



Sustainability

Report

20
23

Bracell



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Message from Our President

GRI 2-2

Since our company's inception in 2003, we have been guided by two core convictions that are intrinsically connected. Firstly, we think long term. Secondly, whatever we do must be good for the community, country, climate and customers, and only then will it be good for the company. This ethos brings to life our purpose and materializes our founder's 5Cs philosophy (Community, Country, Climate, Customer, and Company).

Building upon these principles, last year we launched Bracell 2030—a long-term sustainability roadmap comprising 14 targets and commitments on climate, biodiversity, sustainable pulp and paper production, and people and communities, aligned with the UN Sustainable Development Goals (SDGs).

Through Bracell 2030, we are pushing beyond what is already being done in the sector by advancing a set of ambitious sustainability targets and commitments that are setting a benchmark in our industry. To raise wider discussion on sustainability in our industry, we unveiled Bracell 2030 in collaboration with Brazilian business newspaper *Valor Econômico*.

The launch event, held in São Paulo last October, convened industry leaders, experts, opinion makers, and government officials to chart pathways for advancing sustainability in the pulp and paper sector.

Another highlight from the past year was the new positioning of our corporate brand. The new tagline, "Bracell - Making a difference in every detail," encapsulates our essence and clearly articulates our vision for creating value across the supply chain, positively impacting each and every stakeholder.

Also in 2023, we updated our Sustainability Policy and launched the Bracell Human Rights Policy; we signed further agreements with government bodies to protect over 105,000 hectares of public native forests as part of our One-for-One Commitment; and we benefited 164,000 people through Bracell Social initiatives spanning education, income generation, empowerment, and preservation of traditional community culture.

In our mill operations, we expanded production of specialty products at our Bahia facility, becoming the global market



Through Bracell 2030, we are pushing beyond what is already being done in the sector by advancing a set of ambitious sustainability targets and commitments that are setting the standard for our industry.

leader in the acetate segment. Our two new flexible lines in Lençóis Paulista (SP) ramped up to full capacity, and we established Bracell Papéis following our acquisition of OL Papéis, marking our foray into the tissue market in Brazil.

Our strong performance in the year was made possible by a team that is both technically capable and engaged around our purpose of making a difference in every detail.

I would like to thank each and every one of you who helped to make 2023 a transformative year for Bracell, delivering on our commitments and advancing to position us as leaders in sustainability in our industry.

Praveen Singhavi
President

Bracell
São Paulo

About Bracell

Bracell is a globally leading producer of dissolving pulp

Who we are

GRI 2-1, 2-2, 2-6

Welcome to Bracell, a Brazilian-based, world-leading producer of dissolving pulp and a member of the RGE group of companies—a conglomerate of world-class businesses in the resource-based manufacturing industry.

From our inaugural operations in Bahia, Northeastern Brazil, established in 2003, we have since expanded into São Paulo, in 2018. Our forestry operations are located in these two states as well as in Sergipe. Our operations in Brazil employ a workforce of 7,391 people*.

* As of 12/31/2023



Mission

Improving lives by developing resources sustainably.



Vision

To be a globally leading producer of dissolving pulp, with the best management fully committed to the sustainable use of natural resources; our aim is to consistently create value for our Community, Country, Climate, Customers and the Company.



Core values

We believe that in order to fulfill our mission and achieve our vision for the future, leaders and employees must always comply with T.O.P.I.C.C. values.

T.

O.

P.

I.

C.

C.

We are aligned by our common purpose and work together as a **complementary Team.**

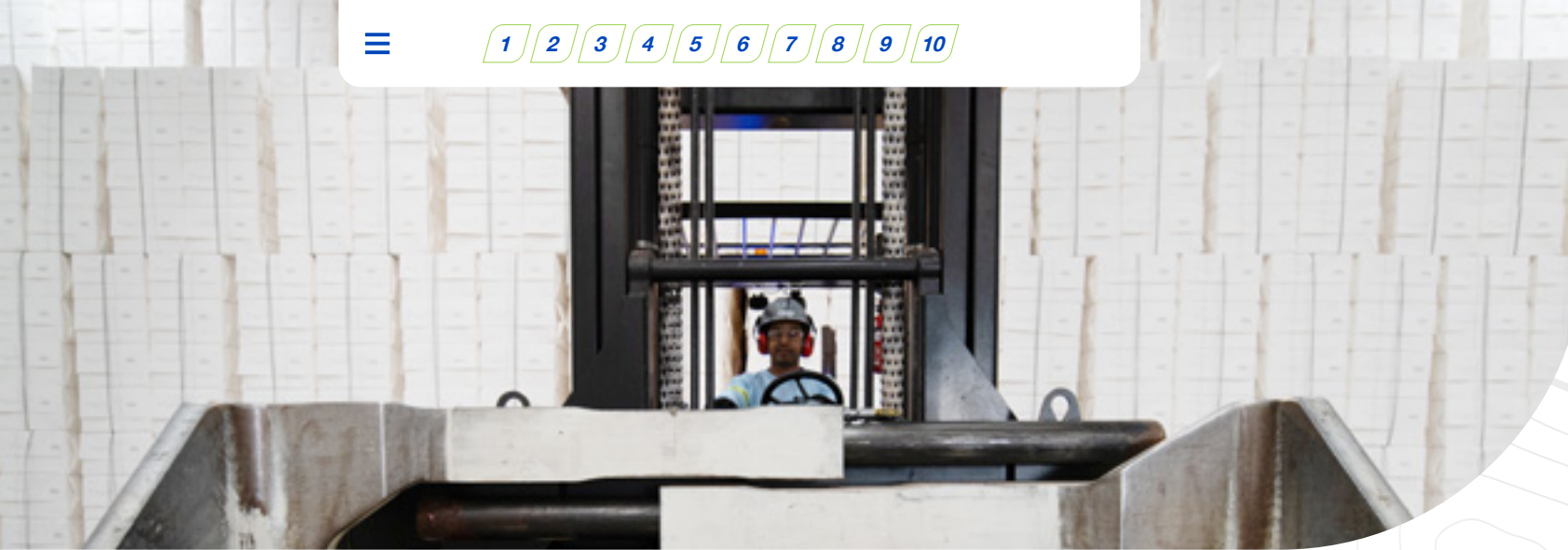
We take **Ownership** to achieve outstanding results and seek value at all times.

We develop our **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.**



Products and markets

GRI 2-6

Our products are made from eucalyptus pulp, a natural, biodegradable polymer produced from pulpwood sourced from certified eucalyptus plantations. Bracell's pulp products are used in dozens of items, such as:

Bracell Papéis

GRI 2-2, 2-4

Reflecting the RGE Group's commitment to continued investment in Brazil, in 2023 Bracell completed the acquisition of OL Papéis, a baby diaper and tissue paper manufacturer with a 15-year presence in the Northeast—tissue paper is a soft, highly absorbent type of paper used to produce toilet paper, paper towels, facial tissues and napkins and baby diapers.

Our new acquisition, now renamed Bracell Papéis, operates two mills in Bahia—in the municipalities of Feira de Santana and São Gonçalo dos Campos—one in Pernambuco, in the city of Pombos and one mill in São Paulo, in Lençóis Paulista, built from 2023 to 2024, to be commissioned in the third quarter of 2024. It is the second largest manufacturer of tissue paper in Brazil's Northeast region, with a portfolio that includes five toilet paper brands, five paper towel and napkin brands, and one diaper brand.

Innovation and employees training

In 2023, Bracell Papéis prioritized product innovation to reduce the use of raw materials and process losses, as well as training operational teams.



1

Bleached eucalyptus kraft pulp

Printing and writing papers

Tissue paper (toilet paper, paper towels and napkins)

Packaging paper

Specialty papers such as filters, self-adhesive papers, adhesive tape and wallpaper

2

Rayon-grade dissolving pulp

Viscose and Lyocell fibers used in fabrics and nonwovens

Viscose filaments used in delicate fabrics such as women's underwear

Wet wipes

Cosmetic masks

Cellophane packaging films

Viscose pads for household and industrial cleaning applications

3

Specialty-grade pulp

Cellulose acetate flakes (cigarette filters, textile filament yarns and fibers for nonwovens)

Pharmaceutical and food products (produced from microcrystalline cellulose)

Printing inks, specialty inks, enamels and cosmetics (produced from nitrocellulose)

Industrial filament used to produce high performance tire reinforcement

Cellulose ethers and sausage casings (specialty applications)

4

Tissue & Personal care

Toilet paper

Paper towels

Baby diapers

Our operations

GRI 2-6



Pulp and Paper

2 sites

Lençóis Paulista (São Paulo)
Camaçari (Bahia)



Tissue

3 sites

Feira de Santana (Bahia)
Pombos (Pernambuco)
Lençóis Paulista (São Paulo)



Forest Areas

In the states of Bahia, São Paulo and Sergipe



Port

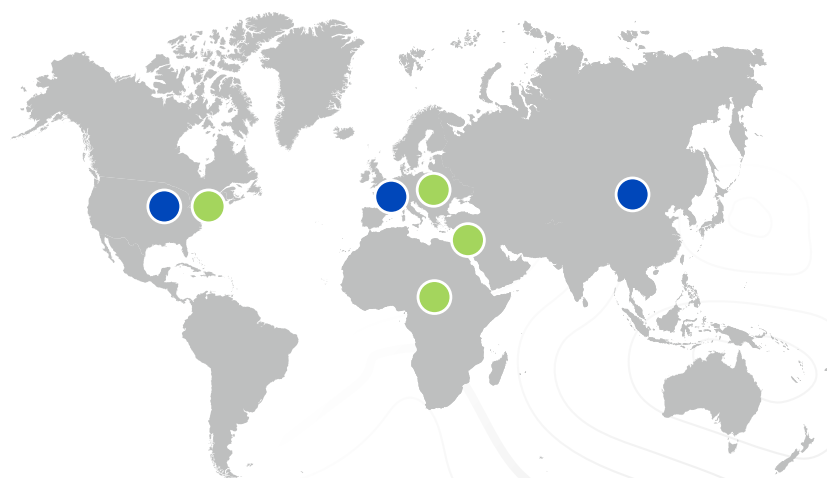
Break bulk Terminal Santos (São Paulo)

Commercial hubs

- Asia
- EMEA (Europe, Middle East and Africa)
- United States

Specialty pulp distribution centers

- United States
- Europe
- China



Total production capacity

3 million
metric tons
of kraft pulp per
year; or

2 million
metric tons
of dissolving pulp
per year.

Bracell has forestry operations in
159 municipalities across different
Brazilian states.

Planted eucalyptus forests*

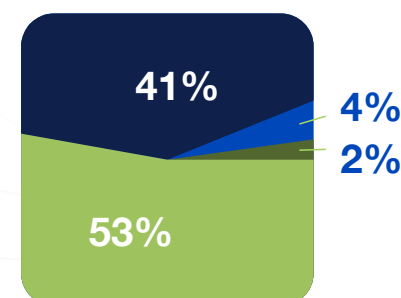


115
municipalities
in the state of
São Paulo

41 municipalities
in the state of
Bahia
3 municipalities
in the state of
Sergipe

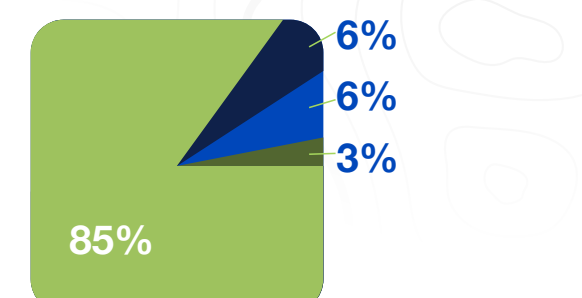
Main markets served in 2023

Pulp produced in Bahia



- Asia
- Europe
- United States
- Other

Pulp produced in São Paulo



- Asia
- Europe
- Brazil domestic market
- Other

* In 2022, Bracell established forestry operations in Mato Grosso do Sul and included information on these operations in that year's report. In 2023, these operations were merged into MS Florestal, also a member of the RGE Group. Because they are no longer owned by Bracell, the data published in 2022 about operations in Mato Grosso do Sul is no longer included within the scope of this report. [GRI 2-4](#)

Mills

Our industrial sites use processes and technology that create positive environmental value. Our two flexible lines in Lençóis Paulista (SP), operational since August 2021, were developed in line with the Best Available Techniques (BAT) Reference Document for the Production of Pulp, Paper, and Board.

In addition, Bracell has undertaken commitments to reducing water consumption, minimizing landfilling of industrial waste, and enhancing chemical recoveries. Water management, effluent treatment, and waste handling are also focal areas for Bracell.

The two flexible lines at our São Paulo site produce over 80% of Bracell pulp every year.

The mill facilities have the following sustainability attributes:

100% renewably sourced electricity

The electricity generated on site is sufficient to meet the mill’s needs, with a surplus of between 150MW to 180MW sold through the national grid. This green, high-quality electricity can supply power to 750,000 homes or around 3 million people.

Fossil fuel-free operations

The lowest air emissions in the industry, and no perceived odors

The lowest water consumption rates in the industry in Brazil

Tertiary effluent treatment

Bracell featured on Discovery Chanel

A documentary about our Lençóis Paulista facility, titled “Engineering Challenges: The Mill of the Future,” released in November 2023, is available for streaming on the Discovery+ platform.

Forests

Our Sustainable Forestry Model aims to minimize the impact on the environment, using the best practices for conserving soil and water resources and protecting biodiversity. Bracell has been committed to zero deforestation since its inception, a commitment that is formalized in our [Sustainability Policy](#).

Bracell’s forestry management practices include

- Cultivating eucalyptus in forest mosaics**, interspersing plantation areas with native forests (including Atlantic Forest, *Cerrado*, and *Caatinga* formations), thereby enhancing biodiversity, ecosystem services, and scenic landscapes
- Implementing Natural Pest Control through Integrated Pest and Disease Management (IPDM)**. Using genetic resistance and natural predators helps to maintain environmental balance, with chemical interventions left as a last resort; and
- Conserving protected areas and biodiversity**. Bracell has no operations in Protected Areas or Legal Reserves
- Retaining post-harvest residue**, such as bark, branches, and leaves. This reduces reliance on chemical fertilizers by adding organic matter into the soil
- Planting in already disturbed land** (pasture and/or degraded areas)

Cultivate Eucalyptus

As an incentive for sustainable forestry operations, we have introduced a program, called *Cultivate Eucalyptus* that provides technical support to partner growers.



Forestry Research & Development

Bracell continually invests in forestry R&D. We work on three major fronts to ensure a sustainable supply of pulpwood in the medium and long term, and ultimately the sustainability of the business.

1

Classical genetic improvement

Bracell is committed to not using genetically modified organisms (GMO), developing its eucalyptus clones through classical genetic improvement, focused on generation, evaluation and selection of improved clone efficiency through successive cycles. Genetic improvement also focuses on developing techniques to improve the cloning species.

2

Forestry and forest management

We work to continuously improve our processes related to climate zoning (learn more on GRI 305); soil conservation, preparation and fertilization; and sustainable management of pests, diseases, and weeds.

3

Forestry extension and technology transfer

Technical assistance and technology transfer for forestry operations.



