



# 20 18

SUSTAINABILITY  
REPORT

**Bracell**

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# 01.

Bracell's Sustainability Report 2018 is our eighth report which sets out in detail our environmental, safety and social performance and progress. The report also serves to guide our growth and continuous improvement as a company with commitments to sustainability.

Since entering the specialty cellulose business 15 years ago, we continually evolve our business and practices while remaining deeply anchored in the 5Cs principle of creating value for the Community, Country, Climate, Customer and the Company. Because of our 5Cs principle, we remain committed to ensuring sustainability is embedded into the core of our business conduct and value chain.

Our journey in Brazil began with Royal Golden Eagle's (RGE) acquisition of Bahia Specialty Cellulose (BSC) and Copener Florestal in Bahia in 2003. In 2018, following 15 years of successful operations in Bahia, our growth ambitions took a major step forward with the acquisition of Lwarcel Celulose in São Paulo. Shortly after, we re-branded Lwarcel under a unified Bracell brand which also includes the Bahia operations, and we announced the launch of Project Star, a R\$7 billion expansion to significantly increase the production capacity of dissolving pulp in Lençóis Paulista, São Paulo.





# MESSAGE FROM THE BOARD

[GRI 102-14, 102-15]

Today, we proudly operate in the Brazilian states of Bahia and São Paulo, working towards a global leadership position in the dissolving pulp sector. The expansion of our São Paulo operations through Project Star is expected to complete in 2021. The expansion project will increase our annual production capacity to approximately two million tons within just three years, and also increase our employment to an estimated 7,300 people in administrative, mill and forestry functions.

To achieve sustainable growth, we remain committed to the highest levels of innovation, quality, and sustainable development across our forestry and industrial operations. Therefore, we continuously invest in technology, research, and process improvements that promote operational and environmental efficiency to manufacture high-quality products. Later in this report, we will explain how we achieve high quality standards and operational sustainability by earning industry-leading certifications supported by ongoing audit and assurance processes.

A significant focus for Bracell remains on our investment in innovation which includes allocating 1,600 hectares for forest research. We have invested in a diverse range of genetic and forest improvements and also allocated funds to the construction of a tissue culture laboratory which will contribute to the production of healthier seedlings and consequently the reduction in the use of pesticides.

Bracell's focus on sustainable development is further underscored by our commitment to conserve 83,841 hectares of native forests, exceeding regulatory requirements. We are the proud custodians of the Lontra Private Reserve of Natural Heritage (PRNH), which at 1,377 hectares is the largest national reserve in the Atlantic Forest located on the north coast of Bahia. In addition, we operate a flora and fauna monitoring program covering four company-owned High Conservation Value Areas (HCVA) and other four areas of remnant forests.

We have thus far recorded 652 plant species and 811 animal species in Bahia and 383 tree species in São Paulo in these protected lands.

Our sustainable practices are based on sound business ethics as outlined in our Code of Conduct. We are clear about our rights and duties, and have established strong relationships with the communities living in the areas surrounding our operations, employees, suppliers, as well as the local and national government. In an effort to further improve relationships with our key stakeholders, we conducted a key stakeholder survey in 2018 that will inform further improvements in the delivery of our Sustainability Policy commitments.

A key pillar of sustainable management is social development. Bracell runs several initiatives in education, entrepreneurship, community dialogue, health and well-being, culture, citizenship, sports, and environmental protection. In 2018, 32 projects were delivered in Bahia. In São Paulo, 69 social actions with direct investment were conducted and an additional 14 initiatives were made possible due to tax incentives. The organization also supported the Lidera Jovem Institute in Lençóis Paulista which works with young people to gain leadership experience. As part of our commitment to improve local communities, we contract services and materials from suppliers within the region. In 2018, 80% of our suppliers were from the states where we operate, bringing significant benefits to the local economy.

**I would like to thank the more than 4,000 Bracell employees who contributed in numerous ways to achieve these outstanding results. In particular, I would like to congratulate the senior leadership team who served as stewards of Project Apollo, a talent development and cultural transformation process designed to better equip our em-**

employees with the tools they need to achieve our ambitious business strategy in a sustainable manner. Further talent development initiatives in 2018 included establishing Bra-cell Leadership University (BLU). The BLU led to executive coaching sessions and launching a continuing education program providing pre-selected courses in partnership with Harvard University. Finally, we continued to invest in upgrading the skills and qualifications of our entire staff, increasing the number of technical, safety, and behavioral training by 19.8%, from 845 in 2017 to 1,012 in 2018, representing 56,000 hours of structured training.

Looking back at our performance in 2018, we have made headway with the strategic objectives and targets we have set. While we are pleased with our progress, we fully know that there is always more that can be done. We will step up and continue to focus on delivering our strategy in 2019, including working with stakeholders within the industry and the broader society, to develop better practices and deliver sustainable cellulose at scale.

**Per Lindblom**

*Executive Vice President*





# 02.

## Company profile

Bracell is the largest Latin American producer of dissolving pulp with operations based on sustainable eucalyptus farming and running state-of-the-art mills. It is one of the business groups of Royal Golden Eagle (RGE). [\[GRI 102-01, 102-02\]](#)

Its operations in Brazil began in 2003 with the acquisition of BSC (Bahia Specialty Cellulose) and Copener Florestal, both in Bahia. In August 2018, the company expanded its operations with the acquisition of Lwarcel Celulose, in the state of São Paulo.

Today, the company has an installed production capacity of 750,000 tons of pulp per year, and its activities employed more than 4,000 people in 2018, including both its own staff and outsourced staff in the two states where it operates. [\[GRI 102-07\]](#)

Approximately 35% of the company-owned land comprises environmental conservation areas. Eucalyptus plantations are strategically located in Bahia – covering 21 municipalities in the North and the Agreste region of the state, the Recôncavo Baiano, and 37 municipalities in the midwestern region of São Paulo state. The corporate management offices are located in two states, with an industrial unit in Camaçari (BA), a forestry unit in Alagoinhas (BA), and an industrial unit in Lençóis Paulista (SP). The company also has a corporate office in São Paulo (SP). [\[GRI 102-03, 102-07\]](#)

Bracell products are traded around the world, especially in North America, Asia, and Europe, where the company has sales, marketing, and customer support services. [\[GRI 102-04, 102-06\]](#)





More than

**4,000**

involved as own staff  
and outsourced

#### ACQUISITION OF LWARCEL CELULOSE [GRI 102-10]

In 2018, RGE acquired Lwarcel Celulose located in Lençóis Paulista in the countryside of São Paulo state. The operation has embarked on an expansion project with investments of approximately R\$7 billion to construct a new mill featuring a flexible line designed primarily to produce dissolving pulp. The expansion will increase its production capacity six-fold.

When the expansion completes in 2021, Bracell will have an annual production capacity of 2.0 million tons of dissolving pulp, becoming the world leader in dissolving pulp production. This total production volume will include 1.5 million tons in São Paulo and 500,000 tons already produced in Bahia.



## Eucalyptus and the forestry business

In Brazil, the cultivation of Eucalyptus, an Australian tree, began in the 1930s, showing rapid growth and good adaptability to different climates and soil conditions. With the development of techniques that enable proper soil use, it is now possible to reach an average cropping period of six years, while native trees may take decades to reach maturity.

**Soil conservation** – In eucalyptus crops, as in native forests, canopies help reduce the effects of sunlight and temperature rise on the soil surface, as well as reduce the impact of raindrops on the soil, thus preventing erosion. Another advantage is that after harvesting, the eucalyptus bark, leaves, and branch-

es – which represents up to 70% of the plant's nutrients – are left on the field, replenishing the organic matter on the upper layers of the soil.

**Improved air quality and the fight against global warming** – According to IBA – Brazilian Tree Industry, trees are authentic CO<sub>2</sub> recyclers, and through their natural photosynthesis process, they absorb carbon and store it in their biomass. The planted trees sector contribute to mitigate climate change by having a good or even negative carbon balance, which removes more CO<sub>2</sub> through its planted or preserved forests than what is actually emitted by industrial activities.

## Products and applications [GRI 102-02, 102-06]

Cellulose is an organic fibrous material naturally present in plants. This natural and biodegradable polymer is used as raw material in the production of a wide variety of products.

When compared to similar petroleum-based raw materials, cellulose has several competitive ad-

vantages in cost and performance, as well as advantages for the environment, as it is sourced from a renewable natural resource: wood. All wood used in Bracell's industrial processes comes from its eucalyptus plantations or partnering producers.



Below are the varieties of pulp produced by Bracell's units:

### BAHIA OPERATIONS (BAHIA)

#### Dissolving pulp (rayon-grade)

It is used mainly in:

- Viscose and Lyocell fibers used in fabrics and nonwovens in wet wipes, cosmetic masks, etc.
- Viscose filaments used in fabrics such as women's underwear or linings.
- Cellophane films for packaging.
- Viscose sponges for domestic and industrial cleaning.

#### Special cellulose (specialty-grade)

It is used mainly in:

- Cellulose acetate flakes that are converted into cigarette filters, textile filament yarns and fibers for nonwovens.
- Microcrystalline cellulose used in the production of pharmaceutical and food products.

- Nitrocellulose to produce printing inks and lacquers.
- Industrial filament used to produce tire reinforcement.
- Other special applications such as cellulose ethers and artificial casings to produce sausages.

### SÃO PAULO OPERATIONS (SÃO PAULO)

#### Bleached eucalyptus kraft pulp

It is used to produce all types of paper, supplying the domestic and international markets. Usage examples:

- Printing and writing paper.
- Sanitary papers (toilet paper and towels).
- Packaging.
- Special applications such as filter papers, self-adhesive papers, and adhesive tapes.

## Corporate strategy

### Mission, Vision, and Core Values [GRI 102-16]

#### Mission

Improving lives by developing resources sustainably.

#### Vision

To be one of the largest dissolving pulp producers in the world, with the best management fully committed to the sustainable use of natural resources; our aim is to consistently create value for the Community, Country, Climate, Customer and the Company.

#### Core Values

- We are aligned by our common purpose and work together as a complementary **Team**.
- We take **Ownership** to achieve outstanding results and seek value at all times.
- We develop **People** to grow with us.
- We act with **Integrity** at all times.

- We understand our **Customers** and deliver best value to them.
- We act with zero complacency and always strive for **Continuous Improvement**.

The Core Values are known as **T.O.P.I.C.C.**, which are the initials of the words in each value: Complementary **T**eam, **O**wnership, **P**eople, **I**ntegrity, **C**ustomer, and **C**ontinuous Improvement.

## SHARING VALUES

Following the review of the Mission, Vision and Core Values, the company continued to make efforts to encourage all employees to integrate the

## Code of conduct

Bracell's Code of Conduct promotes integrity and professionalism in the conduct of its employees. The document details the rights and duties as well as the expectations on how employees manage relationships with strategic audiences such as suppliers, the government, and other key stakeholders.

In 2018, the document was updated based on the Core Values (T.O.P.I.C.C) and made available on the company's intranet. The company introduces the Code of Conduct to all new employees upon hire and offers training on the topics covered by the rules of conduct, such as the fight against discrimination, protection of human rights and anti-corruption procedures, among others. **[GRI 205-02, 412-02]**

If violations of the Code of Conduct are identified, anyone (inside or outside the company) may report the suspected violation to Bracell's communication channel "Escuta" (Listening) – available by email (bracell\_escuta@bracell.com) and by telephone (BA: 0800 006 6012 and SP: 0800 033 3384). Personal identification is not required. All messages are assessed by the Internal Audit Team, which reports directly to the company's executive board.

In 2018, Bahia received seven complaints regarding the Brazilian operations, two of which were considered unfounded. It should be noted that the other reported cases were not related to human rights violations and discrimination by Bracell or its service providers. In one case, after an investigation, the Internal Audit identified corruption in the relationship between an employee and a supplier, resulting in the employee's dismissal and measures to prevent other incidents. São Paulo has not recorded any complaints or cases related to human rights, discrimination, or corruption. **[GRI 205-03, 406-01]**

Core Values in their work. To that end, workshops were conducted, communication materials were distributed, and employees were recruited to act as "Ambassadors of Core Values."

Bracell continually improves its governance, risk management, and compliance practices to make its management procedures and tools even more robust, thus preventing ethical misconduct and unfair business practices. In 2018, the company was not the subject of legal or administrative actions, either domestically or internationally, for unfair competition, corruption, anti-trust and monopoly practices. The company also did not receive any fines for non-compliance with laws and regulations in the social and economic area. **[GRI 206-01, 419-01]**

## Other communication channels

To obtain additional information about the company, or to make requests or register complaints, you may contact Bracell through the [website's "Contact" form](#) as well as the toll-free 24-hour telephone lines for Bahia, 0800 284 4747 (forestry activities) and 0800 071 8484 (industrial activities); or for São Paulo, 0800 709 1490.

All communications are recorded and forwarded internally for rapid response and, where applicable, problem-solving. In 2018, the company recorded 84 complaints (64 in Bahia and 20 in São Paulo) – 7 more compared to 2017; as well as 201 requests for information (197 in Bahia and 4 in São Paulo) – 75 less compared to the prior year, most of which were requests for timber donation and restoration of roads that serve the surrounding communities. There were six complaints regarding the smell of air emissions at Bahia industrial unit (8 less than in 2017), 4 of which were deemed unfounded. At São Paulo, there hasn't been any record of complaints relating to odor since 2015.



## Supply chain

In 2018, Bracell acquired R\$1.3 billion in products and services from 3,267 suppliers. Bahia sourced R\$1 billion products and services from 1,478 suppli-

ers, while São Paulo paid 1,789 contractors R\$316 million. [GRI 102-09]

**At Bahia, around 75% of supplier contracts were from local (within-state) suppliers compared to 86% for São Paulo. Sourcing from local (in-state) suppliers has generated a positive impact on the local and regional economies of both states.**

[GRI 204-01]

We have established procedures that verify if our potential and active suppliers comply with labor, social security, and tax obligations, among others. In addition, our company's contracts require all suppliers to commit to respect human rights, prohibit any form of discrimination, child labor, forced or slave-like labor and violations of freedom of labor unions, and

support the right to collective bargaining. Suppliers found to be in violation of this requirement will be fined, their contracts suspended or terminated, and may face further legal penalties. In 2018, there were no records of violation of these terms. [GRI 407-01, 408-01, 409-01, 412-01, 412-03, 414-01, 414-02]

## Integrated management

Bracell adopts benchmarking practices in quality, environment, health, and safety to identify the needs of our customers, shareholders, employees, suppliers, and society. We also have frameworks and monitoring mechanisms to measure our progress towards fulfilling those needs.

To reinforce this, Bracell has implemented an Integrated Management System (IMS) that helps manage procedures, monitors objectives and goals, prevents and mitigates risks, as well as improves our social and environmental performance. The management system is certified according to the 2015 standards of ISO 9001 and 14001, which focus on a more effective change and risk management.

In 2018, major efforts were made by all departments to analyze and update the environmental aspects and impacts of the industrial activities at São Paulo and Bahia, taking into consideration the entire product life cycle. This data is available in the integrated management system and is the basis for the preparation and updating of procedures that guide the work of various teams.

Based on the Integrated Management Policy published on our website, the IMS is continuously updated, incorporating new legal and certification requirements, industry best practices and advancement in processes. In 2018 at Bahia, 133 procedures were reviewed, demonstrating the dynamic nature of this management system.

At Bracell São Paulo, considering life cycles, all 22 matrices of Environmental Aspects and Impacts were assessed. Fourteen documents were generated to meet the new requirements from the 2015 version of the ISO Standards, and 1,110 documents were monitored in the mill and Forestry Management System. To ensure that applicable legal requirements are met, 173 legal and environmental instruments related to the business were assessed. 100% of the rules & legislation was checked by a contracted company.

The management of São Paulo's forest operations is governed by over 160 documents, which are also continuously updated. Employees also receive ongoing training in compliance with applicable certifications and standards.

## Certifications [GRI 102-12]

**Bracell holds globally recognized certifications that attest to the quality of its products and its commitment to sustainable operations, such as:**

- **Cerflor/PEFC** – a Brazilian certification internationally recognized by the Program for the Endorsement of Forest Certification (PEFC), aimed at the sustainable management of forests, indicating that the institution complies with the environmental, social, and economic requirements that make up CERFLOR's five principles. Its standards were prepared by the Special Committee for Forest Stewardship Studies (CEE) and are integrated with the standards of the Brazilian Association of Technical Standards (ABNT) and the Brazilian Institute of Metrology, Quality, and Technology (Inmetro). In the case of Bracell, the certificate is applied to the responsible management of forests (NBR 14789:2012) and the management of the chain of custody of wood (NBR 14790:2014).

