

2022 SUSTAINABILITY REPORT

Roca Brasil | Cerámica
Roca | Incepa

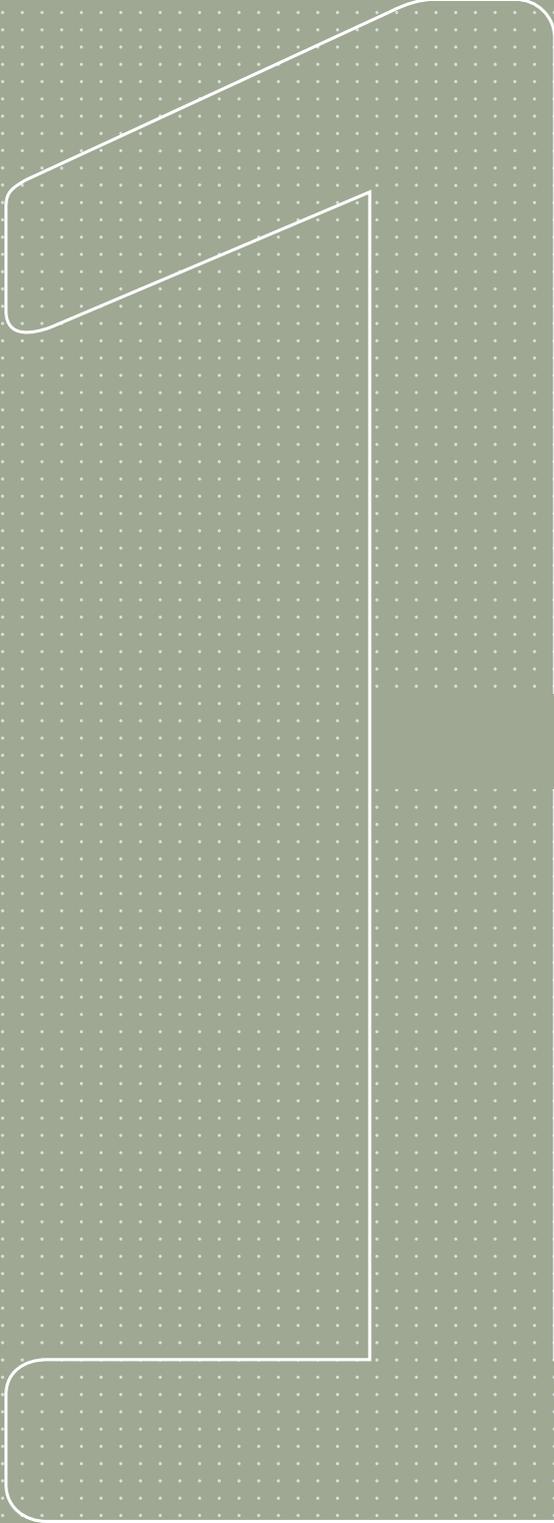


2022
SUSTAINABILITY
REPORT | English

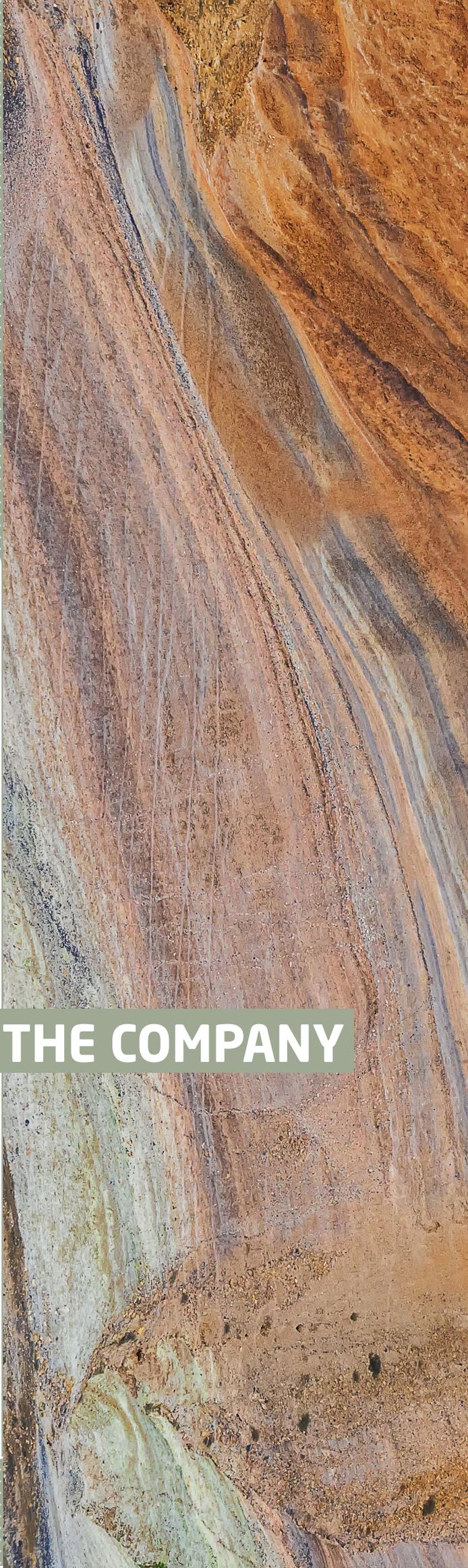
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THE COMPANY



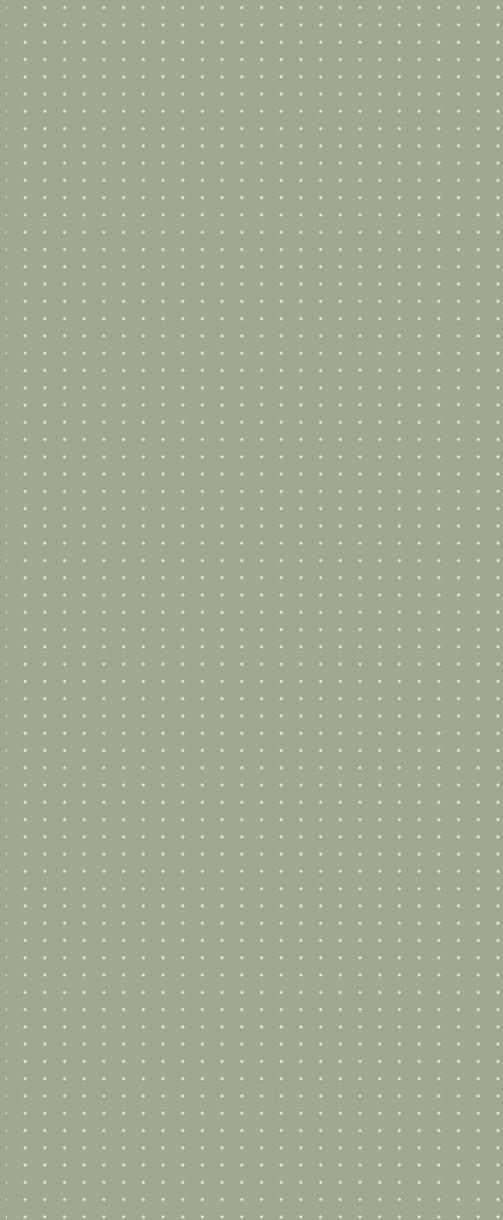
ABOUT US

Innovation, state-of-the-art technology and high quality standards, envisioned in total customer satisfaction and a vision of the future, always accompanied by environmental responsibility. These are the behaviors/values that guide the DNA of Roca Brasil Cerámica, a solid global company that ranks as a reference among the largest manufacturers of ceramic tiles in the world, with its Roca Cerámica and Incepa brands.

This global proposal by the company is the result of constant investment in factories and technologies that, together with the product development team, ensures the delivery to the market of a robust portfolio of pieces that follow the trends in architecture and construction in full technical compliance - as is the case of the compactor machine, Contínua+, acquired by Roca Brasil Cerámica in 2014 and with operations starting in 2015. The production process also has a 180 m oven and a polishing system with 60 heads, capable of reducing energy use, making the process more sustainable when compared to traditional presses. Thus, sustainability and beauty go hand in hand, creating lines with solutions for all home environments, with small and SuperSizes tiles, capable of meeting the needs of the coating and furniture market.

