

A decorative graphic consisting of several concentric, curved yellow lines on the left side, transitioning into four horizontal yellow lines of varying lengths extending to the right.

Sustainability
Report **2019**

Summary

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Sérgio Luiz Cotrim Ribas
CEO

Message from the CEO

(102-14)

For Irani, 2019 was a year marked by structuring actions that will have a great impact on the solidity, profitability and expansion of our businesses in the coming years. We continue, every day, to exercise our mission to build valued bonds with our relationship groups: clients, suppliers, business partners, shareholders, employees, communities near our factories and all other stakeholders. “Building value relationships” permeates all of our actions, so that we never lose the necessary empathy to meet the legitimate aspirations of the audiences with whom we relate, maintaining a balance with our own legitimate objectives. Over time, this posture leads to the construction of value in each relationship being carefully developed, enhancing meaning and forging a success story together with our stakeholders.

In 2019, we reported net revenue of R\$ 898 million, an increase of 12.5% compared to 2018. We implemented a number of measures to improve the debt profile

and accelerate the company's financial deleveraging, such as the issuance of green debentures in the amount of R\$ 505 million and the settlement of foreign currency-denominated debt, thus making our results more predictable. We took an important decision related to the completion of the consolidation project for the Papelão Ondulado São Roberto company, demobilizing the industrial unit located in the capital of São Paulo. The process was conducted with care and sensitivity, offering transfer opportunities and support to discharged employees. We also sold off non-strategic assets, ending the year with 3.40x financial leverage, R\$ 110 million in cash and with 68% of the debt in long-term programs. With these measures, the deleveraging process should continue to progress in the coming years, making way for a new expansion cycle through new investments.

For us, life comes first, and this is translated into constant improvement of practices that

guarantee the health and safety of all our employees. Through investments totaling almost R\$ 3 million, we were able to make the required adjustments to meet regulatory standards and completed 100% of the training deemed necessary to do so.

We operate our businesses transparently and improve the bases necessary to enhance the governance and compliance framework, reinforcing our commitment to ethical behavior and human rights. We also initiated a review our practices in consonance with the Sustainable Development Goals, aligned with the Global and Business Compact for Integrity and Anti-Corruption guidelines, to which we are signatories.

We strive to create and strengthen the pride of belonging to an ecosystem where people and their ideas are respected and welcomed, and who are encouraged to give the best of themselves in projects that strengthen our practices and our businesses. We launched new platforms, redesigned processes and drove a culture marked by people's leadership aligned with

the cultural practices encouraged by the Great Place to Work® organization, initiating a new development cycle for our professionals.

We moved up by one percentage point in the organizational climate survey and conducted a diversity survey for the first time. It pointed to opportunities for improvements in valuing women in the workplace environment and as new hires. In 2020, we will continue to advance our efforts toward this end, implementing projects that promote inclusion and strengthen our ecosystem.

We consolidated our corporate education project by joining the first distance education project. We raised the average number training hours per job category from 25h to 28h, while boosting investments in training and development by 6%.

We have completed the Simplify Project and are now better prepared for the future through an innovative technology platform (SAP S/4HANA) that supports the growth of our businesses. Our teams are the drivers of this digital transformation, better



prepared to explore innovation projects and new technologies in search of increasingly significant results for the company.

We encourage the generation and sharing of ideas through a fully digital solution. We received almost 300 new ideas and paid about R\$ 45,000 to their authors, whose ideas were responsible for financial or operational returns to the Company estimated at R\$ 1.5 million. We defined 10 priority research lines from which 30 open innovation projects and initiatives were derived, which received total funding of R\$ 455,000 in 2019.

The commitment to the environment and mitigation of impacts has been bolstered within Irani and has delivered important results. We improved our forest surveillance, began relying on software for online management and monitoring of fleet movements and started using drones to support operational decisions. We also reduced our greenhouse gas emissions by about 8% compared to 2018 and began selling carbon credits again.

Recycling is an important component in our business. We obtained a return of 6,110 tons of customer paper scraps for recycling at Irani and maintained our position in the reverse logistics chain through a sectorial agreement between industry associations Indústria Brasileira de Árvores (Brazilian Tree Industry-Ibá) and Compromisso Empresarial pela Reciclagem (Business Commitment for Recycling-CEMPRE). In Vargem Bonita (SC), where our largest industrial park is located, we recovered 15% more recycled plastic than in 2018, in our recycling plant and recorded a reduction of 7% of waste sent to our landfill and waste generation per net ton of paper produced. This is also where we make a greater effort to find solutions aligned with the circular economy. The result of this guidance extended the useful life of our industrial landfill by four years, rolling over the investment of approximately R\$ 3 million for the construction of a new one.

We continue to develop projects that benefit our surrounding communities. Our social investments have gone toward programs and projects designed to help the development of

children and youths, from initiatives focused on education, environment, citizenship and sports through to one-off support for actions that meet the guideline.

Our supplier relationship practices also were upgraded. We increased total purchases from surrounding communities by 46% compared to 2018 and the Supplier Performance Index (IDF) rose by 2 points, reaching an overall average of 92.82 points, the best result of the last three years. We have adopted a complementary solution that integrates with the Company's new ERP and our supply chain, promoting full interaction of the process. Thus, the processes became more agile, now more intuitive, with higher informational transparency, security and traceability.

There was an improvement in how clients perceive the value of Irani's product supply regarding the Paper (internal and external), Resin (internal) and SP Packaging businesses. We successfully implemented two new projects that pay special attention to Client Focus: CaiCha and the Value Program.

As a sector, we are very well positioned due to changes in people's consumption habits. They significantly reflect the importance of corrugated paper and cardboard products in the market, especially recyclables and biodegradables, which is encouraging a new wave of thinking about economic, socio-environmental and governance issues. Brazil, for the first time, is aligning with the low interest levels practiced worldwide and is at the beginning of a new economic cycle.

We are prepared for the challenges ahead, confident that sustainability is one of the key components of our way of doing business.



Overview



Certifications

100% OF UNITS CERTIFIED FSC®
Forest Stewardship Council® Forestry
Management Council)

100% OF UNITS CERTIFIED
ISO 14064:2006 (Greenhouse gas inventory
management system)

100% OF THE PACKAGING BUSINESS
ISO 14001: 2015 CERTIFIED
(environmental management system)

100% OF UNITS CERTIFIED
ISO 9001:2015
(quality management system)



Employees

1,977 active professionals in 2019
(85% men and 15% women), challenged
and valued, with whom we build together a
distinctive organizational climate, which placed
on the list of the best companies in which to
work, according to the GPTW® for three years.



Stakeholders (102-40)

We prioritize the establishment of value
relationships with these stakeholders, aimed at
mutual benefit:

- Employees
- Communities
- Government and Society
- Suppliers
- Shareholders
- Clients

In the continuous search for initiatives that
promote sustainability, excellence and the
appreciation of people, the awards and recognitions
that we received in 2019 inspire us even more:

- Best companies to work for - SC, Ranking of
large companies;
- 3rd place Impact Awards | ASUG Brazil;
- Social Responsibility Certificate - Alesc;
- Top Human Being ABRH RS | Overcome Case
History;
- 26th Ecology Expression Award.

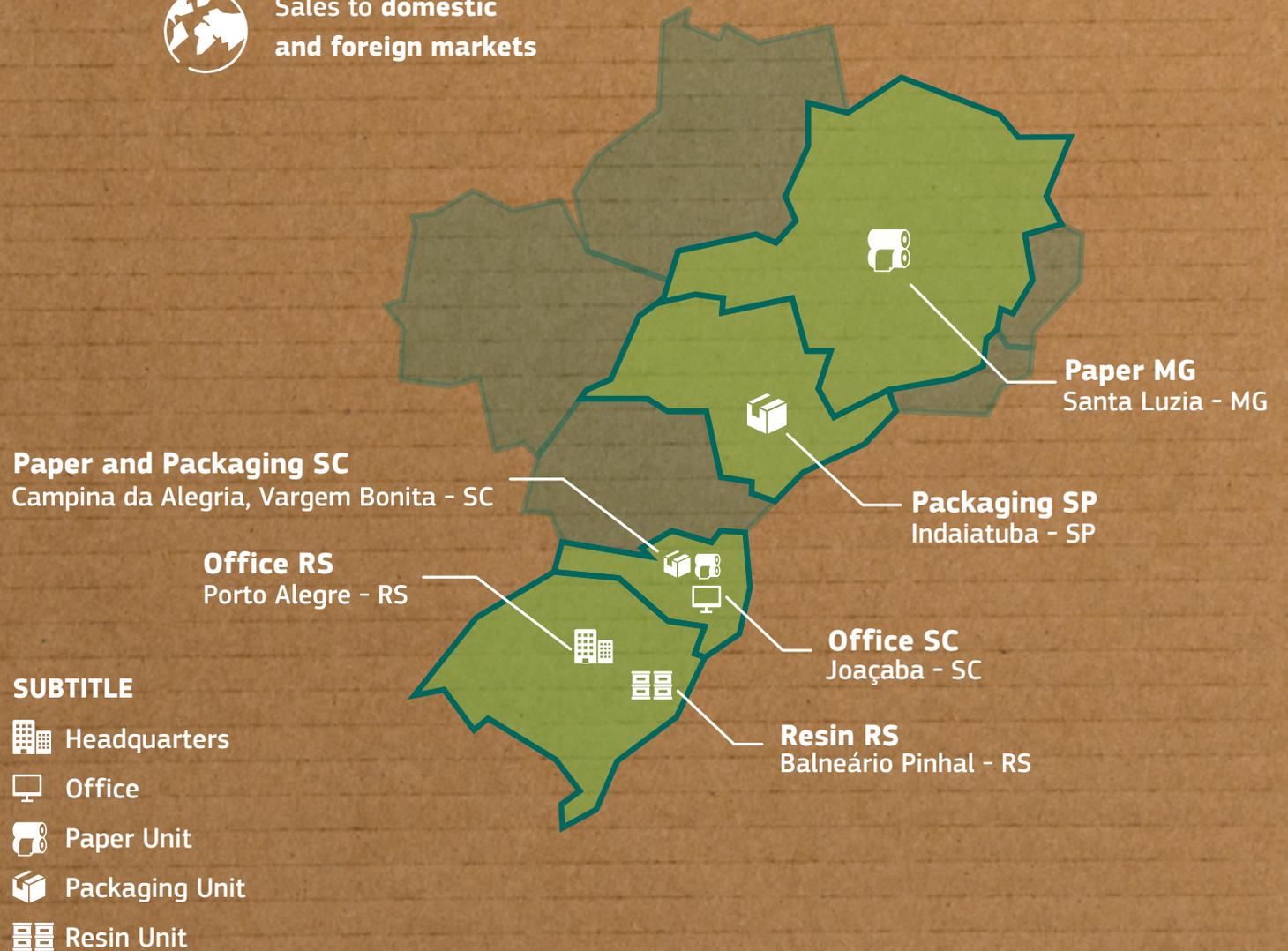
Business Profile

(102-2 and 102-3)

The essence of our businesses derives from planted forests, and our businesses are integrated: forest, paper, packaging and resin. We have 38,940 hectares of land, of which 72% is in Santa Catarina and 28% in Rio Grande do Sul.



Sales to domestic and foreign markets



Business Profile

(102-2)

Pinus seedlings grown in Santa Catarina in their own nursery, intended for:



Production of virgin fibre paper



Sale to the regional market of sawmills and rolling mills (surplus wood)



Paper recycled from scrap paper collected in urban centers



Recycled paper, with a dedicated unit in Minas Gerais, intended for sale



Converted into **corrugated cardboard sheets and boxes** that protect our clients' products in Santa Catarina and São Paulo

1st resin segment company to certify forest management and the chain of custody by the FSC® and the 1st producer of pitch and turpentine in Brazil



Management of Pinus planted forests in RS for extraction of resin gum and resination



Sale of timber in the regional furniture market

Highlights 2019



A new step towards Compliance

- Implementation of the SAP risk management module with the governance, risk and Compliance suite



Innovation

- Completion of the second wave of the Simplify Project that began in 2018 with the implementation of SAP S/4HANA technology as the main ERP, installing new tactical and strategic modules.
- + **280 simulated scenarios**
- + **2,400 steps tested**
- + **80 people** involved
- Three test cycles for each solution conducted
- **16 research lines**
- **30** innovation projects and initiatives
- Total contribution of **R\$ 455,000**
- **70%** of open innovation projects
- Creation of an online platform for the **Innovate Ideas Program**
- **R\$ 45,000** in payment to the authors of ideas registered on the platform.



Economic Performance (102-6)

Net Revenue of **R\$ 898.8 million** (+12.5% compared to 2018)



53%
Corrugated cardboard
packaging



38%
Packaging
paper



9%
Forestry RS and
resins

Adjusted EBITDA of **R\$ 228.2 million** with margin of 25.4%
(-2.9% compared to 2018)

Sales



19%
Foreign Market



81%
Domestic Market

Highlights 2019



Engagement to press forward

- **68%** vacancies filled through internal recruitment;
- **100%** of training in regulatory standards;
- More than **R\$ 35 million** invested in **employee benefits**;
- New integration model started with **100% satisfaction** from the newly hired staff;
- Average **28 hours** of training per employee;
- **94%** of employees covered by the Overcome program, received regular performance evaluations;
- Launch of online platform for distance learning education.



Life first

- **R\$ 5.2 million** invested in initiatives and environmental management processes;
- Approximately **200 hours** dedicated to environmental education, benefiting **790 people**;
- Monitoring of fauna and flora carried out periodically in our forest areas;
- The Natural Heritage Private Reserve (RPPN) Prof. Yara C. Nicoletti, in Vargem Bonita (SC), contributes to scientific research and environmental education, mobilizing **276 people**;
- Our initiatives focused on a circular economy extend the useful life of the industrial landfill by 4 years (2018-2021), generate new value chains, employment and income for the local community.



Commitment

- More than **R\$ 186,000** in social investments;
- Conclusion of Irani's socio-environmental impact study in the surrounding communities.
- **R\$ 189 million in purchases from local suppliers**, corresponding to **24%** of the Company's total purchases.
- Return of **6,100 tons** of paper scrap through reverse logistics with our customers.
- Client-focused projects led to earnings and results, bolstering the perception of Irani's value as a supplier.

A woman wearing an orange cap, safety glasses, a teal shirt, and a clear plastic apron is smiling. She is holding a small pine sapling in a black nursery container. The background is a blurred nursery with many other saplings. The image is framed by decorative curved lines in shades of green and yellow.

Nice to
meet you,
we are
Irani

Therezinha Lourdes Pereira - Campina da Alegria/SC

About us

(102-1) Nice to meet you, we are Irani. **(102-2)** Committed to sustainability, we produce Kraft papers, resins and are notable as one of the main Brazilian industries for corrugated containerboard boxes and sheets. We operate with full control of the production chain and complementary relationship interfaces, in order to integrate our experience with the reality of those with whom we do business. Thus, we create ever closer relationships with all our stakeholders.



Jose Tavares de Oliveira Neto - Packaging SP - Indaiatuba



Our businesses

Forestry

(103-1) The availability of natural resources is an essential factor for our businesses. Hence, we develop preservation strategies that reflect the conservation of water and forests and the enrichment of local fauna and flora.

The management of our forest areas is certified by the Forest Stewardship Council® (FSC®), ensuring these practices:



Environmentally sound

- Protection and conservation of High Conservation Value Areas (HCVAs)
- Adoption of best practices for identifying, controlling, minimizing and mitigating environmental impacts
- Biodiversity conservation



Socially beneficial

- Respect for workers' rights
- Respect for local communities
- Dialogue and strengthening our relationship with audiences in the localities where we operate



Economically viable

- Build markets, adding value
- Create equitable access to forest benefits
- Ensure the supply of wood and resin from renewable plantations

(103-2) In compliance with current legislation, we also are dedicated to connectivity between protected areas, maintaining ecological corridors. Micro-planning of planting and harvesting stages involves aspects of legal compliance, occupational health and safety and operational processes. Aspects verified include, among others, exposure to risks, socio-environmental impacts, operational efficiency and productivity and **management indicators**.

(103-3) Management effectiveness is assessed through biodiversity monitoring, forest inventory to calculate forest increments and health and safety indicators.

We periodically publish the **Public Forestry Management Summary** of our areas in Rio Grande do Sul and Santa Catarina, available online at: <https://bit.ly/3d0p1od>

Key management indicators:

- Quality of operations
- Forest biomass production
- Operational health and safety training
- Environmental impacts
- Stakeholder complaints regarding forestry operations

The Public Forestry Management Summary is a transparency instrument for our stakeholders, covering topics such as: forestry oversight, management and protection, biodiversity, monitoring and contact channels.

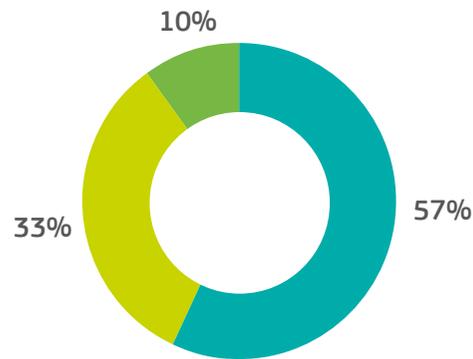


Our Santa Catarina forests

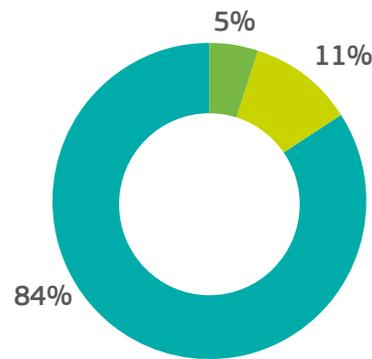
Our forest base in Santa Catarina comprises 27,900 hectares and is distributed in the municipalities of Água Doce, Catanduvas, Vargem Bonita, Ponte Serrada and Irani.

Of this total, 15,700 hectares are planted forests, 14,200 hectares in Pinus and 1,500 hectares with Eucalyptus.

Pinus



Eucalyptus

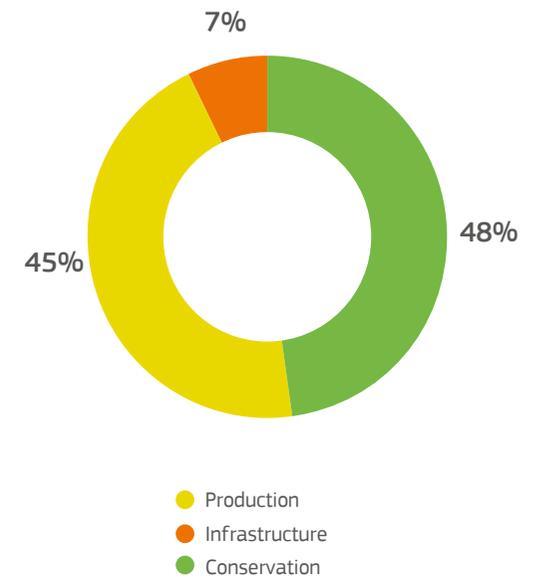


- Own
- Partnerships
- Repurchase option

(102-2) *Pinus taeda* harvested from the Santa Catarina soil supplies the paper production process in Vargem Bonita (SC). The cogeneration boiler is fed with biomass from Pinus and Eucalyptus, serving the units installed in this same location with energy in the form of steam.

Logs from certified forest management reforestation areas are sold on the regional market to laminators and sawmills.

Land occupation and own land base



- Production
- Infrastructure
- Conservation

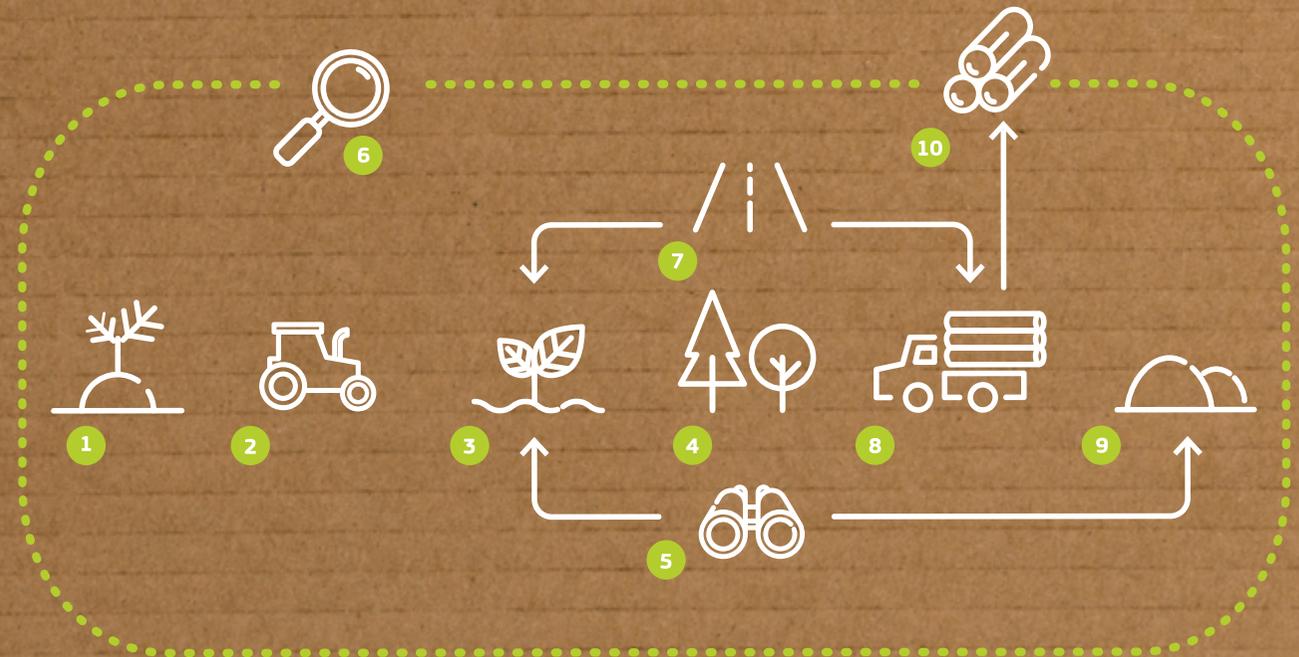
(304-2) Forestry process





Leocir Tonini - Campina da Alegria - SC

(102-15, 304-2) Main impacts of Santa Catarina's forestry activities, products and services on biodiversity



1. Seedling production

We obtain our own genetic materials and buy the seeds of Pinus and Eucalyptus from the market. Respecting the local ecosystem, we also harvest seeds from native parent trees of our planted forests or other forests in the region for growing seedlings. In our own nursery, our Pinus and Eucalyptus seedlings are grown for 6 to 12 months, until they are ready for planting. Native seedlings are directed to the recovery of degraded areas, enrichment of native forests or donations to our surrounding relationship audiences.



In 2019, 12,432 native seedlings were donated, 9,312 for events in general and 3,120 for recovery of areas.

2. Soil preparation

Subsolation techniques are carried out by an outsourced team, opening the furrows where our own teams conduct planting operations. In the steepest areas, holes are dug manually. In 2019, our analyses were enhanced after realizing qualitative gains in the operational process in terms of planting quality and seedling development.

3. Planting

Planting is conducted by own teams. Toward this end, they rely on ergonomic equipment to ensure safe work practices and correct spacing between seedlings.

In 2019, 947.12 hectares were planted, of which 803.46 were Pinus and 143.66 Eucalyptus.

4. Forest management

One of the forms of management is pest control and combat, which is different depending on the species planted. In planted Pinus areas, we fought ants between 15 and 30 days prior to soil preparation. For

their part, in the Eucalyptus areas, we conducted two mitigation activities: one was a pre-planting operation, 45 days before subsolation; and the second took place approximately 15 days before planting. The areas are monitored for evaluation of new combat needs, according to the premises described in internal procedures. Control of pests such as the wood wasp is conducted in our own and partnership areas, starting from five years after the trees are planted. Every six months, up to five years after an area has been planted, we make surveys to evaluate plantings, designed for assessment of the compliance related to the survival of the seedlings and the control of competing ants, pests and bushes.

5. Asset structure and surveillance

In 2019, three fire outbreaks were recorded without loss of any planted trees. Our forest emergency brigade consists of 15 members who participate in four training sessions per year to battle fires, under the guidance of the Irani Volunteer Firefighters (SC). Our own fire truck, watchtower and specific equipment are used in firefighting activities. In addition, own teams

constantly monitor and surveil more than 100 points, totaling over 350 monthly verifications in our forest areas. These points comprise strategic locations, difficult to access or even more vulnerable areas that are vulnerable to fire flare-ups, with yearly adjustments to ensure full coverage. An agreement with the Concordia Environmental Military Police (SC) contributes to the maintenance of order and security in the forested areas.

6. Research, health, safety and environment

Our forest planning team is actively involved in forestry and harvesting activities, guiding operational aspects and means of preventing and mitigating socio-environmental impacts. It also is responsible for processes and georeferencing, updating the registry base and forest inventory. Involving teams from the Forest, Supply and People Development areas, every six months we conduct legal compliance audits on all forest service providers, with visits and document verification. The Occupational Health, Safety and Environment (OHSE) report contributes to the recording of irregularities, minimizing exposure to risks, improvements in the workplace environment and reduction of environmental impacts resulting from our operations. It has registered since implementation in 2014 the following: 301 health and safety irregularities, treated in critical analysis meetings, and 513 observations of animals in the field.

Since 2018, we have participated in a cooperative program for Pinus productivity in Brazil known as PPPIB and promoted by the Instituto de Pesquisas e Estudos Florestais (Forest Research and Studies Institute). Created in 2006, this Program aims



Pedro Ivo Ferrarez e Vilmar Recalcati - Paper SC - Campina da Alegria

to study the processes that control the growth of some Pinus species and operational quality. It also involves investigating issues related to the interaction of these forests with the environment, based on aspects of sustainable production and efficient use of natural resources, as well as providing a large volume of data for the development and testing of patterns that simulate forest dynamics in different soil and climate conditions.

In 2019, we started a practice of minimizing exposure to operational risks in forest areas. It is a guide card that orients teams regarding the safe distances to be maintained from each machine in operation in the field. Moreover, we implemented a fleet tracking system to control speed and to produce a map vehicle resources.

7. Road maintenance

It is carried out primarily in locations where there are critical focal points of environmental impacts such as erosion, or when the stretch is near water sources. Additionally, our roads undergo maintenance prior to planting and harvesting operations and whenever necessary. This assures

that the transport of timber over and their use by the surrounding communities is satisfactory and safe. In 2019, we conducted about 200km of maintenance on municipal roads, benefiting the production process and the local communities.

8. Harvesting and transportation

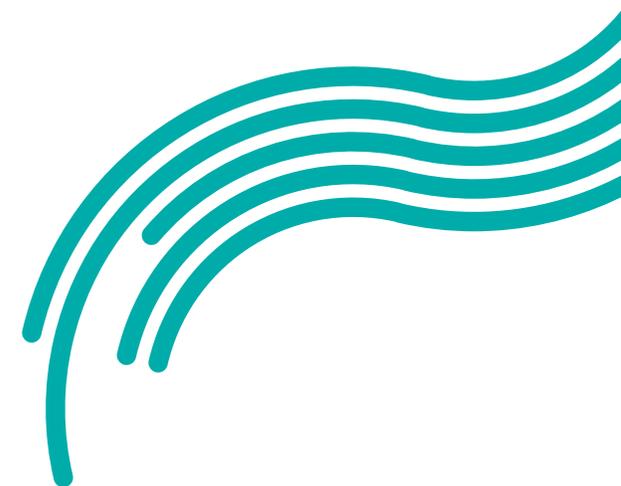
When the forest reaches approximately 15 years of age, mechanized harvesting is carried out. The technique involves cutting, dragging, tracing and unloading the loglets in the wood patio, where the paper production process begins. Outsourced service providers are responsible for the entire process. **In 2019, 437,827.75 tons of wood were conveyed to the paper production process patios.**

9. Chip production for biomass

At this stage, part of the Pinus residues such as branches, tips and wood residues from the process are chipped in the field and feed the Cogeneration Boiler, generating energy and steam for the Vargem Bonita industrial units. Eucalyptus produced by Irani is used exclusively for this purpose.

10. Wood sales (102-7.v)

Reforested wood with a diameter of more than 28cm is considered a log and made available on the market for laminators and sawmills. In 2019, the volume sold totaled 23,214 tons.



Our challenges

In 2019, we initiated tree felling in partnership areas located in Concordia, Ponte Serrada, Vargem Bonita, Catanduvás and Passos Maia included in the scope of FSC® certification, in order to ensure that the wood sent for paper production processes derives from forests that meet the certifier's sustainability requirements.

We progressed in our efforts to meet the challenges proposed for 2019.

We put on a third shift for our own biomass chipping field activities (Pinus residues and small Eucalyptus logs), enabling higher production and cost reductions. We also maintained strategic focus on occupational health and safety, process effectiveness, land legalization and new technologies available:

2019 Challenge	Advance 2019	Challenge 2020
Encourage continuous operational productivity improvements and cost reductions.	Productivity ratios higher than in 2018 and costs under budget.	Foster improvement in quality compliance and Occupational Safety & Health (OSH) rates in operations, with no lost-time accidents.
Promote continuous improvement to Occupational Safety and Quality Compliance (OSQC) rates in our operations.	Good compliance and quality indicators and no lost-time work accidents in forest areas in SC.	
Complete Land Legalization by registering the remaining 3,500 hectares (12% of the base).	91% of the area registered in SC.	Complete the Land Regularization by registering the remaining 2,700 hectares (9% of the base).
Increased use of new technologies to support quality control and monitoring of forest operations.	We deployed software for online fleet movement management and monitoring and started using drones to support operational decisions.	Identification of opportunities and achievement of operational gains (productivity and costs) with the use of new fleet monitoring software.

We have also defined three new challenges:

1) Harvesting in forestry partnership in areas of greater distances and sloping terrain.

2) Establishment of Pinus seed production areas and clonal seed orchards.

3) Finalize analyses to update the forestry management system.

RS Forestry and Resin

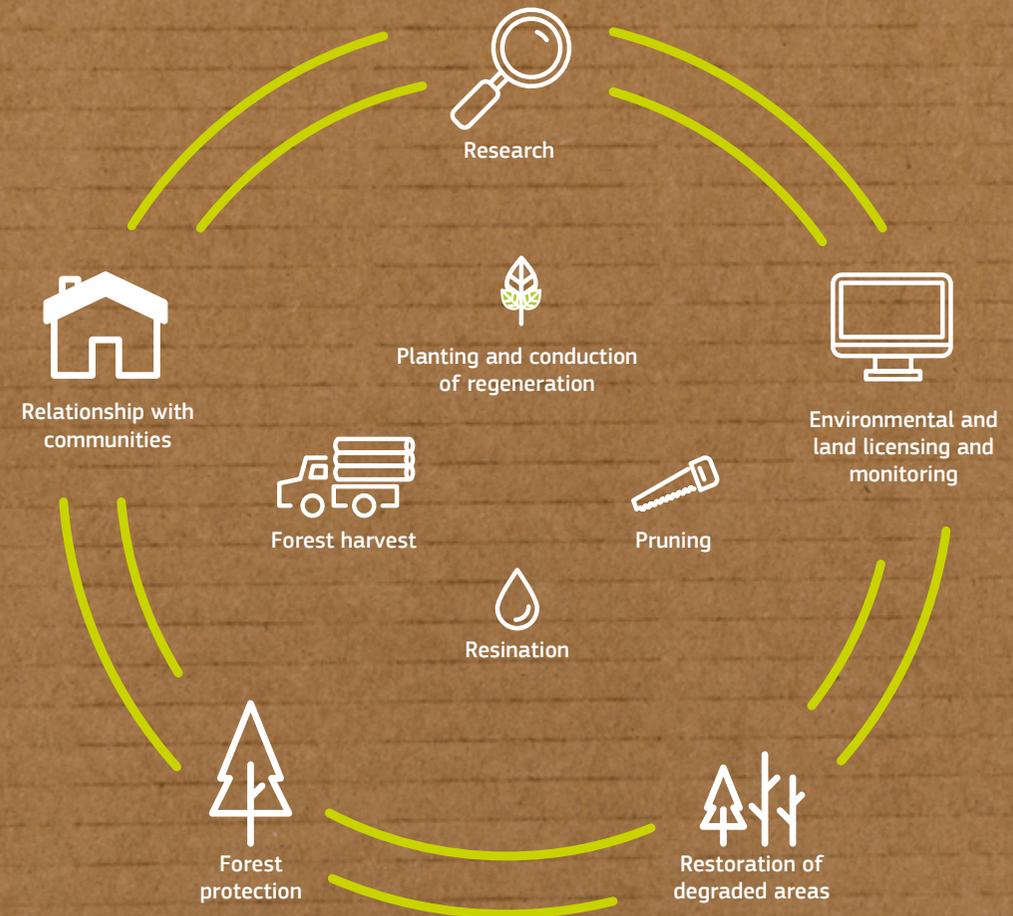
(102-2 e 102-7.v) In Rio Grande do Sul, resin production is a way to anticipate revenues from *Pinus elliottii* forests in the Mustardas, Tavares and São José do Norte localities. This value chain generates direct and collaborative jobs, contributing to convincing people to remain and work in agricultural regions.

In 2019, the Habitasul Florestal subsidiary sold part of its forest assets located in the municipalities of Balneário Pinhal and Cidreira. The remaining forest base totals 4,342.26 hectares, 92% of which are dedicated to the planting of *Pinus elliottii*.

From Pinus we extract the gum-resin that is processed in the Resin RS – Balneário Pinhal unit, leading to pitch and turpentine products, with a wide variety of applications.

