or extractive operation)	Extractive operation	Extractive operation	Extractive operation
Size of the operating unit in km ²	49.87 km ²	45.23 km ²	Variable*
Biodiversity value characterized by the attribute of the protected area or area of high biodiversity value outside the protected area (terrestrial, freshwater or maritime ecosystem)	Terrestrial Ecosystem	Terrestrial Ecosystem	Terrestrial Ecosystem
Biodiversity value characterized by listing of protected status (such as IUCN Protected Area Management Categories, Ramsar Convention, national legislation)	IUCN/National legislation	IUCN/National legislation	Proforest

¹The public summaries of the management plans contain further information.

SIGNIFICANT IMPACTS OF ACTIVITIES, PRODUCTS AND SERVICES ON BIODIVERSITY

GRI 304-2

We have identified a series of direct and indirect impacts on biodiversity that are particularly managed by the company's Forestry Area. The impacts are detailed below:

Aspect	Description of impacts
Construction or use of manufacturing plants, mines and transport infrastructure	The forestry units build and maintain rural roads. In all cases, there are procedures to mitigate the impacts resulting from this operation. In specific cases, these procedures were associated to environmental monitoring tools.
Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources)	We have a survey of associated environmental aspects and impacts on the forestry operations. These documents also include mitigation actions.
Introduction of invasive species, pests and pathogens	We use exotic species for commercial plantations. Native species are used in plantations for area restoration. A dedicated team is in charge of eliminating invasive exotic species from permanent preservation areas.
Reduction of species	Periodic surveys are conducted with specialized consultants for the purpose of identifying any changes in the environments (fauna and flora) resulting from the adopted forest management. There were no negative changes in the evaluated parameters.
Habitat conversion	Not applicable, except for cases of conversion from planted forests to environmental recovery areas. This activity may occur to restore ecological functions, maximize the positive impacts of ecological corridors and enhance water resource maintenance procedures.
Changes in ecological processes outside the natural range of variation, such as salinity or changes in groundwater level	The concept of "hydrosolidarity" is being improved and implemented. This process considers a forest's water consumption throughout its productive cycle to avoid negatively affecting neighboring river basins. That is, water availability, especially in small neighboring rural properties.

The following are the significant direct and indirect impacts, both positive and negative, in relation to the following aspects:

Aspect	Description of impacts
Species affected	In the forest management scenario, native flora species can be negatively impacted due to competition for light and nutrients when exotic species invade the Permanent Preservation Areas (APPs) and Legal Reserves (RLs). We can cite the connectivity of the forest fragments as a positive impact, allowing movement of the fauna.
Extent of areas impacted	The Klabin forest area totals 557,034 hectares. Although it is susceptible to impacts arising from the operation, its management is guided by the mosaic forest concept, with the planting of pine and eucalyptus interspersed with areas of native forests, preserving the fauna, flora and water resources.
Duration of impacts	Continuous.
Reversibility or irreversibility of the impacts.	When a non-conformity is identified in the field, the operation is notified to provide the primary solutions, analysis of the incident and the need for review or design of an operational procedures.

PROTECTED OR RESTORED HABITATS

GRI 304-3

We hold 29.26 km² in protected or restored areas. Conservation areas where interventions were conducted are considered, such as control of exotic species and planting of native species. Check out the details below:

Areas protected or restored

Aspect	Paraná	Santa Catarina	São Paulo
Size of habitat areas protected or restored (km ²)	14.49 km ²	13.12 km ²	1.65 km ²
Location of habitat areas protected or restored;	Permanent Preservation Areas of farms under the company's management	Permanent Preservation Areas of farms under the company's management	Permanent Preservation Areas of farms under the company's management
Have restoration measures been approved by independent external professionals?	Yes. Third-party company Casa da Floresta	Yes. Universidade do Estado de Santa Catarina (UDESC)	Yes. Third-party company Casa da Floresta
Partnerships with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures	Good Forests Program	Good Forests Program	Good Forests Program
Condition of each area at the close of the reporting period	In different stages of recovery	Initial recovery	In different stages of recovery
Standards, methodologies, and assumptions used	Abandonment and follow-up, as well as occasional planting of native species	Abandonment and follow-up	Abandonment and follow-up, as well as occasional planting of native species

IUCN RED LIST SPECIES AND NATIONAL CONSERVATION LIST SPECIES WITH HABITATS LOCATED IN AREAS AFFECTED BY THE ORGANIZATION'S OPERATIONS

GRI 304-4

In 2019, 918 fauna and flora species with conservation status recognized by the IUCN were identified in areas affected by Klabin's operations. The variation is due to the updating of the IUCN list, as well as technical variations (nomenclature changes) and adjustments related to the updating methodology.

Extinction risk level	2016		2017		2018		2019	
	Fauna	Flora	Fauna	Flora	Fauna	Flora	Fauna	Flora
Critically endangered (CR)	1	1	2	3	1	1	1	1
Endangered (EN)	4	7	3	11	2	8	3	8
Vulnerable (VU)	21	17	49	21	21	16	20	16
Near threatened (NT)	54	8	84	2	52	11	50	11
Least concern (LC)	643	55	1,211	73	652	72	642	165
Total	723	88	1,349	110	728	108	716	201

An accumulated total of 844 species of fauna (including the puma, little red brocket and howler monkeys) and 1,889 species of flora had been identified through 2019 in Klabin areas. Among these, 25 fauna and 25 flora species are threatened with extinction (CR, EN and VU), according to the IUCN List.

ENVIRONMENTAL COMPLIANCE

GRI 307-1

In 2019, Klabin received Infraction Notice No. 46001324 (CETESB) in the amount of BRL 12,071.15, regarding the emission of water effluents from the Angatuba plant above the legal limits, with respect to the sulfide parameter, as well as a non-monetary sanction.

Significant fines and non-monetary sanctions

Significant fines and non-monetary sanctions for non-compliance with environmental laws and regulations	2016	2017	2018	2019
Monetary value of significant fines	BRL 0.00	BRL 0.00	BRL 18,589.57	BRL 12,071.15
Total number of non-monetary sanctions	0	0	1	1
Total number of cases resolved through arbitration mechanisms	0	0	0	0



PEOPLE



PEOPLE MANAGEMENT

Klabin's cultural evolution, focused on engaging people, delivering results and building the future, and the consolidation of the #Atitude Klabin[#Atitude Klabin, model in 2019 were fundamental in achieving the Company's results. Our people management focuses on developing talent to leverage operational efficiency of the business model, one of the pillars of the Klabin growth plan.

Our leaders play the role of protagonists in this process. Nesse processo, nossas lideranças exercem papel de protagonistas. People management policies and strategies provide a continuous learning experience for employees, stimulate innovation, promote diversity and a culture of appreciating life, through a safe and healthy environment.

CULTURAL EVOLUTION

GRI 103-1, 103-2, 103-3

Klabin's organizational culture reinforces and catalyzes our ability to adapt to change in an agile, innovative and competent manner. We consider this culture to be a precious and driving factor in the history that Klabin has been building for 120 years. The flexibility and agility that we have instituted to respond to society's constant transformations preserve our essence while building our growth trajectory, thus reflecting this culture.

Practices adopted in 2019 further emphasized our management focused on attitudes such as adaptability, agility and simplification, exemplified in the incorporation of digital platforms into our routine: we began to participate in more meetings via videoconference, share data via cloud and communicate more digitally. Learn more in [Information Technology for Klabin of the future](#).



ALIGNED LEADERSHIP

The 3rd Klabin Managers Convention was held in 2019 and represented an important forum for aligning the Company's cultural evolution and strategy. At the meeting, videos recorded by the managers themselves were shown, with testimonials that demonstrated daily attitudes in line with the organizational culture.

After the Convention, leaders shared and reinforced such topics with their teams, as a way of leveraging cultural evolution at Klabin.

EMPLOYEE PROFILE

GRI 102-7, 102-8

Klabin's workforce experienced no significant variation in 2019, ending the period with 14,608 employees. There was a change, however, in the worker profile, with a 19% increase in the group of those over 50 years of age, when compared to 2018. The proportion of women on the staff increased by 2% in the period. Such aspects reinforce the generation diversity and gender actions.

Number of employees by employment contract and gender

Employment contract	2017			2018			2019		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Indefinite term	12.991	1.413	14.404	12.804	1.466	14.270	12.538	1.710	14.248
Indefinite term	-	-	-	-	-	-	-	-	-
Others (apprentices and trainees)	181	175	356	254	267	521	163	197	360
Total	13.172	1.588	14.760	13.058	1.733	14.791	12.701	1.907	14.608

Number of employees by employment contract and region

Region ¹	2017			2018			2019		
	Direct employees	Indirect employees	Others (apprentices and trainees)	Direct employees	Indirect employees	Others (apprentices and trainees)	Direct employees	Indirect employees	Others (apprentices and trainees)
Northern Region	200	-	5	242	-	4	221	22	3
Northeastern Region	1.255	161	44	1.289	315	48	1.256	230	25
Southeastern Region	3.117	374	113	2.919	384	122	2.998	1.108	124
Southern Region	9.832	4.636	194	9.820	4.642	347	9.773	5.591	208
Total	14.404	5.171	356	14.270	5.341	521	14.248	6.951	360

¹There are no employees in the Midwest region.

Number of employees by employment type

Employment type	2017			2018			2019		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Full-time employment	12.991	1.413	14.404	12.804	1.466	14.270	12.538	1.710	14.248
Part-time employment	-	-	-	-	-	-	-	-	-
Others (apprentices and trainees)	181	175	356	254	267	521	163	197	360
Total	13.172	1.588	14.760	13.058	1.733	14.791	12.701	1.907	14.608

Number of employees by employment contract and business unit

Business unit	2017			2018			2019		
	Direct employees	Indirect employees	Others (apprentices and trainees)	Direct employees	Indirect employees	Others (apprentices and trainees)	Direct employees	Indirect employees	Others (apprentices and trainees)
✓ Papers	3.534	1.696	81	3.553	1.454	105	3.510	1.798	50
✓ Forestry	3.923	2.041	47	3.862	2.192	169	3.670	2.942	118

Packaging and Recycled Materials	4.145	422	123	3.960	553	161	3.903	570	112
Sacks	1.114	157	46	1.124	204	16	1.128	152	29
Corporate	875	91	43	958	107	35	961	674	36
Pulp for paper	813	764	16	813	831	35	1.076	815	15
Total	14.404	5.171	356	14.270	5.341	521	14.248	6.951	360

DIRECT AND INDIRECT EMPLOYEES

In general, approximately 32% of our staff was composed of indirect employees in 2019, up five percentage points from 2018, with greater emphasis on the Forestry unit, where this increase was eight percentage points.

The indirect employees perform activities to support each business's end activities and comply with the precepts of working hours, remuneration and other legal requirements, including the freedom of collective association.

The following tables contain a breakdown of Klabin's direct employees by age group and functional category of governance body members:

Age group

	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Under 30 years of age	4.232	769	3.628	799	3.337	848
Between 30 and 50	7.690	720	8.159	834	7.829	965
years of age	1.250	99	1.271	100	1.535	94
Total	13.172	1.588	13.058	1.733	12.701	1.907

Functional category¹

	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Executive Board	13	1	12	1	11	1
Management and coordination	417	100	434	105	484	124
Technical	652	109	687	126	760	514
Administrative	703	667	691	701	679	431
Operational	11,206	536	10,980	533	10,566	633
Apprentices	134	121	184	186	111	124
Interns	47	54	70	81	52	73
Total	13,172	1,588	13.058	1,733	12,663	1,900

¹The group of professionals identified as "Board of Directors" is contained in the "Administrative" group to consolidate the other indicators until 2018.

Governance bodies

Governance bodies	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Board of Directors	20	5	22	5	27	6

TALENT MANAGEMENT

GRI 103-1, 103-2, 103-3

An engaged and trained team, in search of constant development contributes to increased productivity. Trained employees are able to simplify work, foster innovation, contribute to operational efficiency and, consequently, deliver sustainable results.

Klabin's management of the subject focuses on permanent employee development, a robust succession chain and the training of extraordinary leaders, as we believe that cultural evolution for the Company to execute its strategic plan is only possible with a strong leadership team, with behaviors and skills capable of delivering results both now and in the future.

WHAT DRIVES MANAGEMENT

THE TRAINING AND DEVELOPMENT POLICY ENABLES EMPLOYEE TRAINING AND KNOWLEDGE ENHANCEMENT, CONDUCTED THROUGH THE KLABIN BUSINESS SCHOOL, WITH MANDATORY AND OPTIONAL TRAINING ON A WIDE VARIETY OF TOPICS: WORK ROUTINES, SPECIFIC DUTIES, SPECIALIZATIONS AND GENERAL KNOWLEDGE. INTERNAL AND EXTERNAL AUDITS ARE CONDUCTED ON SPECIFIC PROCESSES (MANDATORY TRAINING, FOR EXAMPLE).

FOCUS ON STRENGTHENING THE SUCCESSION CHAIN

In 2019, many people management efforts were focused on identifying and training successors. We revised the Performance Cycle, a process for evaluating and discussing Performance and Potential, which generates relevant *inputs* for good development conversations. The Cycle provided us with inputs to form a pilot group of 20 employees who participated in a new initiative at the Company: the Development Acceleration Program for leaders, starting in August.

Based on a robust process of evaluating skills and behaviors, the program helps build and execute a strong plan that accelerates these leaders' development for the next career step. It prioritizes the concept of continuing education under self-directed learning in the daily life and culture of the company, reinforcing autonomy as a core part of the process. The program remains in 2020.

FORMING HIGH PERFORMANCE TEAMS

In 2019, we worked hard to develop high-performance teams, with actions focused on strengthening collaboration, trust, transparency, agility and innovation, which further engaged the mid-level leadership in guiding our cultural evolution and leveraging extraordinary and sustainable results.

LEADERSHIP TRAINING

The Rumos Program, which is part of the Klabin Business School, stands out among the leadership development actions as an innovative knowledge transfer model. It seeks to strengthen the holistic and strategic vision of the business and portray how the parameters followed in different areas come together to obtain results.

RUMOS 1.0

Created in 2015, focused on managers and specialists.

It trains the manager to deeply understand the Klabin value chain.

Over 550 managers and specialists had participated in the program by the end of 2019, which represents almost 100% of the target audience.

RUMOS 2.0

Created in 2018, focused on managers and, as of 2019, on coordinators as well.

It develops competencies and skills with a focus on people and innovation, based on the chain vision and operational efficiency.

In 2019, 130 coordinators and 90 managers participated in the program, which has a satisfaction rating of 92%.

KLABIN BUSINESS SCHOOL

The Klabin Business School (ENK) is our learning platform organized as knowledge tracks, with on-site and online initiatives (ENK Portal). Its purpose is to develop our employees, preparing them for current and future challenges in order to leverage business objectives.

ENK's goals are related to levels of satisfaction, applicability, effectiveness and impact in the business area, such as the goal of 85% satisfaction in the Leadership Program, which was exceeded with an index of 92% achieved in 2019. There are others related to specific projects, which seek to improve the School and its performance model.

Based on the understanding that knowledge only grows when shared and for the purpose of supporting the value chain, we also offer the ENK Family Portal, available to employees and their dependents, with content for all age groups.

THE ENK PORTAL HAS MORE THAN 11,000 USERS ACROSS ALL KLABIN UNITS; THE ENK FAMILY PORTAL ALREADY HAS A TOTAL OF APPROXIMATELY 40,000 USERS.

TRAINING CONDUCTED IN 2019

GRI 404-1

The training actions in 2019 are aligned with the Company's organic growth. The following training solutions are considered: technical, behavioral and leadership training, respecting each employee's career level and momentum, through classroom, , *in company*, and open courses, participation in congresses, among others.

IN 2019, 783,000 HOURS OF TRAINING WERE OFFERED, 82% OF WHICH WAS TO OPERATIONAL TEAMS.



Average hours of training that the organization's employees have undertaken, by gender

	2016	2017	2018	2019
Men	48,73	47,37	49,63	54,61
Women	40,47	39,85	40,82	48,47
Total	47,84	46,56	48,59	53,81

Average hours of training that the organization's employees have undertaken by employee category¹

	2016	2017	2018	2019
Executive Board	4,12	5,45	4,55	2,86
Management and coordination	31,58	32,93	38,42	39,19
Technical	114,61	122,30	60,11	45,04
Administrative	20,62	17,53	30,09	36,61
Operational	48,21	46,31	51,40	57,25
Apprentices	19,00	36,38	23,84	35,93
Interns	-	-	44,28	67,10
Total	47,82	46,56	48,59	53,81

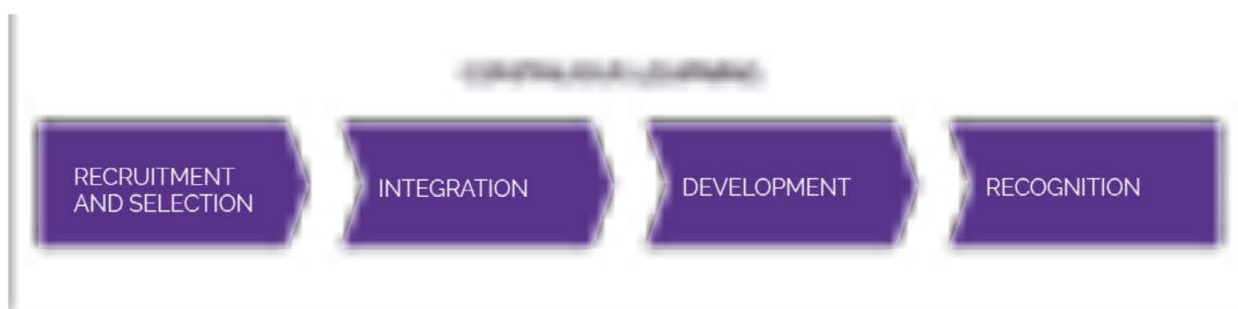
¹The differences in hours of training observed in the Technical and Administrative categories mainly refer to a reorganization of the positions by category, used as a premise in the preparation of this report.