- **Management Certifications** – Bracell is ISO 14001:2015 (Environmental Management System) certified for its forestry and industrial activities at Bahia and industrial activities at São Paulo. It is also ISO 9001:2015 (Quality Management System) certified concerning all industrial operations in Brazil.

- **FSC** – Bracell São Paulo is certified and a member of the Forest Stewardship Council®, which attests to society the proper usage of natural resources and its commitment to the non-predatory exploration of forests. The certification applies to forest management and chain of custody.





- **Halal** – This certification attests that the processes of production, storage, and selling of dissolving pulp have been subject to evaluation by a recognized Islamic organization and that it can be sold to the Muslim consumer market. It applies to Bahia.

- **Isega** – A German agency responsible for certifying that the product can be used by the food industry and isn't harmful to consumers' health. It follows the standards of the US Department of Health and Human Services (FDA) and the German Federal Institute of Risk Assessment (BfR). It applies to Bahia.

- **ISO/IEC 17025** – São Paulo is ISO 17025 certified for several environmental analyses of water and effluents aiming at standardizing internationally the testing processes performed in our testing and calibration laboratories. It proves the high reliability of the results of the analysis performed by the company.

In addition to the external audits required to maintain Cerflor and ISO 14001 certifications in 2018, Bahia continued with its internal audits and weekly inspections, conducting 39 forestry field inspections. As a result, the certifications have been maintained, demonstrating that Bracell meets world-class quality and control standards for its processes and products.

In Bahia's forestry operations, all certification-related processes and activities are managed by a specialized team and supported by the Elo Program for Facilitators, which since 2017 has consistently promoted the role of employees as multipliers and internal auditors. In 2018, the program was responsible for 104 inspections, which allowed the identification of 224 breaches (which have since been duly corrected), as well as the implementation of 82 improvements. In the same period, facilitators received eight training sessions to improve their knowledge of certifications and continuous improvement tools.

In São Paulo, external audits were conducted to transition to the new versions of the standards for ISO 9001 and 14001. We also engaged an external company to conduct audits and identify

potential gaps in our compliance to the new ISO standards so that they may be addressed before the upcoming certification exercise.

In 2019, São Paulo's operations aim to achieve ISO recertification and the Kosher certificate, a document issued to certify that the products produced by a specific company comply with Jewish dietary regulations.

## Risk management [GRI 102-11]

Bracell's Risk Management Program (RMP) uses international methodologies to identify and minimize risks related to the safety of people, the environment and processes. This work comprises information management, training, equipment, emergency response processes, among other actions.

Our processes, being certified ISO 9001 (Quality Management) and 14001 (Environmental Management), include specific procedures for risk and operational change management, such as changes in processes, inputs, systems and people.

As per protocol, São Paulo's operations actively manages and maintains a matrix, which will inform action plans on mitigation of weaknesses and threats. At Bahia, the quality level of risk analysis was enhanced through greater involvement of inter-departmental and multifunctional teams from the company. The company also continued with the critical assessment of the RMP and its manual, in accordance with current legislation.

## Sustainability Policy

Bracell's Sustainability Policy is based on RGE's Sustainability Framework as well as 5Cs business philosophy in which everything it does must first be good for the community, country, climate, and customer, and only then it will be good for the company.

Launched in 2017, the document is anchored on seven pillars that demonstrate the company's interest in promoting the creation of long-term shared value for its stakeholders, and its commitment to environmental protection, sustainable de-

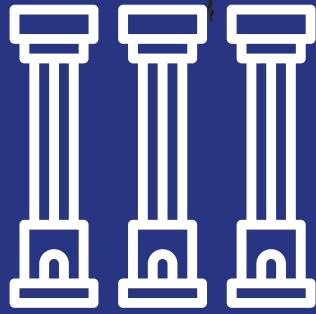
velopment of the communities near its operations, and business continuity.

In 2018, Bahia consulted its stakeholders to identify opportunities and risks, aiming to achieve a full review of the company's Sustainability Policy. In 2019, a diagnostic will be delivered to identify the primary topics to be reviewed and the specific actions to be taken. This process will also be followed in the future in São Paulo to further improve its sustainability governance.

Bracell's Corporate Affairs and Sustainability team will promote, whenever necessary, updates on Sustainability Policies, ensuring the participation of stakeholders in this process, and the effective implementation of management tools within the organization.







## Pillars:

- 1.** Compliance with laws and regulations
- 2.** Responsible work practices
- 3.** Development of local communities
- 4.** Environmental protection and conservation
- 5.** Transparency and accountability
- 6.** Impact identification and monitoring
- 7.** Continuous improvement and customer-centricity





# 03.

## Forestry activities

### FOREST BASE

- **58 forest-based municipalities**, 21 in Bahia, and 37 in São Paulo. Figures are 6.9% higher than in 2017 when plantations covered 54 municipalities – 21 in Bahia and 33 in São Paulo.
- **83,841 hectares of native forests** – 61,212 ha in Bahia and 22,629 ha in São Paulo. In 2017 the area was 3.3% smaller, representing 81,187 hectares, out of which 60,992 ha in Bahia and 20,195 ha in São Paulo.
- **1,600 hectares dedicated to forestry research** – 1,310 ha in Bahia and 290 ha in São Paulo.



**58**

forest-based municipalities



**83,841ha**

of native forests conserved



**1,600ha**

dedicated to forestry research

# OPERATIONAL PERFORMANCE

[GRI 102-07]

**23.3**MILLION

eucalyptus seedlings  
produced



## HARVESTING

- 3,556,868 m<sup>3</sup> of harvested timber, where 2,275,398 m<sup>3</sup> was from Bahia, and 1,281,470 m<sup>3</sup> was from São Paulo – a reduction of 12.5% compared to 2017, when 4,065,844 m<sup>3</sup> was harvested, 2,449,731 m<sup>3</sup> in Bahia and 1,616,113 m<sup>3</sup> in São Paulo.
- 49 forestry machinery used in harvesting operations, 37 in Bahia and 12 in São Paulo.

**3.6**MILLION

square meters of harvested  
wood



## SEEDLING NURSERY

- In the Entre Rios, Bahia nursery, 19.1 million eucalyptus seedlings were produced – an increase of 11% compared to 2017, when the production reached nearly 17.2 million seedlings. In the Lençóis Paulista nursery in São Paulo, more than 4.2 million seedlings were



produced, 73% higher than in 2017, which was 2.4 million. In addition to securing seedlings from the local market, São Paulo consumed 55% of seedlings produced in Bahia.

- A chlorination treatment system was implemented in the Entre Rios (BA) nursery, which eliminates bacteria from the water used in irrigation, improving the quality of the seedlings, and reducing losses.

- Also, in Entre Rios (BA), the company held training sessions and revised management procedures that contributed to obtaining healthier seedlings, and consequently, to a reduction of pesticide usage. The quality of the seedlings produced by the company received a 95% positive assessment, according to internal standards.



*Employees from the Quatis nursery, in Entre Rios, Bahia.*

## LOGISTICS

- 120 trucks used for mill supplies and transport, 94 in Bahia and 26 in São Paulo.
- 112 km average radius traveled considering the mill in Bahia (15% less than in 2017), and 82 km in São Paulo, approximately the same distance as the previous year.
- In Bahia, there was an increase in triple logging trucks replacing the double logging trucks, which promoted a reduction of both consumption of diesel fuel and greenhouse gas emissions. In 2018, the triple logging trucks represented 40% of the fleet.
- Bahia invested R\$ 14.9 million in road improvement projects including surfacing, drilling, and drainage works of 845 km of roads, of which

# 120

trucks used for transport and supplies



74% are owned roads, 15% are in development areas, and 11% are third-party properties. R\$ 2.9 million was also spent on wood yard maintenance services, road signaling, towing of logging trucks, and water sprinkling services to prevent dust clouds in communities.

- In São Paulo, R\$ 100 thousand was invested to maintain roads of nearby communities to mitigate impacts generated by the transport of timber. **[GRI 203-01]**

## FORESTRY PLANNING

Bracell develops its strategic forestry planning by focusing on business sustainability, based on benchmarking practices related to climate, environmental, and social aspects. At Bahia, the company adopts an integrated approach to its harvest, log forwarding, transport, forest and nursery operations. Through a meticulous and detailed microplanning process, it is able to assess the risks related to operational, social and environmental requirements, resulting in action plans that are applicable across divisions. Our Forest Stewardship Committee provides the necessary guidance to ensure that forest productivity remains high while fulfilling the requirements of sustainable operations.

As part of Bracell's commitment to no deforestation and a zero-burn policy, Bracell's area of operations remain the same and there has been no expansion of our land footprint. This commitment to no deforestation and a zero-burn policy is extended as a requirement to our company's supply chain.

## FORESTRY DEVELOPMENT

At Bahia, the Forestry Producer Program included 108 farmers in the region, 88 individuals and 20 legal entities. This program enables the participation of farmers in the eucalyptus production process, thus diversifying the activities developed in their farms, such as cattle or buffalo breeding.

For producers to join the program, the suitability of the land for forests and the environmental conditions of the estates are first assessed, and then receive assistance from Bracell to address requirements regarding land ownership and environmental documentations, ensuring compliance with the current legislation.

In 2018, Bahia allocated approximately R\$ 5.5 million to the program participants.

Bracell São Paulo also has a forestry partnership program with landowners within 200 km from the mill of Lençóis Paulista.

## FORESTRY TECHNOLOGY

The company seeks to improve forestry productivity on an ongoing basis through the latest knowledge and technologies, high-quality genetic materials and integrated pest and plant disease management.

In the field of genetics and forest improvement at Bahia, a controlled pollination orchard, with capacity for 1,300 potted trees, a fertigation infrastructure, and a pollen and seed processing laboratory were built. The company has also installed new water channels in the research nursery and began the construction of a plant tissue culture laboratory.

The forestry protection (biotechnology, phytopathology, and forest pests) support labs in Bahia have also received investments in equipment that will help reduce the use of chemical pesticides in eucalyptus cultivation, expanding the adoption of biological control techniques. In 2018, 6.6 million pest-controlling insects, predators, and parasitoid insects were released into the field.

The use of near-infrared (NIR) technology to prospect new materials continues to help expedite further materials that could be used in the dissolving pulp processes, and two new genetic materials were chosen to integrate commercial plantations in 2020.

In forestry management, the company seeks to continuously improve the sustainability of its production capacity. To achieve this goal, we continue to perform detailed surveys of the soil and nutritional conditions of forests that facilitate evidence-based recommendations about the productive cycles, use of inputs, and fertilizing methods.

Bahia partners with several local and international educational institutions and research centers such as [SIF](#), [Ipef](#), [ESALQ/USP](#), [Unesp](#), [UFV](#), [UFS](#), [UFRB](#), [Ufla](#), and [Embrapa from Brazil](#); [Cirad from France](#); [NCSU](#) and [Camcore from the United States of America](#); [UP from South Africa](#).

At São Paulo, we significantly increased our investments in innovation in 2018 through the Forest Research and Development Program. The amount invested increased from R\$ 1.6 million to R\$ 1.9 million, a 20.4% increase when compared to 2017.

## Industrial activities

Bracell operates one of the most modern dissolving pulp and specialty-grade dissolving pulp operations in the world, with an annual installed production capacity of 500,000 tons, meeting approximately 7% of the dissolving (rayon-grade) demand and approximately 14% of the specialty grade market. In addition, it has an installed capacity of 250,000 tons to produce bleached eucalyptus kraft pulp.

In 2018, production reached 707,619 tons (456,612 tons in Bahia and 251,007 tons in São Paulo), representing a decrease of 3.8% compared to 2017. The production target at Bahia, which was 500,000 tons, was not met. Nevertheless, the volume of specialty pulp was around 23% higher than the previous year, adding value to the company's productivity and improving its global market penetration. Production and sales volumes were almost entirely directed to customers in China, USA, Mexico, Japan, and European countries.

**The business goals for 2019 are to manufacture 750,000 tons, 195,000 tons of which comprises specialty-grade pulp, to achieve more competitive production costs and to reach an average above 97% in the dissolving pulp quality index.**

### PRODUCTION [GRI 102-06]

- 750,000 tons current installed capacity.
- Bracell meets 7% of global demand for dissolving (rayon-grade) pulp.
- 707,619 tons were produced in 2018 (a volume 3.8% lower than the prior year, when production reached 735,827), of which:
  - 456,612 tons in Bahia (3.2% less than the 2017 production of 471,848 tons).
  - 251,007 tons in São Paulo (4.9% less than the 2017 production of 263,979 tons).

**750,000tons**  
of installed capacity



**707,619tons**  
of pulp was produced



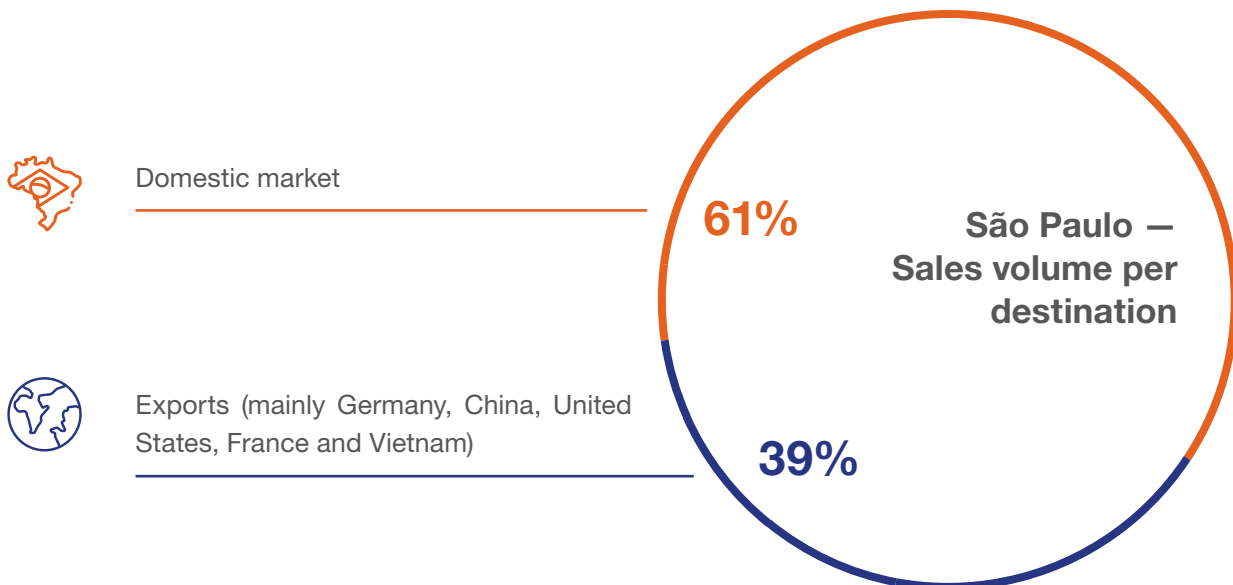
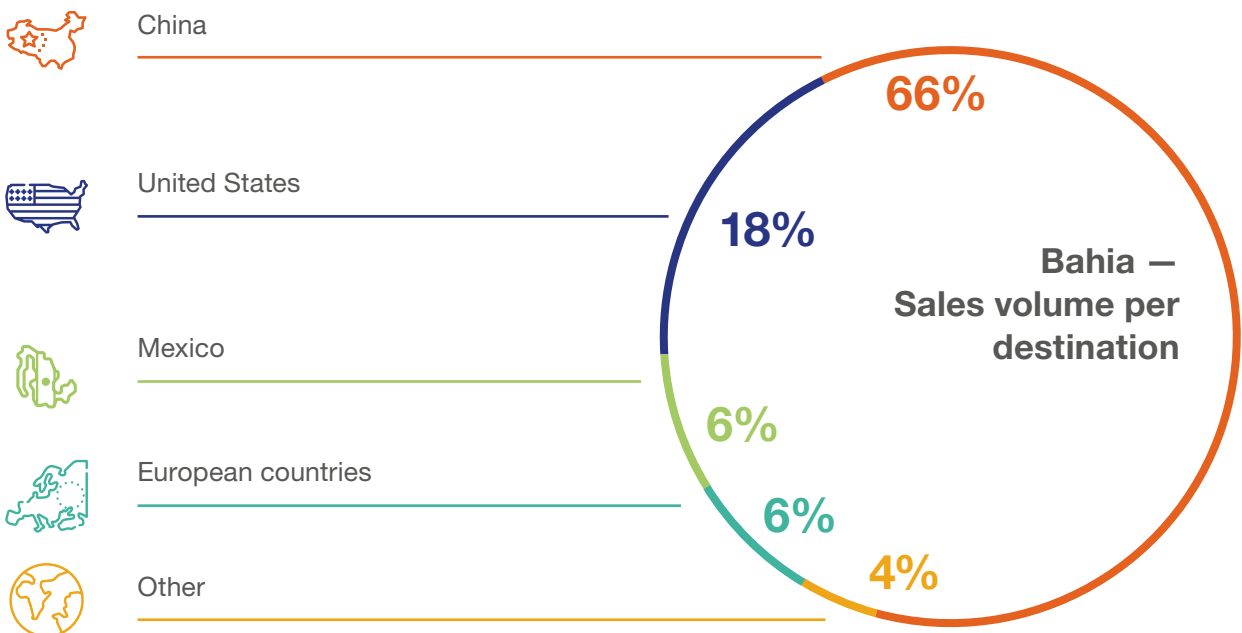


## SHIPPED VOLUME

- 707,781 tons of products were shipped in 2018, of which:

- 462,061 tons in Bahia (249,864 tons of rayon-grade dissolving pulp and 212,197 tons of specialty-grade pulp - 27% higher than the recorded volume in 2017 of 167.011 tons).
- 245,720 tons of bleached eucalyptus kraft pulp in São Paulo (94,798 tons for export and 150,922 tons for the domestic market).