A solid, pitch is packaged and recommended for application in products such as glues, adhesives, soaps, enamels, electrical insulators, chewing gum, waxes and expectorants. Turpentine is a liquid product stored in tanks and suitable as a solvent in paints and varnishes, the manufacturing of dyes, waxes, disinfectants (pine oil), camphor, soaps, insecticidal greases, sealants and perfume fixation purposes.

Certified by ISO 9001:2015 and ISO 14064:2006, we are the first company in this sector in Brazil and pioneers for certifying our forest management and chain of custody by the FSC® (FSC-C009947/FSC-C116791).





Rodrigo de Sousa Silva - Resin RS - Balneário Pinhal

In a management cycle that lasts up to 21 years, we conducted four major steps: **spontaneous regeneration and planting, resin production, processing and shallow cutting**. In each of them, we comply with the guidelines of the certifications obtained and the Company's own quality and excellence standards.

Regeneration

We opted for the natural, spontaneous regeneration of Pinus; planting becomes an option only when there is a loss in a given area. In 2019, 88,331 seedlings were planted. Regardless of the form of regeneration decided upon by the Company, when an area reaches nine years, thinning is conducted, culling trees that do not present adequate characteristics for the resination process. Wood harvested in 2019 totaled 27,839t.

Resination

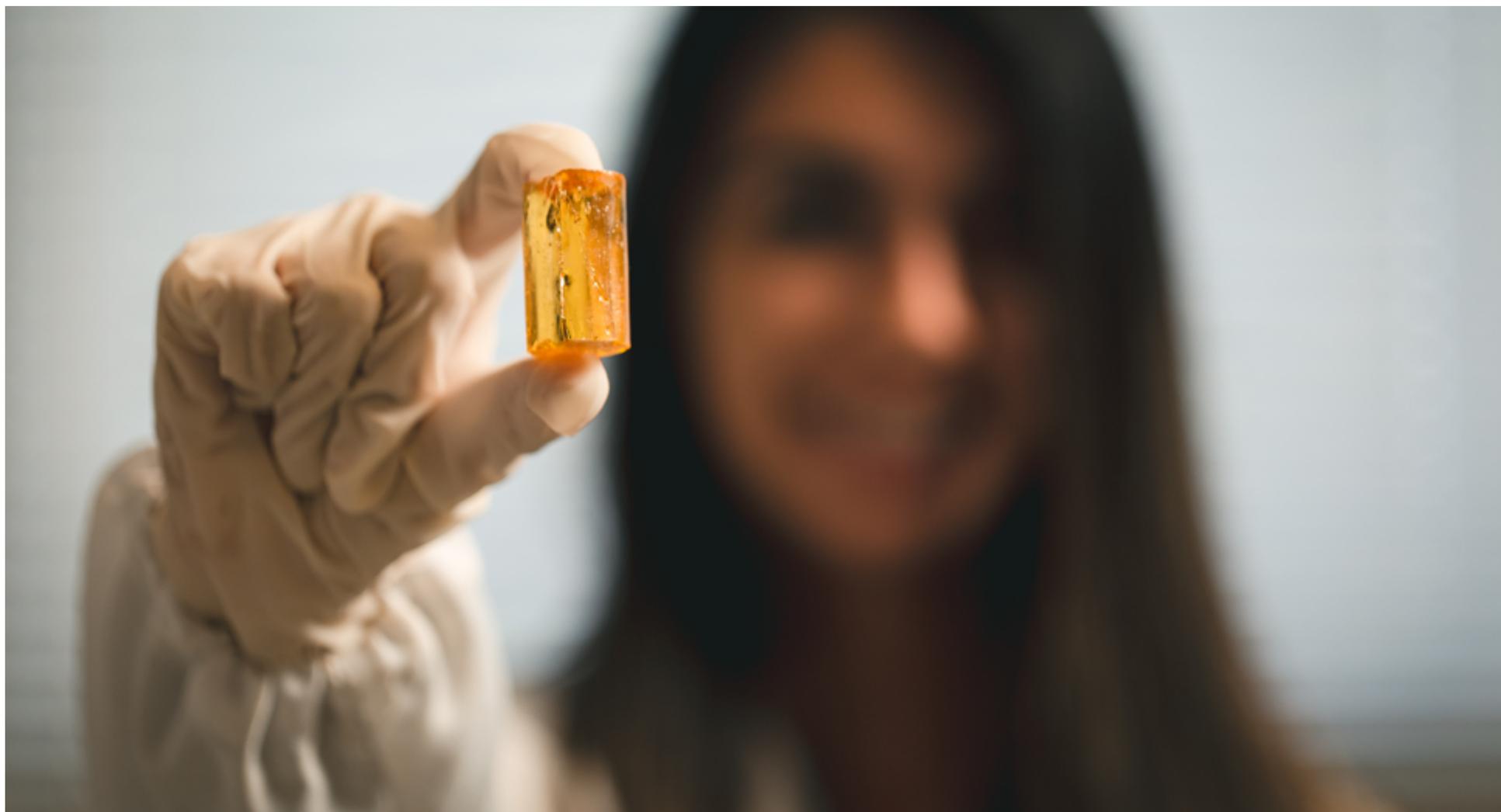
Manual activity in which we split the Pinus into faces and open grooves for gum-resin collection. This process can occur for up to eight years, followed by a tree resting period of 12 months. In the 2018/2019 harvest 1.2 million trees were resinated, with collection of 4,183 tons of resin, corresponding to 22% of the demand of the industrial unit. The remainder is purchased from small producers in the surrounding area and from the domestic market. Our Quality Resin Program establishes the purity of the product to suppliers, applying discounts or increases in the payments for this raw material according to the level reached during delivery. We closed 2019 with more than 220t of gum-resin received, in compliance with the Program's guidelines..

Processing

In the industrial plant, the gum-resin undergoes malaxing, filtration, decanting and distillation stages. In distillation, we can separate the resin in pitch, which is solid, and in turpentine, which has liquid characteristics. In 2019, we optimized the efficiency of the unit, producing more than 3t/h of pitch and more than 760kg/h of turpentine..

Shallow cutting

This stage is conducted when a forest area is 21 years old. The harvested timber is sold on the regional market in the form of logs and loglets. Wood logs supply sawmills and the loglets are transformed into MDP and MDF sheets by furniture makers.



We made progress in meeting our challenges for the 2019 cycle, implementing actions focused on the quality and operational performance of our businesses, upgrading laboratory analyses, establishing and consolidating preventive and predictive maintenance and consolidating daily accounting practices, encouraging critical analysis. Our new cooling tower for water used in the process ensures lower quantities of turpentine vapor escaping during distillation and greater solidification of pitch in the form of flakes. We also put into practice actions focused on quality and operational performance.

In 2019, the main challenge for the Resin RS – Balneário Pinhal unit was the purchase of resin from suppliers, due to the sale of the product in its own areas. In the 2018 harvest, this index was 49% of purchased resin. In 2019, this number went up to 83% and for 2020 the forecast is reaching 89%. This change offers challenges in terms of operational efficiency, raw material quality monitoring and supplier relationships.

	2019 Challenge	Advance 2019	Challenge 2020
Forestry RS	Complete registry of forest areas	Reach 80% registration of Cidreira's areas	Complete the registration of the areas in São José do Norte (Bojuru)
	Reduce absenteeism rates and improving employees' perception of the organizational climate	Considerable progress was made in the perception of organizational climate management	Reduce absenteeism rates
	Complete NR-10 suitability projects and Fire Prevention and Protection Plan	NR10 Fittings Completed	Fire Prevention and Protection Plan in progress
Resin	Reduce packaging costs	Drum assembly in-sourcing project in progress	Complete and evaluate the project that is in progress
	Boost operational productivity	Flake conveyor belt production increased to 133.1 t	Continue seeking opportunities to increase productivity with operational efficiency gains
	Increase share of sales of Pitch in Flake in paper bags	22% increase	

New challenges

Study alternative resination methods, focusing on reducing forest production costs

Study process and product improvements that allow IRANI to deliver premium pitch to the market

Paper

We are among the leading producers of packaging paper in Brazil with an ISO 9001: 2015 certified quality management system and FSC® certified chain of custody (FSC-C009947).

(102-2 e 102-7.v) With weights ranging from 30g/m² to 200g/m², we offer virgin fiber papers suitable for production in rigid or flexible packaging. **(416-1)** Among the types offered is a special line of papers representing 25% of the products supplied. This paper line is comprised of the Fine Kraft, Fine Kraft Branco, Flash Kraft, Flat Kraft and Flexi Kraft families. These papers can be in direct contact with food because they are produced with inputs permitted by the positive list of RDC Resolution No. 88 of June 29, 2016 and approved in our internal acceptance processes. Legal compliance and good manufacturing practices that prevent physical, chemical or biological contamination of the product, as well as constant evaluations, ensure that these products do not impact consumer health and safety. In addition, every two years we carry out all the analyses requested by RDC Resolutions No. 88 and RDC No. 90 and revalidate the ISEGA certification.



Sidnei Daneli - Paper SC - Campina da Alegria

How our papers are produced



1. Logs from the planted forests are cut into loglets, which go to the debarking area and then are transformed into chips, used for pulp production.
2. The chips go into the digester, which separates the lignin from the pulp.
3. The pulp is cooked and purified to remove contaminants and part is not cooked.
4. Scrubbing is initiated, separating the pulp from the chemical products, and stocked in a tower.

The pulp is sent for refining, where the cellulosic fiber is physically treated.

5. Once the fiber is treated, the mass is prepared by adding chemical products. Strong jets of water push the mass to a flat table where the initiation of the paper sheet formation process begins.
6. The sheet is pressed, helping remove the humidity of the paper by about 40%. Drying rollers remove the remaining humidity to guarantee its mechanical resistance.

7. A scanner analyzes the quality of the paper, which goes to the winder and formation of what we call the jumbo roll.
8. Upon reaching the rewinder, the paper is cut per customer specification.
9. The complying paper rolls are sent to the customers, whereas the waste is shipped for recycling and reprocessing.



Gilberto Silva - Paper SC - Campina da Alegria



(416-1) Learn more about our paper

See at:

<https://bit.ly/2BvQOLr>

In another challenging year for the Paper business in Santa Catarina, we implemented important projects, such as the structural reform of the Broby 2 and 3 furnace, ensuring greater safety during operations and maintenance, as well as higher pulp production availability. For this same purpose, we completed the structural recovery of the cogeneration boiler's biomass conveyor belt system. We also updated the safety plans for our dams and set a number of production records.

In Minas Gerais, operational highlights included overall machinery efficiency, stable consumption of raw materials, chemicals and electrical energy and steam consumption below budget for the period. We trained our teams how to operate forklifts and work at heights.

In 2019, the Paper business developed 29 new inputs and 37 new paper types. Furthermore, we strengthened our relationships in the field of research with national and international partners, focusing on operational efficiency and new solutions for the market.

Packaging

We are among the main producers of packaging and corrugated cardboard sheets in Brazil. **(102-2 e 102-7.v)** We produce boxes and sheets of white and recycled Kraft paper with excellent performance and corrugated cartonboard sheets in single and double waves. We have instituted rigorous quality control processes and installed an environmental management system, certified under ISOs 9001 and 14001, in addition to the FSC® certified chain of custody (FSC-C009947).



How our packaging is produced

Client Focus

This is the concept that guides our relations. We place ourselves besides the client from beginning to end, so that our company will be recognized as the preferred solution because it offers innovative, distinctive and customized solutions along with exceptional performance.

Our papers, produced by Irani or purchased, are corrugated and glued in the corrugator, originating the sheets, according to the specifications of each client. This stage represents between 70% to 80% of the steam consumed in the production process.



We offer the best solutions for the needs of the clients, evaluating the products to be packaged, weighted, measured and the logistical requirements.

As of this analysis, our packaging engineering team creates a prototype, which is submitted to the client for approval before production. We always seek to make lighter and more resistant boxes, ensuring better performance and smaller thickness.

The sheets are stacked in pallets and can continue in two manners:

Shipped to the cartonboard end client.

Process for conversion to be creased, cut and printed and, then, shipped for use in various products by our clients.

Our technical assistance team monitors the process at all stages, making visits for development, preventive and corrective purposes.



Fábio Ambiel, Genivaldo Melo e Márcia Cocato -
Packaging SP - Indaiatuba

We remain firm in our commitment to the supply of ever smaller base thicknesses and superior mechanical strength. Toward this end, we made recent investments in infrastructure and industrial processes at our Packaging business units.

(102-10) In Santa Catarina, we focused on NR12 adaptations in the printing area and set 14 records. In Packaging SP – Indaiatuba, which absorbed the demands of the decommissioned unit in São Paulo, we adapted and expanded our administrative infrastructure. In the production environment, we worked on upgrading the Corrugator, acquiring new equipment, starting to operate with a new printer and adjusting the elevation of our shipping area docks. Thus, focused on results, we set 24 production records.

Our sales and marketing teams met to analyze joint actions to boost the profitability of the business. We added volume by supplying to large customers and shipping year-end campaigns. The technical assistance area and the sales team worked more closely together, and this led to projects to enhance product profitability, shared profitability, automation actions and dimensional reductions.

The year 2020 is replete with challenges for the paper and packaging business:

- 
 - Take effective action to address COVID-19 and its impacts
- 
 - Focus on occupational safety and health issues
- 
 - Improve management of the organizational climate
- 
 - Focus on cost and profitability management
- 
 - Strengthen market positioning through Client-Focused value offerings
- 
 - Focus on productivity
- 
 - Progress the development of new markets for paper manufactured at the MG Paper unit



Courage to inspire

Cristiano Siqueira e José Messias Alves da Silva - Paper MG - Santa Luzia

Our strategic intention

(102-16, 102-26) Our strategic intention has been reviewed in the light of the Company's Strategic Plan for the 2018-2027 cycle and was approved by the Executive Board and the Board of Directors.



Mission

Build Value Relationships



Vision

Be the best, most profitable, one of the best companies to work for and be among the largest paper and corrugated packaging companies.



Values

Life first
Challenged and valued people
Customer-focused
Results-focused
Integrity
Cordiality
Innovation
Social and environmental responsibility

Corporate Governance

(102-20) We adopt a governance structure guided by transparency, socio-environmental responsibility, ethics, courage, cordiality, innovation and pioneering, in addition to the best practices of relationship with our shareholders and other stakeholders.

(102-19, 102-20) We also have developed corporate policies for decisions of the controlling shareholder, resolutions of the General Meeting or of the management bodies and restrictions on stock trading during certain periods.

- **Information Disclosure and Use Policy**, available at: <https://bit.ly/2U8CELA>
- **Securities Trading Policy**, available at: <https://bit.ly/2BnZ84y>

(102-25) For transactions with interested parties, we are guided by market practices and values and existing commercial operations, respecting the regulations applicable to each subject.



Uillian Klotz Sewald, Cassandra Driessen Pavelski e Maíara Mena Barreto Lenzi - Office SC - Joaçaba

(102-18) Corporate Structure

At December 31, 2019, our capital stock totaled 161,894,847.81, divided into 166,720,235 shares, of which 92% were common (ON: R\$ 4.00 each) and 8 % preferred (PN: R\$ 4.30 each).

Shareholders	Shares common	%	Preferred shares	%	Total shares	%
Irani Participações S.A.	93,348,807	60.65%	5,375,080	41.96%	98,723,887	59.22%
Habitasul Des.Imobiliários S.A.	25,660,740	16.67%	2,019,020	15.76%	27,679,760	16.60%
Cia Habitasul de Participações	19,888,540	12.92%	1,188,560	9.28%	21,077,100	12.64%
Treasury shares	24,000	0.02%	2,352,100	18.36%	2,376,100	1.43%
Shares owned by executive officers	1,124,067	0.73%	704,060	5.50%	1,828,127	1.10%
Free float shares	13,863,821	9.01%	1,171,440	9.14%	15,035,261	9.01%
Total shares	153,909,975	100%	12,810,260	100%	166,720,235	100%

(102-18.a e 102-18.b) Governance Structure

 Segment	 Tag Along ¹	 Dividend Distribution	 Board of Directors	 Executive Board	 Annual Calendar of Events
Basic, listed on the B3 since 1977.	(102-25) 100% for common and preferred shares.	25% of the adjusted net profit and equal conditions for common and preferred shares. (102-25)	(102-22 e 102-24) 5 members elected by the General Meeting, with unified terms of office of two years, and may be reelected. 20% are independent members, with representation of the shareholders (controlling block). Non-executive function.	5 members nominated by the Board of Directors. (102-23) There is no accumulation of positions as CEO and Board of Directors Chairman. Unified terms of office of two years, and may be reelected. Executive function.	Annually published since 2011.

¹ Mechanism foreseen under the Brazilian Corporations Law, designed to offer greater guarantees to minority shareholders in the case of a change in the Company's ownership control.

General Shareholders Meeting

Respecting the Bylaws and the Brazilian Corporations Law, through the convocation of a general or extraordinary meeting are held at the Irani headquarters site in Porto Alegre (RS), with the following attributions:

- Deliberative functions
- Approval of the management’s accounts
- Resolve regarding the use of earnings and dividends
- Election of its Members

General: Held in the first four months of the year for examination and discussion, of the financial statements of the previous year, distribution of net profits and election of the members of the Board of Directors.

Extraordinary: Held whenever necessary to resolve important topics, in accordance with the Company’s Bylaws.

Board of Directors

Discuss, monthly, strategic topics such as Corporate Policies, market relations, investments and risks inherent to our businesses. It also is responsible for the regular evaluation of our management model, recognized and widely disclosed in the Financial Statements (quarterly and annual). Its attributes are contained in Article 12 of the Bylaws, and include among them:

- Resolution function
- Election of the Executive Board
- Oversight of the Executive Board’s management
- Attribution to compensate the executive board
- Convoke the general meetings

Executive Board

Responsible for supplying the guidelines and validate the Company’s strategic intention, policies, targets and other economic and socio-environmental topics. With the support of its teams, it implements the decisions for projects, budget reviews, prioritization of requirements and implementation of organizational controls and modifications, respecting the attributions contained in Article 14 of the Bylaws, including:

- Executive Function
- Representing the Company to the market and to stakeholders
- Responsibility for the financial statements

Sustainability Committee

Comprised of the Executive Board, Business and Corporate Managers with responsibility of ensuring the evolution and strategic alignment of this topic within the Company, managing and monitoring investments, projects and initiatives.

Matricial Support Areas*

Corrugated
Cartonboard Packaging

Paper

RS Forestry and Resin

New Businesses

*Internal Audit and Risk Management, Strategy and Marketing, Health and Safety, Quality and Sustainability, Accounting, Controllershship, People Development, Office of Project Management, Finance, Innovation and Continuous Improvement, Legal, Strategic Projects, Investor Relations, Institutional Relations, Supplies and Information Technology.

Makeup of the Board of Directors



PÉRICLES PEREIRA DRUCK
Chairman



EURITO DE FREITAS DRUCK
Member



PAULO SÉRGIO VIANA MALLMANN
Member



PAULO ISERHARD
Independent Member



ROBERTO FALDINI
Independent Member

Makeup of the Executive Board



SÉRGIO LUIZ COTRIM RIBAS
CEO



ODIVAN CARLOS CARGININ
Administration, Finance and Investor Relations Officer



FABIANO ALVES OLIVEIRA
Personnel, Strategy and Management Officer



LINDOMAR LIMA
Packaging Business Officer



HENRIQUE ZUGMAN
Paper and Forestry Business Officer

(102-33) Supported by the Executive Board, the Chief Executive Officer is responsible for reporting business-critical topics to the Board of Directors during the monthly meetings. **(102-13, 102-21a, 102-27)** With expertise in economic and socio-environmental aspects, according to their areas of experience, the members of the Board of Directors, Executive Board and Sustainability Committee develop their knowledge of these topics with constant participation in external events, professional associations and representative entities.

(102-23) Note 1: The Chairman of the Board of Directors does not exercise an executive function in the Company.
(102-25) Note 2: Representatives of Irani's Board of Directors also sit on the boards of the Habitasul Florestal S.A. (two members) and HGE – Geração de Energia Sustentável S.A. (two members) subsidiaries. Elected by the shareholders, members of our Board also sit on the Board of Directors of the Irani Geração de Energia Sustentável Ltda. and Iraflor - Comércio de Madeiras Ltda subsidiaries.
Note 3: The members of the Board of Directors and the Executive Board were re-elected for a term running from April 2019 until April 2021.

(102-35, 102-36) Compensation of the Board of Directors and the Board of Executive Officers

Each element of compensation plays a role in the short-, medium- and long-term. We seek to align the interests of the managers and the shareholders by stipulating guidelines to be observed regarding the remuneration of the members of the Board of Directors and the Executive Board.

The overall compensation of senior management is established annually during the General Shareholders Meeting. It provides for fixed compensation and fringe benefits, variable and short-term quarterly bonuses linked to pre-established goals and long-term variable compensation through the Upside Program and/or statutory Profit Sharing plan. The long-term remuneration, proportional to the valuation of the stock every three years, also takes into account these intangible assets and the economic result.

Supera Program

Applicable to Irani's Board of Directors and all direct employees, the program establishes annual variable compensation ranges according to the result of an evaluation that correlates achieved goals and the development of individual competencies. This assessment encompasses items that capture a broad vision of sustainability related to competency culture excellence.

Upside Program

Applicable to the Executive Board, is strongly linked to our results. Its premises are based on the theoretical value of the stock in the year it was established and in the planned future, assigning each participant remuneration based on a theoretical number of shares, with a cash payout on the date of the determination and/or statutorily mandated through profit sharing.

(102-36) Additional information on the remuneration of executives and those responsible for governance, including the relationship of how this remuneration is linked to our performance in the short-, medium- and long-term are available on the Investor Relations website at <http://www.irani.com.br/ri/informacoes-financeiras/arquivos-cvm/>
→ Information ITR, DFP and REFERENCE FORM.

The Reference Form contains information regarding conflicts of interest, cross-participation in management bodies, cross-shareholding control with suppliers and other stakeholders, existence of majority shareholder and disclosure of information about stakeholders. We also make information available regarding significant shareholding interests (greater than 5%) down to the individual level. There is no shareholders' agreement currently in force.

Expenses from Management compensation, excluding mandated social security charges (R\$ thousand)

	2017	2018	2019
	13,271	11,089	13,346

Communication with the market

Our activities and results are communicated to the market through our official channels:

-  • Investor Relations website, available in Portuguese and English;
-  • Direct channel with the Investor Relations Officer and the Investor Relations team via e-mail ri@irani.com.br;
-  • Shareholder ServiceTool, on the IR website;
-  • E-mail Alert;
-  • Disclosure of the Annual Financial Statements and Quarterly Information (ITR);
-  • General and Extraordinary Shareholder Meetings; and
-  • Annual Sustainability Report.



Camila Angela Guindani e Aline Barbieri - Office SC - Joaçaba

Ethics and Integrity

(102-17 e 102-25) Integrity is one of our Company's values. In consonance with this value, we launched our Integrity Program in 2017. Composed of eight policies and the Code of Ethical Conduct, it buttresses the need for compliance with the Company's standards, applicable laws and regulations. It also consolidates our ethical behavior and relationship practices and guidelines, covering all hierarchical levels.

The Program's full content, as well as the Code of Ethical Conduct, is available for consultation at <http://www.irani.com.br/integridade/>

Our Ethics Committee is composed of 11 members appointed by the Executive Board. In addition to representing the employees of all business units, its members ensure, promote, train and guide managers and employees regarding the conduct laid out in the Code of Ethical Conduct.

(102-17.a.ii) We also make communication channels available for our relationship audiences to send information and requests for clarification of doubts and concerns regarding ethical issues related to the Company:

- **Our executives**
- **Email etica@irani.com.br, directed to the Ethics Committee coordinator**
- **Email of the Chief Executive Officer: sergioribas@irani.com.br**
- **Ethics channel available at : <http://www.irani.com.br/integridade/#canal-de-etica>**
- **Exclusive channel for employees through Irani World (intranet)**

Upon receiving a communication, the Committee's coordinator is responsible for classifying and addressing it according to type.

We received 38 communications in the past year, three questions related to Code compliance, 22 about behavioral issues and 13 on other matters. Of this total, 14 revealed their identities and 24 were anonymous. Retaliation against the complainant is banned and the content is treated in a secret and confidential manner. All inquiries directed to the Committee were answered and those of identified authorship received an appropriate response.

Ranking	Communication content
Questions about the content of the Code of Ethical Conduct	Ethics Committee analyzes the doubts received and issues an opinion and/or recommendation.
Behavioral	Analysis by the People Development Department and preparation of a correction plan, when applicable.
Conflict of Interests	Analysis of facts and data by the Internal Audit area to confirm or not the content of the communication.
Internal processes	
Others	Coordinator of the Ethics Committee evaluates the content of the communication and addresses it to the person responsible for dealing with it.

A new step towards Compliance

For the application of the precautionary principle, we have adopted all economically viable measures, aligned with the financial and sustainability policies and our strategic intention, approved by the Board of Directors and the Executive Board.

We are also guided by ABNT ISO 31000:2018 and The Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management Framework (COSO-ERM) to define our risk management, which comprises the steps of identification, analysis, evaluation, treatment, monitoring and communication.



1. Identification

Our leaders support process analysis to identify gaps in internal controls that may lead to risk factors for our businesses.

2. Analysis

We classify the omissions identified, defining the steps necessary for further assessment.

(102-15) The main risks identified in our businesses are:

Risk	Definition	Formas de mitigação
Strategic	Inability to recognize factors related to changes in the political and economic scenario, such as the instability of the world economy.	Periodically, we prepare the long-term strategic plan through the evaluation of different scenarios, permitting effective responses to the event. Increased competition is also monitored based on a market scenario analysis, noting the growth capacity of competitors and the current capacity of the sector in Brazil and worldwide for decision making during the strategic planning process.
Financial	Sales to customers with credit limits exceeded or in default.	Monitoring of securities pending receipt. Market risks, arising from the inability to respond effectively to unfavorable fluctuations, liquidity of the national currency and changes in monetary policy to foster and regulate the heating up of the country's economy, are monitored and define the scenarios of impact of the exchange rate and interest rate variations. The risk of not obtaining financial funding at affordable costs, resulting in financial losses, delays or interruption of strategic projects for the Company, is monitored by mechanisms that ensure the necessary fundraising guarantees.
Compliance	Exposure to assessment of regulatory bodies due to failure to comply with regulations applicable to the business, both legal and voluntary compliance, aiming at abiding with the environmental rules.	We use software that permits the monitoring of applicable legal environmental requirements and the monitoring of the validity periods of the environmental licenses granted by the appropriate authorities, among other mechanisms. We also apply and disseminate policies aimed at reusing solid waste and reducing effluents generation.
Operational	Related to the operating conditions of capacity and efficiency, continuity of operations, distribution of products under the conditions and deadlines as established.	We monitor impacts such as loss of productivity and damage to assets through controls that attest to the conditions of equipment and facilities, maintaining preventive and predictive maintenance and performing fire emergency management in the industrial and forestry units. For client relations purposes and to better meet their needs, we have a Client Focus process in place for the careful analysis of the quality of finished products and technical after-sales follow-ups. We have improved and enhanced the way we relate to people, instituting controls in order to prevent and ensure the health and safety of employees in their on-the-job activities, constantly evaluating their effectiveness.

3. Evaluation

(102-15, 102-29, 102-30) Using a tool that details the risk factors, we classify the impacts to the businesses arising from the possibility of occurring as follows:

Impact Type	Description
Operational	Production shutdown
Occupational medicine	Harm to the health and safety of direct employees or outsourced workers
Environmental	Possible damage to the environment
Image	<i>Commitment of Irani's Image to stakeholders</i>
Financial	Monetary losses or opportunities to take advantage of financial advantages

Next, we check internal history and controls to measure the likelihood of risk factors actually materializing. We also evaluate the applicable controls and requirements, by type (preventive, detective or reactive), response required (monitoring, mitigation or tolerance) and frequency of occurrence. Finally, an opinion is consolidated regarding the qualitative recommendations and respective weightings resulting from the joint analysis of the risk manager and the Risk Management team.

4. Treatment

We draw up action plans based on the control actions and interpretation of the evaluation's most critical and relevant points.

5. Monitoring

Periodically, we evaluate the effectiveness and execution of the action plans outlined and conduct audits to validate the controls in place.

6. Risk communication

(102-15, 102-30) The Audit and Risk Management area produces annual reports that reflect the progress of the work carried out during the year. With the support of risk managers, the content of these materials is brought up for discussion with the Executive Board and to deal with various activities arising from the action plans.

In 2020, we established the Compliance area, which was incorporated into the Legal department, thereby formalizing our commitment to develop and disseminate the compliance culture through training and awareness campaigns. This area is responsible for the analysis and evaluation of the laws and regulations applicable to our businesses, risk management and internal controls and the report sent to the Executive Board. In addition, we segregated out the Internal Audit and Risk Management area. The Internal Audit will be linked to the Chief Executive Officer, giving the audited processes greater autonomy. The Risk Management area was merged into the Compliance area.

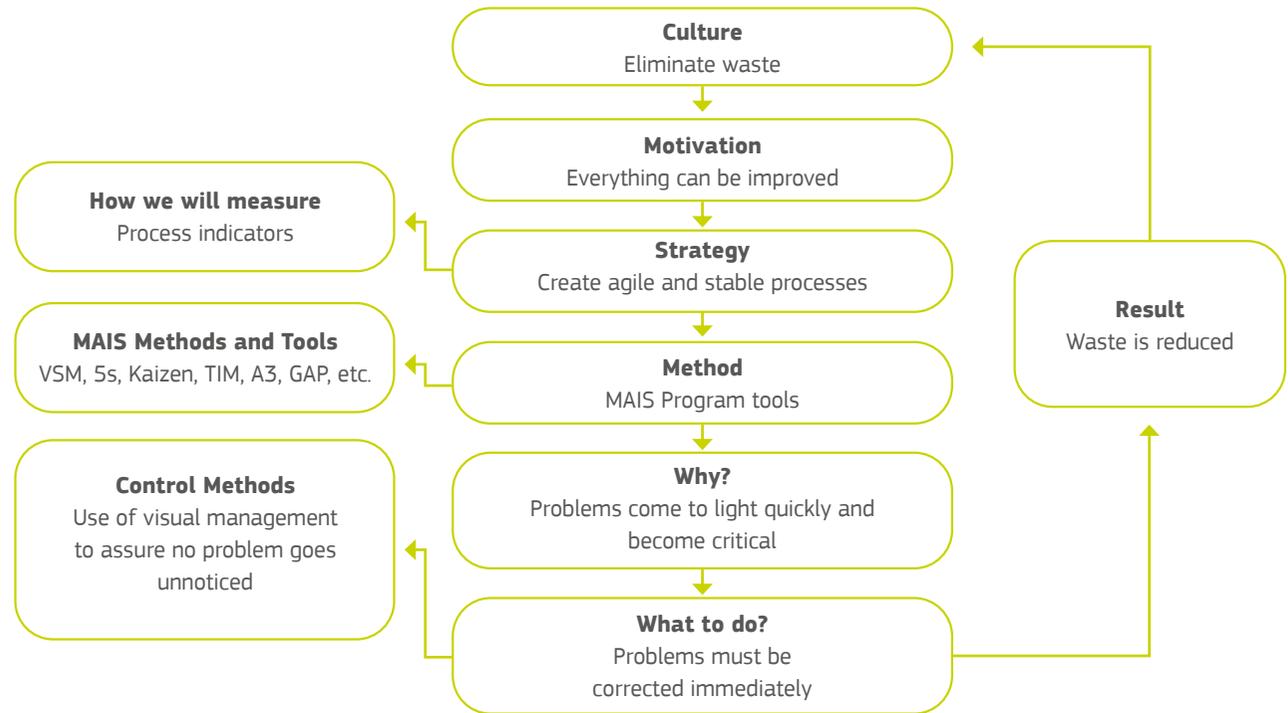
2019 Challenge	Advance 2019	Challenge 2020
Submit four reports to the Executive Board, one for risk assessment and three for risk monitoring.	We are dedicated to implementing the SAP risk management module with the governance, risk and compliance switch, including access profiles, internal controls, risk management and audit. We also have developed the implementation project for the General Data Protection Act.	Submit a risk review proposal to the Executive Board Resume risk assessment and monitoring reports.

Excellence

We believe it takes courage to inspire excellence, learning and continuous improvement as a strategic commitment. Our management system aggregates methodologies and practices that help us in the search for superior and commendable results, such as the Management Excellence Model® (MEG®) and the respective certifications that are earned.

Strengthening a results-oriented culture and ensuring operational excellence are strategic objectives that allow us to better achieve end-to-end management and be client-centric. Create habits to do more in each attitude: this is lean culture, this is the More Program.

More also means eliminating waste. Driven by the Continuous Improvement team, our actions in this challenge are:



The internal communication of this initiative involves themes such as lean culture, dissemination of the Program, support of lean culture and the strengthening of the initiatives. Over 2019, we developed 26 continuous improvement projects that delivered more than R\$ 2 million in returns, in addition to the creation of a new operational

management indicator. **(103-1)** We worked on the implementation of SAP's process control and goal management modules. At the same time, we conducted a new management maturity assessment that pointed to good progress in personnel engagement and training, along with opportunities for product improvement and product management.



Innovation

We continued the digital transformation process started in 2018 with the deployment of SAP S/4HANA technology as the main ERP. Using agile methods for project management, throughout 2019 we dedicated ourselves to the implementation of new tactical and strategic modules. They are focused on solutions such as asset maintenance, projects and investment, management reports in Business Intelligence (BI) and started using SuccessFactors for training and qualification, selection and admissions of people, performance evaluation and goals and succession. We furthermore adopted a tool for accounting closing control that lets us monitor the evolution of activities in real time.

We strengthened the company's governance and compliance practices, implementing solutions for identity management and user access, process and risk control, improving the internal control environment. Moreover, we implemented the audit solution to assess the suitability of planned internal controls in relation to risks and their correct execution.