EMPLOYEE JOURNEY

GRI 103-1, 103-2, 103-3

Providing our employees with the best experience and continuous learning from the time of their hiring – and even before, during the selection process – and throughout their journey is as important as maintaining a cohesive group of leaders in the Company.

Managing our talents through retention actions promotes the maturity of employee relationships, improves the climate results and also contributes to strengthening external trust relationships with suppliers, clients and partners, which directly impacts the Company's results.



INTERNAL RECRUITMENT IS A PRIORITY

We prioritize internal recruitment to fill positions, giving employees the opportunity to progress within the Company. In this case, vacancies are published through the Internal Opportunities Panel (accessed via the intranet). When positions are not filled internally, we resort to external recruitment through partnerships with websites and our institutional talent database as well (online platform available on our website).

WE BEGAN A CORPORATE INTERNSHIP PROGRAM IN 2019, APPLIED TO ALL OF THE COMPANY'S UNITS, FOCUSED ON ALIGNING THE SELECTION PROCESS AND DEVELOPMENT PLAN, IN ADDITION TO GENERATING GREATER VISIBILITY AND BROADENING THE KLABIN BRAND IN UNIVERSITIES AND ACROSS SOCIAL MEDIA

OUR MAIN COMMITMENTS

1. Work our **employer brand** through several channels, such as participation in university fairs and communication initiatives on social media.
2. Quality service for internal clients to ensure that positions are filled with **qualified professionals** that **adhere to the required** profile.
3. Provide candidates with a respectful and professional **experience** during the selection **process**.
4. Promote **quality and enticing integration** to employees who join Klabin, focused on contributing to the professionals' development and engagement and providing immersion into all of the Company's business. In 2019, nine Corrugated Board and Recycled Materials units, two Industrial Bags units and two Paper units had already adopted the new integration model, which began in 2018 in a gradual manner.

CLIMATE SURVEY

In 2019, we conducted the Organizational Climate Survey with our employees. Its execution was 100% digital for the first time, with 88% adherence. The survey is an important tool that measures the effectiveness of our people management practices throughout the employee's journey. It has been conducted since 2001 at Klabin. GPTW began handling the task in 2012 and a two-year periodicity was adopted. The Hay Group (currently Korn Ferry) became responsible for the task as of 2017.

Check out the key results of the survey conducted in 2019:

88%

ADHERENCE, COMPARED TO 87% IN THE LAST SURVEY CONDUCTED IN 2017.

RESPECTIVE INDEXES OF

**85% AND
83%,**

FOR THE ENGAGEMENT FACTOR AND FOR WELL-BEING AND RESPECT.

OVERALL FAVORABILITY INDEX OF

76%

76%: UP 3 PERCENTAGE POINTS FROM THE SURVEY CONDUCTED IN 2017.

RATE OF NEW EMPLOYEES AND TURNOVER

GRI 401-1

The number of terminations exceeded hirings at Klabin in 2019. Regarding age groups, a greater renovation of human resources is observed, reinforced by the structuring of the apprentice and trainee programs. The most significant movements in hiring and termination occurred in the South, due to expansion of the forestry base. Business movements often justify the slowdown of operations in certain cities to make room for a ramp-up in others. The following tables portray our turnover indicators, which consider apprentices and interns in the admissions and terminations base.

IN 2019, CONSIDERING THE 2,318 EMPLOYEES HIRED AND 2,405 TERMINATED, THE ACCUMULATED TURNOVER RATE FOR THE YEAR WAS 15.94%. IF ONLY VOLUNTARY TURNOVER IS CONSIDERED, WITH EMPLOYEES WHO LEFT THE COMPANY FOR THEIR OWN PURPOSES, THE RATE DROPS TO 2.18%.

Cumulative turnover rate *turnover*

2016	2017	2018	2019
18,22%	16,29%	15,94%	15,93%

Cumulative turnover rate *turnover*

2016	2017	2018	2019
18,22%	16,29%	15,94%	15,93%

Total number and rate of new employee hires, by age group

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Under 30 years of age	1.590	54%	1.431	51%	1.511	64%	1.376	59%
Between 30 and 50	1.261	43%	1.240	45%	812	34%	885	38%
years of age	107	4%	114	4%	50	2%	57	2%
Total	2.958	100%	2.785	100%	2.373	100%	2.318	100%

Total number and rate of employee turnover, by age group

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Under 30 years of age	877	46%	855	43%	954	41%	1.048	44%
Between 30 and 50	871	45%	916	46%	1.133	49%	1.114	46%
years of age	177	9%	200	10%	238	10%	243	10%
Total	1.925	100%	1.971	100%	2.325	100%	2.405	100%

Total number and rate of employee hires, by gender

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Men	2.475	84%	2.416	87%	1.835	77%	1.682	73%
Women	483	16%	369	13%	538	23%	636	27%
Total	2.958	100%	2.785	100%	2.373	100%	2.318	100%

Total number and rate of employee turnover, by gender

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Men	1.583	82%	1.661	84%	1.946	84%	1.986	83%
Women	342	18%	310	16%	379	16%	419	17%
Total	1.925	100%	1.971	100%	2.325	100%	2.405	100%

Total number and rate of employee hires, by region¹

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Northern Region	257	9%	50	2%	67	3%	55	2%
Northeastern Region	183	6%	133	5%	149	6%	147	6%
Southeastern Region	539	18%	328	12%	435	18%	0	0%
Southern Region	1.979	67%	2.274	82%	1.722	73%	451	19%
Total	2.958	100%	2.785	100%	2.373	100%	1.665	72%

¹Klabin has no operations in the Midwest region

Total number and rate employee turnover, by region¹

	2016		2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate	Total number	Rate
Northern Region	33	2%	63	3%	37	2%	69	3%
Northeastern Region	181	9%	198	10%	147	6%	156	6%
Southeastern Region	452	23%	389	20%	581	25%	0	0%
Southern Region	1.259	65%	1.321	67%	1.560	67%	451	19%
Total	1.925	100%	1.971	100%	2.325	100%	1.729	72%

¹Klabin has no operations in the Midwest region

MATERNITY AND PATERNITY LEAVE

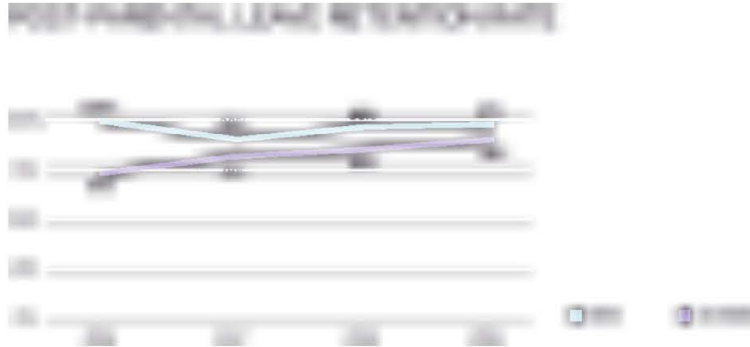
GRI 401-3

Klabin joined the federal government's Empresa Cidadã program in 2019, whose main action is to extend the parental leave period. With the increasingly higher ratio of women in our workforce, we also see higher retention of members of this group who return from maternity leave and are still with the company 12 months after returning, showing greater stability for the gender.

Maternity and paternity leave information¹

		2016	2017	2018	2019
Total number of employees who took maternity/paternity leave	men	409	392	150	650
	women	45	64	94	91
Total number of employees who returned to work, during the reporting period, after maternity/paternity leave	men	409	392	150	650
	women	45	64	94	91
Total number of employees who returned to work after maternity/paternity leave and who were still employed 12 months after returning to work	men	409	345	144	628
	women	31	50	78	80
Rate of return	men	100%	100%	100%	100%
	women	100%	100%	100%	100%
Retention rate	men	100%	88%	96%	97%
	women	69%	78%	83%	88%

¹We do not monitor the number of employees entitled to take maternity/paternity leave. Due to the nature of the leave, we understand that it is available to all employees. The concept of termination is comprehensive and its database also includes voluntary terminations.



RECOGNITION

Klabin's Policy on Fundamental Rights in Labor Relations determines that balance in remuneration constitutes a retention factor for qualified employees, ensuring the non-interference of criteria such as race, color, gender, religious or sexual orientation, social origin, appearance, age, physical disability and special needs.

In 2019, we sought to simplify the Performance Cycle and made improvements to the employee performance and potential evaluation program, in which deliveries, skills (Atitude Klabin), potential and also the remuneration of eligible employees are assessed. Among the changes, the highlights are the construction of good conversations and development plans.

OUR REMUNERATION GUIDELINES

GRI 102-35, 102-36

To determine remuneration, we use the market methodology with universally comparable factors to measure the relative size of positions, ensuring comparison reliability. We conduct annual salary surveys and analyze the competitiveness of our remuneration practices as compared to the market. Deliveries, skills, performance, potential and salary position in relation to market research are evaluated for salary adjustment decisions.

One of the tools that guide the management of the topic is Klabin's Remuneration Policy, which is updated periodically to establish guidelines and directives in line with our purposes.

The Executive Board's remuneration consists of fixed and variable remuneration, including short- and long-term incentives, benefits (life insurance, health care, food vouchers, meal vouchers, private pensions and check-ups) and Guarantee Fund for Length of Service (FGTS). indicators long-term Our strategy for total remuneration is a position aligned with the third market quartile. We adopted indicators for short- and long-term incentives related to the strategy and business cycle, allowing greater alignment with shareholders.

ANNUAL TOTAL REMUNERATION RATIO

GRI 102-38

In 2019, the ratio of the annual total remuneration of Klabin's highest-paid individual to the median annual remuneration for all employees was 9.696%. All employees are included in the calculation, considering the integral calculation for annualization of the amounts. Only operations in Brazil and the aspects of base salary data, benefits, short- and long-term incentives were considered for the calculation.

Ratio of the annual total remuneration of the highest-paid individual to the median annual total remuneration for all employees ¹	2016	2017	2018	2019
	15.949%	11.421%	10.780%	9.696%

¹Until 2018, the Health Care account was not considered in the calculation, which justifies the variation between the values.

VARIATION OF THE RATIO OF LOWEST ENTRY LEVEL WAGE COMPARED TO LOCAL MINIMUM WAGE

GRI 202-1

We respect the determination of the national minimum wage, regional minimum and the minimum established in union relations for our operations. The minimum wages paid by Klabin are based on collective bargaining agreements and refer to the respective categories represented, regardless of the importance of the unit. Gender is not a factor when establishing these values. We recommend that employment contracts with third parties follow the requirements set forth in CLT and in line with the respective collective bargaining agreements, when applicable.

THE LOWEST SALARY PAID BY KLABIN IN 2019 WAS 1.02 TIMES HIGHER THAN THE NATIONAL MINIMUM WAGE

Variation between the lowest wage by gender in significant operating units and the minimum wage

Operating unit	2016		2017		2018		2019	
	Men	Women	Men	Women	Men	Women	Men	Women
Angatuba	1.51	1.85	1.80	1.80	1.84	1.84	1.81	1.81
Betim	1.11	1.11	1.09	1.09	1.09	1.09	1.09	1.09
Correia Pinto	1.24	1.24	1.21	1.21	1.24	1.24	1.50	1.67
São Paulo	1.85	2.02	1.67	1.97	1.84	1.84	1.81	1.98
Feira de Santana	1.45	2.13	1.43	2.40	1.43	2.41	1.44	2.10
Forestry	1.15	1.31	1.15	1.31	1.16	1.28	1.16	1.31
Goiana	1.22	1.38	1.17	1.31	1.19	1.40	1.15	1.39
Itajaí	1.44	1.44	1.38	1.33	1.44	1.44	1.41	1.41
Jundiá	1.60	1.94	1.57	1.70	1.52	1.74	1.53	1.72
Lages	1.53	1.70	1.49	1.49	1.52	1.69	1.50	1.50
Manaus	1.02	1.02	1.61	1.71	1.03	1.03	1.02	1.02
Monte Alegre	1.76	1.76	1.61	1.71	1.75	1.75	1.31	1.36
Ortigueira	1.76	1.76	1.71	1.71	1.75	1.75	1.72	1.72
Otacílio Costa	1.24	1.24	1.21	1.21	1.69	1.24	1.44	1.44
Piracicaba	1.75	1.80	1.70	1.75	1.74	1.74	1.72	1.72
Rio Negro	1.12	1.12	1.38	1.24	1.41	1.41	1.39	1.39
São Leopoldo	1.24	1.24	1.24	1.24	1.24	1.24	1.03	1.23
Klabín OVERALL	1.02	1.02	1.02	1.02	1.03	1.03	1.02	1.02

MEMBERS OF SENIOR MANAGEMENT RECRUITED FROM THE LOCAL COMMUNITY

GRI 202-2

In 2019, 100% of the directors and managers of Minas Gerais and Rio Grande do Sul had been hired from the same states as our operating units. This percentage was 91% in the state of São Paulo and 89% in Paraná. The results shown in the table reflect the movement in the structure, whether due to strategic issues or the search for greater operational efficiency.

Percentage of leadership position members at significant operational units that are hired from the local community¹

	2016	2017	2018	2019
Amazonas (AM)	0%	0%	0%	0%
Bahia (BA)	100%	50%	50%	50%
Minas Gerais (MG)	100%	100%	100%	100%
Paraná (PR)	94%	88%	85%	89%
Pernambuco (PE)	80%	80%	80%	67%

Santa Catarina (SC)	85%	100%	100%	89%
São Paulo (SP)	99%	96%	92%	91%
Rio Grande do Sul (RS)	100%	100%	100%	100%
Rio de Janeiro (RJ)	100%	100%	100%	0%

¹The base for the indicator started in 2016, considering managers who already held or took on a top management position that year (for positions taken before 2016, even professionals coming from other locations are considered locals). As of 2016, the base was set and updated according to manager movement. For location purposes, the reference is the state.

PROMOTING DIVERSITY

GRI 103-1, 103-2, 103-3

We believe that the best decisions are made when the work environment is free of discrimination and characterized by several different points of view, experiences, cultures and ways of life. Therefore, we seek to provide job opportunities compatible with people of different aptitudes, skills and life stories.

Diversity is a topic that gained a more strategic approach at Klabin in 2019, with the creation of a governance structure, responsibilities for initiatives attributed in different instances and focus on the purpose of expanding the representativeness of diversity groups in the Company.

The management of the topic is supported by the [Policy on Diversity and Promoting Employability](#).

Cultural evolution at Klabin also highlights this aspect. In 2019, informal movements that arose at the company and fostered reflections and discussions on the diversity led us to catalyze initiatives and create synergies, privileging natural leaders on this issue in the company.

KLABIN HAS BEEN A SIGNATORY TO THE WOMEN'S EMPOWERMENT PRINCIPLE (WEP) SINCE 2018, A UN INITIATIVE THAT PROMOTES INITIATIVES RELATED TO THE TOPIC.

The upswing of female participation in our workforce by two percentage points in 2019 (from 11% to 13%) already represents an evolution compared to previous years, when this result shifted by 1% in each period. This representation is an important indicator (considering the reality of the sector, which varies between 12% and 14%), but we are still concerned.

To expand this representativeness, we have been promoting initiatives such as the inclusion of women on the shortlist (list of pre-selected candidates) for attraction and selection and a review of these processes, in addition to training on diversity for the teams involved.

PARTICIPATION BY ALL

Under the diversity governance structure, we held several work meetings, both in the corporate areas and in the units, to approve programs and projects in the area with the People Commission. We conducted several awareness actions for all target audiences, in order to boost the culture of promoting greater inclusion and respect in the Company.

DIVERSITY GOVERNANCE

CORPORATE AREA	DIVERSITY COMMITTEE	AFFINITY GROUPS	PEOPLE COMMISSION
Construction of corporate programs and strategy alignment throughout the organization.	Representatives from all units are included, identified from a mapping of actions related to the theme in each one. The group meets every two weeks and is responsible for building and supporting local actions.	Made up of employees who meet weekly. Responsible for discussions, construction and support of corporate actions related to the themes: Women, Men, Blacks and LGBTQIA+.	Made up of senior management who meet quarterly. Responsible for program validations and approvals.

IN THE CLIMATE SURVEY, WE INCLUDED A QUESTION ON THE FEELING OF SECURITY LINKED TO GENDER EQUITY FOR THE FIRST TIME, ANSWERED BY A CONSIDERABLE SAMPLE OF EMPLOYEES, DEMONSTRATING AN OVERALL POSITIVE VIEW REGARDING RESPECT AMONG EMPLOYEES. THE ACTION PLANS RESULTING FROM THE ANALYSIS OF THESE RESPONSES WILL BE IMPLEMENTED THROUGHOUT 2020. .



OUR GOAL IS TO DOUBLE THE NUMBER OF WOMEN AT KLABIN BY 2025.

DIVERSITY IN GOVERNANCE BODIES AND AMONG EMPLOYEES

GRI 405-1

We have been seeing a maturity in the technical, operational and managerial staff at Klabin, wherein the group over 50 years of age has constantly grown over the last three years, the result of a natural evolution process. In management, the increase observed in the period is in the age group between 30 and 50 years of age.

We also highlight the evolution of the proportion of women observed in greater detail among managers and coordinators, technicians and operational staff. With regard to the ratio of blacks, the result has remained constant over the last three years, stable at 31%.

An analysis of the proportion of People with Disabilities (PCD) shows a constant increase until 2018, with a slight drop in 2019, both in the proportion of PCD women and in the technical, administrative and operational staff. The monitoring of this indicator is the result of our efforts to meet the quota established by Law 8.213/91 (5% of the workforce, for companies with over 1,000 employees), by seeking partnerships for hiring, promoting accessibility in jobs, and raising management’s awareness on the issue.

