

SUSTAINABILITY REPORT

2017



Klabin

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STAFF

Klabin's Executive Coordination

Carime Kanbour
Aline Tozaki
Thiago Pereira
Sarah Casquet

GRI Consulting

Avesso Sustentabilidade

Graphic Design, Information Graphics and Content

BH Press Comunicação
Dulcemar da Costa
Marina Figueiredo
Bruno Filogônio
Renata Taffarello

External verification Conecta Consultores

Photo

André Valentim
Anna Nigri
Marcio Bruno
Sergio Zacchi
Zig Koch
France Press
Luciano Kim/ggjobs

PRESENTATION

This is the short version of the Klabin 2017 Sustainability Report, which discloses the main information on the company's performance and management practices in the environmental, social and economic areas from January 1 to December 31, 2017. The full version of the report is available at <http://rs.klabin.com.br/>.

The report was developed using the GRI Standards (Essential Option), whose guidelines, adopted by companies worldwide, promote comparison among sectors and companies, and following up on the evolution of sustainability management at Klabin over the years.

The content was compiled based on a correlation between the nine most relevant topics for the business, identified in a materiality study carried out with Klabin's stakeholders, and subsequently related to the UN's **Sustainable Development Goals (SDGs)**. The results of the Local Development Forums held in Santa Catarina and Pernambuco, encouraged by the company, supplement this study.

The company's actions in each of the topics is also evident in the cases and testimonials set out in the Best Practices column at the end of each chapter. The financial indicators in this report refer to all of Klabin's operating units in Brazil and Argentina. Social and environmental information, however, refers only to the Brazilian operations. Enjoy your reading!

Klabin has voluntarily adopted the SDGs since 2016. This great action plan involving various sectors of global society is based on the principal that solutions, technologies and business processes can be applied to address the major global challenges to sustainable development. To put into practice its commitment to the SDGs, Klabin supplemented its sustainability premises and policy to include all of these topics.



MESSAGE FROM THE BOARD


IN RECENT YEARS, KLABIN HAS MADE SIGNIFICANT INVESTMENTS
IN ITS BUSINESSES, DOUBLED ITS PRODUCTION CAPACITY,
ENTERED NEW MARKETS, AND STRENGTHENED ITS POSITION AS
A COMPANY WITH A UNIQUE PRODUCT MIX IN
THE DOMESTIC INDUSTRY

In addition to standing out due to competitiveness, capacity for resilience in times of economic crisis, high forest productivity, and growing financial results, Klabin also excels in regard to the quality and acceptance of its products in the internal and external markets, its sustainability practices, and vision of the future.

The year 2017 was marked by important achievements. The company reached a record production of boards at the Monte Alegre Unit; its fluff pulp was widely accepted in Brazil and abroad; completed the ramp up process (gradual production growth until reaching stabilization) at the Puma Unit, and closed the year with a production volume of 1.4 million tons of pulp at the new plant. Highlights include the increased market share of corrugated board packaging and the inauguration of an advanced Technology Center in Paraná.

Throughout the year, the company restated its beliefs on sustainability as a competitive advantage on several occasions, as well as its long-term commitment to stakeholders. Sustainability guides the company's operations and vision of the future, responding to a market that follows global trends and looks toward a new consumer profile, interested in more customizable and sustainable alternatives

>>WITH HIGH FOREST
PRODUCTIVITY, CONSIDERED ONE
OF THE BEST IN THE WORLD, AND
THE RECENT EXPANSION OF PULP
PRODUCTION, KLABIN IS PREPARING
FOR A NEW GROWTH CYCLE.<<



In this scenario, Klabin has worked on product development along with its clients and is prepared to offer packaging solutions that are increasingly safe and effective. The sustainability elements of Klabin's paper stand out in relation to other packaging available on the market, as its products are completely recyclable and come from renewable and biodegradable sources.

The recent inauguration of the Klabin Technology Center consolidates the business investments in research and development and has allowed further discussions on biodegradable packaging. The acquisition of a 12.5% stake in Melodea, an Israeli startup company, pioneer in nanocrystalline cellulose extraction technology, strengthens the strategy to offer solutions focused on the sustainable, efficient and responsible use of natural resources.

We would like to thank all employees and business partners for their commitment to building the company's historical success trajectory, which decisively contributed to the growth in financial results achieved for

the 26th consecutive quarter at the end of 2017. We also thank our shareholders, customers, suppliers and investors for trusting our unique business model and for another year of great achievements.

Cristiano Teixeira, Klabin's Chief Executive Officer





COMPETITIVENESS AND ECONOMIC RESULTS

— HIGHLIGHTS OF 2017



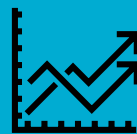
PULP SALES VOLUME
1.4 million tons.



SALES REVENUE
BRL 8.4 billion



PACKAGING SALES VOLUME
8% growth.



ADJUSTED EBITDA
BRL 2.7 billion



INAUGURATION OF THE
TECHNOLOGY CENTER.

UNIDFORESTRY BUSINESS UNIT

Operations at the Forestry Unit evolved in order to handle the greater volumes of pulp, paper and packaging production in 2017. In the year, Klabin handled approximately 16.1 million tons of logs and chips of pine and eucalyptus and waste for energy, a 12% increase over the previous year.

Although the availability of wood intended for third-party sales was impacted by increased domestic consumption, the more favorable economic scenario benefited the export of the customers' wood products and increased log sales to third parties, up 5% compared to 2016, totaling 2.6 million tons.

