

KLABIN – GREEN BOND REPORT 2018
USE OF PROCEEDS RELEASE



Klabin

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PRESENTATION

In September 2017, Klabin made its first issuance of green bonds in the amount of USD 500 million, with a 10-year maturity. The operation, which achieved a “High Standard” rating in the independent assessment performed by Sustainalytics consultancy, reinforces Klabin’s austerity and commitment towards sustainable development – an area in which the company is consolidated as a market benchmark. In January 2018, Klabin’s green bond issuance was recognized in Deals of the Year, an international award that highlights high-yield corporate operations.

In this document, Klabin submits the resource use report for the allocation period from September/2015 to June/2018 for initiatives that met the eligibility criteria for Green Bond

issuance (The Green Bond Principles 2017). Also following the same principles, part of the funds was allocated to projects whose investments covered a retroactive period up to 24 months from the date of issuance of the bonds, such as the Puma Project, for the construction of the industrial unit in Ortigueira, Paraná. For these projects, the amounts invested with the Company’s own resources were considered in this statement.

To learn more about Klabin’s first green bond issuance, see the Management Report on Eligible Projects (Appendix A), the Resource Use Statement (Appendix B), and the External Auditors’ Report (Appendix C) at the end of this document.



CATEGORY | Energy Efficiency

PROJECT | Puma Unit energy efficiency

INVESTMENTS | US\$ 1.0 million

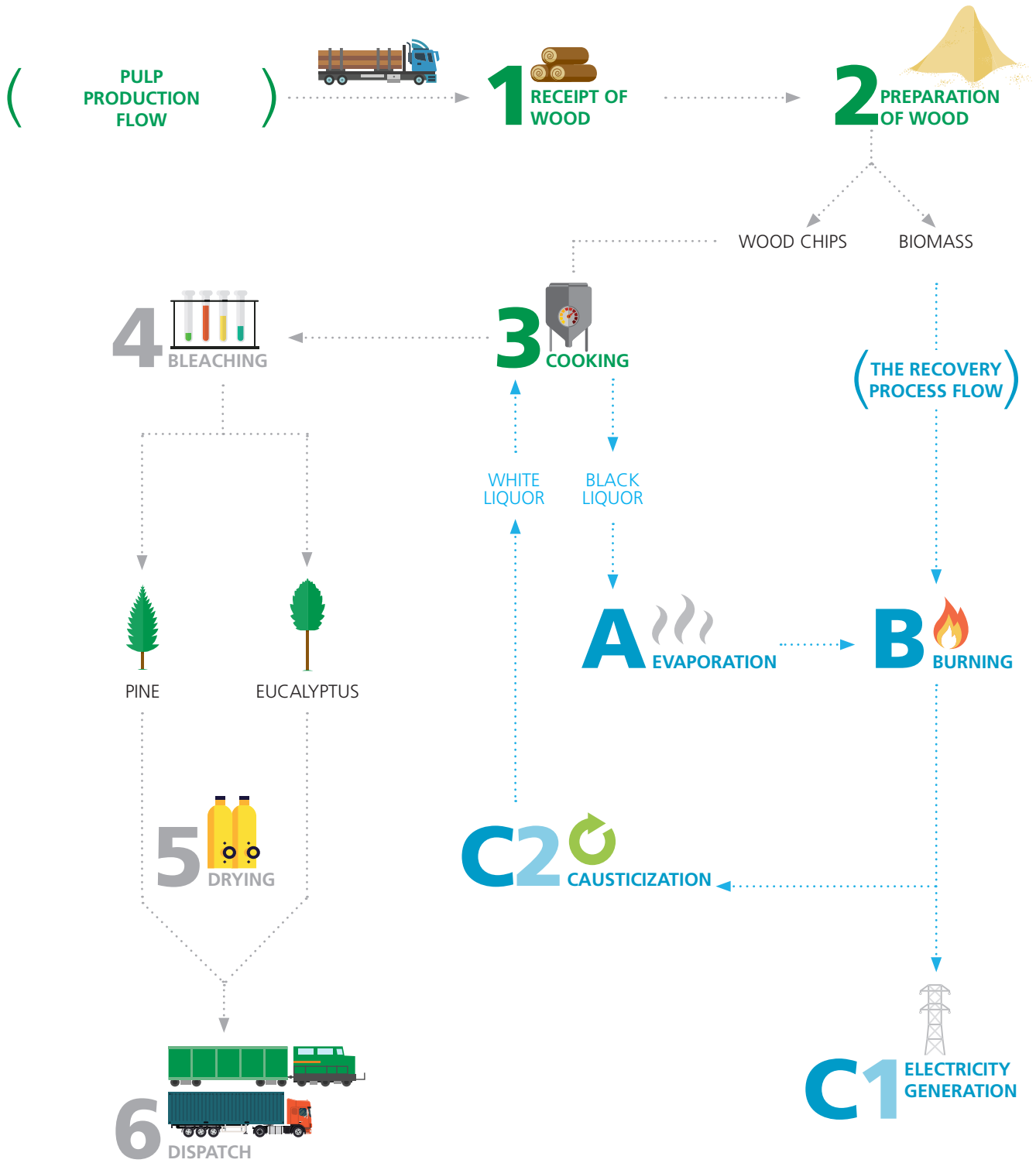
DESCRIPTION

The Puma Unit in Ortigueira (PR), inaugurated in 2016, was designed to be energy self-sufficient using waste from the pulp manufacturing process, such as black liquor and biomass. The unit's power generation capacity is 270 MW. Of this total, approximately 120 MW are destined for the plant. As the company produces more energy than it consumes, the company provides part of the surplus to other Klabin units and the majority is sold within the Brazilian Electric Power System, thus contributing to the generation of income, as well as to a cleaner energy matrix.

The allocated funds financed projects and initiatives to optimize the energy efficiency process, focused on increasing production and the reduction of specific steam consumption in the production stages, generating surplus (steam) for the production of energy in the turbines.

Most of the installation and maintenance activities included in green bond investments were performed during the industrial plant's General Shutdown for scheduled maintenance in March 2018. The benefits could already be seen in June, when the Puma Unit increased power generation from 200 MW in February 2018 to 246 MW, 36 MW higher than expected.

STAGES OF PRODUCTION AT THE PUMA UNIT



INITIATIVES