Percentage of employees per employee category, by gender¹

	2016		2017		2018		2019	
	Men	Women	Men	Women	Men	Women	Men	Women
Executive Board	93,33%	6,67%	92,86%	7,14%	92,31%	7,69%	91,67%	8,33%
Management and coordination	80,97%	19,03%	80,66%	19,34%	80,52%	19,48%	79,61%	20,39%
Technical	86,02%	13,98%	85,68%	14,32%	84,50%	15,50%	59,65%	40,35%
Administrative	50,42%	49,58%	51,31%	48,69%	49,64%	50,36%	61,17%	38,83%
Operational	95,45%	4,55%	95,44%	4,56%	95,37%	4,63%	94,35%	5,65%
Apprentices	59,17%	40,83%	52,55%	47,45%	49,73%	50,27%	47,23%	52,77%
Interns	53,85%	46,15%	46,53%	53,47%	46,36%	53,64%	41,60%	58,40%
Total	89,23%	10,77%	89,24%	10,76%	88,28%	11,72%	86,95%	13,05%

¹The group of professionals identified as "Board of Directors" is contained in the "Administrative" group to consolidate the other indicators until 2018. This group was not considered in 2019.

Percentage of employees per employee category, by age group¹

	2016			2017			2018			2019		
	Under 30 years of age	Between 30 and 50	years of age	Under 30 years of age	Between 30 and 50	years of age	Under 30 years of age	Between 30 and 50	years of age	Under 30 years of age	Between 30 and 50	years of age
Executive Board	0,00%	26,67%	73,33%	0,00%	35,71%	64,29%	0,00%	46,15%	53,85%	0,00%	50,00%	50,00%
Management and coordination	3,50%	74,17%	22,33%	3,48%	73,50%	23,02%	1,30%	74,03%	24,68%	1,48%	72,20%	26,32%
Technical	23,44%	67,64%	8,92%	26,28%	64,26%	9,46%	20,91%	69,37%	9,72%	25,43%	63,74%	10,83%
Administrative	34,64%	53,28%	12,08%	38,25%	49,78%	11,97%	34,12%	54,67%	11,21%	42,70%	49,46%	7,84%
Operational	31,38%	60,70%	7,92%	33,26%	58,35%	8,39%	28,36%	62,99%	8,65%	27,00%	62,24%	10,76%
Apprentices	99,58%	0,42%	0,00%	99,22%	0,78%	0,00%	100,00%	0,00%	0,00%	100,00%	0,00%	0,00%
Interns	90,38%	7,69%	1,92%	100,00%	0,00%	0,00%	92,72%	7,28%	0,00%	93,60%	6,40%	0,00%
Total	31,60%	59,57%	8,83%	33,88%	56,98%	9,14%	29,93%	60,80%	9,27%	28,72%	60,32%	10,96%

¹The group of professionals identified as "Board of Directors" is contained in the "Administrative" group to consolidate the other indicators until 2018. This group was not considered in 2019.

Percentage of black employees per employee category¹

	2016	2017	2018	2019
Executive Board	0,00%	0,00%	0,00%	0,00%
Management and coordination	8,35%	10,06%	11,87%	14,80%
Technical	18,91%	24,44%	29,15%	21,35%
Administrative	19,85%	21,09%	21,41%	26,31%
Operational	31,30%	33,21%	33,35%	33,17%
Apprentices	54,58%	37,65%	35,95%	37,02%
Interns	34,62%	60,40%	33,77%	28,00%
Total	29,04%	31,06%	31,26%	30,84%

¹The group of professionals identified as "Board of Directors" is contained in the "Administrative" group to consolidate the other indicators until 2018. This group was not considered in 2019. Blacks, according to the IBGE, include people who call themselves blacks and mixed ethnicity. The percentage is calculated regarding the total number of employees of the gender in the category.

Percentage of PCD per employee category¹

	2016		2017		2018		2019	
	Men	Women	Men	Women	Men	Women	Men	Women
Executive Board	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Management and coordination	1,44%	0,00%	1,68%	0,00%	2,07%	0,00%	1,86%	0,00%
Technical	2,32%	0,00%	2,15%	0,00%	2,62%	0,00%	2,76%	1,17%
Administrative	2,99%	1,67%	2,70%	1,65%	3,33%	2,14%	2,95%	1,39%
Operational	2,39%	0,61%	2,44%	1,31%	2,76%	2,81%	2,65%	2,69%
Apprentices	0,00%	1,02%	4,48%	0,83%	1,63%	0,00%	0,90%	0,00%
Interns	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,92%	0,00%
Total	2,35%	1,02%	2,42%	1,20%	2,73%	1,73%	2,62%	1,53%

¹The group of professionals identified as "Board of Directors" is contained in the "Administrative" group to consolidate the other indicators until 2018. This group was not considered in 2019.

Percentage of individuals within the organization's governance bodies, by gender

	2016	2017	2018	2019
Men	76,19%	80,00%	81,48%	81,82%
Women	23,81%	20,00%	18,52%	18,18%

Percentage of individuals within the organization's governance bodies, by age group¹

	2016	2017	2018	2019
Under 30 years of age	0,00%	0,00%	0,00%	0,00%
Between 30 and 50	19,05%	24,00%	25,93%	27,27%
years of age	80,95%	76,00%	74,07%	72,73%

¹There are no blacks or People with Disabilities (PCDs) on Klabin's Board of Directors.

Ratio of the basic salary and remuneration of women to men for each employee category, by significant operating units¹

GRI 405-2

		2016			2017			2018			2019		
		Klabin	Monte Alegre	Puma	Klabin	Monte Alegre	Puma	Klabin	Monte Alegre	Puma	Klabin	Monte Alegre	Puma
Executive Board	basic salary (BRL)	0.78	N/A	N/A	0.83	N/A	N/A	0.78	N/A	N/A	0.92	N/A	N/A
	remuneration (BRL)	0.68	N/A	N/A	0.67	N/A	N/A	0.63	N/A	N/A	0.92	N/A	N/A
Management and coordination	basic salary (BRL)	0.84	0.77	1.16	0.85	0.83	1.17	0.86	0.89	1.16	0.96	0.93	0.90
	remuneration (BRL)	0.78	0.73	1.37	0.77	0.81	1.49	0.77	0.85	1.50	0.96	0.93	0.90
Technical	basic salary (BRL)	0.85	0.82	0.70	0.86	0.79	0.79	0.86	0.77	0.69	0.93	0.99	0.97
	remuneration (BRL)	0.83	0.81	0.70	0.86	0.78	0.79	0.85	0.77	0.69	0.93	0.99	0.98

Administrative	basic salary (BRL)	0.85	0.73	0.83	0.86	0.76	0.73	0.83	0.75	0.82	0.93	0.98	0.98
	remuneration (BRL)	0.84	0.74	0.83	0.86	0.76	0.75	0.83	0.75	0.82	0.93	0.98	0.98
Operational	basic salary (BRL)	0.84	0.76	0.62	0.90	0.80	0.68	0.90	0.79	0.69	0.92	0.97	0.97
	remuneration (BRL)	0.84	0.76	0.62	0.90	0.79	0.68	0.90	0.79	0.69	0.92	0.97	0.97
Apprentices	basic salary (BRL)	1.09	0.94	1.00	1.13	1.14	N/A	1.10	0.97	1.00	1.01	1.13	N/A
	remuneration (BRL)	1.24	0.94	0.99	1.31	1.14	N/A	1.11	0.96	1.00	1.01	1.13	N/A
Interns	basic salary (BRL)	1.06	0.95	0.00	0.94	1.27	1.11	0.91	0.93	1.07	0.93	1.00	1.01
	remuneration (BRL)	1.06	0.95	0.00	0.93	1.27	1.11	0.91	0.93	1.07	0.93	1.00	1.01
Total	basic salary (BRL)	1.24	0.97	0.61	1.26	0.96	0.61	1.20	0.90	0.61	0.94	1.00	0.97
	remuneration (BRL)	1.15	0.99	0.58	1.17	0.94	0.59	1.13	0.86	0.58	0.94	1.000.91	0.97

¹Remuneration includes nominal salary + short-term incentives (ICP) + long-term incentives (ILP). There were no directors at the Puma and Monte Alegre units during the period considered. In 2017 and 2019, there were also no apprentices at the Puma unit.

APPRECIATING LIFE

GRI 103-1, 103-2, 103-3

GROWTH AND STRONG RESULTS ONLY HAVE REAL MEANING IF OUR OWN EMPLOYEES AND THIRD PARTY CONTRACTORS PERFORM THEIR ACTIVITIES SAFELY.

We posted a significant improvement in our safety rates in 2019, reaching historical records at Klabin. Even so, we believe that even better rates can be pursued and achieved, aiming for excellence. We will not be satisfied until we attain zero occurrences.

Safety improvements result from a more strategic view and the recent structuring of governance for the matter at the Company. Numbers (detailed indicators are further presented in this chapter) reflect a change in approach. In addition to seeking continuous improvement of work environments, we encourage employees to be the protagonists of this story. With the motto "Appreciating Life: a caring gesture", internal initiatives reinforce that everyone is responsible for taking care of colleagues.

We expanded our monitoring on this front in 2019. In addition to tracking the classic safety indices, we also included high potential occurrences on the radar. These are situations that could have, but ultimately did not result in accidents. The operation then becomes more preventive and less reactive.

HEALTH AND SAFETY MANAGEMENT

GRI 403-1, 403-2, 403-8

We adopted our own Occupational Health and Safety Management system, which encompasses all of the company's operations and employees, including our service providers. Audited internally and externally, the system is guided by three fundamentals: visible commitment, line responsibility and operational discipline.

In 2019, a complete review of the Management System was undertaken, focusing on building standards and guidelines that are more consistent and compliant to the business and, especially, on the mapping of critical activities, which allowed us to gain comprehensive knowledge on many of the routine activities that posed higher risk for employees.

Based on such analysis, Critical Activity Requirements (RACs) were established for our industrial and forestry operations. The process allowed us to identify gaps and resulted in the drafting of protocols for good standardization practices, enhanced integration among teams and further developed into strategic safety plans for the units.

Our operations' compliance percentage with the protocols and guidelines is an relevant indicator, monitored to allow assessing the progress of our Management System. We expect at least a 10% evolution by 2021..

THE THREE MANAGEMENT PILLARS

GRI 103-1, 103-2, 103-3



FACILITIES

Ensure equipment safety and reliability. Improve and maintain the work environment offered to our professionals.



MANAGEMENT/METHOD

Continuously improve the way we address security in our routine. Keep a critical eye on our accident prevention and mitigation procedures by creating and reviewing policies, guidelines and requirements.



PEOPLE

Value good practices and encourage our employees to care for one another. Train them on rules and procedures, in addition to bringing leaders closer to the routine.

FACILITIES

We started a round of equipment analyses for all units in 2018 and consolidated it in 2019. The focus was to identify risk situations and raise awareness among leaders to act more closely with the teams in risk mapping and prevention. This study will allow us to implement a safety inspection routine.

BEHAVIORAL MANAGEMENT

We updated the behavioral audit model, which was replaced by Safety in Focus. The proposal addresses the matter more extensively, analyzing the behavior of employees based on dialogue for the purpose of identifying contributing factors for a given behavior.

We also developed an application for filing Safety Reports. Employees can use their mobile phones to inform management of risk behaviors, environments inappropriate for work and good practices as well. The pilot project will be tested in 2020.

MEASURING THE MATURITY OF THE SAFETY CULTURE

We completed the Safety Culture Diagnosis throughout the Packaging and Paper businesses using the Hearts & Minds methodology, which allowed us to ascertain the maturity of our operations. We fluctuate between “Reactive”, a level at which safety actions still depend on an order or event; “Calculating”, in which the management system is well implemented and encourages good behavior; and “Proactive”, whose attention is on the future and not on responding to data from the past or present events.

The diagnosis of the cultural model allows us to be more assertive in safety-related actions, whether through a method or leadership model. We want to reach the highest level in 2030, which is the “Generative” level. At this stage, organizations exceed the highest safety standards, leadership is always aware of what is happening and employees work attentively and study new preventive possibilities. This will guarantee an accident rate close to zero.

The analysis at the Pulp Unit was interrupted due to complications related to the Covid-19 pandemic and should be resumed as soon as possible. In 2020, we also plan to make a comparison of Hearts & Minds with another methodology already applied at the Forestry Unit, in order to establish strategies that meet the cultural model of each unit.

IDENTIFICATION OF RISKS AND ACCIDENTS

To manage risks we use the following tools, whose implementation varies according to the pace and needs of each unit:



RIGHT OF REFUSAL: EMPLOYEES HAVE THE RIGHT AND OBLIGATION TO INTERRUPT AN ACTIVITY WHEN THEY FIND THEMSELVES, THEIR COLLEAGUES AND ASSETS IN A RISK CONDITION.

INVESTIGATION

All occurrences of accidents and incidents of high potential are investigated. Root causes are identified through the “5 whys” methodology. Records are kept on the company’s own action manager system, which allows for filing, monitoring of actions and evaluation of effectiveness, through an action manager called PLAK. In some Klabin businesses, such as Papers and Forestry, specialists are trained to ensure the quality of the investigation process.

LEADERSHIP ENGAGEMENT

The proximity between leaders and their teams makes all the difference in good practices. Management is both support and example. That is why, in 2019:

SAFETY-ORIENTED MODULE ADDED TO LEADER TRAINING.

THE **VIDAS MUDADAS [CHANGED LIVES] CONCEPT WAS DEPLOYED** TO RAISE AWARENESS AMONG SENIOR MANAGEMENT ABOUT THE IMPACT OF ACCIDENTS ON THE LIVES OF EMPLOYEES WHEN THERE ARE, FOR EXAMPLE, DEFINITIVE CONSEQUENCES.

SAFETY INDICATORS

In 2019, we recorded an important evolution in our work safety results, such as the historical rates of general accident frequency rate (see details in the table below) and severity rate (101) and the best lost-time accident rate over the past five years at Klabin: 2.46.

The progress in the indicators reflects the increasingly strategic vision on the Company towards this aspect, especially in the past two years, with the structuring of a corporate management and the consolidation of a governance structure for the matter.

Accident frequency rate from – Klabin S.A.

2016	2017	2018	2019
11.08	7.88	8.80	6.30

WORK-RELATED INJURIES

GRI 403-9

This indicator was updated by the GRI in 2018, when we began to report the information on the following tables.

Direct and indirect employee health and safety rates and figures¹

	2018	2019
Number of fatalities as a result of work-related injuries	3	0
Rate of fatalities as a result of work-related injuries	0.07	0.00
Number of high-consequence work-related injuries (excluding fatalities)	3	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.07	0.00
Number of recordable work-related injuries	400	333
Rate of recordable work-related injuries	8.80	6.30

¹The main types of injury in 2018 included contusions, lacerations, abrasions, sprains and dislocation. In 2019, the main types of injuries included contusions, sprains, abrasions and lacerations. In 2018, direct employees worked 29,123,893.82 hours and indirect employees worked 17,210,526.43 hours, while in 2019, direct employees worked 28,093,228.00 hours and indirect employees worked 24,748,599.00 hours. The calculation was made based on 1,000,000 hours worked. For direct employees, the SAP system database, number of occurrences, and manhours worked were used. For workers who are not employees, but whose work and/or workplace is controlled by Klabin, the database of the senior system and reports made by the business units were used.

Direct and indirect employee health and safety rates and figures¹

	2018		2019	
	Direct employees	Indirect employees	Direct employees	Indirect employees
Number of fatalities as a result of work-related injuries	0	3	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.17	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	5	3	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.17	0.17	0.00	0.00
Number of recordable work-related injuries	298	102	224	109
Rate of recordable work-related injuries	10.55	5.93	7.97	4.40

¹The main types of injury in 2018 included contusions, lacerations, abrasions, sprains and dislocation. In 2019, the main types of injuries included contusions, sprains, abrasions and lacerations. In 2018, direct employees worked 29,123,893.82 hours and indirect employees worked 17,210,526.43 hours, while in 2019, direct employees worked 28,093,228.00 hours and indirect employees worked 24,748,599.00 hours. The calculation was made based on 1,000,000 hours worked. For direct employees, the SAP system database, number of occurrences, and manhours worked were used. For workers who are not employees, but whose work and/or workplace is controlled by Klabin, the database of the senior system and reports made by the business units were used.

Direct and indirect employee health and safety rate by business, region and gender

	2018		2019	
	Men	Women	Men	Women
Number of fatalities as a result of work-related injuries	3	0	0	0
Rate of fatalities as a result of work-related injuries	0.19	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	8	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.19	0.00	0.00	0.00
Number of recordable work-related injuries	390	10	326	7
Rate of recordable work-related injuries	11.20	6.25	6.71	1.66

Direct and indirect employee health and safety rates by region¹

	2018				2019			
	North	Northeast	Southeast	South	North	Northeast	Southeast	South
Number of fatalities as a result of work-related injuries	0	0	0	1	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	1	1	1	5	0	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	1.62	0.29	0.16	0.14	0.00	0.00	0.00	0.00
Number of recordable work-related injuries	1	35	57	307	0	26	31	276
Rate of recordable work-related injuries	1.60	10.12	9.39	8.69	0.00	6.88	4.71	6.58

¹Klabin had no operations in the Midwest region during the period.

Indirect employee health and safety rates by region¹

	2018				2019			
	Norte	Nordeste	Sudeste	Sul	Norte	Nordeste	Sudeste	Sul
Número de óbitos como resultado de lesões relacionadas ao trabalho	0	0	0	0	0	0	0	0
Taxa de óbitos como resultado de lesões relacionadas ao trabalho	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Número de lesões relacionadas ao trabalho de alta consequência (excluindo óbitos)	1	1	1	2	0	0	0	0
Taxa de lesões relacionadas ao trabalho de alta consequência (excluindo óbitos)	1,87	0,36	0,19	0,10	0,00	0,00	0,00	0,00
Número de lesões relacionadas ao trabalho reportáveis	1	26	57	214	0	21	29	174
Direct employee health and safety rates by region ¹	1,80	9,27	10,81	10,90	0,00	7,50	5,20	9,06

¹Klabin had no operations in the Midwest region during the period.