## SALES VOLUME



## INDUSTRIAL LOGISTICS

Despite the enormous logistics impact of the Brazilian truck drivers' strike in 2018, Bracell was able to deliver on schedule, exceeding the expectations of customers concerned about the crisis.

In 2019, Bracell aims to further improve port operations for *break bulk* ships by redefining new contractual terms, renovating the port machinery, and entering into a long-term sea freight agreement. The company also seeks to reduce road freight costs by changing its operational logistics format and by reducing finished product inventory levels.

## RESPONSIBILITY WITH CUSTOMERS

The dissolving pulp produced by Bracell presents no potential health, safety, or environmental risks. Product information is available to customers through the Chemical Product Data Sheets, with Portuguese, Spanish, German, English, and French versions. These sheets comply with the standard of the Globally Harmonized System of Classification and Labeling of Chemicals. As in previous years, in 2018 no non-compliance relating to impacts on health and safety was recorded throughout the products' life cycle.

[GRI 416-01, 416-02, 417-01]









# 04.



## Strategic advances

At Bracell we recognize we cannot develop natural resources without first developing our people. To achieve this aim, we provide staff with safe, conducive and ethical work environment that has inspiring leaders, opportunities for personal and professional growth, fair and attractive earnings, recognition mechanisms, and consistent health and safety processes.

In 2018, we implemented a number of notable advancements, such as the creation of the departments of people development, and labor relations, to enable a more structured management of human resources matters at Bracell.

The cultural transformation project known as Apollo was also implemented at Bracell Bahia. The

project seeks to more deeply embed the company's Core Values into daily work, beginning with a leadership attitude. To implement it, there were intensive training sessions for people across all levels to develop behavioral skills that are imperative for the relationship with their teams.

Our Bahia operations also adopted the Workday system, a human resources management software with a range of integrated management and operational tools that allow more autonomy and a strategic view for team leaders. In 2020, performance assessment will be monitored through this system.

# PEOPLE MANAGEMENT

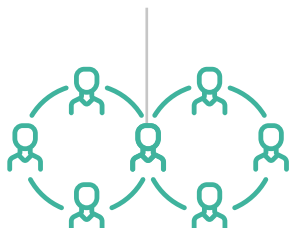


## Employees' perception survey

To further promote the evolution of people management, Bracell believes that it is essential to regularly listen to its staff to better understand their workplace perceptions and demands. Since 2014, it has therefore been conducting organizational perception surveys at Bahia.

In 2018, a new assessment was applied, this time in partnership with GPTW (Great Place to Work), an organization that specializes in consulting and certifying related to work environment. With participation of 92% of employees, the survey provided a detailed report on the workplace climate with a greater focus on the relationship between employees and their leaders. One of the important indicators that detailed substantial progress compared to the previous survey was "equity and meritocracy," which was considered 20% more favorable in the opinion of employees. We attribute this improvement to the increase in satisfaction with the new format of performance assessment.

Participation of **92%** of employees



Equity and meritocracy  
categories considered

**20%**

more favorable in the  
opinion of employees



The next step will be to hold qualitative meetings to analyze results and structure action plans aimed at improving the organizational climate. In 2019, the first phase will prioritize departments that had a result lower than 70% favorability. In 2020, the other departments will participate in this same phase.

São Paulo did not conduct the survey in 2018 because it focused on policy adjustments and integration into Bracell.

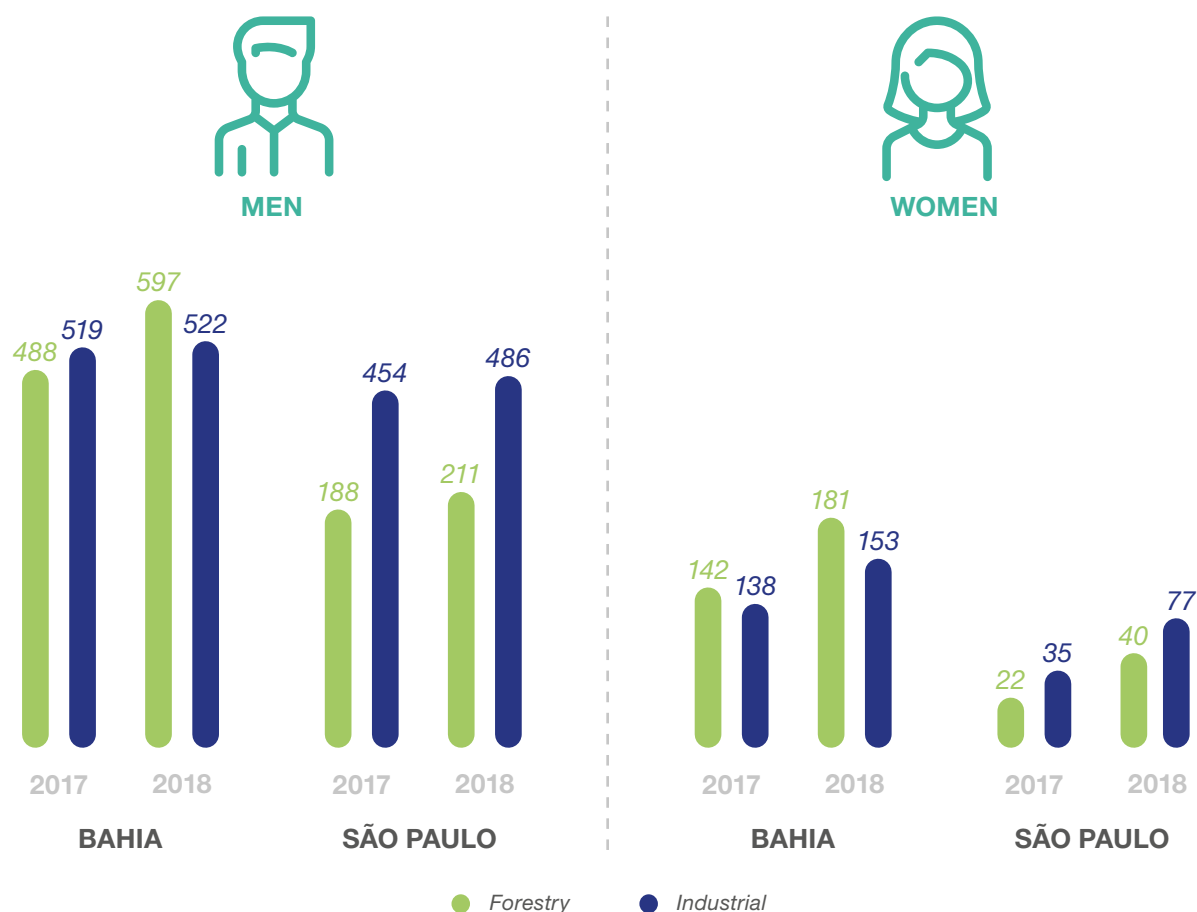
## Employee profile [GRI 102-08, 405-01]

The headcount increased by 3.6% compared to 2017, from 2,188 (1,489 in Bahia and 699 in São Paulo) to 2,267 (1,453 in Bahia and 814 in São Paulo). Among the 2,267 employees, only three from Bahia were hired for a fixed term.

In addition to its staff, the company ended the year with 2,126 outsourced personnel, 1,610 in Bahia (330 in the mill and 1,280 in forestry activities), and 516 in São Paulo, considering mill and forestry activities.

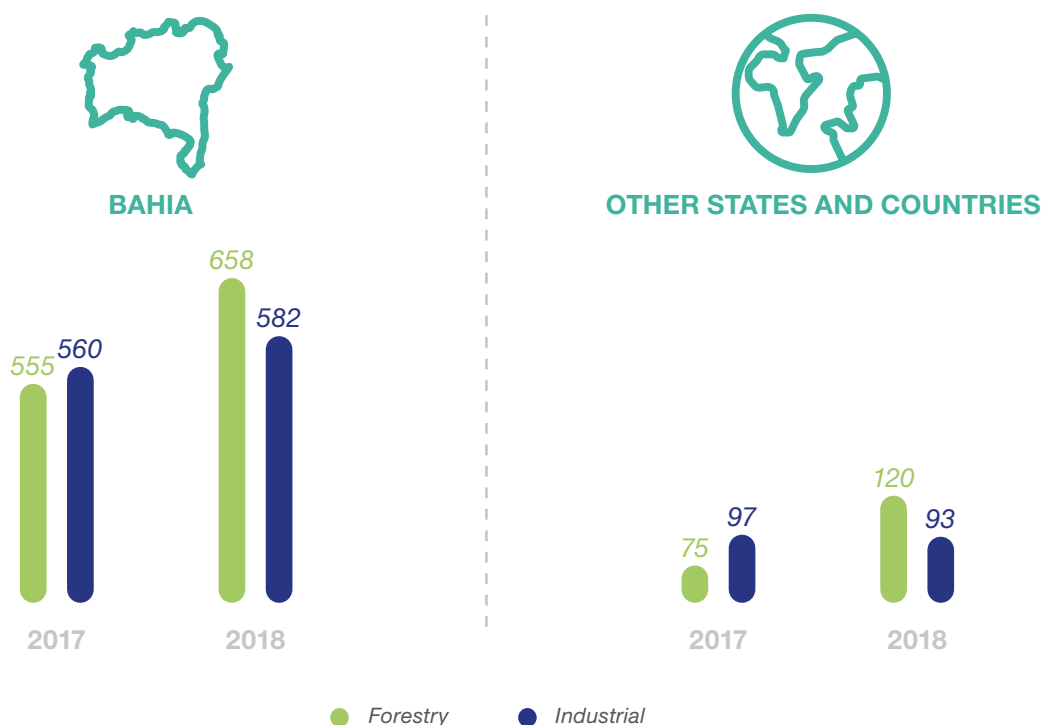
In 2018, Bracell Bahia carried out 329 employment selection processes for various administrative and operating positions. Of this total, 59 talents were promoted within the organization, and 270 professionals were hired from the market. In Bracell Bahia, the turnover rate was 12.3% in the industrial unit, and 13.6% in the forestry unit, excluding seasonal employment. São Paulo did not measure the turnover rate in 2018. [GRI 401-01]

### Own employees, by gender





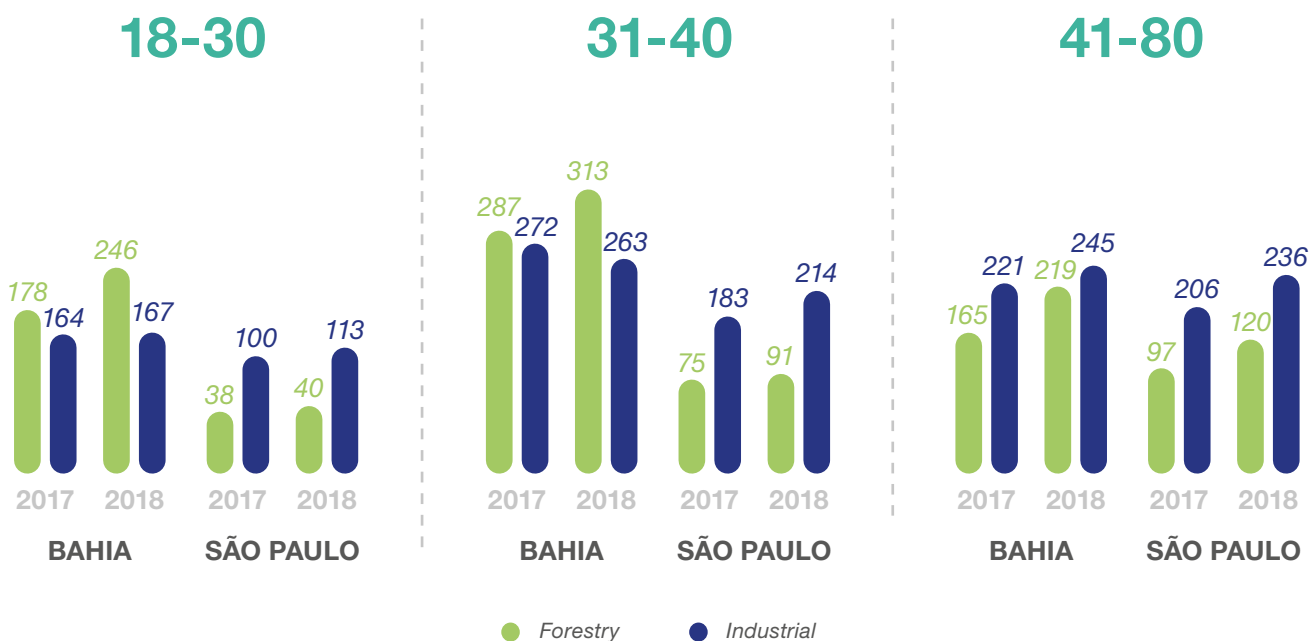
## Employees by region of origin – Bahia



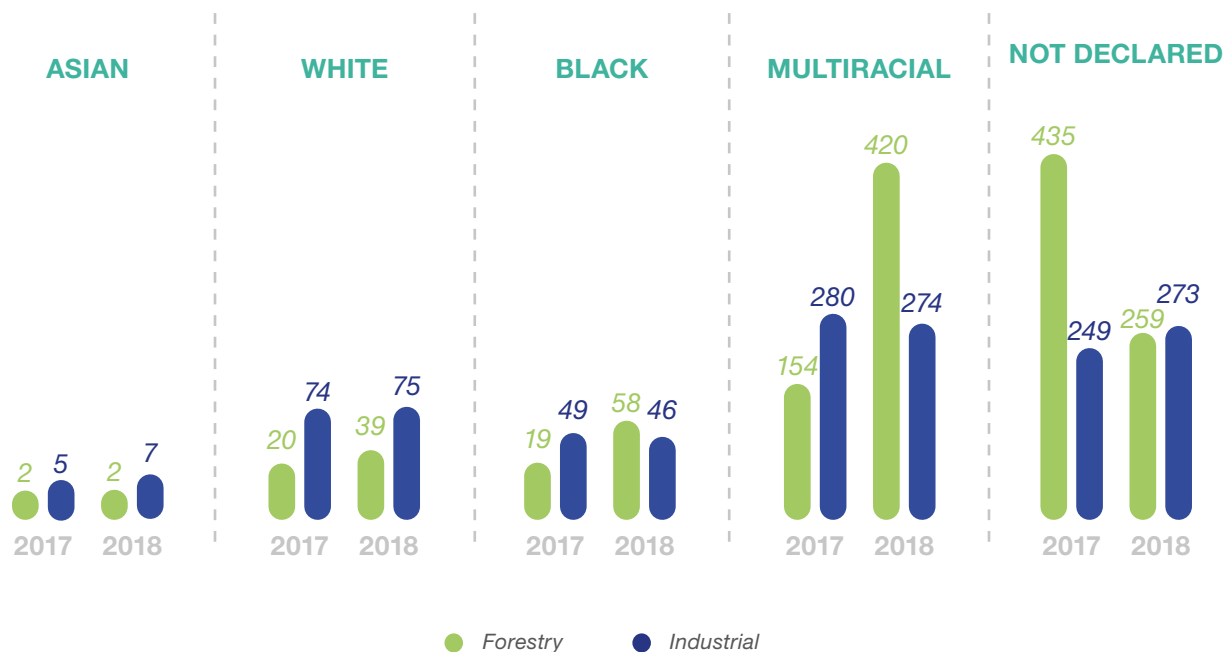
Note: The number of employees by region of origin at the São Paulo operations was not reported in 2018 due to the transition of management and monitoring of information from Lwarcel to Bracell.