Since the end of 2021, Roca Brasil Cerámica has belonged to Grupo Lamosa, a Mexican company with a worldwide presence focused on the manufacture and sale of ceramic tiles and adhesives. The Group has been in the building materials industry for over 130 years, with operations in 9 countries and 33 production centers in the Americas and Europe. Today, Grupo Lamosa occupies the leading position in the markets in which it participates, being the world's second-largest manufacturer of ceramic tiles with an annual installed capacity of more than 225 million m².





OUR REACH

Roca Brasil Cerámica has three manufacturing units. Two of them are adjacent units located in Campo Largo (PR) and the other is located in São Mateus do Sul (PR). All these units have programs that have a positive impact on their local economies, generating jobs and moving the local economy - the company's headquarters are located next to the manufacturing plants in Campo Largo.

The 3 manufacturing units are able to meet demand for Roca Brasil Cerámica products around the world. The main destination country for the products is the United States, but Roca now also exports to the rest of America and Europe.

OUR PRODUCT

The search for new sustainable initiatives is permanent within Roca Brasil Cerámica, which sees in this behavior a way to increase the quality of its products and reduce environmental impacts.

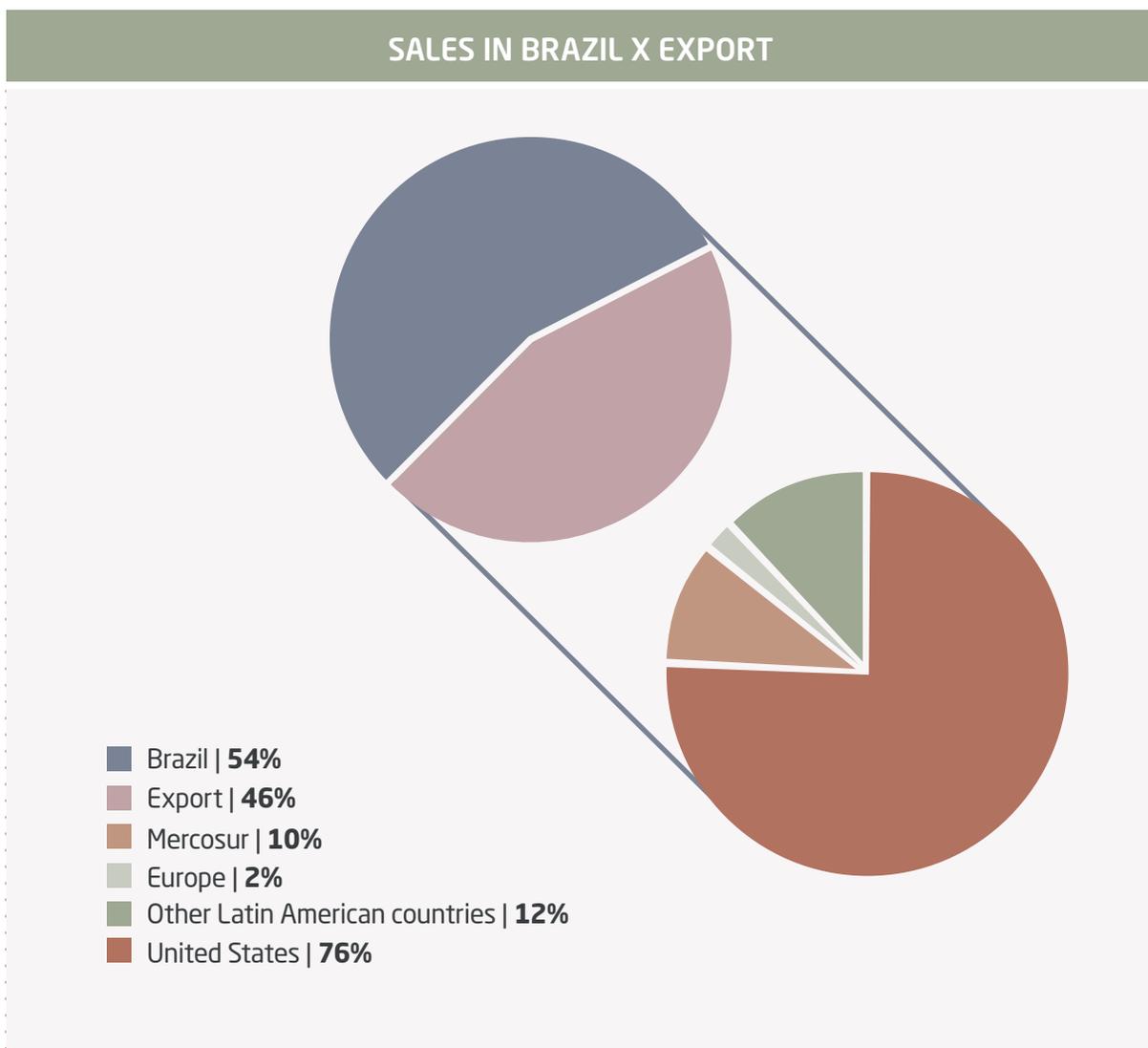
The company's recent SuperSizes are proof of this: the 100x200 cm size was developed so that it can be transported by elevators, without the need for lifting to go up in buildings with several floors.

In turn, the 120x250 cm size was developed considering the common size of ceiling heights in Brazil.

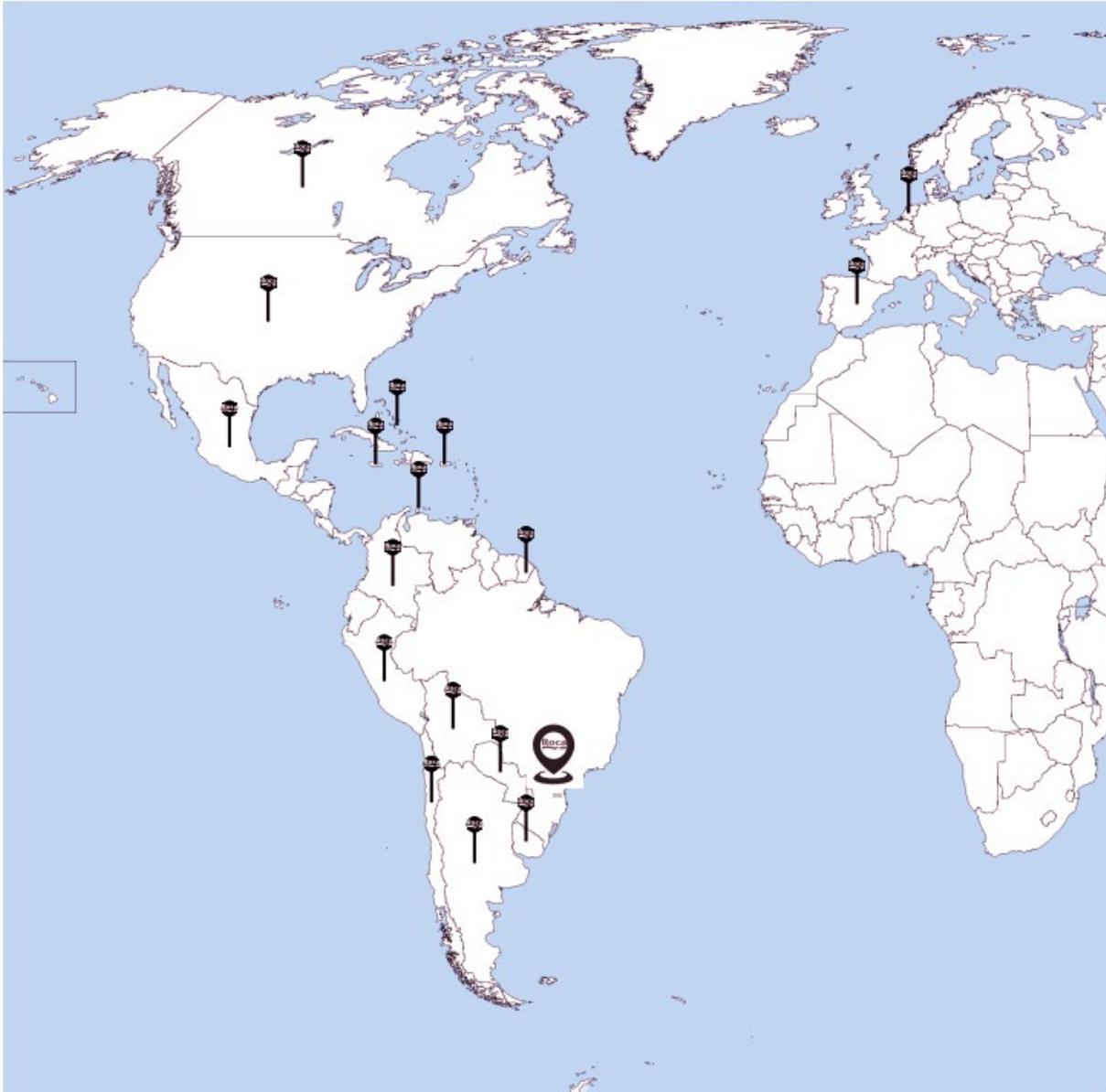
For the new 160x160 and 160x320 formats, one of the main factors in choosing dimensions is serving a new sales channel: the marble and furniture sector. Roca Brasil Cerámica always seeks to keep up to date with market trends and technological innovations, which is why it invested to take the lead with SuperSizes.