- **Condensate recovery** – project designed to use condensate to heat water, generating medium-pressure steam savings, which is sent to the turbogenerator, allowing for increased power generation. Previously, this condensate was discarded. As of May 2018, the unit started to generate 1 MW/h more energy from this initiative.

- **Solar energy** – purchase of photovoltaic panels, capable of generating 40 KW/h of solar energy for charging electric vehicle batteries. The solar power plant started operating in May 2018 and by July, it had already generated 6 MW/h of power. The facility, which is connected to the electrical system, also provides power for lighting the Puma Unit administrative building.

- **Advanced controls in Kiln 2** – the system uses algorithms to control the specific consumption

of fuel oil in the process, identifying variables such as burning temperature and oxygen content, among others, making it possible to act preventively. With the initiative, which was deployed in June 2018, Klabin expects to reduce its specific consumption of fuel oil by 5%, which represents less fossil fuels in the company's energy matrix and an annual savings of around BRL 1,800,000.

- **Increased liquor pumping capacity and pipe installation in evaporation stages of the process** – improvements to the facilities for the purpose of ensuring liquor pumping without limiting evaporation, increasing reliability and evaporation capacity. The expectation is to increase the amount of water evaporated from 1,600 t/h to 1,700 t/h, resulting in a power generation increase on the order of 3 MW/h.

IMPACT REPORT ON PROJECTS FINANCED IN THE ENERGY EFFICIENCY CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
Power generation in the recovery stages of the process	May/2018 to June/2018	Generation of 1 MW/h of power from condensate recovery
Solar power generation	May/2018 to June/2018	6 MW/h

CATEGORY | Renewable Energy

PROJECT | Puma Project

INVESTMENTS | US\$ 30.5 million

DESCRIPTION

The shift from fossil fuels to biomass and other inputs recovered as an energy source has been a focus of Klabin's environmental management for some years. Currently, 89% of the energy matrix is made up of renewable energy sources (biomass, black liquor and hydroelectric power). This mark achieved in 2017, surpassing the target of 88% established for 2020, is due to management focused on sustainable development and directly reflects the start-up of the Puma Unit in Ortigueira (PR), inaugurated in 2016.

The pulp mill's construction project was designed to be a benchmark in sustainability practices

in industrial operations, especially in the areas involving energy, waste, water and emissions.

Power generation in the Puma Unit, which reuses waste from the operation itself as an input, required a project that included the installation of equipment and structure for the production and recovery lines. For that purpose, Klabin allocated part of the Puma Project's investments in the green bond, which was acquired with the company's own resources, including the installations of recovery and power boilers, turbogenerator, cooling tower, Boiler Water Treatment Plant (ETAC), transmission lines and the basic power network.