The identification, treatment and mitigation of the organizational impacts arising from this second wave in the Simplify Project were mapped by the change management team, also responsible for the bolstering training involving a number of hierarchical levels. This new step in the Company's digital transformation process led to enhanced security regarding information traceability, more mature control of processes and a higher volume of automated processes.

During its development, the Simplify Project also played a role in promoting the development of nearby communities resulting from the high demand for hospitality, food and transportation services. The pro-activism of people was essential to allow us to complete this project successfully. Our teams are the drivers of this digital transformation, better prepared to explore innovation projects and new technologies in search of increasingly significant results for the company.



Esther Schneider Pedroso - Paper SC - Campina da Alegria

Project’s second wave highlights:

- Three test cycles for each solution conducted
- Over 280 simulated scenarios covering more than 2,400 steps tested
- More than 80 people involved, between direct employees and outside consultants
- Project executed in 12 months

Aligned with our Strategic Plan for the 2018-2027 cycle and from the Information Technology perspective, we met our goals with the completion of the Simplify Project. We now are better prepared for the future, equipped with an innovative technological platform that ensures the growth of our businesses.

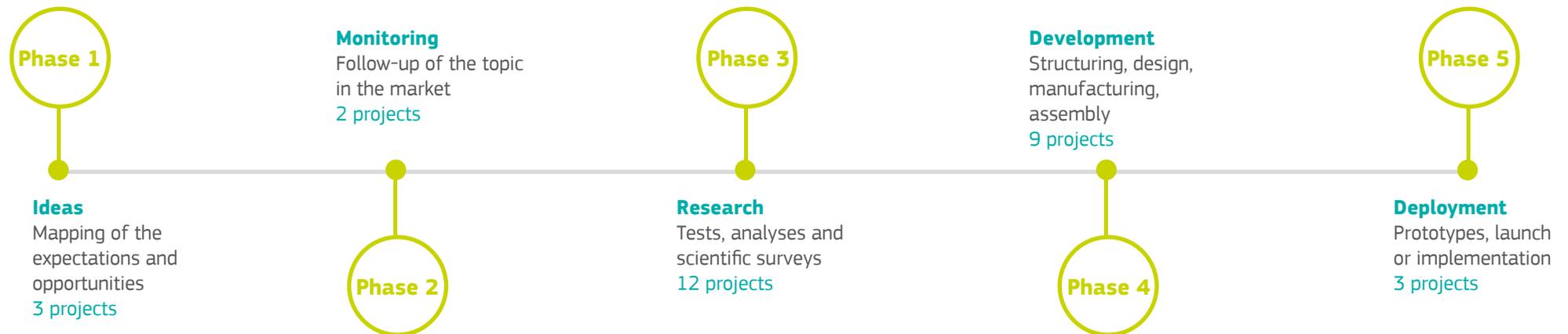
And innovation has become one of Irani's main strategic drivers. In 2018, the creation of the Innovation Committee and four technology platforms, led to the consolidation of this commitment to the mission of establishing priority lines of investment in Research, Development and Innovation (RD&I) for our businesses.

Composed of the Executive Board and Business Managers, the Innovation Committee meets quarterly to monitor and direct the projects and initiatives generated by the Technology Platforms that act as tactical and operational groups, identifying opportunities, planning and implementing RD&I projects.

We defined 16 lines of research and listed the 10 priorities for 2019. We derived 30 innovation projects and initiatives from them, which received contributions totaling R\$ 455,000 through open innovation projects with suppliers, universities, technology incubator, class entities, startups, government and research and innovation centers.

	Forestry Platform and Resin	Pulp and Paper Platform	Corrugated Cardboard Platform	Environmental and Energy Platform
Research line	Silviculture, forest processes Technology and forest Management	More resistant paper New paper and New segments	Processes Technology, Longer shelf life, New packaging and Industrial processes	Biofuels, renewable Energy, atmospheric Emissions, energy Efficiency, Water and effluents and Solid Waste
Linhas prioritárias	Silviculture, forest processes Technology and forest Management	More resistant Paper, New paper and New segments	Longer shelf life, New packaging and industrial Processes	Solid Waste

Status of projects and initiatives in innovation



Because we understand that there is a significant amount of highly qualified knowledge and technologies available outside Irani, we have developed a growing interaction with research centers in Brazil and, abroad, mainly in France and Israel. Thus, we are able to take advantage of resources to conduct exploratory or advanced research, improve the development of our products, incorporate new technologies that boost efficiency and create added value, as well as develop new businesses. In addition, we have increased the number of interactions with universities, suppliers and startups through technical cooperation agreements, joint development contracts and the launching of technological challenges.

Currently, about 70% of ongoing research, development and innovation projects are open innovation. The projects that gained the greatest prominence in 2019 are focused on the performance of the mechanical characteristics of paper and optimization of operational performance. The largest investment went to augment the mechanical strength of our paper products, representing almost 50% of the total volume.



Jonatan Bugalho - Resina RS - Balneário Pinhal

Innovate Ideas Program

This initiative encourages an innovation culture, stimulating our employees to contribute to the generation of value for the Company through the presentation and application of ideas.

In 2019, the Innovate Ideas Program underwent digital transformation, moving its entire structure to a more practical and modern online idea-sharing platform. Throughout the year, we promote awareness and engagement actions through creativity laboratories.

Since the beginning of this initiative, 5,690 ideas have been presented and 360 applied, of which 260 led to qualitative and 100 quantitative gains.

In 2019, 298 ideas were generated and we paid R\$ 45,000 to the authors of the ideas that brought financial or operational returns to the Company totaling approximately R\$ 1.5 million.

In 2020, we will further strengthen and widen the innovation culture:

- Fostering ties to the open innovation ecosystem
- Stimulating the generation of ideas by employees
- Extending the Idea Program to the employees of Habitasul (Irani's parent company)

A worker in a blue hard hat and green gloves is operating a large industrial machine in a factory setting. The worker is wearing a blue hard hat, safety glasses, and large green gloves. The machine is a large, cylindrical, purple-colored roller or mill. The background shows a concrete wall and other industrial equipment. The image is overlaid with decorative curved lines in shades of green and yellow.

Engagement to press forward

João Basso - Paper SC - Campina da Alegria

People Development

(103-2, 103-3) 2019 marked the beginning of a new cycle for the development of our professionals. We introduced new platforms, reshaped processes and drove a culture marked by proactive leadership of people aligned with the cultural practices encouraged by Great Place to Work® organization.

At Irani, people are at the heart of all strategies. And so it shall always be, to ensure that we remain one of the best companies in which to work. Here, people do not undergo change, they drive change as they delve into a profound journey of personal and professional improvement, grounded in five structuring programs:

programa **gera** programa **cuida** programa **cresce** programa **motiva** programa **superã**



Cristiano Jacinto Ferreira - Paper MG - Santa Luzia

programa — gera The Generate Program

It monitors the full professional cycle of our employees, including the processes of attraction, engagement and monitoring of their trajectory in the Company. Thus, we work on cultural alignment and empower our employees to take control of their own careers.

The analysts in the team who captain the selection processes are in-house and specialized. In 2019, with the implementation of a new systematized module, we began monitoring all online steps, from application to admission. Greater transparency and speed in getting back to the participants represent some of the main gains from this practice.

	2017	2018	2019
Vacancies filled by internal recruitment	45.76%	59.00%	68.09%

We have maintained our youth talent development initiatives with the mandatory and non-mandatory internship program in technical, administrative and production areas. In 2019, 71.43% of the trainees were hired. We intend to reassess the program's structure, realigning practices and reviewing indicators such as young talent retention.

We also continued “My Learning,” a specially applied initiative with young apprentices from all units. It is based on a training plan focused on skills related to the labor market, establishing a chain of learning, training and growth. Young

people develop through subjects like corporate behavioral posture, self-knowledge, communication, teamwork, creativity and innovation and emotional intelligence, establishing a chain of learning, training and growth.

In 2019, we updated our employee integration process by aligning it with the "hire and receive" pillar, one of the nine practices encouraged by the GPTW® Certification program. In addition to standardizing the materials, ensuring that all units have the same content, the object is to warmly receive newcomers, delivering them a kit with information about the Company's products and a welcome letter signed by the Chief Executive Officer. Internal facilitators were trained on the importance of their role as the new employee's first contact, as well as guidance on how to conduct a good reception with techniques and language appropriate to each participant's profile.

In 2019, at the end of each integration process, we began to evaluate the degree of satisfaction of the new employees and ascertained:

100 %

Felt welcomed and well received

97.44 %

Mentions about the positive importance of the welcome kit.

94.81 %

Consider the orientation process to be excellent, with praise for the instructors' guidance, the comfort of the integration sites and the welcome coffee hour, affirming that their perception was that our organizational climate is light and pleasant.



Nathália Gomes Santos - Packaging SP - Indaiatuba

The inclusion initiatives we have developed for employees with disabilities were continued. They encompass actions such as raising awareness and preparing the teams that will be in contact with these professionals, to contribute to a better understanding of the aspects of the disability of the arriving coworker so that he/she can develop to the maximum of his/her potential. The result of these practices has a direct impact on the workplace, ensuring mutual learning experiences.

(103-2) Bearing in mind the most significant and innovative business practices, we further refined internal practices related to diversity in order to promote an environment that is welcoming and accepts and respects differences.

(103-2) For us, diversity is everything that distinguishes one person from another: gender, age, nationality, color, ethnicity, religion, marital status, sexual orientation and disability of any nature. It is synonymous with plurality, an elementary characteristic of what is collective and of living in society. We are present in four states of one of the most multicultural countries in the world, and we recognize that this is one of our strengths.

(103-3) Therefore, in 2019, we conducted an opinion survey to identify the perception of our employees about this subject within the Company. Headed up by an external and independent team with extensive experience in the field, the survey indicates our employees realize that we introduce programs to promote diversity. According to the research, the groups that should be prioritized are women, young people, newly hired professionals, people with disabilities and LGBTQ+ persons. In 2020, we will continue to press on with this topic, putting more projects that promote inclusion into practice.

programa cuida

(103-1, 103-2, 103-3, 403-1)

Care Program

This is our commitment to life. The Program is part of our occupational health and safety system and aims to ensure that working conditions are adequate and safe for employees and service providers, strengthening the Company's occupational health and safety culture. It acts on the following fronts:



Legal assistance



Communication, programs and campaigns



Management



Standardization and Training



Recognition



Penalties



Legal assistance

At Irani, we make a commitment in the form of a value: **life first**.

(103-1, 103-2, 403-1.a, 403-1.b, 403-8.a) Based on Order No. 3.214/1978 (Regulatory Rules), the Care Program is how we translate this value into a set of occupational health and safety management policies, procedures and practices, offering appropriate and safe conditions for employees and outsourced workers to carry out their regular activities. Non-regular outsourced workers are issued work permits subject to a criticality analysis by our Specialized Safety Engineering and Occupational Medicine (SESMT) Service team.

(403-1, 403-2.a.i) In all business units, our SESMT teams have more members than the

NR4 requires, totaling 27 direct employees and six outsourced providers. Continuously trained in aspects related to health, safety and wellness, these teams are dedicated to complying with about 400 laws and nearly 2,500 occupational health and safety requirements applicable to our business.

(403-3.a) Working on our premises and during the working day, the health teams also are on call for employees and outsourced workers. Whenever necessary and according to the severity of the case, our teams furthermore are responsible for transportation to specialized centers and follow-up of medical treatments. In addition to the services provided by SESMT teams, we offer medical and dental insurance for direct employees and their dependents.



Communication, programs and campaigns (403-3.a)

Occupational health and safety content is addressed through the integration of employees and service providers, in regular examinations, in the dissemination of preventive campaigns, in thematic meetings and with leaders, through In-house Prevention of Occupational Accidents (SIPATs) Weeks and in the records of follow-up reports, demonstrating the full availability of services to all employees.

(403-6.b) Health and Excellence Dialogues (SDRs) and internal campaigns support our health and safety culture. In 2019, a number of SDRs and 17 internal campaigns were conducted, while preventive campaigns run by the federal government were spotlighted.

Topics covered in campaigns:

» Safe Holidays » Safe Carnival » Ergonomics » PPE Use » Occupational Accidents » Safe Transit » Hearing Health » Emergencies » Pink October » Blue November » Combating the Flu » Blood Donation » Heart Diseases

We also have other mechanisms in place to strengthen this culture, such as:

- **Medical and dental assistance plan:** extended to all direct employees and their dependents.
- **(403-2.c e 403-6.a) CID-M medical certificates:** evaluated by the occupational physician, who analyzes whether to communicate the fact to the manager in order to restrict or change work activities, or even authorize the employee's preventive leave of absence, with the guarantee assured that he/she will not suffer reprisals. In 2019, we saw a 50% reduction in the issuance of CID-M certificates.
- **(403-6.b) Control groups:** for employees who present some kind of restriction for special work, such as at height, in confined spaces or mobile equipment operation. We focus on rehabilitation for these types of jobs, monitoring factors such as weight, blood glucose and blood pressure. In 2019, 97 people were monitored, diagnosed with hypertension, diabetes and obesity.
- **(403-6.b) Hyperdia:** collaborators diagnosed with hypertension and diabetes receive periodic follow-up as a preventive form of work leave.
- **(403-6.b) Pregnancy follow-up:** periodic guidelines for women who are in gestational period on the care required during pregnancy and with their newborns.
- **Hearing conservation program:** we keep updated the reports of exposure of our employees to the noises of industrial environments. This type of action unfolds in the Medical Control and Occupational Health Program (PCMSO) and in the Environmental Risk Prevention Program.
- **(403-6.b) Safety Patrol:** SESMT and CIPA work together on this initiative, which involves regular inspections in industrial units to ensure that working conditions are appropriate and safe and that employees remain comfortable and productive. Adaptation needs are reported to the area managers, who are responsible for executing them. **(403-2.b)** Improvement

recommendations also are collected in suggestion boxes distributed around the manufacturing environment, freely accessed by all employees.

- **Observation and Prevention Program (POP):** Introduced as a pilot project to replace the Safety Patrol in the Paper SC – Campina da Alegria Unit, in 2019. Unlike Patrol, in this program the health and safety team uses a behavioral audit routine to identify safety discrepancies and recognize employees who are adopting correct and appropriate behavior. **(403-8)** It is estimated that 40% of employees and outsourced workers were reached by the POP in this pilot initiative. Evaluated as a positive initiative by the unit, it will be expanded to the other units in 2020.
- **(403-6.b) Professional rehabilitation:** we follow-up on employees who have left the company to see if there is a possibility of their returning to work. This practice reflects directly on indicators such as the Company's quota for hiring people with disabilities.



Cristiano Gomes Avelino - Paper MG - Santa Luzia



Management

In 2019, we installed software for health and safety management. Integrated with the Company's new ERP system, we now have one of the best solutions available in Brazil for end-to-end occupational health management, from admission to discharge.

Through this software, we also feed information on safety-related issues, including all reports and programs (such as PCMSO and PPRA) and the full set of physical, chemical, biological and ergonomic risks to the units that already have ergonomic reports. The program also made it possible to hold the first electronic vote for the members of the Internal Accident Prevention Commission (CIPA).

(403-4.a e 403-4.b) Formal committees represent employees and assist in the definition, implementation and monitoring of health and safety practices.

Committee	Representativity	Responsibility	Degree of autonomy for interruption of operations	Meeting frequency
Internal Accident Prevention Commission (CIPA)	As provided by law. Extra vacancies are filled by professionals appointed by the Company.	As foreseen in the law.	It respects the provisions foreseen in the legislation. Members may at any time interrupt an operation when unsafe conditions or behavior are ascertained.	Monthly
Emergency brigade	100% of employees on all work shifts.	Identification of scenarios that can lead to occupational risk conditions and emergency care.	Total during callout for emergency occurrences.	Monthly
Health and safety patrol	Composed of employees and tree nursery works, representing 100% of our workforce.	Prevention of occupational health and safety risks in work areas.	Total in the face of imminent danger.	Monthly and on demand, when necessary.

Note: in 2019, the Health and Safety Patrol started to assume the activities of the Noise and Ergonomics Committee (CIRE).

(403-4) Full-time outsourced workers attend the CIPA regular meetings at the Vargem Bonita units. In Safety Patrol rounds, behavioral deviations from regular outsourced workers are flagged and dealt with.

(403-2.a.ii, 103-3) Monthly, the Executive Board monitors a dashboard displaying strategic health and safety indicators:

- Number of lost-time workplace accidents
- Severity Rate
- Frequency rate
- % of CID-M certificates
- % legal compliance
- % of employees trained in regulatory standards (NRs)
- % of periodic examinations overdue
- % of written and disseminated safety procedures

Thus, they are responsible for pointing out ways to improve our form of governance in relation to the topic, monitoring our performance in order to achieve the goal of zero accidents in the Company.

Health and safety indicators are monitored regularly by our SESMT teams at all sites:

(403-9)	2018		2019	
	Direct employees	Service providers	Direct employees	Service providers
Number and rate of fatalities as a result of work-related injuries	1 fatality Severity rate: 1,441.22	1 fatality Severity rate: not available	0	0
Severity rate¹	362.33	Unavailable	235.15	Unavailable
Number and rate of injuries without lost time	16 accidents without lost time		32 accidents Rate: 7.26	
Number and rate of injuries with lost time	74 accidents with lost time		51 accidents Rate: 11.58	
Number of man-hours worked	5,561,273 h		4,843,445 h	
Main types of work-related injury	Upper limbs		Upper limbs	
Work-related hazards that pose a risk of high consequence injury	Assessment of risks through NR12 report on machinery and equipment. The lack of installation of physical protections and barriers and operational procedures contributed to the registration of occurrences over the course of 2018. That is why we dedicate ourselves to a thorough review of the operational procedures and investments needed to ensure the safety of people and we remain firm in or purpose to constantly offer training and annual requalification courses.			

¹ The severity rate is calculated considering (HHT*1000000/number of accidents)

² Information on high consequence injuries is not available

(103-3, 403-1, 403-8.a.iii e 403-8.c) Internal, external and client audits and certifications such as ISO and FSC®, in addition to the licenses granted by the appropriate regulators, assure the effectiveness of the occupational health and safety management processes. This contributes to a deeper examination into how we deal with risks and ways to mitigate them.

(403-2) In our last Sustainability Report, we strengthened and disclosed our commitment to

improve hazard identification, risk assessment and accident investigation practices. In 2019, we concluded the first step of this plan with the construction of safety and training procedures involving the entire Company.

(403-4.a) This movement also aims at ISO 45001 certification by 2024. In parallel, we continued to investigate accidents and other treatment activities, which led to a reduction in the severity rate and number of occurrences.

(403-8.a.i) Full time outsourced workers receive initial orientation, participate in the industrial units' health and safety activities and are included in the occurrence records. Part time outsourced workers undergo health and safety recycling every 12 months.



*Andre Matheus da Silva Reis -
Packaging SP - Indaiatuba*



Standardization and Training

(403-3.a, 403-5.a) In 2019, we completed 100% of the training required by the regulatory standards. By the end of 2019, we had been manually identifying the training needs in health and operational safety per employee, with support from the leaders. As of 2020, this occupational health and safety training needs identification will be carried out through software and segmented by job category.

The applicable regulatory standards guide the content of the training that is offered free of charge and during the working day, whenever possible. Approximately 90% of the training is conducted by our own teams. The remainder corresponds to training in electricity and boiler operations, with assistance of outside professionals or held in specialized educational centers.

Irani's forestry outsourced service providers must take at least three hours of specific coursework on the subject. At the end of each course, assessment is made regarding content assimilation.



Recognition

Recognition of appropriate health and safety behavior and practices was included as an item for management incentive bonuses in 2019. Therefore, during the "Green April" campaign, which dealt with the prevention of workplace accidents, we formalized the recognition of eight outstanding areas and eight employees. The winners were evaluated according to specific criteria associated with the perception of safety. The name of the spotlighted employee of each unit was approved by the managers. In the case of the areas, the number of occurrences was considered, which includes accidents with and without lost time, and days lost, in addition to the cases of incidents reported throughout 2018.



Penalties

Also, in 2019, we recorded all irregularities and applied appropriate disciplinary action in case of non-compliance with established standards.



Our challenges

2019 Challenge	Advance 2019	Challenge 2020
Strengthen and consolidate the health and safety culture, with zero accidents as a condition.	<p>Maintain consolidation of the health and safety culture and continuous efforts so that, in 10 years, we can achieve a severity rate equal to zero</p> <p>Qualification</p> <p>More than 20% severity rate reduction</p> <p>Campaigns, N2 maintained, severity rate under 2018</p>	Maintain consolidation of health and safety culture and continuous effort to reach TG=zero in up to 10 years
Disseminate 100% of the operating procedures revised in 2019 to employees.	All procedures were drafted, and all plants requalified those involved	Implement risk analysis program (IPARSSO)
Implement occupational health and safety software integrated with E-SOCIAL and the Company's new ERP, making management transparency even greater and contributing to the application of defined standards, controls and action monitoring.	Software implemented, ready to be integrated with E-SOCIAL	Develop business intelligence to facilitate the management of health and safety indicators
Invest about R\$ 10 million over the next five years in the necessary actions and adjustments and make progress in meeting the applicable legal requirements in all units.	In 2019, R\$ 2.9 million was invested to adapt projects to meet the regulatory standards (NRs)	Follow the investment plan established for 2020, on the order of R\$ 2.7 million.

New challenges

- **Widen understanding of the system, seeking to investigate new job opportunities, automation of controls and management of indicators.**
- **Preparation of ergonomic reports and meeting the recommendations of the Workplace Ergonomic Analysis (AET), adjusting our facilities to them.**
- **Develop partnerships to stimulate comprehensive health (body and mind), based on physical activity.**
- **Refine the construction of a corporate matrix of punishments for non-compliance with security procedures.**

programa 
cresce Growth Program

(103-2)

This program focuses on actions for training people. Offering contemporary, lively and dynamic teaching-learning opportunities, we develop high-performance teams, proactively introducing practices that address the challenges of our businesses and the market.

Its actions are based on 11 competencies:

- **Leadership:** ability to engage and influence people to achieve superior and sustainable results.
- **Communication:** ability to listen, understand and make oneself understood using a variety of communication methods.
- **Planning, organization and control:** ability to plan and organize actions while maintaining control over the required priorities and resources.
- **Focus on results:** ability to perform the work with objectivity, simplicity, austerity and client focus, always seeking excellent results.
- **Culture of Excellence:** posture aimed at ensuring excellence and continuous improvement of products, services and processes.
- **Teamwork:** ability to combine efforts to achieve goals, taking advantage of complementary relationships of knowledge and skills, delivering superior results.
- **Client Focus:** remaining fully focused on the client, implementing effective actions that generate value and loyalty.
- **Entrepreneurialism:** ability to identify opportunities and transform them into actions that generate effective results.
- **Self-development:** continuous search for skills improvement, taking advantage of the different ways to access learning.
- **Relationship-building:** ability to develop value relationships, with lasting bonds, trust and respect.
- **Innovation:** ability to act creatively, generating and implementing successful ideas.

Irani Corporate Education

This is our way of improving how we capture knowledge, making it accessible, available and easy to understand. Segmented into three schools and their respective strategic points of focus, our Corporate Education program delves deeper into the Company's everyday topics using different teaching methodologies, stimulating the continuous learning and pro-active career development culture. In 2019, we initiated our first distance education project through an online platform.



Encourages the leadership capacity of each individual to bring about the future.



Strengthens, at the same time, our roots and technical bases, striving for excellence.



Instigates our ways of thinking and doing as a strategy to embrace the future.

Each school has a sponsor and working groups attentive to educational demands, building learning solutions in a 70-20-10 experience.



70% in practical learning:

Learn by experimenting and practicing in the workplace..

20% in learning from each other:

Learning through interaction in the workplace environments, through conversations and encouragement of sharing.

10% structured:

Courses and training outside the workplace.

(103-3) The Executive Board evaluates the results of this initiative and is advised by a specific committee to develop educational solutions appropriate to our business strategy.

(404-1) Average training hours per job category

Hierarchy level	2017			2018			2019		
	Total class hours	No. of employees	Average hours of training	Total class hours	No. of employees	Average hours of training	Total class hours	No. of employees	Average hours of training
Leadership	13,944	168	83	6,297	161	39	9,350	138	68
Administrative	8,230	340	24	9,419	410	23	15,071	476	32
Technician	6,634	254	26	8,226	179	46	0	0	0
Operational	36,530	1,751	21	37,231	1,670	22	35,460	1,511	23
TOTAL	65,052	2,513	26	61,174	2,420	25	59,881	2,125	28

(404-1) Average training hours per gender

	2017			2018			2019		
	Total class hours	No. of employees	Average hours of training	Total class hours	No. of employees	Average hours of training	Total class hours	No. of employees	Average hours of training
Women	11,761	368	32	8,390	358	23	9,191	327	28
Men	53,577	2,145	25	52,954	2,062	26	50,690	1,798	28

Investments (in R\$ '000)

	2017	2018	2019
Investment capacity-building and development	659	1,154	1,231
Incentives to education through grants	652	459	283

Last year, we reviewed the policy of granting subsidies for courses at technical, higher, postgraduate and language levels, observing improvements necessary for the selection process of beneficiary employees and equalizing the values practiced.

Encouraging reading

We run two physical libraries: one in Vargem Bonita (SC) and one in Porto Alegre (SC) with rich collections available to any employee. In the other units,

the collection is made available through regular sending of books to specific and accessible spaces.

2019 Challenge	Advance 2019	Challenge 2020
Implement the digital e-learning platform, aligned with the Company's new ERP, promoting the learning cycle's mobility, accessibility, self-development and support.	<p>Learning Management System (LMS) platform implemented, with these main gains:</p> <ul style="list-style-type: none"> • Information management • Enhanced security • Agility • Higher quality of employee information and history • Learning Management 	<p>Strengthen the learning cult through Mentoring and Succession Programs</p> <p>Reinforce Career Pro-activism through the Self-Development Week</p> <p>Implement Continuous Integration in the Business Units</p> <p>Act to expand the scope of Corporate Education</p>
Conduct training on the subjects of resilience, team development and pro-activism	Implement Learning Solutions to address these topics throughout 2020	Conduct training on this topic
Strengthen operational level technical training, including on the job coaching.	We taught the first continuous integration class for the Packaging Conversion SC – Campina da Alegria area, training seven new employees. The objective was not only to assist new employee reception into the area, but also their immersion into our organizational culture. Especially, this included the technical training of the newly hired workers, meeting the operational safety, quality and productivity requirements.	Conduct a survey of the opportunities to expand this type of training to our business units.

programa **motiva** Motivate Program

(102-43, 102-44) The following is our definition of organizational climate management. In this program, we bring together a set of initiatives aimed at providing a stimulating and motivating work climate so that people can develop their full potential. We believe that this stimulus assists in creating the identity of employees with us along with shared responsibility for the Company's growth.

The Program's main tool is organizational climate research. Applied annually and according to the Great Place to Work® methodology, the survey shows the level of satisfaction of our teams in relation to various aspects of the workplace, such as interpersonal relationships, communication, leadership style, development opportunities, recognition, the Company's image, compensation and health and safety.

The diagnosis is developed by our leaders, wherein they construct corporate and unit action plans for all areas, developing enhancement ideas for each improvement opportunity that emerges. We also set up climate management support groups in all the business units, which act as spokespersons for employees and support leaders in the implementation of the action plans.

To keep employees engaged in building an ever better internal climate, we launched the #cultiveoclima hashtag, guided by the practices of the best companies to work for, and put into effect dynamic actions to define ways to strengthen them.

To build up the connection with our employees, we honor annually those who have completed 5, 10, 15, 20, 25, 30, 35, 40 and 45 years of dedication to the company. In 2019, special events were held in all units to celebrate and recognize 299 employees.

This strengthening of cultural practices aligned with the GPTW® methodology enabled us to be certified as Great Place to Work and to be among the 15 best companies to work for in Santa Catarina.

2019 Challenge

Achieve an overall 76% employee satisfaction rate in the next GPTW® Climate Survey cycle.

Advance 2019

The overall average reached 75% satisfaction, with an emphasis on our team's feeling of pride, camaraderie and benefits. It was one percentage point higher than the previous cycle.

When evaluating the statement "Taking everything into account I would say this is an excellent place to work," members of our team responded with 84% agreement.

Challenge 2020

Persist in reaching an overall 76% employee satisfaction rate in the next GPTW® Climate Survey cycle.

programa **superá** Overcome Program

For 10 years, the Overcome Program has stimulated personal and professional development through a series of structured actions designed to evaluate employees based on the development of skills and attainment of results. Thus, it provides opportunities for self-knowledge, the bolstering of the feedback culture, stimulation of productivity, talent identification and a recognition of differentiated performance levels.

The Program's annual cycle begins with the collaborative definition of individual and global targets, monitored periodically over the course of the year. Twice a year, we encourage formal feedback between leaders and subordinates, documented in the form of an individual development plan. Skill assessments are specific to each hierarchical level:

	Who evaluates?	Skills assessed
Leadership	Self-evaluation Immediate leader Subordinates Peers	Leadership; Communication; Client Focus; Planning, organization and control; Focus on results; Entrepreneurship; Relationship building; Innovation; Culture of Excellence; Teamwork and Self-development.
Administrative/ commercial	Self-evaluation Immediate leader Peers	Communication; Customer Focus; Self-Development; Focus on Results; Innovation; Relationship Building and Teamwork.
Operational	Self-evaluation Immediate leader	Culture of excellence, Teamwork, Self-Development and Focus on Results

Annually, the results achieved and the skill assessments are consolidated into a matrix, which determines the final performance rating and bonus range, limited to 150% of the nominal salary.

In 2019, we were recognized by the Top Human Being Award of the Brazilian Association of Human Resources of Rio Grande do Sul (ABRH-RS) for the "The Irani way to manage skills and results" case study.

(404-3) Percentage of employees who participate in the Overcome Program

	2017			2018			2019		
	Men	Women	TOTAL	Men	Women	TOTAL	Men	Women	TOTAL
Leadership	6%	1%	7%	6%	1%	7%	5%	1%	6%
Administrative	7%	7%	13%	7%	6%	13%	11%	7%	18%
Technician	10%	1%	11%	1%	9%	10%	10%	1%	11%
Operational	55%	7%	63%	59%	5%	64%	55%	1%	60%
TOTAL	78%	16%	94%	73%	21%	94%	82%	13%	94%

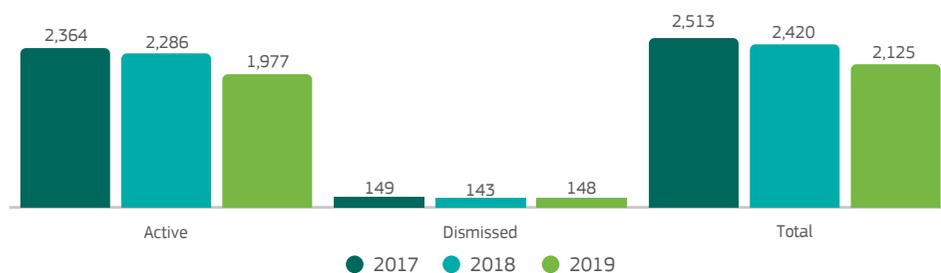
Note: retired persons, young apprentices, trainees and new employees admitted after December 15 do not participate in the Program

In 2020, the Program will undergo review, seeking to improve the experience of employees and offer an even more assertive use of their feedback for internal actions, so that employee development is enriched, providing even greater opportunities for each participant.

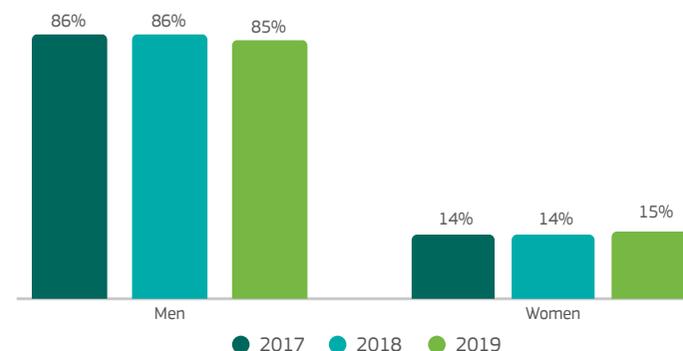
Labor force demographic information

(102-8.f) The information presented was extracted from our ERP system with a base date of 12/31/2018. We consider all Irani branches and subsidiaries as important operational units because they have the same representative weight for the group, applying to them the same policies and strategies, seeking their development and growth. **(404-2)** The information reported for the 2019 period was impacted by the closure of the Packaging Unit SP - Vila Maria, where we conducted timely actions aimed at continuity of employment for dismissed workers, in addition to offering support packages that extended their fringe benefits for six months and included career workshops. For employees at the coordinator level, we offer relocation processes in the market through a specialized consulting company.