PULP BUSINESS UNIT

Following the completion of the Puma Unit ramp up process, after the plant started operating in March of the previous year, pulp production accelerated compared to 2016, ending the year at 1.4 million tons, 1 million tons of which corresponds to hardwood and 372 thousand tons to softwood and fluff.

The increased volume produced at the Puma Unit, combined with better global prices of hardwood pulp, affected the revenues from pulp sales for export and the domestic market. Thus, the total revenue from pulp (hardwood, softwood and fluff) totaled BRL 2.4 billion in 2017, twice the amount recorded in 2016.

PAPERS BUSINESS UNIT

The flexibility and competitiveness of its product line enabled Klabin to adapt to changing market conditions during the year. The lower average exchange rate in 2017 compared to 2016, the upward trend of national economic indicators, and the new production capacities drove the increased use of paper at conversion plants and reduced the volume of kraftliner sales.

On the other hand, board sales volume experienced a slight growth in 2017, due to improvements in productivity and increased exports. Thus, the sales volume of paper for packaging and coated cartonboard was 1 million tons, stable results compared to 2016. Year to date, revenue from sales of paper and board reached BRL 2.8 million, down 6% from the previous year.

CONVERSION BUSINESS UNIT

The shipping of boxes as ascertained by the Brazilian Association of Corrugated Board (ABPO) showed signs of recovery, closing 2017 with a 5% increase compared to 2016. In the industrial bags market, the same speed of recovery was not duplicated by the country's construction sector.

Taking advantage of its flexibility for developing new markets, its capillarity, and the recent acquisitions in the sector, Klabin achieved important results in 2017. Thus, the packaging sales volume in 2017 grew 8% compared to 2016, totaling 761 thousand tons. Meanwhile, sales revenue increased 14% in the same comparison period, reaching BRL 2.4 billion in 2017.

— BEST PRACTICES



GREEN BALANCE FOR KLABIN

In its first issuance of green bonds in the international market, Klabin captured an amount of resources three times higher than expected for sustainability-related projects.

On the one hand, the desire to raise funds to proceed with planned investments aimed at sustainable development, an area in which Klabin is considered a benchmark. On the other, a line of credit focused on sustainability and successful impacts. In September 2017, these two fronts converged and allowed Klabin to issue, for the first time, a high volume of Green Bonds on the international market, raising approximately BRL 1.6 billion.

With the dossier of Klabin's sustainability actions in hand, in September from 2017, three teams that formed a single multidisciplinary team (economic and financial operation, green team and investor relations) visited investors in various parts of the world – Los Angeles, Boston, New York, Paris and London. In addition, contacts were made from its Head Office in São Paulo.

Investors have recognized and appreciated Klabin's sustainable performance, which resulted in an offer for the company's securities three times greater than expected: the plan was to raise BRL 500 million, but the amount offered was close to BRL 1.6 billion – due in 10 years and with one of the lowest interest rates in the market.

>>IN JANUARY 2018, THE ACTION WAS FEATURED IN DEALS OF THE YEAR, AN INTERNATIONAL AWARD THAT HIGHLIGHTS HIGH-YIELD CORPORATE OPERATIONS.<<



BUSINESS EXPANSION

AFTER THE INAUGURATION OF THE TECHNOLOGY CENTER AND THE RAMP UP OF THE PUMA UNIT, KLABIN'S GROWTH CYCLE ADVANCES, WITH NEW PROJECTS AND EXPANSION ROUTES

In 2017, flexibility, resilience to act in times of crisis, and reduction in cash costs were the key to maintain Klabin's competitiveness and expansion to carry out the planned high return projects. The installation of the new line of industrial sacks in the Lages (SC) plant, with operation scheduled for the middle of the first semester of 2018, stands out among the projects seeking to improve the company's performance throughout the operating segments and develop new markets.

NEW INVESTMENTS

New investments made by the company, based on the evolution of its integrated business model, include the early 2018 acquisition of a 12.5% stake in Melodea Bio Based Solutions, an Israeli startup company, as well as the acquisition of new kraftliner and board machinery, and an additional line of fluff pulp.

— OUR CHALLENGES



AVAILABLE WOOD: OVER 229,000 HECTARES OF PLANTED PINE AND EUCALYPTUS FORESTS ARE THE FOUNDATION FOR KLABIN'S BUSINESS GROWTH, FEATURING THE HIGHEST PRODUCTIVITY INDEXES IN BRAZIL AND PROVIDING ACCESS HIGH-QUALITY RAW MATERIAL. THE CHALLENGE TO HANDLE THE NEW GROWTH PHASE IS TO IDENTIFY THE BEST FOREST ASSETS AND, THUS, ENSURE THE AVAILABILITY OF WOOD.



INDUSTRY 4.0: CONSIDER THE LATEST TECHNOLOGY IN EQUIPMENT AND PROCESSES, STARTING AT PROJECT DESIGN, IS THE CHALLENGE TO PLACE KLABIN ON THE SAME PATH AS INDÚSTRIA 4.0, WHICH USES AUGMENTED REALITY AND ARTIFICIAL INTELLIGENCE, AMONG OTHER TECHNOLOGICAL ADVANCEMENTS. THE COMPANY EVEN ALLOCATES INVESTMENTS TO UPDATE ITS UNITS' INSTALLATIONS, PROCESSES AND EQUIPMENT.