IMPACT REPORT ON PROJECTS FINANCED IN THE RENEWABLE ENERGY CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
Share of renewable sources in the Klabin energy matrix	December/2017	89%
Power generation from renewable sources	June/2018	246 MW/h



CATEGORY | Clean Transportation

PROJECT | Puma Project

INVESTMENTS | US\$ 23.9 million

DESCRIPTION

All pulp produced at the Puma Unit in Ortigueira (PR), which began operations in 2016, is transported by rail to the Port of Paranaguá (PR) for export. This is equivalent to more than 130,000 tons per month (data from June/2018) transported by 464 km of railroad. Each train replaces about 200 trucks on this route, which represents an environmental benefit directly related to the reduction of Greenhouse Gas (GHG) Emissions, one of the items on Klabin’s Sustainability Policy. Transported by rail, Klabin’s pulp generates 8,279.3 tCO₂e of greenhouse gases, seven times less than the road modal, an option that would produce 57,966.54 tCO₂e of GHG.

The “Puma Project”, the name given to the Unit’s construction phase, included a 21-kilometer rail branch, connecting the Puma Unit to the existing Paraná Central railroad, in addition to the acquisition of 306 railroad cars and seven locomotives. Klabin allocated part of the Puma Project investments that were acquired with its own resources in the green bond for these initiatives.

IMPACT REPORT ON PROJECTS FINANCED IN THE CLEAN TRANSPORT CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
CO ₂ emission avoided	2017	49.687 tCO ₂ e/ton transported

CATEGORY | Waste Management

PROJECT | Puma Project

INVESTMENTS | US\$ 7.3 million

DESCRIPTION

Pollution prevention and control is an express commitment in Klabin's Sustainability Policy and waste management is fundamental for the company to follow this principle. The Puma Unit, inaugurated in 2016 in Ortigueira (PR), took Klabin to a new level in managing waste generated in the industrial processes, with the start-up of the Solid Waste Processing Plant. The deployment of this structure is one of the initiatives in which Klabin has allocated part of the Puma Project investments in the green bond that were made with its own resources.

The Processing Plant receives industrial waste from both the Puma Unit and the Monte Alegre Unit in the neighboring municipality of Telêmaco Borba, redirecting about 70% of the waste generated in the operations away from the industrial landfill. Part of them is reused as a byproduct in several different applications, especially as fertilizers and soil correctives, and part can be reincorporated into the papermaking process, such as recovered

primary sludge and fiber waste.

The Plant has the capacity to recycle 94% of the Puma Unit's solid waste. As a result, in addition to reducing the operational costs of waste treatment, the company also reduces the number of landfills and environmental impacts.

The waste recycling and reuse rate in 2017 was 91% and the target is to reach 95% by 2020. The strong results in this regard are also due to the generation of tertiary sludge from the Puma Unit's Effluent Treatment Plant (ETP), to which Klabin also allocated in the green bond part of the Puma Project investments made with its own resources. The tertiary treatment in the ETP, which lends more quality to the effluent to be discarded, is an advantage of the project, which also included the installation of emergency ponds for the purpose of avoiding the need to send contaminated effluents to the ETP in the event of deviations in the process.

IMPACT REPORT ON PROJECTS FINANCED IN THE WASTE MANAGEMENT

CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
Solid waste recycling and reuse	2017	Waste recycling and reuse rate of 91%
Solid waste not sent to industrial landfill	2017	18,500 t / year of waste avoided
COD - Chemical Oxygen Demand (t / year) in effluent	2017	Improved effluent biodegradability with a 38% reduction in COD (t / year)

CATEGORY | Sustainable Forestry Management

PROJECT | Forestry

INVESTMENTS | US\$ 53.0 million

DESCRIPTION

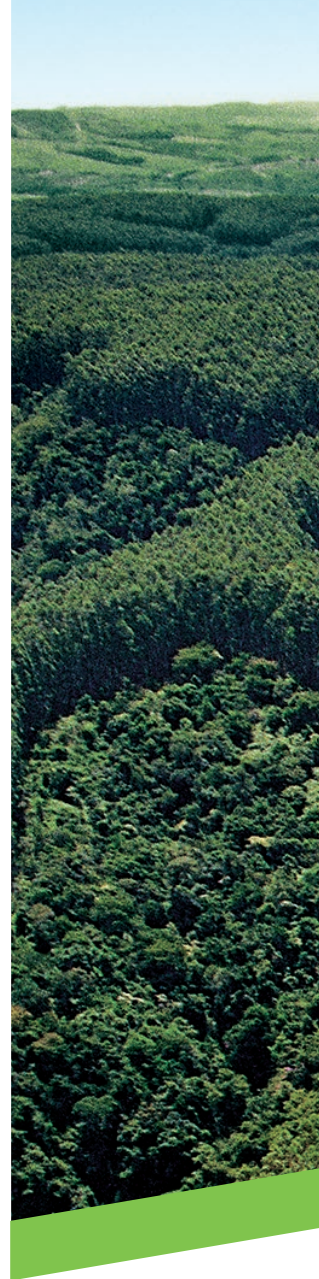
Klabin's pine and eucalyptus forests are already among the most efficient in the world in terms of pulp production per hectare planted. High productivity is a key factor for ensuring competitiveness and sustaining the company's growth strategy. The company's targets for its forestry operations establish long-term commitments to maximize productivity, protecting biodiversity and natural resources and strengthening relationships with the communities. The FSC® certification (FSC – C022516) – Forest Stewardship Council® at all of the company's forestry management units, totaling 224,000 hectares of planted forests (December/2017 data), attests to this commitment.