The company seeks to hire professionals locally. At Bahia, 44.5% of employees in leadership positions (managers, directors, coordinators, and supervisors) come from the same state, while in São Paulo, this percentage is close to 95%. [GRI 202-02]

## Employees by age group



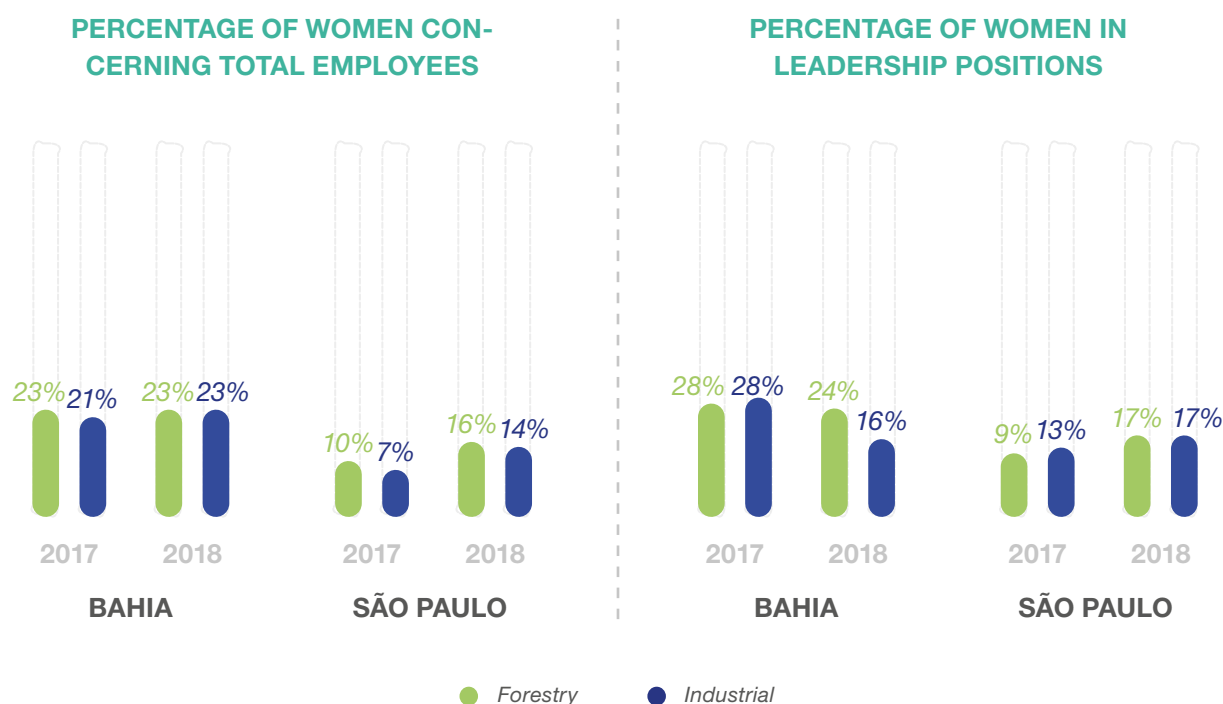
### Employees by race – Bahia



Note: The number of employees by race at the São Paulo operations was not reported in 2018 due to the transition of management and monitoring of information from Lwarcel to Bracell.

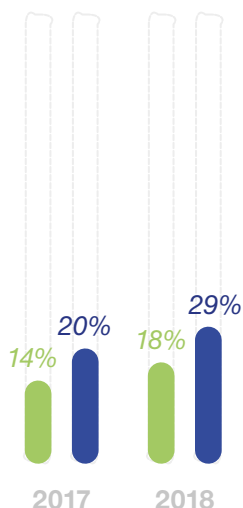
In 2018, Bracell had 83 employees with disabilities (two more than in 2017), 52 in Bahia, and 31 in São Paulo.

### Women's participation

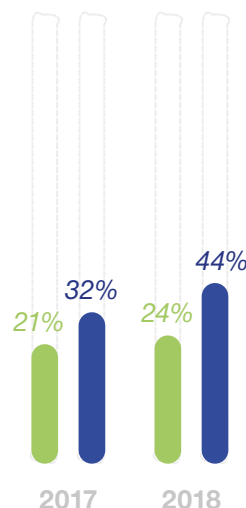


## Participation of people over 45 – Bahia

### PERCENTAGE CONCERNING TOTAL EMPLOYEES



### PERCENTAGE IN LEADERSHIP POSITIONS



● Forestry ● Industrial

Note: The number of employees over the age of 45 at the São Paulo operations was not reported in 2018 due to the transition of management and monitoring of information from Lwarcel to Bracell.

## Earnings and benefits [GRI 401-02]

Bracell conducts market research to ensure its competitiveness and its adoption of industry best practices. In addition, all employees are covered by collective bargaining agreements and have unrestricted freedom of union association. [GRI 102-41]

In 2018, the company kept its employees' earnings above the monthly minimum wage for the period, which was R\$ 954.00. At Bahia, base salaries were R\$ 1,444.31 (51.4% above the minimum wage) for the mill sector, and R\$ 1,055.23 (10.6% above the minimum wage) for forestry sector employees. At São Paulo, the base salaries were R\$ 1,556.15 (63.1% above the minimum wage) for the mill sector, and R\$ 1,185.64 (24.2% above the minimum wage) for the forestry sector. [GRI 202-01]

In addition to their salary, employees are entitled to the Profit-Sharing Program, a type of variable remuneration linked to the company's results and the achieve-

ment of pre-established individual goals. The performance assessment at Bahia was thoroughly revised in 2018 to enable employees to better understand the evaluation criteria. The criteria are based on three pillars: meeting company results, and required technical and behavioral competencies. In Bahia, 1,159 employees were evaluated in 2018, which corresponds to 80% of the staff – 21% women and 79% men. In São Paulo, the individual performance assessment was not carried out. [GRI 404-03]

The benefits offered to employees are attractive and include health and dental care, meals at the company and/or meal vouchers, vacation return bonus, childcare allowance, annual allowances for school materials, allowance for employees who have children with disabilities, laundry costs and wage complements for employees in sick leave or cases of work-related accidents. Employees and their legal dependents are covered by low-cost group life in-



insurance and allowance for funeral expenses, and ensures employee rights to maternity and paternity leave under Brazilian law.

There are subsidy agreements with drugstores, optical shops, gyms, and educational institutions, which offer affordable prices and favorable payment conditions, and a partnership with the Industry Social Service (Sesi) providing employees with access to sports and leisure activities.

At Bahia, staff who reach 10, 20, and 30 years of service at Bracell are honored by the Years of Service Recognition Program and celebrate their

anniversary at a special dinner. In 2018, this initiative honored 43 employees, 36 for 10 years of service, 5 for 20 years, and 2 for 30 years of service. Similarly, São Paulo has the Valued Stories Program since 2015 which recognizes professionals who helped build the company's history. In 2018, 18 employees were honored, two for 25 years of service, and 16 for 30 years of service. A special event was held, attended by directors, managers, and family members of the professionals.

Retirees are entitled to the Supplementary Pension Program, a pension fund in which the company supplements retirement earnings. [GRI 201-03]

## Occupational health and safety

After outperforming in its occupational safety standards year after year, 2018 was a particularly challenging year for Bracell. At São Paulo, though there were no fatal accidents, there was a slight drop in the occupational safety performance of outsourced personnel. At Bahia, although the forestry sector finished the second consecutive year without accidents with leave and the absentee rate was below 1%, the mill recorded a fatal accident. This incident was subject to a strict investigation, and its results motivated the intensification of a preventive approach focused on safe behavior.

An advisory firm was hired to make a comprehensive diagnosis of the company's safety culture, based on interviews with professionals of all hierarchical levels at Bahia. Psychologists specializing in safety conducted this study, and provided inputs for the development of an action plan focused on raising awareness and employee engagement in risk prevention.

Given this recent incident, Bracell restates its zero-accident goal with no tolerance for attitudes and behavior that disregard the importance of safety measures. For this commitment to become a reality, the company has maintained and refined a range of management tools, such as field inspections, training, and behavioral audits. In 2018,

Bahia executed 3,858 actions, through which it identified and addressed 5,293 deviations. During the same period, São Paulo continued the training of behavioral auditors and promoted 2,696 safety actions, including unexpected assessments and behavioral audits.

Key actions to further improve occupational health and safety were taken by the Internal Accident Prevention Committees (CIPA), the Ergonomics Committee (Coergo), the Internal Accident Prevention Weeks (SIPAT), as well as planned inspections to identify and correct unsafe conditions, daily talks about safety, and simulations with the Emergency Brigades. Another relevant initiative has been the participation of Bahia's Occupational Health and Safety team in committees led by the Camaçari Industrial Development Committee (Cofic), generating increased cooperation and exchange of knowledge and ideas. [GRI 403-04]

Personal protective equipment (PPE) and collective protection devices are provided to prevent risks to the health and safety of employees. The organization also conducts training to sensitize and guide its teams towards conduct that further expands overall safety awareness.

Below are several safety indicators used by Bracell:

### OCCUPATIONAL SAFETY PERFORMANCE AT BAHIA (OWN STAFF) [GRI 403-09]

Year	Forestry				Industrial			
	Number of accidents		Accident rate		Number of accidents		Accident rate	
	CAF	SAF	CAF	SAF	CAF	SAF	CAF	SAF
2017	0	2	0	1,28	2	2	0,78	0,78
2018	0	3	0	1,96	2	4	0,71	1,42

Due to two accidents with leave involving employees of the Bahia Industrial area, the total missed workdays were 6,015, of which 6,000 were related to a fatal accident. This calculation follows the regulatory standard regarding occupational safety. In the Forestry area, no missed days were recorded in 2018.

### OCCUPATIONAL SAFETY PERFORMANCE AT BAHIA (OUTSOURCED STAFF) [GRI 403-09]

Year	Forestry				Industrial			
	Number of accidents		Accident rate		Number of accidents		Accident rate	
	CAF	SAF	CAF	SAF	CAF	SAF	CAF	SAF
2018	0	3	0	0,79	0	1	0	0,67

### OCCUPATIONAL SAFETY PERFORMANCE AT SÃO PAULO (OWN STAFF) [GRI 403-09]

Year	Forestry					Industrial				
	Number of accidents		Accident rate		Missed days per employee	Number of accidents		Accident rate		Missed days per employee
	CAF	SAF	CAF	SAF		CAF	SAF	CAF	SAF	
2018	2	16	2,8	22,2	133	0	13	0,0	12,3	0

### OCCUPATIONAL SAFETY PERFORMANCE AT SÃO PAULO (OUTSOURCED STAFF) [GRI 403-09]

Year	Forestry					Industrial				
	Number of accidents		Accident rate		Missed days per individual	Number of accidents		Accident rate		Missed days per individual
	CAF	SAF	CAF	SAF		CAF	SAF	CAF	SAF	
2018	4	10	6,2	15,5	36	3	19	5,4	34,5	102

Graph legend: CAF – occupational accidents with leave | SAF – occupational accidents without leave

Frequency rate – number of accidents x 1.000.000/ total man-hours worked

Considering the indicators presented, Bracell remains committed to zero accidents involving its own and outsourced staff, both in the industrial and forestry activities, seeking to reduce the frequency of accidents with leave.

In addition to preventing accidents, the company promotes the health and well-being of its employ-

ees. In 2018, the company ran major campaigns addressing men's and women's health, cardiovascular care, sexually transmitted diseases, diabetes and hypertension, healthy diet, and obesity control. It also monitored the health of its employees through mandatory health exams capable of early detection of conditions that may pose a risk.

At Bahia, the company continued its daily physical exercise sessions, promoted vaccination against influenza (Influenza/H1N1/H1N2), held a self-care fair,

and provided training on self-stretching, and guidance on posture to all forestry machinery operators.

## Development

A significant highlight in 2018 was the intensification of leadership development initiatives at Bracell Bahia. The Apollo Program, designed to further strengthen the company's culture, held an eight-hour training session for 19 executives. The company also launched BLU - Bracell Leadership University which offers robust capacity building in five modules. Bracell also provided executive coaching and a continuing education program in partnership with Harvard University, which provides pre-selected online courses.

In addition to this set of actions for leaders, Bracell continued its traditional investments in professional

development applicable to all hierarchical levels. In 2018, 1,012 technical, safety, and behavioral training sessions were held (757 at Bahia and 255 at São Paulo), 19.8% more than in 2017, when the training sessions totaled 845.

These 2018 events had a total duration of 56.4 thousand hours (34.6 thousand hours at Bahia and 21.8 thousand hours at São Paulo), involving 13,500 participants, of which 5,903 in Bahia and 7,597 in São Paulo.

TOTAL TRAINING [GRI 404-01]					
Unit	Type of training	2017		2018	
		Forestry	Industrial	Forestry	Industrial
Bahia	Safety	48	162	145	240
	Technical	118	212	138	232
	Behavioral	18	22	1	1
	<b>Total</b>	<b>184</b>	<b>396</b>	<b>284</b>	<b>473</b>
São Paulo	Technical	80		94	
	Operational	65		56	
	Administrative	113		103	
	Management	7		2	
	<b>Total</b>	<b>265</b>		<b>255</b>	

Furthermore, Bahia maintained the Education Incentive Program, which in 2018 alone, received R\$ 185,117 in investments, benefiting 88 employees with language, technical, undergraduate, graduate, and masters' courses. In the previous year, the investment amounted to R\$ 192,607 and involved 102 professionals. This programme will soon be implemented at São Paulo in the future.

To prepare and introduce young people into the workplace, the company continued its Young Apprentice Program in partnership with the Business-School Integration Center (CIEE) and the Brazilian Service for

Industrial Learning (Senai). This action contributed to the professional education of 83 people (49 in Bahia and 34 in São Paulo), of which 55 are from the industrial sector and 28 from the forestry sector. There were three more apprentices in 2018 than in 2017.

Likewise, the Trainee Internship Program promoted the development and the hiring of thirteen participants from Bahia as harvesting machine operators, and two participants from São Paulo in 2018. The "Talentos de Fibra" Program for engineers, on the other hand, has been remodeled and will implement a new selection process starting in 2019.





In 2018, **1,012** technical, safety, and behavioral training sessions were held, **19.8%** more than in 2017. These events had a total duration of **56.4 thousand** hours.





# 05.

Bracell's vision states that sustainable growth of our business depends on how the company creates shared value to the neighboring communities. This relationship must be based on shared values, respect, ethics, and transparency.

Currently in Bahia, there are 306 mapped communities, including 72 quilombolas recognized by the Palmares Foundation. Of the 306 mapped communities, 107 are in the area of a direct influence by Bracell's forestry operations, of which seven are quilombolas. There are also two areas classified as High-Value Social Conservation Area (HCVA).

In São Paulo, according to data disclosed by the Brazilian Institute of Geography and Statistics (IBGE), forest management directly or indirectly influences a region inhabited by about 1.3 million people, with 90% living in urban areas. Every five years, São Paulo outlines a socioeconomic profile of the communities surrounding the areas managed by the company to understand better the people influenced by the company's operations. In 2018

alone, 99 contacts were made, with 33 residents from neighboring farms to identify stakeholders. Also, there were 178 operational discussion meetings at 47 farms, which enabled the assessment and monitoring of forest management activities. In the previous year, 522 contacts were made with 160 farms, as well as 103 operational discussions were held at 16 farms.

All these areas are on the tactical maps of the company, and are taken into account in all activity planning so that the communities that are directly impacted and are located closest to the company's operations have their histories, traditions, and cultures preserved.

Based on the preparatory work to revise the Sustainability Policy and on a diagnostic work that involved an inquiry with leaders, internal and external audiences in 2018, Bracell implemented process improvements and obtained new drivers for the management of its social projects.

# SOCIAL RESPONSIBILITY MANAGEMENT

[GRI 102-43, 412-01, 413-01]

In Bahia, social projects remain grouped into three main categories: education, entrepreneurship, and dialogue. In São Paulo, the topics are education, health, culture, citizenship, sports, and environmental conservation. It should be noted that at all times, the choice of priorities is aligned with the needs of local communities.

In 2018, Bracell ran and promoted 32 projects in Bahia, 69 social actions with direct investment in São Paulo, and in this state, 14 projects were sponsored due to tax incentives. The organization also sponsors the Lidera Jovem Institute in Lençóis Paulista. This set of practices benefited thousands of people in 24 municipalities in Bahia and 8 in São Paulo. The total annual investment surpassed R\$ 4.0 million.