Bracell is committed to not using genetically modified organisms (GMO). We instead develop our eucalyptus clones through classical genetic improvement.

Industrial Research & Development

We conduct research and studies to:

Pulpwood development

- **Evaluate** pulpwood quality at source plantations and potential impacts on the production process and product quality
- **Support** forestry research and development to assess pulpwood quality and develop new clones and forestry practices

Product development

- **Identify** new product opportunities, meeting the needs of our customers from different segments

Process development

- **Continuously** production processes to enhance competitiveness through solutions focused on quality, productivity and cost
- **Identify** best available technologies for our laboratories and mills

Biorefineries and the Environment

- **Develop biorefinery** projects to create value from by-products
- **Support research and development** focused on solutions for environmental and natural resource use, contributing to our Bracell 2030 targets



Distribution logistics

São Paulo

Bracell operates its own truck fleet to transport pulp from the Lençóis Paulista (SP) site to Pederneiras (SP). We have also started trials using electric trucks for this shipping route (read more on [page 98](#)).



At the Port of Santos, our storage and shipping operations are 100% owned by Bracell.

Bahia

Bracell is the single largest user of the Port of Salvador (BA) by cargo handled.



In 2023, we started new warehouse operations at our Bahia site, with a total capacity of 27,000 metric tons.



Certifications

ISO 9001:2015 and ISO 14001:2015

Bracell's mill operations are certified to ISO 9001:2015 and ISO 14001:2015 for compliance with quality and environmental management system requirements. Bracell's eucalyptus plantations in Bahia additionally hold ISO 14001:2015 certification.

ISEGA

Bracell's Bahia and São Paulo mills additionally have certification attesting that the pulp they produce is compliant with requirements for food contact. This certification, conferred by the Isega Institute in accordance with standards issued by the German Federal Institute for Risk Assessment and by the US Food and Drug Administration (FDA), underscores our commitment to quality and safety. In addition, our São Paulo mill has a certificate from the Guangzhou Customs District Technology Center (IQTC), in compliance with Chinese regulation GB 4806-8, which also certifies that Bracell pulp is compliant with requirements for food contact.

Halal and Kosher

Our operations in Bahia are audited for Halal certification, providing assurance that our manufacturing process complies with Islamic ethics, moral, and legal standards, and for Kosher certification, providing assurance that our process quality control and safety comply with Jewish dietary laws.

Cerflor/PEFC

Our forestry operations are certified by the Brazilian Forestry Certification Program (Cerflor/PEFC) for responsible pulpwood management practices that are environmentally sound, economically viable, and socially beneficial. This certification was successfully renewed in 2023. Our Bahia forestry operations are also ISO 14001 certified.

Customs-Trade Partnership Against Terrorism (C-TPAT)

In 2023, our Bahia logistics operations underwent a review by a US audit firm on anti-terrorism procedures, a requirement as part of the Customs-Trade Partnership Against Terrorism (C-TPAT), a voluntary supply-chain security program led by U.S. Customs and Border Protection (CBP). This proactive initiative, the first of its kind at Bracell, addresses sabotage risks such as container contamination.



Operations in São Paulo:

ISO 9001:2015, ISO 14001:2015, ISEGA and Cerflor/PEFC.

Operations in Bahia:

ISO 9001:2015, ISO 14001:2015, Cerflor/PEFC, Halal, Kosher and ISEGA.

See the relevant certificates [here](#).

End-to-end sustainability



Climate

CO₂e removals in native forests set aside for conservation and planted eucalyptus forests. We also generate green energy from eucalyptus, a 100% renewable source



Company

It will be good for Bracell if first it is good for everyone



Community

Social projects focused on education, jobs and income.



Customer

Customized, flexible and biodegradable products.



Country

Investment in logistics, infrastructure and R&D

Making a difference
in every detail

2023 at a glance



Governance

Launched Bracell 2030

a corporate sustainability agenda that sets ambitious long-term targets focused on climate, nature and people, directly connected to our business and operations

Enhanced sustainability governance

progress on targets is tracked via KPIs that are monitored by the Bracell Sustainability Steering Committee

Updated our Sustainability Policy

and published a Human Rights Policy, Pulpwood and Fiber Sourcing Policy, and Anti-Corruption and Anti-Bribery Policy.



<https://www.bracell.com/en/sustainability/our-commitment/>



Environmental

-1,286,441 tCO₂e
removed from the atmosphere in 2023, from protected areas hosting native vegetation

95%

of wastewater originally sourced from the Tietê River is treated and returned to the river with a higher quality level than at the source

2,34 m³/ADT

(Air Dry Tonne) water consumption intensity at our São Paulo mill and 5,14 m³/ADT at our Bahia mill

9,387,409.61 GJ
of green electricity generated — 3,506,216.24 GJ sold

92%
of One-for-One Commitment achieved - 0.92 ha of protected areas for every hectare planted.

35%+

of Company-owned land set aside as protected areas, more than 60 hectares undergoing active restoration, and more than 450 hectares controlled for exotic invasive species in our Bahia forestry operations in 2023

Carbon monitoring in planted forests

- Bracell, represented by our R&D Department, is a member of the Eucflux-IPEF Cooperative Program, which monitors carbon and water flux in eucalyptus plantations. A flow tower with equipment that monitors these components is situated in a eucalyptus plantation area within Bracell's operations in the municipality of Itatinga (SP). The Program is led by IPEF (Institute of Forestry Research and Studies) and CIRAD (French Agricultural Research Centre for International Development), and was started in 2007. It has several affiliated companies from the pulp sector, including Bracell, and representative institutions from academia, such as the Federal University of Lavras, UNESP (Paulista State University) and the University of São Paulo (Esalq)



Social

Diversity and inclusion — we strengthened our affinity groups focused on women, people with disabilities, race and LGBTQIAP+ and advanced initiatives to foster diversity and inclusion in our operations

26,4%
women in leadership positions

Suppliers screened against social and environmental criteria

R\$ 9+ million
invested in Education, Empowerment and Enhancement programs as part of Bracell Social

164,000+
people benefited

ESG labels



In 2023, Bracell garnered important accolades for its sustainability performance:



Nordic Swan and EU Ecolabel

Awarded to our São Paulo operations, these labels denote products meeting rigorous environmental performance requirements set by the European Union, including reduced environmental impact throughout the product lifecycle. This label has been awarded specifically to Bracell's eucalyptus Kraft pulp.



GHG Protocol Gold reporting status

This distinction is awarded to organizations that demonstrate high levels of accuracy and transparency in their greenhouse gas inventory submissions to the Brazilian GHG Protocol Program's Public Emissions Register (RPE). Bracell is a member of the PBGHG (Brazilian GHG Protocol Program) and discloses the company GHG Inventory data in the Public Emissions Registry. The PBGHG aims to promote the recognition of participating organizations for the voluntary transparency initiative, among stakeholders who are increasingly attentive to corporate socio-environmental responsibility.



Reporting Matters

Bracell was awarded the 2023 Reporting Matters Mark by the Brazilian Business Council for Sustainable Development (CEBDS). Our Annual Sustainability Report was awarded a quality score of 65%, with special mention given to the report's clarity of information about our value chain, KPIs addressing all material topics, and a clear tone from the top around our ESG agenda.

The quality of our social and environmental initiatives is evidenced by certifications granted by recognized entities.

Disclosures Hub

As part of our commitment to transparency toward Bracell stakeholders, we also annually publish a Disclosures Hub. This platform enhances visibility and understanding of our environmental, social, governance and business performance - focused on Bracell's material topics. Our sustainability performance as disclosed in this Sustainability Report is further detailed in the Disclosures Hub, available [here](#).

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 2-1: Organizational details

GRI 2-2: Entities included in the organization's sustainability reporting

GRI 2-3: Reporting period, frequency and contact point

GRI 2-4: Restatements of information

GRI 2-5: External assurance

GRI 2-6: Activities, value chain and other business relationships

2

Governance



Members of Bracell’s senior leadership team are selected for their background in the pulp market and expertise strategic topics.

Governance structure

GRI 2-9, 2-10, 2-12, 2-13

Bracell is a member of the RGE group. RGE’s governance structure includes an Executive Management Board comprising key executives who advise on and validate the Group’s key performance indicators. Each Group company has its own CEOs and management teams. Depending on each organization’s strategic needs, members of the Executive Management Board may be appointed to provide support and oversight of specific businesses.

At Bracell, the highest governance body is the Sustainability Steering Committee. This governance body is responsible for making strategic business and operational decisions, evaluating investments, and tracking social and environmental performance. Key executives in various

businesses meet with the RGE Executive Management Board on a weekly basis to report on business performance and other corporate matters.

Members of Bracell’s senior leadership team are selected based on the extent to which their expertise, skills, competencies and technical knowledge can contribute to creating positive value for the business and for the regions where we operate. The performance of members of the Sustainability Steering Committee is assessed annually, both individually and against performance indicators for the broader RGE Group, core organizational values, leadership skills, and adherence to annual planning for the position. All members receive feedback focused on continuous improvement. [GRI 2-18](#)

Composition of the Sustainability Steering Committee [GRI 2-9, 2-11](#)

President [GRI 2-11](#)
Praveen Singhavi¹

Chief Operating Officer (COO)
Clinton Clive Van Vught

Head of Forestry Operations
Mauro Quirino

Managing Director, Bahia
Guilherme Araújo

Executive Vice-President
Luiz Carlos Cavalcanti Dutra Junior

Bracell Papéis Managing Director
Eduardo Aron

¹**Praveen Singhavi** stepped up as president of Bracell in January 2023, and has not served in any other executive role within the Company. For more than 15 years (April 2007 to January 2023), he previously served as president of April, an RGE Group company and one of the world’s largest and most advanced producers of fiber, pulp and paper, with operations in the province of Riau, Sumatra, Indonesia.

[Learn more about our senior leadership team’s credentials in Bracell’s Disclosures Hub at \[GRI 2-17\]\(#\).](#)

Sustainability governance

GRI 2-9, 2-10, 2-12, 2-13

Bracell’s Sustainability Steering Committee is responsible for developing and validating our strategic sustainability plan, including strategic sustainability goals. In 2023, the senior leadership team participated directly in developing and launching Bracell 2030 (read more on [page 43](#)), our long-term sustainability roadmap anchored in 14 targets and

commitments that are a benchmark in the pulp industry in Brazil, focusing on climate, biodiversity, sustainable production, people and communities. The Sustainability Steering Committee additionally participates in formulating and validating Bracell’s materiality matrix (read more on [page 53](#)) and approving our material topics. [GRI 2-16, 2-25](#)

Vice President for Sustainability

Bracell’s Vice President for Sustainability is responsible for managing environmental, social and governance risks. Environmental team leadership reports directly to the Sustainability Steering Committee and the president on environmental projects, initiatives and key performance indicators, and progress toward our Bracell 2030 targets.

The Vice President for Sustainability is also the spokesperson for our sustainability agenda, liaising with strategic and priority stakeholders such as internal leaders, customers, trade associations and financial institutions.

Institutional Relations, Community Relationship and Corporate Social Responsibility Department

Bracell’s Corporate Institutional Relations, Community Relationship and Social Responsibility Director is responsible for engaging with external stakeholders, such as local communities, governments and civil society organizations, to address the needs and concerns of underrepresented social groups, preserve the Company’s social license to operate, and oversee projects within Bracell Social (read more in Empowering Lives, on [page 70](#)).

The Bracell leadership team is involved in the preparation and approval of our Annual Sustainability Reports and Disclosures Hub. [GRI 2-14](#)



Crisis Committee

The Crisis Committee deals with unexpected events and emergencies with the potential to impact our stakeholders, operations, and reputation. This Committee uses management workflows consistent with the nature of the emergency and local needs. In Bahia, it has two organizational levels depending on how the crisis escalates, as outlined in the Crisis Prevention and Management Manual. In our São Paulo operations, the crisis committee is composed of key leadership personnel as relevant to the crisis situation.

The Bracell leadership team participated directly in developing the Bracell 2030 targets and commitments in 2023.

Learn more in disclosure [GRI 2-17](#)

Commitments

GRI 2-12, 2-13, 2-23, 2-25

Our corporate strategy and governance practices draw guidance from the following principles and standards:

International Bill of Human Rights

UN Guiding Principles on Business and Human Rights

International Labor Organization's (ILO) Declaration on Fundamental Principles and Rights at Work

United Nations Declaration on the Rights of Indigenous Peoples

Ten Principles of the UN Global Compact

UN Women's Empowerment Principles (WEPS)

International Financial Corporation (IFC) Standards

Laws and regulations applicable to Bracell's operations

ESG Policies

GRI 2-23, 2-24, 2-26

Compliance with certification standards

Our approach to sustainability governance is based on our Sustainability Policy, Human Rights Policy, Anti-Corruption and Anti-Bribery Policy, and Pulpwood and Fiber Sourcing Policy. These policies formalize and strengthen Bracell's commitment to best social and environmental management practices in our operations. Bracell's policies are publicly accessible at <https://www.bracell.com/en/>

Bracell's governance and risk management practices, KPIs (key performance indicators) and efforts for continuous improvement align with applicable certification standards. All leaders, employees, contractors and suppliers are required to comply with these standards. To ensure these requirements are effectively met, Bracell provides regular training and consistently monitors and assesses performance against requirements. We also follow a regular program of internal and external audits (read more about our certifications on [page 22](#)).

As a signatory of the **Global Compact**, Bracell annually reports on progress on its **Ten Universal Principles**.

Read Bracell's Communication on Progress (COP) [here](#).

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 2-22: Statement on sustainable development strategy

GRI 2-23: Policy commitments

GRI 2-24: Embedding policy commitments

GRI 2-26: Mechanisms for seeking advice and raising concerns

Based on these principles and standards, we develop corporate policies and operating procedures as part of our **Integrated Management System** (read more about risk management and impacts in our Disclosures Hub at [GRI 2-12](#)). GRI 2-24

Compliance, ethical conduct and transparency

GRI 2-13

We are committed to ensuring we uphold internationally recognized standards of ethical conduct as expected by organizations, customers, business partners, and employees. These guidelines are articulated in our **T.O.P.I.C.C.** Core Values and in the [Bracell Code of Conduct](#), which provides clear guidance on the conduct expected of employees and on creating long-term value for our communities, country, climate, customers, the Company, and other stakeholders.

Grounded in our core values, we have developed corporate policies setting out guidelines on sustainability, human rights, pulpwood and fiber sourcing, anti-corruption and anti-bribery, in addition to our Procurement Code of Ethics. These policies are publicly available on our [website](#) (read more about our corporate policies on [page 37](#)).

All applicable policies, protocols, regulations and standards are embedded in internal procedures outlining processes and rules on managing social, environmental and governance issues (read more in [GRI 2-24](#)). Annually, Bracell publishes detailed disclosures in a Disclosures Hub to broaden and facilitate understanding of the

environmental, social, governance and business performance by which Bracell's Sustainability Strategy is measured. Progress against these indicators, along with Bracell's contribution to the United Nations Sustainable Development Goals (SDGs), is reported annually in our interactive Sustainability Report. The Disclosures Hub also helps explain what are the most important social and environmental issues for Bracell in terms of stakeholder priorities.