(102-7.a.i) Total number of employees



(405-1.i) Total number of active employees by gender



(102-8.c) Hiring regimen

	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Half time	12	13	10	24	11	21
Full Time	2,133	355	2,052	334	1,787	306

(102-8.a) Employees by employment contract and gender

	2017		2018		2019	
	Women	Men	Women	Men	Women	Men
CLT - Indefinite Period	352	2,121	319	2,042	297	1,773
CLT - Young apprentices	16	18	31	11	21	11
CLT - Determined period	Not available		Not available		9	8
Statutory	0	6	0	6	0	6
Overall Total	368	2,145	350	2,059	327	1,798

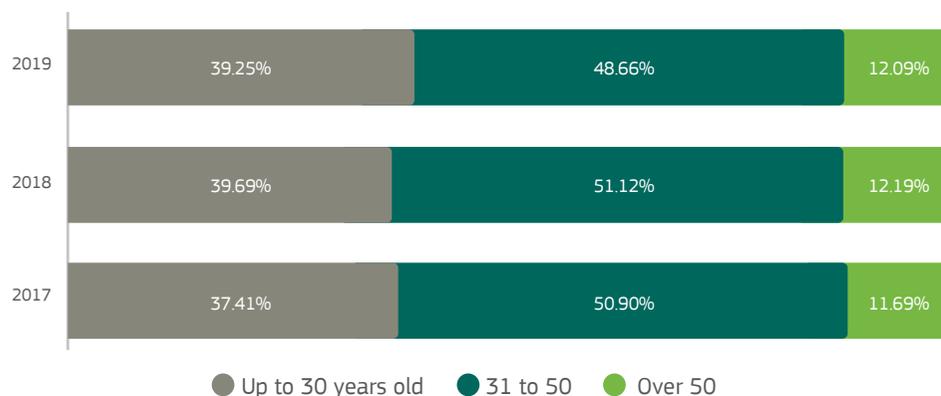
(102-41.a) Active employees covered by collective bargaining agreements

	2017	2018	2019
Collective Agreements	98.27%	98.21%	91.25%
Pro-labore	0.25%	0.26%	0.28%
Minimum wage	1.48%	1.53%	1.51%

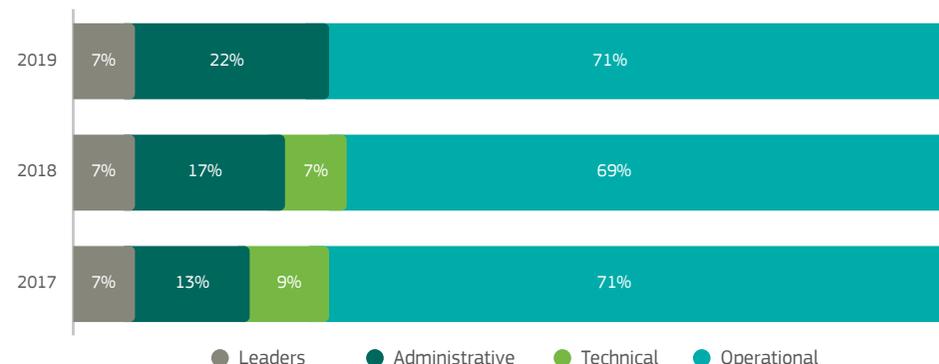
(401-1.a) New hires of employees by age group and gender

	2017		2018		2019	
	Women	Men	Women	Men	Women	Men
Under 30 years old	7%	61%	17%	50%	17%	50%
From 31 to 50 years old	5%	26%	7%	24%	0%	1%
More than 50 years old	0%	1%	0%	1%	9%	22%

(405-1.ii) Percentage of employees by age group

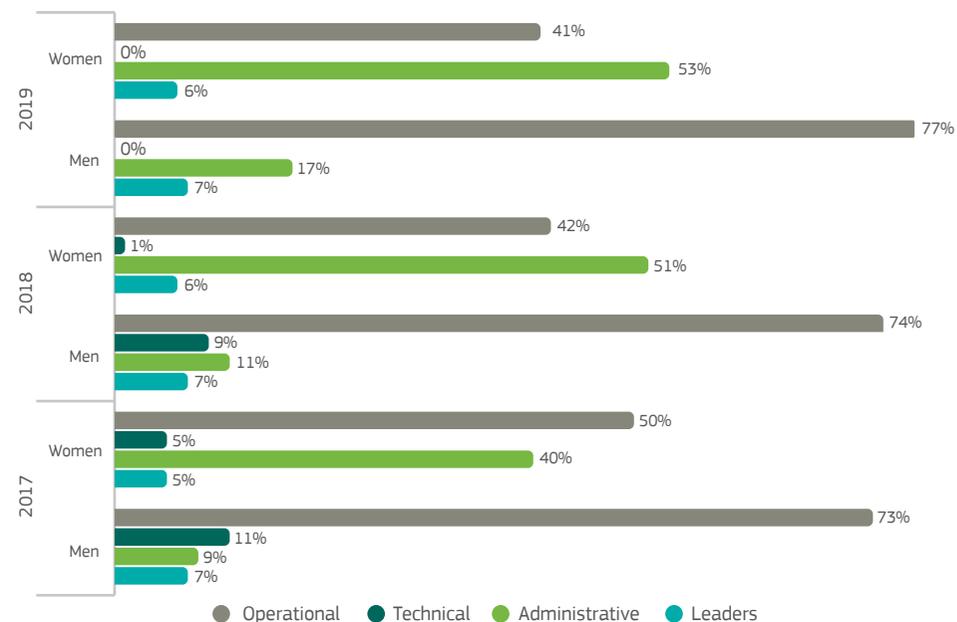


(405-1.ii) Percentage of employees by job function



Note: from 2019, with the implementation of the new ERP, we discontinued the "technical" hierarchical level.

(405-1.ii) Percentage of employees by job function ad gender



Note: from 2019, with the implementation of the new ERP, we discontinued the "technical" hierarchical level.

(405-1) Employees by age group and job category

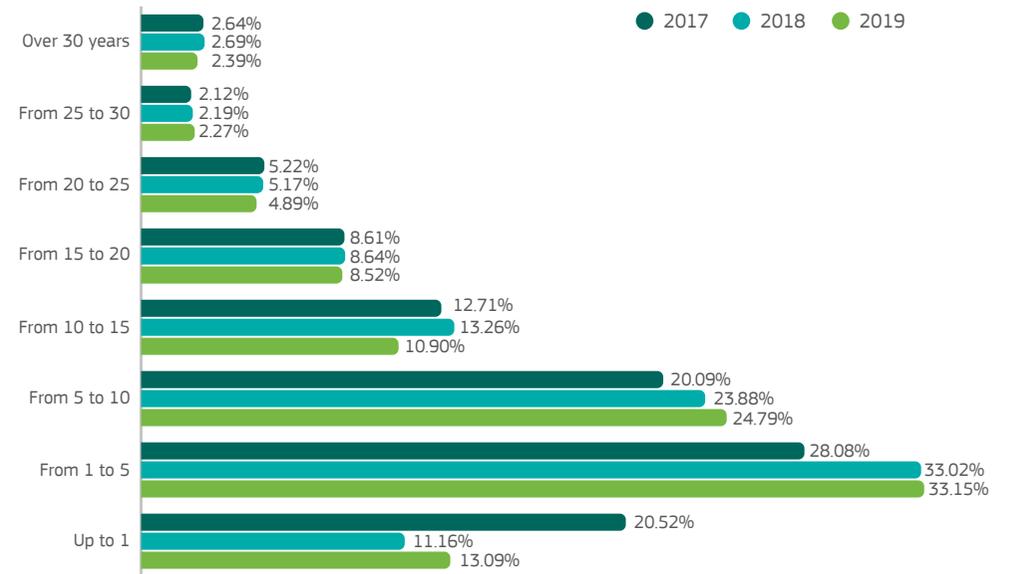
	Women	Men	Overall Total
Leadership	0.89%	5.60%	6.49%
Under 30	0.09%	0.42%	0.52%
More than 50	0.19%	0.99%	1.18%
Between 30 and 50	0.61%	4.19%	4.80%
Administrative	8.14%	14.26%	22.40%
Under 30	3.67%	4.61%	8.28%
More than 50	0.24%	0.85%	1.08%
Between 30 and 50	4.24%	8.80%	13.04%
Operational	6.35%	64.75%	71.11%
Under 30	1.41%	25.27%	26.68%
More than 50	0.94%	8.89%	9.84%
Between 30 and 50	4.00%	30.59%	34.59%
Overall Total	15.39%	84.61%	100.00%

Note: from 2019, with the implementation of the new ERP, we discontinued the “technical” hierarchical level. We do not monitor minority or vulnerable groups.

(401-1) Turnover by age group and gender

	2017		2018		2019	
	Women	Men	Women	Men	Women	Men
Under 30 years old	5%	6%	18%	24%	36%	24%
From 31 to 50 years old	4%	3%	6%	10%	22%	16%
More than 50 years old	0%	1%	5%	3%	23%	15%

Percentage of employees by time with the company



Demographic information stratified by business units

(102-8.b, 102-8.c) Employees by business unit and gender

	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Office RS - Porto Alegre	17	12	17	18	19	18
Office SC - Joaçaba	46	73	80	48	86	52
Paper SC - Campina da Alegria	696	65	690	67	652	70
Paper MG - Santa Luzia	136	14	135	15	131	16
Packaging SC - Campina da Alegria	267	32	263	30	249	33
Packaging SP - Indaiatuba	320	32	316	38	326	48
Packaging SP - Vila Maria	300	60	210	45	7	3
Resin RS - Balneário Pinhal	51	12	42	13	42	14
Habitasul Florestal	176	55	205	54	172	39

Note: In 2019, we closed the Packaging Unit SP - Vila Maria. The remaining staff comprises employees involved in decommissioning.

(401-1.b) Turnover per business unit

	2017	2018	2019
Office RS - Porto Alegre	10.3%	14.9%	1.1%
Office SC - Joaçaba	7.0%	8.8%	0.8%
Paper SC - Campina da Alegria	9.4%	7.1%	0.6%
Paper MG - Santa Luzia	6.6%	10.5%	0.9%
Packaging SC - Campina da Alegria	13.4%	11.2%	1.5%
Packaging SP - Indaiatuba	12.5%	11.0%	1.0%
Packaging SP - Vila Maria	6.5%	3.3%	0.2%
Resin RS - Balneário Pinhal	18.9%	13.1 %	0.9%
Habitasul Florestal	17.0%	27.6%	1.8%

Note: Workforce reductions are not considered for the composition of this indicator, including the workforce reduction of the Packaging unit SP - Vila Maria, in 2018, and its decommissioning in 2019.



Cristiano Seabra e Ana Paula Correia - Office RS - Porto Alegre

(401-1) Admissions, dismissals and turnover by age group and unit

Unit	Hiring	Dismissal	Turnover (%)
Office RS – Porto Alegre	6	7	1.1%
Under 30	1	0	0.2%
Between 30 and 50	5	7	1.0%
Office SC - Joaçaba	15	12	0.8%
Under 30	10	2	0.3%
More than 50		1	0.1%
Between 30 and 50	5	9	0.4%
Paper SC – Campina da Alegria	55	63	0.6%
Under 30	34	18	0.3%
More than 50	1	15	0.1%
Between 30 and 50	20	30	0.3%
Paper MG – Santa Luzia	16	17	0.9%
Under 30	4	1	0.1%
More than 50	1	5	0.2%
Between 30 and 50	11	11	0.6%
Packaging SC - Campina da Alegria	51	59	1.5%
Under 30	44	34	1.1%
More than 50	0	1	0.0%
Between 30 and 50	7	24	0.4%
Packaging SP - Indaiatuba	39	46	1.0%
Under 30	32	22	0.6%
Between 30 and 50	7	24	0.3%
Packaging SP - Vila Maria	2	2	0.1%
Under 30	2	0	0.1%
Between 30 and 50	0	1	0.0%

Unit	Hiring	Dismissal	Turnover (%)
Resin RS - Balneário Pinhal	7	8	0.9%
Under 30	5	0	0.6%
More than 50	0	3	0.4%
Between 30 and 50	2	5	0.4%
Habitasul Florestal	49	60	1.7%
Under 30	25	36	1.0%
More than 50	0	2	0.1%
Between 30 and 50	24	22	0.73%



Compensation and benefits

(102-7) We ended the year of 2019 with 2,125 employees in our labor force, 148 or 6.95% of whom are on leave. Of the total number of employees, 93.05% are hired under the CLT (registered work contract) regimen and 0.30% on a *pro-labore* (per job) basis. In the breakdown of the table, 98.08 % are covered by collective bargaining agreements.

(103-2 e 103-3) With the support of specialized consultants, we evaluated the regional practices and positions of the Company to guide our compensation and fringe benefits package. **(102-38 e 102-39)** The average of the lowest compensation practiced was equivalent to 1.45 times the minimum wage in force in Brazil on December 31, 2019. In relation to the total number of employees, 9.30% receive the job category floor wage.

(102-38 e 102-39) Proportionally, the highest paid individual in the organization receives 36.96 salaries higher than the average of other employees. For the preparation of this data, the total annual remuneration was as follows: base salary + 13th salary + vacation pay.

Total payroll value (in R\$ million)

2017	2018	2019
109	150	150

(405-2) Proportion of wages paid to men and women

	2017		2018		2019	
	Men	Women	Men	Women	Men	Women
Leadership	1	0.78	1	0.71	1	0.77
Administrative	1	0.90	1	0.73	1	0.88
Technician	1	0.91	1	0.79	-	-
Operational	1	0.80	1	0.80	1	0.76

Note: For the presentation of this information we consider only the average of the base salary paid by job category. Men and women performing the same job in the Company receive the same wage. On average, men earn more by being the majority at all levels, impacting the highest leadership wages. Note: from 2019, with the implementation of the new ERP, we discontinued the "technician" hierarchical level.

(401-2.a) Benefits granted to employees (in R\$ '000)

	2017	2018	2019
Meals	12,073	11,931	12,047
Transportation	7,379	8,069	8,541
Life insurance	218	299	340
Health insurance	10,370	12,344	14,568
TOTAL	30,040	32,643	35,496

Notes: meals take into account the sum of the amounts invested in employee meals and basic hampers. All benefits are offered to full-time or part-time direct employees, regardless of the type of contract.

Parental leave

(401-3.a) All employees are entitled to maternity/paternity leave upon presentation of supporting documentation. The information presented below is based on the number of direct employees active on 12/31/2019.

	Men	Women	Overall Total
(401-3.b) Total number of employees who took maternity/paternity leave, broken down by gender	69	6	75
(401-3.c) Total number of employees who returned to work after taking maternity/paternity leave, broken down by gender	69	6	75
(401-3.d) Total number of employees who returned to work after taking maternity/paternity leave and remained employed 12 months after returning to work, broken down by gender	5	5	10

(401-3.e) Note: 75 employees took parental leave during the reporting period, 6 women and 69 men. 100% of them returned to work after their leave and continue in the workforce.



Sileni Roerigh - Office SC - Joaçaba



Life first

Adriana Dias - Forestry SC - Campina da Alegria

Responsible Environmental Management

(103-2) The commitment to sustainability is found throughout our business chain: it is born in the forests and concludes with our actions in the surrounding communities, promoting a cycle of prosperity and sustainability.

(103-2, 103-2, 102-11, 102-43, 416-1) Because we are a renewable forest-based industry, the interaction of the processes with the environment is a fundamental factor for the prosperity of our businesses. We continually seek improvement opportunities that reflect operational effectiveness, sustainable

management of natural resources and the creation of new businesses from strategies focused on the circular economy.

Environmental responsibility, evidenced in our strategic map for the 2018-2027 cycle and in the Company's Sustainability Policy, keeps us attentive to current legislation, which is monitored through specific software support. This is in addition to maintaining certifications for quality and sustainability aspects up to date.

	FSC®	ISO 9001:2015	ISO 14064:2006	ISO 14001:2015
	International assurance certification that the raw materials we use comes from an ecologically sound, socially fair and economically viable forest.	Quality management system designed to help organizations improve their performance.	International standard certifying greenhouse gas inventories, voluntarily drawn up by organizations.	International standard that specifies the requirements for the creation of a management system for environmental protection and rapid response to changes, taking into account environmental aspects influenced by the organization and others that may be controlled by it.
Forestry and Paper Business	✓	✓	✓	
Packaging Business	✓	✓	✓	✓
Resin Business	✓	✓	✓	

Note: we are preparing all of Irani's businesses for ISO 14001:2015 certification. The RS Resin - Pinhal Spa Unit is in a more advanced line of preparation with internal audits being conducted.

(102-11) The certifications obtained stimulated the adoption of measures to cope with potential impacts by monitoring legislation and requirements, identification of aspects and impacts and definition of controls to minimize their effects. **(102-43 e 416-1)** Abiding by the Company's strategic guidelines, we periodically reassess our internal procedures and update the mapping of environmental aspects and impacts on all business units.

(103-1) In 2019, there was no record of formal grievances and complaints related to environmental impacts. We received one notification regarding non-compliance with environmental laws and regulations, for which we filed a defense with the appropriate authority and are awaiting the progress of the process. We consider as significant fines whose value exceeds R\$ 1 million or that offer risk (medium to high) to the Company's image.

We invested R\$ 5,154,359.85 in environmental management initiatives and processes. Our education practices with this focus totaled almost 200 hours of efforts benefiting 790 people.

Water

(303-1, 303-3b, 303-3c, 303-4.c) The water used in our production processes is fresh. We are authorized to discharge effluents in receiving bodies not located in water stress areas.

Part of the water that supplies the Vargem Bonita (SC) units is used for power generation in a Small Hydroelectric Power Plant (SHP) and two Hydroelectric Power Plants (HGCs).

(303-2) All water sources of our business units, except the concessionaire, are granted by the agency responsible, ensuring there is no significant impact on the respective water bodies due to the volume captured. Opportunities for operational efficiency gains are under constant evaluation, prioritizing actions that make productivity gains possible, coupled with reduced use, alternatives for reuse and closure of circuits. **(103-1, 103-2 e 303-1)** This is one of the fundamental strategies of our businesses that, in their essence, depend on the availability of water and other natural resources.

(103-2 e 303-1c) TWe also participate in a water basin committee that involves various sectors of society, set up to define guidelines that ensure the conservation of springs, headwaters and local biodiversity.



(303-5) Water consumption in 2019, taking into account the amount of water abstracted and subtracting the amount of effluent generated and treated, totaled 465.482 megaliters. Water consumption information is obtained through flow meters (hydrometers). Registered automatically in some cases and, for others, conducted manually, the readings are recorded in spreadsheets that, in turn, provide the data for the control of indicators.

(303-3) Total water withdrawn by source (in megaliters)

Source	Composed of what?	2017	2018	2019
Surface	River water captured for Paper and Packaging SC - Campina da Alegria and Paper MG - Santa Luzia units	4,745.36	4,728.24	4,902.47
Underground	Captured in wells for the Paper MG, Packaging SP - Indaiatuba, Packaging SP - Vila Maria and Resina RS - Balneário Pinhal units	154.44	158.40	123.72
Concessionaire	Water supplied by Casan, Sabesp and Corsan and Copasa to the Paper and Packaging SC - Campina da Alegria, Packaging SP - Vila Maria and Resina RS and Paper MG - Santa Luzia units, respectively	17.20	15.93	21.18
TOTAL		4,916.99	4,902.58	5,047.36

Note: **(303-3d)** the records presented come from daily flow meter readings.

All industrial units have water consumption targets defined from the historical analysis of the reduction of consumption and the production projection for each location.

(303-3) Specific water consumption (m³) per ton produced

Unit	Specific water consumption (m ³) per ton produced				Specific water consumption (m ³) per ton produced		
	2017	2018	Realized 2019	Target 2019	2017	2018	Realized 2019
Paper SC - Campina da Alegria	18.90	19.37	18.87	19.37	20.00	20.56	20.13
Paper MG - Santa Luzia	3.48	3.58	3.28	n/a	3.65	3.76	3.46
Packaging SC - Campina da Alegria	0.20	0.23	0.28	0.23	0.23	0.25	0.32
Packaging SP - Indaiatuba	0.28	0.29	0.29	0.27	0.31	0.32	0.31
Packaging SP - Vila Maria	0.46	0.49	0.60	0.55	0.48	0.53	0.62
Resin RS - Balneário Pinhal	1.99	2.75	2.45	2.75	1.99	2.76	2.45

Notes: In the Paper MG - Santa Luzia unit, the target is calculated based on the volume of treated water consumed in the production process x net production, and not on the volume of water collected directly at the source.

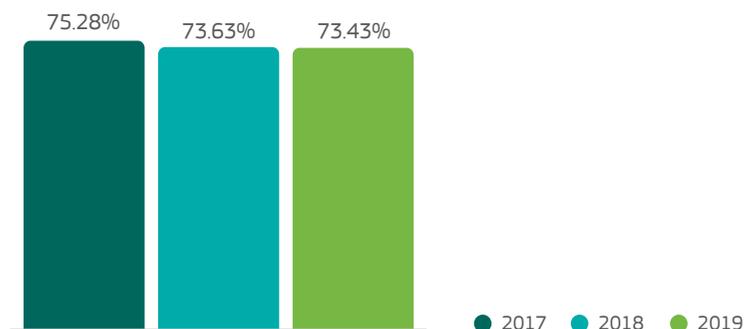
The less water consumed to produce a greater amount of end product, the more efficient is the process and the better is the use of the natural resources.

(303-3) Percentage of reused and non-reused water in the SC Paper - Campina da Alegria unit

	2017	2018	2019
Water not reused (m ³)	4,620,403	4,589,999	4,759,753
Water reused (m ³)	14,072,687	12,818,684	13,151,084
TOTAL (m³)	18,693,090	17,408,684	17,910,837

Note: reused water is considered to be water that remains in a closed circuit, always with the same flow.

(303-3) Percentage of water reused in the SC Paper - Campina da Alegria unit



Note: reused water is water extracted from abstraction sources (surface, well or concessionaire) that supplies the production processes, treated internally and returned to the bodies of water.

(303-3) Volume of recirculated water in the SC Paper - Campina da Alegria unit

	m ³ /month		m ³ /year	
	2018	2019	2018	2019
ETE HPB	205,586	210,672	2,467,030	2,528,069
TG1	243,495	308,159	2,921,938	3,697,913
TG2	86,363	76,118	1,036,350	913,410
TG3	172,781	174,620	2,073,372	2,095,441
Torres	360,000	326,354	4,320,000	3,916,250
TOTAL	1,068,224	1,095,924	12,818,684	13,151,084

Note: the parameter used takes into account the estimated hours worked and the flow rate of the pump responsible for the circulation and recirculation of water, such as ETE HPB: 290m³/h | TG1: 430m³/h | TG2: 450m³/h | TG3: 241m³/h | Towers: 500m³/h

Effluents

(103-2 e 303-4b) Effluents from production processes, equipment cleaning, tank drains and cooling water are treated for the removal of solid materials and stabilization of dissolved organic matter before water is returned to its source, in a freshwater course.

(303-2, 303-4, 303-5) All water bodies affected by the discharges or runoff of water from the Company's effluent treatment come from freshwater and are not located in environmental protection areas. In the Bonita Vargem Units (SC), the water bodies affected by the discharges or runoff of the effluent treatment water are 22m wide and 70.2km long. The biodiversity value

was not measured. However, in the previous ichthyofauna (animals living in fresh water) monitoring campaign at this locality in 2015, we identified 646 specimens divided into nine species. In the other units, discharges are not directed to the receiving bodies.

(103-3) Periodically and systematically we conduct analyses in internal laboratories and in external laboratories recognized by the environmental agencies. The reports are forwarded to the regulatory agency, as required by the environmental licenses and accompanying conditions.

(303-4) Volume of effluents generated (in megaliters)

Unit	2017	2018	2019
Paper SC - Campina da Alegria	4,306.04	4,217.85	4,550.82
Packaging SC - Campina da Alegria	9.89	9.54	12.42
Packaging SP - Indaiatuba	10.70	9.91	10.94
Packaging SP - Vila Maria	6.32	3.43	2.01
Resin RS - Balneário Pinhal	5.39	6.33	5.70
TOTAL	4,338.33	4,247.05	4,581.88

Note: not applicable to the Paper MG – Santa Luzia unit, which uses a closed circuit.

(103-3, 303-4d) Environmental permits define the priority substances of treated effluent and receiving water resource quality, including the parameters that should be monitored. Limits are based on region-specific environmental legislation. Specific parameters also orient the monitoring of the quality of the effluent generated. We systematically carry out internal laboratory analyses and periodically send this material for analysis in external laboratories recognized by the authorized bodies. The reports are periodically sent to the regulatory body, respecting the constraints of environmental licenses.

Unit	Destination	Treatment	Parâmetros legais
method	Parameters	Biológico (aeração prolongada)	Resolução Conama 430/2011
parameters	Rio do Mato	Biológico (aeração prolongada)	Resolução Conama 430/2011
Paper SC - Campina da Alegria	Rio do Mato	Biological (prolonged aeration)	CONAMA Resolution No. 430/2011
Packaging SC - Campina da Alegria	Rio do Mato	Biological (prolonged aeration)	CONAMA Resolution No. 430/2011
Packaging SP - Indaiatuba	City treatment station - ETE Mario Araldo Candello	Physical-chemical	State Decree No. 8468/1976, article 19A
Packaging SP - Vila Maria	City treatment station - ETE Parque Novo Mundo	Physical-chemical	State Decree No. 8468/1976, article 19A
Resin RS - Balneário Pinhal	Fertigation	Physical-chemical	Conama Resolution 420/2009

Note: the Paper MG – Santa Luzia is not listed because it uses a closed circuit. The other units comply with the legal parameters established by Conama Resolution 430/2011. In none of the units is the effluent used by other organizations.

Specific effluent volume (m³) per ton produced

Unit	Specific effluent volume (m ³) per ton produced			Specific effluent volume (m ³) per ton produced		
	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	17.61	17.80	18.04	18.64	18.89	19.24
Packaging SC - Campina da Alegria	0.15	0.14	0.18	0.17	0.16	0.21
Packaging SP - Indaiatuba	0.13	0.12	0.12	0.14	0.13	0.13
Packaging SP - Vila Maria	0.10	0.07	0.08	0.10	0.07	0.09
Resin RS - Balneário Pinhal	0.46	0.47	0.42	0.46	0.47	0.42

Note: not applicable to the Paper MG – Santa Luzia unit, which uses a closed circuit.

Energy

(103-1) Energy self-sufficiency is one of the main challenges for our businesses, highlighted in the 2018-2027 strategic map.

(103-2, 103-3, 302-1.a) In the Vargem Bonita units, where the process energy consumption is high, we have devoted intense efforts toward improving operational excellence and efficiency. One of the alternatives we have been working on is the use of biomass from forest waste. This material, now sent to landfill, decomposes, emitting greenhouse gases such as methane and carbon dioxide. Since 2005, we have used a boiler for steam and energy generation from the burning of this biomass to supply the SC Paper and Packaging units. This process was registered with the Organizations of the

United Nations (UN) as the "Irani Biomass Electricity Generation Project" and validated as a Clean Development Mechanism (CDM). In this same location we have a Small Hydroelectric Power Plant (SHP) and two Hydroelectric Power Plants (HGCs) with automated control and remote operation, in addition to four other boilers for thermal power generation.

(103-3, 302-3, 302-4) We seek more effective mechanisms in all business units, with equipment replacement, use of economical LED lamps as well as making necessary operational adjustments to reduce electricity consumption or maintain adequate rates.

Specific electricity consumption (MWh) per ton produced

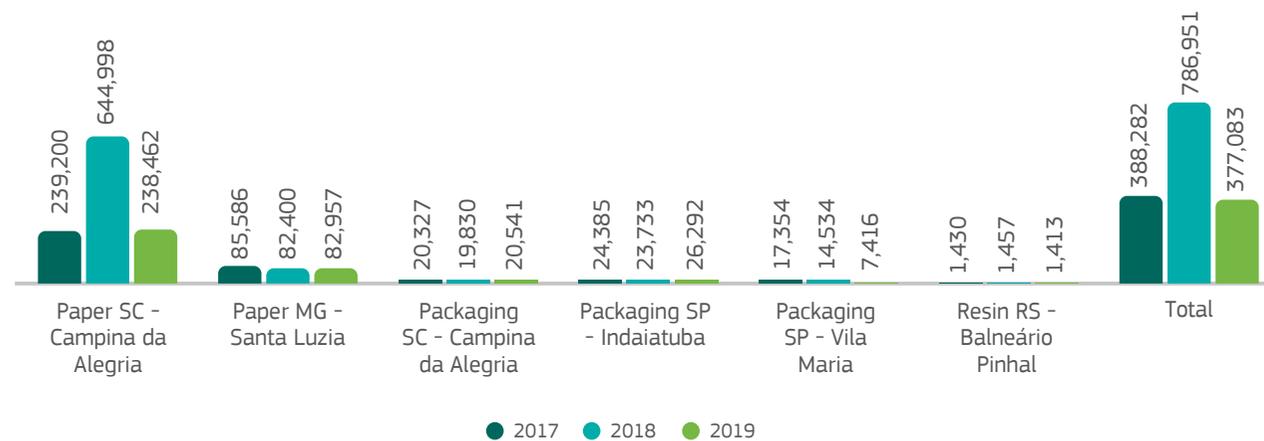
Unit	Specific electricity consumption (MWh) per gross ton produced			Specific electricity consumption (MWh) per ton produced		
	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	0.75	0.76	0.74	0.79	0.80	0.79
Paper MG - Santa Luzia	0.40	0.39	0.39	0.42	0.41	0.41
Packaging SC - Campina da Alegria	0.09	0.08	0.08	0.10	0.09	0.09
Packaging SP - Indaiatuba	0.08	0.08	0.08	0.09	0.09	0.08
Packaging SP - Vila Maria	0.09	0.08	0.09	0.08	0.08	0.09
Resin RS - Balneário Pinhal	0.03	0.03	0.03	0.03	0.03	0.03

Note: The specific metric used to calculate the specific electricity consumption is gross production and net production. The ratio used refers to the energy consumed within the organization, as it does not have enough information to report energy consumed outside it.

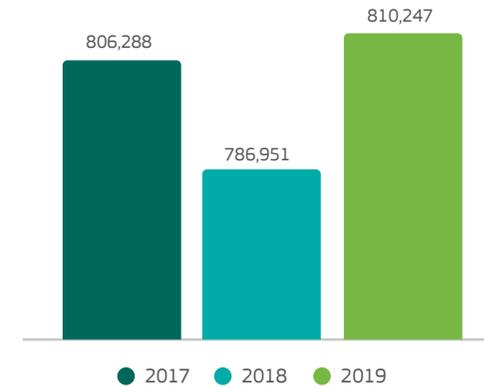
The Paper SC – Campina da Alegria unit, the significant increase in energy consumption. The SC – Campina da Alegria Packaging unit had consumption proportional to the increase in production in 2019. On the other hand, the considerable growth in consumption of the Packaging unit SP – Indaiatuba comprises the absorption of the production of the Packaging SP – Vila Maria unit after decommissioning. This set of factors, associated with the continued search for operational efficiency, led us to a 52% reduction in electricity consumption per ton produced.

(302-2) The total energy consumption inside and outside the organization in the form of steam, fuels and electrical energy was 363,069,620.59 GJ.

(302-1.c, 302-3) Total electricity purchase (in GJ)

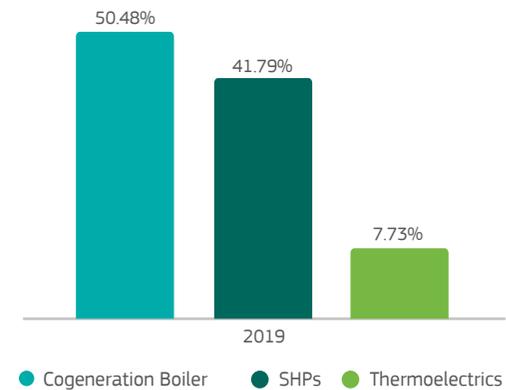


(302-3) Total electricity consumption in GJ



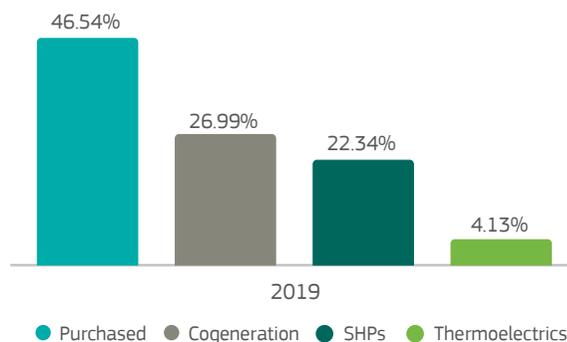
Note: electricity consumption within the organization.

Percentage of self-generated energy by source



Note: refers to the self-generation of energy for the SC Paper unit - Campina da Alegria.

Percentage of energy consumed by generating source



Note: represents the purchase and self-generation of energy considering all units.

(302-1.a) Non-renewable fuel consumption (in GJ)

Unit	2017	2018	2019
Paper SC - Campina da Alegria	22,947.20	23,230.00	25,197.88
Paper MG - Santa Luzia	277,368,173.76	263,979,850.79	262,689,080.77
Packaging SC - Campina da Alegria	6,643,117.19	6,650.65	17,631.77
Packaging SP - Indaiatuba	59,269,382.01	58,941,372.28	65,210,520.36
Packaging SP - Vila Maria	70,243,339.34	53,379,363.54	28,134,519.13
TOTAL	413,546,959.50	376,330,467.25	356,076,949.92

Note: the non-renewable fuels presented comprise low boiling point fuel oil and natural gas. The Resin RS - Pinhal Spa unit does not use non-renewable fuel.

(302-1.b) Non-renewable fuel consumption (in GJ)

Unit	2017	2018	2019
Paper SC - Campina da Alegria	3,454,704.04	3,282,696.36	3,307,163.68
Resin RS - Balneário Pinhal	16,317.90	16,657.51	15,592.04
TOTAL	3,471,021.94	3,299,353.87	3,322,755.72

Note: consumption of biomass (wood) is considered.