The goals for Bahia in 2019 include: restoring riparian forest in at least six communities of a direct influence by Bracell's forestry operations,



**32**

projects in Bahia



**69**

social actions in  
São Paulo



**14**

projects enabled by tax  
incentives in São Paulo



**R\$4.0<sup>MILLION</sup>**

in total investment



taking environmental education actions to surrounding communities benefiting at least 2,000 people by this, promoting health actions (lectures, workshops,

etc.) for at least 1,500 people, increasing in 20% the number of people benefited by Bahia Volunteer Program, among others.

## Social investment in Bahia

### EDUCATIONAL PROJECTS [GRI 413-01]

In this field, Bracell Bahia develops relevant projects to improve education, provides musical introduction classes for children and teenagers from the public-school system, sports incentives, and environmental education. In 2018, these projects benefited more than 33,000 students and 2,000 teachers/technical staff from 616 schools.

#### Educação Continuada

The *Educação Continuada* (Continuing Education project, in English) has been running for over four years in partnership with hundreds of municipal schools in Bahia. Its main results are the reorganization of the administrative structure of schools, the development of an annual work plan capable of rais-

ing students' interests, the increase in the number of children that will learn to read and write at a proper age, and the strengthening of public management. These results are reflected in the improvement of the Basic Education Development Index (Ideb) of the municipalities assisted by the project.

INDICATORS	2017	2018
Benefited municipalities	6	7
Participating schools	326	404
Teachers or technical team	1,744	2,106
Students involved	23,896	29,407

#### Música na Escola and Fest in Canto

The *Música na Escola* (Music at School project, in English) stimulates the introduction of music to children and teenagers from municipal public schools, contributing to their development in culture and citizenship. Through this project, Bracell provides music classes at alternate hours to the regular school hours. On the other hand, students need to present good school performance, and parents need to participate in their kids' school activities.

This initiative stands out with the *Fest in Canto* (Singing Festival, in English) - "*Festival Intercolegial de Novos Talentos da Música*" an inter-school music festival exclusively for students from public schools in five municipalities of the Bahia state. In addition to cash prizes, the first places in the children and youth categories can record their songs/performances for CD release, with 1,000 copies made available for the public.

INDICATORS OF THE PROJECT <i>MÚSICA NA ESCOLA</i>	2017	2018
Benefited students	278	625
Benefited schools	4	5
Benefited municipalities	3	5
Number of class hours	608	1,193

INDICATORS OF THE PROJECT <i>FEST IN CANTO</i>	2017	2018
Students enrolled	328	551
Classified students	120	140
Participating schools	44	83
Benefited municipalities	7	7
The audience at the events	2,870	2,790

### **Parceiros da Escola – Incentives for Sports (Karate)**

Bracell also encourages the practice of sports combined with good school performance through the *Parceiros da Escola* (School Partners, in English). Bracell supports karate classes in the quilombola community Cangula.

INDICATORS	2017	2018
Benefited students	41	33

### **Environmental Education**

#### **Casa da Árvore – Neco (Eco-Social Center)**

The *Casa da Árvore* (Tree House, in English) project drives awareness on environmental issues through initiatives such as lectures, handicrafts and recycling workshops, ecological trails, restoration of springs, and guidance on proper waste disposal. The Neco (Eco-Social Center) is open to students from all over the region, providing knowledge on environmental protection and sustainability for the communities, in addition to offering an eco-trail that allows visitors to get to know the flora and fauna species of the whole region.



INDICATORS	2017	2018
Visiting schools	87	124
Visits carried out	100	164
Benefited teachers	183	246
Benefited students	1,848	2,390
Own employees or outsourced personnel	56	161
Visitors	2,195	3,266
Workshops	46	143

**Ecomunidade - Developing agents**

The project provides the audience an understanding of the environment and the socio-environmental context in which they live, encouraging mindful attitudes towards the conservation of nature and proper use of natural resources. One of the main focuses is to stimulate the reflection of the impacts caused by waste that isn't correctly disposed.

INDICATORS	2017	2018
Benefited communities	9	18
Participants	120	126
Qualifications carried out	22	26
Qualified Eco-agents	48	180
Benefited municipalities	4	6

**Troca de Saberes**

The *Troca de Saberes* (Knowledge exchange, in English) action encourages company employees to share personal and professional experiences, or specific skills of general interest, with their co-workers. In meetings during working hours, they voluntarily present topics within their area of knowledge.

INDICATORS	2017	2018
Benefited participants/people	117	149
Lectures held	4	6

**Restoration of riparian forests and springs**

The purpose of this activity is to restore riparian forests and degraded springs with the support of the community. Partnerships with the government, educational institutions, and communities help map out the areas to be restored and to receive native plant seedlings.

INDICATORS	2017	2018
Mapped springs	7	15
Planting actions	6	6
Donated seedlings	2,080	510
Planted seedlings	1,400	470
Benefited municipalities	6	6
Benefited communities	14	13
People involved	470	158





## ENTREPRENEURIAL PROJECTS [GRI 203-02, 413-01]

Bracell identifies income-generating opportunities, especially in the rural areas where it operates. We encourage local entrepreneurship by forging partnerships that contribute to the economic feasibility of productive activities. In 2018 alone, the income generated by the entrepreneurial projects reached more than R\$ 3.0 million.

### Farmácia Verde

Since 2017, *Farmácia Verde* (Green Pharmacy, in English) fosters the development of herbal medicine in partnership with residents from the quilombola communities of Cangula, in Alagoinhas and Gamba, in Entre Rios, and the Ana Rosa Settlement, in Pojuca – located in Bahia state. The project has a participatory, theoretical, and practical methodology that involves training participants to study and apply herbal medicine and natural remedies, including knowledge about the interaction of plants with the human body, as well as guidelines for trading processes.

In 2018, this initiative won the 12th Bahia Sustainable Industry Award in the Social and Environmental Projects category. Sponsored by the Federation of Industries of the State of Bahia (Fieb), this award saw 29 companies with 45 projects participating in four categories: Very Small and Small-Sized Companies; Social and Environmental Projects; Social and Environmental Management Practices; and Clean Technologies.

For 2019, the goal is to implement a naturopathy course to at least 25 people benefited from Farmácia Verde project and local health agents.

INDICATORS	2017	2018
Directly benefited people	46	52
Indirectly benefited people (families)	138	156
Benefited municipalities	2	3
Benefited communities	2	3

### Beekeeping

A long-time partnership between Bracell and producers in the northern coast and the *Agreste* region of Bahia state, the Beekeeping Project promotes the installation of beehives in company-owned native forests. The flowers in these areas are a source of pollen and nectar for honey production. Seven beekeepers' associations from

the municipalities of the region collaborate in this project. In 2018, a request made by beekeepers resulted in the first workshop on the selection and production of queen bees in the region, with the participation of 30 representatives from the beekeepers' associations.

INDICATORS	2017	2018
Beekeepers enrolled in the project	184	176
Indirectly benefited people (families)	552	528
Benefited municipalities	4	4
Benefited associations and/or cooperatives	7	7
Produced honey (kg)	126,700	125,250
Income generated (R\$)	897,750	751,500

### Family farming

Bracell provides free technical assistance to small farmers in the region. It also provides diagnostics, guidance, and follow-up on issues related to agricultural and livestock activities. This project

encourages and guides producers to adopt eco-friendly cultivation techniques, avoiding the use of chemical pesticides in their lands.

INDICATORS	2017	2018
Benefited producers	210	210
Indirectly benefited people (families)	630	630
Benefited associations and cooperatives	14	14
Benefited municipalities	6	6
Impacted communities	14	14

### Community Seedling nursery

Launched in 2018, Bracell initiated a Community Seedling Nursery, in Imbé, a community of Entre Rios (Bahia), to produce seedlings of native fruit trees and ornamental plants focused on generating income for eleven trained women. The company provided the site, infrastructure, training, and monitoring tools for their operations.

INDICATORS	2017	2018
Directly benefited people (trained)	11	11
Indirectly benefited people	33	33
Seedlings produced	-	3,996
Income generated (R\$)	-	350 (not all seedlings were sold in 2018)
Benefited communities	1	1
Benefited municipalities	1	1

### Uniform factory

Launched in 2014, the Uniform Factory, in the municipality of Inhambupe, Bahia state, has trained 40 women from the communities to work as industrial seamstresses. The project is housed in Bracell's warehouse, which has been remodeled and

equipped with state-of-the-art sewing machines for the full development of activities and where uniforms are produced for several companies in the region, including Bracell.

INDICATORS	2017	2018
Directly benefited people	9	9
Benefited communities	3	3
Indirectly benefited people	27	27
Produced pieces	3,366	8,300
Generated income (R\$)	56,912	63,845



### *Sewing and craftsmanship with fabric*

This project trains people from farming communities in basic sewing by using scrap fabric and discarded uniforms. The courses are held at the communities with the support from a Bracell's traveling van – each community receives a 32 hours-training.

INDICATORS	2017	2018
Directly benefited people	94	82
Indirectly benefited people	282	246
Benefited municipalities	3	3
Benefited communities	5	7

### *Art and craftsmanship with liana and piassava palm*

This project involves liana and piassava pickers and artisans on the North coast of Bahia (Itanagra, Mata de São João, Entre Rios, Esplanada). It gives them access to courses on sustainable fiber extraction, processing, development, improvement, and product marketing – with the liana and piassava, they

produce handmade products such as bags and baskets. In 2018, 147 artisans who pick raw materials on the company's areas were registered and trained, disseminating the Bracell plan for the sustainable handling of piassava and liana.

INDICATORS	2017	2018
Registered/benefited artisans	38	147
Training sessions	4	4
Produced pieces	520	1,740
Benefited municipalities	1	4
Benefited communities	2	10

### *Art and craftsmanship with silkscreen printing*

This silkscreen printing techniques project involves training and selling this type of work, focusing on teenagers from farming communities. It is currently

held in Bahia state, in the communities of São José do Avena, in Itanagra, and Saquinho, in Inhambuê.

INDICATORS	2017	2018
Directly benefited people	20	26
Indirectly benefited people	60	78
Produced pieces	300	800
Generated income (R\$)	0 (there was only training sessions)	10,450
Benefited municipalities	1	2
Benefited communities	1	2

#### *Wood waste collecting and selling*

In response to the request by neighboring communities to collect eucalyptus residuals left on the field after wood harvesting, Bracell allowed community members to collect them and gain an additional source of income. As a result, Bracell developed the Forest Waste Collecting Procedure, which requires

beneficiaries to be properly registered, participate in training, and join an association or cooperative. People who participate in this initiative generally collect the wood waste and sell them to ceramic industries or use them for burning in community ovens, to produce cassava flour.

INDICATORS	2017	2018
Trained people	760	1,047
People authorized in company premises	595	621
Indirectly benefited people	1,785	1,863
Training sessions/lectures	31	49
Generated income (R\$)	131,517	2,137,461
Benefited municipalities	10	12
Collected material (m³)	7,891	83,251

**Capacity building (several)**

INDICATORS		2017	2018
<b>Training for community association leaders</b>	Trained people (directly benefited)	0	43
	Training sessions/lectures	0	9
	Benefited communities	0	35
	Benefited municipalities	0	6
<b>Capacity building</b>	Directly benefited people	80	245
	Indirectly benefited people	240	735
	Capacity building\training sessions	4	10

**DIALOGUE PROMOTING PROJECTS** [GRI 413-01]

Every year Bracell encourages dialogue with thousands of people through lectures, training, visits to the organization's facilities, free movie screenings in farming communities, and meetings for environmental education and health care activities. This approach to community engagement has increasingly strengthened the relationships based on mutual respect and trust between Bracell and our stakeholders.

In 2018, a new version of Mais Cidadania (Citizenship Project, in English) was implemented in ten municipalities within Bracell's scope of influence in Bahia. In partnership with city departments, the company offered several services to the community such as workshops on women's health, blood pressure measurement, vaccination, nutritional counseling, dance classes, legal counseling, and access to social benefits. The children had fun in eco-educational workshops, painting sessions, and other playful activities. Also, fair stands were

set up for the selling of products such as handicrafts, honey, as well as fruit and vegetable produce from entrepreneurial initiatives.

We also took part in strategic events to strengthen the relationship with the community in Bahia. We participated in the Coco Festival in the municipality of Conde; in the Accordion Players' Festival at Expo Alagoinhas, in Alagoinhas; and promoted the 3rd Sociocultural Fair bringing together representatives from several social projects run by the company; in Camaçari, we participated in the Citizenship Fair. In this social action promoted by the Camaçari Industrial Development Committee, Bracell stood out for helping to issue 200 Identity Cards (RG).



### Meeting with communities

The Institutional Relations and Social Responsibility team frequently holds meetings with leaders and residents in the region. These meetings identify needs and opportunities, as well as address complaints and suggestions so that Bracell can improve its processes and relationships with neighboring communities.

INDICATORS	2017	2018
Meetings held	40	94
Communities served	24	29
Participants	1,940	2,068
Requests taken	285	197
Requests met	144	91

### Cinema no Campo

Launched in 2014, the project Cinema no Campo (Movie Screening in Farming Communities, in English) provides farming community residents with access to quality movie screening sessions that involve themes related to the reality of these locations. The free sessions bring together dozens of people in squares and other public venues, providing not only entertainment, but also the opportunity to discuss topics of utmost relevance to the communities via discussions facilitated by qualified psychologists.

INDICATORS	2017	2018
Municipalities covered	23	15
Visited communities	30	31
Benefited adults	1,186	1,982
Benefited children	1,459	1,230
Sessions held	33	40
Benefited employees	(this figure was not calculated)	360

### Mais Cidadania: *improving health and quality of life*

The project focuses on business and community integration through a fair that offers resident-centric services aimed at raising their self-esteem through hairstyling, eyebrow design, preventive health care, legal and institutional guidance, and kids' games,

among other activities. In 2018, we partnered with city halls, resulting in the fair being held at the administration buildings of participating municipalities in Bahia. The dates of this event were strategically chosen to benefit mainly the residents of farming communities.

INDICATORS	2017	2018
Municipalities covered	9	10
Benefited communities	29	209
Adults benefited by lectures	947	3,316
Children benefited by playful activities	1,467	1,800
Benefited employees	(this figure was not calculated)	315

### Volunteer Program

Called *Mãos Dadas* (Hand in Hand, in English), the Bahia Volunteer Program seeks to engage employees and their families by channeling their skills, knowledge, and time for a good cause. In 2018, 20 institutions including *Associação da Prata* (from Entre Rios) and *Lar de Idosos* (from Alagoinhas) benefited from the program.

## Social investment in São Paulo

In 2018, Bracell São Paulo invested over R\$ 2.3 million (derived from direct and incentive funds) in social initiatives.

With the direct social investment funds, Bracell supported 69 actions, coordinated by public or philanthropic institutions in 8 cities in the region of Lençóis Paulista (SP) for programs in education, health, culture, citizenship, sports, and environmental protection.

The company is also one of the sponsors of the *Lidera Jovem* Institute, a non-profit civil society organization dedicated to the development of leadership skills and youth engagement, focusing on the ages 13 to 18. This institute has been serving the region of

Lençóis Paulista municipality since 2002 and had an impact on over 11,000 youths in its pathway. In 2018, 2,902 people benefited from the program, including youths, teachers, and volunteers.

As for its tax incentive programs, the company used mechanisms such as the Brazilian Program for Culture Support (Rouanet/Pronac Law), Cultural Action Program (ProAC), Sports Incentive Program (PIE), Sports Incentive Law (LIE), Municipal Fund for the Rights of Children and Adolescents (Fumcad), State Council for the Rights of Children and Adolescents (Condeca), Fund for the Elderly, Brazilian Program for Support to Oncological Care (Pronon), and National Program for Support to Health Care for Persons with Dis-

abilities (Pronas/PCD). There were 14 projects supported in the region of Lençóis Paulista (SP). The following projects stand out:

- **Fumcad – Lençóis Paulista and Macatuba (SP):** fund for managing resources for the financing of social and cultural projects aimed at the education and development of children and youth in the cities of Lençóis Paulista and Macatuba.

- **Municipal Fund for the Elderly – Lençóis Paulista and Macatuba (SP):** fund for managing resources for the financing of plans, programs, projects, actions, activities, and services for the local population over 60 years of age.

- **Project *Era Uma Vez Brasil* (Once upon a time, in English):** drives collaboration for the

development of Brazilian culture, fostering historical knowledge for teachers and 8th grade students from public schools through contact with different artistic and cultural languages. Based on the book 1808 by Laurentino Gomes, it stimulates the students' understanding of Brazilian history and its current impacts. In 2018, the project offered training for teachers and cultural activities for all public schools in Lençóis Paulista and Macatuba, impacting over 500 students; and a ten-day cultural exchange in Lisbon, Portugal, for 15 students and two teachers selected in the last stage of the project.