All employees and contractors are trained and informed about Bracell's values, commitments and policies. Employees are also assessed annually on our **T.O.P.I.C.C.** values. [GRI 2-23](#)

Conflict of interests

GRI 2-15

[Bracell's Code of Conduct](#) and RGE's Global Code of Conduct provide guidelines on conflicts of interest. These guidelines are disseminated among employees, who are required to complete Annual Conflict of Interest Declarations.

Whistleblowing and grievance channels

GRI 2-13, 2-25, 2-26



Bracell has two dedicated channels for receiving complaints and concerns: *Bracell Escuta* and Contact Us. Through these channels, we maintain contact with whistleblowers to provide updates on the progress and status of their case (learn more about our approach to managing complaints, reports and concerns in our Disclosures Hub at [GRI 2-25](#)).

Bracell Escuta

Bracell Escuta is a platform for reporting misconduct and non-compliance with applicable laws and regulations, our Code of Conduct, or other company policies. The platform is available to all Bracell stakeholders.

Reports are handled confidentially and whistleblowers are kept anonymous. Whistleblower reports are investigated by an internal audit team, which reports directly to senior management at Bracell and the RGE Group.

bracell_escuta@bracell.com

Bahia: 0800-006-6012

São Paulo: 0800-033-3384

Contact Us

Our Contact Us channel is also open to all stakeholders to submit suggestions, compliments, complaints and concerns.

Cases submitted through the Contact Us channel are documented and addressed by the relevant departments, and feedback is provided to the individual submitting the case.

Channel for operations

in Bahia

0800-284-4747

faleconosco@bracell.com

Channel for operations

in São Paulo

0800-709-1490

faleconoscosp@bracell.com

Risk management and due diligence

GRI 2-13, 2-25

Consistent with the precautionary principle, Bracell's approach to risk management is focused on protecting the environment and preventing adverse impacts on ecosystems in the locations where we operate.

We manage our operations in accordance with the guidelines outlined within our Risk Management Program (RMP), which has been developed in line with internationally recognized best practices. The Program covers information management, training, equipment, use of technology, and emergency response.

Bracell's governance and risk management practices, KPIs and efforts for continuous improvement are compliant with applicable laws, regulations and policies.

All applicable policies, protocols, regulations and standards are embedded in internal procedures outlining processes and guidelines on managing social, environmental and governance issues. These documents are controlled via an Integrated Management System (IMS) that all employees are familiar with.



Risk management practices

We regularly update our identified aspects and impacts, in an exercise involving all our operations, in order to identify, prevent and mitigate any and all negative impacts;

We conduct assessments to identify and map out social and environmental risks before initiating any operation;

We assess products on health, safety and environmental risks; and

We regularly monitor the impacts from our operations and activities, and implement immediate mitigation measures focused on minimizing impacts.



For more information about our results and management practices, see the Bracell Disclosures Hub

GRI 2-9: Governance structure and composition

GRI 2-10: Nomination and selection of the highest governance body

GRI 2-11: Chair of the highest governance body

GRI 2-12: Role of the highest governance body in overseeing the management of impacts

GRI 2-13: Delegation of responsibility for managing impacts

GRI 2-14: Highest governance body's role in sustainability reporting

GRI 2-15: Conflicts of interest

GRI 2-16: Communicating critical concerns

GRI 2-17: Collective knowledge of the highest governance body

GRI 2-18: Evaluating the highest governance body's performance

GRI 2-25: Processes to remediate negativ

3

Bracell 2030

Bracell 2030
is embedding
sustainability at the
core of our business.

Sustainability journey

GRI 2-22, 2-24

As we marked our 20th anniversary in Brazil, we unveiled our newly launched commitment to delivering positive impact on climate, nature, people and communities—called Bracell 2030. This long-term sustainability roadmap comprises a set of industry-leading targets and commitments on climate, biodiversity, sustainable paper and pulp production, and people and communities.

Bracell 2030 builds on our Group founder's 5Cs philosophy (*Community, Country, Climate, Customer and Company*), which states that everything we do must be good for the community, country, climate and customers, and only then will it be good for the Company.

Bracell 2030 embeds sustainability at the core of our business, in line with the UN Sustainable Development Goals (SDGs).



Sustainability Vision

GRI 2-22

Bracell is committed to being a sustainable business in the circular bio-economy. We aim to revolutionize the forest-based pulp industry and remain at its forefront, while providing diversified products from responsibly managed, renewable plantations. We believe in creating shared value as well as building impactful and long-lasting partnerships that enable us to continuously do good for the Communities, Country, Climate, Customers and Company.

Learn more about Bracell's sustainability journey in our Disclosures Hub at [GRI 2-22](#).

Bracell 2030



Targets and commitments



Sustainable Landscapes and Biodiversity

Building regenerative systems that favor nature, biodiversity and ecosystem services

Targets

Conservation of
230,000 ha
of native forests

KPIs

Actions to conserve native forests in **public environmental protection areas** in the states of São Paulo, Bahia and Mato Grosso do Sul

Protection of
endemic and threatened species

Monitoring of natural habitats and endemic and threatened species in Bracell's priority conservation areas

Support for the
reintroduction of animals
into the wild

Double the number of Bracell areas certified by Environmental Agencies for the release of animals into the wild

Scientific research
on biodiversity conservation

Support for at least **10 research projects** per year on biodiversity conservation



Climate Action

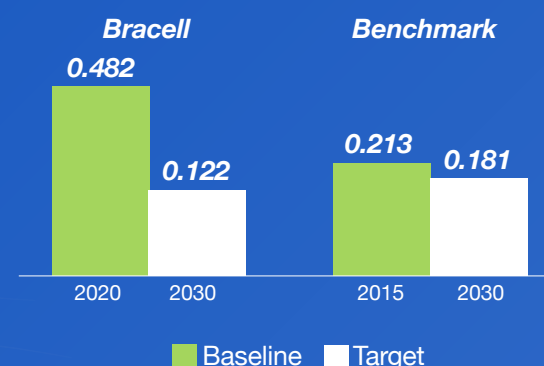
Creating a climate positive operation towards a low-carbon economy

Targets

75%
reduction in carbon emissions per ton of product

Benchmarking

Reduction of carbon emissions per ton of product (tCO₂e/t)



25 MtCO₂e
removed from the atmosphere between 2020 and 2030

Net carbon removals = total GHG emissions - total CO₂e removals (eucalyptus plantations + native vegetation)

* The 25 MtCO₂e figure refers to emissions less removals.



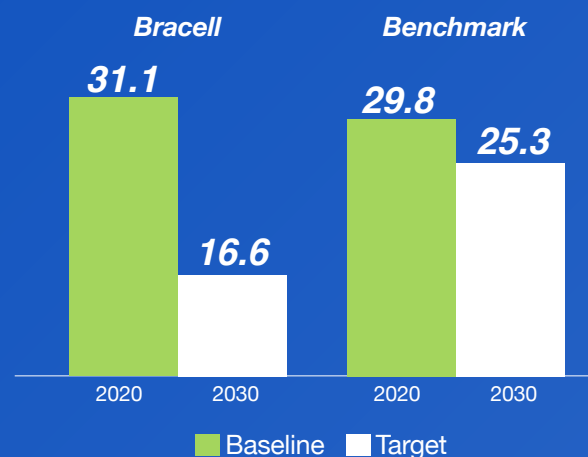
Delivering Sustainable Growth

Growing our business through efficiency, circularity and responsible production

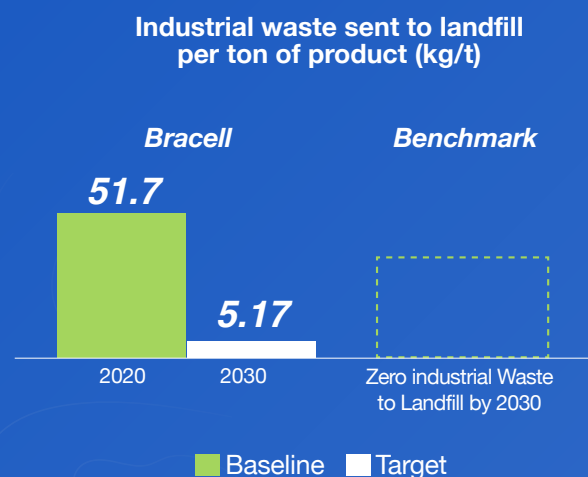
Targets

47%
reduction in water consumption per ton of product

Benchmarking



90%
reduction in industrial solid waste sent to landfills per ton of product



97%
chemical recovery in our operations

Increase the **chemical recovery of lime and soda** in the pulp production process to 97%



Empowering Lives

Empowering our people and communities through transformative initiatives

Targets

Promoting **equal opportunities** for women

KPIs

Increasing the proportion of women in **leadership positions** to 30%

Fostering an **inclusive work environment** for diversity groups

Achieving **90% positive evaluation** from employees in Diversity WG in relation to **conditions of respect and equity** in the workplace

Promoting **women's entrepreneurship** in communities

At least **60% of "impact business"** social projects supported by Bracell must be **led by women**

Promoting **income generation** for families and communities

Increase the **income of families** that participate in Bracell's income generation projects in priority areas by **20%**

Promoting quality **public education**

Increase **proficiency in Portuguese and Mathematics by 30%** in public schools supported by Bracell in areas with low learning rates



Praveen Singhavi, president of Bracell

Bracell 2030 was launched at an event discussing trending ESG topics

As we marked our 20th anniversary in Brazil, we unveiled our long-term vision for building a more sustainable and inclusive future: Bracell 2030.

Bracell presented the 14 targets and commitments, organized into four pillars, that have been set to be achieved no later than 2030. Progress on each target is tracked by leadership and periodically reported to the Sustainability Steering Committee.

Targets within Bracell 2030 have been established through extensive benchmarking both within and outside the industry, and through an internal cross-department consultation via Working Groups (WGs) addressing the different topics within our Sustainability Strategy. Our long-term sustainability plan is anchored in 14 targets and commitments that are setting a benchmark in the pulp industry in Brazil, focusing on climate, biodiversity, sustainable production, people and communities.

We unveiled our 2030 goals to the Market at an event held in partnership with Brazilian business newspaper *Valor Econômico* on October 31, 2023. The event was attended by representatives from the Brazilian Forestry Association (Ibá), the NGO WWF-Brazil, and the São Paulo state government, represented by leaders from these organizations. The debate was moderated by journalist Christiane Pelajo and explored how companies in the pulp and paper industry can further advance the sustainability agenda and create a positive impact for the country and society.

The discussions hosted by Bracell also addressed topics such as changing business models for more sustainable corporate actions, the role of public-private partnerships, innovation, actions, future perspectives, and other key issues to positively transform the social and environmental agenda. The event was livestreamed by *Valor Econômico*'s YouTube channel.

Tracking progress on 2030 targets

The Bracell 2030 targets and commitments launched in 2023 clearly articulate our vision for building a positive legacy for climate, nature, people and local communities. Beginning in 2024, we will track progress on our 2030 targets against a set of KPIs and action plans.

This oversight will be provided through working groups comprising leadership and operational teams, directly reporting to the Bracell Sustainability Steering Committee. Progress on Bracell 2030 will be publicly reported in 2025 in our Sustainability Report for 2024.



From left to right: journalist Christiane Pelajo; WWF-Brazil president Maurício Voivodi; Ibá (Brazilian Forestry Association) executive president Paulo Hartung; Cetesb Corporate Management Director Liv Costa; Bracell Executive Vice-President Luiz Dutra.



Read more about Bracell 2030
<https://www.bracell.com/en/bracell-2030/>

Materiality

GRI 3-1, 3-2

Strategic social and environmental topics

GRI 3-2

BRACELL 2030 ⁶	Material topic ¹	GRI disclosure ²	SASB ³	SDGs ⁴	UNGC ⁵
CLIMATE ACTION Climate positive operations supporting a low-carbon economy	Climate change	GRI 3-3, 201-2, 305-1, 305-2, 305-3, 305-4, 305-5	RR-PP-110a.1, RR-PP-110a.2, RR-PP-120a.1	 	7, 8, 9
	Energy efficiency	GRI 3-3, 302-1, 302-2, 302-3, 302-4, 302-5	RR-PP-130a.1	 	7, 8, 9
SUSTAINABLE LANDSCAPES AND BIODIVERSITY Build regenerative systems that benefit nature, biodiversity and ecosystem services	Biodiversity	GRI 3-3, 304-1, 304-2, 304-3, 304-4, 101-1, 101-2 e 101-4		  	8
PROMOTING SUSTAINABLE GROWTH Expand our business through increased efficiency, circularity and responsible production	Water and effluents	GRI 3-3, 303-1, 303-2, 303-3, 303-4, 303-5	RR-PP-140a.1, RR-PP-140a.2	   	7, 8
	Waste management	GRI 3-3, 306-1, 306-2, 306-3, 306-4, 306-5			7, 8
	Supplier social and environmental assessment	GRI 3-3, 2-8, 204-1, 308-1, 308-2, 408-1, 409-1, 414-1, 414-2	RR-PP-430a.1	   	1, 2, 4, 5, 7, 8
EMPOWERING LIVES Provide capacity building to our people and communities through transformational initiatives	Human rights in the value chain	GRI 3-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, 405-1, 405-2, 406-1		  	3, 4, 5, 6
	Community relations	GRI 3-3, 203-1, 203-2, 411-1, 413-1, 413-2		  	1
	Valuing our human capital	GRI 3-3, 2-7, 404-1, 404-2, 404-3			6
Governance					
GOVERNANCE AND RISK MANAGEMENT	Compliance, ethical conduct, integrity and transparency	GRI 2-27, 205-1, 205-2, 205-3, 206-1			8, 10

¹ In early 2022, Bracell conducted an exercise to update its materiality matrix – learn more under disclosure [GRI 3-1](#). Bracell's material topics have been mapped to the relevant Bracell 2030 pillars based on their contribution to Climate, Biodiversity, Human Rights and Sustainable Development.

² Bracell-reported GRI disclosure linked to the relevant material topics.

³ Bracell-reported SASB disclosures.

⁴ SDGs affected by Bracell's material topics and Bracell 2030 targets

⁵ Global Compact Principle related to the material topic

⁶ Bracell 2030 pillar affected by the material topic.

Bracell's material topics were ranked by importance in a materiality assessment involving our key stakeholders.

Following the launch of Bracell 2030 in 2023, we conducted an exercise to map our material topics to the pillars under our new long-term ESG strategy. Learn more about Bracell's materiality assessment process, which included the views and inputs from key stakeholders (learn more at [GRI 3-1](#)).

Stakeholders [GRI 2-29](#)

Bracell's material topics were ranked by importance in a materiality assessment involving our key stakeholders. These stakeholders were identified based on their impact and influence on Bracell's business, and included: employees and contractors, local communities, indigenous and traditional communities, suppliers, government, customers, financial institutions, and trade associations (read more about our stakeholder engagement practices in our Disclosures Hub at [GRI 2-29](#)).

Membership of trade associations [GRI 2-28](#)

Bracell seeks to catalyze change in its industry by exercising thought leadership as a member of trade associations, boards, committees, forums and unions (read more in our Disclosures Hub at [GRI 2-28](#)).