(302-1.a) Steam consumption (in GJ)

Unit	Pressure	2017	2018	2019
Paper SC - Campina da Alegria	9.5	2,574,747.04	2,245,834.16	2,484,159.20
Paper MG - Santa Luzia	12.23	180,513.07	214,775.43	195,451.72
Packaging SC - Campina da Alegria	9.5	42,039.80	38,529.20	82,379.39
Packaging SP - Indaiatuba	13	50,987.74	52,654.97	60,802.28
Packaging SP - Vila Maria	13	42,747.03	34,784.29	16,958.75
Resin RS - Balneário Pinhal	4	36,460.80	22,300.34	19,768.59
TOTAL		2,927,495.48	2,608,878.39	2,859,519.93

(302-2) Energy consumption outside the organization

Fuel	Consumption (in l)			Consumption (in MJ)		
	2017	2018	2019	2017	2018	2019
Diesel	5,128,414.30	4,676,648.15	3,767,654.65	196,548.73	179,234.60	144,397.02
Gasoline	60,521.52	54,087.82	65,376.73	2,108.07	1,883.98	2,277.19
LPG Restaurant	20,852.82	15,230.02	20,404.30	1,025.17	748.74	1,003.12
TOTAL	5,209,788.64	4,745,965.99	3,853,435.68	199,681.97	181,867.32	147,677.33

Note: (302-1.e) The total energy consumption within Irani in the form of steam, fuels and electrical energy was 363,069,472.91 GJ. (302-1.f) Total energy consumption outside the organization was 147,677.33 MJ, according to scope 3 of the GHG inventory. (302-1.g) The conversion factors come from the Petrobras website.

Materials and waste

(103-2, 103-3) Consumption of raw materials and inputs has a significant impact on operating costs. Therefore, they undergo rigorous controls and periodic analyses that seek alternatives for reuse and recycling,

reducing the volume of waste disposed in licensed landfills and significant environmental impacts.

(301-1) Volume of renewable and non-renewable materials (tons)

Unit	Total volume of materials used			Total volume of renewable materials			Total volume of non-renewable materials		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	692,626	645,820	668,658	680,683	633,588	655,019	11,943	12,232	13,639
Paper MG - Santa Luzia	67,579	69,961	66,400	66,553	68,903	65,359	1,026	1,058	1,041
Packaging SC - Campina da Alegria	67,580	68,101	71,578	66,953	67,503	71,064	627	598	514
Packaging SP - Indaiatuba	87,279	86,338	95,243	86,596	85,706	94,688	683	632	555
Packaging SP - Vila Maria	67,174	53,673	24,205	66,831	53,444	24,133	343	229	72
Resin RS - Balneário Pinhal	13,983	17,172	16,542	13,983	17,172	16,542	Not applicable	Not applicable	Not applicable
TOTAL	996,220	941,064	942,625	981,599	926,315	926,804	14,621	14,749	15,821

Note: Only the materials consumed in the production process are considered. From 2019, we also started to account for the inputs used in the production of pulp and paper.

(301-1, 301-2, 301-3) Percentage of recycled materials used in the process

Unit	2017	2018	2019
Paper SC - Campina da Alegria	23.82%	23.69%	07/22
Paper MG - Santa Luzia	88.76%	92.90%	91.69%
Packaging SC - Campina da Alegria	86.99%	87.55%	92.99%
Packaging SP - Indaiatuba	87.37%	87.36%	87.12%
Packaging SP - Vila Maria	92.58%	92.58%	95.92%

Note: the increase in the volume of materials of the Packaging SC – Campina da Alegria unit is directly influenced by the volume of recycled paper used in the process, which increased from 90% in 2018 to 96% in 2019.

Although the consumption of materials has increased significantly in the Packaging Unit SP – Indaiatuba due to the absorption of the production of the Packaging SP - Vila Maria Unit, there is a reduction in the specific consumption of material per ton produced (gross and net) as a reflection of the set of improvements in the process carried out in 2019.

(301-1) Specific material consumption per ton produced

Unit	Specific material consumption per ton produced			Specific material consumption per ton produced		
	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	2.83	2.72	2.65	3.00	2.89	2.83
Paper MG - Santa Luzia	1.14	1.19	1.12	1.20	1.25	1.18
Packaging SC - Campina da Alegria	1.02	1.03	1.03	1.17	1.11	1.18
Packaging SP - Indaiatuba	1.02	1.25	1.02	1.14	1.14	1.09
Packaging SP - Vila Maria	1.05	1.03	1.02	1.09	1.12	1.05
Resin RS - Balneário Pinhal	1.19	1.27	1.21	1.19	1.27	1.21

Note: Only the materials consumed in the production process are considered.

(301-1, 301-2, 301-3) Recovered materials used in the process (tons)

Unit	Recovered material	Total Sold	Percentage of materials recovered by the production process
Paper SC - Campina da Alegria	25,260	235,419	10.73%
Paper MG - Santa Luzia	3,835	55,829	6.87%

Note: We consider as recovered material a process tailing called refill, generated in the production of sheets and boxes by the packaging units. The control of the volume that returns to the industrial units for recovery is carried out by means of an invoice and stock movement from the SC Packaging unit to Paper SC, both located in Campina da Alegria, Vargem Bonita (SC).

Waste**(306-2) Total weight of waste (tons)**

Unit	2017	2018	2019
Paper SC - Campina da Alegria	249,562	219,542	224,003
Paper MG - Santa Luzia	6,480	6,730	7,599
Packaging SC - Campina da Alegria	9,573	9,370	9,489
Packaging SP - Indaiatuba	10,328	9,594	11,370
Packaging SP - Vila Maria	6,696	5,294	2,704
Resin RS - Balneário Pinhal	1,983	2,048	2,199
TOTAL	284,622	252,578	257,406

(103-2) The collection and storage of our waste complies with procedures aligned with NBR 10.004/2004, classified as Class I (hazardous), Class II-A (non-inert) and Class II-B (inert), avoiding contamination.

(306-2) Total weight of waste by type (tons)

Note: The significant amount of Class I waste is due to reforms of the Broby II and III furnaces.

(306-2 e 306-4a) Total weight of waste broken down by disposal method (tons)

Disposal method	Non-hazardous			Hazardous		
	2017	2018	2019	2017	2018	2019
Recycling	32,706.32	31,704.84	47,627.45	3,798.37	3,861.24	12.39
Reuse	90,491.83	70,359.52	81,326.33	0.00	87.87	0.00
Incineration	0.03	0.00	0	0.03	8.17	0.04
Blending	4.67	0.00	0	4.67	7.20	5.23
Composting	2,145.13	16,711.38	23,153.93	0.00	0.00	0.00
Reinstatement	133,252.82	108,728.23	84,357.42	0.82	0.00	0.00
Landfill	21,913.69	21,094.55	20,839.46	308.06	18.51	88.31
TOTAL	280,514.48	248,591.52	257,304.59	4,111.95	3,983.00	106.05

Note: The reduction of hazardous waste between 2018 and 2019 is due to the reclassification of soap bleach. This factor also contributed to the increase of non-hazardous waste in the same period. The waste disposal method was determined by the organization based on the classification according to NBR 10. 004. The total amount of hazardous waste was transported and treated by duly licensed companies. There was neither import nor export of hazardous waste, so there was no percentage of international transportation.

Specific volume of waste generated per ton produced

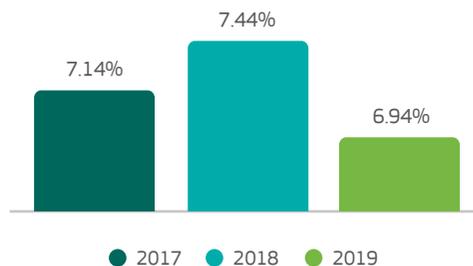
Unit	Specific volume of waste generated per gross ton produced			Specific volume of waste generated per ton produced		
	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	1.02	0.93	0.89	1.08	0.99	0.95
Paper MG - Santa Luzia	0.11	0.11	0.13	0.11	0.12	0.14
Packaging SC - Campina da Alegria	0.14	0.14	0.14	0.17	0.15	0.16
Packaging SP - Indaiatuba	0.12	0.11	0.12	0.14	0.13	0.13
Packaging SP - Vila Maria	0.10	0.10	0.11	0.11	0.11	0.12
Resin RS - Balneário Pinhal	0.17	0.15	0.16	0.17	0.15	0.16

(103-1) We formalized the commitment to promoting the circular economy in the value chain in our strategic map for the 2018-2027 cycle. In line with the National Solid Waste Policy (Law No. 12.305/10), our teams are constantly evaluating industrial processes, capturing opportunities to reduce the consumption of materials and analysis of alterations to insert waste generated in new production chains. Thus, in addition to promoting the circular economy, we contribute to the generation of employment and income in the surrounding communities.

(306-4) Paper SC – Campina da Alegria is the unit that generates the most waste in the group. Therefore, it is in this unit where we are most focused on the search for solutions aligned to the circular economy. The result of this effort extended the useful life of our industrial landfill by four years (2018-2021), delaying the investment of approximately R\$ 3 million for the construction of a new one.

Learn more about our circular economy practices at <http://www.irani.com.br/praticas-sustentaveis/gestao-ambiental/>

Percentage of waste sent to the landfill in the SC Paper Unit - Campina da Alegria



Note: The reduction from 2018 to 2019 was due to progress in inserting waste from production processes into new value chains. We studied the possibility of installing a plastic recycling plant at the Paper MG – Santa Luzia unit. In the Resin RS – Balneário Pinhal Unit, the organic waste was sent to landfill due to requirements of the State Environmental Protection Foundation (Fepam).

(306-4) Respecting current legislation, 100% of waste recycled or disposed of externally is transported with Waste Transport Movement (MTR) documentation issued in the online control system of the Environment Institute (IMA). This ensures that this material is only sent to duly licensed companies.

(102-12) We are members of a Coalition, through the Indústria Brasileira de Árvores Brazilian's (Ibá) Business Recycling Commitment (CEMPRE), sealing a sectorial agreement for the implementation of the reverse logistics system for packaging in general.

(306-2) Annual recovery of paper fiber and plastic (in tons)



Note: the number of contaminants in the paper scraps has gradually increased over time, generating a higher volume of plastic tailings. Consequently, the amount of plastic recovered has accompanied this increase. Adjustments in the process and constant maintenance of the equipment used to prepare the paper mass have boosted the efficiency and utilization of fibers, reducing losses.

Emissions

(103-2) We are a carbon-neutral company by nature. That means we capture more greenhouse gases from the atmosphere than we emit. **(103-1,103-3, 305-1.e)** In addition to being guided by the GHG Protocol guidelines and the National Climate Change Policy in scopes 1, 2 and 3, we were the first Brazilian company to certify a Greenhouse Gas Inventory (GHG) in accordance with ISO14064:2006.

(103-2, 305-1.f e 305-2.f) This inventory identifies and quantifies the sources of greenhouse gas (GHG) emissions and our evolution in this direction in industrial units, forest areas in Santa Catarina, offices and the Habitasul Florestal subsidiary. **(305-1b, 305-1.g, 305-2c, 305-3b)** For calculation purposes, we take into account emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Emissions from HFCs, PFCs, SF₆, NF₃ are not considered because we do not use precursor substances of these gases in industrial processes.

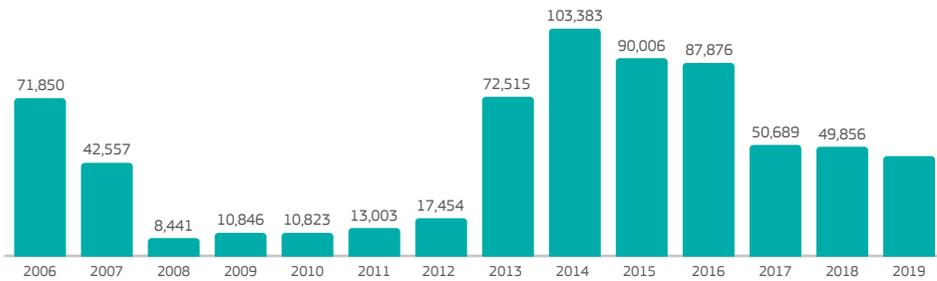
The base year used until 2013 was 2006, when we published our first greenhouse gas inventory. **(305-1d, 305-2d e 305-3d)** In 2013, due to the acquisition of Papelão Ondulado São Roberto with two industrial units, the inventoried emissions were higher. Since then, dedicated to process optimization, the continuous effort for superior operational efficiencies and a genuine commitment to sustainability, we have managed to reduce emissions until the decommissioning of the unit in 2019.

Scope 1 - Direct emissions: all the GHG emissions from the industrial process, ranging from fuels and reagents to disposal of waste in industrial landfills.

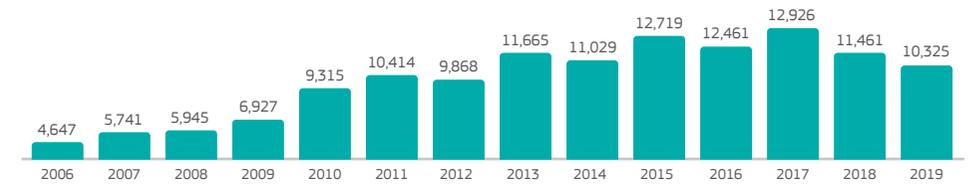
Scope 2 - Indirect emissions: covers GHG emissions from energy purchased from third parties.

Scope 3 - Indirect emissions from other sources: keeps track of fuel consumption for transporting raw materials, inputs, products and sending waste to third-party landfills.

(305-1.a) Scope 1 - Direct GHG emissions (in tons of CO₂eq)

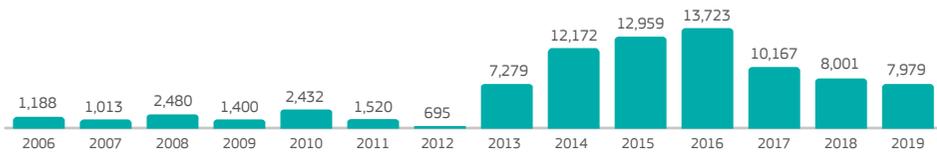


(305-2) Scope 3 Summary - Indirect emissions – Other sources (in CO₂eq)



(305-3f, 305-3g) Note: The IPCC 2006 Guidelines are considered the source of the emission factors used and the potential global warming rates, following the ISO14064:2006's recommendations.

(305-2) Scope 2 - Indirect emissions – Energy (in tons of CO₂eq)



(305-2e, 305-2g) Note: the emission factors used for calculation purposes are made available by the Ministry of Science and Technology and make up the indirect emission calculation pursuant with the ISO14064:2006 guidelines.

(305-2 e 305-3d) Advances in Scope 3 have been recorded since the base year with regard to the number of activities each year. Because it is a good management practice and we are dedicated to the improvement of our Inventory, we chose to include new sources, even if this scope does not require such accountability.

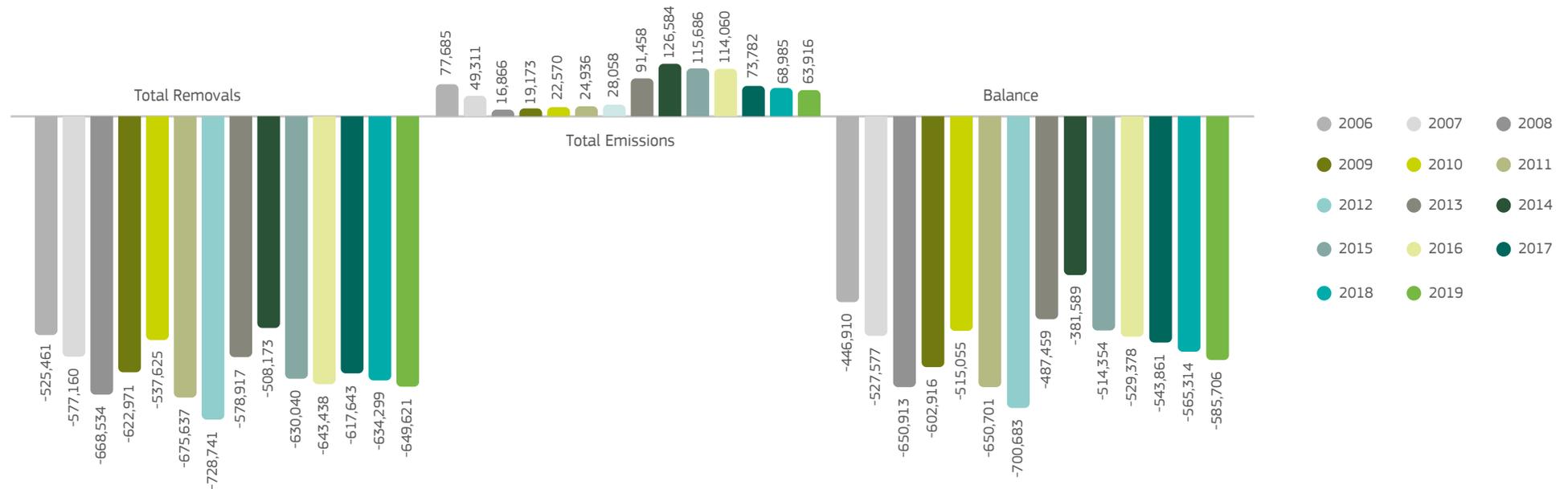


(305-4c) Distribution of the indices based on the operating units

Units	Base Year: 2006			Base Year: 2013		2019			
	Production	Emissions	Intensity	Intensity (1,2,3)	Intensity (1,2)	Production	Emissions	Intensity (1,2,3)	Intensity (1,2)
Paper SC - Campina da Alegria	172,201	64,127	0.37	0.07	0.06	252,298	28,510	0.11	0.11
Paper MG - Santa Luzia	-	-	-	0.72	0.69	59,196	18,124	0.31	0.29
Packaging SC - Campina da Alegria	30,998	4,454	0.14	0.03	0.03	69,727	2,387	0.03	0.04
Packaging SP - Indaiatuba	47,859	4,725	0.1	0.08	0.06	93,332	6,293	0.07	0.05
Packaging SP - Vila Maria	-	-	-	0.22	0.21	23,776	2,017	0.08	0.08
Resin RS - Balneário Pinhal	5,467	550	0.1	1.79	1.79	13,640	507	0.04	0.03

(305-4.a) Note: the intensity reports the specific per unit, i.e. the emission divided by the gross production causes the intensity indicated for each operating unit.

Balance: Emissions and Removals



(305-2, 305-3d) Note: Scope 3 evolution is observed since the base year with the number of activities in each year. Because it is a good management practice and we are dedicated to the improvement of our Inventory, we chose to include new sources, even if this scope does not require such accountability.

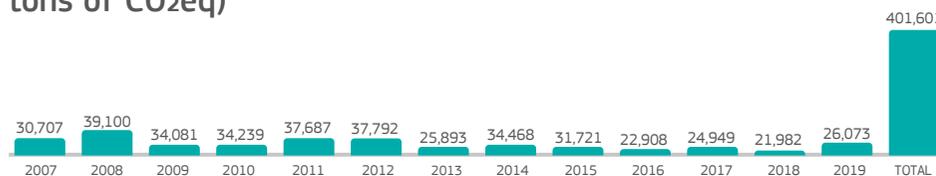
(305-3f, 305-3g) The IPCC 2006 Guidelines are considered the source of the emission factors used and the potential global warming rates, following the ISO14064:2006's recommendations.

(305-1c e 305-3c) Emissions from biogenic sources (in CO₂eq tons)

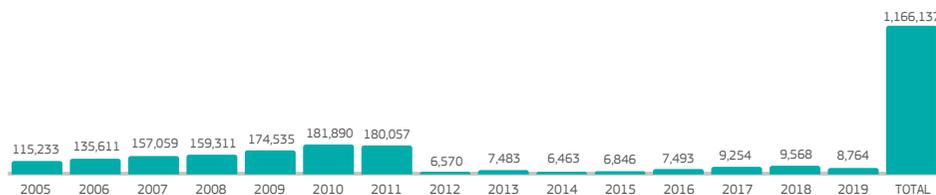
	2017	2018	2019
Biodiesel and gasoline - Scope 1	110.98	132.24	183.73
Ethanol - Scope 1	3.07	14.70	20.54
Biodiesel and gasoline - Scope 3	763.48	668.23	816.58
Black liquor - Scope 1	163,506.51	155,503.54	217,329.14
Biomass - Scope 1	765,521.51	728,892.90	734,332.84
TOTAL	929,905.55	885,211.61	952,682.84

Note: the total volume of emissions from biogenic sources presents an increase in 2019 compared to 2019 due to the increase in fuel consumption (gasoline, biodiesel and biomass).

(305-5) Certified emission reductions from the wastewater treatment plant at the Paper SC - Campina da Alegria Unit (in tons of CO₂eq)

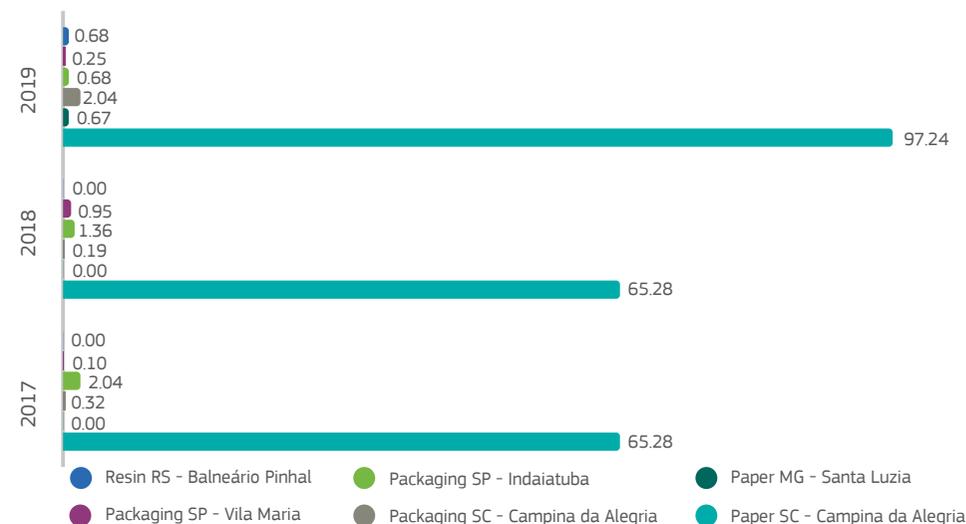


(305-5) Certified emission reductions from the cogeneration boiler at the Paper SC - Campina da Alegria Unit (in tons of CO₂eq)



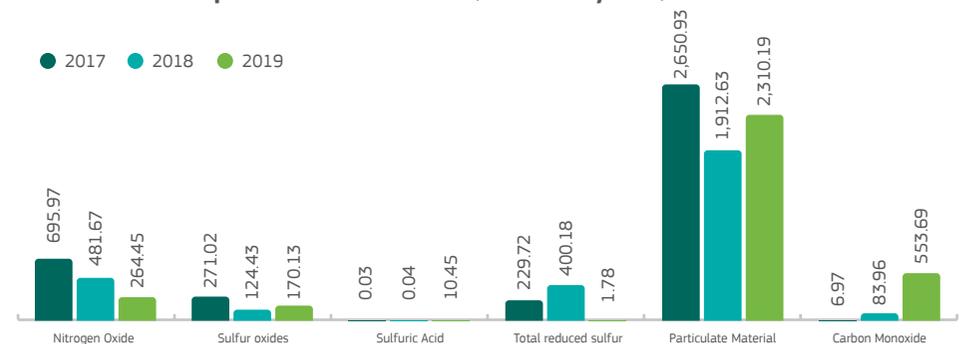
Note: In 2019, we registered higher biomass consumption from third parties located in a radius over 200km from the Vargem Bonita units, influencing the calculation of the certified emission reductions.

(305-6) Emissions of ozone depleting substances (in tons of CO₂eq)



Note: The calculation can be made directly. Both the CML-IA and the ReCiPe methods use the equivalent CFC-11 substance with an ozone depletion impact indicator. The two methods present the characterization factor as 0.05 kg of CFC-11 eq for each kg of HCFC-22. We have not adopted the formula indicated by the GRI because we neither produce, import nor export ozone layer depleting substances. The data presented refer to emissions from the use of air-conditioning refrigeration gas.

(305-7) Atmospheric emissions (in tons/year)



(305-7) Emissões atmosféricas por unidade (em toneladas/ano)

Unit	Nitrogen Oxide			Sulfur Oxides			Sulfuric Acid			Reduced total sulfur			Particulate matter (PM)			Carbon Monoxide		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Paper SC - Campina da Alegria	665.54	448.70	221.84	270.89	41.49	106.97	0.03	0.04	10.45	229.72	400.18	1.78	2,638.67	1,902.48	2,308.72	-	-	394.93
Paper MG - Santa Luzia	15.67	15.67	32.43	-	-	-	-	-	-	-	-	-	-	-	-	6.95	6.95	8.77
Packaging SC - Campina da Alegria	2.37	-	4.23	-	-	3.54	-	-	-	-	-	-	-	-	0.25	0.01	-	0.02
Packaging SP - Indaiatuba	10.64	10.64	1.15	-	-	-	-	-	-	-	-	-	-	-	-	0.01	0.01	
Packaging SP - Vila Maria	1.75	6.66	4.79	-	82.94	59.62	-	-	-	-	-	-	-	6.71	-	0.00	0.00	
Resin RS - Balneário Pinhal	-	-	-	0.13	-	-	-	-	-	-	-	-	12.26	3.44	1.22	-	77.00	129.96
TOTAL	695.97	481.67	264.45	271.02	124.43	170.13	0.03	0.04	10.45	229.72	400.18	1.78	2,650.93	1,912.63	2,310.19	6.97	83.96	533.69

Notes: As of 2018, the information of the Packaging SC – Campina da Alegria Unit was added to that of the Paper SC – Campina da Alegria Unit. POP and VOC are not issued by the Company.

(305-7b) The source of the factors used is obtained from the analysis reports that are prepared by contractors. **(305-7c)** To define the sampling methodology for emission analysis, the Technical Standards of ABNT, CETESB and EPA were taken as the basis.

Biodiversity

(103-1 e 103-2) The continuity of our business depends on the balance in the interaction of processes and natural resources. Toward this end, our specialized teams are dedicated to environmental and forest management and they monitor the impacts of our operations. This includes the minimization and/or mitigation practices, respecting the different biomes and needs of forest areas in Santa Catarina and Rio Grande do Sul.

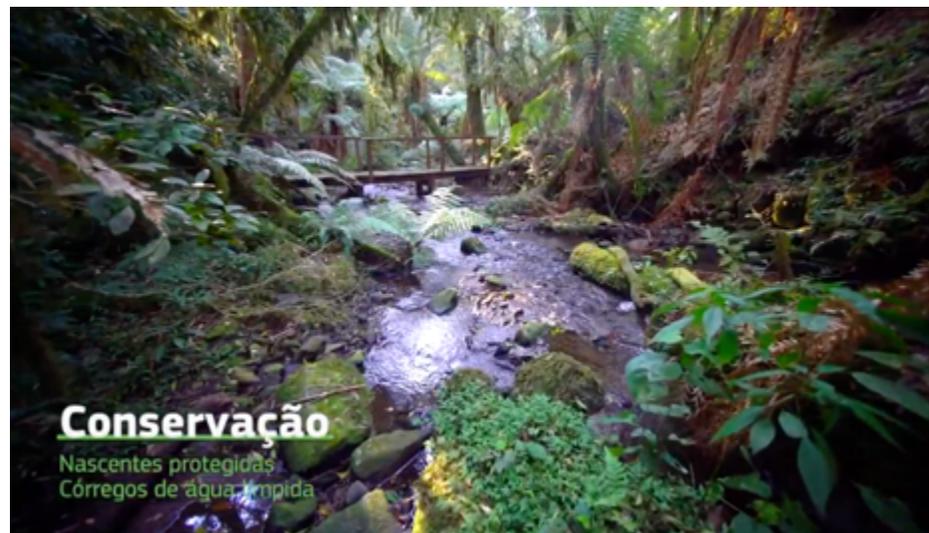
Biodiversity in Santa Catarina's forest areas

(304-3.a) In Santa Catarina soil, 48% of our areas are dedicated to environmental preservation through APPs, legal reserves and other native vegetation areas.

(304-3) In 2011, a Conduct Adjustment Agreement was signed with the Public Prosecutor's Office of Santa Catarina and the Institute of the Environment due to the planting of exotic species in a permanent preservation area. Compliance with the agreed terms is under review by the Public Prosecutor.

(304-3) The boundaries of the Company's forest areas in Santa Catarina are adjacent to the Araucárias National Park (ParNa). ParNa is a federal conservation unit created by decree in 2005, covering the municipalities of Passos Maia and Ponte Serrada. Currently managed by an ICMBIO Integrated Management office, Irani representatives sit on the Advisory Board, participating directly in the actions for the resolution of the implementation of its management plan, working groups on specific demands, public use and activities support.

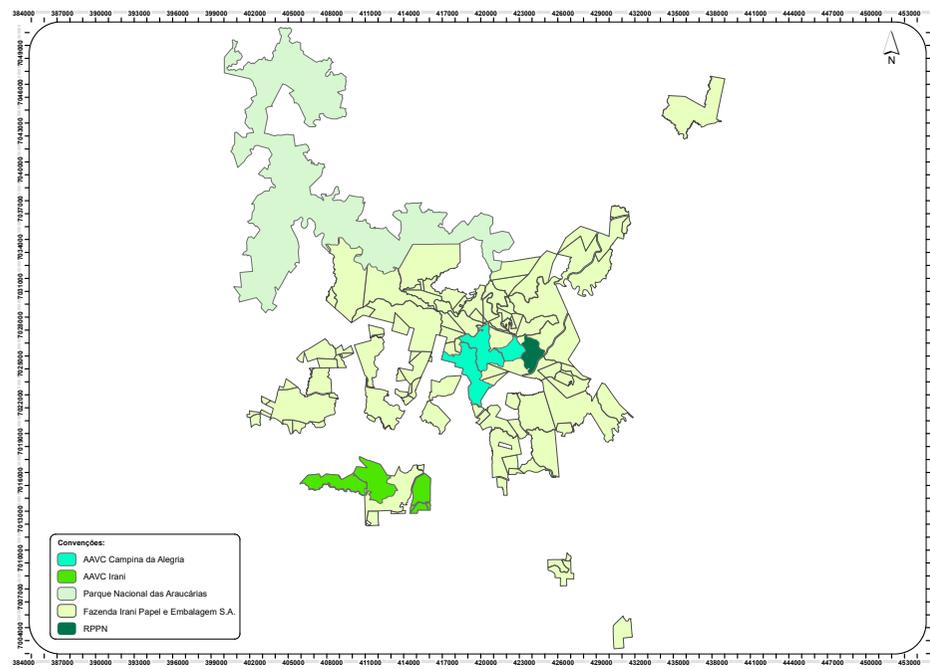
We continued to conduct scientific research and environmental education in the Prof. Yara C. Nicoletti Private Natural Heritage Reserve (RPPN) in Vargem Bonita (SC). Named after an important teacher from the Campina da Alegria community, the area contains 285 hectares of native vegetation typical of Mata de Araucária, with species of local fauna and flora threatened with extinction, as well as an ecological trail dedicated to environmental education activities, enjoyed by 276 people over the year. Also, in 2019, we made structural improvements to the trail, including the building a rest area.



See at:

<https://youtu.be/LU-Ts39XZnk>

Verification of conservation attributes in our forest areas was oriented by the **Guia ProForest, Princípios do FSC®**, expert studies and public consultations with our stakeholders. This evaluation resulted in two locations classified as High Conservation Value Area (AAVCs) of types 1, 2 and 3, located in the municipalities of Irani and Vargem Bonita (SC) totaling 3,150 hectares.



(103-3) The survey of fauna and flora is carried out periodically, with external support, to evaluate the measures for the preservation and conservation of local biodiversity.

Flora survey

Conducted every five years with the last update in 2016, in 2019 it recorded the presence of 44 families and 120 species in our forest areas. The richest family is *Myrtaceae* with 26 species, followed by *Asteraceae* (6), *Lauraceae* (6) and *Fabaceae* (5). Some of the species listed are threatened with extinction, such as:

Scientific name	Popular name	Conservation aspect
<i>Araucaria angustifolia</i> (Bertol.) O. Kuntze	Araucaria, Brazilian pine tree	* CR ** EN
<i>Butia eriospatha</i> (Mart. ex Drude) Becc.	Wooly jelly palm	* VU ** VU
<i>Cedrela fissilis</i> Vell.	Argentine cedar	** VU
<i>Dicksonia sellowiana</i> Hook.	Xaxim	* CR ** EN
<i>Ocotea porosa</i> (Nees & Mart.) Barroso	Brazilian walnut	* CR ** EN
<i>Podocarpus lambertii</i> Kl.	Plum pine tree	* NT
<i>Quillaja brasiliensis</i> (A.St.-Hil. & Tul.) Mart.	Quillaja	* EN

* *Red List of Threatened Species. Version 2016-3* – (IUCN); ** MMA Edict nº 443, December 17, 2014. VU – Vulnerable; CE – Critically Endangered; EN – Endangered

Mastofauna survey

The last update was completed in 2015, pointing to the occurrence of 29 species distributed in eight orders. Of these, nine are listed on endangered species lists. The next update of this survey is scheduled to start in 2020.

Species	Popular name	Conservation aspect
<i>Mazama americana</i>	Red brocket deer	EN**
<i>Pecari tajacu</i>	Collared peccary	VU**
<i>Leopardus pardalis</i>	Ocelot	VU*, EN**
<i>Puma concolor</i>	Puma	VU*, VU**
<i>Puma yagouaroundi</i>	Jaguarundi	VU*
<i>Leopardus guttulus</i>	Southern tiger cat	VU*
<i>Leopardus wiedii</i>	Margay	VU*
<i>Alouatta guariba clamitans</i>	Southern brown howler monkey	VU*, VU**

* MMA Edict N°. 444, of December 17, 2014 ** CONSEMA Resolution N°. 002, of December 6, 2011. VU – Vulnerable; CE – Critically Endangered; EN – Endangered

Birdlife survey

The last survey, carried out in 2015, basically was focused on forest birds, with species dependent on preserved forests and other residents of woodlands and forest edges. It is, therefore, less susceptible to environmental change.