SOCIAL RESPONSIBILITY: FOLLOWING THE PREMISES OF ITS VISION AND SUSTAINABILITY POLICY, CREATING VALUE FOR THE COMMUNITIES AND ITS AREAS OF INFLUENCE, ASSESSING AND MITIGATING ACTUAL AND POTENTIAL IMPACTS RELATED TO ITS ACTIVITIES ARE CONSTANT CHALLENGES AND HAVE PRIORITY IN KLABIN'S GROWTH PROJECTS. FOR FUTURE PROJECTS, THE COMPANY MAKES USE OF PREVIOUSLY IMPLEMENTED TOOLS, SUCCESSFUL EXPERIENCES, AND LESSONS LEARNED WITH THE PUMA PROJECT.

— BEST PRACTICES

KLABIN IS ALREADY DEVELOPING THE PRODUCTS OF THE FUTURE

With its participation in a startup company, Klabin is expanding its focus on innovation and advanced technology to respond to market demands and seek new growth cycles

While seeking research lines to develop solutions aimed at responsible, efficient and sustainable use of natural resources, Klabin invested in nanocrystalline cellulose (CNC), produced entirely from renewable resources. Melodea Bio Based Solutions was on the same path, a leading Israeli startup company in the extraction of this product. After studies, assessment and visits to the company in Israel and to the pilot plant at the holding company's headquarters in Sweden, Klabin acquired 12.5% of Melodea.

According to Klabin's Director of Technology and Pulp Business Unit, Francisco Razzolini, expanding the focus in R&D+I as a path to growth is one way

to respond to increasingly challenging market demands and support Klabin's recent return to the global pulp market after the inauguration of the Puma Unit. "Our goal is to use this kind of pulp to produce more resistant paper and packaging, 100% recyclable, in addition to enhancing opportunities for new business", he says.

>>THE USE OF CNC PROVIDES
KLABIN OPPORTUNITIES FOR
NEW BUSINESS IN FOREST-BASED
PRODUCTS.<<



1 NO POVERTY



8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



15 LIFE ON LAND



CERTIFICATIONS

KLABIN IS THE FIRST AND ONLY COMPANY IN THE SECTOR IN LATIN AMERICA TO GUARANTEE THE ORIGIN OF THE RAW MATERIALS USED IN THE MANUFACTURE OF ITS PRODUCTS THROUGH FSC® CERTIFICATION. THE COMPANY OBTAINED THE CERFLOR CERTIFICATE IN 2017. WITH THE TWO CERTIFICATIONS, THE COMPANY STANDS OUT IN THE ENGAGEMENT WITH THE BEST MARKET PRACTICES AND THE QUALITY OF ITS PRODUCTION

— Certifications and methodologies adopted by Klabin

FSC® (FSC-C022516) -
Forest Stewardship
Council®

CERFLOR

OK Compost

American Institute of
Banking (AIB)

FSSC 22000

ISEGA

ISO 14001

ISO 9001

OHSAS 18001

TPM – Total Productive
Maintenance

Top Employers

More information on Klabin's certifications can be found at
(www.klabin.com.br/en/a-klabin/certifications/).

— BEST PRACTICES



A NEW LOOK AT MAINTENANCE

Dedicated maintenance work based on the Programa Klabin Superar (PKS) [Overcoming Program] led to a 50% reduction in downtime of one of the main machines at the Monte Alegre Unit (PR), which manufactures liquid packaging board (LPB)

PKS uses Total Productive Maintenance (TPM), a Japanese methodology applied by many companies in Brazil and around the world, placing the Monte Alegre Unit as a reference within the company. "In the past, the maintenance system consisted of fixing what was broken. Today, a preventive attitude prevails", says the Manager of Engineering and Maintenance Planning, Luiz Francisco Almeida.

In order to map opportunities for improvement before the problem surfaces, the company applies tools such as wireless sensors to monitor the equipment via mobile devices,

and prioritizes preventive maintenance on critical machines, responsible for 70% of the unit's production volume. In addition, personnel training and change of attitude are the keys to ensuring successful initiatives.

"The important thing is to keep the machine in safe working conditions and monitor the performance, quality and availability indicators. We are trained to identify problems and the level of criticality, to determine whether the solution must involve scheduled maintenance or if it is urgent", says operator Giomar Xavier de França.

WOOD SUPPLY

KLABIN'S FORESTRY UNITS ARE ALREADY AMONG THE MOST EFFICIENT IN THE WORLD IN TERMS OF THE PRODUCTION OF PULP PER HECTARE PLANTED. IN 2017, THE COMPANY EXCEEDED ITS HISTORICAL PLANTING RECORDS, REACHING 34 THOUSAND HECTARES PLANTED IN SELF-OWNED AND THIRD-PARTY LAND, TWICE AS MUCH AS THE PREVIOUS YEAR

— 2017 HIGHLIGHTS



FORESTRY OPERATIONS IN **138 MUNICIPALITIES**, INCLUDING SELF-OWNED AND LEASED AREAS/PARTNERSHIPS.



AVERAGE DISTANCE OF SELF-OWNED FORESTS TO THE PLANTS OF **66 KM** IN PARANÁ AND **74 KM** IN SANTA CATARINA, REPRESENTING A GREAT LOGISTICS ADVANTAGE.