Klabin works to maintain the management of its forests in order to approach the estimated productivity potential of its sites, while protecting biodiversity and natural resources. Forestry management uses the mosaic concept: planted forests are interspersed with native forest areas – preserved areas of the Brazilian Atlantic Forest – creating ecological corridors that conserve local fauna and flora.

The allocated green bond resources financed the maintenance of forestry activities in order to increase forest production without necessarily increasing the planted area or reducing the volume of conserved areas. The activities include development and optimization of genetic material, seedling production, soil correction techniques, fertilization, planting and cultural treatments (cleaning areas for weed control), as well as the protection of the forest (pests, diseases and fire) with a focus on increasing forest productivity.

From 2015 to 2017, the MAI (Mean Annual Increment) rate, which indicates the value of forest growth, measured by m³/hectare/year, considering the applied life cycle for each Klabin forest (7 years for eucalyptus and 16 years for pine) increased 1.5%-2% in eucalyptus forests and 1% on average in pine forests.

In addition, Klabin's GHG emission balance in 2017 showed a positive result of 2,961.2 kg CO₂e, which indicates that planted forests captured more CO₂e than the industrial processes emitted into the atmosphere.





IMPACT REPORT ON PROJECTS FINANCED IN THE SUSTAINABLE FORESTRY MANAGEMENT CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS	
		Eucalyptus (ha planted)	Pine (ha planted)
Forestry productivity	2015 (September to December)	1.407	2.898
	2016	8.051	6.626
	2017	16.011	11.911
	2018 (January to May)	2.560	2.718
GHG emission balance	2017	Positive result of 2,961.2 kg CO ₂ e	

CATEGORY | Sustainable Forestry Management

PROJECT | Certified wood purchases

INVESTMENTS | US\$ 61.3 million

DESCRIPTION

Most of the wood used for Klabin's production comes from its own pine and eucalyptus forests, all FSC® certified. About 20% of the total wood used in production is acquired from third-party forests, members of the Fomento Florestal program or independent producers. Since 2013, Klabin has maintained the Forest Certification Program for Small and Medium-sized Rural Producers in the region of Campos Gerais, Paraná, focused on producers that are part of the Fomento Florestal Program and independent producers.

By the end of 2017, the producers stimulated by the program were responsible for planting more than 66,000 hectares of certified pine and eucalyptus forests. Certification is an affirmation that the timber producer operates with social and environmental responsibility and follows global forestry management standards.

The allocated green bond resources were used in investments for the acquisition of certified wood from September 2015 to February 2017 and from April 2018 to June 2018.

IMPACT REPORT ON PROJECTS FINANCED IN THE SUSTAINABLE FORESTRY MANAGEMENT CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
Volume of certified wood purchased	September/2015 to February/2017	2,225,464 t
	April/2018 to June/2018	506,408 t

CATEGORY | Restoration of Native Forests and Conservation of Biodiversity

PROJECT | Biodiversity and Forest Restoration and Conservation

INVESTMENTS | US\$ 5.6 million

DESCRIPTION

Klabin was one of the first companies to adopt mosaic forestry management, which mixes planted forests and preserved native forests. Ecological corridors allow the transit of animals in large areas, contributing to the preservation of fauna and flora and the conservation of water resources. The company develops an extensive program for research and conservation of wild fauna and flora, promoting the monitoring of biodiversity in its forests and helping ensure the survival of endangered species such as the pygmy brocket deer, howler monkey and cougar.

Forty-six per cent of Klabin's total area, approximately 215,000 hectares, corresponds to preservation areas, divided between Permanent Preservation Areas (APPs), Legal Reserves and Private Natural Heritage Reserves (RPPNs). Two RPPNs, which total almost 9,000 hectares, are exclusively dedicated to scientific research, protection of biodiversity and water resources, and provide the seeds of forest species for degraded area recovery.