Indirect employee health and safety rates by region¹

	2018				2019			
	North	Northeast	Southeast	South	North	Northeast	Southeast	South
Number of fatalities as a result of work-related injuries	0	0	0	1	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	0	0	0	3	0	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
Number of recordable work-related injuries	0	9	0	93	0	5	2	102
Rate of recordable work-related injuries	0.00	13.76	0.00	5.93	0.00	5.1	2.00	4.49

Employee health and safety rates by business unit – Papers

	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	0	3	3	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.00	0.59	0.28	0.00	0.00	0.00
Number of recordable work-related injuries	43	38	81	35	48	83
Rate of recordable work-related injuries	7.70	7.40	7.60	6.34	5.36	5.73

Employee health and safety rates by business unit – Pulp

	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	0	1	1	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.00	0.49	0.29	0.00	0.00	0.00
Number of recordable work-related injuries	14	21	35	14	23	37
Rate of recordable work-related injuries	9.70	10.20	10.00	8.42	6.32	6.98

Employee health and safety rates by business unit – Forestry

	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	2	2	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.26	0.12	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	0	0	0	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.00	0.00	0.00	0.00	0.00	0.00
Number of recordable work-related injuries	121	31	152	99	24	123
Rate of recordable work-related injuries	14.10	4.10	9.40	12.26	2.74	7.31

Employee health and safety rates by business unit – Packaging and Recycled Materials

	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	1	1	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.73	0.10	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	3	0	3	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.33	0.00	0.29	0.00	0.00	0.00
Number of recordable work-related injuries	103	8	111	68	9	77
Rate of recordable work-related injuries	11.40	5.80	10.70	7.72	5.23	7.33

Employee health and safety rates by business unit – Sacks

	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	2	0	2	0	0	0
Rate of high-consequence work-related injuries (excluding fatalities)	0.99	0.00	0.73	0.00	0.00	0.00
Number of recordable work-related injuries	17	4	21	8	5	13
Rate of recordable work-related injuries	5.60	3.70	5.10	2.72	2.43	2.95

Employee health and safety rates by business unit – Corporate¹





	2018			2019		
	Direct employees	Indirect employees	Total	Direct employees	Indirect employees	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	0	0	0	0	0	0

Rate of high-consequence work-related injuries (excluding fatalities)	0.00	0.00	0.00	0.00	0.00	0.00
Number of recordable work-related injuries	0	0	0	0	0	0
Rate of recordable work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00

¹Klabin does not control the number of recordable work-related accidents by incident type on a corporate level, nor the number of potential adverse events (“near misses”) identified. Occurrences recorded that resulted in over six months of leave were considered in order to account for high-consequence work-related injuries. Report extracted from SAP for direct employees and units consulted for indirect employees.

MAIN COMMITMENTS AND GOALS RELATED TO HEALTH AND QUALITY OF LIFE

103-1, 103-2, 103-3

			
<p>Focus on prevention as a primary factor in maintaining the health of our employees;</p>	<p>Comply with the provisions of the <u>Occupational Health Medical Control Program (PCMSO)</u> – by conducting occupational examinations according to the mapped risk and frequency;</p>	<p>Guide third parties in managing the occupational examination requirements for service providers that work in our facilities, following the list of minimum requirements related to mandatory medical and supplementary exams;</p>	<p>Implement at least three health-related pilot programs using indicators to measure effectiveness.</p>

OBJECTIVES OF THE OCCUPATIONAL HEALTH MEDICAL CONTROL PROGRAM (PCMSO)

1. Survey the agents and risks of the activities developed at the company.
2. Prevent and mitigate risks related to worker health.
3. Advise on the use of Collective and Individual Protection Equipment.
4. Ensure the investigation of work-related and occupational health incidents and accidents.
5. Ensure the application of management tools and practices.
6. Ensure proper management and recovery of those on leave.

OCCUPATIONAL HEALTH SERVICES

GRI 403-3



To eliminate or minimize occupational health risks, we maintain the Service Specialized in Health and Occupational Medicine (SESMT), composed of doctors, nurses and occupational health nursing technicians in the units, in accordance with current regulations and legislation. Clinical and supplementary examinations are conducted within the units or in specialized clinics.



Our employees are free to seek assistance from private healthcare and dental services, a benefit offered to all employees and dependents. We maintain a specialty center in the Paraná region, which exclusively cares for 18,000 people.



We monitor indicators of leave (through certificates of health) and social security with the INSS.

FOCUS ON PREVENTION

GRI 403-6



PREVENTION AWARENESS ACTIONS:
INTERNAL WORK-RELATED ACCIDENT PREVENTION WEEK (SIPAT), HEALTH WEEK AND VACCINATION CAMPAIGNS, PINK OCTOBER AND BLUE NOVEMBER, AMONG OTHERS.



MEDICATION CO-PAY BENEFIT.



CHRONIC ISSUES PROGRAM:
HYPERTENSION, OBESITY, DIABETES (FOR SOME UNITS).



HEALTH COMMITTEE:
PERIODIC MEETINGS TO ANALYZE THE OCCUPATIONAL HEALTH DATA IN ORDER TO DEFINE ACTIONS IN HEALTH PROMOTION AND PREVENTION FOR THE EMPLOYEE AND FAMILY.

COMPLIANCE

OUR MEDICAL STAFF SIGNS A CONFIDENTIALITY AGREEMENT ON THE SYSTEMS PROVIDED BY THE HEALTHCARE OPERATOR TO TRACK EMPLOYEE USE, AS WELL AS TO ENSURE THE STORAGE OF MEDICAL CHARTS IN THE OUTPATIENT CLINICS. ACCESS TO THE COMPANY'S HEALTHCARE SYSTEMS IS CONTROLLED THROUGH THE GOVERNANCE, RISK AND COMPLIANCE (GRC) SYSTEM. THE MEDICAL AND NURSING STAFF ALSO COMPLY WITH THE CODES OF ETHICS AND CONDUCT OF THEIR RESPECTIVE OPERATING BOARDS, AS WELL AS THE REGULATORY PRECEPTS FOR THE TECHNICAL ACTIVITY AND CURRENT LEGISLATION.

SUPPORT PROGRAMS

VIVER BEM PROGRAM:

a 24/7 phone service managed by an independent company, which provides guidance to employees, at first approach, to solve personal problems. A trained team identifies the nature of the problem and make referrals to a psychologist, social worker, lawyer or financial adviser, as the case may be. When it comes to Klabin, the matter is referred to our Ombudsman.

ALCOHOL AND DRUG PREVENTION PROGRAM:

covers the Monte Alegre, Otacilio Costa and Correia Pinto units, as well as the Forestry Unit in Paraná. Based on random and authorized testing, it seeks to identify situations involving chemical dependency so that from there, we can offer help and subsidize treatment. In the case of third parties, the outsourced company receives guidance on how to handle the matter.

BENEFIT PLAN

GRI 201-3

Our employees have medical and dental assistance, agreements with pharmacies, transportation and food benefits, life insurance, childcare and school supply assistance, among others. The pension plan is managed by a private and independent entity, in which there is no obligation for the company to hold reserves to ensure pensions. All professionals, regardless of position, can participate by making voluntary contributions. The company's contribution includes the following modalities:

FOR POSITIONS WHOSE SALARY IS LESS THAN BRL 4,736 AND THE EMPLOYEE IS OVER THE AGE OF 55, THE PAYMENT IS UP TO SIX TIMES THE EMPLOYEE'S SALARY, MADE WHEN THERE IS A NEED, AND THE BENEFIT IS COST-FREE FOR THE EMPLOYEE.

FOR POSITIONS WITH A SALARY HIGHER THAN BRL 4,736, EMPLOYEES CAN CONTRIBUTE BETWEEN 1% AND 9% OF THEIR CONTRIBUTION SALARY. KLABIN'S MATCH VARIES FROM 100% TO 150% OF THE EMPLOYEE CONTRIBUTION, ACCORDING TO THEIR LENGTH OF EMPLOYMENT.

BENEFITS FAIR

EVERY TWO YEARS, WE HOLD THE BENEFITS FAIR AT ALL UNITS TO UPDATE OUR EMPLOYEES ON THE BENEFITS TO WHICH THEY ARE ENTITLED. THE INITIATIVE GATHERS SUPPLIERS IN THE FIELDS OF HEALTHCARE, DENTAL, INSURANCE AND PRIVATE PENSION PLANS, AS WELL AS KLABIN REPRESENTATIVES. THE EVENT IS HELD ON AN ON-CALL BASIS, TO COVER ALL WORK SHIFTS. THE TEAM PROVIDES INFORMATION AND ANSWERS QUESTIONS ABOUT BENEFITS OFFERED TO EMPLOYEES AND THEIR DEPENDENTS.

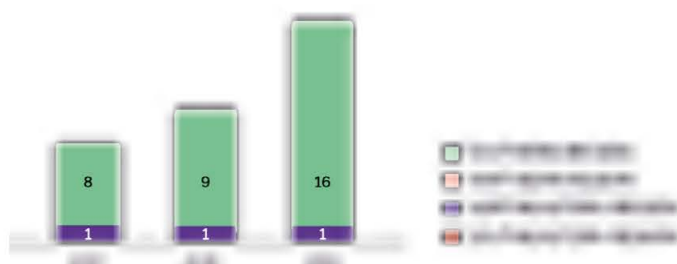
WORK-RELATED HEALTH INDICATORS

GRI 403-10

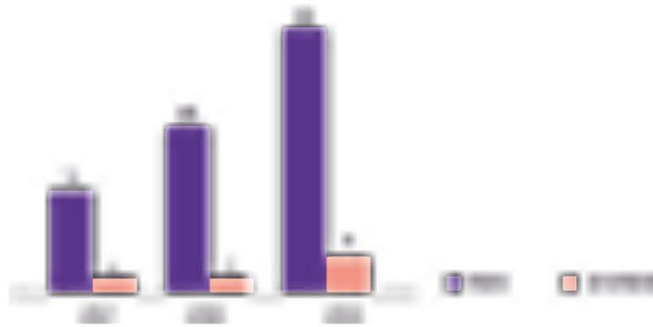
The main work-related health problems in our units are associated with musculoskeletal diseases (tenosynovitis and tendonitis, for example) and back problems. The risks related to these diseases are determined in ergonomic analyses, such as the one conducted in 2019 at all units, for which action plans were developed, to be implemented starting in 2020.

In 2019, 27 occupational health problems were recorded among our employees, compared to 16 in 2018, 10 in 2017 and 21 in the previous year.

NUMBER OF CASES OF OCCUPATIONAL WORK-RELATED ILLNESS BY REGION



NUMBER OF CASES OF RECORDABLE WORK-RELATED ILLNESS BY REGION



Number of cases of recordable work-related illness, by region

	2016	2017	2018	2019
Northern Region	0	0	0	0
Northeastern Region	0	1	1	1
Southeastern Region	0	0	0	0
Southern Region	6	8	9	16
Total	6	9	10	17

Number of cases of recordable work-related illness, by gender

	2016	2017	2018	2019
Men	5	8	9	16
Women	1	1	1	1
Total	6	9	10	17

LOCAL DEVELOPMENT

GRI 103- 1, 103-2, 103-3

The commitment to Local Development is part of our essence and is set forth in our Sustainability Policy. In practice, it is conducted based on engagement with communities through an economic, environmental and social agenda built with the participation of a wide variety of stakeholders. Social responsibility actions include education and training projects for the job market, family farming, regional solid waste management, as well as a program to support public management planning. All operational impacts of industries and forestry operations are identified, mitigated or reduced, fostering operation under the highest standards of sustainability. The negative impacts are also mapped and can be consulted in [Relationship with stakeholders](#).

The following internal policies and documents guide us on this topic:

1. [1. Klabin Sustainability Policy](#);
2. [2. Klabin Sustainability Vision](#);
3. *Stakeholders* Engagement Policy,
4. Reputational Capital Policy;
5. Code of Conduct;
6. Anti-Corruption Manual;
7. Policy for Diversity and Promoting Employability;
8. Manual and Procedures from the area of Social Responsibility and Community Relations;
9. Forestry Goals;
10. Social and Environmental Action Plan;
11. *Stakeholders* Stakeholder Engagement Plan;
12. Regulatory policies such as environmental legislation, certifications and investment bank standards (See more in [Certifications and Environment](#).)

SOCIAL INVESTMENT

Through the Private Social Investment Platform, we direct investments to four lines of action, divided into two axes – Land and People:

PRIVATE SOCIAL INVESTMENT PLATFORM



COMMUNITY GOALS

We voluntarily endorse a series of external initiatives and commitments (learn more details in [Relationship with stakeholders](#)). Our goals for this topic include:

Objectives	2017 Goal	2017 Results	2018 Goal	2018 Results	2018 Analysis	2019 Goal	2019 Analysis	2020 Goal
Identify and scale the negative impacts of Klabin's operations in communities	*	*	*	*	*	*	*	Carry out pre- and post-operational actions and diagnostics in the communities where forestry operations are planned for 2020
Monitor the performance indicator of Klabin's commitment to communities	Increase by 9% (from 47% to 56%) the perception of Klabin's commitment to the communities in the six municipalities surveyed in 2016 ¹ Expand the survey from 6 to 9 municipalities ²	Increase the indicator of perception of Klabin's commitment to urban and rural communities of six municipalities by 16% (from 47% to 62.8%)	Increase by 10% (from 63% to 73%) the perception of Klabin's commitment to the communities in the nine municipalities ²	Increase by 16.6% (62.8% to 79.4%) the indicator of perception of Klabin's commitment to urban and rural communities of nine municipalities ²	Goal reached	Keep perception of Klabin's commitment to communities at 80% in nine municipalities ⁵	Drop in the indicator. In 2019, perception of Klabin's commitment to the community varied from 79% (recorded in 2018) to 64%. The rate is measured in urban and rural communities in nine target municipalities.	Maintain perception of Klabin's commitment at 80.5% in nine municipalities (Telêmaco Borba, Imbaú, Ortigueira, Tibagi, Reserva, Curiúva, Rio Branco do Ivaí, Ventania and Sapopema) regarding the set of indicators that measure matters of Perception of Impacts, Economic Development, Environmental Preservation, Employment, Commitment, Social, Business Support and Image
Measure the level of the communities' knowledge of Klabin, its social project and activities	*	*	*	Survey expanded to 12 municipalities ⁴	*	*	*	*
Monitor Klabin's image and reputation	*	*	*	*	*	*	*	*
Provide proper response to demands such as complaints, reports, requests, questions and suggestions within two days, providing clarifications and information regarding negotiations ³	Respond to up to 80% of demands within 2 days	79% of incoming contacts responded within 2 days	Respond to up to 80% of demands within 2 days	72% of incoming contacts responded within 2 days	Goal not achieved due to the high number of demands received and the need for preliminary checks	Keep initial response to contacts within 2 days at 80%	*	Assist 100% of the communities within the ADA with regard to dust generation (directly affected area) from transporting own wood (own and leased farms)
*	*	*	*	*	*	*	*	Reduce complaints related to dust generation by 20% (up to 3.8 complaints per km of road within communities)
*	*	*	*	*	*	*	*	Demand Management System: Assess the fulfillment of demands and occurrences reported to the Fale com a Klabin tool in Paraná regarding the following requirements: Quality of service; Punctuality and Satisfaction in the fulfillment of the demands and occurrences reported to the Fale com a Klabin tool in Paraná.

*The goals without historic were defined in this report's cycle.

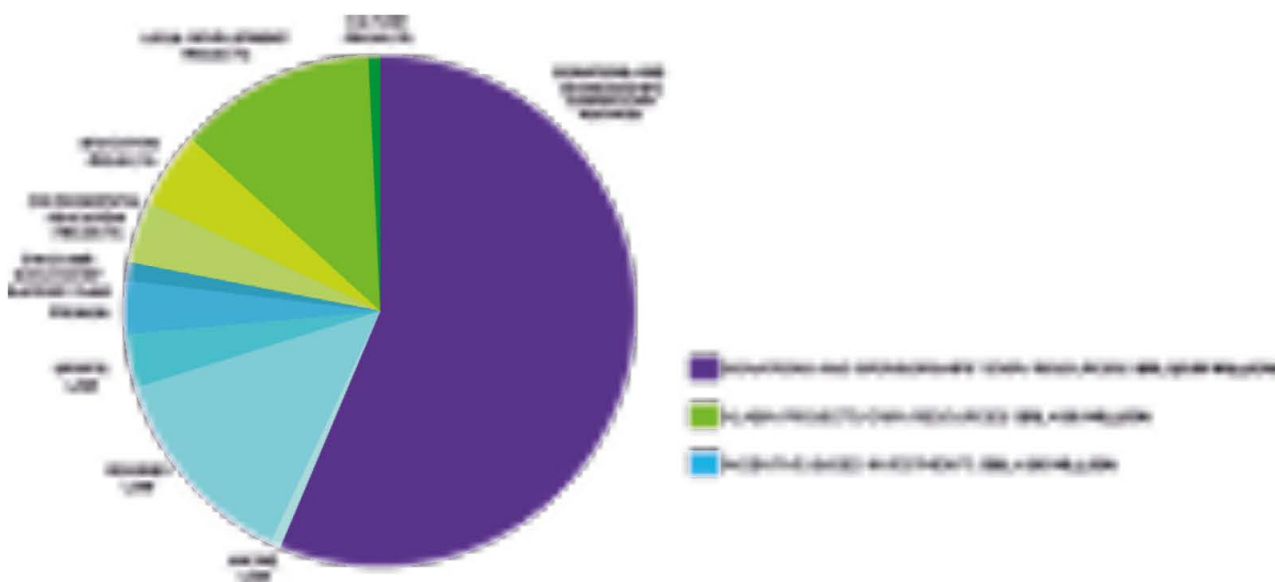
DEVELOPMENT AND IMPACT OF INFRASTRUCTURE INVESTMENTS AND SERVICES SUPPORTED

GRI 203-1

The PROSAS platform, focused on managing Klabin's private social investment, is a tool that helps define own and supported initiatives regarding their social impact in the areas of local development, environmental education, culture and education. BRL 27.14 million were invested in 2019. **BRL 22.84** million were invested in 2019.