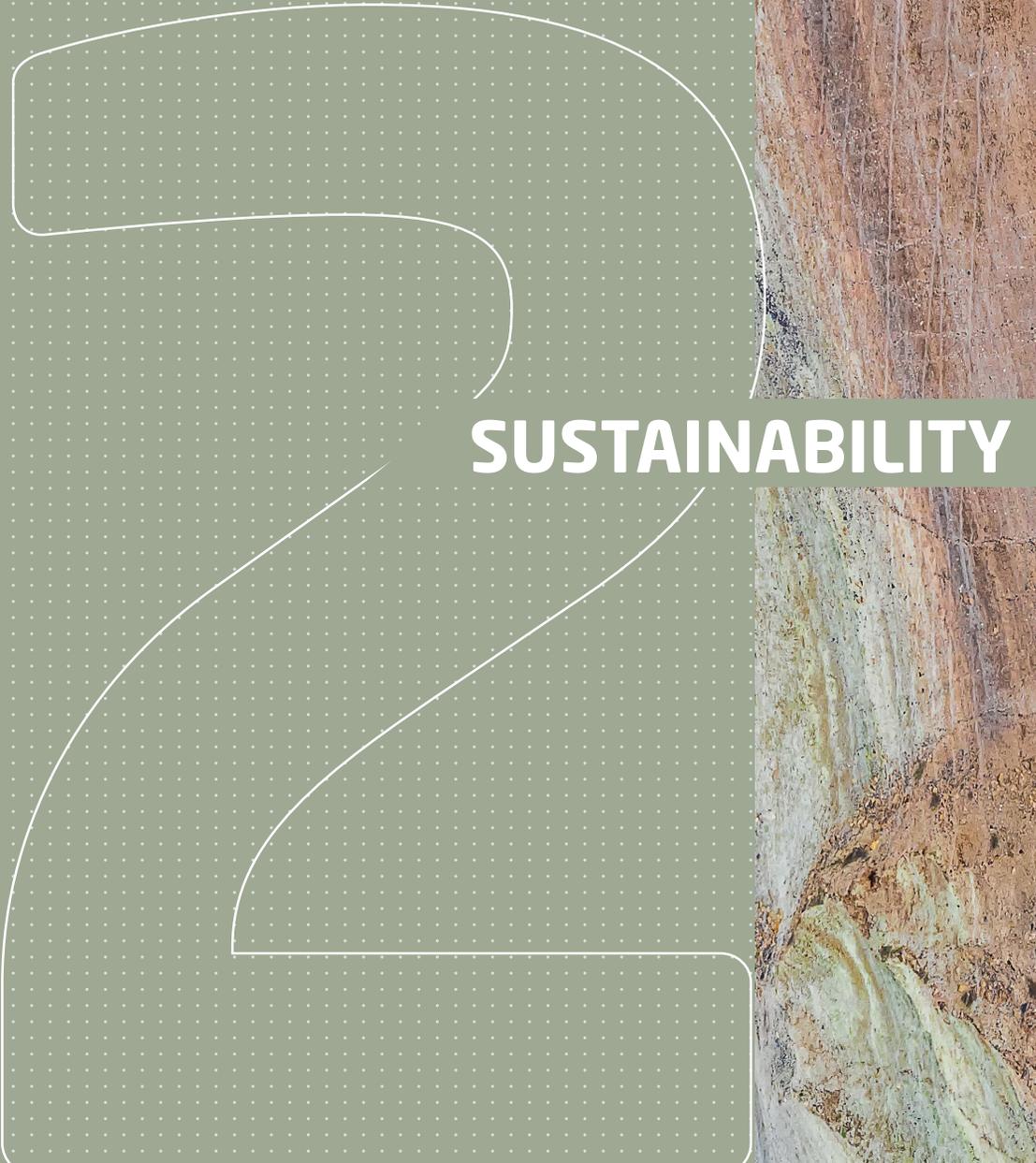
In addition, during the period in which we were devastated by the COVID-19 pandemic, the company added BioSafe technology to these products, an unprecedented technology in Brazil based on nanotechnology with antiviral and antibacterial action.

In 2022, another step was taken towards sustainability, the company completed the Life Cycle Assessment of products from the São Mateus do Sul plant.



SALES IN BRAZIL X EXPORT





SUSTAINABILITY

OVERVIEW

The company has always aimed to reduce the consumption of resources, investing in modern equipment capable of delivering high quality in exchange for a low use of inputs, which, consequently, also contributes to a lower environmental impact of its products.

In 2019, an extensive sustainability project was started, with an analysis of the company's positioning that included qualitative environmental parameters to meet the demand of an ever-growing market that is more interested in sustainable products.

Following this initial analysis, the company carried out the Life Cycle Assessment of the products manufactured at Factory 1, the company's most modern factory unit, which has the modern

Continua+. Responsible for pressing porcelain tiles, this equipment performs this task with minimal use of resources and minimal loss of materials. Life Cycle Assessment (LCA) - or Life Cycle Analysis - is a methodology standardized by ISO 14040 for quantifying environmental footprints.

Thus, the company became the first brand of porcelain tiles in Brazil to have an LCA for its products, capable of generating more points in sustainable certifications.

In 2021, Roca Brasil Cerámica became the first brand to produce SuperSizes tiles and slabs in sizes 100x200 and 120x250 cm in Brazil and continued its Life Cycle Assessment, in order to include these new products so that they can also obtain higher scores in sustainable certifications.

In order to include even more products within the Life Cycle Assessment of its products, Roca Brasil Cerámica expanded its LCA to the products of the São Mateus do Sul factory. This LCA was completed in 2022, already with the biomass present in the manufacture.

SUSTAINABILITY REPORT

In 2020, the company published its first Sustainability Report, containing relevant and contextualized information for the year 2019. The main objective of the Sustainability Reports is transparency, so that the public is aware of the situation and the company's sustainable advances.

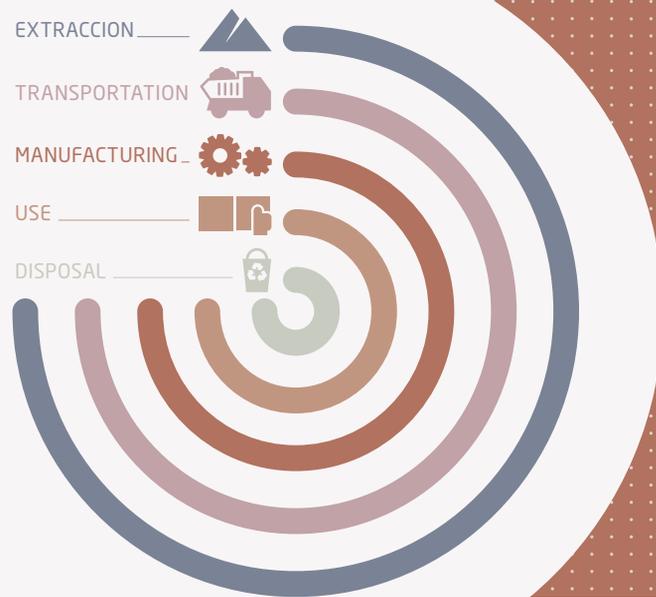
This is the fourth edition of the Sustainability Report and provides updated information for the year 2022.