Allocated green bond resources for restoration and conservation were applied in the following initiatives:

- **Degraded area recovery around the Puma Unit:** planting of native trees on 140 hectares of environmental recovery area during the Puma Unit construction project in Ortigueira (PR), as a way of environmental compensation for the project.
- **Fauna and flora monitoring:** maintenance activities of the Continuous Monitoring Program for Fauna and Flora developed by Klabin in Paraná and Santa Catarina, for the purpose of verifying the impacts of the forestry management on the behavior of the species and adopting prevention and mitigation measures. By June 2018, the company had already identified 979 species of fauna and 211 species of flora included in the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN) with a conservation status in its operating areas.
- **Legal Forests Program:** guides small and medium-sized rural producers in Paraná and Santa Catarina to operate more efficiently, profitably and ecologically on their properties, through rural property planning, conservation, environmental education and forestry development actions. The program also encourages forestry actions using planted forests, the enrichment of secondary forests, organic agriculture, eco-tourism, and the recovery of riparian forests, supporting the conservation of water sources. From 2015 to 2017, 219.72 hectares of Permanent Preservation Areas (APPs) in Paraná and 111.3 hectares in Santa Catarina were recovered through



the initiative. During this period, the program donated more than 160,000 native plant seedlings in Paraná and over 65,000 in Santa Catarina.

- **Social Forests Program:** performed in Paraná, the program aims to assist family farmers in the municipalities of Ortigueira, Telêmaco Borba and Imbaú with Rural Environmental Registration (CAR) Environmental Recovery Plan (PRA), in sustainable planning, and diversified use of the property, encouraging family farming and staying in the field. The initiative has already benefited 230 properties from 2015 to 2016, to which 77,046 native seedlings were donated.

- **Environmental projects and certifications:** Klabin Environment and Certification area structure, responsible for certification processes, interfacing with other areas, removal of naturally occurring pine plants in Areas of Permanent Preservation (APPs), training on Sustainability Policy, environmental education activities, among other activities. The teams also conduct initiatives under the Controlled Wood Program, which evaluates properties of timber suppliers for Klabin in aspects of economic management, environmental compliance and social impacts, such as work and impact in the surrounding communities. Once certified, they annual maintenance audits, by the Forest Management and Certification Institute Agricultural (Imaflora). Since its creation, by the end of 2017, the initiative allowed 286 producers to be certified.

IMPACT REPORT ON PROJECTS FINANCED IN THE NATIVE FOREST RESTORATION AND BIODIVERSITY CONSERVATION CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS	
		SC	PR
Fauna and flora species identified during monitoring activities	June/2018	Fauna: 390 species (346 with conservation status listed on the IUCN Red List)	Fauna: 776 species (633 with recognized conservation status)
		Flora: 914 species (128 with recognized conservation status)	Flora: 1,355 species (83 with recognized conservation status)
Permanent Protection Areas (APPs) recovered in the Matas Legais (Good Forests) Program	2015	111.3 ha	47.78 ha
	2016	111.3 ha	86.45 ha
	2017	111.3 ha	85.49 ha
Certified supplier areas in the Madeira Controlada (Controlled Wood) Program	2016	-	30,820.32 ha
	2017	3,790.26 ha	28,855.51 ha
	2018	9,204.24 ha	41,550.18 ha
Number of certified rural producers	2015 a 2017		286 producers



CATEGORY | Native Forest Restoration and Conservation of Biodiversity

PROJECT | Ecological Park

INVESTMENTS | US\$ 2.6 million

DESCRIPTION

Klabin maintains an Ecological Park at the Monte Alegre Farm in Telêmaco Borba (PR), which dedicates its operations to the conservation and study of the behavior of endangered species, promoting their reproduction and reintroduction into the environment. The site also houses animals at risk and unable to return to the wild, such as animals hit by cars on local roads. About 200 specimens of 50 species live in the Park's nursery. The park is on 11,000 hectares of land, of which almost 7,000 are native forests. The Park is an Area of High Conservation Value (AAVC), which means that it has a significant concentration of flora and fauna specimens important to biodiversity and rare ecosystems that are endangered or threatened with extinction.

In 2014, the Ecological Park changed from the status of scientific breeding to zoological, which allowed it to broaden its performance in the maintenance of the animal species in several models of projects and also as a center of fauna rehabilitation. Investments were required on several fronts for this purpose. The green bond resources allocated to the investments made from September 2015 to June 2018 funded projects to build new structures, renovations of existing facilities, and labor costs for the animal treatment team.

The new facilities include a veterinary clinic, with just over 100 sqm and 51 new enclosures in the zoo circuit, totaling an area of 14,600 sqm. One hundred and twenty-one (121) individuals were transferred to the new enclosures, representing 75% of the animals of the park's herd (group of animals of good quality/race), above the target of 113 established along with the Environmental Institute of Paraná (IAP). The zoo receives visits focused on environmental education. The purchase of equipment and renovations to existing facilities and enclosures complement the investments made in the period. The Ecological Park's technical team is currently made up of 26 people, including a veterinarian, biologist and a second wildlife assistant.