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

[GRI 2-22](#): Statement on sustainable development strategy.

[GRI 2-24](#): Embedding policy commitments.

[GRI 2-28](#): Membership associations.

[GRI 2-29](#): Approach to stakeholder engagement.

[GRI 3-1](#): Process to determine material topics.

[GRI 3-2](#): List of material topics.



Empowering lives



Valuing human capital is a strategic topic for Bracell. We have set a target to have 30% of leadership positions filled by women by 2030.

Valuing our human capital

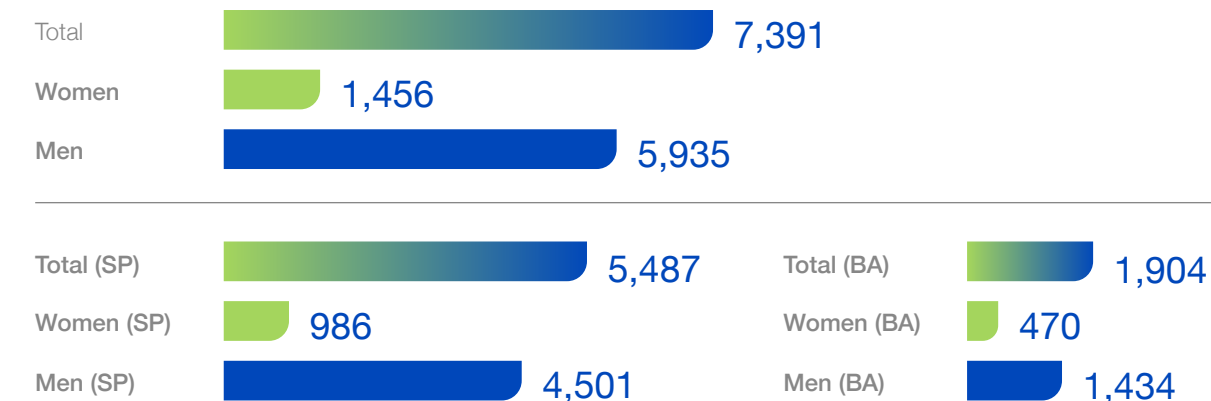
GRI 3-3

Valuing human capital, one of our material topics, is crucial to delivering on the “Empowering Lives” pillar of our Bracell 2030 sustainability vision.

At Bracell, this material topic is addressed by ongoing programs to attract, retain and develop talents. We also have

Occupational Health & Safety programs designed to protect the physical integrity of our employees and avoid occupational injuries and diseases (read more on [page 62](#)). Learn more about our performance review practices and employee benefits in our [Disclosures Hub](#). [GRI 404-1](#), [404-2](#), [404-3](#), [403-6](#)

Total employees by operation in 2023



In 2023, we updated our internal employee engagement survey, with 76% of employees responding. This survey found a **favorability rate of 87%**, one percentage-point higher than the rate in 2021 and higher than the Brazilian industry average.

Training and development initiatives in 2023

Throughout the year, we ran a series of training initiatives and programs tailored to Bracell's development needs, in line with the rapid growth and structure of the business. Some of the key initiatives in the year included:



Passport Program:

a comprehensive learning track for operations employees in the mill, forestry, and logistics divisions. The program is designed to ensure that all employees are well prepared for their operational roles using a systematic approach, including onboarding, regulatory safety standards, and role-specific technical content.

Diversity and Inclusion:

training delivered to the HR team by independent consultants.

Leaders in Action:

aimed at developing soft skills for operational teams and employees, involving participation from operational supervisors.

Manager Training Program (MTP):

implemented across all RGE Group companies. At Bracell, the program is managed by BLI (Bracell Learning Institute), with lecturers from different departments. The program covers topics such as finance, supply chain, Lean Methodology, procurement, and team development.

Computer Skills Training for People with Disabilities (PwD):

we organized two computer skills training classes in Bauru (SP) and Lençóis Paulista (SP). In total, 18 people with disabilities participated in the initiative, with support from the Brazilian Industrial Training Service (SENAI) and education consultancy ITEC.



Bracell Learning Institute

The Bracell Learning Institute (BLI)—a knowledge and training hub hosted at the Lençóis Paulista site in São Paulo—provides courses and training addressing business and operational needs, including technical and operational subjects such as workplace safety, Bracell's values, company policies and guidelines, leadership development, as well as community training initiatives for prospective operations employees.

Graduate and MBA programs

In partnership with universities and trade associations, Bracell introduced opportunities in 2023 for company employees to enroll in graduate and MBA programs in areas such as: Pulp Technology (offered by the Brazilian Pulp Association), Forestry Management (offered by the Federal University of Paraná), and Forest Fire Prevention and Response (offered by Faculdade Unyleya).

For detailed training and development disclosure, see Bracell's Disclosures Hub at [GRI 404-1](#).



Employee wellness, health and safety

GRI 403-1, 403-2, 403-3, 403-7

Bracell operates an integrated occupational health and safety management system that is compliant with Brazilian legislation, including the Regulatory Standards (NRs) of the Ministry of Labor and Employment.

The system, which covers all employees and contractors, is operated by Bracell employees who are members of the Specialized Occupational Health and Safety Service (SESMT) and the Specialized Rural Occupational Health and Safety Service (SESTR), as mandated by NR-4. Each site has a dedicated occupational physician, occupational nurse, and nursing technician.

Bracell’s occupational health and safety management practices include our:

Risk Management Program (PGR)

Rural Occupational Risk Management Program (PGRTR)

Occupational Health Surveillance Program (PCMSO)

These programs align with our Integrated Management System Manual and international standards ISO 9001:2015, ISO 14001:2015, and Cerflor/PEFC (read more about our occupational health and safety management practices in Bracell’s Disclosures Hub at [GRI 403-1](#)).

Our health and safety initiatives GRI 403-4, 403-5, 403-6

Our Health and Safety Department includes Process Safety, Emergency Response, and Business Risk functions. These functions conduct risk and hazard assessments across our operations, covering People, the Environment, Assets, and Business Continuity.

We monitor and evaluate Occupational Health and Safety System performance and develop action plans addressing improvement opportunities for hazards and risks identified within our Rural Occupational Risk Management Program (PGRTR) and Risk Management Plan (PGR). Based on the PGR and task descriptions (see GRI 403-1), we identify the risks associated with each task. We then use this information

to create action plans focused on accident and incident prevention as well as opportunities for improvement

Through our Occupational Health Surveillance Program (PCMSO), we conduct regular health screening checkups that help to preserve the well-being of our employees. These checkups are focused on the specific occupational risks that each worker is exposed to. If any abnormal results are detected during checkups, the relevant individuals are temporarily relieved of their duties, provided with appropriate treatment based on the recommendations of our medical team, and monitored until their health status normalizes.

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 3-3: Approach to managing the material topic Development and recognition of human capital

GRI 2-7: Employees

GRI 2-19: Remuneration policies

GRI 2-20: Process for determining remuneration

GRI 2-21: Annual total compensation ratio

GRI 2-30: Collective bargaining agreements

GRI 404-1: Average hours of training per year per employee

GRI 404-2: Programs for upgrading employee skills and transition assistance programs

GRI 404-3: Percentage of employees receiving regular performance and career development reviews

GRI 403-1: Occupational health and safety management system

GRI 403-2: Hazard identification, risk assessment, and incident investigation

GRI 403-3: Occupational health services

GRI 403-4: Worker participation, consultation, and communication on occupational health and safety

GRI 403-5: Worker training on occupational health and safety

GRI 403-6: Promotion of worker health

GRI 403-7: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

GRI 403-8: Workers covered by an occupational health and safety management system

GRI 403-9: Work-related injuries

GRI 403-10: Work-related ill health



Human rights in the value chain

GRI 2-13, 2-23, 3-3

Our operations undergo assessments on potential human rights risks and impacts, in line with international certification requirements and Brazilian laws and regulations, including the Regulatory Standards (NRs) of the Ministry of Labor and Employment.

Corporate policies—including our [Code of Conduct](#), [Procurement Ethics Code](#), [Human Rights Policy](#), [Sustainability Policy](#) and [Pulpwood and Fiber Sourcing Policy](#)—provide guidance to stakeholders on mitigating human rights risks and impacts and govern our contracts with suppliers and contractors (read more on [page 82](#)). These policies support us in mitigating risks related to child labor and forced and slave labor in our value chain, and ensuring compliance with labor, child and adolescent rights.

We also continuously monitor the areas surrounding our eucalyptus plantations to protect human rights in neighboring communities, as part of our pulpwood traceability process.

With the commissioning of the two new flexible lines at our Lençóis Paulista (SP) site, we have expanded our forestry operations in the region and some local residents on a particular property have been resettled as a result.

This process is managed in compliance with International Finance Corporation (IFC) Performance Standard 5 – Land Acquisition and Involuntary Resettlement. Within this front, Bracell also manages and works to prevent and/or mitigate the social risks to which workers and their families may be exposed.

Every six months on average, Bracell undergoes an independent audit on compliance with social and environmental standards, including the IFC Performance Standards.

To minimize actual impacts on communities surrounding the mill, we use an approach that includes community mapping, advertising official communication channels, and managing and addressing community concerns.

Bracell also actively manages and works to prevent and/or promptly mitigate the social risks to which workers and their families may be exposed.

In 2023, following recommendations from affinity groups, Bracell created affirmative-action positions aimed at attracting women and people with disabilities.

Diversity, inclusion and equality GRI 2-7, 405-1

Bracell is committed to providing equal opportunity to women within the company, and we have set a target to achieve 30% female representation in leadership roles. We also seek to cultivate an inclusive workplace environment for affinity groups and support impact-driven businesses led by women from local communities. These efforts are included among the Bracell 2030 targets to advance diversity, inclusion, and equality (explore our Bracell 2030 targets on [page 42](#)).

As part of our diversity and inclusion practices, we

- Have implemented a Diversity and Inclusion Program
- Created a Diversity and Inclusion Committee in 2023
- Have established affinity groups focusing on women, people with disabilities, race, and LGBTQIAP+ to drive a cultural transformation within the company

Initiatives promoting gender equity

Bracell is a signatory of the Women's Empowerment Principles (WEPs), a UN Global Compact and UN Women initiative providing guidance on promoting gender equality and women's empowerment in the workplace, marketplace, and community.

In 2023, we conducted an internal survey on gender equity to gauge female employees' perceptions of our workplace environment. Based on the responses, we developed a Diversity & Inclusion Journey, which began with five online focus groups where women could voice their views regarding female inclusion in the industry, and a training program on female inclusion.

Rede Mulher Florestal



In 2023, we joined *Rede Mulher Florestal* and began responding to the organization's survey questionnaire on the presence of women in the forestry industry. The initiative is also collecting diversity data beyond gender, such as race and people with disabilities. In 2023, Bracell assumed the vice presidency of the organization.

We are signatories to the Women's Empowerment Principles (WEPs), established by the UN Global Compact and UN Women.

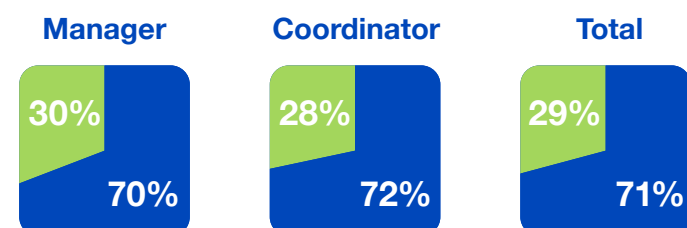
Employees by leadership level and gender in 2023 GRI 405-1

Women Men



Employees by leadership level and gender in 2023

Women Men



In 2023, Bracell had 26.4% of women in leadership positions.

Community relations GRI 3-3

Close engagement and open, transparent, and continuous communication with communities near our industrial and forestry operations are an integral part of Bracell's approach to community relations.

Before commencing any operations or initiatives, we conduct a comprehensive survey on local communities to identify and mitigate potential risks and impacts. We seek to understand community needs and expectations to develop solutions collaboratively (learn more about our community relations guidelines on our Disclosures Hub at [GRI 413-1](#)).

In our Bracell 2030 roadmap, the Empowering Lives pillar sets out targets to build a social legacy for the future. Among these targets is increasing the income of families participating in our income-generating projects by 20% and improving Portuguese and mathematics proficiency by 30% in Bracell-supported public schools in areas with low school achievement rates, as measured by the Basic Education Index (read more about Bracell 2030 on [page 42](#)).



Indigenous communities

GRI 411-1

In São Paulo, the Araribá Indian Reservation, located in Avaí (SP), is the only indigenous community within a three-kilometer radius of Bracell's forestry operations. The community comprises four villages—Tereguá, Ekeruá, Kopenoti and Nimuendaju—with a population of approximately 600 people.

Bracell did not develop protocols for consulting with indigenous peoples in 2023; however, dialogues were initiated with the leaders of these communities. The agenda included discussions about forestry operations that could affect people living on indigenous reservations.

These dialogues are conducted before the start of operations. During these meetings, we provide relevant information about the company's activities, offering an opportunity for indigenous representatives to express their concerns. All concerns are taken into account. The stakeholder engagement process is inclusive of the entire community, including women and elders, and allows sufficient time for the community to be informed about issues and for Bracell to address the needs, aspirations and

concerns shared by indigenous peoples during interactions with the company.

Meetings with indigenous communities are documented in minutes that record the agreements reached with community leaders. All villages are consulted through their leaders, and 100% have chiefs or vice-chiefs as representatives.

In 2023, we: identified and mapped out actual and potential impacts from our operations on indigenous communities (no violations of indigenous peoples' rights were identified and/or documented); documented the agreements and decisions formalized with indigenous communities; implemented a communications process mediated by the National Indigenous Foundation (FUNAI); sought to avoid or resolve conflicts amicably; mapped out identified risks and created prevention and mitigation measures for potential impacts; and carried out initiatives to improve relations with indigenous communities.

Bracell's relations with indigenous peoples are mediated by FUNAI and follow guidelines on Free, Prior, and Informed Consent (learn more about our practices for engaging with indigenous communities on our Disclosures Hub at [GRI 411-1](#)).

In our forestry and mill operations, the most significant potential impacts include odor emissions, noise, dust from truck traffic, machinery and equipment, road degradation, as well as health risks from the use of crop protection products. GRI 413-2

Bracell Social

GRI 203-1, 203-2

Through Bracell Social, our social investment platform, we support enabling projects in local communities that connect social inclusion with environmental sustainability. Bracell Social reflects our commitment to carry out our activities in harmony with neighboring communities, respecting their habits, customs, and traditions and building relationships based on mutual trust.



Through Bracell Social, we develop enabling projects in the areas of education, entrepreneurship, and civic engagement:

1

Education: Bracell sees education as the cornerstone for societal development. Our efforts make a substantial contribution to improving educational practices in public schools, through programs and initiatives that engage both children and adults across various locations. These programs also teach environmental civics, develop leadership skills, and support the professional development of adolescents and young adults, further underscoring our belief in the transformational role of education.