Some 248 species were recorded, with important emphasis on taxa of significant environmental quality, such as the Mantled hawk (*Leucopternis polionotus*), King vulture (*Sarcoramphus papa*) and Pileated parrot (*Pionopsitta pileata*) and/or dependent on specific micro-habitats, such as: Rufous-tailed Antthrush (*Ruficauda chamaeza*), Black-bellied seed-eater (*Sporophila melanogaster*), Speckled-breasted ant pitta (*Hylopezus nattereri*) and Blackish-blue seedater (*Cyanoloxia moesta*).

Scientific name	Popular name	Conservation aspect
<i>Tinamus solitarius</i>	Solitary tinamou	Vulnerable**
<i>Tricharia malachitacea</i>	Blue-bellied parrot	Vulnerable**
<i>Pyroderus scutatus</i>	Red-ruffed fruitcrow	Endangered**
<i>Sporophila melanogaster</i>	Black-bellied seedeater-	Vulnerable**

* MMA Edict N°. 444, of December 17, 2014 ** CONSEMA Resolution N°. 002, of December 6, 2011.

The next update of this survey is scheduled to start in 2020.

*Boana leptolineata*

Herpetofauna survey

Updated in 2019, this survey indicated the presence of 31 amphibian species. In this inventory, we highlight those included in the list of endangered species, in addition to the *Ischnocnema henselii* and *Trachycephalus dibernardoii* frogs whose distribution is restricted to the Araucaria Forest.

Scientific name	Popular name	Conservation aspect
<i>Melanophryniscus simplex</i>	South American redbelly toad	EN**
<i>Vitreorana uranoscopa</i>	Humboldt's Glass Frog	VU*
<i>Hypsiboas curupi</i>	Curupi frog	EN**, VU*

* MMA Edict Nº. 444, of December 17, 2014. CONSEMA Resolution No. 002, of December 6, 2011. VU – Vulnerable; EN – Endangered

In the case of reptiles, 10 species were found, including *Echianthera cyanopleura* and *Chironius bicarinatus* typical of forest environments.

(304-3.b) In partnership with researchers and government institutions, biodiversity studies are carried out in our forest areas, such as:

- **Fauna and flora monitoring:** updated in rotating periods of approximately two years for fauna and five years for flora, verifying that our forest areas present the attributes that characterize high conservation value areas (AAVCs) and the presence of a number of species with conservation status. Bioindicator species from highly conserved areas of Mixed Ombrophilous Forest (FOM) and endemic species are present in the RPPN Prof. Yara C. Nicoletti. In these areas,

in addition to monitoring, procedures are adopted to maintain and/or enhance the high conservation value attributes.

- **Capuchin monkey project:** the agreement established with Embrapa Florestas aims to study the species *Sapajus nigritus* and its interactions with our planted and native forests in order to reduce the damage caused by commercial planting areas. Currently, we are preparing an inventory on an experimental area that will allow the comparative and quantitative analysis of wood volume losses with different management practices.
- **Reintroduction of the Vinaceous parrot:** for the reintroduction of this species into the Araucária National Park (ParNa), in Santa Catarina, the fruit of the partnership with the Wildlife Space, a nucleus dedicated to the rehabilitation of wildlife was set up.

(304-3) High Conservation Value Areas (AAVCs)

Location	Area (in hectares)	Evaluation result
Campina da Alegria, Vargem Bonita (SC)	1,441.34	<ul style="list-style-type: none"> • The presence of imperiled species of birds, mammals and flora in highly endangered categories; • Excerpts of remaining areas in good conservation stage; • Large remnants (over 1,000 hectares), compared to the extremely fragmented region; • Legal Reserve Area registered and preserved.
Irani (SC)	1,708.66	
TOTAL	3.150,00	

(304-3) Protection and monitoring measures in High Conservation Value Areas (AAVCs)

Protection measures	Community of Campina da Alegria, Vargem Bonita (SC)	Irani (SC)
Environmental education	✓	
Asset Surveillance (monitoring with ibuttons)	✓	✓
Mastofauna Survey	✓	✓
Birdlife Survey	✓	✓
Herpetofauna survey	✓	✓
Flora survey	✓	✓
Control of invasive exotic species	✓	✓
Firebreak maintenance	✓	✓
Road erosion control	✓	✓
Creation of a private conservation unit	✓	
Environmental impact assessment	✓	✓

Note: firebreaks are strips of unplanted land that make it difficult for forest fires to spread.

(304-1.vi e 304-2) Additional information about high conservation value areas (AAVCs), such as the stages, established partnerships focused on protection, restoration and impacts in relation to the introduction of Pinus, are addressed in the Public Summary of Forest Management, available at <http://www.irani.com.br/irani/areas-de-negocios/florestal/>

Biodiversity in the Rio Grande do Sul forest areas

(304-1, 304-3) Our planted forests form mosaics with permanent preservation areas (APPs) and other natural areas. None of them are located within or adjacent to protected areas.

(304-1) We use the Proforest Guide classification and FSC® Certification guidelines to designate the High Conservation Value Areas (AAVCs). We had a remaining total of 13.71 hectares of area with this characteristic after the agreement to divest the Cidreira and Balneário Pinha forested areas.

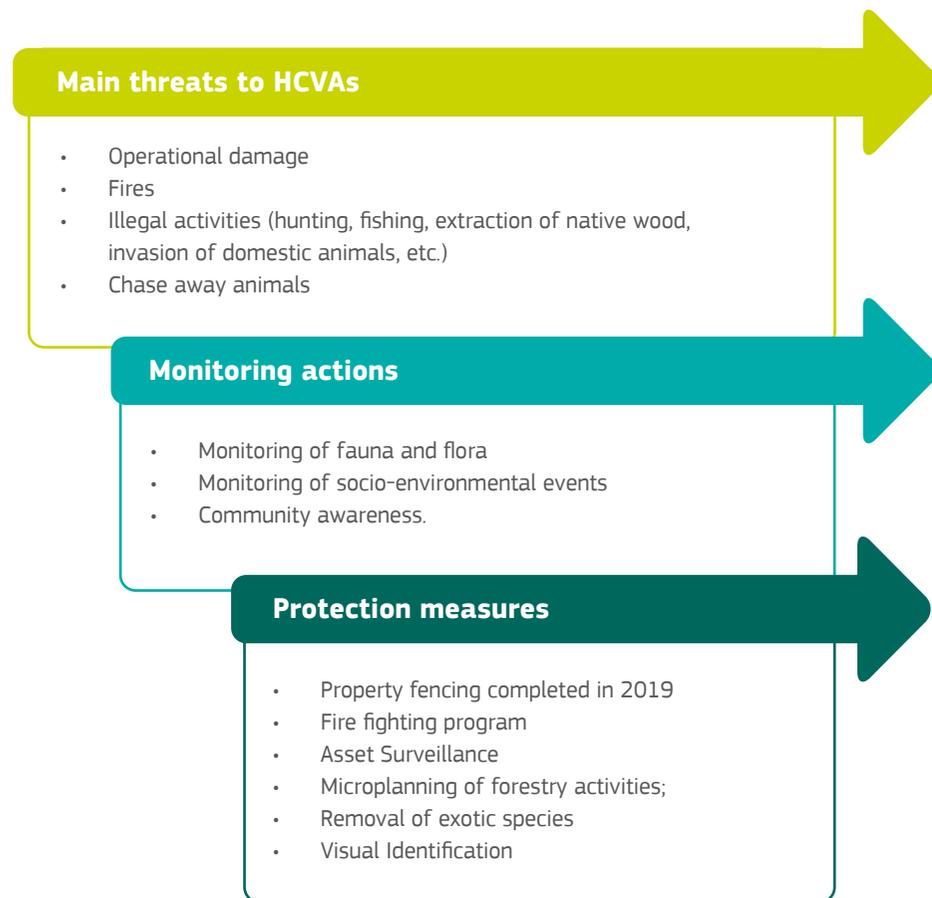
Located on the Lagoa do Paurá lakebed, in the rural area of São José do Norte municipality, this area has four adherent attributes for AAVC, especially the observation of a high presence and conservation of biodiversity, including the typical native, dune-fixing restinga vegetation, of great regional importance.

(304-4) We monitor the biodiversity of this location annually, sequenced to the seasons of the year in order to understand the environmental dynamics on the areas and the impacts of our operations. **(304-2)** Using a matrix of aspects and impacts, we mapped the impacts on fauna, soil, flora, water resources and surrounding communities and evaluated the social and environmental impacts that could occur due to the forestry operations.

(103-3, 304-2) Measures such as management effectiveness monitoring are applied in AAVCs. The intent is to ensure the maintenance and improvement of the identified values, consolidate their conservation and perpetuate their benefits.

AAVC	Location	Area Description
Bojuru Lake and Restinga Forest	São José do Norte	<p>It comprises a gallery forest containing species characteristic of the Dense Ombrophile Forest formed by <i>Coussapoa microcarpa</i>, <i>Scutia bruxifolia</i>, <i>Sebastiania commersoniana</i>, <i>Psidium araca</i>, <i>Iodina rhombifolia</i> and <i>Myrsine umbellata</i>, which house species of orchids and bromeliads.</p> <p>Among the dunes, there is a species of wild fauna classified as endangered on the IUCN - World Union for Nature red list, the tuco-tuco, rodent belonging to the genus <i>Ctenomys</i>.</p>

The partnership established with the state government through the RS BIODIVERSITY project allowed rapid ecological assessment (AER) in one of these locations, pointing out:



Areas of permanent preservation, legal reserves and other forest fragments belonging to the Company also have management and monitoring measures in place to curb illegal activities and promote the conservation of biodiversity, such as an integrated forest production system, restoration actions, property surveillance and operational care. We provide more information on biodiversity in our forest areas on the coast of Rio Grande do Sul in the Public Summary of Forest Management, accessible at: <http://www.irani.com.br/irani/areas-de-negocios/florestal/>

This document will be updated in 2020.

2019 Challenge	Advance 2019	Challenge 2020
Further the fauna and flora monitoring campaigns in the AAVCs in Rio Grande do Sul.	Campaigns conducted at the AAVC located in São José do Norte.	Analyze the possibility of production and cultivation of native species seedlings in São José do Norte and introduce environmental education activities for employees.



Commitment

Our commitment to the development of the surrounding communities

(103-2, 413-1) Our definition of the surrounding community comprises those municipalities where our business units are located and where most of our employees reside. This definition also is used in the analysis and prioritizing of the establishment of partnerships and relationship strategies, as well as social investments or community service activities.

	Priority Attention	Eventual Attention
Santa Catarina	Irani, Ponte Serrada, Joaçaba, Herval d' Oeste, Luzerna, Catanduvas, Concordia, Vila Campina da Alegria and the head offices in the municipality of Vargem Bonita.	Água Doce
São Paulo	Indaiatuba and the Vila Maria district, located in the northern part of the capital.	Guarulhos and Itaquaquetuba
Rio Grande do Sul	Vila Bojuru (São José do Norte), Balneário Pinhal, Cidreira	Porto Alegre, São José do Norte, Tavares, Osório, Mostardas, Santo Antônio da Patrulha
Minas Gerais	Santa Luzia	Belo Horizonte

Note: As of 2020, with the completion of the decommissioning of the Packaging SP - Vila Maria Unit, only the municipalities of Indaiatuba (priority attention) and Salto (eventual attention) will be considered as surrounding communities in the state of São Paulo.

(103-1, 103-2 e 103-3) We have been implementing shared value generation initiatives and contributing to the development of communities near our business units over the course of the current strategic planning cycle (2018-2027).

(413-1) One hundred percent of the cities in which we operate have put in place local community development programs for children and youths. The actions are focused on education, environment, citizenship and sports, or may even be one-off events to help meet the goals of this guideline.

Initiatives promoted and/or supported by Irani in surrounding communities:

- **Notable Student:** we offer exclusive pedagogical guidance and monthly scholarships to the top five students at the Galeazzo Paganelli Elementary School in Campina da Alegria - Vargem Bonita (SC), focusing on the National High School Examination (ENEM) and college entrance exams. Supplemental to this effort, we organized meetings of our professionals with the institution's high school students to share information about the undergraduate journey, continuing education and how the acquired training contributes to the Company's processes.
- **Broto do Galho:** industrial waste becomes objects of utility and decoration in the hands of craftsmen from the community of Campina da Alegria, stimulating social integration and the generation of extra income for participants.



- **Partnership with Junior Achievement:** encourages business volunteer activities, empowering Irani's employees from all its units to apply partner organizational methodologies in nearby community public school classrooms. The subjects cover entrepreneurship, innovation and sustainability.
- **Partnership with the Joaçabense Volleyball Association (AJOV):** stimulate good citizenship concepts through the practice of sports, involving more than 300 school-age youths residing in Joaçaba (SC), Vargem Bonita (SC) and Campina da Alegria (SC).
- **Sports programs in partnership with SESI:** Our programs benefit about 1,500 young people from Indaiatuba (SP) and Santa Luzia (MG), encouraging the practice of various sports and addressing cross-cutting themes such as respect and teamwork.
- Our employees participated in almost 400 hours of volunteer activities in 2019.

(201-1) Social investments (in R\$ '000)

	2017	2018	2019
Direct investment	314	214	176
One-off Donations	41	10	10
TOTAL	355	224	186

We also donated native seedlings produced in our forest nursery to environmental events and for the recovery of degraded areas, including species such as Araucaria, Imbuia and Butiá.

(103-3, 102-43, 413-2) In 2019, we completed Irani's socio-environmental impact study on the communities in proximity with the Indaiatuba and Minas Gerais business units. The results were presented to the Sustainability Committee, responsible for preparing guidelines designed to mitigate negative perceptions and reinforcing positive ones in order to assure the social license to operate. Uncomfortable factors for the surrounding communities identified in the socio-environmental impact studies carried out indicate:

- **Santa Catarina:** odor, truck traffic, road maintenance, soot, waste collection and access roads.
- **Rio Grande do Sul:** road conditions, garbage, vegetation burns, lack of fencing between properties, invasion of Pinus by dispersion, health of workers in forests and the use of chemicals in the resination process.
- **Minas Gerais:** odor and truck traffic.

Stakeholders consulted around the Packaging Indaiatuba SP Unit were not aware of negative impacts. A common demand in all locations is the interest in learning more about our processes and products and aspects related to environmental education. Toward this goal, in 2019, we prepared materials that present this information and should be implemented in 2020 through a program focused on schools in proximity with our industrial units.

(102-13) Our relationship with governments and social entities representative of society also occurs through our leaders when they join outside committees, boards and/or contribute to projects and actions developed in organizations such as:

- Associação Brasileira das Companhias Abertas (Abrasca)
- Associação Brasileira de Papelão Ondulado (ABPO)
- Associação Brasileira Técnica de Celulose e Papel (ABTCP)
- Associação Catarinense das Empresas Florestais (ACR)
- Associação Comercial e Industrial do Oeste Catarinense (ACIOC)
- Associação de Pais e Amigos dos Excepcionais (APAIE) dos municípios de Joaçaba, Vargem Bonita e Concórdia, em Santa Catarina
- Associação dos Resinadores do Brasil (ARESB)
- Associação Empresarial de Santa Luzia (AESL)
- Associação Gaúcha de Empresas Florestais (Ageflor)
- Associação Qualidade RS/PGQP
- Centro das Indústrias do Rio Grande do Sul (CIERGS)
- Conselho Estadual do Meio Ambiente (CONSEMA)
- Federação das Associações Comerciais e de Serviços do Rio Grande do Sul (Federasul)
- Federação das Indústrias do Estado de Santa Catarina (FIESC)
- Fundação Centro Tecnológico de Produção Industrial – CETEPI de Joaçaba (SC)
- Fundação Centro Tecnológico de Produção Industrial (Cetepi)
- Indústria Brasileira de Árvores (Ibá)
- Instituto Brasileiro de Avaliações e Perícias de Engenharia (IBAPE)
- Instituto Euvaldo Lodi (IEL)
- Movimento Catarinense pela Excelência – Excelência SC
- Ordem dos Advogados do Brasil de Santa Catarina (OAB-SC)
- Secretaria de Desenvolvimento Sustentável de Santa Catarina (SDS)
- Sindicato das Indústrias de Marcenarias, serrarias, carpintarias e tanoarias de Caxias do Sul (Sindimadeira RS)
- Sindicato da Indústria do Papelão do Estado de São Paulo (Sinpesp)
- Sindicato das Indústrias de Celulose e Papel de Santa Catarina (Sinpesc)

- Sindicato das Indústrias de Celulose, Papel e Papelão do Estado de Minas Gerais (Sinpapel)
- Sindicato das Indústrias de Papel, Papelão e Cortiça do Rio Grande do Sul (Sinpasul)
- Sindicato dos Trabalhadores da Indústria de Papel e Papelão em Santa Luzia (Sintipel)
- Sindicato dos Trabalhadores nas Indústrias de Artefatos de Papel Papelão Cortiça em Joaçaba e Região (SITIAPAPEL)
- Sindicato dos Trabalhadores nas Indústrias de Papel, Papelão e Cortiça de São Paulo, ABCDM, Osasco, Taboão da Serra e Região (Sintrapel)
- Sindicato dos Trabalhadores Rurais de Osório (SITRROSO)
- Subcomitê Poderoso-Vermelho - Comitê de Bacia Hidrográfica do Rio das Velhas
- Youngs Presidents Organization (YPO)



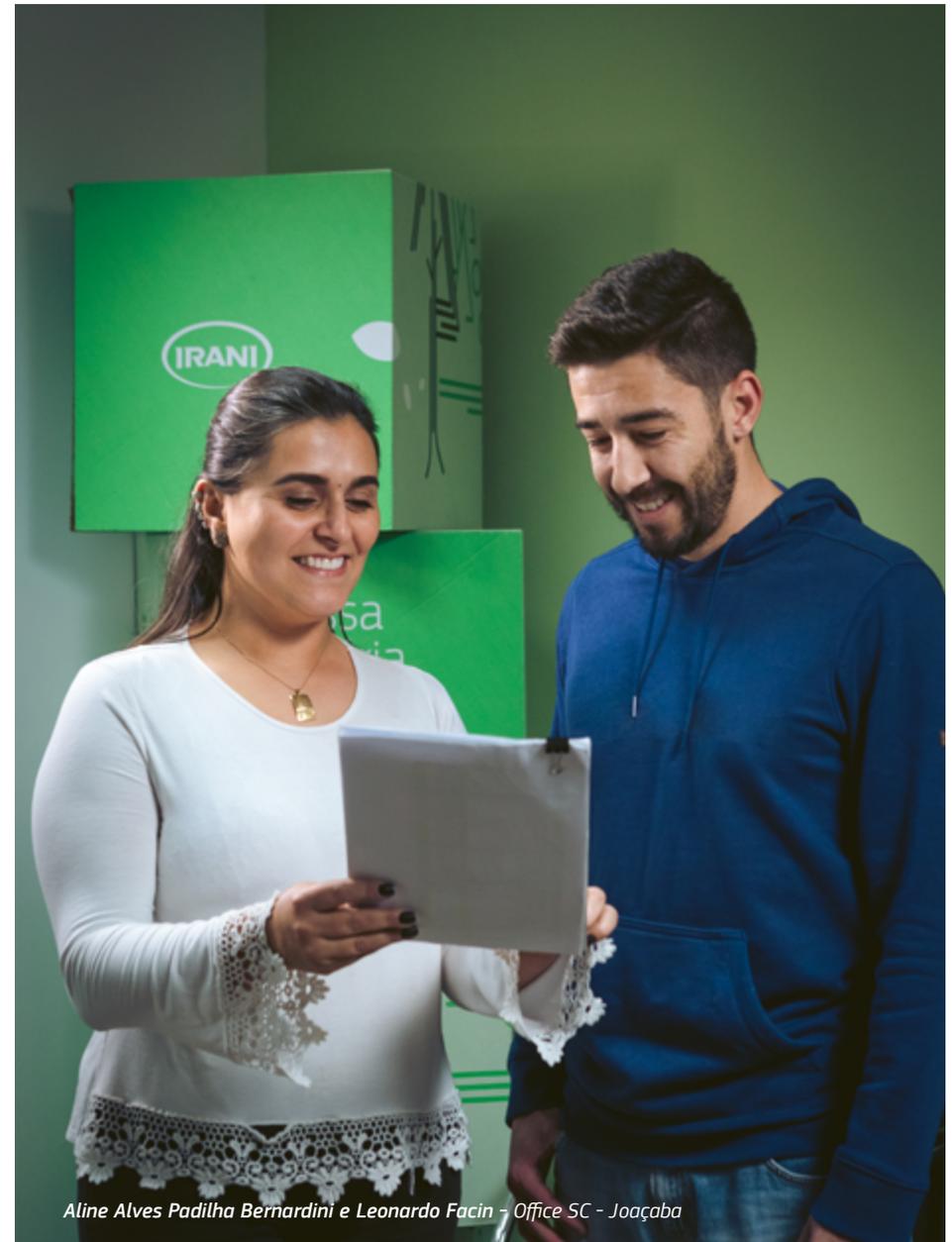


Suppliers

Relations with our Suppliers

(103-2) In order to strengthen this synergy and make it even more transparent and lasting, we work to formalize contracts, adding clauses related to socio-environmental and human rights aspects to ensure legal compliance and adequate working conditions in the value chain. The signing of these documents represents affirmative self-declaration of commitment to the topics, including aspects such as the absence of slave and/or child labor in their operations. We signed 357 new contracts in 2019. Of this total, 272 applied to the inclusion of environmental clauses, 170 contained clauses related to human rights and 201 contracts included anti-corruption clauses. The analysis of the applicability of the clauses to contracts is conducted by the legal department.

(102-12) We are signatories to the Global and Business Compact for Integrity and Against Corruption, which reinforces our commitment to ethics and human rights. In practice, the adoption of the Management Excellence Model (MEG), international certifications such as FSC®, ISO 14001 and the GRI Standards indicators monitored and presented in this Report raise the level of our processes with regard to the socio-environmental aspects linked to the evaluations of suppliers and service providers. The management of the risks and controls of the procurement processes, contracts and warehouses adopts internal work methodology.



Aline Alves Padilha Bernardini e Leonardo Facin - Office SC - Joaçaba

(103-3) For the past 10 years, we have been monitoring some internal indicators that aim to measure and preserve the performance of the Supply sector regarding purchases from suppliers with contracts, including Irani Supplier and the Urban Forest. The Irani Supplier indicates the percentage of purchases from suppliers under long-term contracts. In 2018, the index recorded 67.02% of purchases in this model and, in 2019, it was calculated at 68.93%. For its part, the Urban Forest indicator shows the volume of purchases through partnerships in contract of a specific and essential input for our production process: wood chips. In 2018 we recorded 85.06% and 80.13% in 2019.

(308-1, 414-1) In the last quarter of 2018, we created and implemented a system for approval and control of documents from new suppliers and service providers that serve the Packaging business and that could impact the environment. Formalized in the form of an internal procedure, the environmental area is responsible for monitoring the documentation of active suppliers and Supplies handles the collection of documents in the development of new partners. This system was maintained in 2019, with no need for improvement and/or changes. We mitigate the risks in the operations for contracting services throughout the Paper and Packaging business through a third-party management practice, which provides for the application of an internal procedure covering in-house standards, health and safety, the environment and documentation required by law.

	Packaging SC- Campina da Alegria	Packaging SP - Indaiatuba
Controlled suppliers	16	8
Controlled service providers	7	24
Total evaluations	23	32

Note: No suppliers were disqualified during the period

Actual suppliers	Significant environmental impacts			
	Greenhouse gas (GHG) generation	Update environmental permits	Consumption of natural resources	Waste generation
Purchase of chemicals	X	X	X	X
Transport of chemicals	X	X	X	
Purchase of natural products directly from the supplier (water, sand, stone, pallets)	X	X	X	
Recruitment of waste transport service	X	X	X	
Hiring of waste disposal service	X	X	X	X
Hiring of water reservoirs/ sump cleaning service	X	X	X	X
Disposal of own forklift tires	X	X	X	X
Service providers	X	X	X	X

(103-2) Our materials management activity is perceived when we have high inventory accuracy, reduced waiting time between delivery of the desired item or emergency procurement. With the implementation of the new ERP system, we guarantee the safety of the inventory of warehouse items, now registered on the system, supporting a unified view of the inventories of all the industrial units. This change also gave us a new understanding of the for materials needs planning, analyzing the reserves and anticipating purchases. Thus, we have developed a planned and sustainable supply cycle, ensuring the availability of the materials necessary for the Company and strengthening our relations with suppliers.

Whenever possible and to stimulate local economic development and the building of partnerships with regional suppliers, we prioritize purchases and contracting of services from the communities surrounding our units. In 2019, the percentage index presented growth:

	2017	2018	2019
(204-1) Total purchased from local suppliers (R\$ million)	124,608	129,692	188,931
Percentage of total purchases made by the Company (%)	18.90	17.99	23.61

Note: In 2019, we unified the understanding of surrounding communities according to those listed in the topic “Our commitment to the development of surrounding communities.”

We also encourage circular economics by fostering reverse logistics of corrugated cardboard scraps. In 2018, the volume of scraps that returned from our customers to the production process was 5,713.90 tons, lower than the volume of 6,000 tons projected for the period. In 2019, we achieved a return of 6,110 tons.

(102-9) We have more than 10,000 suppliers and service providers, with active registrations, in our supply chain, segmented according to the guidelines and requirements of the FSC®, ISO9001 and ISO14001 standards:

- Critical service providers
- Critical and chemical products
- Transportation services (shipment logistics)
- FSC® and forest products
- Critical use and consumption materials and external services



All contracting includes systematic identification, qualification, selection and evaluation steps that take into account the criticality of products and services and their impacts on our businesses.

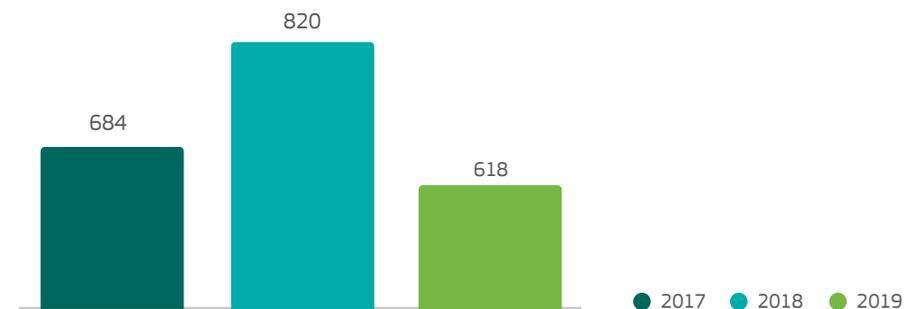
In 2019, we adopted a supplemental solution that was integrated with the Company's new ERP and our supply chain, promoting the **process' full interaction**. Thus, the processes became more agile, now more intuitive, with higher informational transparency, security and traceability.

(103-2, 103-3) We applied the IDF assessment that measures the Supplier Performance Index to the five purchasing groups. Measured from 0 to 100 points, this assessment is a way to stimulate the continuous improvement of our suppliers/service providers. Thus, we go beyond what is legal compliance, encouraging best management practices. The composition of this item aggregates topics such as compliance with technical specifications, quality of products, services and the commercial relationship, in addition to the effectiveness of the communication process.

Also, in 2019, we began a project to improve the evaluation stage, analyzing how to speed up the purchasing process on the website, unifying the channel of communication with suppliers, ensuring the historical record and the greater reliability of the results. Completion of this work is planned for 2020.

One hundred percent of the price quotes are made on the new purchasing portal, including monitoring and approval of purchases, contract management, third party documentation and monitoring of financial information.

Number of suppliers and service providers evaluated

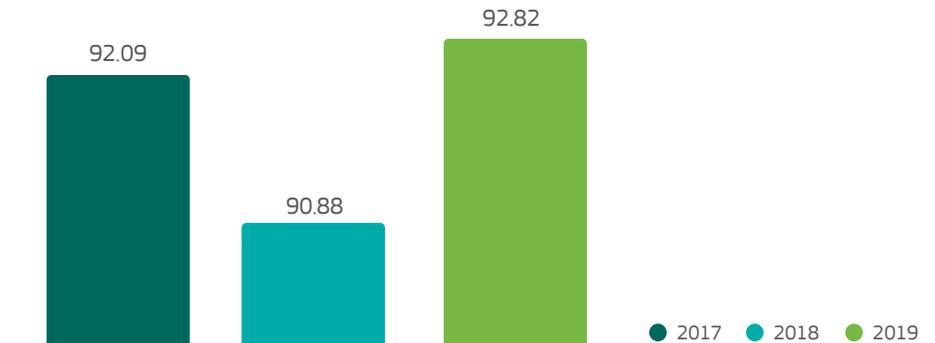


Note: We reassessed the method of calculating supplier evaluations, deepening analyses and adjusting the records for the latest cycles. The decline of about 25% in the number of evaluations, from 2018 to 2019, was influenced by the shutdown of the Packaging SP – Vila Maria unit.

The supplier/service provider receives a notification of the outcome of the evaluation, and some measures may be required, depending on the score:

- **Below 60 points:** registration is canceled and contracting or purchases are not possible. Requalification can be requested from the moment the supplier/service provider meets the applicable requirements and submits an action plan approved by Irani's forest or supply manager, depending on the type of service rendered.
- **Between 60 and 79.99 points:** qualification conditional to the opening of a non-compliance form (NFC). Irani must receive a cause analysis of the problems pointed out and present a corrective action plan. The effectiveness of this plan is verified by the Purchasing Intelligence area every six months for the provision of services and annually for the supply of products.
- **Between 80 and 100 points:** automatic qualification. In this category, there are records of suppliers and service providers who ask us to help prepare joint analyses of opportunities for improvement, aimed at upgrading their practices. These records show the importance of this process for the supplier.

Supplier Performance Index (IDF) Result



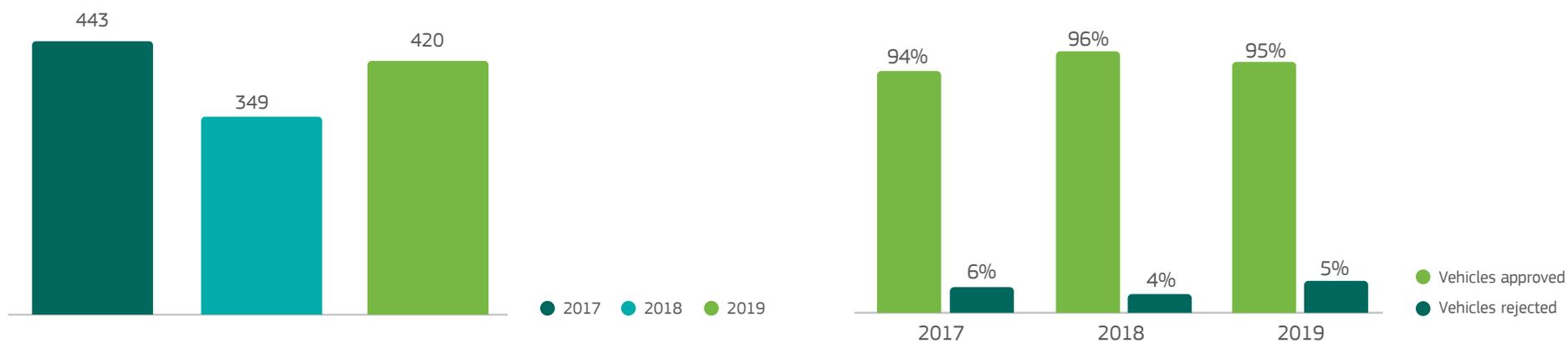
Critical Services Providers			2017	2018	2019
Composition	Service providers hired per job or on an hourly basis, for work conducted on our premises that may directly impact the quality of our products — such as forestry, environmental services, maintenance of machinery and equipment and electrical energy.	Nº. of service providers in general	1,036	1,061	732
Interface	Team of negotiators and health and safety, quality and sustainability areas	% of service providers evaluated (critical services)	16%	26%	26%
Predominant origin of those evaluated	SC 32% SP 31% RS 14% MG 13% PR 10%	Investment in acquisition of services in general (R\$ million)	79	87	159
<p>In 2019, we held a workshop with service providers at Vargem Bonita Units to inform them that we are making our dealings stricter in terms of occupational health and safety. As of 2020, a notification will be issued to the service provider for each occurrence, and appropriate disciplinary measures may be taken pursuant to the risk classification.</p> <p>In addition to the guidelines on security measures and practices aimed at curbing behavioral deviations, the meeting also addressed the new rules of the Supplier Performance Index (IDF), third party documents and management tools.</p>		% of contracted services over total purchases	12%	12%	20%
		IDF Result	92.61	93.53	93.13
		Predominant criteria for IDF evaluation: legal compliance, quality, qualification for rendering the service, innovation and improvements, environmental aspects including waste disposal, and business relationship.			

NOTE: In 2019, we also reviewed the concepts about third party services, considering outsourced labor as a new Company category of critical service providers, totaling an average of 799 service providers.

Chemical and Critical Products			2017	2018	2019
Composition	Suppliers of inputs and raw materials that can directly interfere in the quality of the end products, with whom we have established regular purchase schedules	Nº. of chemical product and critical suppliers	179	140	221
Interface	Team of negotiators, R&D, Quality and Warehouse.	% of chemical product and critical suppliers	66%	91%	45%
Predominant origin of those evaluated	SP 47% SC 23% RS 11% MG 10% PR 6% RJ 2% RN 1%	Total investment in purchases (R\$ million)	71	79	118
<p>The purchase schedule is made every four months, ensuring the guarantee of supply without risks of paralyzing the production processes.</p> <p>The qualification of this group requires the application of the Supplier Assessment Questionnaire (QAF), a tool that seeks to assess the capacity of suppliers of critical and chemical products to meet the quality and socio-environmental requirements required by ISO 9001 (quality), ISO 14001 (environmental management system), ISO 22000 (food safety) and SA 8000 (social responsibility). (414-2) When necessary, our negotiators carry out visits <i>in loco</i> for investigating evidence. From 2020, the QAF evaluation will be carried out every two years.</p> <p>2019 was a year of immersion in internal procedures and adjustments to the Company's new ERP. As of 2020, visits will resume.</p>		% of purchases of chemical and critical products over total purchases	11%	11%	15%
		IDF Result	94.57	87.84	95.89
		Predominant IDF evaluation criteria: legal compliance, quality, innovation and improvement, environmental aspects and commercial relationship.			