LIFE CYCLE ASSESSMENT

The Life Cycle Assessment is a methodology that has been increasingly used by companies that value sustainability, as is the case of Roca Brasil Cerámica. The LCA consists of a compilation of the consumption of all resources used in manufacturing - raw materials, auxiliary inputs, packaging materials, fuels and emissions, water and effluents, waste generation, among others - to quantify environmental footprints, such as the carbon footprint.

With this holistic view towards sustainability, Roca Brasil Cerámica started its first LCA in 2019. The project was audited by an international LCA reviewer with experience in LCAs for the civil construction sector.

The LCA is a tool to be used as a basis for decisionmaking and improvement. In it, one can see environmental bottlenecks - manufacturing points or materials with the worst environmental performance - and based on that, sustainable strategies are outlined.



Product Life Cycle

EVOLUTION

One of the results that the LCA pointed out is how harmful pet coke is to the environment when used for heat generation. In 2021, the company revolutionized its energy matrix and started using biomass to generate heat in the atomizer furnaces instead of petroleum coke.

With this big step, Roca Brasil Cerámica became a reference and example in the generation of heat using renewable fuels.

Biomass is a renewable fuel that can be produced from wood industry waste. For example, briquette is one of the biomasses used by Roca Brasil Cerámica, it is a residue from the furniture industry. In this way, what would be waste to be discarded ends up entering the market again to replace non-renewable fuels.

Impacts assessed on the LCAs of Roca Brasil Cerámica



Climate changes

Global warming potential that could result in melting ice poles and rising sea levels.



Fossil depletion

Consumption of resources in Renewables at an intensity greater than their formation in nature.



Depletion of the ozone layer

Potential reduction of the ozone layer, which would increase the incidence of ultraviolet rays, possibly resulting in an increase in cases of skin diseases.



Photochemical oxidation

Potential air pollution from ozone formation from anthropogenic emissions, which can lead to respiratory problems.



Acidification

Release of emissions into the atmosphere that enter the water cycle causing acid rain..



Eutrophication

Accumulation of nutrients (mainly phosphorus and nitrogen compounds) in ecosystems that leads to an imbalance and greater reproduction of some species, occurs mainly in aquatic environments.



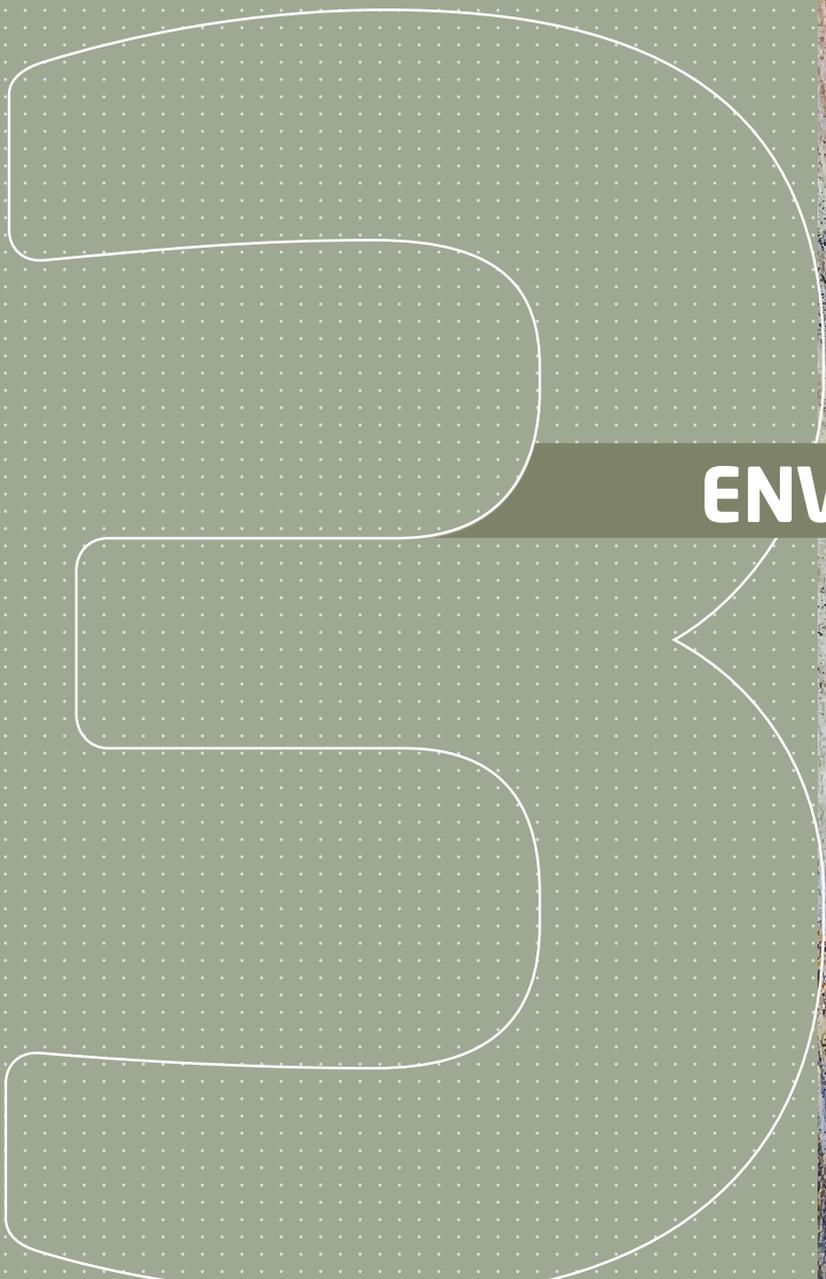
Depletion of non-fossil resources

Consumption of resources in fossils at an intensity greater than their formation in nature.

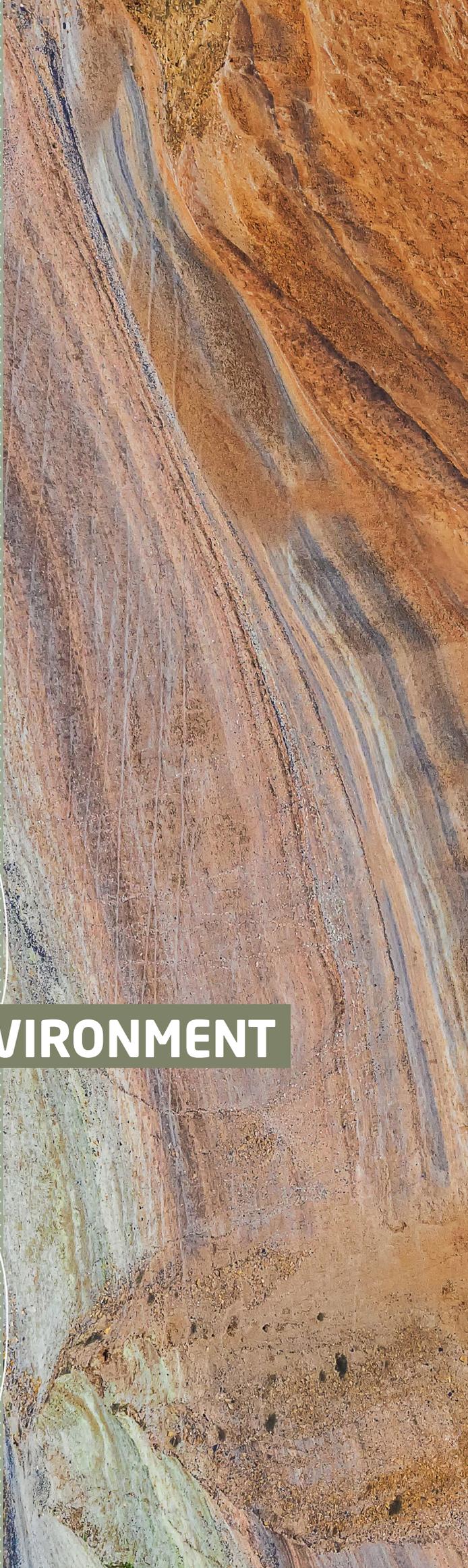


Water depletion

Water use from nature.



ENVIRONMENT



ENERGY

The search for sustainable solutions in civil construction has become increasingly relevant and urgent. In this context, the use of energy plays an essential role, since its production and use have significant impacts on the environment, economy and society.

This chapter aims to present a general analysis of Roca Brasil Cerâmica's strategies and performance when it comes to energy management.

The search for improvements is constant in the company and goes hand in hand with increasing product quality and reducing environmental impacts are priorities for the brand.