MANAGEMENT OF THE FORESTRY UNITS (SÃO PAULO, PARANÁ AND SANTA CATARINA) IS FSC®-CERTIFIED, TOTALING **224 THOUSAND HECTARES OF PLANTED FORESTS**.



IN 2017, KLABIN EARNED A NEW **INTERNATIONALLY RECOGNIZED FORESTRY CERTIFICATION, CERFLOR** (BRAZILIAN FORESTRY CERTIFICATION PROGRAM). THE SEAL IS ANOTHER SYMBOL TO ENSURE SUSTAINABLE MANAGEMENT OF THE COMPANY'S FORESTS AT THE MONTE ALEGRE UNIT IN PARANÁ.

OPERATIONAL EFFICIENCY BEGINS IN THE FORESTS

High productivity of Klabin's forests is a key factor for ensuring competitiveness and sustaining the company's growth strategy. Most of the wood used in the production processes comes from own plantations. Supply is supplemented by the purchase of material from producers that are members of Fomento Florestal or from independent producers with which the company maintains contracts that cover criteria such as quality, delivery times, compliance with relevant laws and the adoption of measures to protect the environment.

In 2017, Klabin expanded its forestry operations in order to handle the greater volumes of pulp, paper and packaging production. Klabin handled approximately 16.1 million tons of logs and chips of pine and eucalyptus and waste for energy, a 12% increase compared to the volume transported the previous year.

VALUE PARTNERSHIPS

Since 1984, the *Programa de Fomento Florestal* has been contributing to expand and diversify the income of nearby communities by planting forests on rural properties. At the same time, these producers – those participating in the program as well as those working independently – represent an important link in Klabin's wood supply chain.

With the Matas Legais Program, carried out in partnership with the Environment and Life Preservation Association (Apremavi), the company contributes to improve landscape planning, taking into account environmental and social factors. Through Matas Sociais, Klabin encourages family farming and more sustainable properties, in partnership with Apremavi, Sebrae, and The Nature Conservancy (TNC).





— BEST PRACTICES

GOOD WOOD

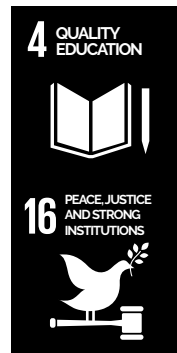
RESPONSIBLE WOOD PRODUCTION PRODUCED BASED ON MANAGEMENT STANDARDS RECOGNIZED AROUND THE WORLD. THIS IS ALREADY A REALITY FOR MANY SMALL PRODUCERS OF PARANÁ, THANKS TO THE SUPPORT PROVIDED BY KLABIN TO ALLOW THESE PROPERTIES TO OBTAIN THE INTERNATIONAL FSC® CERTIFICATION

Klabin maintains the Small Rural Producers Forest Certification Program since 2013, having contributed to help 286 producers in the region obtain their certificates. Of this total, 33 received the certification in 2017.

The initiative helps with the conservation of natural resources, provides fair work conditions, and encourages good relationships with the community. With the certification, producers receive an additional amount for certified wood, improving their chances of supply to other markets. In turn, Klabin has more certified wood available

for its production, in addition to promoting sustainable development.

David Manosso, a producer at Palmital de Cima, a district within the municipality of Reserva (PR), had his property certified in 2017. The eucalyptus crop, planted in 2011, will have its first cut in 2018 and will supplement the family income, whose main source is milk production. "I have three children living away from home, two of whom are school-aged. The sale of wood is important to support them financially. Certified wood has a differentiated value", he says.



PROMOTING LOCAL DEVELOPMENT

THE PROGRAMS DEVELOPED BY KLABIN IN THE COMMUNITIES WHERE IT OPERATES, FOCUSED ON HEALTHCARE, CULTURE, EDUCATION, SPORTS, LEISURE AND THE ENVIRONMENT, TOTALED BRL 22.4 MILLION IN 2017

SOCIAL INVESTMENT FOCUSED ON PEOPLE AND THE LAND

Generate positive social and environmental impact and establish a relationship with neighboring communities are among Klabin's goals for social and environmental actions, whose guidelines follow the Private Social Investment Platform. The company's actions in this area are organized in two main areas –

land and people – and divided into four lines: education, local development, environmental education, and cultural development.

These topics are managed based on Klabin's Sustainability Vision and Policy and the Stakeholder Engagement Policy.



All programs included in this platform, described here, will continue to be implemented in 2018

OVER BRL 22 MILLION INVESTED IN 2017

The programs developed by Klabin in the communities where it is present, focused on health, culture, education, sports, leisure and the environment, totaled BRL 22.4 million in 2017, of which BRL 5.6 million were made possible through Brazilian incentive laws (Ancine, Rouanet and Sports).

KLABIN EDUCATION

Klabin's actions in Education include initiatives to improve education, sports and citizenship. The projects focus on training teachers and students of all educational levels (early childhood, elementary, secondary, technical and after school activities), and improving school infrastructure. *Semeando Educação*, *Crescer Lendo* and the actions carried out by the *Terra Viva* Association are examples of projects that encourage a volunteering attitude among Klabin employees.