Private Social Investments (in BRL millions)	2016	2017	2018	2019
	21.82	22.36	26.68	22.84

The funds were allocated to donations and sponsorships that, through their own and incentive-based resources, support third-party projects both in the communities and outside Klabin's area of operation, as well as own projects, which are preferably conducted in the territories where the Company operates.



**Donations and own funds are allocated to assistance entities, educational institutions, cultural donations and sponsorships.*

Since 2016, Klabin has not made any type of contribution to political campaigns, in accordance with Brazilian legislation currently in force (Law No. 13.165/2015).

DETAILS OF PROJECTS THAT RECEIVED A DONATION OR SPONSORSHIP CAN BE CONSULTED ON THE [PROSAS](#).

OUR PROJECTS

GRI 203-1

KLABIN SUPPORT FOR LOCAL DEVELOPMENT

State Forestry and Agricultural Professional Education Center of Ortigueira

One of the major highlights of our projects in 2019 was the structuring of the first school for forestry operation and mechanics in Brazil. The State Forestry and Agricultural Professional Education Center of Ortigueira (PR) was inaugurated in January 2020 and already received its first classes in February, in four courses with 43 students each.

Forestry Operations, Heavy Machinery Maintenance Technician and Agribusiness Technician courses will be offered in full-time (parallel to high school) and subsequent (after high school) regimes. There will be a total of 800 vacancies, 300 of which are boarding school and semi-boarding school modalities, which allows students from different parts of the country to enter.

The school's infrastructure measures 37,000 m² and includes classrooms, a sports court, a specialized library, and laboratories for biology, mechanics, soil, cutting and sharpening. Modern simulators, articulated forestry tractors, processors and motorized harvesters are among the equipment used in teaching and learning activities. The project sought educational inspiration from schools in Sweden and Finland. Klabin employees who participated in the State selection process make up part of the staff. Partnerships are being established with companies in the forest-based chain. The initiative received BRL 35 million in investments and is a partnership between Klabin, the State Government of Paraná and the City of Ortigueira to contribute to the training of qualified labor for the sector. According to the Brazilian Tree Industry (Ibá), projects related to increasing forest plantations, expanding factories and new units that work with raw forestry material should total BRL 32.9 billion in investments, between 2020 and 2023.



A NEW BASELINE FOR THE PUMA II PROJECT

The assessment of the socioeconomic situation in the region where a large project is being implemented is an important instrument for better evaluating its positive and negative impacts and for the adoption of social, economic and environmental programs and projects. Following what was previously implemented within the scope of the Puma I Project, in 2013, Klabin has now prepared a new diagnosis for Ortigueira and the municipalities in its expansion area of influence: the Puma II Baseline.

For this process, we adopted the Social Progress Index (IPS), developed by Fundación Avina, that uses indicators that are relevant in directing Klabin's social investment strategy and the dynamics of the territory.

The document will enable to better understand the region's socioeconomic dynamics and the transformations of the territory influenced by the start of operations of the industrial complex in 2016. And, with that, also understand the growth potential from the new expansion project.

1

DEFINITION OF INDICATORS IN LIGHT OF THE THREE NATURES FORESEEN IN THE IPS METHODOLOGY: BASIC HUMAN NEEDS, FUNDAMENTALS OF WELL-BEING AND OPPORTUNITIES.

2

RESEARCH ON POLITICAL-INSTITUTIONAL AND LOCAL CONTEXT OF THE TERRITORY.

3

ALIGNMENT OF IPS TO KLABIN'S SOCIAL PROJECTS IN THE TERRITORY: SUPPORT TO PUBLIC ADMINISTRATION, SOLID WASTE PROGRAM, SEMEANDO EDUCAÇÃO [SOWING EDUCATION] AND MATAS SOCIAIS [SOCIAL FORESTS] (SEE MORE ABOUT THE PROJECTS IN THIS CHAPTER).

The process of building the Baseline involved statistical analysis of official indicators and field research with communities in the 12 municipalities under the influence of the Puma II Project (stages already completed). The selection of indicators to be monitored to assess the progress of these municipalities is expected for June 2020. The perspective is that these indicators will provide a basis for the development of improvement plans and social investments by Klabin, and serve as a subsidy to public policies to be adopted in the region.

WITH SUPPORT FROM KLABIN, ARTISTIC GYMNASTICS IN TELÊMACO BORBA BECOMES A NATIONAL HIGHLIGHT

THE DEDICATION AND TALENT OF THE ATHLETES AT THE ARTISTIC GYMNASTICS TRAINING CENTER (CTGA) IN TELÊMACO BORBA ARE HIGHLIGHTED IN COMPETITIONS THROUGHOUT BRAZIL. TEACHING OF THE SPORT BEGAN EIGHT YEARS AGO THROUGH A PARTNERSHIP BETWEEN KLABIN AND THE CITY OF TELÊMACO BORBA, WHICH GUARANTEES THE DEVELOPMENT OF THE MODALITY, CONTRIBUTING POSITIVELY TO THE PHYSICAL AND CULTURAL TRAINING OF YOUNG WOMEN IN THE REGION. THE CENTER CURRENTLY PROVIDES TRAINING FREE OF CHARGE TO 100 GIRLS BETWEEN FIVE AND FOURTEEN YEARS OF AGE.

KLABIN SUPPORTS THE PROJECT BY PROVIDING INFRASTRUCTURE IN THE GYM AND GUARANTEES THE HIRING OF ONE OF THE COACHES. IN 2019, ATHLETES FROM THE GROUP WON AT THE NATIONAL ARTISTIC GYMNASTICS TOURNAMENT, THE SPORT'S MAIN EVENT IN THE COUNTRY.

Development Forums

In 2019, we created the Local Development Forum of Angatuba (SP) and continued with the activities in Goiana (PE). The proposal is to involve various players from the organized civil society, including Klabin, and advocates for them to come together to create a new management model for the territory based on the discussion of solutions to local issues. The initiative, which has also been taken to the municipality of Goiana (PE), has been improved with the application of the Social Progress Index (IPS), a methodology that measures the territory's quality of life items, independent of economic development.

During the year, approximately BRL 20,000 was invested to support the Education Diagnosis conducted by the Goiana Forum. Actions on the education and sustainability fronts were prioritized at the meetings in Angatuba, such as the meetings on Perspectives of the Job Market and Sustainable Cities, and the creation of a Geopark in the municipality, all to be conducted in the short term, and the "Community in School" project and "Spring Project" for the long term.

For 2020, the proposal (not yet confirmed, due to changes arising from Covid-19) is for the forums to become a space for debates by candidates for mayor, based on issues raised by the groups on local development.

Public Administration Support Program

We expanded the Public Administration Support Program in 2019. Specialized consultants assisted the municipal administrations of Sapopema, Curiúva, Reserva and Tibagi in management and action planning. The purpose is to balance public accounts, optimizing the use of resources. In 2019, BRL 520,000 was invested to hire these consultants. Imbaú, Telêmaco Borba and Ortigueira have been assisted since 2017.



Matas Sociais [Social Forests], Planning Sustainable Properties

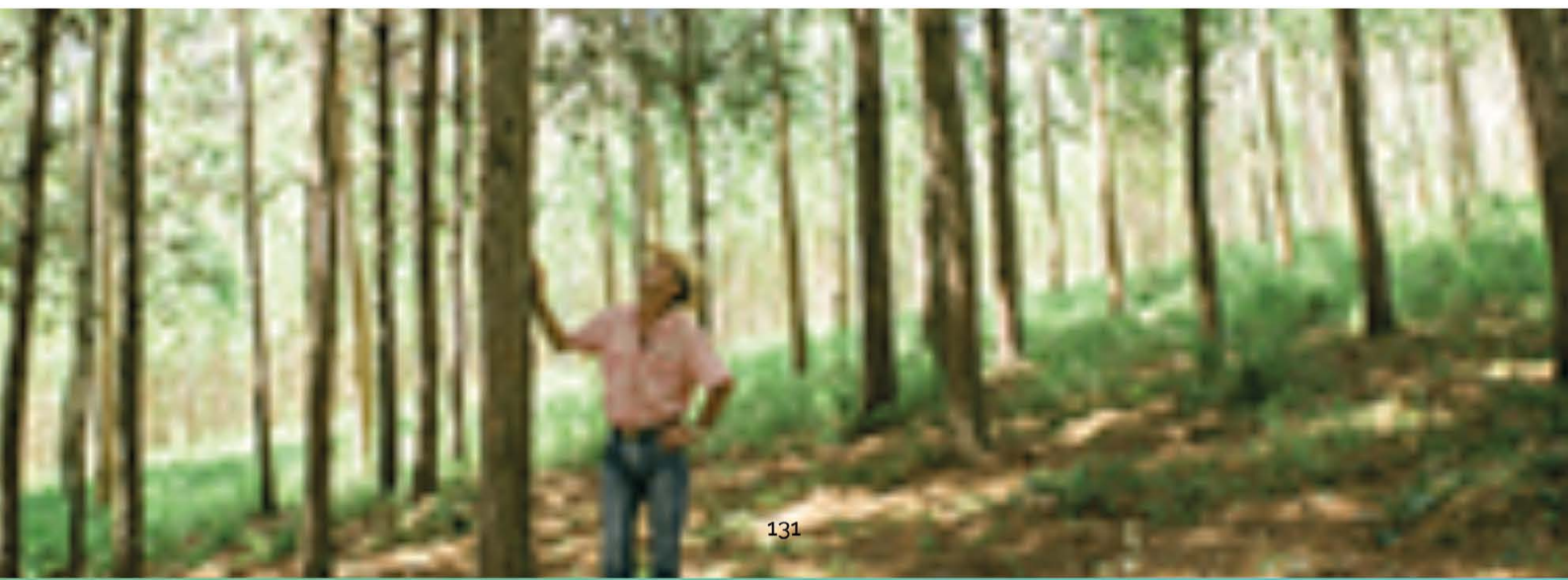
In July, the program was extended to the municipalities of Sapopema, Curiúva, São Jerônimo da Serra, Tibagi and Cândido de Abreu. The expectation is that another 100 properties will be assisted in the region. Over five years, Matas Sociais has served more than 500 properties in Telêmaco Borba, Ortigueira, Imbaú and Reserva, all in Paraná, achieving the following results¹:

1. 66% of farmers reduced the use of pesticides due to consultant guidance, the search for less aggressive alternatives, diversification of production and the prospects of accessing the organic market;
2. 72% of farmers experienced an increase in income;
3. Of these, 45% recorded a rise of between 20% and 60% in their properties' revenue;
4. 79% invested in the property;
5. 57% increased food production;
6. 52% expanded the marketing network from local farmers markets to cooperatives, restaurants and companies. The farmers' production is found in school lunches, regional markets and in meals at Klabin factories and forestry area; More than 80% of producers believe that the Program has brought benefits or changes to the property with respect to environmental issues.
7. More than 1700 hectares of Permanent Preservation Areas and Legal Reserve have been delineated from the beginning of the Program until this report.
8. More than 1700 hectares of Permanent Preservation Areas and Legal Reserve have been delineated from the beginning of the Program until this report.

¹Data are part of a socioeconomic and environmental survey completed in 2020, referring to the five years of the Project. Research was conducted with a group of 60 Matas Sociais participants.

For 12 years, we have been helping rural producers in Paraná and Santa Catarina make environmental adjustments to their properties. The initiative promotes the preservation and restoration of riparian forests and legal reserves for small producers, an increase in family income and awareness on environmental issues. Municipalities assisted in Paraná: Arapoti, Assai, Bandeirante, Cândido de Abreu, Castro, Congoinhas, Conselheiro Mairinck, Curiúva, Figueira, Ibaiti, Imbaú, Jaboti, Jaguaçuva, Londrina, Mauá da Serra, Ortigueira, Pinhalão, Pirai do Sul, Reserva, Santa Bárbara, Santana do Itararé, Santo Antônio da Platina, São Jerônimo da Serra, Sapopema, Tamarana, Telêmaco Borba, Tibagi, Tomazina, Urai, Ventania, Wenceslau Braz. Municipalities assisted in Santa Catarina: Agrolândia, Alfredo Wagner, Bela Vista Toldo, Bocaina do Sul, Bom Retiro, Braço do Trombudo, Campo Belo do Sul, Canoinhas, Capão Alto, Cerro Negro, Correia Pinto, Curitibaanos, Ibirama, Imbuia, Itaiópolis, Chapadão do Lajeado, Lages, Leoberto Leal, Major Vieira, Monte Castelo, Otacílio Costa, Paineira, Palmeira, Papanduva, Petrolândia, Ponte Alta, Ponte Alta do Norte, Rio do Campo, Rio do Sul, Rio Rufino, Santa Cecília, Saleté, São Cristóvão do Sul, São José do Cerrito, Taió, Timbó Grande, Urubici, Urupema, Vidal Ramos.

Learn more about the initiative [here](#).



IN 2019, INVESTMENTS OF **BRL 492.221,50** WERE MADE IN PARANÁ AND **BRL 350.000,00** IN SANTA CATARINA.

IN THE 15 YEARS OF THE PROGRAM



More than 1,000 properties assisted



About 1 million native plant seedlings donated



Over 15,000 hectares of Permanent Preservation Areas (APP) and Legal Reserve (RL) preserved

Matas Legais in Paraná and Santa Catarina

	2016	2017	2018	2019	Cumulative total 2005 - 2019*
APPs and RL in regeneration	51	61	37	54	1.479
Preserved APPs and RL	2.406	3.159	2.246	2.691	15.675
Delineated APPs and RL - recovered	2.660	3.403	2.463	2.803	18.297

¹The Matas Legais Program started in Santa Catarina in 2005 and in Paraná in 2008.



Apiculture and Meliponiculture Program

In 2019, the initiative focused efforts on training multiplying agents to prevent and minimize accidents with bees and wasps during forestry activities (Apiculture OSH). The opportunity for participation was opened to employees to encourage the training of new beekeepers. In December, **the Field Day in Apiculture and Meliponiculture** featured classes with renowned teachers from the region of Londrina to update the knowledge of experienced keepers. During the year, 10.7 tons of honey were produced, coming from 45 producers in Ortigueira, Curiúva, Reserva, Ventania and Telêmaco Borba, in Paraná. Training was also held for 112 employees, who joined the forest brigade. The program received investments of BRL 30,000.

SINCE THE PROGRAM BEGAN, **178.7 TONS OF HONEY HAVE BEEN PRODUCED AND SOLD.**



Wood Supplier Certification Program

Klabin's partner Forest Certification program is a Klabin initiative that has been supporting the region in the production of sustainable forests. Suppliers that agree to receive support for the forest certification of their areas undergo an intense one-year process consisting of documentary and field preparation to conduct an external audit with a certifying body. The 12-month preparation process, which is paid for by Klabin, allows small suppliers to add value to the product with FSC certification, facilitate business operations and improve the competitiveness of the value chain as a whole. In Santa Catarina, more than 21,000 hectares are certified in over 15 municipalities involved. The first FSC group certification for small producers in the state was achieved with the support of Klabin.

KLABIN ENVIRONMENTAL



Klabin Caiubi Project

In 2019, we began to expand the Project to communities near the corrugated board factories. Thirty-five teachers from the **Monsenhor Jessé Torres Cunha** and Professora **Josenita Nery Boaventura** municipal schools, in Feira de Santana (BA), participated in the training. Progressively, the initiative will also be implemented in schools close to other units.

Two more editions are expected to take place in 2020 in municipalities where the company operates. The program began in 2007 and has benefited 572 schools, 1,453 teachers and 187,938 students over the years in the 32 stages conducted.

In Paraná, Caiubi has been held since 2001. In 2019 alone, it trained 155 teachers and pedagogical coordinators from 66 schools and Municipal Centers for Early Childhood Education and involved 1,873 students. More than 12,700 students were indirectly impacted.



Klabin Araucaria Trail

The trail is located in the municipality of Correia Pinto, close to the company. It is 1,260 m long and is interspersed with the native forest of Klabin's forest areas. Since 2007, it aims to receive teachers and students who participate in the Caiubi Program, in addition to the general public. Visitors receive information of an environmental nature about Klabin and about our social and environmental actions. So far, over five thousand visitors have visited the trail.



Protetores Ambientais [Environmental Protectors]

We have supported Protetores Ambientais [Environmental Protectors] Program since 2005, an initiative of the Environmental Military Police of Santa Catarina, which aims to train pre-adolescents to act as multipliers in environmental education. So far, 402 teenagers have been involved in the program across several municipalities in our operating region. In 2019, BRL 22,000 was invested in the initiative. Two more classes will be formed in 2020, totaling 17 with the support of Klabin.

Klabin in Schools

The purpose of the Program is to inform elementary and high school students about Klabin's operations in the region, the company's activities and how the community is inserted in this context. Through actions that involve lectures, exhibitions and sensory experiences, we present the Company's entire production process, from the planting and harvesting of raw materials to the industrial process routines. One of the highlights is the announcement that the papers and packaging manufactured by the company are present in the daily lives of these communities: milk cartons, diapers, bags of seeds, for example. Klabin in Schools also provides students with notions on biodiversity, sustainability, security and citizenship. Developed four years ago, it has already impacted more than 5,000 students and visited more than 15 municipalities in Paraná where we have forest operations. In 2019 alone, 2,350 students were impacted in nine municipalities.