IMPACT REPORT ON PROJECTS FINANCED IN THE NATIVE FOREST RESTORATION AND CONSERVATION OF BIODIVERSITY CATEGORY

KPI	PERIOD	ENVIRONMENTAL BENEFITS
Births of reproduced animal species	2015 to June/2018	42 individuals, 19 of which are members of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species
Endangered animals, according to the International Union for Conservation of Nature (IUCN) Red List of Threatened Species	July/2018	33.95% of all the animals, considering the herd's individuals and sheltered animals
Assistance to animals at risk	2016 to 2018	5,632 medical appointments

CATEGORY | Eco-Efficient and Circular Economy Adapted Products, Production Technologies and Processes

PROJECT | Investments in R&D+I focused on sustainability

INVESTMENTS | US\$ 22.4 million

DESCRIÇÃO

Innovation is one of the foundations of Klabin business and guides the company's actions and future vision. Constant investments in Technological Innovation focused on the process and for management place the company at the forefront and leadership of its market and allow it to advance in the search for a sustainable industrial model. The Research, Development and Technological Innovation (R&D+I) area works with all stages of the company's production and develops studies in collaboration with universities, research centers and suppliers from Brazil and abroad, focused on finding solutions to market needs.

Klabin inaugurated a modern Technology Center in Telêmaco Borba (PR) in 2017, raising the company's R&D+I activities to a new level. The new facilities bring together laboratories, state-of-the-art equipment and experts to ensure the company works at the cutting edge of this area, meeting current needs and supporting medium- and long-term projects.

The new Technology Center's research focuses on five routes: development of the forestry raw material for pulp; streamlining roles and new applications; biorefinery - multiple uses of the forestry base, especially lignin; streamlining of processes in the environment, reuse of products generated in the process, reduction of water, energy and steam consumption; and

nanotechnology - micro or nanoscale fractions of pulp and application in new products.

The funds allocated to the green bond were used for part of the funding for the installation of the new Technology Center, which was made with the company's own resources, and was also earmarked for investments in research and maintenance lines of the Industrial and Forestry R&D+I structure.

In 2016, the company redesigned the forestry research area, expanding its development capacity and fostering its integration process with the industrial area. Two specific managements bodies were created - Industrial Research and Forestry Research - subordinate to corporate R&D management, making management of R&D+I processes more robust. Because of this change in structure, the number of professionals directly linked to the R&D area increased from 72 in 2015 to 97 in 2017.

The following works are highlighted among the works currently under development:

- Implementation of new pine and eucalyptus clones that allow higher pulp and biomass productivity, seeking to obtain a more sustainable forestry base;

- Improved industrial processes, aiming at reducing environmental impacts and increasing productivity, resulting in less use of inputs, better control of production and processes, quality standard, less generation of waste and consequently less waste as well as improvements in gas and waste treatments;

- Develop applications of lignin, hemicellulose and cellulose fibers in micro and nano fractions, allowing for improved quality and characteristics of products that already make up the company’s portfolio, as well as developing other application methods for new markets.

IMPACT REPORT ON PROJECTS FINANCED IN THE CATEGORY OF ECO-EFFICIENT AND CIRCULAR ECONOMY ADAPTED PRODUCTS, PRODUCTION TECHNOLOGIES AND PROCESSES

KPI	PERIOD	ENVIRONMENTAL BENEFITS	
		Eucalyptus MAI7* (m3/ha/year)	Pine MAI16** (m3/ha/year)
Forestry productivity	2015	57.4	39.5
	2016	58.5	39.9
	2017	59.4	40.3
	2018 (estimated)	60.3	40.8

*MAI7: Mean Annual Increment for the 7-year lifecycle

**MAI17: Mean Annual Increment for the 16-year lifecycle





APPENDIX A

MANAGEMENT REPORT ON ELIGIBLE PROJECTS

Klabin is responsible for completeness, accuracy and validation of the Klabin Green Bond Resource Use Statement (Appendix B). We declare, by means of this resource use report, that net resources in the amount of BRL 700 million (equivalent to USD 207 million) were applied from September 2015 to June 2018 in qualified eligible projects that meet the following Eligibility Criteria:

CRITERIA	DESCRIPTION
Sustainable Forestry Management	Green bond resources can be allocated to capital expenditures necessary for the sustainable management of FSC® certified eucalyptus and pine forests, including: new planting and maintenance activities in own and third party areas, as well as purchase of certified wood.
Native Forest Restoration and Conservation of Biodiversity	Green bond resources may be allocated to capital expenses required for activities that maintain existing restricted conservation areas or develop new restricted conservation areas, including: restoration and conservation of native forest cover on degraded lands and biodiversity, Matas Legais (Good Forests) Program and fauna conservation by the Klabin Ecological Park.
Renewable Energy	Green bond resources can be allocated to capital expenses necessary for the development, construction, installation, operation and upgrading of facilities that reduce greenhouse gas (GHG) emissions by replacing fossil fuels with renewable sources and increased energy efficiency.
Clean Transport	Green bond resources can be allocated to capital expenses necessary for the construction, maintenance and operation of a clean transport infrastructure for the pulp transportation of the Klabin plant.
Energy Efficiency	Green bond resources can be allocated to capital expenses necessary for the development, construction, installation and upgrading of facilities, including energy efficiency projects and streamlining of equipment or processes to reduce wasted energy.
Waste Management	Green bond resources can be allocated to capital expenses necessary for the development, construction, implementation, and upgrading of facilities that reduce waste generation, promote the reuse of waste in processes and act in the treatment of wastewater.
Products that are Eco-efficient and/ or Adapted to the Circular Economy, Production Technologies and Processes	Green bond resources can be allocated to expenses that support Klabin's Industrial and Forestry Research Centers; facilitate the use of packaging made of FSC® certified raw materials and recycled materials; promote less use of packaging materials and prolong the shelf life of packaging materials.

APPENDIX B

USD – BRL (average/year)

2015	2016	2017	2018
3.3387	3.4833	3.1925	3.4274

USE OF RESOURCES

PUMA PROJECT		BRL Million				US\$ Equivalent			
		2015 (Sep to Dec)	2016	2017	2018 (Jan to Jun)	2015 (Sep to Dec)	2016	2017	2018 (Jan to Jun)
Renewable Energy	Power generation from renewable energy sources	49.5	45.7	2.1	2.9	14.8	13.1	0.6	0.8
	Basic Power Network and transmission lines	1.6	1.5	0.5	-	0.5	0.4	0.2	-
Waste Management	Effluent Treatment	7.7	11.1	0.1	-	2.3	3.2	0.02	-
	Waste Central	0.3	5.8	-	-	0.1	1.7	-	-
Clean Transportation	Railroad, wagons and locomotives	24.1	57.9	-	-	7.2	16.6	-	-
Energy Efficiency	Photovoltaic Generation and Load Station	-	-	-	0.1	-	-	-	0.04
	Reduction of steam consumption and increased power generation	-	-	0.1	3.5	-	-	0.02	1.0
Sustainable Forestry Management	Forestry	4.0	14.7	107.5	47.7	1.2	4.2	33.7	13.9
	Certified Wood Purchases	18.7	140.7	21.7	29.2	5.6	40.4	6.8	8.5
Eco-Efficient and Circular Economy Adapted Products, Production Technologies and Processes	Investments – New Technology Center and Research Lines	4.5	17.4	37.6	14.6	1.4	5.0	11.8	4.3
Restoration of Native Forests and Conservation of Biodiversity	Klabin Ecological Park	1.2	3.4	3.2	1.0	0.4	1.0	1.0	0.3
	Recovery of degraded areas surrounding the Puma unit	-	1.1	0.3	0.02	-	0.3	0.1	0.01
	Fauna and Flora Monitoring	0.4	0.6	0.6	-	0.1	0.2	0.2	-
	Programa Matas Legais (Good Forests Program)	0.4	0.4	0.5	-	0.1	0.1	0.1	-
	Environment projects and certifications	1.3	2.4	7.0	3.2	0.4	0.7	2.2	0.9
	Programa Matas Sociais (Social Forests Program)	-	-	0.3	-	-	-	0.1	-
Subtotal		113.7	302.7	181.5	102.2	34.1	86.9	56.8	29.8
TOTAL		R\$ 700.1				US\$ 207.6			

APPENDIX C



ASSURANCE STATEMENT – BUREAU VERITAS

Bureau Veritas Certification Brasil (Bureau Veritas) was engaged by Klabin S.A. (Klabin) to provide reasonable assurance over Klabin's Green Bond Report, dated September 2017.

This assurance was conducted by a multidisciplinary staff with expertise in financial and non financial data.

CONCLUSION

Based on the work we have performed and the evidence we have obtained we believe that Klabin's Green Bond Report has been properly prepared, in all material respects, following the reporting criteria.