**At Bracell Bahia, social projects are grouped into three pillars: education, entrepreneurship, and dialogue. At Bracell São Paulo, the pillars include: education, health, culture, citizenship, sports, and environmental conservation.**

**In 2018, there were thousands of beneficiaries across 24 municipalities in Bahia and 8 in São Paulo, with a total investment that surpassed R\$ 4.0 million.**







# 06.

## Sustainable forestry operations

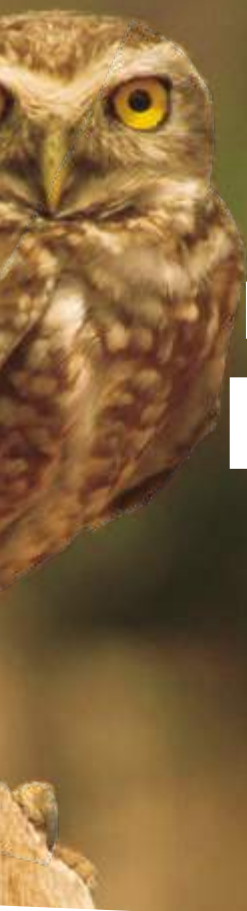
In all our forestry activities, from planting to the delivery of eucalyptus wood to our industrial unit, Bracell strives for the best use of soil, water and supplies, and the respect for the remnant native vegetation and local fauna, exceeding standards determined by the environmental legislation.

The company has 83,841 hectares of preserved areas, out of which 61,212 ha are in Bahia and 22,629 ha are in São Paulo. Bracell also contributes to the conservation of another 33,860 hectares, through a partnership with farmer members of the Forestry Partnership Program – 17,093 ha of preserved areas in Bahia and 16,767 ha in São Paulo (considering legal reserves, permanent conservation areas and native forests). [\[GRI 304-03\]](#)

Bracell does not deforest to start new cultures. On the contrary, it keeps the remnants of native forest by using the Mosaic Landscape Approach, in which native vegetation is preserved and physically protected from illegal hunting and logging.

In company-owned areas that have undergone any instances of land-use change, the Degraded Area Restoration Program (PRAD) carries out actions such as soil correction, fertilization, and planting of native seedlings to allow for the growth of native species through natural regeneration. In 2018, Bahia accounted for the recovery of 9.26 ha, exceeding the established target for the period, which was the restoration of 8.57 ha while keeping the other 21.15 ha considering the PRAD of 2016 and 2017. The method used in São Paulo's PRAD is to monitor and follow up on the land lying fallow under Resolution SMA 32/2014. In 2018, 3,460 ha of restoration areas and distributed across 69 properties were being actively monitored. [\[GRI 304-03\]](#)

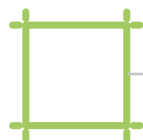
For a more structured and consistent conservation of biodiversity, Bracell Bahia launched the Wildlife Sighting Program in 2017, in which professionals contribute by collecting information on the medium and large-sized mammals sighted in the areas owned by



# BIODIVERSITY MANAGEMENT

the company. This allows Bracell's Flora and Fauna Monitoring Laboratory to keep a geo-referenced species database and identify potential threats – such as activities from illegal encroachers and poachers in the environmental conservation areas. In 2018, according to the target established in 2017, this program promoted a greater environmental awareness among field teams. It was able to record 862 wild animal sightings, being the gray brocket (*M. gouazoubira*) and the crab-eating fox (*C. thous*) the species with the highest number of sightings.

In 2018, São Paulo mapped 6,707 hectares of Atlantic Forest (with 2,651 ha being monitored), 5,478 hectares of *Cerrado* (with 891 ha being monitored), and 6,483 hectares of wetland. To mitigate adverse ecological impacts, all conservation areas have annual monitoring and control of exotic tree and shrub species. Last year, 53 farms were monitored, among permanent conservation areas and legal reserves.



**83,841ha**  
of preserved areas



**862**  
wild animal sightings in the  
Wildlife Sighting Program



**33,860ha**  
of preserved areas, through the  
Forestry Partnership Program

## Lontra Private Reserve of Natural Heritage [GRI 304-03]

The Lontra Private Reserve of Natural Heritage (PRNH) is a private conservation unit of public interest and in perpetuity, aimed at preserving biological diversity. With an area of 1,377 hectares, this reserve is part of the Lontra/Saudade farm, a property belonging to Bracell, located between the municipalities of Entre Rios and Itanagra, in the state of Bahia.

The area is a remnants forest fragment of the Atlantic Forest and is at an advanced stage of recovery. It is an evergreen forest with a predominantly arboreal appearance when compared to others, forming a relatively even-sized closed canopy, presenting possibly emergent trees of up to 50 meters in height and dense shrubby vegetation.

In 2018, Lontra PRNH was awarded the title of the outpost for the Atlantic Forest Biosphere Reserve (AFBR). This means the reserve is now officially considered a strategic area for the protection of the Atlantic Forest biome, following international criteria of the “Man and the Biosphere” Programme of the United Nations for Education,

Science and Culture Organization (UNESCO). It is the only outpost of the AFBR in Bahia that belongs to a private company, which shows Bracell’s commitment to sustainable development and the conservation of native forests.

Such acknowledgment is mainly due to Bracell’s ongoing research on flora, fauna, and the quality of water through partnerships with universities. Based on this biomonitoring, it has been possible in recent years to identify several new, rare, endemic, and endangered species according to the International Union for Conservation of Nature (IUCN). The identified endangered species include the Rio rocket frog (*Allobates olfersioides*), the fringe-backed fire-eye bird (*Pirryglena atra*), the northern tiger cat (*Leopardus tigrinus*) and, among the plant species, the juçara palm (*Euterpe edulis*). These data strengthens the recognition of the area as one of the most important fragments of the Atlantic Forest in the region preserved to store and disseminate the genetic heritage of the biome.

## Flora and fauna monitoring

Bracell has a flora and fauna monitoring program to identify and observe species in their native forests, covering four High Conservation Value Areas (HCVA) owned by the company and and four areas of remnant forests associated with managed areas.

This program allows the company to better understand the dynamics of plant and animal communities, as well as the pressure vectors in and around the region, generating indicators on the environmental conservation status that may be useful for environmental agencies, universities, and several institutions.

After the first stage that focused on learning about the existing biodiversity in conservation areas, 2018 was a year in which Bracell Bahia investigated the biodiversity difference among natural, planted, and

transition areas, which are natural forest and forested areas. Although the natural areas were richer than the others, the transition areas in projects and the HCVAs in the *Caatinga* biome and *Cerrado* fragments showed a high number of microhabitats with areas for forage (feeding areas), lying fallow (arable land set aside for recovery), reproduction and nutrient availability.

This work enabled the observation of an essential correlation between the richness of flora and fauna that landscapes with a more heterogeneous flora which also features a more diverse fauna, showing the conservation of protected habitats.



At the end of 2018, Bahia's updated biomonitoring database had 1,463 native species recorded on the company's properties, 652 belonging to flora (angiosperms), and 811 to fauna (avifauna, herpetofauna, and mastofauna) categories.

#### DIVERSITY OF SPECIES

HCVA/Project	Flora	Fauna		
		Herpetofauna	Mastofauna	Avifauna
Lontra PRNH	113	47	13	110
Sergipe	100	43	11	76
Cachoeira	59	42	11	27
Jaboticaba Farm	125	38	20	92
Bonfim	74	27	7	39
Santo André	91	12	4	39
Olhos D'Água	36	16	3	41
Raíz	54	9	3	81
<b>Total</b>	<b>652</b>	<b>234</b>	<b>72</b>	<b>505</b>
			<b>811</b>	

At São Paulo, flora monitoring is performed every five years in the three remaining native vegetation areas. On the other hand, birds and mammals are monitored every three years in three different locations within the forest management units. The last flora monitoring campaign took place in 2017 when 383 tree species belonging to 62 botanical families were identified. As for the fauna, the latest monitoring took place in 2018, when the general richness of birds totaled 281 species, and the number of mammal species reached 40.

The sections below show the species found in areas of the company that are considered endangered according to the Chico Mendes Institute for Biodiversity Conservation (ICMBio) and IUCN. Each one is classified according to the number of individuals per species and other factors such threat level indicators. The scale begins with the category "least concern", followed by "nearly threatened", "vulnerable", "endangered", "critically endangered", "extinct in the wild", and "extinct".

**FLORA** [GRI 304-04]

Along with the monitoring carried out since 2016, the areas at Bahia that have shown the greatest flower diversity were the Fazenda Jaboticaba HCVA, the Lontra PRNH, and the Sergipe Project. These belong to the comprehensive Atlantic Forest biome and have large fragments of vegetation and are an important wildlife corridor with a great diversity of *phytophysiognomies*.

**BAHIA – ENDANGERED FLORA SPECIES**

Family/species	Threat level according to conservation organizations	
	ICMBio	IUCN
<b>Aracaceae</b>		
<i>Euterpe edulis</i>	Vulnerable	-
<i>Attalea funifera</i>	Nearly threatened	Least concern
<b>Chrysobalanaceae</b>		
<i>Couepia bondarii</i>	Endangered	-
<b>Fabaceae</b>		
<i>Abarema turbinata</i>	Nearly threatened	Vulnerable
<i>Tachigali rugosa</i>	Nearly threatened	-
<i>Bowdichia virgilioides</i>	Nearly threatened	-
<b>Lauraceae</b>		
<i>Ocotea puberula</i>	Nearly threatened	Least concern
<b>Myristicaceae</b>		
<i>Calycolpus legrandii</i>	Vulnerable	-
<i>Virola bicuhyba</i>	Endangered	-
<b>Sapotaceae</b>		
<i>Pouteria grandiflora</i>	Least concern	Nearly threatened
<i>Chrysophyllum splendens</i>	Nearly threatened	Vulnerable
<i>Manilkara elata</i>	Data deficient	Endangered
<b>Vochysiaceae</b>		
<i>Vochysia riedeliana</i>	Nearly threatened	-

In the monitoring campaign run by São Paulo in 2017, 225 tree species from 62 botanical families were identified. Among them are the species sassafras cinnamon (*Ocotea odorifera*) classified as “endangered”, Argenti-

ne cedar (*Cedrella fisillis*), Farinha Seca (*Albizia burkartiana*) and Ipê Felpudo (*Zeyheria tuberculosa*) classified as “vulnerable”. There was no evaluation of the flora structure and diversity in 2018.

## HERPETOFAUNA (REPTILES AND AMPHIBIANS) [GRI 304-04]

The wide diversity of amphibians and reptiles, as well as the high rates of endemism and rare and endangered animals, are due to the conservation of the ecosystems responsible for providing foraging, breeding, and sheltering areas. Conservation of water resources and respect for permanent conservation areas contribute to the high diversity of anurans (toads, frogs, and tree frogs, lizards, and snakes) found in the projects and the HCVA.

Only one species of amphibians, the rocket frog (*Allobates olfersioides*), was classified “vulnerable”. The major cause of the species population decline is mainly the loss of habitat quality and fragmentation. The presence of the Southern American bushmaster (*Lachesis muta*), a snake considered necessary for medical purposes that is an endangered (vulnerable) species, should be noted.

The herpetofauna survey is performed only in Bahia.





**AVIFAUNA (BIRDS)** [GRI 304-04]

According to Bahia's monitoring of the avifauna, the diversity of birds found in the Atlantic Forest, *Caatinga*, and enclaves of the *Cerrado* is rich and abundant. Conserved fragments of native vegetation reinforce the importance of the ecosystem services performed by birds such as pest control, which are so important for forestry. In open landscapes with drier ecosystems, the cultivation areas are important places for lying fallow and foraging for birdlife in the region.

**BAHIA – ENDANGERED AVIFAUNA SPECIES**

Family/species	Threat level according to conservation organizations	
	ICMBio	IUCN
<i>Psittacidae</i>		
<i>Touit surdus</i>	Vulnerable	Vulnerable
<i>Amazona rhodocorytha</i>	Vulnerable	Vulnerable
<i>Furnariidae</i>		
<i>Automolus lammi</i>	Endangered	Endangered
<i>Tinamidae</i>		
<i>Crypturellus noctivagus</i>	Vulnerable	-
<i>Thamnophilidae</i>		
<i>Herpsilochmus pileatus</i>	Vulnerable	Vulnerable
<i>Pyriglena atra</i>	Endangered	Endangered
<i>Ramphastidae</i>		
<i>Ramphastos vitellinus ariel</i>	-	Endangered
<i>Fringillidae</i>		
<i>Spinus yarrellii</i>	Vulnerable	Vulnerable
<i>Cotingidae</i>		
<i>Xipholena atropurpurea</i>	Endangered	Vulnerable
<i>Cathartidae</i>		
<i>Sarcoramphus papa</i>	Vulnerable (SP, RJ, MG, RS)	-

In 2018, São Paulo conducted an avifauna survey at Turvinho II Farm, which enabled the identification of 135 species belonging to 40 families, out of which 21 are endemic species, such as *Saltator fuliginosus* (black-throated grosbeak), *Florisuga fusca* (black jaco-

bin), *Thalurania glaucopis* (Violet-capped woodnymph), and *Drymophila malura* (dusky-tailed antbird); and two species classified as “threatened”: *Syanoloxia brissonii* (ultramarine grosbeak), and *Sporophila angolensis* (Chestnut-bellied seed finch).

In the previous year, the unit monitored Nova América Farm identified 131 bird species belonging to 37 families, including 17 endemic species, such as *Picumnus temminckii* (ochre-collared piculet), *Florisuga fusca* (black jacobin), *Thalurania glaucopis* (Violet-capped wood nymph), and *Drymophila malura* (dusky-tailed antbird); two “endangered” species: *Primolius maracana* (blue-winged macaw) and *Sporophila angolensis* (Chestnut-bellied seed finch); and four “nearly threatened” species: Penelope superciliaris (rusty-margined guan), *Amazona aestiva* (turquoise-fronted amazon), *Antilophia galeata* (helmeted manakin), and *Hemitriccus orbitatus* (eye-ringed tody-tyrant).

## MASTOFAUNA (MAMMALS) [GRI 304-04]

From the monitoring of fauna in Bahia, most mammals were recorded through their tracks (footprints, feces, territorial markings, and predation remains). The Wildlife Sighting Program has also supported the sighting of endangered felines such as the northern tiger cat (*Leopardus tigrinus*), the “jaguarondi”

(*Puma yagouaroundi*) and the maned sloth (*Bradypus torquatus*). These records demonstrate the value of green corridors and the use of tree stands by certain species while moving from one habitat to another.

### BAHIA – ENDANGERED MASTOFAUNA SPECIES

Família/ espécies	Threat level according to conservation organizations	
	ICMBio	IUCN
<b>Cebidae</b>		
<b><i>Sapajus xanthosternos</i></b>	Endangered	Critically endangered
<b>Pitheciidae</b>		
<b><i>Callicebus coimbrai</i></b>	Endangered	Critically endangered
<b>Felidae</b>		
<b><i>Leopardus tigrinus</i></b>	Endangered	Vulnerable
<b><i>Puma concolor</i></b>	Vulnerable	-
<b><i>Puma yagouaroundi</i></b>	Vulnerable	-
<b>Bradypodidae</b>		
<b><i>Bradypus torquatus</i></b>	Vulnerable	Vulnerable
<b>Erethizontidae</b>		
<b><i>Chaetomys subspinosus</i></b>	Vulnerable	Vulnerable

The mastofauna monitoring performed by São Paulo in 2018 accounted for the identification of 18 species of medium and large-sized mammals. In the previous year, this work was carried out at the Nova América Farm, where 26 similar-size species

were identified. In both campaigns, seven endangered species were recorded: maned wolf, hoary fox, brocket deer, ocelot, cougar, giant anteater, and small felines.

## Property security and forest fire fighting

In order to protect the environment and our heritage, Bracell has made efforts to prevent illegal logging of natural and industrial trees, fight arson, and prevent further damage. This work involves a multi-pronged approach which includes electronic surveillance, tactical ground patrol groups, awareness campaigns through the Friends of the Forest Program, regular training and upskilling of firefighting teams, and the company's participation in the Community Committee for Forest Security, where security solutions with community representatives and local authorities are thoroughly explored.

In 2018, Bahia acquired a drone to enable the fire-fighting team to detect risks, identify fire incidents, and assess the extent of the damage to impacted areas. The unit also acquired additional fire-fighting equipment as part of its fire suppression work.

This approach has yielded significant results. From 2013 to 2018, the company saw a 96.7% decrease in eucalyptus and native wood thefts and a 63.8% decrease in forest fires. In 2018, a total of 259.17 ha were lost due to forest fires – an area 63.4% smaller than the one recorded in 2015.