Projeto Crescer [Growing Up Project]

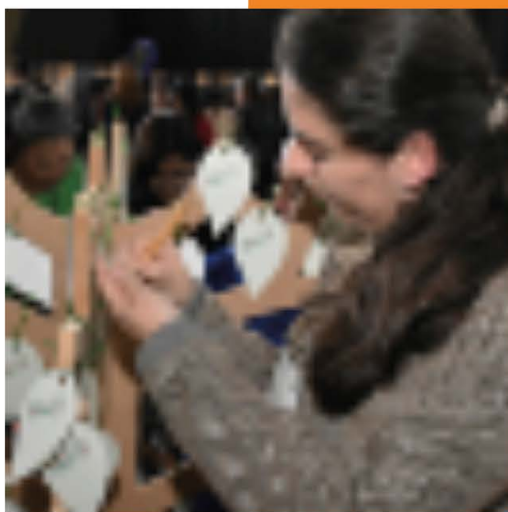
We work to continuously train direct and indirect employees on environmental issues, health, family management, quality of life and professional growth, among other topics. The program relies on a partnership with Sesi, including trained instructors who give lectures aimed at the target audience of forestry operations. BRL 92,600 were invested in Santa Catarina and BRL 75,900 in Paraná, respectively covering 4,000 and 6,304 people, among own employees and third parties, in various activities.



Solid Waste Program

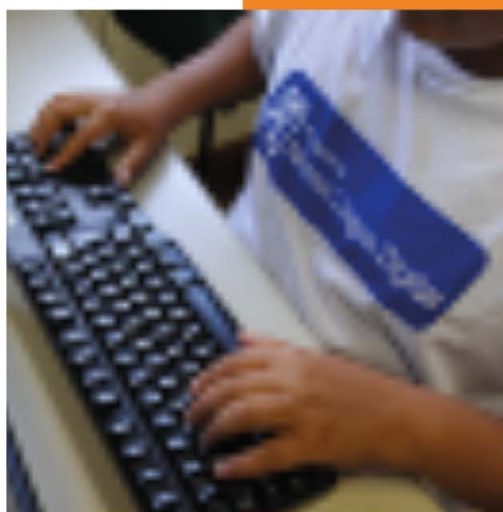
The Solid Waste Program has been focused on supporting the management of solid waste in six municipalities in Paraná since 2012: Imbaú, Ortigueira, Reserva, Tamarana, Tibagi and Telémaco Borba, providing structures and equipment, assisting in the formalization of associations and cooperatives and conducting monitoring, training and institutional strengthening activities for 290 recyclable material pickers. The Program also worked to raise public and community awareness to improve selective collection in the municipalities and to distribute ecological bags to 13,200 homes to implement the selective collection methodology in the municipalities. Another front of the program is training educators on how to approach the concepts of selective collection and recycling in schools. Klabin has also been assisting the Caminhos do Tibagi Consortium in the environmental licensing process for the new Consortium Landfill that is already in the deployment phase.

KLABIN EDUCATION



Klabin Semeando Educação [Klabin Sowing Education]

After achieving strong results in the state network, the program was extended to the municipal network. The first event to raise awareness was held in August and gathered approximately 700 people from Telêmaco Borba, Imbaú and Ortigueira. In this new phase, the initiative should benefit 11,000 students, from zero to ten years of age, and a thousand teachers from 65 schools in the urban and rural areas of the three municipalities. BRL 400,000 is invested in the program per year. Between 2015 and 2017, the state schools of these same municipalities showed an average evolution of 25% in the Brazilian Basic Education Development Index (IDEB), calculated based on the students' learning in Portuguese and Mathematics (Prova Brasil) and the school flow (approval rate). The growth is greater than the average for Paraná and Brazil.



Our Digital Language

Intended for young people 13 to 18 years of age, it seeks to improve the oral and written communication skills of the children of employees and residents of Telêmaco Borba (PR). Its methodology uses new information and communication technologies to address topics covered by the UN Sustainable Development Goals and by ENEM.

SINCE 2009, 1,115 STUDENTS HAVE BEEN TRAINED IN 21 SEMESTERS.



Terra Viva

The Terra Viva Volunteer Association organizes and promotes citizenship and solidarity actions focused on children and young people in situations of social inequality or physical disability and the elderly, with the support of Klabin employees and their families. These actions include guiding young people in their search for their first job, the Investir Vale a Pena (Investing is Worth It) Program (IVP), in São Paulo, and blood, clothing and food drives in several states.

KLABIN CULTURAL



Meninas Cantoras da Klabin [Klabin's Girls Chorus]

Choir formed by daughters of company employees and young people from the Telêmaco Borba and Ortigueira communities. Seventy girls between 7 and 17 years of age learn choral singing, music theory concepts, rhythm and vocal technique. The repertoire includes classical songs, folk classics and Christmas carols. The project inspired the creation of the Imbaú Choir in 2019, made up of girls under 18 years of age supported by the Imbaú Coexistence and Bond Strengthening Center. The young women take classes in music theory and practice and also learn to play instruments. The project is a partnership with the Social Action Secretariat of Imbaú.

Learn [more](https://klabin.com.br/sustentabilidade/responsabilidade-socioambiental/) about Klabin's projects at <https://klabin.com.br/sustentabilidade/responsabilidade-socioambiental/>

Created in partnership with Studio 3 Cia. De Dança, it offers contemporary dance and capoeira classes for children and teenagers, children of company employees and young people from the Telêmaco Borba and Ortigueira community. The program benefited 181 people in 2019. Since its foundation in 2008, it has already welcomed more than a thousand members.

MORE HIGHLIGHTS

In July 2019, we expanded transmission of the radio program **Minuto Klabin** [Klabin Minute] to 12 radio stations with ranges across the 30 municipalities of Santa Catarina. In Paraná, the program is in 10 radio stations and a website, covering 28 cities. The communication tool brings Klabin closer to the communities where forestry operations are located, sharing information about the Company's economic, environmental and social activities in the region, reinforcing the projects, products and commitments.

Klabin in the Community was in the rural areas of eight municipalities: Ortigueira, Telêmaco Borba, Imbaú, Reserva, Tibagi, Ventania, Sapopema and Curiúva. The travelling fairs are held in public places and provide the population with a closer look at our production process, social and environmental projects.

Projects developed by Klabin

Project or activity	Locations	Progress	Positive and negative impacts (current or expected)	Investments and services (commercial, in kind or free)	Volume, cost and duration of each investment	Extent to which different communities or local economies are impacted	Related SDG	Pillar of the Klabin Private Social Investment Platform
Matas Sociais – Planning Sustainable Properties	Ortigueira, Imbaú, Telêmaco Borba, Reserva, Cândido de Abreu, Curiúva, Sapopema, São Jerônimo da Serra and Tibagi	Strengthening of production chains, environmental adjustment of properties and management support for the operation of associations and cooperatives. Expansion of the program to Cândido de Abreu, Curiúva, Sapopema, São Jerônimo da Serra and Tibagi. Action focused on institutional articulation, definition of new groups and initiating support.	Expansion of the marketing network. Environmental adjustment of rural properties for compliance with environmental legislation. Definition and structuring of Reference Units (model properties) in the new municipalities.	Acquisition of equipment to support and strengthen productivity in the main production chains (assignment of use with cooperatives) and hiring of consultants to support entrepreneurship and environmental adaptation.	Total equipment purchase amount: BRL 90,000.00. Consultant hiring: BRL 1,355,995.00. Investment made throughout the year of the cycle.	72% of farmers experienced an increase in income 79% invested in the property 57% increased food production 52% expanded the marketing network. 66% of farmers reduced the use of pesticides. More than 80% perceive environmental improvement in the property.	2, 11, 15, 17	Local Development
Support to Public Administration		Monitoring of the execution of actions planned by the municipalities during the 2018-21 cycle. Expansion of the program to Sapopema, Curiúva, Reserva and Tibagi.	City management teams trained through public planning instrumentation. Budget efficiency for the municipalities.	Offered free of charge to the municipalities, with the hiring of specialized consultancy in public management.	The program's duration and renewal is annual. In 2019, BRL 520,000.00 was invested to hire consultants.	Indicators measured according to the municipality's budget efficiency performance.	16, 17	Local Development
Local Development Forum	Otacilio Costa (SC), Correia Pinto (SC), Goiana (PE), Angatuba (SP)	Continuation of the Correia Pinto and Otacilio Costa (SC) forums – 4 th year Goiana (PE) – 3 rd year. Beginning of the Angatuba Forum (SP) – 1 st year.	Expected impacts are linked to the results of actions coordinated based on the needs presented by each Forum (Education, Health, Environment, Local Development, Culture).	Maintenance of the forum (consultancy that organizes the activities of the Forums); small support (snacks, invitations, transportation, advertising, etc.); specific projects (as prioritized by the group and the Klabin Private Social Investment Platform)	BRL 230,000.00 for consulting. BRL 20,676,000 to support the Education Diagnosis carried out by the Goiana Forum in action.	Delivery of the actions proposed by the Forums have a medium-long term impact to be measured by reapplying the Social Progress Index. Annual measures vary from public policies created from the articulation of the group, to training, awareness actions and other forms of engagement.	11,16, 17	Local Development

Respeitar é Preciso! [Respect is Necessary] Project	Goiana (PE)	Implementation of situational diagnosis of the educational network in Goiana (PE), which indicated an action plan for a human rights education project	Confrontation of one of the structural problems indicated by the research (infrastructure and conflicts in the school community)	Hiring of a consulting service specializing in the management of a public human rights education program	BRL 535,000.00 for consulting services to conduct a situational diagnosis; training for the network of technicians, managers and teachers; preparation of teaching material for the entire network and to hold a regional seminar	Cases of violence in the school community that have been reported and referred, both by the Department of Education and by the Juvenile Court	4,10, 17	Education
Klabin Semeando Educação [Klabin Sowing Education]		Beginning of the municipal phase of the project, to support preschool and elementary school education. Visit to 65 schools to compose the diagnosis of each.	Improvements in student performance on the Paraná Test, which is given 3 times a year.	Free service for schools in the municipal network of Telémaco Borba, Imbaú and Ortigueira, which are considered in the Company's Area of Direct Influence.	BRL 400,000 /year.	First assessment at the municipal level will take place in 2020	4, 17	Education
Agricultural and Forestry Professional Education Technical School of Ortigueira		Offering of technical courses in Machinery Operation, Heavy Machinery Maintenance and Agribusiness Technician under full-time (with integrated high school) and subsequent regimes.	The pedagogical project of the Center is based on the Scandinavian model, with a quality, benchmark education system that brings several benefits to the community, mainly with regard to employability and the job market.	The investments to implement CEEP are the result of a partnership between Klabin, the State Government of Paraná and the Municipality of Ortigueira. CEEP is maintained by the State Government as a public institution.	Total investment of BRL 35 million	Registration of 170 students (80% local and 20% regional) who are taking the first CEEP classes, whose academic year began in February 2020	4, 8, 17	Education
Regional logistics		Own investment, or in partnership with municipalities and the state government, to revitalize rural roads and important paved roads	Efficient flow of goods and services that promotes local development, in addition to maintenance of local roads	Own investment in road maintenance, based on a protocol of intentions with the state government	In 2019, Klabin invested approximately BRL 89 million on municipal roads in Paraná, Santa Catarina and São Paulo	Efficiency for the flow of goods, essential for forestry activity. Road maintenance allows better movement of community members with faster access to services and safety	12, 17	Local Development

INTEGRATED AND RESPONSIBLE GROWTH

Aware of how we impact the territories in which we operate, we work in partnership with governments to improve local infrastructure. In 2019, we signed agreements with the Government of Paraná, focusing on the implementation of the Puma II Project in Ortigueira (PR).



Expected investments of up to **BRL 450 million** via anticipation of ICMS, in logistics and road infrastructure, with a focus on improving the existing road networks in the Project's area of influence, located in Ortigueira (PR).



Klabin and the Secretary of State for Infrastructure and Logistics (SEIL) will work on planning and detailing works and schedules. The projects should be conducted between **2020 and 2024**.



The Government in Paraná foresees the complementation of personnel from the battalion of the Military Police, Fire Department and Civil Police; the implementation of the Forensic Medicine Institute (IML), the Citizen Police Station and Social Education Centers (CENSE); and the operation of the Regional Hospital of Telémaco Borba.

Significant indirect economic impacts

GRI 203-2

Impacts	Description of positive indirect economic impacts	Description of negative indirect economic impacts
Changes in the productivity of organizations, sectors or the whole economy (such as through greater adoption or distribution of information technology)	Klabin promotes studies aimed at the adoption of alternatives to single-use plastic, increasing investments in research and development of more sustainable packaging.	Research and development times do not keep up with the accelerated pace of market evolution, causing excess demand and rising supply.
Economic development in areas of high poverty (such as the total number of dependents supported through the income of a single job)	Income generation in communities with few job opportunities and low quality of life.	Community economically dependent on the Company, resorting to the company for requests that should be addressed to the public authority.
Economic impacts of improving or deteriorating social or environmental conditions (such as changing job market in an area converted from small farms to large plantations, or the economic impacts of pollution)	Income generation in the communities by encouraging permanence in the field and organic production, driven by projects such as Matas Sociais [Social Forests], Matas Legais [Legal Forests] and the Apiculture & Meliponiculture Program.	No identified impacts on this front.
Availability of products and services for those on low incomes (such as preferential pricing of pharmaceuticals, which contributes to a healthier population that can participate more fully in the economy; or pricing structures that exceed the economic capacity of those on low incomes)	-	-

Stimulating, enabling, or limiting foreign direct investment (such as the expansion or closure of an infrastructure service in a developing country, which can then lead to changes in foreign direct investment)	-	-
Economic impacts from a change in operation or activity location (such as the impact of outsourcing jobs to an overseas location)	No impacts were identified on this front.	Depending on the size of the operation and the municipality's economic dependence, there may be substantial impacts. However, there may be changes after a detailed study considering the economic impact and mitigation measures.
Economic impacts from the use of products and services (such as economic growth patterns and the use of a particular product or service)	Does not apply	Does not apply

Total number and percentage of operations subjected to impact assessments or human rights analyses, by country

GRI 412-1

BRAZIL			
	2017	2018	2019
Operations			
Total number of operations	-	18	18
Total number of operations that were subjected to impact assessments or human rights analyses	-	6	6
Percentage of operations that were subjected to impact assessments or human rights analyses	31%	33.33%	33.33%

Percentage of operations with local community engagement implemented, impact assessments and/or development programs

GRI 413-1

Type of initiative	Number of operations for each initiative		Observations and comments
	2019		
	Number	Percentage	
I. Social impact assessments, including gender impact assessments, based on participatory processes*	6	33.33%	Monte Alegre, Puma, Otacílio Costa, Correia Pinto, Goiana and Angatuba units*
ii. Environmental impact assessments and continuous monitoring	18	100.00%	-
iii. Public dissemination of the findings of environmental and social impact assessments	17	94.44%	All units except Pilar (Argentina)

iv. Local development programs based on the needs of the local communities*	6	33.33%	Monte Alegre, Puma, Otacílio Costa, Correia Pinto, Goiana and Angatuba units*
v. Stakeholder engagement plans based on mapping of these parts*	11	61.11%	Units in Monte Alegre, Puma, Otacílio Costa, Correia Pinto, Goiana, Angatuba*, Piracicaba, Rio Negro, Manaus, Jundiá Tijuco Preto and Jundiá Distrito Industrial **
vi. Committees and processes for extensive consultations with the local community including vulnerable groups*	6	33.33%	Monte Alegre, Puma, Otacílio Costa, Correia Pinto, Goiana and Angatuba units*
vii. Work councils, occupational health and safety committees and other worker representation bodies to deal with impacts	18	100.00%	-
viii. Processes for formal complaints by local communities	18	100.00%	-

*This calculation considers the total number of industrial units that take part in concurrent initiatives for: assessment of social impacts; stakeholder engagement mapping and plan; and committees and consultation processes with local communities based on participatory processes. The calculation used for the 33.3% percentages indicated here only considers the absolute number of units that take part in these three initiatives on the total of operations. However, we reinforce that these 6 units listed:

- total more than 80% in terms of operational representation (units in Monte Alegre, Puma, Otacílio Costa, Correia Pinto, Goiana and Angatuba);
- are located in 100% of the municipalities in territories prioritized by the company's private social investment platform (zone 1);
- have medium- and long-term plans and targets that consider local development indicators.>/dfn>

**These five units of the packaging business were also included in the mapping process and stakeholder engagement plan in 2019.

OPERATIONS WITH SIGNIFICANT POTENTIAL IMPACTS OR ACTUAL NEGATIVE IMPACTS ON LOCAL COMMUNITIES

GRI 413-2

Our impact management includes mapping, matrix development, and specific control and/or mitigation initiatives. In addition, we promote engagement of communities in the regions where we operate through constant and transparent dialogue.

IN THE FORESTRY UNITS OF PARANÁ, SANTA CATARINA AND SÃO PAULO, THE IMPACT MATRIX IS BUILT TOGETHER WITH EMPLOYEES OF THE FORESTRY AREA, WHICH ALLOWS SOCIAL AND ENVIRONMENTAL IMPACTS OF FORESTRY AND INDUSTRIAL OPERATIONS TO BE ANALYZED.

DUST CONTROL

One of the 2019 highlights is the 21% drop in complaints about dust in our communication channels with the community.

Measures to reduce this type of emission from traffic during harvesting activities, for example, comprise wetting the roads, investing in roads, planning routes, as well as procedures that limit the hours of operation.

Wetting is being conducted with better planning: we collected the details of all the transports that will be made and, based on this information, we plan for water truck rentals or even the paving of stretches.