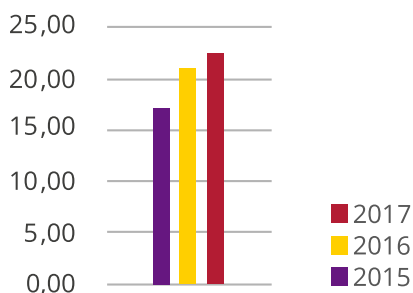
KLABIN SUPPORT FOR LOCAL DEVELOPMENT

Klabin believes that economic, social and cultural empowerment of communities is a path for the development of the regions in which it operates. Thus, its social investment initiatives strengthen the skills, knowledge and the potential of each area, through Community Development Forums, and the *Matas Legais* and *Matas Sociais* programs (see Value partnerships), in addition to the Beekeeping & Meliponiculture project.

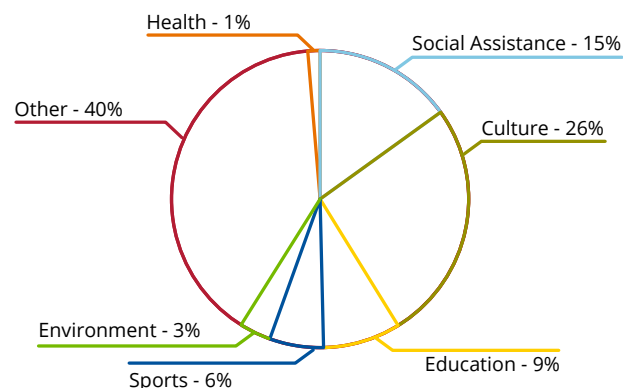
KLABIN AND THE ENVIRONMENT

With regard to Environmental Education, Klabin maintains projects for teachers and students of the communities to spread ecological awareness, support respect for the environment and conserve biodiversity. Some of the projects include *Caiubi*, *Protetores Ambientais*, *Crescer*, *Parque Ecológico*, and the National Heritage Private Reserves Conservation Program (RPPN).

KLABIN'S EXTERNAL SOCIAL INVESTMENT, IN BRL MILLIONS



EXTERNAL SOCIAL INVESTMENT IN 2017, BY AREA OF ACTIVITY





KLABIN AND CULTURE


Klabin's initiatives that support cultural development through artistic expression include the activities carried out at the Vera Lafer Cultural Center, such as Meninas Cantoras da Klabin, Passo Certo, Nossa Língua Digital and Decolar, as well as projects developed by the Ema and Eva Klabin Foundations and by the Queimados Cultural Center.

A photograph of a panel discussion on a stage in front of an audience. The stage is made of wood and has a large screen behind it displaying a green-tinted image. Six people are seated on the stage, and several small tables with water bottles are placed around them. The audience is seated in rows of black chairs, facing the stage.

— BEST PRACTICES

THE COMMUNITY IS ORGANIZED AROUND THE “CITY OF DREAMS”

THE COMMUNITY DEVELOPMENT FORUM IN GOIANA (PE) SEEKS ALTERNATIVES FOR SUSTAINABLE DEVELOPMENT AND IS SUPPORTED BY THE APPLICATION OF THE SOCIAL PROGRESS INDEX AND COMPLIANCE WITH THE UN SUSTAINABLE DEVELOPMENT GOALS (SDG)



When members of different sectors of society representing various segments come together, these groups will almost certainly have very divergent opinions, presenting an imminent risk for distress and conflict. However, that has not taken place in the Community Development Forum in Goiana, Pernambuco. The initiative, encouraged by Klabin's successful experiences in the municipalities of Otacílio Costa and Correia Pinto, in Santa Catarina, was implemented in Goiana in 2017.

The Forum involves various representatives from community and encourages them to jointly seek a management model based on the discussion of solutions to local issues. Klabin does not play the main role in these meetings, and like all of the other participants, is interested in finding answers able to contribute to sustainable local development.

METHODOLOGY

The Social Progress Index (SPI) was used to define a "starting point" for the situation faced by the municipality and its actual priorities. SPI is a methodology developed by the Avina Foundation that measures the quality of life in the territory, regardless of economic development. "In addition to this methodology, we apply a dynamic action that allows us to learn from the participants their idea on the Goiana of their dreams", says Judi Cavalcante, a consultant at Avesso Sustentabilidade. The responses are combined with other data from secondary sources to help trace the region's most important topics.

The results were compared to the Sustainable Development Goals and organized into four priority topics on which the working groups will be focused in 2018: education; employment and income; culture and tourism.

6 CLEAR WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



13 CLIMATE ACTION



ENVIRONMENT

THE PUMA UNIT RAISES THE STANDARDS IN THE MANAGEMENT OF NATURAL RESOURCES, INCLUDING WATER, EMISSIONS, POWER GENERATION, AND WASTE TREATMENT & REUSE; SUSTAINABLE MANAGEMENT OF PLANTED FORESTS, AND THE MONITORING OF FAUNA AND FLORA ARE PART OF BIODIVERSITY MANAGEMENT

COMMITMENT TO THE CONSERVATION OF NATURAL RESOURCES

Klabin's Environmental Management System is certified by ISO 14001 and supported by the Sustainability Vision and Policy. Aspects such as water, energy, climate change and biodiversity are considered in all operations.

The company's newest manufacturing plant the Puma Unit, located in Ortigueira (PR), was designed with state-of-the-art environmental technology for water consumption, effluent treatment, atmospheric emissions and reduced use of inputs, attaining more stringent environmental control standards than those provided by law.

RENEWABLE ENERGY MATRIX IS A PRIORITY

Replacing fossil fuels with biomass as an energy source has been the focus of Klabin's environmental management for some years. With the stabilization of the Puma Unit, self-sufficient in power generation, the company's indicators regarding this element have improved in 2017.