Transportation services (shipment logistics)			2017	2018	2019
Composition	Companies that transport our finished products to customers and that undergo a qualification process before the establishment of the partnership contract to guarantee compliance with aspects of legal compliance.	Nº. of logistics carriers for dispatch	44	43	47
Interface	Team of negotiators and shipping staff.	% of transport services evaluated	79%	83%	72%
Predominant origin of those evaluated	SC 69% SP 22% RS 6% MG 3%	Total investment in purchases (R\$ million)	49	46	47
<p>The Company's new ERP has a specific module for logistics management, optimizing itineraries and documentation.</p> <p>When the development of a new service provider in this category is necessary, we apply a questionnaire to assess the adequacy of the available fleet to the needs of the Company and its service range.</p> <p>We also take advantage of the partnerships signed to strengthen our actions with a focus on reverse logistics. Whenever possible, carriers return corrugated board scraps to our units.</p>		% investment in transport services over total purchases	7%	7%	6%
		IDF Result	92.22	86.94	90.72
		<p>Predominant IDF evaluation criteria: Compliance with schedules, quality of services provided, response time, tracking and environmental criteria related to leaks and atmospheric emissions. The latter was approved by the Depollute Program in Santa Catarina and through an opacity opinion in São Paulo.</p>			

Measurements carried out on the transport trucks of the Vargem Bonita Units



FSC® and forest products

(103-2) The worldwide growth of the corrugated board market has been supported by recycled fiber to the detriment of virgin fibers. This was one of the motivations for organizing a workshop to seek strategic alternatives to face the availability volatility and price issues of this input.

We brought in managers from different in-company areas and specialists on the subject, analyzing the market and business models applied abroad. Subsequently, we defined more than ten initiatives aimed at studying the main aspects of the paper scraps sector in the domestic and foreign markets, developing improvement alternatives for the Company and our value chain.



Eliane Barros Xavier Pelegrini - Packaging SP - Indaiatuba

FSC® and forest products		2017	2018	2019	
Composition	Suppliers of raw materials and inputs such as resin gum, paper scrap, pulp, paper, wood, biomass and wood for biomass.	Nº. of FSC® product and forestry suppliers	332	308	289
Interface	Team of negotiators and forestry team	% of FSC® products and forestry suppliers	71%	93%	76%
Predominant origin of those evaluated	RS 37% SC 23% SP 17% MG 10% PR 9% RJ 2% ES 1% GO 0,5% MS 0,5%	Total investment in purchases of FSC® and forestry products (R\$ million)	254	283	349
<p>The qualification of the Pulp and Paper suppliers that make up this group is revalidated annually through the application of the Supplier Assessment Questionnaire (QAF), seeking to assess the ability of suppliers to meet the quality and socio-environmental requirements required by our Sustainability Policy, and by the ISO 9001, ISO 14001, ISO 22000 and SA 8000 standards. From 2020, the QAF evaluation will be conducted every two years.</p> <p>Consultations regarding legal compliance and compliance with specifics pointed out by our teams are issues that are verified before the establishment of the business relationship. (414-2) Visits (<i>in loco</i>) are also carried out, aiming to determine:</p> <ul style="list-style-type: none"> • Chip supply: business relationship, legal aspects, training and occupational health and safety • Supply of gum-resin: business relationship, legal aspects, training and occupational health and safety and decent work • Supply of firewood and logs for the process: legal aspects and occupational health and safety • Supply of biomass: Self-declaration with topics related to decent work and human rights <p>The volume of visits made was influenced by prioritizing the dedication of efforts in system migration.</p> <p>In 2019, the total was 16 visits to chip suppliers and 13 to resin suppliers, respecting the minimum quantity required by FSC® certification. Gum-resin suppliers made guided visits to the Resin RS unit, reflecting a better understanding of the production processes and the importance of delivering quality gum-resin.</p>		% of FSC® and forestry product purchases over total purchases	39%	39%	44%
		IDF Result	92.07	93.31	91.30
		Predominant IDF evaluation criteria: legal compliance, quality and meeting specifications, supply capacity, innovation and improvement, environmental aspects and commercial relationship.			

Critical use and consumption materials and external services			2017	2018	2019
Composition	External products and services with a direct impact on the Company's production processes	Nº. of suppliers (mostly industrial machinery and equipment components)	1,557	1,589	1,764
Interface	Commercial issues are evaluated by our negotiators and the user of the services is a key figure in defining the contract, evaluating technical aspects and suggested brands.	% of suppliers of materials for use and consumption and critical external services evaluated	9.69%	8.30%	4.64%
Predominant origin of those evaluated	SP 44% SC 18% PR 18% RS 10% MG 6% EXTERIOR 4%	Total investment in purchases of materials for use and consumption and critical external services (R\$ million)	79	95	125
The qualification of this group consists of the verification of legal compliance by suppliers followed by the analysis and development script for approval of the indicated brands.		% of investment in purchases of materials for use and consumption and critical external services over total purchases	12%	13%	15%
		IDF Result	87.96	92.79	93.01
		Predominant IDF evaluation criteria: Return of merchandise, legal compliance, analysis of the requesting area in relation to quality, technical capacity, innovation, environmental aspects of the service provider and analysis of the supply area regarding the established commercial relationship.			



Clients

Client relations

(103-1 e 103-2) The way we are is simple, agile, transparent and we perceive a clear challenge: Understanding through service. We place ourselves next to the client, viewing the same horizon. Thus, by linking to our knowledge and experience, we offer innovative, differentiated and personalized solutions designed to reduce costs and assure performance excellence.

This movement is all about research, development, processes innovation, products, management and business. Our teams act as facilitators, monitoring the entire process — from the relationship and understanding of the customer's universe through to development of our products and the technical assistance activities.

That is why our relationships go beyond just the act of supplying. This manner of doing business is what fuels the way we generate and share value. We share best practices, train client teams for free and, thus, build solid and prosperous relationships. This is our essence, what inspires and engages us, and what moves things forward.

Throughout 2019, with closer coordination between the Marketing and Sales teams, we promoted initiatives together with our clients to raise their perceived value of our brand. Combining our mission with client focus, we developed the Value Program. Through this action we help our Paper business clients implement internal improvements, indicating and monitoring the application of lean manufacturing concepts. In 2019, two clients participated in the Program, with these main results:

- Setup of machines with a reduction of **30%** in image carrier pasting time on printers
- Reduction in raw materials waste (glue, paint, PVC film and paper scraps), of about **15%**
- **8%** productivity gains;
- Better definition of products and their real profitability
- Reduction of **36%** in customer complaints

Also, in 2019, we launched the CaiCha Program inspired in our mission to build value relationships. Through this Program, we are dedicated to understanding the reality of our carton segment clients and their processes, suggesting improvements and solutions that can help them capture results, such as the expansion of the production of boxes, waste reduction and better financial health.

(102-43 e 102-44) The perception of the value of the Company's offer to our customers is measured annually, using a scale of 1 to 5 as the parameter. The closer to 5, the better the perception.



Value Program,
see at:
<https://youtu.be/MLaCRITfRE>



CaiCha Program,
see at:
<https://youtu.be/n4H16DIM8rl>

Business Paper

(102-6) Main customers: Food segment, light and heavy bags, bags, among others.

Market	Offer value perception			
	Evaluated item	2017	2018	2019
Internal: Amazonas, Bahia, Ceará, Distrito Federal, Espírito Santo, Goiás, Minas Gerais, Paraíba, Pernambuco, Paraná, Rio de Janeiro, Rio Grande do Norte, Rondônia, Rio Grande do Sul, Santa Catarina and São Paulo.	Average satisfaction	4.68	4.67	4.71
	Product quality	4.80	4.80	4.88
	Quality of Service	4.78	4.71	4.70
External: África do Sul, Alemanha, Arábia Saudita, Argentina, Bolívia, Chile, China, Cingapura, Colômbia, Estados Unidos, Israel, Itália, Kuwait, Paquistão, Paraguai, Peru, Portugal, Trindade e Tobago, Turquia and Uruguai.	Average satisfaction	4.30	4.40	4.46
	Product quality	4.44	4.51	4.57
	Quality of Service	4.31	4.46	4.44

Resin Business

(102-6) Main customers

Pitch: producers of printing inks, glues for paper and coating and hair removal wax.

Turpentine: Producers of solvents in paints and varnishes, dyes, waxes, camphor pine oil, soaps, greases, insecticides, sealants and perfume fixers.

Market	Offer value perception			
	Evaluated item	2017	2018	2019
Internal: Bahia, Rio Grande do Sul and Santa Catarina.	Average satisfaction	4.22	4.36	4.48
	Product quality	4.33	4.60	4.50
	Quality of Service	4.39	4.45	4.46
External: Portugal, China, Japan, India, Canada, Netherlands, Turkey, Spain, Mexico, Peru, Germany, France, United States, South Africa, Ireland, Chile and Hong Kong.	Average satisfaction	4.21	3.98	3.95
	Product quality	4.50	4.20	4.14
		4.25	3.86	3.89



Leandra Aparecida Gasparin - Packaging SP - Indaiatuba

Packaging Business

Somos um dos principais produtores nacionais de embalagens de papelão ondulado.

(102-6) Principais clientes são os segmentos de cartonagem, frigoríficos, setor alimentício, químicos, plásticos e bebidas.

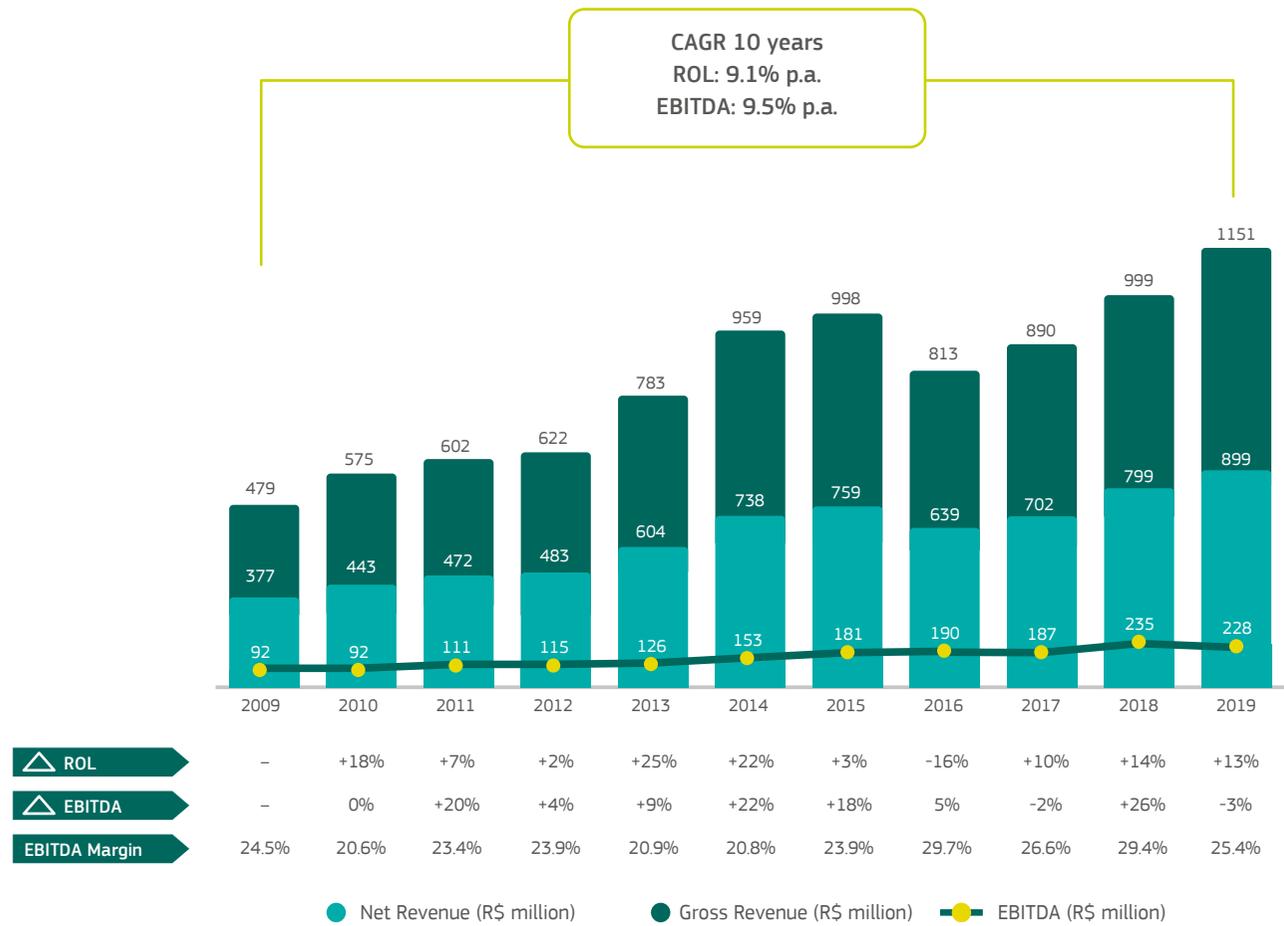
Market	Unit	Evaluated item	Offer value perception		
			2017	2018	2019
Acre, Alagoas, Amapá, Bahia, Ceará, Distrito Federal, Espírito Santo, Goiás, Maranhão, Minas Gerais, Mato Grosso do Sul, Mato Grosso, Pará, Paraíba, Pernambuco, Paraná, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina and São Paulo	Packaging SC - Campina da Alegria	Average satisfaction	4.42	4.61	4.51
		Product quality	4.57	4.63	4.69
		Quality of Service	4.46	4.68	4.48
Acre, Alagoas, Amapá, Bahia, Ceará, Distrito Federal, Espírito Santo, Goiás, Maranhão, Minas Gerais, Mato Grosso do Sul, Mato Grosso, Pará, Paraíba, Pernambuco, Paraná, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina and São Paulo	Packaging SP - Indaiatuba	Average satisfaction	4.54	4.48	4.69
		Product quality	4.75	4.84	4.88
		Quality of Service	4.55	4.48	4.69

Results



Focus on results

Our Net Revenue grew at an average of 9.1% per year over the last 10 years, as has Adjusted EBITDA, whose average annual growth was 9.5%. In this period, this indicator went from R\$ 92 million in 2009, with a margin of 24.5%, to R\$ 228 million, in 2019, with a margin of 25.4%.



Balance Sheets

(Consolidated on December 31, in R\$ '000)

	12.31.2019	12.31.2018
		Restated
ASSETS	1,579,546	1,526,664
Current assets	503,864	386,646
Non-current assets	1,075,682	1,140,018
LIABILITIES AND NET EQUITY	1,579,546	1,526,664
Current assets	430,506	453,941
Non-current assets	812,549	765,329
Net equity	336,491	307,394

(102-7) Consolidated income statements for the years ended December 31 (R\$ '000)

	12.31.2019	12.31.2018
		Restated
Net sales revenue	898,779	799,159
Change in fair value of the biological assets	(7,970)	1,244
Cost of goods sold	(638,349)	(533,757)
Gross Profit	268,400	266,646
Operating Revenue (Expenses)	(63,278)	136,206
Income before financial result and taxes	205,122	130,440
Net financial revenue (expenses)	(234,647)	(92,392)
Operating profit before tax effects	(29,525)	38,048
Net Income from Continued Operations	26,456	27,211
Net income from discontinued operations	(106,048)	(27,434)
Net profit for the financial year	(79,592)	(223)

(103-2, 103-3) The full annual financial statements are available on our **Investor Relations** website, covering the Explanatory Notes, the Independent Auditor's report and the Management Report. The preparation of these documents respects both the Brazilian Corporations Law and its amendments and the rules set forth by the Brazilian Securities and Exchange Commission (CVM).

Results were released on March 16, 2020, in major newspapers and on March 13, 2020 on the CVM and B3 websites, at which time we disclosed our corporate activities.

Main economic-financial indicators

According to the Brazilian Corrugated Cardboard Association (ABPO), shipping as measured in tons of corrugated board in 2018 posted 1.6% growth over 2018.

The improved domestic market sales for the Packaging Paper and Corrugated Cartonboard Segments contributed to the 12.5% growth in Revenue in 2019, compared to the previous year.

Main Indicators - Consolidated	2019	2018	Change 2019/2018
Economic and Financial (R\$ '000)¹			
Net Operating Revenue	898,779	799,159	12.5%
Domestic Market	730,046	629,048	16.1%
Foreign market	168,733	170,111	-0.8%
Gross Profit (inclusive*)	268,400	266,646	0.7%
<i>Change in the Fair Value of the Biological Assets</i>	(7,970)	1,244	540.7%
Gross Margin	29.9%	33.4%	-3.5 p.p.
Operating Income before Taxes and Participations	(29,525)	38,048	-177.6%
Operating Margin	-3.3%	4.8%	-8.1 pp.
Net Result	26,456	27,211	-2.8%
Net Margin	2.9%	3.4%	-0.5 p.p.
Adjusted EBITDA continued operation ²	228,244	234,957	-2.9%
Adjusted EBITDA margin continued operation	25.4%	29.4%	-4.0 p.p.
Net Debt - R\$ million	728.3	692.7	5.1%
Net Debt/Adjusted EBITDA	3.40	3.12	9.0%
Proforma Net Debt / Adjusted EBITDA (x) ³	2.28	-	-
Operational Data			
Corrugated Cardboard Packaging (CC)			
Production/Sales	165,078	182,310	-9.5%
Packaging Paper			
Production	292,628	279,110	4.8%
Sales	121,351	95,959	26.5%
RS Forest and Resins			
Production	13,680	13,472	1.5%
Sales	13,503	13,155	2.6%

¹ Excluding discontinued operation

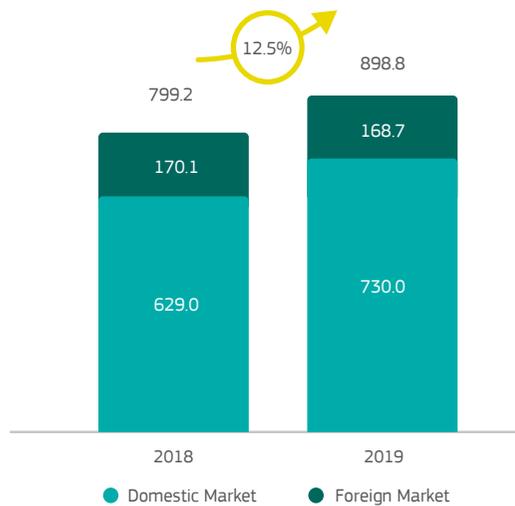
² EBITDA (earnings before interest, taxes, depreciation, amortization and depletion)

³ Excluding net debt transactions carried out in the year whose amounts will be received in the coming months: i) PIS and COFINS credit (ICMS at the Base) in the amount of R\$ 143,157 thousand; ii) Sale of Rural Real Estate in the amount of R\$ 24,975 thousand; iii) Demobilization of real estate of Vila Maria - SP in the amount of R\$ 40,200 thousand.

Net Operating Revenue from Continuing Operations

Our Net Revenue reached R\$ 898.8 million in 2019, an increase of 12.5% in relation to 2018, reflecting the better performance of revenue in the domestic market. This continues to be our main market, accounting for 81% of sales at the end of the year.

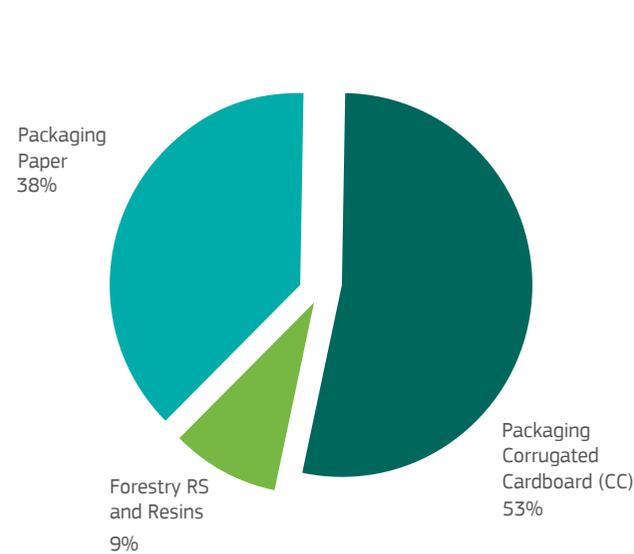
Net Revenue (R\$ '000)



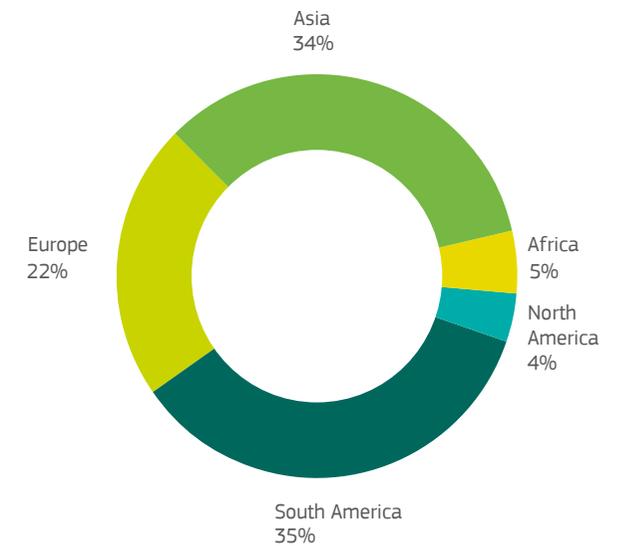
Share per market

	2018	2019
Domestic Market	79 %	81 %
Foreign Market	21 %	19 %

Net Revenue per Segment (2019)



Net Revenue – Foreign Market (2019)



Assessment of the fair value of the Biological Assets (Forests)

The increase in wood and resin prices influenced the positive change in the fair value of the biological assets in the year.

Effects of the variations in the fair value of the biological assets

R\$ '000	2019	2018
Change in fair value of the biological assets	7,970	1,244
Fair value of the biological assets	(12,252)	15,314

As of 2010, as determined in CPC 29, we have measured the fair value of the biological assets (forests) on a regular basis. The change in this value and its depletion is recognized in the Cost of Goods Sold (COGS) line item. This accounting determination makes it possible to more precisely evaluate the market value of our forests, thus more appropriately presenting them in our Financial Statements.

Net Income from Ongoing Transactions

It was impacted by the increase in revenue and better cost and expense results, in addition to being negatively impacted by the realization of the hedge accounting of operations settled over the period; and positively impacted by the recognition of PIS and COFINS credits due to a court ruling the Company's favor, by the sale of forest assets and lands of the Company in the state of Rio Grande do Sul and, also, by the recognition deferred income tax and social contribution on tax losses for the period and accumulated in previous periods. Our net result from 2019's ongoing operations reached R\$ 26,456 thousand in profit, when in 2018 it was R\$ 27,211 thousand in profit.

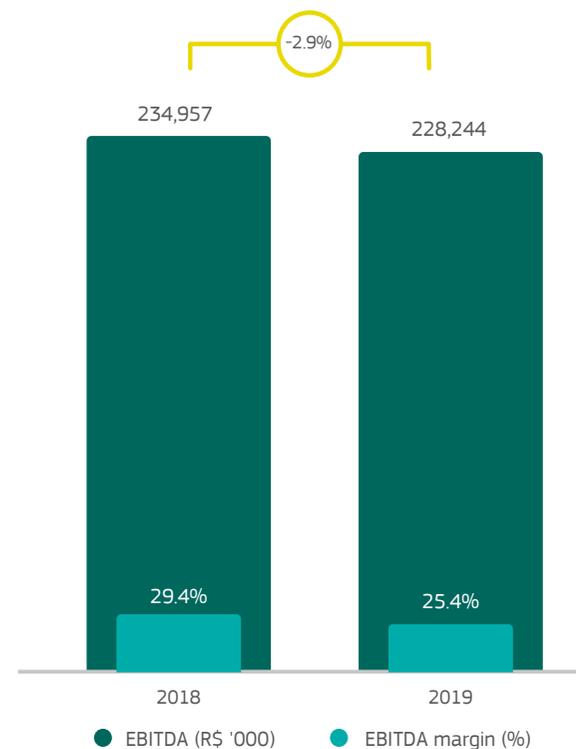
Operating Cash Generation (Adjusted EBITDA)

Consolidated (R\$ thousand)	2019	2018	Change 2019/2018
Operating Income before Taxes and Participations	(29,525)	38,048	-177.6%
Exhaustion	56,789	65,431	-13.2%
Depreciation and Amortization	60,520	46,624	29.8%
Financial Income	234,647	92,392	154%
EBITDA from continued operations	322,431	242,495	33%
<i>EBITDA margin of continued operation</i>	<i>35.9%</i>	<i>30.3%</i>	<i>5.6p.p.</i>
<i>Adjustments according to CVM Inst 527/12</i>			
Change in fair value of the biological assets ⁽¹⁾	(7,970)	(1,244)	540.7%
Non-Recurring Events ⁽²⁾	(86,217)	(6,294)	1,269.8%
Adjusted EBITDA Continued operation	228,244	234,957	-2.9%
<i>Adjusted EBITDA margin continued operation</i>	<i>25.4%</i>	<i>29.4%</i>	<i>-4.0p.p.</i>
Adjusted EBITDA Discontinued operation	(13,760)	(12,745)	8.0%
Adjusted EBITDA	214,484	222,212	-3.5%

¹ Variation in the fair value of the biological assets, as it does not mean a reduction in cash in the period.

² Non-Recurring Events: The amount of (R\$ 86,217 thousand) (2019) refers to the non-recurring provision related to the PIS and COFINS credit in the amount of (R\$ 74,124 thousand), provision for non-recurring contingencies in the amount of R\$ 4,000 thousand, and result of land sales in the amount of (R\$ 16,093 thousand).

Year-to-date, Adjusted EBITDA reached R\$ 228.2 million, with a margin of 25.4%, 2.9% lower than in 2018. The decrease of 4.0 percentage points in the margin mainly was due to the recognition of the sale of forests motivated by the re-representation of the financial statements in 2018. The EBITDA in 2019. For its part, had a positive impact due to: i) exclusion of negative EBITDA from discontinued operations; ii) better revenue and cost performance in the period, and iii) EBITDA generated by the sale of the Company's forests in the State of Rio Grande do Sul.



Financial Income

The financial result for 2019 was impacted by several financial restructuring measures, such as the write-off of hedge accounting and prepayment expenses of operations. Our financial result in 2019 was a negative R\$ 234,647 thousand, which represents an increase of 154.0% compared to 2018.

In the same year, the exchange variation negatively impacted our results by R\$ 159,471 thousand, mainly explained by the accounting recognition of the hedge accounting in the result in the amount of R\$ 161,757 thousand in 2019, due to the settlement of financial transactions denominated in dollars, for which the Company adopted this recognition procedure.

The financial result, excluding the effects of exchange variation, was negative by R\$ 75,176 thousand, and produced a positive impact of R\$ 61,875 thousand, referring to updating of the PIS and COFINS credits; and represented a negative impact of R\$ 42,151 thousand referring to expense prepayments for certain financial transactions that occurred in the year.

R\$ '000	2019	2018	Change 2019/2018
Financial Revenues	77,285	25,482	203.30%
Financial Expenses	(311,932)	(117,874)	164.6%
Financial Result	(234,647)	(92,392)	154%
Net exchange variation	(159,471)	3,676	4,238.2%
Financial Result without exchange variation	(75,176)	(88,716)	-15.3%

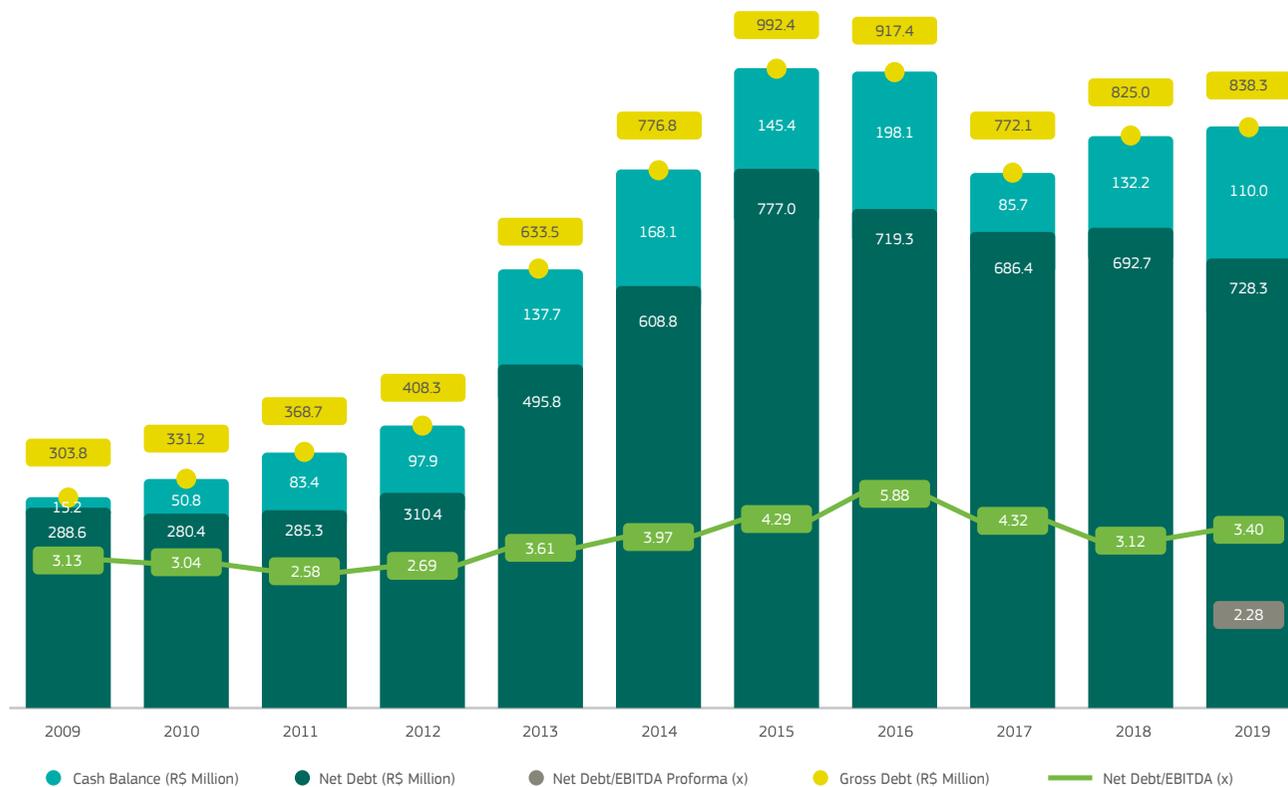
Net Debt

Our consolidated gross debt totaled R\$ 838.3 million in 2019, with 68% maturing in the long-term. The variation in this indicator was influenced by funding and settlements during the year, with emphasis on the raising of the 3rd public issue of green debentures in the amount of R\$ 505 million. The consolidated cash balance totaled R\$ 110.0 million, on December 31, 2019, compared to R\$ 132.2 million in the same period of 2018 (including the balance of linked bank accounts in both years). Settlement of financial operations in greater volume than funding and execution of investments in view of cash generation and sales of assets were the main factors that impacted cash.

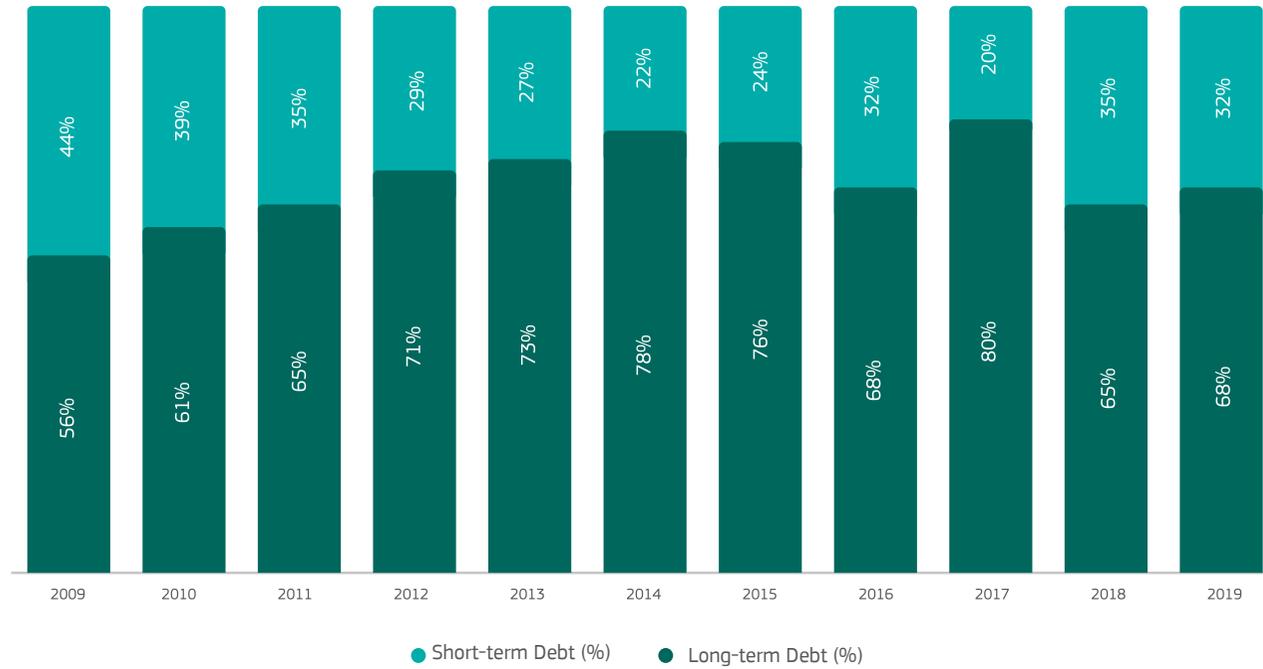
Thus, our consolidated net debt in 2019 totaled R\$ 728.3 million, compared to R\$ 692.7 million in 2018. The net debt/EBITDA ratio was 3.40 times at the end of 2019 versus 3.12 times at the end of 2018. The change was due to the reduction in Adjusted EBITDA compared to the increase in net debt. EBITDA in 2018 was positively impacted by the recognition of forest sales motivated by the re-presentation of the financial statements for that year.