2

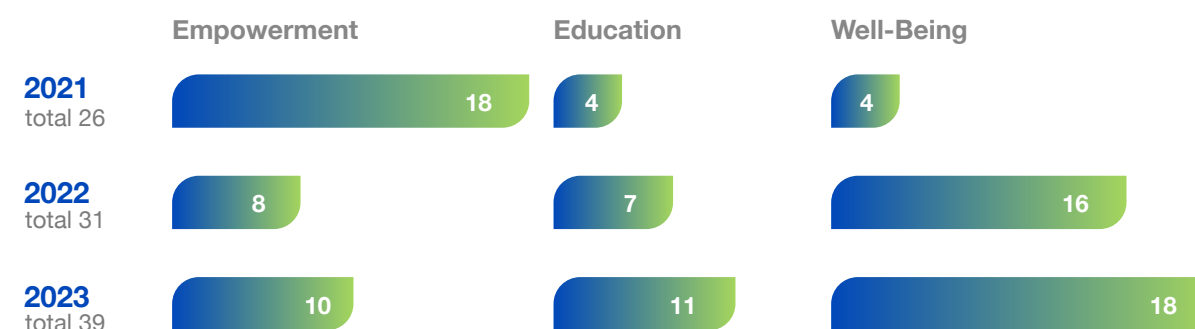
Empowerment: Bracell works to strengthen production collectives and social enterprises through training initiatives focused on leadership, empowerment, and creating employment and income opportunities. This is achieved through a range of initiatives to develop and strengthen productive activities, including investment in training and technical assistance, leadership development, cooperative organization, and equal access to social participation mechanisms through calls for projects and public-private partnerships.

3

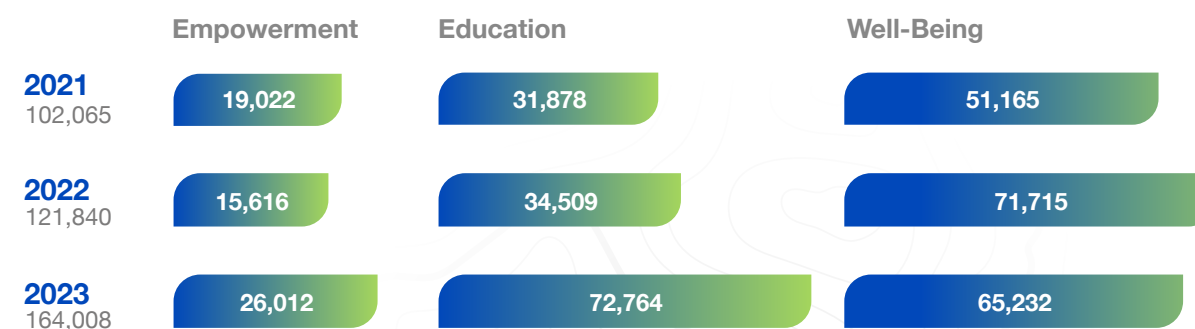
Well-Being: we provide community residents with free leisure, culture, health promotion, and civics activities that foster well-being and civic engagement in the communities around our facilities.



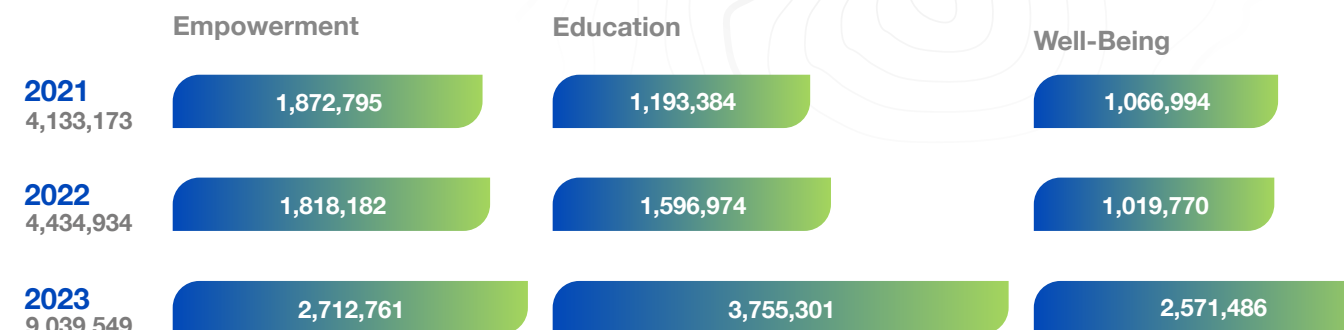
Number of projects



People reached



Investment (R\$)





Bracell 2030 has set goals to build a **social legacy for the future** as part of the Empowering Lives pillar:

Ensure at least
60%
of the high-
impact businesses
we support are
women-led

Work to raise by
20%
the incomes of
families participating
in income-generating
projects

Improve by
30%
the Portuguese
and Math
proficiency of public
school students in
regions with low Basic
Education Index scores.

Read more about
Bracell 2030 on page 42,
and about our related
projects and results on
the [Disclosures Hub](#).



For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 405-1: Diversity of governance bodies and employees

GRI 3-3: Management of the material topic – Relations and engagement with local communities

GRI 413-1: Operations with local community engagement, impact assessments, and development programs

GRI 413-2: Operations with real and significant negative impact or potential impact on local communities

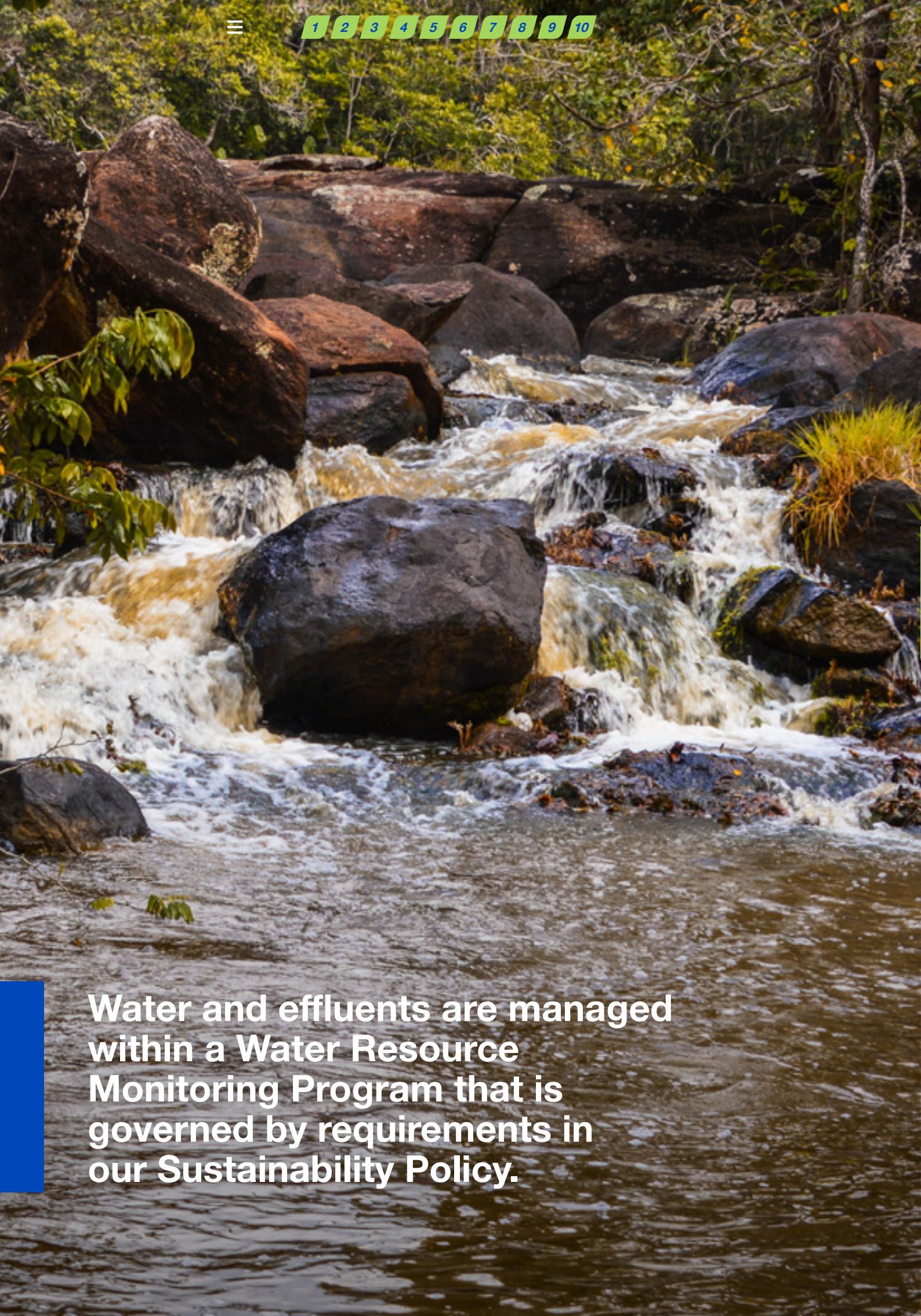
GRI 203-1: Infrastructure investments and services supported

GRI 203-2: Significant indirect economic impacts

GRI 411-1: Incidents of violations involving rights of indigenous peoples

5

Promoting sustainable growth



Water and effluents are managed within a Water Resource Monitoring Program that is governed by requirements in our Sustainability Policy.

Water stewardship

GRI 3-3

Water and effluents are a material topic for our business. To address this topic, Bracell has a Water Resource Monitoring Program that is governed by requirements in our [Sustainability Policy](#). Through this program, we implement measures to monitor and continuously improve water resource efficiency. We work to protect springs and water bodies in the areas where we operate, and rehabilitate native vegetation in protected areas.

Bracell has set a target to reduce water consumption per metric ton of pulp produced by 47% by 2030.

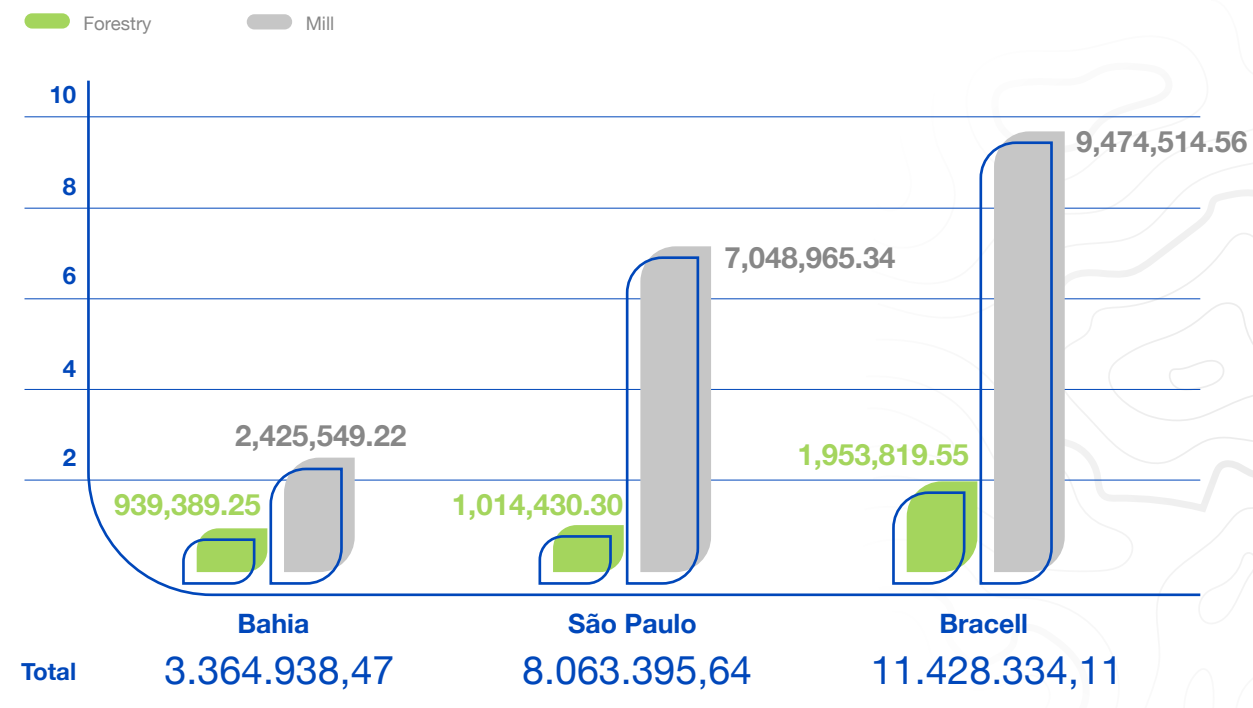


Below are some of our key water stewardship practices:

- In our forestry operations, we **monitor qualitative and quantitative parameters in water bodies** and whether our operations are affecting those parameters. Water withdrawals are kept strictly within the limits set by regulatory authorities and the carrying capacity of the watershed.
- On an annual basis, we update our **climate zoning** to assess the water availability in each of our plantation areas. Climate zoning helps us to **optimize our forest management practices** by selecting locations with adequate water resource for optimal seedling growth as well as for other uses in local communities.
- At our Lençóis Paulista (SP) site, water is sourced from the Tietê River, with **95% of the withdrawals returned to the river** following tertiary wastewater treatment.
- In Camaçari (BA), we monitor **groundwater reservoir levels in collaboration** with other companies in the Camaçari Industrial Hub. We also actively engage in multilateral forums where **we discuss water management practices** to ensure compliance with the standards and guidelines set by environmental monitoring and control agencies.

Total volume of water withdrawals in 2023

GRI 303-1, 303-2, 303-3, 303-4, 303-5



Continuous monitoring

Bracell actively monitors water withdrawal intensity (the ratio of water withdrawals for mill processes to net production output). **In 2023, our water withdrawal intensity was 5,14 m³/ADT (average dry metric tons of pulp produced) in Bahia and 2,34 m³/ADT in São Paulo.** Our Bahia mill produces dissolving pulp and specialty pulp, our most water-intensive products. The São Paulo mill, in turn, produces Kraft pulp, which is less water intensive.

Learn more about our water and effluent management practices and performance in our Disclosures Hub at [GRI 3-3](#).

For more information about our results and management practices, see the Bracell Disclosures Hub

GRI 3-3: Management of the material topic - Water and effluents

GRI 303-1: Interactions with water as a shared resource

RR-PP-140a.2: Discussion of water management risks and description of strategies and practices to mitigate those risks

GRI 303-2: Management of water discharge related impacts

GRI 303-3: Water withdrawal

RR-PP-140a.1: (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress

GRI 303-4: Water discharge

GRI 303-5: Water consumption

Waste management

GRI 3-3, 306-1, 306-2

Our Waste to Value Policy aligns with the Brazilian National Waste Management Policy (PNRS). We ensure compliance at all times with our Environmental Policy and Waste Management Plan (PGRS). Waste is among the KPIs that is tracked within our Integrated Management System and reported to employees throughout the year so they can keep up to date on our performance.



Bracell's approach to waste management is based on three Circular Bioeconomy principles

Reduce waste generated in the process

Re-utilize materials whenever possible

Recycle waste in partnership with third parties where waste reduction or reuse is not possible.