**96.7%**

decrease in eucalyptus and  
native wood theft

**63.9%**

decrease in forest  
fires



# 07.

## Water withdrawal [GRI 303-03]

The use of water by Bracell's Forestry and Industrial Operations is strictly controlled. Our use of artesian wells, rivers, streams, and riverside areas complies with procedures authorized and approved by the Environmental Agency, and are carried out responsibly.

We monitor the micro watersheds of all regions where we operate, which allows us to learn about the water conditions of each area. We also protect springs and water bodies on our properties as well as on legal reserves and permanent conservation areas to help preserve the availability of water resources.

In 2018, a total of 20,808,625 m<sup>3</sup> were withdrawn – with 6,014,138 m<sup>3</sup> of water at São Paulo, and 14,794,487 m<sup>3</sup> of water at Bahia. In the industrial area at Bahia, the monthly water withdrawal rate was 31.2 m<sup>3</sup> per ton of air dried pulp produced, ranking slightly above the target, which was 30 m<sup>3</sup> of water per ton. In the industrial area at São Paulo, the monthly

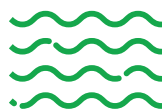
withdrawal was a little higher than the targeted 23 m<sup>3</sup> per ton of BEKP (bleached eucalyptus kraft pulp) produced, at 23.5 m<sup>3</sup> of water per ton. For 2019, the withdrawal targets will be maintained.

In 2018, there were no records of negative impacts on water resources that would correspond to deviations from authorized withdrawal.



**6.1%**

reduction in water withdrawal in industrial activities of Bracell Bahia



**7.2%**

reduction in water withdrawal in industrial activities of Bracell São Paulo





# ENVIRONMENTAL MANAGEMENT

Below are further details of our water use in our industrial and forestry activities:

- **Water withdrawal in industrial activities:** Bahia plant is supplied by eleven production wells, nine external and two internal ones, all of them duly authorized and monitored. The volume of water withdrawn in 2018 (14,261,955 m<sup>3</sup>) represents a decrease of 6.1% compared to 2017.

At São Paulo, the water supplied to the mill is obtained from five authorized artesian wells. In 2018, they supplied a volume of 5,895,134 m<sup>3</sup>, a 7.2% decrease in withdrawal compared to the previous year.

The water extracted from these wells returns to the environment in two ways: as wastewater sent to effluent treatment stations and through evaporation via our cooling towers, recovery boiler stacks, pulp drying machines, and the lime kilns.

**Besides training our employees in best practices in responsible water use, we have also assigned a group to monitor water use. With the use of mechanical pump seals, the group is able to quickly detect any leaks and other failures that could cause waste.**

- **Water withdrawal for forest activities:** in forestry activities, water is used, especially in the production of eucalyptus seedlings, in the construction and maintenance of roads, in road sprinkling in communities, in research, and in the washing of harvesting machines.



In 2018, Bahia's water consumption reached 532,532 m<sup>3</sup>, 50% above the 2017 volume measured of 354,802 m<sup>3</sup>, a rise that is due to the increase of seedling production at the Quatis nursery (groundwater extraction), of irrigated planted areas, forest firefighting actions, and road sprinkling in the communities to prevent dust clouds.

Surface water withdrawal totaled 25,576 m<sup>3</sup> (84% increase above the previous year) and groundwater withdrawal reached 506,956 m<sup>3</sup> (48% increase above the previous year). Currently, 17 surface water withdrawal sources and eight artesian wells are duly authorized for our use. One of the wells was deactivated during the year which had been used the past for irrigation of agricultural crops. This well had previously been considered for deactivation

due to its flow capacity and location (inside one of Bracell's properties in Inhambuque region).

As for São Paulo's forestry activities, there are eight groundwater extraction sources -- seven on farms, 1 in the seedling nursery, and 16 licensed surface water withdrawal sources. In 2018, 119,004 m<sup>3</sup> of water was consumed to produce 4,213,000 seedlings.

São Paulo supports residents in seven farms where water is extracted from wells. Since the purpose of these wells is human consumption and due to their little use, all wells are exempt from licensing. Nonetheless, they are equipped with a chlorination system, and the water quality is systematically monitored, thus ensuring potable water for consumption.

## Effluents [GRI 303-04]

The industrial process generates wastewater effluents that receive primary treatment at the mill before being sent to Effluent Treatment Stations. In 2018, the volume of wastewater disposed at Bahia totaled 11,752,030 m<sup>3</sup>, 4.0% less than in 2017. There was a reduction of 10.4% in volume disposed of by the inorganic system and of 4.2% by the organic one. In São Paulo, the absolute volume of wastewater was 4,819,335 m<sup>3</sup>, a 7.9% reduction from the previous year.

When analyzing the volume of wastewater effluents in cubic meters per ton of air-dried pulp disposed by the organic system, the average annual volume was 25.4 m<sup>3</sup>/admt<sup>1</sup> in Bahia (1.6% less than in 2017), achieving the 2018 target of <25.6

m<sup>3</sup>/admt per-month. For 2019, the target will be 25.5 m<sup>3</sup>/admt per month.

In São Paulo, the volume of wastewater effluents generated by the organic and inorganic system was 19 m<sup>3</sup>/admt (0.5% less than the previous year). The number kept steady within the desired <20 m<sup>3</sup>/admt for 2018 and will be kept as the same target next year.

As for the organic effluent load (BOD - Biochemical Oxygen Demand), there was a slight increase at Bahia, increasing from 5.3 kg/admt to 6.6 kg/admt in 2018. An increase was also recorded at São Paulo, from 0.8 kg/admt to 0.9 kg/admt.

### EFFLUENT DISPOSAL BY QUALITY AND DESTINATION AT BAHIA

Metrics	2017	2018
Inorganic effluent in m <sup>3</sup>	60,801	55,072
Organic effluent in m <sup>3</sup>	12,183,626	11,696,958
Organic effluent in m <sup>3</sup> /admt	25.8	25.4
Organic effluent load (BOD) in kg/ admt	5.3	6.6

<sup>1</sup> admt = air dry metric ton

## EFFLUENT DISPOSAL BY QUALITY AND DESTINATION AT THE SÃO PAULO UNIT

Metrics	2017	2018
Organic and inorganic effluent in m <sup>3</sup> /admt	19.7	19.8
Organic effluent load (BOD) in kg/ admt	0.8	0.9

Using parameters from the Brazilian Environment Council (Conama), Bracell continuously analyzes the water quality in areas where we have a direct influence such as rivers and ground water from artesian wells, as well as water from our operations such as wastewater from seedling nurseries and wastewater generated by the water and oil separator box at the washing ramp.

In 2018, surface and underground water sources were found to be contamination-free. Likewise, the company did not find any traces of the main agrochemicals used in our forest management operations.

In the Farje river micro watershed (an area of 125 hectares located in Alagoinhas, which belongs to the Sauípe watershed), the water quality and flow were not affected by our forestry activities.

Forestry activities generate a small volume of wastewater in nurseries - the water left over from the plants' irrigation process. This water supports the nutrition of the nursery's lateral plantations by forming a protective belt.

## Waste [GRI 306-02, 306-04]

Bracell is committed to effective waste management eco-efficiency and favors the reuse and recycling of materials whenever possible. The company strictly follows regulations and takes up best practices throughout the process: from selective collection to storage on monitored sites, transport by licensed companies, and proper disposal of waste.

Part of the waste from industrial units is sold as an energy source for the manufacturers of ceramics, fiber-cement tiles, and soil correction products, as well as fertilizer to restore degraded areas and application in hydro-seeding. Another part goes to licensed companies and landfills. Non-industrial waste separated in the selective collection process, such as plastic, paper, scrap, and others, is directed to recycling.

In 2018, the industrial area of Bahia generated, on average, 259 kg of waste per ton produced, achieving the volume target that was equal or below 260 kg – the same target for 2019. São Paulo also achieved its target of generating less than 45 kg/admt of industrial waste from the process (grits, dregs, and biological sludge), having churned out a volume of 42 kg/admt.

In our forestry activities, the most significant waste is Class I waste, generated in the maintenance of forestry equipment, whose destination is reported in the table below. Hazardous materials are sent to duly licensed companies, which direct them to co-processing or to industrial waste landfills in line with regulation. There are audits in operational areas to detect failures and opportunities for process improvement.

DESTINATION OF WASTE				
Bahia – Forestry				
Materials	Classification	Volume in 2017	Volume in 2018	Destination
Fluorescent lamps	Class I	450 units	410 units	Shipped to a licensed company - decontamination
Pesticide packaging	Class I	7,144 drums	5,145 drums	Shipped to the Association of Agrochemicals Resellers of Feira de Santana Region (Ardarfs) – recycling
Paperboard	Class II A	13.5 tons	0.7 ton	Shipped to the Collectors and Recyclers of Alagoinhas – (Coral) Cooperative – recycling
Plastic	Class II A	2.2 tons	0.8 ton	
Tires	Class II B	6.5 tons	3.2 tons	Shipped to a licensed company – recycling
Lubricant oil	Class I	16.5 tons	16.2 tons	Sold – refining
Scrap	Class II B	47.47 tons	35.03 tons	Sold – recycling
Common waste	Class II A	17.5 tons	12.09 tons	Shipped to a licensed and controlled landfill
Contaminated soil	Class I	17.5 tons	16.8 tons	Shipped to a licensed company – co-processing
Contaminated items – miscellaneous	Class I	15.0 tons	15.54 tons	
Oil filters	Class I	3.0 tons	5.44 tons	
Contaminated hoses	Class I	4.5 tons	12.6 tons	



## DESTINATION OF WASTE

### Bahia – Industrial

Materials	Classification	Volume in 2017	Volume in 2018	Destination
Bark, sawdust, and others (from the woodyard)	Class II	52,128 tons	51,800 tons	Sold (biomass for electric power generation)
Sludge and screen from ETE (Effluent Treatment Plant)	Class II	8,410 tons	33,519 tons	Sold (primary fibers to paper mills and recyclers; fertilizer and biomass for electric power generation)
Lime rejects from the recovery process	Class I	1,270 tons	320 tons	Donation to Cetrel (Treatment of liquid waste and industrial waste) from the Camaçari Industrial Hub, to correct pH of wastewater
Grits, dregs, and mud from the recovery process	Class II	33,547 tons	27,633 tons	Grits: industrial waste landfill Dregs: industrial waste landfill and organic fertilizer Lime mud: traded for the manufacturing of fiber cement and ceramic tiles, and soil correction
Knots and rejects from the fiberline	Class II	22,200 tons	25,234 tons	Sold (biomass for electric power generation and organic fertilizer)
Metal (non-industrial)	Class II	1,306 tons	334 tons	Sold (recycling)
Plastic (non-industrial)	Class II	43 tons	43 tons	Sold (recycling)
Paperboard (non-industrial)	Class II	151 tons	181 tons	Sold (recycling)
Glass (non-industrial)	Class II	3.32 tons	4.14 tons	Donated (recycling)
Light bulbs (non-industrial)	Class I	1.44 ton	0.91 ton	Shipped to a licensed company
Batteries	Class I	2.09 tons	3.82 tons	Shipped to a licensed company
Used lubricant oil	Class I	43.94 tons	46.16 tons	Shipped to a licensed company
Healthcare waste	Class I	0.04 ton	0.02 ton	Shipped to a licensed company
Contaminated drums	Class I	101.10 tons	13.41 tons	Shipped to a licensed company

DESTINATION OF WASTE				
São Paulo - Industrial				
Materials	Classification	Volume in 2017	Volume in 2018	Destination
Metal and plastic drums	Class I	491 units	0	Shipped to a licensed company
Lubricant oil	Class I	7,820 liters	4,380 liters	Shipped to a licensed company
Light bulbs	Class I	4,000 units	4,123 units	Shipped to a licensed company
Waste from outpatient care	Class I	8.3 kg	10.0 kg	Shipped to a licensed company
Tires	Class I	703 units	641 units	Shipped to a licensed company
Cooking oil	Class I	340 liters	339 liters	Shipped to a licensed company
Grits, dregs, mud, and lime rejects from the recovery process	Class II	3,999 tons	4,028 tons	Used for soil correction
Ashes from the power boiler	Class II	4,189 tons	5,191 tons	Used for soil correction
Effluent Treatment Plant sludge	Class II	1,480 tons	1,356 tons	Used for soil correction
Carbon steel scrap	Class II	223 tons	151 tons	Shipped to a licensed company
Stainless steel scrap	Class II	7.2 tons	3.2 tons	Shipped to a licensed company
Waste - office supplies	Class II	118 tons	142 tons	Shipped to a recycling plant
Glass-wool and fiberglass	Class II	8.4 tons	39.0 tons	Shipped to a licensed industrial landfill
Canteen waste	Class II	33,514 liters	26,120 liters	Forwarded to a licensed city landfill
Recyclable waste	Class II	3.6 tons	5.9 tons	Shipped to the Association of People with Disabilities of Lençóis Paulista (Adeflip)

DESTINATION OF WASTE				
São Paulo - Forestry				
Materials	Classification	Volume in 2017	Volume in 2018	Destination
Empty agricultural products packaging	Class II	4,674 kg	8,468 kg	Shipped to the Association of Agricultural Input Distributors of the State of São Paulo (Adiaesp) collection station in São Manuel
Contaminated waste	Class I	3,081 kg	4,000 kg	Shipped to co-processing in a licensed company

## Emissions

Every year, Bracell prepares a greenhouse gas emission inventory based on the GHG Protocol methodology to identify, qualify, and quantify its main emission sources. Based on this inventory, Bracell seeks to adjust its processes and procedures for emission reductions in all operations.

**Total emissions dropped 4.7%, from 397,699 to 378,900 tons of CO<sub>2</sub>e.**

In 2018, total emissions (scope 1 and 2) were 4.7% lower as compared to the previous year – dropping from 397,699 to 378,900 tons of CO<sub>2</sub>e. This decrease is due to:

- the reduction of fuel combustion at stationary emission related to the reduction of production volume;
- emission factor of the Electric Power Distribution Grid, as in 2018 the energy produced in Brazil came from cleaner sources;
- improvements made in soil management in Bahia's forestry sector

GREENHOUSE EFFECT GASES (TONS OF CO <sub>2</sub> E) [GRI 305-01, 305-02]					
Unit	Type	2017		2018	
		Forestry	Industrial	Forestry	Industrial
Bahia	Direct (Scope 1)	22,643	226,598	12,429	235,857
	Indirect (Scope 2)	90	40,329	76	31,782
	<b>Subtotal</b>	<b>22,733</b>	<b>266,927</b>	<b>12,505</b>	<b>267,639</b>
São Paulo	Direct (Scope 1)	13,215	94,510	11,769	86,529
	Indirect (Scope 2)	12	302	10	448
	<b>Subtotal</b>	<b>13,227</b>	<b>94,812</b>	<b>11,779</b>	<b>86,977</b>
<b>Bracell</b>	<b>Total per year</b>	<b>397,699</b>		<b>378,900</b>	

Note: This does not include biogenic CO<sub>2</sub> emissions from São Paulo



Direct emissions (Scope 1) of forestry activities come from the use of fuel from the power generators, from the vehicle fleet, the harvesting and loading equipment, as well as the agricultural activities such as soil preparation for culture through liming and the application of fertilizers.

In the industrial area, the direct emission sources are fossil fuel and biomass burning by fixed equipment, the fleet and machinery, and the decomposition of waste sent to the company's landfill.

Indirect emissions (Scope 2) of both the forestry and industrial units are related to the consumption of power from the national grid and other external sources.

One of the important advancements at Bahia in 2018, was the investment of R\$ 42 million (with the disbursement of R\$ 25 million in that same year) in the purchase of a fourth electrostatic precipitator that will commence operation in 2019 to help increase the environmental control of particulate matter emissions. With this type of equipment installed in the recovery boiler and in the lime kiln, and a gas incinerator, the industrial unit has been able to reduce the emission rates of odorous, pollutants, and greenhouse effect gases.

**Carbon footprint:** In 2018, the carbon footprint of the Bracell Bahia dissolving pulp was quantified at 0.842 kg CO<sub>2</sub>e per kilogram of dissolving pulp at the exit gate of the industrial unit. Compared to 2017, there was a 1.9% increase in the carbon footprint, whereas a 4.7% reduction in total greenhouse effect gas emissions may be seen. It is because the footprint calculation is relative to the production volume, which in 2018 was lower than in the previous year. This quantification comprises the entire Bracell Forestry and Industrial Production Process. No carbon footprint calculation is made for São Paulo operations. [GRI 305-4]

**Carbon sequestration:** Bracell calculates the carbon sequestration by its eucalyptus crops based on the average annual biomass increase. By using such information, an absorption of 4.9 million tCO<sub>2</sub> per year is estimated (2.4 million tCO<sub>2</sub> at Bahia and 2.5 million tCO<sub>2</sub> at São Paulo). Most of the material obtained from harvesting operations – the wood itself – is dedicated to producing dissolving pulp. The parts that are not used in this activity, such as twigs, leaves, bark, and roots, are also considered in the calculation of emissions in the harvested area, assuming that all previously absorbed carbon will be sent back as CO<sub>2</sub>.