Significant actual and potential negative impacts of the operations

<p>Actual impacts</p>	<ul style="list-style-type: none"> - Noise generation; - Bad smell (odor); - Damage to roads (land); - Damage to fences/neighbors; - Rupture of water pipes; - Waste left in an inappropriate place; - Increased convoy flow/traffic (difficulty with vehicle traffic); - Dust generation; - Parted wires (electricity or telephony); - Herbicide drift in neighboring areas; - Risk to third-party assets (fallen trees and branches); - Shading of cultures and residences; - Risk of accidents (speeding and other deviations).
<p>Potential impacts</p>	<ul style="list-style-type: none"> - Change in migration flows (rural exodus); - Impediment to vehicle traffic; - Erosion formation in third-party areas; - Impediment to vehicle traffic; - Cleaning of cargo on the road (obstruction of water outlets/damage to the road); - Accident rate; - Vibration (damage to homes); - Improper harvesting of neighboring plantations; - Visual impact; - Contamination of water courses; - Water availability; - Damage to headwaters (silting)

NEWS

IN 2020, WE WILL CONDUCT A NEW TERRITORY BASELINE STUDY, COVERING 15 MUNICIPALITIES IN THE CAMPOS GERAIS REGION. THE DEVELOPMENT OF THE SOCIAL PROGRESS INDEX (IPS) IS AMONG THE PLANNED ACTIVITIES, WHICH CONSIDERS FOREST EXPANSION FOR THE COMPANY AND THE PUMA UNIT.

THE INDEX MAKES IT POSSIBLE TO MEASURE THE LEVEL OF SOCIAL PROGRESS (SOCIAL AND ENVIRONMENTAL DEVELOPMENT), ALWAYS ATTEMPTING TO ANSWER HOW EACH TERRITORY IS CAPABLE OF PROVIDING ADEQUATE CONDITIONS FOR ITS INHABITANTS.

PARTNERS IN THE INITIATIVE WILL BE FUNDACIÓN AVINA, CONSULTORIA DE INTERAÇÃO URBANA AND DIFERENCIAL PESQUISA DE MERCADO.

TRADITIONAL COMMUNITIES

GRI 411-1

The company maps all traditional communities in its area of influence, such as *quilombolas*, *faxinalenses* (Paraná communities that inhabit small areas and live off of their relationship with the forest), and indigenous groups. In its relationship with these communities, the company follows the Brazilian legislation and the recommendations of ILO 169, resolution of the International Labor Organization on Indigenous and Tribal Peoples, ensuring their right to free, prior, informed consent (FPIC).

In 2019, we advanced in Phase II of mapping traditional communities in our operating area in Paraná (municipalities of the industrial and forestry operation). The data update began in 2017 and its purpose is to identify possible new communities and expand relationships and knowledge on those already included in our survey. There were no cases of violation of the rights of indigenous peoples or traditional communities in 2019.

Mapping and results

PHASE I



MAPPING

AN INITIAL SURVEY IS CONDUCTED VIA:

READING OF STUDIES:

CONDUCTING ONLINE, PHONE AND FACE-TO-FACE CONSULTATIONS WITH SPECIALISTS, MUNICIPAL, STATE AND FEDERAL PUBLIC BODIES, UNIVERSITIES, ECCLESIASTICAL ENTITIES, NON-GOVERNMENTAL ORGANIZATIONS, FUNDING AGENCIES, ENVIRONMENTAL AND SOCIAL BODIES.



RESULTS

38 FAXINAL COMMUNITIES

15 QUILOMBOLA COMMUNITIES

9 INDIGENOUS AREAS

PHASE II



MAPPING

DIALOGUE WITH COMMUNITIES TO IDENTIFY HISTORICAL AND CULTURAL ASPECTS; PRODUCE A SOCIOECONOMIC PROFILE; POSITIVE AND NEGATIVE SOCIAL AND ENVIRONMENTAL IMPACTS, ACTUAL AND POTENTIAL; PRODUCE A MAP OF THE TERRITORIES, ETC.



RESULTS

42 FAXINAL COMMUNITIES
27 QUILOMBOLA COMMUNITIES
9 INDIGENOUS AREAS

DIPLOMA IN HAND

IN DECEMBER 2019, FIVE YOUNG PEOPLE FROM THE TIBAGY-MOCOCA INDIGENOUS COMMUNITY, IN THE ORTIGUEIRA REGION (PR), GRADUATED IN PEDAGOGY AND DENTISTRY. THE RECENT GRADUATES WERE PART OF THE FIRST GROUP OF UNIVERSITY SCHOLARSHIP STUDENTS INCLUDED IN KLABIN'S BASIC ENVIRONMENTAL INDIGENOUS PLAN (PBAI), WHICH IS A CONDITION FOR THE CONSTRUCTION OF THE PUMA UNIT.

IN ADDITION TO OFFERING TEACHING MATERIALS DURING THE COURSE, THE SCHOLARSHIP PROGRAM PROVIDES TUTORING THAT PERIODICALLY ASSESSES THE ENGAGEMENT AND NEEDS OF THE SCHOLARSHIP STUDENTS' ACADEMIC ROUTINE.

THE INVESTMENT IS THE RESULT OF A PARTICIPATORY CONSULTATION PROCESS INVOLVING KLABIN, THE NATIONAL INDIAN FOUNDATION (FUNAI) AND INDIGENOUS COMMUNITIES.





R&D+I

ANTICIPATING AND RESPONDING TO MARKET



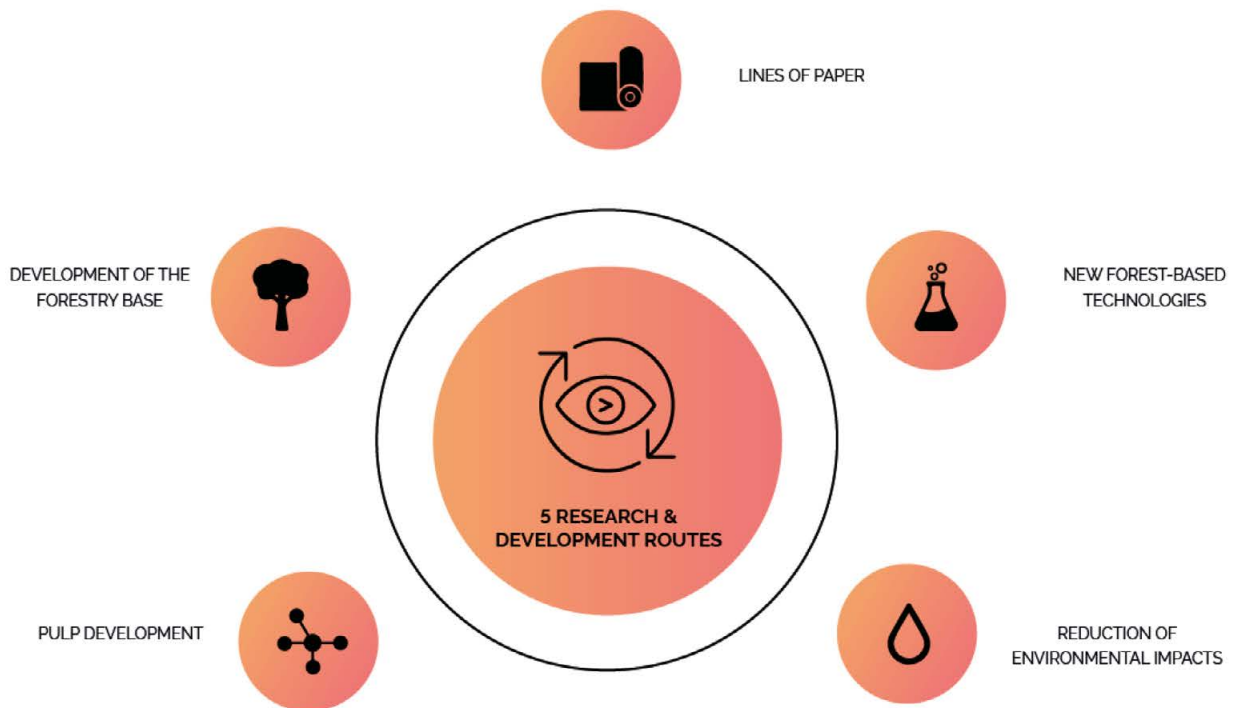
ANTICIPATING AND RESPONDING TO MARKET

GRI 103-1, 103-2, 103-3

In recent years, we have expanded our activities in research, development and innovation to advance in increasingly sustainable applications for our products, in search of natural and biodegradable barriers to meet the demands of conscious consumption.

Movements in favor of restricting the use of single-use plastic – such as the recent plan to combat pollution by this product announced by the Chinese government – have drawn attention to the packaging industry. In this scenario, Klabin once again stands out as a benchmark manufacturer in sustainable alternatives. Our challenge is to find ways to offer solutions that do not harm the environment and are economically viable for our customers.

WE EXPECT TO INVEST AROUND **BRL 180 MILLION** IN INDUSTRIAL AND FORESTRY RESEARCH FOR **DEVELOPING NEW PRODUCTS AND AGREEMENTS** WITH RESEARCH INSTITUTES AND UNIVERSITIES.



Learn more about our research routes on the [website](#).

FEATURED DEVELOPMENTS

IN 2019, THROUGH THE INTERNAL PAPER COATING UNITS AT OUR TECHNOLOGY CENTER IN PARANÁ, WE MADE PROGRESS IN DEVELOPING THE NEW BARRIERS.

Highlights include work developed for **industrial bags**: products with a **water barrier**, intended for the mortar and fertilizer segments, and in **dispersible paper**, intended for special cement packaging.

Another advance comes from testing on customer lines with **mixtures of cellulose fibers** (long and short), and on the fluff pulp line for new applications in addition to the diaper and menstrual pad segments.

Research on the uses of **lignin**, extracted from black liquor of the wood cooking processes in our pulp units, also confirmed opportunities for different applications: in resins for sheets, plywood and abrasives; in plastics to increase the percentage of renewable raw materials; and in carbon fibers, replacing the use of materials of a fossil fuel origin.

UNPRECEDENTED AND AWARD-WINNING TECHNOLOGY

GRI 103-1, 103-2, 103-3

The development of Eukaliner[®], a kraftliner made exclusively with eucalyptus fibers, earned Klabin the award for the Innovation in Packaging category of the 11th edition of the PPI Awards, from Fastmarkets RISI, in an event held in Lisbon in March 2020. This is one of the most prestigious recognitions of the paper and pulp industry in the world.

The new paper has already been tested by customers in Europe, the United States and Latin America, exceeding all expectations for the product in the packaging segment. Large-scale production is scheduled for early 2021 at the Puma II Unit. Among the benefits proven in the product testing are high print quality, excellent structure that allows for a reduction in paper weight and outstanding performance in refrigerated environments. In addition, since its production uses eucalyptus alone, it optimizes planted forest areas.



PILOT PLANT PARK COMES ONLINE

After conducting tests on concept, capacity and performance, our Pilot Plant Park came online in Paraná. The facility simulates a manufacturing unit to conduct industrial studies and tests on research fronts related to [lignin](#) and [microfibrillated cellulose \(MFC\)](#), reinforcing the technological basis for our expansion cycle. This will allow us to accelerate processes that were on the industrial testing bench, with more rigor and accuracy of results.

RESEARCH AND TECHNOLOGY IN FOREST PRODUCTION

GRI 103-1, 103-2, 103-3

Our Research and Development projects also target forestry operations and seek to help maintain competitiveness and support the Company's expansion projects. Forest productivity is one of the main action focuses on this front, in which we have made important progress.

The installation of the Technology Center accelerated the characterization of wood for the tested genetic materials. In 2019, three new clones were recommended, with 22% higher productivity compared to the existing forestry base.

With regard to the pine genus, a new species is being planted, [Pinus maximinoi](#) [hypertext], capable of generating 20% more wood to supply our factories, without loss of properties and quality in the final product.

Innovation and technology transfer in forest management are R&D focuses, aiming to enhance the productivity of Klabin's forests. Interactions of biotic and abiotic factors are evaluated for the allocation of pine and eucalyptus forests in order to capitalize the productive gains of each genus, according to the regions in which the Company operates. To that end, we have specialists dedicated to the areas of genetic improvement for eucalyptus and pine, biotechnology and cloning, nutrition and forestry, ecophysiology and forest protection.

INNOVATION WITH A PURPOSE

MAIN INNOVATION HIGHLIGHTS



The innovation strategy is to access a global network of ecosystems and contacts, formed by *startups*, organizations, universities, associations, investors, among others, capable of strengthening our initiatives on this front. The innovation concept was reinforced with the creation of the Inova Klabin movement and the inauguration of the Technology Center in Paraná.

Click [here](https://inova.klabin.com.br/index.php) and learn more about Inova Klabin. Link to <https://inova.klabin.com.br/index.php>



Plug and Play: parceria com uma das principais aceleradoras de *startups* do mundo, sediada no Vale do Silício. A cooperação, como uma das empresas apoiadoras do primeiro escritório da Plug and Play na América do Sul, em São Paulo, nos abre portas a uma rede global de contatos, formada por *startups*, corporações e investidores, que fortalecerão nossas iniciativas.



Pitch Day: busca de tecnologias diferenciadas, sustentáveis e inovadoras para solucionar desafios da empresa. Foram realizados sete *pitchs*, sobre os temas: controle biológico de formigas cortadeiras; redução de embalagens plásticas na Expedição e Almoarifado; melhoria do Sistema de Qualidade de equipamentos de sacos; lodo terciário (resíduo gerado na produção); e três edições focadas em Pesquisa e Desenvolvimento.



Klabin Lab: fomento ao empreendedorismo corporativo interno, que reúne colaboradores de diversas áreas e localidades, em imersões durante cinco dias, para encontrar soluções para problemas diversos. Foram quatro projetos em 2019, com resultados para a Companhia, voltados à prestação de contas de viagens, à clareza na visualização de créditos de clientes e ao desenvolvimento do Mapa Florestal (tecnologia que está em homologação) para instalação nos caminhões da logística florestal.

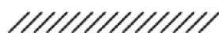


Klabin +U: fornece soluções em parceria com universidades, nacionais e internacionais. Contempla a imersão de estudantes na rotina da Klabin, para que possam avaliar, experimentar e desenvolver soluções inovadoras e sustentáveis para o mercado de embalagens. Quatro projetos com graduandos de Engenharia da Universidade Técnica Federal do Paraná tiveram início a partir do programa, envolvendo conceitos de Indústria 4.0, Inteligência Artificial e Análises Preditivas. Uma competição entre Masters in Business Administration (MBAs) também foi feita, desenhando novos modelos de negócio para um de nossos produtos, gerando ótimos *insights*, da qual participaram as universidades de Harvard, Insead, Asian Management Institute, Calgary e Universidade da Califórnia (USC).



Plante sua ideia: oportunidade para que os colaboradores se engajem no processo de melhoria e inovação da Klabin. Em busca de resultados reais de inovação, o programa, que surgiu a partir da Pesquisa de Clima, funciona como um canal aberto de ideias alinhadas às necessidades estratégicas de cada unidade, usando tecnologias novas como *chat bot*, inteligência artificial e ferramentas de gestão de inovação, para garantir a participação de todos em todos os níveis da organização, em qualquer dia e horário. Foi realizado como piloto na Unidade de Lages (SC) e, posteriormente, implantado no Departamento de Planejamento Operacional, Logística e Suprimentos e na Unidade Monte Alegre (PR). A expectativa para 2020 é abranger todas as unidades.

PARCERIAS DE VALOR



A parceria estabelecida com universidades e centros de pesquisa do Brasil e do exterior tem sido fundamental para a busca de soluções voltadas às necessidades do mercado. Destaca-se, em 2019, a premiação de um projeto de nanofibra, em parceria com a Universidade Federal de Lavras (UFLA), durante a Conferência Internacional sobre Nanotecnologia para Materiais Renováveis, realizada no Japão, em junho de 2019. O trabalho envolveu pesquisa de otimização de produção de nanofibra e de redução no consumo de energia nesse processo.

PESQUISA NANOFIBRA



REDUÇÃO DE

20% A 25%

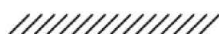
do gasto de energia no processo de desfibrilamento.

AUMENTO SUPERIOR A

10%

nas propriedades de resistência dos papéis com 1% a 2% de celulose microfibrilada.

PARCEIROS DE P&D NO BRASIL E EXTERIOR



Associação Brasileira Técnica de Celulose e Papel (ABTCP)

Central American and Mexico Coniferous Resources Cooperative

Comitê de Produtores – Tappi Nano

Cooperativa Central America and Mexico Coniferous Resources (Camcore), Carolina do Norte (EUA)

Forest Productivity Cooperative (FPC)

Instituto de Pesquisas e Estudos Florestais (IPEF)

Melodea

North Carolina State University (NCSU)

Research Institutes of Sweden (RISE)

Sociedade de Investigações Florestais (SIF) – Universidade Federal de Viçosa

Universidade de Toronto

Universidade do Estado de Santa Catarina

Universidade Estadual de Ponta Grossa

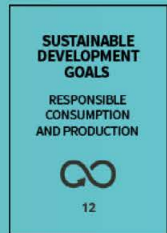
Universidade Federal de Campina Grande

Universidade Federal de Lavras

Universidade Federal do Rio de Janeiro



QUALITY



MUCH MORE THAN JUST PACKAGING

GRI 103-1, 103-2, 103-3

Based on the “Much more than just Packaging” positioning, which we have adopted since 2018, we highlight the solutions we offer to the market, seeking to meet customer needs and operating in accordance with the pillars of sustainability and innovation that guide our business.

This position is clear to customers, for example, in communication for Packaging solutions on our website, organized by category according to the attributes, differentials and applications of our products ([see here](#)).

We have also sought to increasingly expand support for technical and commercial teams, through actions such as participation in market events, and the creation of materials that facilitate the work of presenting our products, including marketing emails, catalogs, videos and kits for distribution to customers.

CUSTOMER FOCUS

GRI 102-40, 102-43, 102-44

The strategies to position the sustainability attributes of our brand have contributed to always strengthening Klabin as a benchmark in the market.

In many cases, even before we spark consultations and other types of interaction, such as workshops with the main brand owners on the market, we are sought after by customers to present everything we do and our approach for the future.

Another important aspect is that, in our annual satisfaction or perception surveys, our businesses rely on an important tool to identify strengths and opportunities to improve products, processes and performance. Quality, safety, qualification, technical support and sustainability indicators are part of the consultations. Customer *feedback* and insight are also obtained at various times, such as during commercial and technical visits or during specific consultations.