Waste management is included among the targets in our Bracell 2030 sustainability roadmap, supporting our commitment to advancing a circular economy throughout our operations:

90%

reduction in industrial solid waste sent to landfills per ton of product

97%

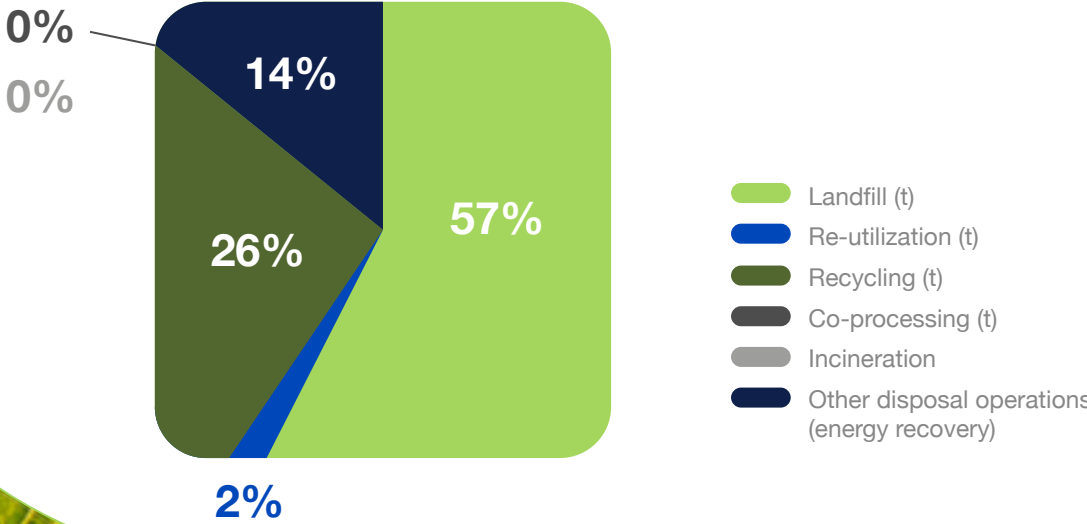
chemical recovery in our operations

Volume of waste by type of disposal operation in 2023 GRI 306-5

Operation	SÃO PAULO (forestry and mill waste - class I and II)	BAHIA (forestry and mill waste - class I and II)	TOTAL
Landfilling (t)	185,474.46	11,406.16	196,880.62
Re-utilization (t)	193.69	7,273.63	7,467.32
Recycling (t)	21,274.67	69,297.39	90,572.06
Co-processing (t)	247.11	5.98	253.09
Incineration	0.12	0.00	0.12
Other disposal operations (energy recovery)	48,767.71	52.56	48,820.67

Note: in São Paulo, Class II scrap wood is diverted for energy recovery. In Bahia, hazardous waste (Class I)—such as lubricating oil, pesticide packaging, laboratory waste, and separator box residue—is sent for refining, reverse logistics, autoclaving, and effluent treatment, respectively. Non-hazardous waste (Class II), such as machine tires, wood, and fluorescent lamps, are sold, directed for energy recovery, and decontaminated, respectively.
 Note 2: waste disposal figures refer to both our mill and forestry operations.

Percentage of waste by type of disposal operation in 2023



For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

[GRI 3-3: Management of material topic - Waste](#)

[GRI 306-1: Waste generation and significant waste-related impacts](#)

[GRI 306-2: Management of significant waste-related impacts](#)

[GRI 306-3: Waste generated](#)

[GRI 306-4: Waste diverted from disposal](#)

[GRI 306-5: Waste directed to disposal](#)

Supplier management

GRI 3-3, 308-1, 308-2, 408-1, 409-1, 414-1, 414-2

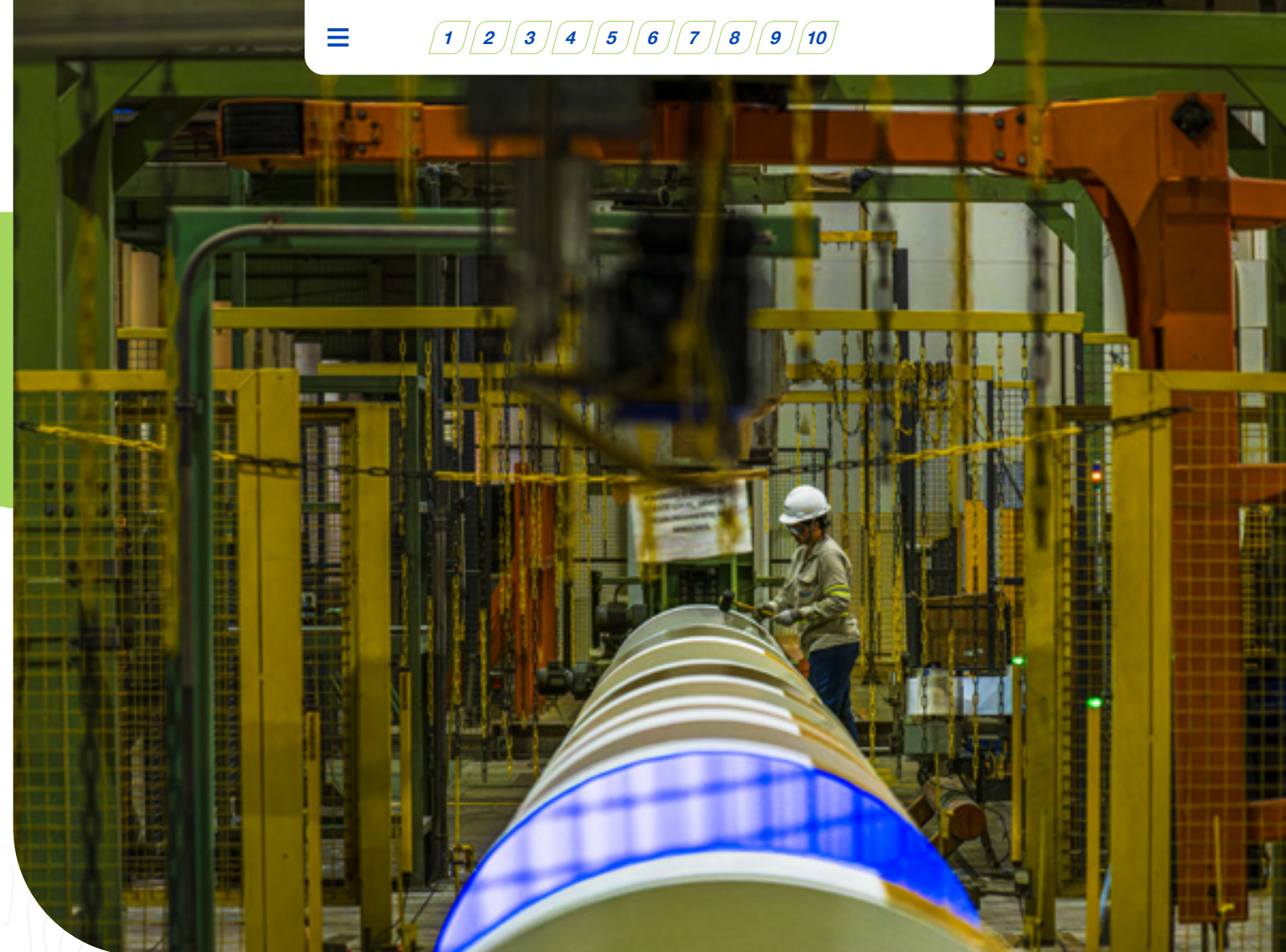
At Bracell, supplier onboarding and management are governed by corporate policies on sustainability and human rights management, which in turn draw guidance from applicable laws and regulations and international sustainability standards. Our related policies are publicly available on our website at <https://www.bracell.com/sustentabilidade/nosso-compromisso/> and <https://www.bracell.com/institucional/governanca-e-certificacoes/>.



As part of our supply chain management practices, we:

- **Promote economic development** in the regions where we operate, including by sourcing products and services for our forestry, mill, logistics (wood and pulp), and administrative operations
- **Evaluate and score suppliers on performance.** All suppliers are screened and must meet a minimum score to retain their supplier status. The findings from screening may prevent the relevant supplier from being awarded the contract or the negotiations from proceeding
- **Perform audits** on operations employing contractors.
- As part of supplier due diligence, **review** documents demonstrating compliance with environmental laws and regulations, environmental and operational license requirements, and other requirements specific to the supplier's segment. These requirements are monitored throughout the supplier's contract, with periodic requests for updated documentation

In 2023, we did not identify suppliers at risk for child, forced or slave labor in our operations.



For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 3-3: Management of the material topic - Supplier social and environmental assessment

GRI 2-8: Workers who are not employees

GRI 204-1: Proportion of spending on local suppliers

GRI 308-1: New suppliers that were screened using environmental criteria

GRI 308-2: Negative environmental impacts in the supply chain and actions taken

GRI 408-1: Operations and suppliers at significant risk for incidents of child labor

GRI 409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labor

GRI 414-1: New suppliers that were screened using social criteria

GRI 414-2: Negative social impacts in the supply chain and actions taken

SASB RR-PP-430a.1: Percentage of wood fiber sourced from (1) thirdparty certified forestlands and percentage to each standard and (2) meeting other fiber sourcing standards and percentage to each standard

6

Sustainable landscapes and biodiversity



Bracell has operations in Brazil's *Caatinga*, *Cerrado* and *Atlantic Forest* biomes.

Protecting biodiversity GRI 3-3

Protecting forests and biodiversity is intrinsic to our business. In our forestry operations, we implement strategies to protect native vegetation and biodiversity in the *Caatinga*, *Cerrado* and Mata Atlântica biomes hosting our operations (read more in the Bracell Disclosures Hub at [GRI 304-1](#)).

We use official data from the Rural Environmental Register (CAR) to georeference information about the farms we manage. In our geographic information system, we intersect this data with other data sets, such as those compiled in our protected areas and buffer zones. This informs our operational procedures on each property, depending on the constraints and conditions set in management plans.

Protecting forests and biodiversity is intrinsic to our business.

One-for-One Commitment GRI 304-3

This is an industry-first initiative to preserve areas hosting native vegetation. Under the Commitment, we have pledged to support the preservation of native vegetation in an area the same size as our eucalyptus plantations.

Every hectare of eucalyptus forests we plant will be matched with another hectare of preserved native vegetation.

Our One-for-One Commitment will extend our biodiversity protection efforts beyond our own properties.



Under our One-for-One Commitment, Bracell will:

- **Preserve native vegetation** within our eucalyptus plantation properties;
- **Support conservation** efforts on public land and the restoration of disturbed land through partnerships with governments and other organizations;
- **Work to prevent** and respond to forest fires, deforestation, theft of native timber, poaching, and illegal trafficking in wild animal species;
- **Establish public partnerships** at the federal, state and municipal levels, we provide services or materials to different types of protected areas, such as parks, ecological stations, and wildlife reserves;
- **Establish partnerships** with land owners to support conservation on Private Natural Heritage Reserves (RPPN) or to restore disturbed land.

Within our One-to-One Commitment, in 2023 Bracell achieved a 92% protected area ratio, or 0.92 ha of protected areas for every hectare planted.



2023 Highlights

In 2023, Bracell:



Signed a ten-year commitment with the São Paulo Forest Foundation

to sponsor environmental protection initiatives in significant Atlantic Forest and Cerrado formations.

Signed a mutual cooperation agreement with the Bahia State Environmental Department (SEMA) and the Mato Grosso do Sul Environmental Institute (IMASUL)

to support conservation and protected area management and to safeguard natural heritage by conserving fauna and flora species, protecting water resources, and enhancing carbon sequestration in forest formations.

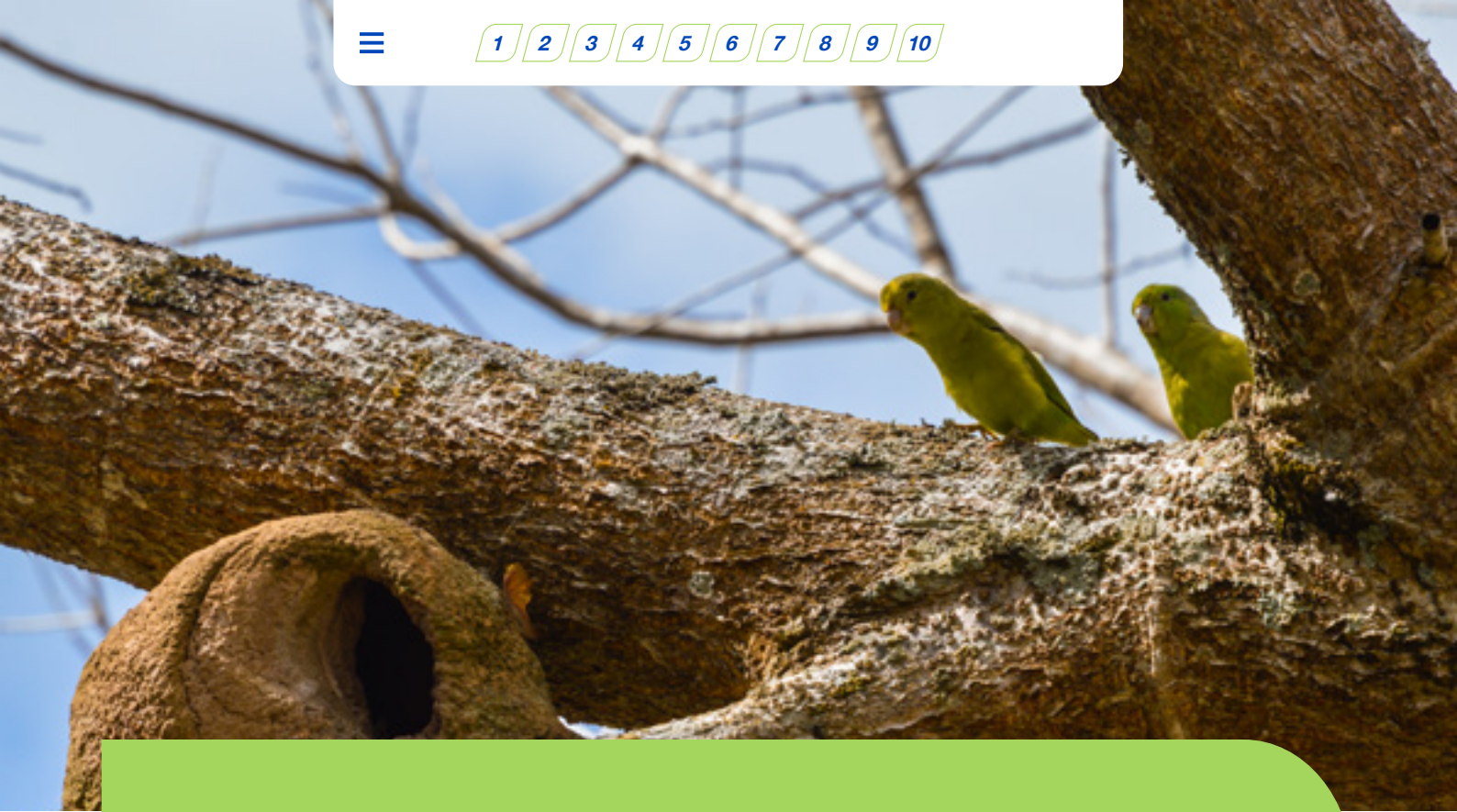
Benefited 11 protected areas in São Paulo:

- Sebastião Aleixo Ecological Station and Aimorés Wildlife Refuge – Botanical Garden, in Bauru; Caetetus Ecological Station, in Gália;
- Caetetus Ecological Station, in Gália;
- Santa Bárbara Ecological Station, in Águas de Santa Bárbara;
- Barreiro Rico Ecological Station, in Anhembi;
- Carlos Botelho State Park, in São Miguel Arcanjo;
- Nascentes do Paranapanema State Park, in Capão Bonito;
- Avaré Ecological Station, in Avaré;
- Paranapanema Ecological Station, in Paranapanema;
- Angatuba Ecological Station, in Angatuba; and
- Itapeva Ecological Station, in Itapeva.