GREENHOUSE GAS EMISSIONS

Reducing air emissions is one of the items included in Klabin's Sustainability Policy. With the increased use of renewable fuel, the company is contributing to a reduction in greenhouse gas (GHG) emissions. In 2017, Klabin experienced an 8% increase in absolute GHG emissions from Scope 1, due to the increased production of the Puma Unit, which reached

its full capacity. On the other hand, emissions from biomass, a renewable fuel, increased by 15%, representing an improvement in the management of this element.

CLIMATE CHANGE

Klabin 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 follows the precautionary principle established at the Eco-92 Conference and constantly evaluates all aspects that present risks to the environment, health and safety of employees, clients and communities impacted by its activities.

— 2017 HIGHLIGHTS



80% OF THE SURPLUS ENERGY FROM THE PUMA UNIT IS MADE AVAILABLE TO THE MARKET



89% OF ENERGY COMES FROM **RENEWABLE SOURCES**



7% REDUCTION IN THE CONSUMPTION OF **FOSSIL FUELS**

— ENVIRONMENT

FOCUS ON THE RATIONAL USE AND REUSE OF WATER

Rational use of water without waste is a constant challenge for industrial operations. Klabin adopts measures such as the installation of flow measurement systems at the plants, and management of this matter is strengthened by participating in Regional Water Basin Committees, as well as in various discussion forums. The company's total water consumption in 2017 was 16% higher than in 2016, due to the full operation of the Puma Unit. However, the new plant's high recycling and reuse capacity positively contributed to the high volume of water recycled in the year: the flow rate was 2.3 times the volume of groundwater captured.

QUALITY OF THE TREATED EFFLUENT

Wastewater disposal at Klabin has a differential quality, with the tertiary treatment at the Puma Unit's Effluent Treatment Plant (ETP). An additional treatment is carried out at this stage, ensuring better quality of the

effluent to be disposed. All of the company's units meet the legal limits for effluent disposal.

WASTE MANAGEMENT EFFICIENCY

The Puma Unit brought innovative standards to Klabin related to the management of solid waste generated during industrial processes. The Solid Waste Processing Center in Ortigueira (PR) is one of the examples of this management improvement. Responsible for processing industrial waste of both units, the Center prevents approximately 70% of the waste generated from being discarded at the industrial landfill. Some of it is reused as by-product in various applications, especially in agriculture.

USE OF MATERIALS

More than 98% of materials used in Klabin's production are of renewable origin, such as wood, chips and pulps. Non-renewable materials account for less than 2% of the total amount used, totaling a little over 218,000 tons.



— ENVIRONMENT

BIODIVERSITY MANAGEMENT

Ecological corridors established using Klabin's mosaic forestry handling model, mixing planted forests and preserved native forests, allowing the transit of animals in large areas, contributing to the preservation of fauna and flora and the conservation of water resources.

Different and staggered periods of planting and harvesting trees are also part of the sustainable management of planted forests. Biodiversity monitoring is part of an extensive program for research and conservation of wild fauna and flora at the company's forests, contributing to the survival of endangered species such as the pygmy brocket deer, howler monkey and

PROTECTION AND CONSERVATION OF THE ATLANTIC RAINFOREST

Klabin's Private Natural Heritage Reserves (RPPNs) – RPPN Complexo Serra da Farofa (SC) and RPPN de Monte Alegre (PR) – are dedicated exclusively to scientific research, environmental protection and preservation of water resources, contributing to the conservation of biodiversity in the Atlantic Forest biome.

The company also maintains an Ecological Park at Fazenda Monte Alegre, to house the animals at risk that are unable to return to the wild. About 200 specimens of 50 species live in the park's nursery.

— BEST PRACTICES

PROMOTING THE MANAGEMENT OF ENVIRONMENTAL INDICATORS

An online platform allowing greater traceability and streamlines the control indicators, improving the management of environmental aspects in operations

Due to the need to improve the sustainability indicator management system, Klabin implemented the new Environmental Management System in 2017, based on the Resource Advisor online platform. This pilot project covers the environmental indicators, and in the future should be extended to other indicators.

For Klabin's Environment and Sustainability corporate manager, Júlio César Batista Nogueira, systematizing the control of indicators improves management by providing greater traceability of information.

"A dedicated system where you can track all the data inserted there lends even greater reliability to the indicators", he observes.

The platform includes environmental data related to the company's operations, such as water, energy, materials and air emissions. "In addition, the system allows us to view the environmental performance of all units, and to compare and act in a more assertive manner", he adds. All system users received training and the manager ensures that the benefits are already noticeable, even if they cannot be measured quantitatively.

3 GOOD HEALTH AND WELL-BEING



8 DECENT WORK AND ECONOMIC GROWTH



PEOPLE, HEALTH AND SAFETY

ALONG WITH MANAGEMENT DEDICATED TO DEVELOPING PEOPLE AND MERITOCRACY, PROMOTING A CULTURE OF SAFETY, HEALTH AND WELL-BEING HAS BEEN INSTRUMENTAL TO THE LEVELS OF EFFICIENCY AND SATISFACTION AT KLABIN

Klabin's increasing levels of efficiency are the result of management actions focused especially on the development of people, where leaders play the main role in developing high performance teams. Therefore, the company pays special attention to training its leaders. This work is based on Gente & Gestão [People & Management] policies, structured to improve skills, attract talent, engage, promote a culture of meritocracy, and ensure a safe and healthy environment for all direct and indirect employees.