Within this search, Roca discovered, in 2020, that petroleum coke was a major villain when it comes to environmental impact, as it is a major contributor to impacts such as eutrophication and

acidification of soil and water. After this discovery, the company promptly started looking for a less harmful fuel to the environment and arrived at biomass, which was implemented in the manufacturing process in 2021. 2022, the base year for this report, was therefore the first year without the use of petroleum coke in the company's manufacturing plants.

From 2020 to 2021, there was an increase of 16 percentage points in the share of energy from Renewable sources used by the company. As expected - and reported in the previous report (base year 2021) - there was also an increase from 2021 to 2022. The increase from 2021 to 2022 was approximately 4 pp.

The highlight for the increase in the share of Renewables is at the São Mateus do Sul plant, where the use of Renewables grew by almost 14 pps, from 21.7% in 2021 to 35.6% in 2022.

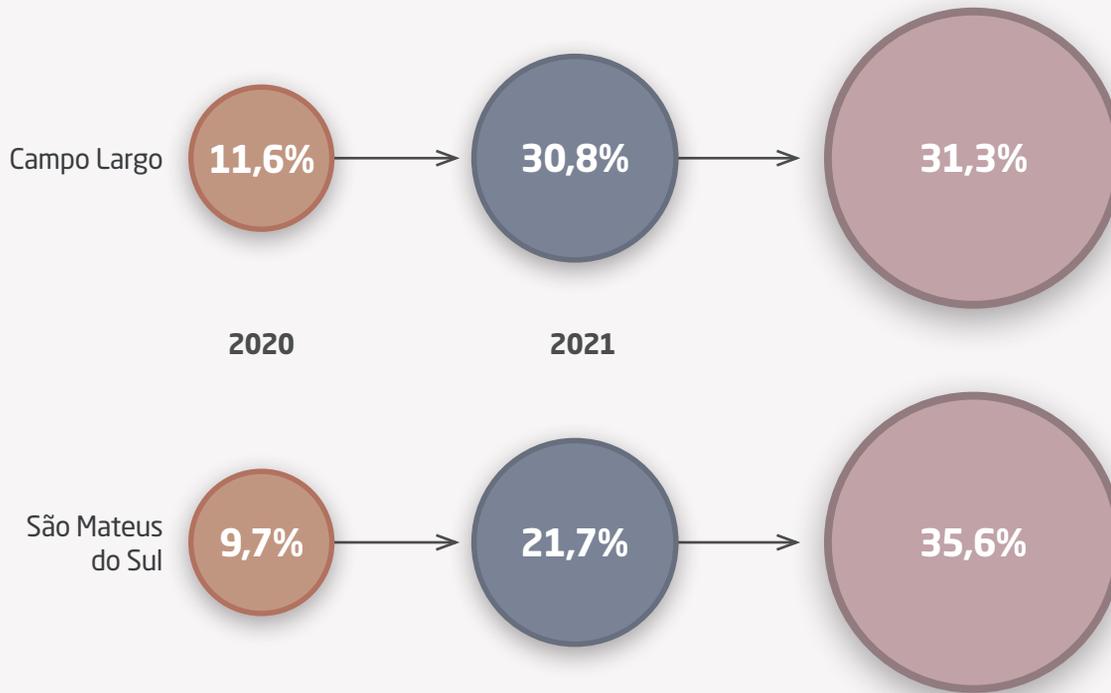
Taking into account the total energy used in all the company's manufacturing units, there was a 5.2% reduction in energy consumption. This consumption reduction is enough to feed 671,144 5-burner flees for 1 whole day.



TOTAL ENERGY USE (GC)			
Campo Largo			
Year	2020	2021	2022
Renewable	119.515	364.396	327.580
Non-Renewable	914.555	819.069	719.909
Total	1.034.070	1.183.465	1.047.489
São Mateus do Sul			
Year	2020	2021	2022
Renewable	82.462	206.450	288.123
Non-Renewable	770.629	742.985	687.161
Total	853.090	949.435	975.284
Total			
Year	2020	2021	2022
Renewable	201.976	570.846	615.703
Non-Renewable	1.685.184	1.562.054	1.407.070
Total	1.887.160	2.132.900	2.022.773



Portion of use - Renewable fuels

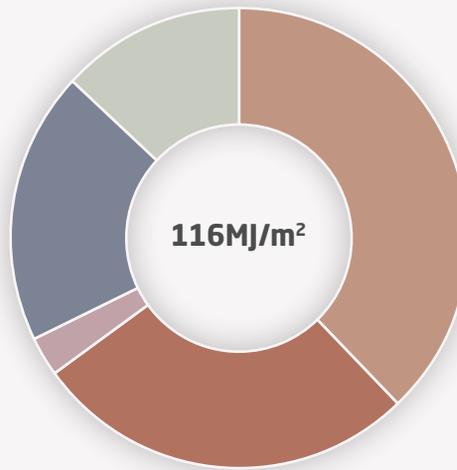


USE OF ELECTRICITY (KWH)			
Year	2020	2021	2022
Campo Largo	39.428.142	41.384.323	39.045.293
São Mateus do Sul	27.204.247	28.382.619	32.170.674
Total	66.632.389	69.766.942	71.215.967

ENERGY INTENSITY (MJ/m ²)			
Year	2020	2021	2022
Campo Largo	112	102	107
São Mateus do Sul	121	117	144
Total	116	108	122

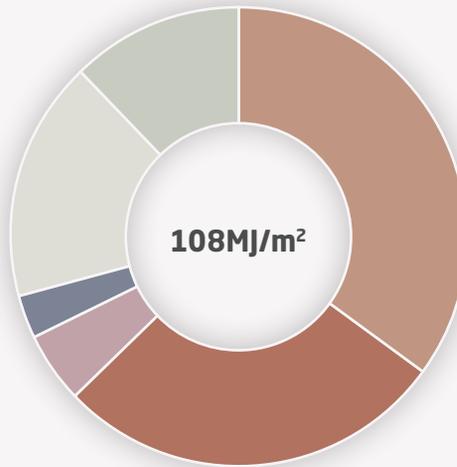
ENERGY INTENSITY

- Others | 0%
- Natural Gas | 38%
- Shale Gas | 27%
- LPG | 3%
- Petroleum Coke | 19%
- Biomass | 0%
- Electricity | 13%



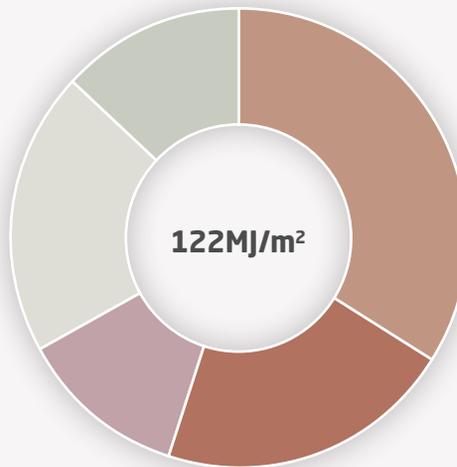
2020

- Others | 0%
- Natural Gas | 35%
- Shale Gas | 28%
- LPG | 5%
- Petroleum Coke | 3%
- Biomass | 17%
- Electricity | 12%



2021

- Others | 0%
- Natural Gas | 34%
- Shale Gas | 21%
- LPG | 12%
- Petroleum Coke | 0%
- Biomass | 20%
- Electricity | 13%

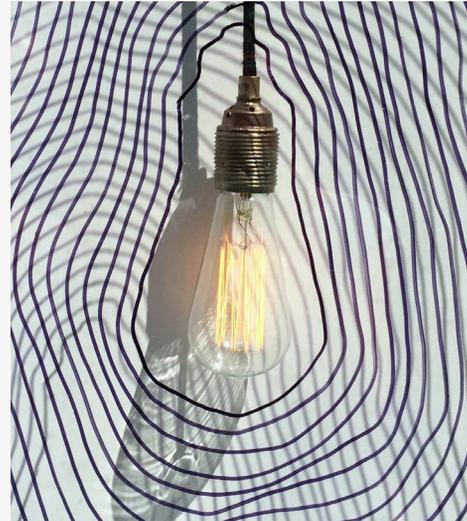


2022

The large increase in the share of Renewable energies at the São Mateus do Sul unit is due to the significant increase in the use of biomass. There was a 57.8% increase in biomass use in 2022 compared to 2021.