Delivered the detail design

of a primate bridge to allow primates to safely cross roads and prevent them from becoming islanded in the Barreiro Rico Ecological Station, in the Municipality of Anhembi (SP).

Developed studies and recommendations for controlling invasive plant species having adverse impacts on local biodiversity and for remote monitoring of wildlife using recorders and camera traps, helping to identify species and monitor environmental quality indicators.



Other biodiversity initiatives and commitments GRI 3-3, 304-3

- **TNFD:** in 2022, we became signatories of the Taskforce on Nature-related Financial Disclosure (TNFD) as members of the CEBDS Action for Nature Platform, which we joined in 2021. This initiative aims to drive accountability and real change in the way natural resources are managed in the territories where participating companies operate.
- **CEBDS¹** – biodiversity pledge: as members, we have committed to take biodiversity into consideration as a pillar of our sustainability strategy (see our targets [here](#));
- **Fundação Florestal:** we have signed a ten-year sponsorship agreement with Fundação Florestal, a foundation linked to the São Paulo State Environmental Department, to support conservation and environmental protection initiatives in areas containing significant Atlantic Forest and *Cerrado* formations.
- **SOS Mata Atlântica:** Bracell is a partner and has committed to restoring 30 hectares in protected areas and legal reserves, helping to form wildlife corridors to enhance biodiversity and conservation of water resources.

¹ CEBDS represents Brazil at the World Business Council for Sustainable Development (WBCSD).

Explore all of our commitments on biodiversity in our Disclosures Hub under [GRI 3-3 Management of the material topic Biodiversity](#).

Integrated Landscape Management

In 2023 we rolled out a project developed jointly with nongovernmental organization Conservation International Brazil (CI-Brazil), called “Integrated Landscape Management: geo-information for decision support in Bracell’s area of influence.”

This initiative directly supports our Bracell 2030 commitment to develop

an integrated territorial intelligence system to manage natural capital and maintain sustainable landscapes throughout our area of influence. We use an innovative methodology that intersects 19 indicators in an integrated and holistic approach spanning three dimensions: conservation, restoration of native vegetation, and land use.

Under the targets within the Sustainable Landscapes and Biodiversity pillar of our Bracell 2030 roadmap, we will:

- **Preserve 230,000 hectares of native vegetation**—through our One-for-One Commitment.
- **Identify areas hosting endemic and threatened species**—we will monitor these species and work to improve habitat quality.
- **Double the amount of area** certified for the release of wild animals.
- **Support at least 10 research projects** on biodiversity per year.



Monitoring protected areas

GRI 304-1

Bracell forestry operations are situated in different biomes in Brazil. In 2023, more than 60 hectares underwent active restoration, and more than 450 hectares were controlled for exotic invasive species in our Bahia forestry operations. In São Paulo forestry operations, the Degraded Areas Restoration Program carried out 188 ha of restoration activities in 2023.

In 2024, we plan to implement robust strategies for restoring organic soil horizons, develop partnerships to enhance forest rehabilitation outcomes, and create more effective methods for monitoring natural regeneration.

We identify and monitor High Conservation Value (HCV) areas through assessments on biological, ecological, social or cultural attributes. We have currently identified two HCV areas in the state of São Paulo and six in Bahia.

As our forestry activities expand, we are working to update our maps of potential HCV areas using the criteria established by Proforest.

We use official data from the Rural Environmental Register (CAR) to georeference information about the farms we manage. In our geographic information system, we intersect this data with other data sets, such as those compiled in our protected areas and buffer zones. This informs our operational procedures on each property, depending on the constraints and conditions set in management plans.

In Bahia, we additionally manage three Private Natural Heritage Reserves (RPPNs). One of these reserves, “RPPN Lontra,” straddling the border between the municipalities of Entre Rios and Itanagra, hosts one of the largest expanses of Atlantic Forest remnants in Brazil, between the Recôncavo Baiano and the northern region of the state. The reserve covers an area of 1,379 hectares and has a perimeter of 14.4 kilometers. RPPN Lontra was recognized by UNESCO as a Frontier Area of the Atlantic Forest Biosphere in 2018.

In 2023, we created a visitor center at RPPN Lontra which will open to the public in 2024.



Floresta Sempre Viva

Discover *Floresta Sempre Viva* (“Living Forest”), a Bracell initiative dedicated to promoting biodiversity and forest preservation in the areas where we operate <https://florestasempreviva.com.br/>.

For more information about our results and management practices, see the Bracell Disclosures Hub

GRI 3-3: Management of material topic - Biodiversity

GRI 304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

GRI 304-2: Significant impacts of activities, products, and services on biodiversity

GRI 101-1: Policies to halt and reverse biodiversity loss

GRI 101-2: Management of biodiversity impacts

GRI 101-4: Identification of biodiversity impacts

GRI 304-3: Habitats protected or restored

GRI 304-4: IUCN Red List species and national conservation list species with habitats in areas affected by operations



Climate action



Bracell’s Sustainability Steering Committee is responsible for making business decisions on climate-related matters.

Climate change

GRI 3-3

Climate change is a material topic for Bracell’s sustainability management, encompassing planning, policies and actions for mitigating greenhouse gas (GHG) emissions, operating in a low-carbon economy and adapting to a world with higher average global temperatures (read more about risks and opportunities related to climate change in disclosure [GRI 201-2](#)).

Bracell’s Sustainability Steering Committee is responsible for making business decisions on climate-related matters and presenting the company’s overall strategic planning for the short, medium, and long term in this area. Bracell is advancing its climate journey by creating a corporate GHG inventory, scenario analyses, emission reduction projects and environmental targets for its operations, all integral to the Bracell 2030 commitment and targets.

In 2023, we announced a set of long-term sustainability targets as part of our Bracell 2030 roadmap, including:

↓ **75%**

reduction in carbon equivalent emissions per metric ton of product

25 MtCO₂e

removed from the atmosphere between 2020 and 2030

Climate-positive impacts

Our 2030 climate targets were developed based on an analysis of the risks and impacts—both positive and negative—Bracell’s operations have on climate change, as well as projections and scenario analyzes considering projects to reduce emissions and grow our activities. Our operations emit scope 1, 2, and 3 GHGs, but also capture CO₂ from the atmosphere by growing

eucalyptus plantations and protection of areas of native forest vegetation under the Company’s management.

We will begin monitoring the progress of our 2030 climate goals in 2024 and report them in our Sustainability Report. Bracell also has operational practices that positively impact the climate agenda.

Key initiatives include:

Self-sufficient generation capacity – we have on-site generation capacity for the full electricity requirement of our two flexible lines in Lençóis Paulista, São Paulo. We also produce a surplus of 150-180 MW which we feed back into the grid, enough to supply power to a city of 3 million people or 750,000 homes.

Transition from fossil fuels to renewable fuels – At our Lençóis Paulista site, we use biomass from sustainably managed forests to produce syngas in biomass gasifiers. This renewable energy source is fed to our lime kilns in replacement of traditional fossil fuels.

Oil-to-natural gas retrofit – using advanced engineering and technology, we have initiated a project to replace oil with natural gas in the oldest production line at our Lençóis Paulista site.

Electric forklifts and trucks – our operations are deploying electric forklifts running on renewable electricity produced on-site in Lençóis Paulista. In addition, we are expanding our fleet of electric trucks—the first electric heavy-haul vehicles (40+ tons) to be deployed in this type of operation—to further reduce GHG emissions.

Ongoing climate-focused improvements – our dedicated continuous improvement team employs agile methodologies (Kaizen) to drive climate-related projects. Reducing greenhouse gas emissions is a key focus of our current Kaizen initiatives. We also participate in decarbonization forums to explore and deploy new technologies and best practices across the company.



Bracell has implemented a range of initiatives to advance a low-carbon economy, such as using electric trucks and solar panels in operations, and regularly compiling greenhouse gas emissions inventories.

Research on carbon and water flux in eucalyptus plantations – as part of the Eucflux-IPEF Cooperative Program, we conduct research on carbon and water flux in eucalyptus plantations in Brazil. This research is enhancing our understanding of these processes in a Bracell-managed eucalyptus plantation in Itatinga, São Paulo, where we have set up a flux tower equipped with advanced monitoring technology.

Investment in carbon and water flux towers –in line with our Bracell 2030 commitments, we are installing five additional monitoring towers in both eucalyptus plantations and native forests across São Paulo, Mato Grosso do Sul, and Bahia.

Participation in the CEBDS Net Zero Platform– we are actively involved in the CEBDS program to accelerate climate action within the corporate sector.

GHG Protocol – our greenhouse gas emissions inventories are published on the Brazilian GHG Protocol Public Emissions Registry platform.

External verification of GHG Inventories – our greenhouse gas emissions inventories, covering Scopes 1, 2, and 3, undergo external audits and verification.

GHG Emissions Inventory

GRI 305-1, 305-2, 305-3

CARBON BALANCE (tCO ₂ e) GRI 305-1, 305-2, 305-3			
Emissions	2021	2022	2023
Total (S1 + S2 + S3)	636,549	1,555,114	1,697,709
Scope 1	365,172	614,673	635,787
Scope 2	35,283	5,258	9,484
Scope 3	236,094	935,183	1,052,438
Biogenic LULUCF emissions	0	3,793,831	3,956,087
Removals (tCO ₂ e)	-5,970,852	-1,309,842	-1,286,441
Balance	-5,334,303	4,039,103	4,367,356

Bracell’s Greenhouse Gas Inventories follow guidance provided in the latest edition of GHG Protocol, ABNT-NBR ISO 14064:2007 and the quantification methodologies published by the Intergovernmental Panel on Climate Change (IPCC).

Inventories are conducted at the corporate level, covering our production sites in São Paulo and Bahia and forestry operations in São Paulo, Mato Grosso do Sul, Bahia, and Sergipe.

Carbon Balance

Bracell’s carbon balance totaled 4,367,356 tCO₂e in 2023. Of this total, 3,956,087 tCO₂e were biogenic emissions related to Land Use, Land-Use Change and Forestry (LULUCF), and specifically eucalyptus harvesting.

Despite a reduction in Stationary Combustion and Waste emissions, Scope 1 emissions increased by 3% due to expanded use of fertilizers and mobile combustion linked to forestry expansion.

Scope 1 emissions from land-use changes amounted to 1,232 tCO₂e due to fires. Read more about our fire prevention and response practices under [GRI 304-3](#).

In terms of Scope 2 emissions, our reported emissions from purchased electricity increased in the year due to the inclusion of water intake pumps at our São Paulo pulp mill in the inventory

and due to the inventory source review. In addition, in Bahia, Scope 2 emissions rose due to a strategy to purchase electricity at lower prices, reducing natural gas consumption in the power boiler.

Scope 3 emissions increased by 13%, mainly in connection with increased downstream transportation of pulp for export.

GHG emission intensity

In 2023, GHG emission intensity increased by 5.7% compared to 2022 due to the expansion of our operations, especially increased pulp transportation for export

(Downstream) as well as intensified agricultural activities and fertilizer use in our forest operations. [GRI 305-4](#)

Emissions (tCO₂e/t)

Scopes 1, 2 and 3



In 2023, Bracell removed -1,286,441 tCO₂e from the atmosphere through protected areas hosting native forests.

Forest R&D initiatives focused on mitigating climate change risks and impacts

- **Biological control using natural enemies:** we employ biological control as a sustainable alternative to chemical pesticides, significantly reducing GHG emissions. In 2023, we produced 65 million natural enemies.
- **Climate zoning studies:** we continuously conduct climate zoning studies using historical climate data such as precipitation, temperature, and latitude. This analysis helps us identify optimal areas for eucalyptus planting and make climate region-specific technical recommendations, including clone allocation and fertilization strategies.
- **Carbon balance:** we updated our carbon balance estimation database. This information was used to develop our 2030 carbon removal goal. The carbon removal estimation study was conducted by the Sustainability department in conjunction with Forestry R&D and Forest Planning departments (see our carbon balance in GRI 305).

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 3-3: Management of material topic

GRI 201-2: Financial implications and other risks and opportunities due to climate change

GRI 305-1: Direct (Scope 1) GHG emissions

GRI 305-2: Energy indirect (Scope 2) GHG emissions

GRI 305-3: Other indirect (Scope 3) GHG emissions

GRI 305-4: GHG emissions intensity

GRI 305-5: Reduction of GHG emissions

RR-PP-110a.1: Gross global scope 1 emissions

RR-PP-110a.2: Discussion of long-term and shortterm strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

RR-PP-120a.1: Air emissions for the following pollutants: (1) NO_x (excluding N₂O), (2) SO₂, (3) volatile organic compounds (VOCs), (4) particulate matter (PM), and (5) hazardous air pollutants (HAPs)

Energy efficiency

GRI 3-3

Energy efficiency is a material topic for Bracell. We invest in processes and technologies to ensure the efficient use of energy in our operations, prioritizing renewable sources of generation. We have targets for reducing greenhouse gas emissions by 2030 and policies and actions to mitigate this impact, as we work to establish low-carbon production capabilities.

Bracell's plants in Bahia and São Paulo are energy self-sufficient. The company has recovery boilers that produce the steam fed to turbine-generator sets to generate electricity.

In our mills, electricity sourced from the national grid is only used occasionally during general maintenance stoppages. Energy is also purchased for forestry operations and nurseries, where diesel also fuels power generators.



Renewable generation

Our flexible lines in Lençóis Paulista (SP) are equipped with a biomass boiler that generates renewable energy from eucalyptus biomass, such as trimmings from the plant and other substances originating from the production of dissolving pulp, including black liquor.

These lines were developed to operate free of fossil fuels and to generate clean energy for the Brazilian market, which

receives the surplus from Bracell's mill.

The site has a 440kV substation with an installed capacity of 409 MW, enough to supply electricity to the mill and a surplus of approximately 150 to 180 MW that is sold to the national grid, enough to supply clean renewable electricity to around 750,000 homes or approximately 3 million people.

We generate enough surplus electricity on site for:

750,000 homes **3 million** people

In 2023, Bracell received International Renewable Energy Certificates (I-RECs) as proof that the electricity sold from its on-site generation facilities in Lençóis Paulista (SP) is renewably sourced.