MOVING TOWARDS THE FUTURE

The company's leadership development actions include the Rumos Program, which is part of the Klabin Business School development platform. Rumos was created in 2015 to align leaders to Klabin's perspective for the future and provide them tools to guide the company through its growth cycle, ensuring that managers fully understand the company's value chain. In 2015 and 2016, the program included training for managers, which was expanded in 2016, and provided training to

approximately 400 coordinators and specialists in 2017. Rumos 2.0 will take place in 2018 and will focus on operational efficiency, production chain vision, innovation and leadership skills.

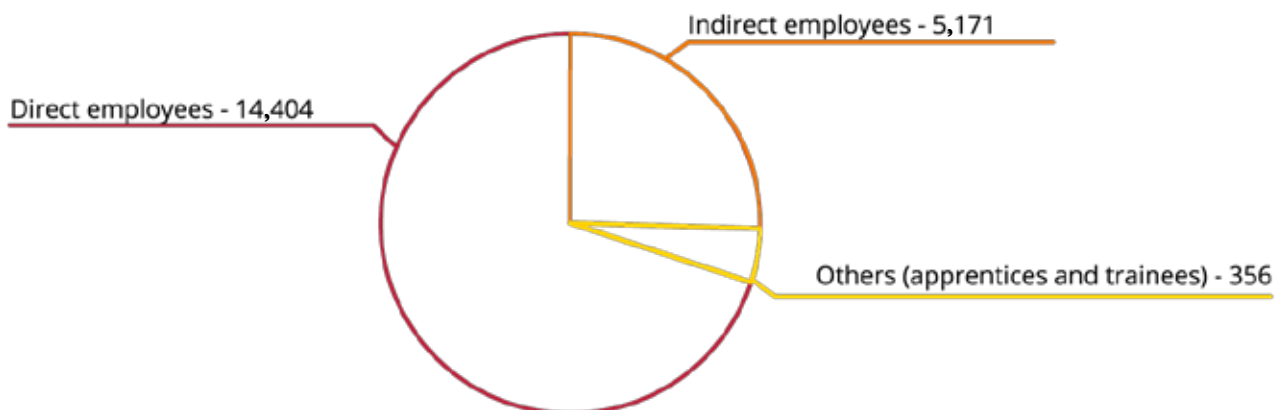
CULTURE OF INNOVATION

Committed to developing people and the business, Klabin refreshed its process to promote innovation as part of its organizational culture in 2017. It aims to create an internal ecosystem that encourages and allows professionals to innovate, reconsider their behavior, and observe their processes under new perspectives, always as a network and in a collaborative manner. Combined with the valorization of meritocracy and a humanized and sustainable approach, this culture is expected to contribute to attracting, retaining and acknowledging talent.

ORGANIZATIONAL CLIMATE SURVEY

In 2017, Klabin applied climate research in partnership with the consulting firm Korn Ferry HayGroup, aiming to measure its employees' engagement and assess the practices and processes. The survey was intended for all employees, of which 87% participated, well above the average for the general market (68%). The results indicated a general satisfaction index of 73% (up from 58% recorded in the last survey in 2012), with positive emphasis on aspects such as "engagement", "clarity and purpose" (people understand their role in the company), and "well-being" (especially related to safety and the work environment). Points for improvement include "cooperation and synergy" (among the teams) and "responsiveness" (in processes).

OUR WORKFORCE IN 2017



ACTIVE CARE

A Klabin abides by current legislation on occupational health and safety issues and uses NBR 14.280 and OHSAS 18001 as its parameters. Rates of occupational diseases are not monitored for employees of contracted companies.

The company promotes a safe production culture and encourages active care practice among its direct and indirect employees. Three fronts are considered essential: identifying and addressing unsafe conditions in facilities and equipment; engagement and commitment by leaders; and people's behavior. The Occupational Health and Safety Program includes training,

awareness actions, monitoring and supervision in all operational areas, in addition to the initiatives carried out by the Internal Accident Prevention Commissions (Cipas).

The Occupational Health and Safety Department was established in 2017, reinforcing the company's focus on the topic. The new structure is committed to completing the Master Plan for Occupational Health and Safety, which Klabin has been developing since 2015, through diagnostics, concept reviews, and prioritization of action fronts.

To learn more about Health and Safety in the company, visit the website (<http://rs.klabin.com.br/en/people-health-and-safety/>).



— BEST PRACTICES

INNOVATION IN SUPPLIES

Teams practice immersion at the Solutions Lab and prove that innovation and development are the path for providing the necessary support to competitiveness and Klabin's growth strategy

Foster a culture of innovation and developing joint solutions, seeking concrete results for Klabin. This was the purpose of the Solutions Lab, an Klabin Business School initiative developed in 2017 for the business areas, which involved employees from the Supply department, in two events that lasted 40 hours each (five days) to study and propose solutions to problems, based on innovation.

"As with other departments, we saw the need to formally launch a line of action based on innovation, to monitor the changes that have been taking place at Klabin, with its growth strategy", says Milton Minoru Miyamoto, Manager of Purchasing Excellence.

By applying design thinking, participants of the Solutions Lab met to jointly develop





innovative solutions to four projects prioritized by the Supply department.