The increase in energy intensity may have been caused by several factors:

- Alternation of fuels throughout the year;
- Increase in on-site employees;
- Infrastructure works;
- Stoppage of one production line per part in 2021.



7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



With these actions, Roca Brasil Cerâmica contributes to Sustainable Development Goal (SDG) No. 07: “Ensure access to affordable, reliable, sustainable and modern energy for all”, and to Sustainable Development Goal (SDG) No. 09: “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”.



EMISSIONS

As global concern and discussions about climate change intensify, the construction industry faces the challenge of reducing its greenhouse gas emissions and playing an active role in the transition to a low-carbon economy. In this context, this chapter on emissions aims to present a comprehensive view of the strategies, initiatives and results of Roca Brasil Cerâmica with regard to the management and reduction of emissions.

In this report, Roca Brasil Cerâmica would first like to communicate an important revision in the emissions calculations, related to biomass and electricity use.

The company recognizes the importance of transparency and accuracy in the information it provides on environmental performance and, as part of this commitment, discrepancies were identified and the methodology was improved.

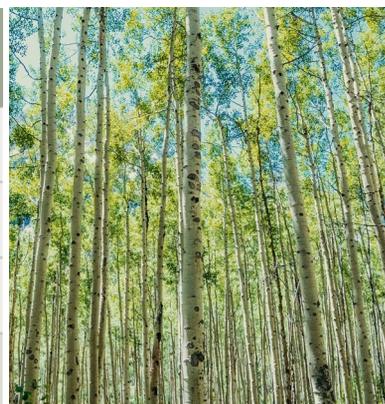
Firstly, due to a mistake in the previous report, the CO₂ emissions from the burning of biomass were considered in the calculations, however the emission of this gas is not accounted for in the carbon footprint of this fuel, as it is considered a neutral emission. The other gases with a potential greenhouse effect (CO, N₂O, etc.) are accounted for, as the main gas resulting from the burning of fuels is CO₂, the carbon footprint of biomass actually has a much smaller value than previously reported.

In addition, it is also necessary to inform that a significant change in the methodology for calculating emissions from the use of electricity has been carried out. Previously, we used the national average of emissions to estimate emissions associated with electricity consumption in our operations. However, recognizing the need for a more precise approach aligned with best practices, the company has now opted to adopt the emissions value resulting from Roca Brasil Cerâmica's life cycle assessments.

The use of LCAs as a basis for calculating emissions from electricity consumption brings greater accuracy, Brazil is a country of continental dimensions and the electrical matrix differs from region to region, a small variation in the amount of energy from thermoelectric plants, for example can change the carbon footprint of electricity significantly.

Thus, the revised carbon footprint values are regionalized for Paraná, where the Roca Brasil Cerâmica factories are located.

EMISSIONS - ELECTRICITY GENERATION (t CO ₂ eq)			
Year	2020	2021	2022
Campo Largo	906	951	897
São Mateus do Sul	625	652	739
Total	1.531	1.604	1.637





EMISSIONS - FUEL BURNING (t CO ₂ eq)			
Campo Largo			
Year	2020	2021	2022
Natural gas	35.035	36.273	32.139
Petroleum coke	15.360	3.783	0
Others	669	824	1.067
Total	51.065	40.879	33.206
São Mateus do Sul			
Year	2020	2021	2022
Shale gas	22.990	26.960	18.328
Petroleum coke	16.326	2.581	0
LPG	3.257	6.362	14.686
Others	124	154	153
Total	42.697	36.058	33.167
Total			
Year	2020	2021	2022
Natural gas	35.035	36.273	32.139
Shale gas	22.990	26.960	18.328
Petroleum coke	31.687	6.364	0
LPG	3.745	6.963	15.554
Others	305	377	352
Total	93.762	76.937	66.373

From 2021 to 2022, there was a 13.4% reduction in total CO2 equivalent emissions, totaling 10,531 ton CO2 eq, equivalent to 48,406 round trips from São Paulo to Rio de Janeiro. This reduction in carbon emissions is mainly due to the implementation of biomass and the growing representation of Renewable fuels in the company's total energy.

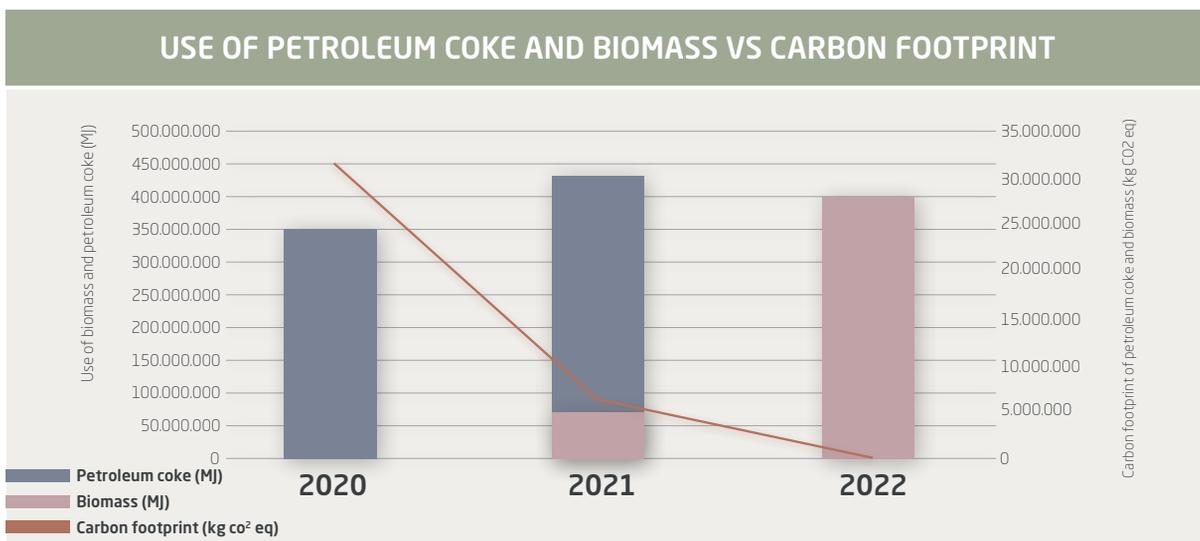
From the beginning of 2020 (the year in which biomass was implemented in the factories) until the end of 2022, there was a reduction in carbon eq emissions equal to 27,283 ton CO2 eq (125,414 round trips between São Paulo and Rio de Janeiro).

Another measure to reduce consumption and energy - and, consequently, reduce equivalent carbon emissions - is the reuse of heat from ovens in dryers. This reduces the consumption of natural gas, in Campo Largo, and shale gas, in São Mateus do Sul. Reuse also provides a reduction of 17.2% in emissions when compared to what would normally be released into the atmosphere (number equivalent to 9,637 round trips from São Paulo to Rio de Janeiro).

From 2021 to 2022, the intensity of carbon equivalent emissions (amount of CO2 eq emitted per square meter of porcelain tiles produced) increased by 3.2%.

The increase in LPG consumption in the furnaces at the São Mateus do Sul manufacturing plant, where there was also an increase in the intensity of CO2 eq emissions, is the main driver of this growth. At the plants in Campo Largo, there was a reduction of approximately 3% in the intensity of CO2 eq emissions.

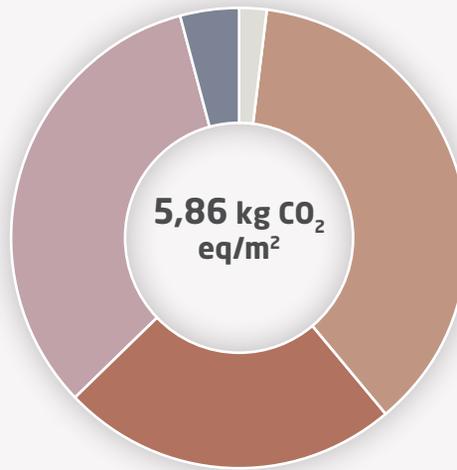
EMISSIONS INTENSITY (kg CO ₂ eq/m ²)			
Year	2020	2021	2022
Campo Largo	5,63	3,60	3,50
São Mateus do Sul	6,17	4,54	5,00
Total	5,86	3,98	4,11



With these actions, Roca Brasil Cerâmica contributes to Sustainable Development Goal (SDG) No. 12: “Ensure sustainable consumption and production patterns” and to Sustainable Development Goal No. 13: “Take urgent action to combat climate change and its impacts”.