Deploying electric forklifts and trucks in our operations

We are currently testing an industry-first solution in Brazil—electric heavy-haul trucks with a payload of over 40 metric tons. In 2023, we held discussions with several truck manufacturers toward

developing a new truck design to be deployed in our operations by 2025. Operating electric heavy-haul vehicles will help to minimize GHG emissions.

Other important initiatives to replace fossil fuels with clean and renewable energy include:

- **deploying electric forklifts** running on renewable electricity produced on-site in Lençóis Paulista (SP)
- **replacing oil** with natural gas at our oldest site in São Paulo.



We are currently testing an industry-first solution in Brazil—electric heavy-haul trucks with a payload of over 40 metric tons.

Energy consumption GRI 302-1, 302-2, 302-3, 302-4, 302-5, RR-PP-130a.1

Historical energy consumption within the organization¹ (GJ)

	2021	2022	2023
Bahia	1,561,590.00	1,579,433.51	1,541,824.41
São Paulo²	1,955,354.26	5,828,717.43	6,227,239.88
Total	3,516,944.26	7,408,150.94	7,769,064.29

1. Total fuel consumption from non-renewable sources includes consumption of natural gas and liquefied petroleum gas (LPG). Total consumption from renewable sources includes black liquor.
2. In 2023, the historical data on energy consumption in our São Paulo operations was restated. In 2022, we sourced electricity from the grid despite our on-site generation capacity. The calculation methods for the 2021 data have been corrected. GRI 2-4

Generation Output (GJ)

	2021	2022	2023
Bahia	1,429,909.20	1,262,907.28	1,066,178.70
São Paulo	1,784,658.89	8,896,430.99	9,387,409.61
Bracell	3,214,568.09	10,159,338.27	10,453,588.31

Energy Sold (GJ)

	2021	2022	2023
Bahia	72,745.20	32,263.77	10,481.59
São Paulo	438,207.54	3,180,704.16	3,506,216.24
Bracell	510,952.74	3,212,967.94	3,516,697.83

Energy intensity (GJ/adt)

	2021	2022	2023
Bahia	3.32	3.29	3.27
São Paulo	2.39	1.99	2.07
Total	2.73	2.17	2.23

Energy intensity

Our energy intensity figures in 2023 were 3.27 GJ/adt in our Bahia operations and 2.07 GJ/adt in São Paulo. Energy intensity figures were calculated for a total production of 471,817 metric tons in Bahia and 3,483,880 metric tons in São Paulo. The calculation includes only electricity generated on-site.

For more information about our results and management practices, see the [Bracell Disclosures Hub](#)

GRI 3-3: Management of material topic

GRI 302-1: Energy consumption within the organization

GRI 302-2: Energy consumption outside of the organization

GRI 302-3: Energy intensity

GRI 302-4: Reduction of energy consumption

GRI 302-5: Reductions in energy requirements of products and services

RR-PP-130a.1: (1) Total energy consumed, (2) Percentage grid electricity, (3) Percentage from biomass, (4) Percentage from other renewable energy



About this report

GRI 2-1, 2-2, 2-3, 2-5

Bracell's Sustainability Report presents our environmental, social, and governance performance and key results for the period from January 1 to December 31, 2023. The report has been developed in accordance with the Global Reporting Initiative Standards (GRI 2021) and additionally includes Sustainability Accounting Standards Board (SASB) disclosures.

This sustainability report addresses the key economic, environmental, social, and governance topics contained in our materiality matrix. We also show how these topics connect to the United Nations Sustainable Development Goals (SDGs) and to the commitments we have undertaken through Bracell 2030.

The information in the report refers to our operations in the states of São Paulo and Bahia (Bracell SP Celulose Ltda. and Bracell Bahia Specialty Celulose S.A.). For confidentiality reasons, Bracell does not report financial data.

All disclosures have been assured by an external and independent third party with no conflicts of interest, as confirmed by the appended Sustainability Report and Disclosures Hub Assurance Letter, GHG Inventory Assurance Statement (details on [page 120](#)), and Statement on Scope of Assurance of Bracell's One-to-One Commitment (details on [page 121](#)). Our Disclosures Hub is available on Bracell's website and provides comprehensive information for each of the GRI disclosures reported in this publication.

If you have any feedback, suggestions, critiques, or questions about this report, please write to faleconosco@bracell.com (Bahia operations) or faleconoscosp@bracell.com (São Paulo operations).

GRI content index

GRI standard/ other source	Disclosure	Location	Omission			
			Requiremen- t(s) Omitted	Reason	Explanation	
General disclosures						
GRI 2: General Disclosures 2021	2-1 Organizational details	9, 109				
	2-2 Entities included in the organization’s sustainability reporting	9, 109				
	2-3 Reporting period, frequency and contact point	109				
	2-4 Restatements of information	12, 15, 107				
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	2-9 Governance structure and composition	33, 34				
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	2-13 Delegation of responsibility for managing impacts	33, 34, 38, 40				
	2-14 Role of the highest governance body in sustainability reporting	34				
	2-15 Conflicts of interest	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-15/				
	2-16 Communication of critical concerns	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-16/				
	2-17 Collective knowledge of the highest governance body	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-17/				
	2-18 Evaluation of the performance of the highest governance body	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-18/				
	2-19 Remuneration policies	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-19/				
	2-20 Process to determine remuneration	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-20/				
	2-21 Annual total compensation ratio			Remuneration data	Confidentiality	For strategic reasons, Bracell does not disclose information about the remuneration of senior executives.
	2-22 Statement on sustainable development strategy	45				
	2-23 Policy commitments	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-23/				
	2-24 Embedding policy commitments	45, 46, 47, 48, 49				
	2-25 Processes to remediate negative impacts	52, 53, 54, 55				
	2-26 Mechanisms for seeking advice and raising concerns	37				
	2-28 Membership associations	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-28/				
	2-29 Approach to stakeholder engagement	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-29/				
	2-30 Collective bargaining agreements	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-30/				
	Material topics					
	GRI 3: Material Topics 2021	3-1 Process to determine material topics	52, 53, 54, 55			
		3-2 List of material topics	52, 53, 54, 55			

GRI standard/ other source	Disclosure	Location	Omission		
			Requiremen- t(s) Omitted	Reason	Explanation
Valuing our human capital					
GRI 3: Material Topics 2021	3-3 Management of material topic	59			
GRI 2: General Disclosures 2021	2-7 Employees	59			
GRI 404: Training and Education 2016	GRI 404-1 Average hours of training per year per employee	https://centraldeindicadores2023.bracell.com/en/indicador/gri-404-1/			
	GRI 404-2 - Programs for upgrading employee skills and transition assistance programs	https://centraldeindicadores2023.bracell.com/en/indicador/gri-404-2/			
	GRI 404-3 - Percentage of employees receiving regular performance and career development reviews	https://centraldeindicadores2023.bracell.com/en/indicador/gri-404-3/			
Human rights in the value chain					
GRI 3: Material Topics 2021	3-3 Management of material topic	64			
GRI 403: Occupational Health and Safety 2018	403-1 -Occupational health and safety management system	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-1/			
	403-2 - Hazard identification, risk assessment, and incident investigation	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-2/			
	403-3 - Occupational health services	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-3/			
	403-4 - Worker participation, consultation, and communication on occupational health and safety	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-4/			
	403-5 - Worker training on occupational health and safety	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-5/			
	403-6 - Promotion of worker health	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-6/			
	403-7 - Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-7/			
	403-8 - Workers covered by an occupational health and safety management system	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-8/			
	403-9 - Work-relate injuries	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-9/			
	403-10 - Work-related ill health	https://centraldeindicadores2023.bracell.com/en/indicador/gri-403-10/			
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	66			
	405-2 Ratio of basic salary and remuneration of women to men	https://centraldeindicadores2023.bracell.com/en/indicador/gri-405-1/			
GRI 406: Nondiscrimination 2016	406-1 Incidents of discrimination and corrective actions taken	https://centraldeindicadores2023.bracell.com/en/indicador/gri-406-1/			
Community engagement					
GRI 3: Material Topics 2021	3-3 Management of material topic	68, 69			
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	70, 71			
	203-2 Significant indirect economic impacts	70, 71			
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	69			
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	https://centraldeindicadores2023.bracell.com/en/indicador/gri-413-1/			
	413-2 Operations with significant actual and potential negative impacts on local communities	https://centraldeindicadores2023.bracell.com/en/indicador/gri-413-2/			

GRI standard/ other source	Disclosure	Location	Omission		
			Requiremen- t(s) Omitted	Reason	Explanation
Supplier social and environmental assessment					
GRI 3: Material Topics 2021	3-3 Management of material topic	https://centraldeindicadores2023.bracell.com/en/indicador/gri-3-3-management-of-the-material-topic-supplier-social-and-environmental-assessment/			
GRI 2: General Disclosures 2021	2-8 Workers who are not employees	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-8/			
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	https://centraldeindicadores2023.bracell.com/en/indicador/gri-204-1/			
GRI 308: Supplier Environmental Assessment 201	308-1 New suppliers that were screened using environmental criteria	https://centraldeindicadores2023.bracell.com/en/indicador/gri-308-1/			
	308-2 Negative environmental impacts in the supply chain and actions taken	https://centraldeindicadores2023.bracell.com/en/indicador/gri-308-2/			
GRI 408-1 Operations and suppliers at significant risk for incidents of child labor	408-1 Operations and suppliers at significant risk for incidents of child labor	https://centraldeindicadores2023.bracell.com/en/indicador/gri-408-1/			
GRI 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	https://centraldeindicadores2023.bracell.com/en/indicador/gri-409-1/			
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	https://centraldeindicadores2023.bracell.com/en/indicador/gri-414-1/			
	414-2 Negative social impacts in the supply chain and actions taken	https://centraldeindicadores2023.bracell.com/en/indicador/gri-414-2/			
SASB	RR-PP-430a.1: Percentage of wood fiber sourced from (1) thirdparty certified forestlands and percentage to each standard and (2) meeting other fiber sourcing standards and percentage to each standard	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-430a-1-percentage-of-wood-fiber-sourced-1-from-third-party-certified-forestlands-and-percentage-to-each-standard-and-2-meeting-other-fiber-sourcing-standards-and-percentage-to-each-standard/			
Climate change					
GRI 3: Material Topics 2021	3-3 Management of material topic	97			
GRI 201: Economic Performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	https://centraldeindicadores2023.bracell.com/en/indicador/gri-201-2/			
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	100			
	305-2 Energy indirect (Scope 2) GHG emissions	100			
	305-3 Other indirect (Scope 3) GHG emissions	100			
	305-4 GHG emissions intensity	101			
	305-5 Reduction of GHG emissions	https://centraldeindicadores2023.bracell.com/en/indicador/gri-305-5/			

GRI standard/ other source	Disclosure	Location	Omission		
			Requiremen- t(s) Omitted	Reason	Explanation
SASB	RR-PP-110a.1: Gross global scope 1 emissions	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-110a-1/			
	RR-PP-110a.2: Discussion of long-term and shortterm strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-110a-2/			
	RR-PP-120a.1: Air emissions for the following pollutants: (1) NOx (excluding N2O), (2) SO2, (3) volatile organic compounds (VOCs), (4) particulate matter (PM), and (5) hazardous air pollutants (HAPs)	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-120a-1/			
Energy efficiency					
GRI 3: Material Topics 2021	3-3 Management of material topic	104, 105			
GRI 302: Energy 2016	302-1 Energy consumption within the organization	107			
	302-2 Energy consumption outside of the organization	https://centraldeindicadores2023.bracell.com/en/indicador/gri-302-2/			
	302-3 Energy intensity	https://centraldeindicadores2023.bracell.com/en/indicador/gri-302-3/			
	302-4 Reduction of energy consumption	https://centraldeindicadores2023.bracell.com/en/indicador/gri-302-4/			
	302-5 Reductions in energy requirements of products and services	https://centraldeindicadores2023.bracell.com/en/indicador/gri-302-5/			
SASB	RR-PP-130a.1: (1) Total energy consumed, (2) Percentage grid electricity, (3) Percentage from biomass, (4) Percentage from other renewable energy.	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-130a-1/			
Biodiversity					
GRI 3: Material Topics 2021	3-3 Management of material topic	87			
GRI 304 - Biodiversity 2016	304-1 - Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	https://centraldeindicadores2023.bracell.com/en/indicador/gri-304-2/			
	304-2 - Significant impacts of activities, products and services on biodiversity	93			
	304-3 - Habitats protected or restored	88, 90			
	304-4 - IUCN Red List species and national conservation list species with habitats in areas affected by operations	https://centraldeindicadores2023.bracell.com/en/indicador/gri-304-4/			
GRI 101 - Biodiversity 2024	GRI 101-1 Policies to halt and reverse biodiversity loss	https://centraldeindicadores2023.bracell.com/en/indicador/gri-101-1/			
	GRI 101-2 Management of biodiversity impacts	https://centraldeindicadores2023.bracell.com/en/indicador/gri-101-2/			
	GRI 101-4 Identification of biodiversity impacts	https://centraldeindicadores2023.bracell.com/en/indicador/gri-101-4/			
Water and effluents					
GRI 3: Material Topics 2021	3-3 Management of material topic	https://centraldeindicadores2023.bracell.com/en/indicador/gri-3-3-management-of-the-material-topic-water-and-effluents/			

GRI standard/ other source	Disclosure	Location	Omission		
			Requiremen- t(s) Omitted	Reason	Explanation
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	https://centraldeindicadores2023.bracell.com/en/indicador/gri-303-1/			
	303-2 Management of water discharge-related impacts	78			
	303-3 - Water withdrawal	78			
	303-4 Water discharge	78			
	303-5 Water consumption	78			
SASB	RR-PP-140a.1: (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-140a-1/			
	RR-PP-140a.2: Description of water management risks and discussion of strategies and practices to mitigate those risks	https://centraldeindicadores2023.bracell.com/en/indicador/rr-pp-140a-2/			
Waste management					
GRI 3: Material Topics 2021	3-3 Management of material topic	79			
GRI 306: Waste 2020	306-1 Waste generation and significant wasterelatedimpacts	79			
	306-2 Management of significant waste-related impacts	79			
	306-3 Waste generated	80, 81			
	306-4 Waste diverted from disposal	https://centraldeindicadores2023.bracell.com/en/indicador/gri-306-4/			
	306-5 Waste directed to disposal	https://centraldeindicadores2023.bracell.com/en/indicador/gri-306-5/			
Compliance, ethical conduct, integrity and transparency					
GRI 2: General Disclosures 2021	2-27 Compliance with laws and regulations	https://centraldeindicadores2023.bracell.com/en/indicador/gri-2-27/			
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	https://centraldeindicadores2023.bracell.com/en/indicador/gri-205-1/			
	205-2 Communication and training about anti-corruption policies and procedures	https://centraldeindicadores2023.bracell.com/en/indicador/gri-205-2-communication-and-training-on-anti-corruption-policies-and-procedures/			
	205-3 Confirmed incidents of corruption and actions taken	https://centraldeindicadores2023.bracell.com/en/indicador/gri-205-3/			
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	https://centraldeindicadores2023.bracell.com/en/indicador/gri-206-1/			

Credits

Overall coordination

Bracell - Sustainability Department

GRI consulting, content, editorial coordination and design

Grupo Report

Photos

Bracell archives





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