**Bracell has absorbed 4.9 million tCO<sub>2</sub> per year through its eucalyptus plantations.**



## Energy [GRI 302-01]

Bracell's industrial units are self-sufficient in power generation for our operations, thus contributing to protecting the environment and saving financial resources. The power is derived from renewable sources such as wood components and other substances coming from the dissolving pulp production process. Bahia also uses complementary natural gas and liquefied petroleum gas.

### GENERATION, CONSUMPTION, PURCHASE, AND SELLING OF ELECTRICAL ENERGY AT THE MILLS (MWH)

Unity	Year	Purchased energy	Generated energy	Consumed energy	Sold energy
Bahia	2017	17,943	474,393	435,044	57,293
	2018	17,617	466,656	429,498	54,775
São Paulo	2017	3,811	238,899	176,494	66,215
	2018	6,457	224,990	169,210	62,237

### AUXILIARY FUELS USED IN BAHIA MILL

Year	Natural Gas (NG) in m <sup>3</sup>	Liquefied Petroleum Gas (LPG) in tons
2017	79,726,196	626
2018	78,954,554	811

In 2018, energy consumption recorded a slight decrease in Bahia and São Paulo mills, 1.3%, and 4.1%, respectively, compared to 2017. This decrease is due to the operational context that

involved, for instance, the national truck driver's strike that impacted several production sectors.

[GRI 302-04]

### ENERGY CONSUMPTION OF THE BAHIA FORESTRY AREA (MWH)

Year	Energy purchased from the Power Supply Company
2017	970
2018	1,022

*Note: Energy consumption by the forestry area started being reported in this publication.*

Bracell has developed initiatives and projects intended to increase operational stability and the use of energy rationally, which should have a positive impact on energy consumption.

Since 2012, São Paulo has relied on the Internal Energy Conservation Commission (CICE) to

propose improvements concerning energy consumption. CICE makes energy diagnostics at the mills and monitors thermal and electric energy consumption indicators, and makes proposals, implements actions, and monitors actions of rational energy use.

# 08



## Overview

The Bracell 2018 Sustainability Report is an important communication and accountability tool for our stakeholders. It was developed based on the guidelines of the Global Reporting Initiative (GRI), the non-profit organization that created the world's most widely used standard for reporting organizational performance. In 2018, the company made the transition from the G4 version to GRI Standards, using the option "essential". [GRI 102-54]

The information in this publication focuses on aspects such as governance, management, and operational, social, and environmental performance, covering the period from January 1st to December 31st of 2018. Since its issue frequency is annual, the previous report refers to the company's performance of 2017, which was published in July 2018. [GRI 102-50, 102-51, 102-52]

Should you be in doubt about any information published in this document, please contact us and send your email to [faleconosco@bracell.com](mailto:faleconosco@bracell.com). [GRI 102-53]

## Definition of materiality [GRI 102-46]

In 2016, Bracell inquired its strategic demographics to learn about which, in their view, were the priorities issues for business sustainability. The goal of this process was to obtain inputs to guide project management and prioritization to help define the topics to be addressed in the annual report.

A total of 420 people were interviewed: 324 employees and 96 external stakeholders' representatives, spread over the 21 municipalities where the company operates. External groups included the govern-



# ABOUT THIS REPORT

ment, NGOs, associations, unions, sector entities, farmers of the Forestry Producer Programme, service providers, the press, and other demographics.

[GRI 102-40, 102-42]

The survey performed was two-fold: an electronic form sent over the internet and field visits for on-site interviews. In both formats, participants were able to express their opinions on the potential impacts, hazards, and opportunities related to the company's activities, indicating the relevance level of different topics for business sustainability. The basis for this analysis was the list of topics addressed by the GRI.

[GRI 102-43]

The following are the topics considered more relevant to Bracell's business in the opinion of stakeholders. The GRI indicators that address these issues in this Sustainability Report are also included. If you wish to learn about the compa-

ny's vision, goals, and company progress on any subject, please refer to the corresponding GRI topic number.



**324**

employees participated in the query



**96**

external stakeholders' representatives

## BRACELL'S MATERIAL TOPICS [GRI 102-44, 102-47, 103-01]

Dimensions/ aspects	Material topics	GRI Standards Indicators corresponding to the topics in this report
SOCIAL AND LABOR	Occupational health and safety	403-04, 403-09, 403-10
	Job creation and people development	102-07, 102-08, 404-01, 413-01
	Equal earnings for men and women	202-01, 202-02, 401-02
	Assessment of suppliers based on labor practices	412-03, 414-01
HUMAN RIGHTS	Prohibition of child or slave labor	102-16, 408-01, 412-02
	Diversity, equal opportunity and non-discrimination	102-16, 404-03, 405-01, 406-01, 412-02
	Respect for human rights	410-01, 412-01, 412-02, 412-03
	Complaints of human rights impacts	102-16, 412-01
	Freedom of association	102-41, 407-01
	Assessment of suppliers based on human rights	412-03, 414-01
	Non-discrimination	102-16, 404-03, 405-01, 406-01, 412-02
GOVERNANCE	Ethics and compliance with laws and regulations	102-16, 205-02, 205-03, 206-01
ECONOMICS	Good economic performance and market presence of the company	102-07
	Indirect economic impacts	203-01, 203-02

## BRACELL'S MATERIAL TOPICS [GRI 102-44, 102-47, 103-01]

Dimensions/ aspects	Material topics	GRI Standards Indicators corresponding to the topics in this report
ENVIRONMENTAL	Water consumption	303-03, 303-04
	Effluent and waste management	306-02, 306-04
	Biodiversity, environmental protection and environmental impact management	304-04, 305-01
	Greenhouse gas emission control	305-01, 305-02, 305-04
	Reuse of materials to be disposed of	306-02
	Energy consumption	302-01, 302-04
	Type of materials used	301-02
SOCIETY AND CUSTOMERS	Compliance with laws and regulations	307-01, 416-02, 417-02, 419-01
	Anti-corruption	205-02, 205-03
	Local communities	413-01
	Customer Health and Safety	416-01, 416-02
	Assessment of suppliers based on social impacts	412-03, 414-01
	Complaints about impacts on society	416-02, 417-02, 419-01
	Unfair competition	206-01



# 09.

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
102-01	Name of the organization	Bracell Limited with divisions: Bracell Bahia Specialty Cellulose and Bracell São Paulo.
102-02	Main activities, brands, products, and or services	Pages 8, 10-11
102-03	Location of headquarters	Page 8
102-04	Number of countries where the organization operates	Page 8
102-05	Type or legal structure of proprietorship	Bracell Limited is a subsidiary of the RGE group.
102-06	Markets served	Pages 8, 10, 11, 22 and 23
102-07	Size of the organization	Pages 8, 18-25

# GRI STANDARDS CONTENT SUMMARY

[GRI 102-55]

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
102-08	Information on employees and other workers' profile	Pages 28-31 To next report, Bracell will inform the number of outsourced personnel, by gender.
102-09	Supply chain	Page 13
102-10	Major changes to the structure of the organization during the period covered by this report	Page 9
102-11	Explanation of whether and how the organization applies the precautionary principle	Pages 15-16
102-12	Externally developed economic, environmental and social charters, principles or other initiatives to which the organization subscribes, or which it endorses	Pages 14-15

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
102-13	Main engagements in associations and or national and international bodies	<p>The company participates in several committees, forums, associations, and unions, with particular emphasis on:</p> <ul style="list-style-type: none"> <li>• Abaf (Bahia State Forest Based Companies Association);</li> <li>• ABNT (Brazilian Technical Standards Association);</li> <li>• ABTCP (Brazilian Pulp and Paper Technical Association);</li> <li>• Cetesb Pulp and Paper Environmental Chamber;</li> <li>• CBHRNI (Recôncavo Norte and Inhambuê Water Basins Committee);</li> <li>• Cepam (State Environmental Council);</li> <li>• Cofic (Camaçari Industrial Development Committee);</li> <li>• Cisnorba (North Forest District Interactive Safety Council);</li> <li>• CONERH (State Council for Water Resources);</li> <li>• APA Litoral Norte Management Council;</li> <li>• APA Joanes/Ipitanga Management Council;</li> <li>• APA Rio Batalha Management Council;</li> <li>• Fieb (Bahia State Industry Federation);</li> <li>• Florestar SP (São Paulo State Association for Planted Forest Producers, Suppliers, and Consumers);</li> <li>• IBA (Brazilian Tree Industry);</li> <li>• Ipef (Forest Study and Research Institute);</li> <li>• SIF (Forest Investigation Society);</li> <li>• Sindpacel (Bahia State Union for Pulp and Paper, Paperboard, Wood pulp for paper and paperboard artifacts Industries).</li> </ul>
102-14	Statement from the senior decision-maker	Pages 4-7



GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
102-15	Main impacts, risks, and opportunities	Pages 4-7
102-16	Values, principles, standards, and norms of conduct of the organization, such as codes of conduct and ethics	Pages 11-13
102-18	Governance structure, including committees	<p>All Bracell units share the same corporate governance model. As part of a global group, we are committed to maintaining governance based on equally global standards that bring together and aggregate the experiences and behaviors desired and admired by organizations, customers, partners, and employees worldwide. We also embrace the RGE Group's 5Cs philosophy, which guides us to do what is good for the community, good for the country, good for the climate, and good for our customers. And only then will it be good for the company.</p> <p>For further information, please visit: <a href="https://www.rgei.com/about/governance-leadership">https://www.rgei.com/about/governance-leadership</a></p>
102-40	List of stakeholders engaged with the organization	Pages 70-71
102-41	Percentage of total employees covered by collective bargaining agreements	Page 31
102-42	The basis for identifying and selecting stakeholders with whom to engage	Pages 70-71
102-43	Approach to stakeholder engagement	<p>Pages 70-71</p> <p>In addition to the contents stated, Bracell holds meetings with communities, city government, state government, and industrial institutions.</p>
102-44	Key topics and stakeholder concerns and measures adopted by the company	Pages 72-73
102-45	List of entities included in the financial statements	Bracell has not disclosed its financial statements since it became a privately held company.
102-46	Process for defining report content and limits.	Pages 70-71

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
102-47	List of material aspects identified in the process of content definition.	Pages 72-73
102-48	Explanation of the effect of any restatements of information provided in previous reports	After the review of internal indicators and the standardization of metrics, Bracell updated information shared in the 2017 report, such as the number of environmental management and social projects.
102-49	Significant changes as compared to previous years as for the list of material topics and limit of topics addressed.	There were no changes in material topics and their limits since we used the same materiality matrix from 2017.
102-50	Reporting period	Page 70
102-51	Date of the latest report	Page 70
102-52	Report issuance cycle	Page 70
102-53	Contact data for questions regarding the report	Page 70
102-54	Report premises in accordance with the GRI Standards	Page 70
102-55	GRI table of contents	Page 74
102-56	External validation	The sustainability report was not submitted to external verification.
103-01	Material aspects and its limits	Pages 72-73
103-02	Management approach to material topics	Pages: 12-16; 19-24; 26-27; 31-34; 36-37; 41-46; 50-53; 60-63; 67-69
103-03	Evaluation of the management approach	

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
201-03	Defined fringe benefit plan obligations and other retirement plans	Page 32
202-01	The ratio of standard entry-level salary by gender as compared to local minimum wage	Page 31
202-02	The ratio of senior management hired from the local community	Page 29
203-01	Impact of infrastructure investments provided for public benefit	Pages 20-21
203-02	Description of major indirect economic impacts	Pages 41-46
204-01	Policies, practices and expenditures on local suppliers' ratio	Page 13
205-02	Communication and training on anti-corruption policies and procedures	Page 12
205-03	Confirmed incidents of corruption and actions taken	Page 12
206-01	Legal suits for anti-competitive behavior, anti-trust, and monopoly practices	Page 12
301-02	Percentage of recycled materials used	Bracell does not use materials from recycling.
302-01	Energy consumption reduction within the organization	Pages 68-69
302-04	Reduction of energy consumption	Page 69
303-03	Water withdrawal	Pages 60-62
303-04	Water disposal	Pages 62-63
304-03	Habitats protected or restored	Pages 50-52



GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
304-04	IUCN Red List species and national conservation list of species with habitats in areas impacted by operations	Pages 53-57
305-01	Direct greenhouse gas emissions GHG (Scope 1)	Page 67
305-02	Indirect GHG emissions from energy acquisition (Scope 2)	Page 67
305-04	GHG emissions intensity	Page 68
306-02	Waste by type and disposal method	Pages 63-67
306-04	Weight of hazardous waste transported - imported, exported or treated	Pages 63-67
307-01	Non-compliance with environmental laws and regulations, including the monetary value of major fines	In 2018, at both national and international judicial or administrative courts, Bracell was not prosecuted for non-compliance with major environmental laws and regulations worth mentioning.
308-01	New suppliers that were selected by using environmental criteria	Bracell does not use environmental criteria to select new suppliers.
401-01	Total number and rate of new employee hires and employee turnover by age group, gender, and region	Page 28
401-02	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Pages 31-32
402-01	Minimum notice periods regarding operational changes	There is no formal minimum notice period regarding operational changes. However, the company maintains frequent dialogues with its professionals and employee representation entities, so that any operational changes are communicated in due time.

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
403-04	Employee participation, consultation, and notice given on occupational health and safety	Page 32
403-09	Work-related injuries	Page 33
403-10	Work-related health conditions	In 2018, Bracell did not record any case of work-related health conditions involving its employees.
404-01	Average hours of training per year per employee, by gender and functional category	Pages 34-35
404-03	Percentage of employees receiving regular performance and career development reviews, by gender and employee category	Page 31
405-01	Disposition of groups in charge of corporate governance and description of employees, by category, gender, age group, minority group, and other indicators of diversity.	Pages 28-31
406-01	Incidents of discrimination and the corrective actions taken	Page 12
407-01	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Bracell has not identified operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.
408-01	Operations and suppliers at relevant risk for incidents of child labor	Bracell has not identified operations and suppliers at risk for incidents of child labor.
409-01	Operations and suppliers at relevant risk for incidents of forced or compulsory labor	Bracell has not identified operations and suppliers at risk for incidents of forced or compulsory labor.
410-01	Security personnel trained in human rights policies or procedures	At Bahia, 100% of the Property Security team receives training on the importance of a harmonious relationship with the communities in the regions where the company operates, covering human rights aspects. At São Paulo, this training has not been applied.

GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
411-01	Incidents of violations involving indigenous people's rights.	Bracell has not recorded incidents of violations involving indigenous people's rights.
412-01	Operations that have been subject to human rights reviews or impact assessments	Page 13
412-02	Employee training on human rights policies or procedures	Page 12
412-03	Substantial investment agreements and contracts that include human rights clauses or that underwent this type of assessment (total number and percentage)	Page 13
413-01	Operations with local community engagement, impact assessments, and development programs	Pages 36-41
414-01	New suppliers that were selected based on social criteria (e.g., labor practices, human rights)	Page 13
414-02	Negative social impacts on the supply chain and the actions taken	Page 13
415-01	Political contributions	Bracell has not made political contributions in 2018.
416-01	Percentage of relevant product and service categories for which health and safety impacts are assessed	Page 24
416-02	Incidents of non-compliance concerning health and safety impacts of products and services	Page 24
417-01	Requirements for product and service information and labeling	Bracell follows internal labeling procedures and meets the standards of the Globally Harmonized System of Classification and Labeling of Chemicals. Although it is Cerflor certified, the company has chosen not to use the seal corresponding to this standard and is therefore exempt from specific labeling requirements determined by the standard. Page 24 (additionally)



GRI STANDARDS	DESCRIPTION OF INDICATOR	RESPONSE OR RESPONSE LOCATION
417-02	Incidents of non-compliance concerning product and service information and labeling	In 2018, no non-compliance regarding this topic was recorded.
418-01	Substantiated complaints concerning breaches of customer privacy and losses of customer data	In 2018, no non-compliance regarding this topic was recorded.
419-01	Non-compliance with laws and regulations in the social and economic area (monetary value of fines and number of non-monetary sanctions)	Page 12

***Bracell***