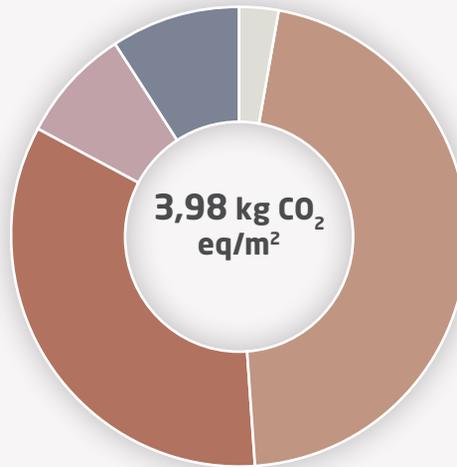
EMISSIONS | ROCA BRASIL CERÁMICA

- Natural Gas | 37%
- Shale Gas | 24%
- Petroleum Coke | 33%
- LPG | 4%
- Others | 2%



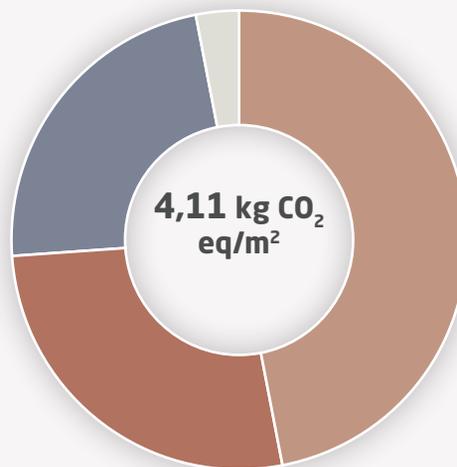
2020

- Natural Gas | 46%
- Shale Gas | 34%
- Petroleum Coke | 8%
- LPG | 9%
- Others | 3%



2021

- Natural Gas | 47%
- Shale Gas | 27%
- Petroleum Coke | 0%
- LPG | 23%
- Others | 3%



2022

WATER

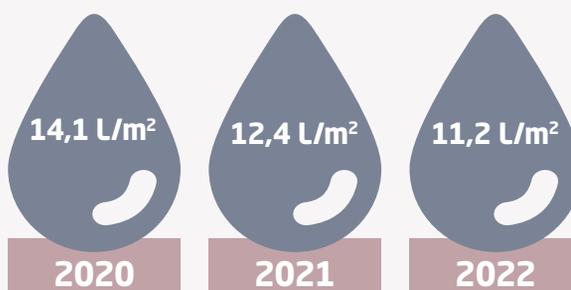
Water is a vital and essential resource for life, and its responsible management becomes increasingly crucial in the face of the global challenges of water scarcity and degradation of aquatic ecosystems.

Recognizing the importance of conservation and efficient use of water, Roca Brasil Cerâmica is always committed to adopting conscious measures to minimize the environmental impact of our operations and value chain.

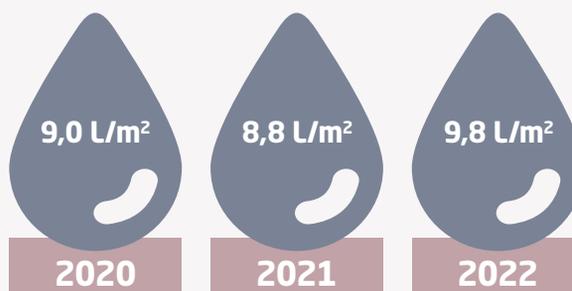
Since this resource is so important, it is essential to implement strategies to save it. Along these lines, from 2021 to 2022, there was a reduction of approximately 3% in water intake per square meter of porcelain tile produced. This water savings resulted in a volume of water saved equivalent to more than 37,800 baths. The highlight in the reduction in the intensity of water abstraction goes to the plants in Campo Largo, where the reduction was 9.6%. In São Mateus do Sul there was an increase of 10.9%, some factors that contributed to this increase are a water leak between the collection point and the factory that occurred at the end of 2022 and beginning of 2023, works and the installation of a new grinding line and the return of on-site work.

Considering the total volume of water abstracted, there was a reduction from 215.7 ML (megaliters) of water abstracted in 2021 to 175.8 ML in 2022, or a reduction of 18.5%. In Campo Largo, the reduction was 24.2%, while in São Mateus do Sul it was 6.9%. This reduction of 39.9 million liters of water is enough to fill 21 Olympic swimming pools, or to supply the water needed for more than 295,000 baths.

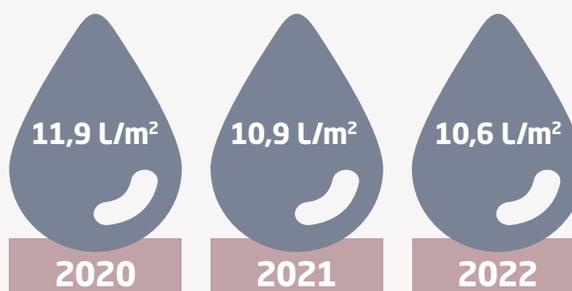
Campo Largo



São Mateus do Sul



Total



Once again, the water use reduction target was met. Reflected in the water collected per square meter produced. There was a percentage reduction of approximately 3% in abstracted water, including all units.



WATER COLLECTION (ML - megalitros)

Campo Largo

Source	2020	2021	2022
Surface water	129,5	142,5	0
Ground water	0	0	108,7
Third party water	1,1	1,9	0,7
Total	130,6	144,4	109,4

São Mateus do Sul

Source	2020	2021	2022
Surface water	43,5	43,4	0
Ground water	18,0	25,8	65,8
Third party water	1,8	2,2	0,6
Total	63,3	71,3	66,4

Total

Source	2020	2021	2022
Surface water	173,1	185,9	0
Ground water	18,0	25,8	174,5
Third party water	2,8	4,1	1,3
Total	193,9	215,7	175,8

In addition to the commitment to reduce the use of water year after year, the company also places great emphasis on the treatment and reuse of water. The water used is treated in order to go beyond the standards required by law.

Additionally, a large part of the treated water is reused in processes that are not directly linked to production, such as floor cleaning.

The values of water discharge in Campo Largo for 2020 and 2021 were corrected in this report, in the values reported in 2022 there was a conversion error.

WATER COLLECTION, CONSUMPTION AND DISPOSAL

Water collection (ML)

	2020	2021	2022
Campo Largo	130,59	144,37	109,4
São Mateus do Sul	63,27	71,34	66,4
Total	193,87	215,71	175,8

CAPTAÇÃO, CONSUMO E DESCARTE DE ÁGUA

Water consumption (ML)

	2020	2021	2022
Campo Largo	109,24	121,72	91,05
São Mateus do Sul	63,27	71,34	66,4
Total	172,51	193,06	157,45

CAPTAÇÃO, CONSUMO E DESCARTE DE ÁGUA

Water disposal (ML)

	2020	2021	2022
Campo Largo	21,35	22,65	18,35
São Mateus do Sul	0	0	0
Total	21,35	22,65	18,35

In São Mateus do Sul, all treated water is reused. This is done with the aid of a lung pond to balance the process cycle. At the factories in Campo Largo, there was an increase in the volume of water discarded from 2021 to 2022 - this water returned to nature with a higher quality than the collected water.

The disposal of water by Roca Brasil Cerâmica follows the criteria established by the National Council for the Environment in CONAMA resolutions 357 and 430, which provide guidelines for water discharge standards, as well as the classification of water bodies and relations on the disposal of effluents in the river class.

Analyzes are carried out monthly and the company has an internal control evaluating parameters such as pH, temperature, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), acute toxicity, sedimentable solids, dissolved oxygen and flow.

In total, 18 million liters of water were returned to nature (equivalent to more than 295,000 baths). This is not counting the water that is released in the atomization processes. When fuel is burned to heat the air used in atomization, water vapor is generated from the combustion reactions, which also returns to the water cycle.



With these actions, Roca Brasil Cerâmica contributes to Sustainable Development Goal (SDG) No. 06: "Ensure availability and sustainable management of water and sanitation for all" and to Sustainable Development Goal No. 14: "Conserve and sustainably use the oceans, seas and marine resources for sustainable development".