SCOPE OF WORK

The scope of work included:

1. Sustainable Forest Management
2. Restoration of native forests and conservation of biodiversity
3. Renewable energy
4. Clean transportation
5. Waste Management
6. Energy efficiency
7. Sustainable waste and water management
8. Eco efficient Products, production technology and processes

The verified data and information refer to the period from September 2015 to June 2018.

This assurance was performed due to the issuance of US\$ 500.000.000,00 in Green Bonds by Klabin Finance S.A. on September 2017, guaranteed by Klabin S.A.

The scope of our work was limited to assurance over the allocation of bond proceeds and impact reporting as stated in Klabin's Green Bond Report, dated September 2017.

Financial data were verified in local currency (Reais).

KLABIN'S AND BUREAU VERITAS RESPONSIBILITIES

The collection, calculation and presentation of the data published are Klabin's management sole responsibility. Bureau Veritas is responsible for providing an independent opinion to Klabin, pursuant to the scope of work defined in this statement.

METHODOLOGY, LIMITATIONS AND EXCLUSIONS

The Assurance covered the following activities

1. Interviews with the personnel responsible for the Green Bond Report preparation, evaluation and monitoring,

specially the areas of sustainability, treasure, environmental (forestry and industry), and controlling;

2. Traceability of financial and non financial data, including planning and monitoring of disbursed proceeds;
3. On site visits to Klabin's units of Monte Alegre and Puma at Telêmaco Borba (PR) and Ortigueira (PR), to collect evidence of investments associated to Green Bonds;
4. On site visits to the Ecological Park and areas from partners engaged with the project "Matas Sociais", to collect evidence of restoration of native forests, water resources and biodiversity conservation;

The level of verification adopted was Reasonable, according to the requirements of the ISAE 3000 Standard¹, which were incorporated to the internal assessment protocols of Bureau Veritas.

Excluded from the scope of this work was any assessment of information related to activities outside the defined assessment period.

The verification process has, given the Reasonable level, some limitations as to the identification of mistakes and omissions.

TECHNICAL OPINION - SUSTAINABLE FOREST MANAGEMENT

1. We evidenced the use of Green Bonds proceeds in areas that are properly certified by FSC® ;
2. We evidenced appropriated systems that support process flows and operational costs control regarding the use of proceeds from green bonds issued between September 2015 and June 2018.

TECHNICAL OPINION – RESTORATIONS OF NATIVE FOREST AND CONSERVATION OF BIODIVERSITY

3. We evidenced appropriate increase of biodiversity in areas were Klabin maintains restoration of native forest projects. During on site visits at the Puma unit and areas from partners engaged with the project "Matas Sociais", we evidenced conservation areas in different levels of restoration;
4. Klabin's restoration areas contribute directly to carbon sequestration.

TECHNICAL OPINION – WASTE, WATER AND ENERGY MANAGEMENT (INCL. ENERGY EFFICIENCY)

5. We evidenced a solid waste treatment plant in full operation. This plant receives wastes from the Puma and Monte Alegre units;
6. We evidenced an industrial liquid effluents treatment station and emergency reservoirs at the Puma unit;
7. At the Puma unit we evidenced full operation of power and recovery boilers, cooling towers and basic energy network;

¹ International Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information

8. We also evidenced at the Puma unit a system for photovoltaic energy supply and records regarding condensate heat recovery, installation of a steam line (FFT) and increase of pumping capacity of black liquor to evaporators.

TECHNICAL OPINION – CLEAN TRANSPORTATION

- At the Puma unit we evidenced a railroad operating normally during our visit.

TECHNICAL OPINION – ECO EFFICIENT PRODUCTS, PRODUCTION TECHNOLOGY AND PROCESSES

- We evidenced Klabin's technological centre where several research and innovation projects are developed.

DECLARATION OF INDEPENDENCE AND IMPARTIALITY

Bureau Veritas Certification is an independent professional services firm specializing in Quality, Health, Safety, Social and Environmental Management, with more than 185 years' experience in independent assessment.

Bureau Veritas has a quality management system that is certified by a third party, according to which policies and documented procedures are maintained for the compliance with ethic, professional and legal requirements.

The assessment team has no links with Klabin and the assessment is performed independently.

Bureau Veritas implemented and follows a Code of Ethics throughout its business, in order to assure that its staff preserve high ethical, integrity, objectivity, confidentiality and competence/ professional attitude standards in the performance of their activities. At the end of the assessment, a detailed report was drawn up, ensuring traceability of the process. This Report is kept as a Bureau Veritas management system record.

CONTACT

Bureau Veritas Certification is available for further clarification on www.bureauveritascertification.com.br/faleconosco.asp or by telephone (11) 2655-9000.

São Paulo, Brazil, September 2018.



Alexander Vervuurt
Lead auditor

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Ivan Vissechi
Contador

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