The department has accepted the challenge of adding the implementation of three innovation projects a year to the leaders' goals (first managers, and then passed down to coordinators and consultants), making an impact on variable compensation.

The projects studied in the Lab are already in the solution development phase, and will allow greater efficiency in the implementation of processes and gains for Klabin. The

department also started working on the approach and engagement between the innovation process and its suppliers.

>>DESIGN THINKING IS A PRACTICAL APPROACH THAT STREAMLINES INNOVATION AND HELPS SOLVE COMPLEX PROBLEMS, FOCUSED ON HUMAN BEINGS AS THE MAIN DIFFERENTIATOR.<<

RESEARCH, DEVELOPMENT AND INNOVATION

IN 2017, COMPLETING A THREE-YEAR BRL 70 MILLION INVESTMENT CYCLE, KLABIN EXPANDED ITS ACTIONS IN RESEARCH, DEVELOPMENT AND INNOVATION, SEEKING TO ADVANCE MORE SUSTAINABLE APPLICATIONS FOR ITS PRODUCTS AND NEW MARKETS

Investments in R&D+I between 2015 and 2017 included partnerships with domestic and international research institutes and universities; physical structuring of the laboratories; purchase of equipment; training and recruitment of staff, and the installation of the Technology Center, established in June 2017 in Telêmaco Borba (PR), supplementing the activities conducted by the Forest Technology Center, in the same municipality.

THE FIVE OPERATING FRONTS OF THE NEW TECHNOLOGY CENTER

- Optimization of paper and new applications;
- Biorefinery: multiple uses of the forest base, mainly lignin;
- Optimization of environmental processes, reuse of products generated in the process, reduction in water, energy and steam consumption;
- Nanotechnology: fractions of pulp in micro or nanoscale and application in new products.
- Development of raw forest material for pulp;

— BEST PRACTICES

THE BOLD AND MODERN ARCHITECTURE FEATURED BY THE BUILDING ESTABLISHED IN PARANÁ IS THE MOST VISIBLE SIGN OF THE IMPORTANCE KLABIN HAS PLACED IN RESEARCH, DEVELOPMENT AND INNOVATION FOR ITS PROCESSES AND PRODUCTS

THE CENTER OF A LOT OF ATTENTION

Just two months after its inauguration, Klabin's Technology Center already made its purpose clear when it hosted Klabin's 1st Innovation Week, on August 15-17, gathering employees, partners, suppliers, customers and guests. It took the opportunity to discuss sustainable applications and new technologies for the packaging, paper and pulp business.

The new Technology Center is considered one of the segment's most modern centers in Brazil when it comes to equipment and infrastructure,

able to reproduce the manufacturing process, from the wood yard to the final product. Its establishment led the company's RD&I to a new level.

The Corporate Manager of R&D, Carlos Augusto Soares do Amaral Santos, who has worked at Klabin for seven years, is proud to have been an early supporter of this initiative. He was the first employee who participated in the R&D Corporate Management team, which later, with the addition of other professionals, had its first headquarters installed in a house in Telêmaco Borba, Paraná.





CUSTOMER SATISFACTION AND PRODUCT QUALITY

UNDERSTANDING THE CUSTOMERS' NEEDS, AS WELL AS MONITORING CONSUMER BEHAVIOR AND TRENDS GUIDE KLABIN'S ACTIVITIES TO ADD VALUE TO ITS PRODUCTS

Being the market leader in several segments increases Klabin's responsibility to maintain the quality of its products and add value to customer relationships. Practical examples of actions focused on this concept include the provision of services such as inventory management, training on packaging storage optimization, and sharing waste reduction practices. In addition, Klabin's Packaging Unit has been developing feasibility studies to automate its customers' production lines, focused on Industry 4.0.

PUMA CARRIES OUT ITS FIRST CONSULTATION

The Pulp Business Unit carried out its first systematic consultation with customers in 2017, taking 2016 as the base year.



RESEARCH HAD A **50% RETURN**, REPRESENTING APPROXIMATELY **90% OF THE PULP VOLUME SOLD**.



"GOOD" AND "EXCELLENT" RATINGS WERE FEATURED IN MOST ANSWERS

— BEST PRACTICES

PACKING CONSUMER WISHES

PARTNERSHIP WITH THE LARGEST MARKETPLACE IN LATIN AMERICA STRENGTHENS KLABIN'S OPERATIONAL E-COMMERCE STRATEGY

A tradition in the United States that is becoming increasingly popular among Brazilian consumers, Black Friday has given Klabin the opportunity to establish a promising partnership in e-commerce. The first tons of corrugated board were directed to this action, which is already the main promotional date of retail in Brazil.

Klabin has been keeping a close eye on online retail for some time, especially because many of its customers that already use packages in their physical stores may eventually purchase packaging for their e-commerce sales. Thus, the opportunity arose to establish a partnership with a big marketplace, a business model that covers e-sales from multiple companies in a single platform.

In 2017, Mercado Livre represented an opportunity for Klabin to show that it is prepared to meet the needs of a segment that, although small in Brazil – representing slightly over 4% of retail sales –, has the potential to grow.

Always following trends, the company already has other projects for this segment, such as customized packaging. Examples include zipper carton boxes, drawstring bags with adhesive closure for clothing, and bottle boxes recessed on the top and bottom for better shock absorption. Services include rationalization of the logistics chain, offering collapsible packaging for better use of storage space and automating the client's production line.





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