Considering exclusion from the net debt the amounts that will be received in the coming months, referring to: i) PIS and COFINS credits in the amount of R\$ 143.1 million; ii) Sale of land and forests in the amount receivable of R\$ 25.0 million; and iii) Sale of the SP - Vila Maria property, with a balance receivable in the amount of R\$ 40.2 million, would result in a Proforma Net Debt of R\$ 520.0 million and considering the EBITDA of the Continued Operation of R\$ 228.2 million, the pro forma leverage would be 2.28 times.

Debt and Net Debt/EBITDA



Gross Debt Profile



(201-1) Direct economic value generated and distributed

We present the values regarding the wealth we generate and its distribution among the parties that contributed to the generation of this wealth, such as employees, government, financiers and shareholders, as follows:

	Consolidated			
	12.31.2019	%	12.31.2018	%
			Restated	
1. Revenue	1,438,658		1,245,579	
2. Inputs acquired from third parties	745,246		654,855	
3. Gross added value (1-2)	693,412		590,724	
4. Depreciation, amortization and exhaustion	122,184		117,677	
5. Biological asset fair value variation	(7,970)		(1,244)	
6. Net added value produced by the entity (3-4-5)	579,198		474,291	
7. Added value received through transfers	83,964		26,245	
8. Total added value to distribute (6+7)	663,162		500,536	
9. Distribution of Added Value				
9.1) Personnel	191,085	28.81%	177,233	35.41%
9.2) Taxes, fees and contributions	166,716	25.14%	158,475	31.66%
9.3) Remuneration of third-party capital	350,511	52.85%	142,741	28.52%
9.4) Remuneration of own capital	(45,150)	-6.81%	22,087	4.41%

Note: information on social investments is presented in the chapter "Our commitment to the development of the surrounding communities"



About the report

About the report

We have now reached our 14th Sustainability Report, presenting the way we do business, results, challenges and commitments. **(102-54)** This report was prepared in accordance with the GRI Standards: comprehensive option.

(102-40, 102-42, 102-45) The reported data correspond to the period between January 1 and December 31, 2019 of all units of Irani Papel e Embalagens S.A. and the Habitasul Florestal S.A. / HGE - Geração de Energia Sustentável S.A. and Irani Geração de Energia Sustentável Ltda and Iraflor Comércio de Madeiras Ltda. subsidiaries, transparently showing how we transform our sustainability strategy into practices that bolster our mission of building value relationships with our employees, surrounding communities, clients, suppliers, shareholders, governments and society.

(102-56) The economic and financial information was audited by KPMG Auditores Independentes and the non-financial issues are verified by BSD Consulting, in accordance with the scope and observations indicated in the Assurance Statement presented below.



Definition of the topics

(102-21, 102-42, 102-43, 102-44, 102-46, 102-47)

The reported issues were identified in the last materiality cycle, held in 2018 by the Sustainability team, inspired by the process conducted by BSD Consulting in 2014 and the guidelines of the Global Reporting Initiative (GRI) and Fundação Dom Cabral (FDC). This work was divided into five stages:

1. Analysis of internal sources, such as corporate publications, reports, studies or internal research and face-to-face interviews with the members of the Executive Board.
2. Consultation with external sources: publications, reports, studies, research and materiality matrixes of companies in the sector. Additionally, it included 13 new consultations with external stakeholders based on our map, where the main stakeholders in our business are defined according to an analysis of the sustainability area and by the executive board. This results in the identification of audiences with whom we have a priority relationship, and which could cause or can deal with the impacts of our business. The survey took into account the diversity of the groups and covered all our business units.
3. Thirty-eight topics emerged from the internal and external consultations, arranged in a matrix from which it was possible to extract those considered most important to the internal and external stakeholders.
4. Finally, 17 issues were prioritized, which were internally evaluated and assimilated, pared to the final list of 11 topics and, thereafter, validated by the Sustainability Committee, on which all members of the Executive Board sit.

(102-47) Material topic	(103-1) What makes the topic material?	GRI	Impacted links*					
			FORESTRY	SUPPLIERS	BUSINESS UNITS	CLIENTS	SOCIETY	COMMUNITY
Environmental performance	Our commitment involves the generation of positive impacts through the efficiency of our processes, with a focus on resource reuse and environmental preservation.	102-11, 301-1, 301-2, 301-3, 302-1, 302-2, 302-3, 302-4, 302-5, 303-1, 303-2, 303-3, 303-4, 303-5, 304-1, 304-2, 304-3, 304-4, 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7, 306-2, 306-3, 306-4	●	●	●		●	●
People development	Challenges people and creates the necessary conditions for them to realize their full potential, developing professionally and personally.	102-8, 102-36, 102-37, 401-1, 401-2, 401-3, 404-1, 404-2, 404-3, 405-1, 405-2	●	●	●	●		●
Local development	Promotes the development of the communities near our units.	102-12, 102-13, 102-41, 413-1, 413-2	●	●	●			●
Excellence, Focus on Results, Innovation and Institutional Image	Ensuring excellence, strengthening the culture of innovation, learning and continuous improvement in everything we do. We are not only an economic agent; we contribute to the prosperity of our stakeholders and to the promotion of social development. The recognition of this effort comes about through worthy and well-deserved profits.	102-15, 102-16, 102-17, 201-1, 201-2, 201-3, 201-4	●	●	●	●		
Governance	We are guided by transparency, ethics and integrity to conduct our governance model and all our relationships.	102-18, 102-19, 102-20, 102-21, 102-22, 102-23, 102-24, 102-25, 102-26, 102-27, 102-28, 102-29, 102-30, 102-31, 102-32, 102-33, 102-34, 102-35, 102-37, 102-38, 102-39	●	●	●	●	●	
Value Relationships	Building value relationships is part of our strategic intention. Development and strengthening successful and meaningful partnerships with all our stakeholders.	102-6, 102-9, 102-10, 102-11, 204-1, 308-1, 308-2, 414-1, 414-2, 416-1, 416-2	●	●	●	●	●	●
Health and safety	Our culture is bolstered by the commitment of both our managers and employees to watch out for each other's health and safety.	403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10						●

Note: (102-46) The interviews carried out during the process of reviewing material topics indicate Irani as the cause of material topics, leading to positive impacts on the value chain links. The more intense the color in the links of the chain, the greater the degree of impact perception. As they are complementary, the Excellence, Focus on Results, Innovation and Institutional Image topics were grouped together.

● Economic impacts ● Environmental impacts ● Social impacts

(102-55) Summary of GRI Standards “in accordance” – Comprehensive

General Disclosures

Organization Profile

GRI Standard	Disclosure	Page	Answer / Omission
102-1	Name of the organization	13	Irani Papel e Embalagem S.A.
102-2	Activities, brands, products and services	8, 9, 13, 16, 23, 27, 30	Kraft papers, sheets and corrugated cardboard boxes and resins.
102-3	Location of headquarters	8	Office RS - Porto Alegre Rua General João Manoel, 157 9th floor, Porto Alegre (RS) CEP 90010-030
102-4	Location of operations		Exclusively Brazilian operations with offices in Joaçaba (SC) and Porto Alegre (RS) and industrial units in Vargem Bonita (SC), Indaiatuba (SP), Santa Luzia (MG) and Balneário Pinhal (RS)
102-5	Ownership and legal form		Publicly held corporation since 1977
102-6	Markets served	10, 119, 120	Domestic and international.
102-7	Scale of the organization	21, 23, 27, 30, 68, 73, 123	
102-8	Information on employees and other workers	68, 71	102-8.d is not applicable. The Company is evaluating the disclosure of employee information by gender and region in the next reporting cycles.
102-9	Supply chain	108	Critical suppliers comprise the five purchasing groups presented in the Report. The details are treated separately, according to the description of each group on the pages.
102-10	Significant changes to the organization and its supply chain	32	Demobilization of the Packaging Unit SP - Vila Maria, in September 2019.
102-11	Precautionary principle or approach	76, 77	
102-12	External initiatives	87, 106	
102-13	Participation in associations	38, 103	

Strategy

GRI Standard	Disclosure	Page	Answer / Omission
102-14	Statement from the senior decision-maker	3	
102-15	Key impacts, risks and opportunities	18, 43, 44	

Ethics and Integrity

GRI Standard	Disclosure	Page	Answer / Omission
102-16	Values, principles, norms and standards of behavior	34	
102-17	Mechanisms for advice and concerns about ethics	41	

Governance

GRI Standard	Disclosure	Page	Answer / Omission
102-18	Governance structure	36, 37	
102-19	Delegating authority	35, 37	
102-20	Executive responsibility for economic, environmental and social topics	35, 37	
102-21	Consulting stakeholders on economic, environmental and social topics	38, 134	<p>We do not have a formal consultation process between stakeholders and the highest governance body.</p> <p>The Executive Board is the only body that exercises an executive function. The Board of Directors has representatives of shareholders and of Irani's controlling family group. Social minorities do not have representatives on the highest governance body.</p>
102-22	Composition of the highest governance body and its committees	36, 37	<p>Age group 80% men over 60 20% men under 60</p> <p>Permanence on the Board: 20% up to 5 years</p>

102-23	Chair of the highest governance body	36, 38	
102-24	Nominating and selecting the highest governance body	36	The Company does not have a policy for the appointment and selection of members for the Board of Directors
102-25	Conflicts of interest	35, 36, 38, 41	Our definition of conflict of interest is provided in the Integrity Program glossary, available to all stakeholders on the Company's website and the types of conflict of interest are listed in the guidelines of each policy: Relationship with the Public Sector, Associations and Unions - item 1.2 Relationship with Suppliers - items 2.3 and 2.7 Client Relationship - item 3.2 Donations and Sponsorships - item 4.3, 4.5, 4.6 Hospitality, Gifts and Presents - item 5.2, 5.3 Accounting Records - item 6.2, 6.3 Mergers, Acquisitions and Corporate Restructuring - item 7.2
102-26	Role of the highest governance body in setting purpose, values and strategy	34	
102-27	Collective knowledge of highest governance body	38	
102-28	Evaluating the highest governance body's performance		Performance evaluation practices are applied up to the hierarchical level of the Executive Board. We do not have processes for evaluating the Board of Directors and we do not have a forecast for when this type of assessment will begin.
102-29	Identifying and managing economic, environmental and social impacts.	37, 44	The Executive Board is responsible for monitoring and validating the discussions and definitions related to risk management.
102-30	102-30 Effectiveness of the risk management processes	37, 44	The Executive Board is the body responsible for assessing the effectiveness of risk management.
102-31	Review of economic, environmental and social topics	37	The Sustainability Committee is responsible for reviewing economic and socio-environmental topics related to the business.
102-32	Role of the highest governance body in sustainability reporting		The Sustainability Committee is responsible for approving the content of this Report.
102-33	Communicating critical issues.	38	
102-34	Nature and total number of critical issues		The reporting of critical concerns to the Board of Directors is inherent to the function of the Executive Board and held, when necessary, at the monthly meeting.

102-35	Remuneration policies	39	
102-36	Process for determining remuneration	39	In 2019, the consultants contracted for the employee compensation process did not carry out work focused on the Board of Directors
102-37	Involvement engagement in remuneration		We did not conduct consultations about including stakeholders regarding the compensation strategy. We use external consultants to conduct the job evaluation process and market salary research, which generate subsidies for the Executive Board's decision-making regarding the Company's remuneration strategy.
102-38	Annual total compensation ratio	73	
102-39	Percentage increase in the proportion of total annual remuneration	73	Percentage information is not yet available. The Company is evaluating the possibility of including this information in the next reporting cycles.

Stakeholder involvement

GRI Standard	Disclosure	Page	Answer / Omission
102-40	List of stakeholder groups	7, 133	
102-41	Collective bargaining agreements	69	
102-42	Identification and selection of stakeholders	133, 134	
102-43	Approach to stakeholder involvement	66, 76, 77, 103, 118, 134	The approach of this indicator is intrinsic throughout the description of how we manage each material topic.
102-44	Main topics and concerns raised	66, 118, 134	Our leaders are responsible for managing the main topics and concerns of their stakeholders.

Reporting practices

GRI Standard	Disclosure	Page	Answer / Omission
102-45	Entities included in the consolidated financial statements	133	
102-46	Defining report content and topic limits	134, 135	
102-47	List of material topics	134, 135	
102-48	Restatement of information		Indicated in an explanatory note, when applicable.
102-49	Report changes		None
102-50	Reporting period		January 1, 2019 to December 31, 2019.
102-51	Date of most recent report		April 2019
102-52	Reporting cycle		Annual
102-53	Contact point for questions regarding the report	155	http://www.irani.com.br/ideias-em-acao/contato/
102-54	Report claims in accordance with GRI standards	133	
102-55	GRI Content Index	136	
102-56	External assurance	149	

Topics

Economic performance

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material Topic and its boundary	135	
	103-2 Management approach and its components	124	
	103-3 Evaluation of the Management approach	124	
GRI 201: Performance economic 2016	201-2 Financial implications and other risks and opportunities due to climate change		A study on the impact of climate change on our businesses is planned for the next strategic planning review.
	201- Defined benefit plan obligations and other retirement plans		Irani does not have social security/pension plans for employees. None

Purchasing practices

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	135	The Company is also studying the improvement of practices to meet this indicator.
	103-2 Management approach and its components	106, 108, 109, 114	
	103-3 Evaluation of the Management approach	107, 109	
GRI 204: 2016 Purchasing practices	204-1 Proportion of spending on local suppliers	108	

Materials

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	86, 135	
	103-2 Management approach and its components	84, 85	
	103-3 Evaluation of the management approach	84	
GRI 301: 2016 Materials	301-1 - Materials used by weight or volume	84, 85	
	301-2 Recycled input materials used	84, 85	
	301-3 Reclaimed products and their packaging materials	84, 85	

Energy

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	81, 135	
	103-2 Management approach and its components	81	
	103-3 Evaluation of the management approach	81	

GRI 302: Energy 2016	302-1 Energy consumption within the organization	81, 82, 83, 84	We do not sell electricity, heating, cooling or steam.
	302-2 Energy consumption outside the organization	82, 83	
	302-3 Energy intensity	81, 82	
	302-4 Reduction of energy consumption	81	The reductions from conservation and efficiency initiatives are reflected in the energy consumption indicator. However, there is no real assessment or estimate to check the reduction generated by the improvement actions.
	302-5 Reduction in energy requirements of products and services.		Not applicable to our business.

Water and Effluents

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	77, 135	
	103-2 Management approach and its components	77, 79	
	103-3 Evaluation of the management approach	80	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	77	
	303-2 Management of water discharge related impacts	77, 79	
	303-3 Water withdrawal	77, 78, 79	
	303-4 Water discharge	77, 79, 80	In 2019, we registered 10 incidents in which liquid effluents were discharged outside the limits defined by the Company.
	303-5 Water consumption	78, 79	

Biodiversity

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	14, 93, 135	
	103-2 Management approach and its components	15, 103	
	103-3 Evaluation of the management approach	15, 94, 98	
GRI 304: Biodiversity	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	97, 98	
	304-2 Significant impacts of activities, products and services on biodiversity	17, 18, 97, 98	
	304-3 Habitats protected or restored	93, 96, 97, 98	
	304-4 Red List species and national conservation list species with habitats in areas affected by operations	98	

Emissions

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	88, 135	
	103-2 Management approach and its components	88	
	103-3 Evaluation of the management approach	88	
GRI 305: 2016 Emissions	305-1 Direct GHG emissions (Scope 1)	88, 89, 91	
	305-2 Indirect GHG emissions (Scope 2)	88, 89, 90	
	305-3 Other indirect GHG emissions (scope 3)	88, 89, 90, 91	
	305-4 Intensity of GHG emissions	90	
	305-5 Reduction of GHG emissions	91	
	305-6 Emissions of substances that destroy the ozone layer (SDO)	91	We have not adopted the formula indicated by the GRI because we neither produce, import nor export ozone layer depleting substances. The data presented refer to emissions from the use of air-conditioning refrigeration gas.
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX) and other significant air emissions	91, 92	

Effluents and waste

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	135	
	103-2 Management approach and its components	79	
	103-3 Evaluation of the management approach	80	
GRI 306: 2016 Effluents and Waste	306-1 Total water discharge, by quality and destination		This information is reported in topic 303: Water and effluents 2018.
	306-2 Waste by type and disposal method	85, 86, 87	
	306-3 Significant spills		The spills recorded, according to severity, frequency and scope, were not classified as significant. The classifications are based on the procedure of environmental aspects and impacts, so that the aspects crosschecked for severity, frequency and coverage is greater than or equal to 9 (according to the classification table) will be considered significant, or when there is a complaint from interested parties.
	306-4 Transport of hazardous waste	86, 87	
	306-5 Water bodies affected by water discharges and/or runoff		This information is reported in topic 303: Water and effluents 2018.

Supplier environmental assessment

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	106, 135	
	103-2 Management approach and its components	106, 108, 109, 1114	
	103-3 Evaluation of the management approach	107, 109	
GRI 308: Evaluation Environmental Supplier 2016	308-1 New suppliers were screened using environmental criteria	107	The monitoring conducted does not include the percentage of total new suppliers. We are assessing the possibility of presenting this information in the next reporting cycles.
	308-2 Negative environmental impacts in the supply chain and actions taken		The Company is assessing the possibility of making the information available in the next reports.

Employment

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	135	
	103-2 Management approach and its components	51, 53	
	103-3 Evaluation of the management approach	51, 53	
GRI 401: 2016 Employment	401-1 New employee hires and employee turnover	69, 70, 71, 72	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	73	Important operating units are all Irani's own industrial units and offices. We do not have a retirement fund. In case of disability, life insurance analyzes workplace accidents and may indemnify the employee if the complete documentation is properly presented and approved.
	401-3 Parental Leave		The Company is studying the possibility of making the information available in the next reporting cycles.

Occupational Health and Safety

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	54, 135	
	103-2 Management approach and its components	54	
	103-3 Evaluation of the management approach	54, 58, 59	
GRI 403: 2018 Health and Safety Occupational Medicine	403-1 Occupational health and safety management system	54, 59	
	403-2 Hazard identification, risk assessment and incident investigation	54, 55, 56, 58, 59	Our procedures do not include the right to refuse to carry out work activities. We are assessing the possibility of updating our procedures as of 2020.
	403-3 Occupational Health Services	54, 55, 60	
	403-4 Worker participation, consultation and communication on occupational health and safety	57, 59	
	403-5 Training of workers in occupational health and safety	60	
	403-6 Worker health promotion	55, 56	

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

The Company is evaluating the possibility of improving management practices and reporting this indicator in the next reporting cycle.

403-8 Workers covered by an occupational health and safety management system 54, 56, 59

403-9 Work-related injuries 58

403-10 Work-related health problems

The Company is evaluating the possibility of improving management practices and reporting this indicator in the next reporting cycles.

Training and education

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	135	
	103-2 Management approach and its components	52	
	103-3 Evaluation of the management approach	64	
GRI 404: 2016 Training and Education	404-1 Average hours of training per year per employee	64	
	404-2 Programs for updating employee skills and transition assistance programs	68	We do not have end of career management programs.
	404-3 Percentage of employees receiving regular performance and career development reviews	67	

Diversity and equal opportunity

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	51, 135	
	103-2 Management approach and its components	53	
	103-3 Evaluation of the management approach	53	
GRI 404: 2016 Training and Education	405-1 Diversity of governance bodies and employees	68, 69, 70	The Board of Directors is composed of 5 men over the age of 50. Of these, 40% belong to the family group of the Company's founders and 60% by specialists without family connections.
	405-2 Ratio of basic salary and remuneration of women to men	73	

Local communities

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: Abordagem de Gestão 2016	103-1 Explanation of the material topic and its boundary	101, 135	
	103-2 Management approach and its components	101	
	103-3 Evaluation of the management approach	101, 103	
GRI 413: Comunidades Locais 2016	413-1 Operations with local community involvement, impact assessments and development programs	101	
	413-2 Operations with significant potential impacts or real negative impacts on local communities	103	

Supplier Social Assessment

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	135	
	103-2 Management approach and its components		Information on the actual and potential significant social impacts, as well as the percentage of suppliers evaluated is not available for reporting. The Company is assessing the disclosure as of the next reporting cycle.
	103-3 Evaluation of the management approach		
GRI 414: 2016 Supplier Social Assessment	414-1 New suppliers that were screened using social criteria	107	
	414-2 Negative social impacts on supply chain and actions taken	112, 115	Information on actual and potential significant social impacts, as well as the percentage of new suppliers assessed is not available for reporting.

Consumer Health and Safety

GRI Standard	Disclosure	Page	Answer / Omission
GRI 103: 2016 Management Approach	103-1 Explanation of the material topic and its boundary	118, 135	
	103-2 Management approach and its components	118	
	103-3 Evaluation of the management approach	118	
GRI 416: 2016 Consumer Health and Safety	416-1 Evaluation of the health and safety impacts of products and services.	27, 29, 76, 77	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services.		None.

(102-56) Statement of Assurance

BSD Consulting independently verified the process of preparing Irani's 2019 Sustainability Report, developed in accordance with the Global Reporting Initiative (GRI) Standards, in the comprehensive "agreement" option. The purpose of the process is to provide Irani Papel e Embalagem S.A.'s stakeholders with an independent opinion on: the quality of the report; the stakeholder engagement processes; the company's sustainability management and adherence to the AA1000 Accountability Principles 2018 and the criteria of AA1000 Assurance Standard 2008 with the 2019 Addendum.

Independence and competence

We work independently and ensure that no BSD member has consulting contracts or other business ties with Irani. BSD Consulting is a company that is specialized in sustainability. The work was conducted by a team of experienced professionals trained in external verification processes.

Responsibilities of Irani and BSD

The preparation of the Sustainability Report, as well as the definition of its content, is Irani's responsibility. The verification of the report was the subject of BSD's work.

Scope and Limitations

The scope of our work includes information from the full version of Irani's 2019 Sustainability Report, in the period covered by the report from January 1, 2019 to December 31, 2019. The independent verification process was conducted in accordance with AA1000AS 2008 (AA1000 Assurance Standard 2008) with Addendum 2019 under the Type 1 verification condition, providing a moderate level of Assurance. The objectives of the Statement of Assurance are to inform interested parties of BSD's findings on the process of assessing the adherence of Irani's accountability to the three principles: Inclusion, Materiality, Response Capacity and Impact, in accordance with the AA1000AP 2018 (AA1000 Accountability Principles 2018 with Addendum 2019). The verification of financial data was not the subject of BSD Consulting's work.

Methodology

Procedures developed during the work and the AA1000AS process verification approach include:

- Evaluation of the content of the 2019 Sustainability Report;
- Evaluation of the engagement and materiality process, focusing on compliance with the criteria contained in Standard 101 of the GRI Standards;
- Understanding the flow of processes for obtaining and generating information for the Sustainability Report;
- Research of public information about the sector and the company (press and websites);
- Interviews with key area managers regarding the relevance of information the reporting and management of sustainability;
- Interviews with company leaders and, where relevant, verification of the information about sustainability performance with the understanding of the company's management;
- Analysis of the evidence of the stakeholder consultation process and material peak management processes;
- Analysis of relevance information from the Sustainability Report from the point of view of external audiences;
- Based on sample testing, confirmation of information from the Sustainability Report with supporting documentation, management reports, internal controls and official correspondence.

Main Conclusions on Adherence to the AA1000AP 2018 Principles

1. Inclusion – people should be involved in the decisions that impact them

- In 2019, Irani continued the socio-environmental impact evaluation process of its units in Indaiatuba (SP) and Santa Luzia (MG).
- There was no evaluation involving the operation of Vila Maria (SP) due to the closure of the unit. A total of 27 representatives were involved in Indaiatuba and 19 in Santa Luzia. The categories of participants were: social entity, neighboring companies, government, media, suppliers, professional entity, partners, clients, labor union and service providers. It is noteworthy that it covers the categories of stakeholders involved in the assessment of the organization's socio-environmental impact.
- Irani's Sustainability Committee meets every four months. The Committee is formed by the Executive Board, Industrial and Corporate Managers and the Sustainability team. As of December 2019, the departments of these areas were included: Legal and People Development. The efforts of Irani and the involvement of top management regarding dialogue about sustainability issues stand out. The opportunity exists to make communication channels available to the in-company stakeholders, to disseminate the guidelines that are considered important for inclusion on the Sustainability Committee's agenda.
- Annually, the Sustainability topic is presented by the Sustainability area at a meeting of the Board of Directors. The importance of the involvement of Irani's highest governance body in the management of sustainability is

notable, strengthening the commitments and involvement of the leadership with the subject. There is an opportunity to expand the active participation of members of the highest governance body in sustainability issues, in view of the validation of the sustainability report by the Board of Directors.

- In 2019, Irani held a workshop with service providers from the Paper and Packaging units in Santa Catarina. The meeting was designed to inform service providers about Irani's safety measures and the new Supplier Performance Index (IDF) evaluation rules that entered into force in 2020. The event was attended by 60 people, including permanent outsourced workers and other service providers. The organization's efforts to involve service providers in relation to health and safety issues and IDF criteria were of particular note. It is important to expand this initiative to the service providers in Irani's other units.

2. Materiality – decision-makers should identify and be clear on what are the material sustainability topics

- Irani maintained the results of the materiality review conducted in 2018 and reapplied the 11 material topics in the preparation of the 2019 sustainability report. It is important to continue to review the material topic processes periodically, considering the changes in context to which the company is subject in its operations. It is important to take into consideration in the next review process: the impacts of the COVID-19 pandemic, the closure of the Vila Maria unit, the sale of forest assets, the results of the socio-environmental impact assessment and the review of the strategic plan (2021-2030 cycle).

- As in the previous cycle, material topics such as "Environmental performance" have broad definitions and other topics have been grouped into a single one, such as "Excellence, Focus on Results, Innovation and Institutional Image." It is important to pay attention to the clarity of the nomenclature and definition of material topics in the review of the materiality process.
- The GRI disclosure items associated with each material topic were listed, but there are specific topics for Irani that are not covered by GRI Standards topics, such as Innovation and Institutional Image. It is important that the organization uses the Management Approach standard (GRI 103) and identifies proper indicators for these specific topics, maintaining monitoring and reporting of performance over time.
- In 2019, the process of mapping the socio-environmental impacts in the communities where Irani operates was completed, but these results were not considered in the presentation of the material topics for the 2019 report. In relation to topics such as: water, waste, emissions and energy, there is an opportunity to detail the impacts that the operation generates on the environment and that contextualize the topic as being material. The importance of considering the impacts identified with local communities in the prioritization and review of material themes is noteworthy, evidencing the perception of these stakeholders in the process and in the detailing of the topics.

3. Responsiveness Capacity – organizations must act transparently in relation to the sustainability material topics and their impacts

- In 2019, Irani advanced in health and safety management with a focus on the safety culture. The Observation and Prevention Program (POP) was implemented as a pilot project at the Santa Catarina Paper Unit. In order to identify variances and recognize good practices of employees and outsourced workers, those responsible for the health and safety area observe, record and communicate the critical variances to managers of the areas. We highlight Irani's efforts regarding monitoring and prevention with respect to the issue of safety, supporting the reduction of the accident severity rate.
- Health and safety information monitoring is conducted monthly through the registration of occurrences on physical forms. In 2018, Irani started to integrate the lost-time accident data on the STRATEC system and in 2019 there was the inclusion of data in a specific software program (SOC); however, the record of occurrences was kept on an electronic spreadsheet shared between the units. Indicator control (403-9 - Work-related injuries) is partially systematized, as part of the controls have not yet been integrated with the system. There is an opportunity to improve accuracy and reliability in relation to Man Hours Worked (MHW) and the Severity Rate data. Regarding item 403-10 (Work-related health problems), the results on occupational diseases were partially made available for analysis in the assurance process, but not published in the report. It is important to emphasize management and dissemination of information about occupational diseases, considering the risks associated with the organization's activities.
- Each unit's environment and quality area monitors waste data monthly through an electronic spreadsheet and shares the results with the managers of the units. Information about generated waste is consolidated daily from physical records, emails and systematized documents. As in the previous year, the control of indicator 306-2 (Waste by type and disposal method) is partially standardized. We emphasize the organization's efforts to monitor performance, but there is an opportunity to align the tools adopted by the units in order to strengthen integrated management, as well as broaden the organization's commitments in this topic, establishing goals for the reuse of waste at all the operating units.
- The volume and quality of the effluent of the units is monitored daily in the Effluent Treatment Station (ETE), complying with the requirements of the operating licenses. Monthly analyses are conducted outside laboratories and the specific indicator of effluent generation is monitored monthly. The results are part of the calculation of employees' variable compensation. Liquid effluent disposal quality parameters are defined based on legislation. In 2019, 10 outside of limits disposal incidents were reported. It is important to establish controls for monitoring the variances, in addition to maintaining the quality of disposed effluents according to the established parameters.
- In 2019, Irani conducted an in-house diversity survey with the support of an outside consulting company, whose objective was to diagnosis the subject within the company. Some 22% of employees participated and the main results indicate an openness in relation to the subject. However, opportunities for improvement in the treatment of management and ethnic group issues were pointed out. The need to establish practices

to ensure non-discrimination and public commitments with a focus on promoting diversity and inclusion in the work environment is highlighted.

- In 2019, Irani implemented the CaiCha project, designed to foster improvements in the performance of customers in the cartonboard segment, through support by the technical and commercial areas. Implemented as a pilot project in 10 clients, the initiative contributed to waste reductions and financial improvements. Of particular note was the organization's commitment to assist in customer development, through technical support and collaboration. It is important to improve the monitoring of results by establishing indicators and goals for the project.
- In 2019, Irani shut down the activities of the Vila Maria unit. The People Development area developed a strategy for this process, mapping the impacts and communicating the actions to the union and the employees. Employees received a support package, which extended fringe benefits for another six months, career workshops and support for reallocation to the coordination level. The efforts made by the organization to reduce the negative impacts of closing this operation were noteworthy.

4. Impact – organizations must measure, monitor, and be accountable for the effects of their actions on wider ecosystems

- In 2019, Irani completed a socio-environmental impact identification process for the units at Indaiatuba (SP) and Santa Luzia (MG), Santa Catarina and Rio Grande do Sul, with outside consulting support. The consulting methodology was qualitative, requesting participants to

indicate, in semi-structured interviews, the perceived demands and impacts that are related to the company's activities. The efforts and depth of the evaluation conducted by Irani are of particular note. It is important to ensure the adoption of tools that make it possible to point out and systematically monitor impacts, identifying improvements and mitigation of the impacts presented in this evaluation.

- A process was carried out to define actions, deadlines and responsibilities for each of the units, related to the demands received from stakeholders from the socio-environmental impact assessment process. Ongoing actions cover topics such as: environmental education, social actions and communication of socio-environmental initiatives. It is important to ensure the establishment of an action plan to address the negative impacts mapped in the consultations (odors, road traffic, lack of fencing between properties, waste collection, among others), as well as to involve other areas of the company to promote joint initiatives in the management of local impacts.
- In 2019, the Forest Unit in Santa Catarina implemented a tracking system for its own and outsourced vehicle fleets, which allows the management and monitoring of the locations, routes adopted and production efficiencies. We emphasize the importance of using the inputs of this online tool for decision making on routes, considering the negative impacts perceived by stakeholders in the socio-environmental impact assessment: road traffic and road maintenance.

Final Considerations

We highlight Irani's commitment to the sustainability reporting process, using the GRI Standards, in the comprehensive "agreement" option. In the view of BSD Consulting, Irani has implemented management for the material topics through programs, indicators and goals. The company has demonstrated a commitment to advancing strategic sustainability management, aligning its practices with the UN Sustainable Development Goals, and with management engaged with the sustainability topics, through the activities of the company's Sustainability Committee.

The 2019 Sustainability Report reflects both positive aspects and critical points regarding the company's performance, contributing to the information's balance and transparency, in accordance with the maturity of the company's sustainability reporting process. Irani can improve the reporting of performance indicators, management approach and goals for material topics, valuing the critical analysis, clarity and succinctness of the information presented.

São Paulo, June 5, 2020.

BSD Consulting - Brazil

Credits

Chairman of the Board of Directors

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Administration, Finance and Investor Relations

Officer - CFO

Odivan Carlos Cargnin

People, Strategy and Management Officer

Fabiano Alves Oliveira

Corrugated Containerboard Packaging Officer

Lindomar Lima de Souza

Paper and Forestry Business Officer

Henrique Zugman

General Coordination, Consolidation and

Review of Content

Health and Safety, Quality and Sustainability
Management

Independent verification

BSD Consulting

Graphic design

Aldeia

Photos

Agência Luz

Fabiano Panizzi

Mário Águas

Marcelo Coelho

Marcelo Freire

Disclosure

June/2020

Distribution

Shareholders, customers, employees, communities,
suppliers, governments and other stakeholders.

(102-53) In the event of questions regarding the content of this report, we are available through the contact channel available on our website, at the link <http://www.irani.com.br/ideias-em-acao/contato/>