With the adoption of the Packaging School tool, we are able to analyze the weak and strong points along the customer's production chain, offering them, for example, cash handling training and technical assistance, development of new processes and products, thus increasing sales and operational performance for our customers.

NEW BUSINESS

A new business area in the Packaging Unit, structured in 2019, works with a focus on seeking innovative solutions for the market, aligned with consumer behavior trends for a more sustainable future. The development of new products and markets with this vision has resulted in several research projects that are underway and the launch of innovative products. The following are highlighted:

BIODEGRADABLE TRAY FOR FRUITS AND VEGETABLES

Developed in corrugated board from clean fibers (used for the first time and without contaminants), guaranteeing the integrity of the goods during transportation, storage and exhibition.

SHELFLIFE COFFEE PACKAGING

Airtight packaging, with high barrier film and protection from light, biodegradable and 100% recyclable. It contributes to the preservation of the aroma, flavor and quality of the beans and allows high-quality printing.

FOIL ROLLS

100% recyclable, made from renewable source material, formatted for high-performance printing, allowing the configurations of size, barriers and printing to be prepared according to customer specifications.

BAG IN BOX

Solution for the disposal of liquids, it can also be used as an exhibition display. Produced from clean fiber, it has a handle to aid during transport and that serves as a support when the position is inverted to facilitate the complete outflow of the liquid.

Learn more about these and other packaging innovations [here](#).

E-COMMERCE



Well aware of the growth of e-commerce in recent years, Klabin has been expanding its operations in this segment since 2018, offering corrugated board and sack kraft solutions.

Klabin For You is a digital platform for the sale of paper packaging, which initiated operations in 2019. It focuses on offering affordable custom solutions for businesses of all sizes. Access [here](#).

CERTIFICATIONS

GRI 102-12, 103-1, 103-2, 103-3

Certifications awarded by independent organizations guarantee quality, attest to the credibility of our products and reaffirm our commitment to continuous improvement. They also ratify the best social and environmental responsibility practices that we adopt in our processes and products.

Our certifications confirm the pioneering spirit of the Company in its search to meet the needs of the customers, anticipating market trends. We were the first company in the Southern Hemisphere to receive an [FSC](#) certification for our forest areas in 1998 and the first in the world to have non-timber forest products certified, ensuring the origin of the raw material used in the manufacturing of our products.

These practices extend throughout the production chain, as we also encourage rural producers from the Forestry Development program to obtain the certification.

Check out the main certifications [here](#).



SUMMARY OF GRI CONTENT

SUMMARY OF GRI CONTENT (102-55)

GRI Standard	Disclosure	Direct response / Link	Omission	Global Compact Principles	SDG
GRI 101: Foundation 2016					
GRI 102: General Disclosures 2016					
GRI 102: General disclosures 2016	102-1	Name of the organization	About us		
	102-2	Activities, brands, products, and services	About us ; Units and Operations		
	102-3	Location of headquarters	Avenida Brigadeiro Faria Lima 3600, 3º, 4º e 5º andares, Itaim Bibi – São Paulo, SP – Brazil. Units and operations		
	102-4	Location of operations	Units and operations		
	102-5	Ownership and legal form	Stock company. About us		
	102-6	Markets served	Units and operations ; Production destinations		
	102-7	Scale of the organization	Forestry base ; Units and operations ; Klabin's main results ; Employee profile		
	102-8	Information on employees and other workers	Employee profile		

102-9	Supply chain	Profile of our suppliers			
102-10	Significant changes to the organization and its supply chain	About us ; Governance structure ; Business expansion			
102-11	Precautionary principle or approach	With operations directly related to Sustainable Development Goal 15 (Life on Land), Klabin follows the application of the Precautionary Principle established at the Earth Summit and constantly evaluates all aspects related to its activities and that may present potential risks to the environment, biodiversity conservation, the customer and the communities where it operates. In compliance with the applicable legislation and in accordance with the requirements of ISO 14001 and FSC certifications, monitoring and preventive measures are constantly conducted.			
102-12	External initiatives	About us ; Certifications			
102-13	Membership of associations	Participation by sector			
102-14	Statement from senior decision-maker	Statement from the Board			
102-15	Key impacts, risks and opportunities	Risk management ; How risks are mapped			
102-16	Values, principles, standards and norms of behavior	Ethics and integrity ; Policies and codes			
102-17	Mechanisms for requesting advice and concerns about ethics	Ethics and integrity ; Grievances and complaints ; Complaint mechanisms			
102-18	Governance structure	Governance structure ; Board of Directors and Executive Board			
102-19	Delegating authority	At Klabin, Delegation of authority is how the manager temporarily and exceptionally transfers specific powers to an employee of the Unit or department to approve operations related to the processes under his responsibility. Delegation for an indefinite period of time is not permitted.			
102-20	Executive-level responsibility for economic, environmental and social topics	Risk management			
102-25	Conflicts of interest	Conflicts of interest			
102-30	Effectiveness of risk management processes	Risk management			
102-35	Remuneration policies	Our remuneration guidelines			
102-36	Process for determining remuneration	Our remuneration guidelines			
102-38	Annual total compensation ratio	Annual total compensation ratio			
102-40	List of stakeholder groups	Presentation ; Materiality ; Engagement initiatives ; Focus on the customer			
102-41	Collective bargaining agreements	All Klabin employees are covered by collective bargaining agreements.			
102-42	Identifying and selecting stakeholders	Engagement initiatives			
102-43	Approach to stakeholder engagement	Materiality ; Engagement initiatives ; Focus on the customer			
102-44	Key topics and concerns raised	Material topics ; Engagement initiatives ; Focus on the customer			
102-45	Entities included in the consolidated financial statements or equivalent documents	How the content is organized			
102-46	Defining report content and topic boundaries	Materiality			

102-47	List of material topics	<u>Material topics</u>			
102-48	Restatements of information	Any reformulation regarding previous editions is noted throughout the report. <u>How the content is organized</u>			
102-49	Changes in reporting	Materiality was updated for this report with the inclusion of new topics. As such, the material aspects are provided throughout this summary.			
102-50	Reporting period	<u>Presentation</u>			
102-51	Date of most recent report	<u>Presentation</u>			
102-52	Reporting cycle	<u>Presentation</u>			
102-53	Contact point for questions regarding the report	<u>Contact Points</u>			
102-54	Claims of reporting in accordance with the GRI Standards	<u>Presentation</u>			
102-55	Summary of GRI content	<u>Summary of GRI content</u>			
102-56	External assurance	<u>How the content is organized; Assurance statement</u>			

Material topic: Occupational health and safety

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; Corporate Unit; and transport of other inputs and product. <u>Appreciating life; The three management pillars; Main commitments and goals related to health and quality of life</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 202: Market presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	<u>Variation of the ratio of lowest entry level wage compared to local minimum wage</u>			1, 5, 8, 10
	202-2	Proportion of senior management hired from the local community	<u>Members of senior management recruited from the local community</u>			1, 5, 8, 10
GRI 403: Occupational health and safety 2018	403-1	Occupational health and safety management system	<u>Management System, Identification of risks and accidents</u>			
	403-2	Hazard identification, risk assessment, and incident investigation	<u>Management System, Identification of risks and accidents</u>			
	403-3	Occupational health services	<u>Occupational health services</u>			
	403-6	Promotion of worker health	<u>Focus on prevention</u>			
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<u>Main commitments and goals related to health and quality of life</u>			
	403-8	Workers covered by an occupational health and safety management system	<u>Management System, identification of risks and accidents</u>			
	403-9	Work-related injuries	<u>Safety indicators</u>			
	403-10	Work-related ill health	<u>Work-related health indicators</u>			

Material topic: Impact on communities

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; and transport of other inputs and product. <u>Local development</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				

GRI 203: Indirect economic impacts 2016	203-1	Infrastructure investments and services supported	<u>Development and impact of infrastructure investments and services supported:Our projects</u>			2, 7, 8, 9, 11
	203-2	Significant indirect economic impacts	<u>Significant indirect economic impacts</u>			2, 7, 8, 9, 11
GRI 412: Human rights assessment 2016	412-1	Operations subject to human rights reviews or impact assessments	<u>Total number and percentage of operations subjected to impact assessments or human rights analyses, by country</u>		1, 2, 3, 4, 5, 6	4, 8, 10

Material topic: Local development

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; and transport of other inputs and product. <u>Local development</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 413: Local communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	<u>Percentage of operations with local community engagement implemented, impact assessments and/or development programs</u>			2, 11
	413-2	Operations with significant actual and potential negative impacts on local communities	<u>Operations with significant potential impacts or actual negative impacts on local communities</u>			2, 11

Material topic: Energy use/Energy efficiency

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; and packaging material plants. <u>Environment; Energy</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 302: Energy 2016	302-1	Energy consumption within the organization	<u>Internal fuel consumption in 2019</u>			7, 8, 12, 13
	302-2	Energy consumption outside of the organization	<u>External energy consumption</u>			7, 8, 12, 13
	302-3	Energy intensity	<u>Energy intensity</u>	8		7, 8, 12, 13
	302-4	Reduction of energy consumption	<u>Reduction of energy consumption</u>			7, 8, 12, 13

Material topic: Water use

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; pulp mill; paper plants; and packaging material plants. <u>Environment; Water and effluents; Management and assessment</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 303: Water and effluents 2018	303-1	Interactions with water as a shared resource	<u>Interactions with water as a shared resource</u>	8, 9		3, 6, 8, 12
	303-2	Management of water discharge-related impacts	<u>Management of water discharge-related impacts</u>			
	303-3	Water withdrawal	<u>Water withdrawal</u>	8, 9		3, 6, 8, 12
	303-4	Water discharge	<u>Water discharge</u>	8, 9		3, 6, 8, 12
	303-5	Water consumption	<u>Water consumption</u>	8, 9		3, 6, 8, 12

Material topic: Supplier social and environmental performance

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; and transport of other inputs and product. <u>Supply chain; Sustainable practices in the supply chain</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 204: Procurement practices 2016	204-1	Proportion of spending on local suppliers	<u>Profile of our suppliers; Percentage of budget spent with local suppliers</u>			12
GRI 308: Supplier environmental assessment 2016	308-1	New suppliers that were screened using environmental criteria	<u>Criticality and sustainability matrix</u>		7, 8, 9	8, 11, 15
	308-2	Negative environmental impacts in the supply chain and actions taken	<u>Criticality and sustainability matrix; Sustainable practices in the supply chain</u>		7, 8, 9	8, 11, 15
GRI 308: Supplier social assessment 2016	414-1	New suppliers that were screened using social criteria	<u>Criticality and sustainability matrix</u>			
	414-2	Negative social impacts in the supply chain and actions taken	<u>Criticality and sustainability matrix; Sustainable practices in the supply chain</u>			

Material topic: Effluents and waste

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; and packaging material plants. <u>Environment; Waste management</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 306: Effluents and waste 2016	306-2	Waste by type and disposal method	<u>Waste by type and disposal method</u>		7, 8, 9	3, 6, 8, 11, 12, 14, 15
	306-3	Significant spills	No leaks considered significant were recorded in 2019.		7, 8, 9	3, 6, 8, 11, 12, 14, 15
	306-4	Transport of hazardous waste	We had a 10% reduction in the generation of hazardous waste, compared to 2019. It is important to highlight that Klabin does not transport hazardous waste, but hires companies that are responsible for its transportation and disposal.		7, 8, 9	3, 6, 8, 11, 12, 14, 15

Material topic: Climate change

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; and transport of other inputs and product. <u>Environment; Emissions; Climate change</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 201: Economic performance 2016	201-2	Financial implications and other risks and opportunities due to climate change	<u>Financial implications and other risks and opportunities associated to climate change</u>			
GRI 305: Emissions 2016	305-1	Direct (Scope 1) greenhouse gas emissions	<u>Direct (Scope 1) greenhouse gas emissions</u>		7, 8, 9	3, 8, 12, 13
	305-2	Indirect (Scope 2) greenhouse gas emissions	<u>Indirect emissions resulting from the purchase of energy (Scope 2)</u>		7, 8, 9	3, 8, 12, 13
	305-3	Other indirect (Scope 3) greenhouse gas emissions	<u>Other indirect (Scope 3) greenhouse gas emissions</u>		7, 8, 9	3, 8, 12, 13
	305-4	Greenhouse gas emissions intensity	<u>Greenhouse gas emissions intensity</u>		7, 8, 9	3, 8, 12, 13

305-5	Reduction of greenhouse gas emissions	<u>Reduction of greenhouse gas emissions</u>		7, 8, 9	3, 8, 12, 13
305-7	NO _x , SO _x and other significant air emissions	<u>Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions</u>		7, 8, 9	3, 8, 12, 13

Material topic: Biodiversity

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; and wood transport. <u>Environment; Biodiversity management; Nature Interpretation Center</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<u>Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity index outside protected areas</u>	8, 9	6, 15
	304-2	Significant impacts of activities, products and services on biodiversity	<u>Significant impacts of activities, products and services on biodiversity</u>	8, 9	6, 15
	304-3	Protected or restored habitats	<u>Protected or restored habitats</u>	8, 9	6, 15
	304-4	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations	<u>IUCN red list species and national conservation list species with habitats located in areas affected by the organization's operations</u>	8, 9	6, 15

Material topic: Human capital development

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; packaging material plants; and Corporate Unit. <u>Human capital development</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 404: Training and education 2016	404-1	Average hours of training per year per employee	<u>Training conducted in 2019</u>	1, 6	4, 5, 8, 10

Material topic: Diversity

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; packaging material plants; and Corporate Unit. <u>Promoting diversity</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 405: Diversity and equal opportunity 2016	405-1	Diversity of governance bodies and employees	<u>Diversity in governance bodies and among employees</u>		5, 8, 10
	405-2	Ratio of basic salary and remuneration of women to men	<u>Ratio of the basic salary and remuneration of women to men for each employee category, by significant operating units</u>		5, 10

Material topic: Retention of professionals

GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; packaging material plants; and Corporate Unit. <u>Employee journey</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 201: Economic performance 2016	201-3	Defined benefit plan obligations and other retirement plans	<u>Benefits plan</u>	2, 7	2, 7, 8, 9, 13
GRI 401: Employment 2016	401-1	New employee hires and employee turnover rates	<u>Rate of new employees and turnover</u>	6	5, 8, 10
	401-3	Parental leave	<u>Parental leave</u>	6	5, 8, 10

Material topic: Klabin's culture					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; packaging material plants; and Corporate Unit. <u>Cultural evolution</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Innovation initiatives					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under all aspects of the Klabin value chain (wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; Corporate Unit; transport of other inputs and product; customers – internal and external market; and final consumer.) <u>Anticipating and responding to market trends</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Multiple uses of wood components					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; pulp mill; paper plants; packaging material plants; customers – internal and external market. <u>Unprecedented and award-winning technology; Research and technology in forest production</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Wood availability					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; pulp mill; and paper plants. <u>Wood availability</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Customer satisfaction and product quality					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; pulp mill; paper plants; packaging material plants; Corporate Unit; customers – internal and external market; and final consumer. <u>Much more than just packaging; Focus on the customer</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Production and logistics					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; wood transport; pulp mill; paper plants; packaging material plants; Corporate Unit; transport of other inputs and product; and customers – internal and external market. <u>Logistics; Competitiveness and results; More robust logistics structure; Operational planning</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
Material topic: Forest certification					
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: wood suppliers and developed producers; forestry operations; wood transport; and customers – internal and external market. <u>Certifications</u>		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			

Material topic: Ethical Conduct/Integrity						
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under all aspects of the Klabin value chain (wood suppliers and developed producers; forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; Corporate Unit; transport of other inputs and product; customers – internal and external market; and final consumer.) <u>Ethics and integrity; Integrity Program; Policies and codes</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	<u>Fight against corruption</u>		10	4, 16
	205-2	Communication and training about anticorruption policies and procedures	<u>Training and anticorruption communication</u>	The total number and percentage of business partners (informed on anticorruption policies and procedures by partner type and region) was not available in the reported period.	10	4, 16
	205-3	Confirmed incidents of corruption and actions taken	<u>Fight against corruption</u>		10	4, 16
GRI 206: Anti-competitive behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	In 2019, proceedings related to anti-competitive behavior, anti-trust, and monopoly practices in which the organization has been identified as a participant were not identified.		1, 5	16
GRI 307: Environmental compliance 2016	307-1	Non-compliance with environmental laws and regulations	<u>Environmental compliance</u>		7, 8, 9	16
GRI 407: Freedom of association and collective bargaining 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	<u>Supply chain</u>		1, 2, 3, 4, 5, 6	8, 16
GRI 408: Child labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	<u>Supply chain</u>		1, 2, 6	8, 16
GRI 409: Forced or compulsory labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<u>Supply chain</u>		1, 2, 3	8
GRI 411: Rights of indigenous peoples 2016	411-1	Incidents of violations involving rights of indigenous peoples	<u>Traditional communities</u>		1, 2, 4	10, 11
GRI 419: Socioeconomic compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	In 2019, Klabin did not receive any significant fines, non-monetary sanctions, or have any case resolved by arbitration mechanisms regarding non-compliance with laws and regulations in the social and economic spheres.		10	16

Material topic: Risk management						
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: forestry operations; wood transport; suppliers of other inputs; pulp mill; paper plants; packaging material plants; and Corporate Unit. <u>Risk management; Main advances in 2019; How risks are mapped</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				

Material topic: Information security						
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundaries	The topic is material under the following aspects of the Klabin value chain: pulp mill; paper plants; packaging material plants; Corporate Unit; customers – internal and external market; and final consumer. <u>Information security</u>			
	103-2	The management approach and its components				
	103-3	Evaluation of the management approach				

GRI 418: Information security 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<u>Information security</u>			16
Non-material disclosures that are reported						
GRI 201: Economic performance 2016	201-1	Direct economic value generated and distributed	<u>Klabin's main results</u>			
GRI 301: Materials 2016	301-1	Materials used by weight or volume	<u>Materials used by weight or volume</u>			12