WASTE

Proper waste management is an essential pillar of sustainability, especially in the context of the coating materials industry. In this chapter dedicated to waste, a comprehensive view of Roca Brasil Cerámica's results in relation to sustainable waste management will be presented.

Roca Brasil Cerámica recognizes the importance of reducing waste generation, promoting recycling, minimizing landfill disposal and adopting innovative approaches to responsible waste management.

Throughout this report, key goals and objectives in relation to waste management will be explored, describing the strategies and initiatives implemented to reduce the amount of waste generated in our operations and value chain.

The first step to good waste management is to minimize the amount of waste generated.

Combining technology and sustainability, the company has the modern Continua+, which by allowing a more precise and sustainable operation, provided a significant reduction in the waste of ceramic mass in compaction and cutting.

In all units, both in Campo Largo and São Mateus do Sul, there is the reuse of raw cracks (waste of ceramic materials that occur before the glazing process). These breaks are reused in the composition of the ceramic mass, being reincorporated into the product.

In São Mateus do Sul, this reuse of breaks goes beyond raw breaks. Powdered waste from grinding and polishing and waste from effluent treatment are also reused in the formulation of the ceramic mass.

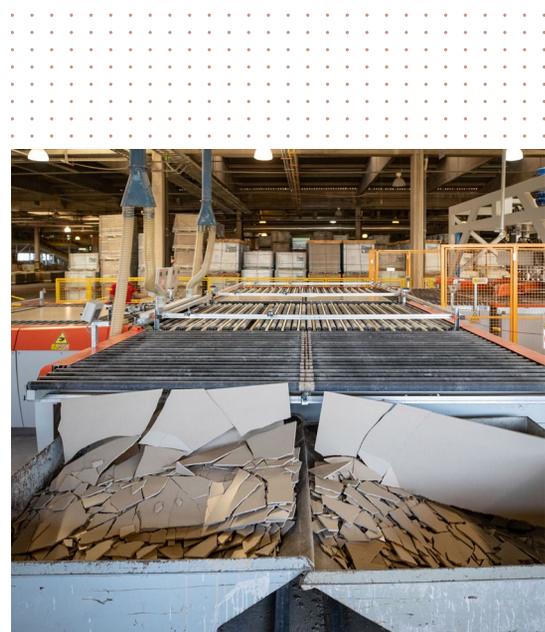
In the case of waste generated, the management process is carried out by the Environmental team at Roca Brasil Cerámica, which, with the help of third parties for services such as transport and specific treatment of waste, seeks the best destinations for each material, always giving priority to reinsert it in the market.

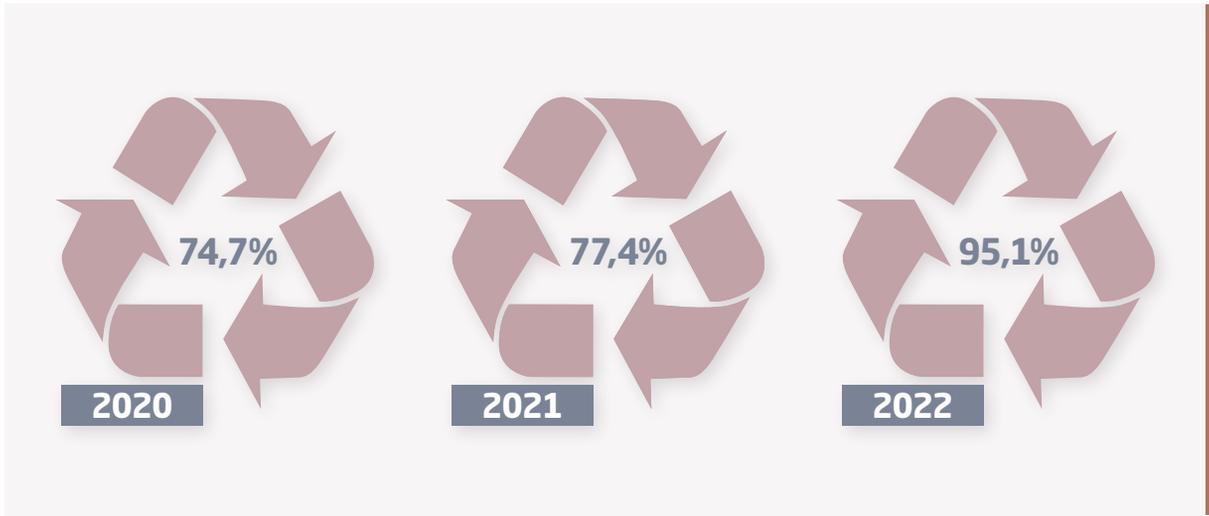
The waste generated is stored at the Waste Center (CDR) in various buckets. During transport to the waste destination, the buckets are weighed so that the Environment sector can issue the Waste Transport Manifests (MTR) and release the trip to the waste destination.

It is worth noting that the waste mentioned here is only waste from the manufacturing process (up to the factory door); residuals beyond this point are not included in this calculation.

These wastes mentioned are treated according to their classification provided for by law and, in accordance with commercial agreements made with their respective destinations, a report is issued to measure the amounts of waste destined.

In 2022, 95.1% of the waste generated at the Campo Largo and São Mateus do Sul plants was not destined for final disposal, that is, it was sent for noble purposes such as recycling and reuse. The remaining 4.9% of waste was, after proper treatment, sent to landfills or incineration





WASTE GENERATION (ton) - Manufacturing process			
	2020	2021	2022
Destined for final disposal	252,1	273,6	259,3
Not Destined for final disposal	742,9	946,7	4.998,4
Total	995,0	1.223,0	5.247,7

From 2021 to 2022, there was a significant increase of 329% in waste generation, which did not prevent the amount of materials sent for final destination (sanitary landfills or incineration, in order to end their life cycle) from decreasing by 6%.

An encouraging aspect of this scenario is that much of the growth in waste generation was directed towards noble purposes, such as reuse and recycling. This means that most of the increase in waste was actually channeled towards more sustainable practices, contributing to the circular economy and minimizing the need for disposal in landfills.

This achievement is a direct result of the brand's ongoing efforts to promote sustainable waste management and adopt innovative approaches to dealing with the waste stream generated in its operations.

Through strategic partnerships and the implementation of circular economy practices, Roca Brasil Cerámica was able to direct a significant percentage of the waste generated to recovery processes, in which there is transformation into new products or reintegration into the production chain.

Reverse logistics and extended liability are linked and important to promote sustainability and proper waste management. The principle of Extended Producer Responsibility (ERP) allows manufacturers to be responsible for the complete lifecycle of the products they place on the market, including their collection, treatment and proper disposal after use by the consumer.

Reverse logistics is the practice of collecting, recovering and redirecting discarded products or post-consumer waste back into the supply chain or to a specific destination. It is a useful tool for performing the REP. By establishing efficient collection and recycling systems, reverse logistics allows manufacturers to fulfill their obligation to manage the waste generated in the use of their products.

The adoption of reverse logistics increases with extended producer responsibility because it leads companies to implement collection and recycling programs, reducing the environmental impact of products throughout their useful life. Businesses can reduce the amount of materials going to landfills, avoid polluting the environment, and contribute to the conservation of natural resources by taking responsibility for proper waste management.

Going beyond the manufacturing process, the company also has a Reverse Logistics Plan (PLR) for the packaging in which its products are shipped. In Brazil, reverse logistics has gained strength and become a key element in waste management strategies, both due to growing environmental concerns and government regulations.

Roca Brasil Cerámica's PLR consists of measuring the amount of packaging invoiced by state in Brazil and offsetting it through recycling credits. Compensation is always made in relation to the previous year and has not yet been finalized for the 2022 period.

It is worth remembering that waste compensation is made according to the amount of packaging that goes to each state in Brazil. There was a 49.4% increase in total compensated waste.

WASTE COMPENSATION - PLR (ton)		
	2020	2021
Campo Largo	171,4	220,2
São Mateus do Sul	85,4	163,5
Total	248,8	383,7

Roca Brasil Cerámica recognizes that sustainable waste management is an ongoing process, which requires constant monitoring, evaluation and adjustments. The company is committed to moving towards a future where waste generation is reduced to a minimum, reuse and recycling are widely adopted and final disposal is only a last option.

In 2022, a partnership was established with Composta+, in which organic waste is collected and the company returns fertilizers and seedlings for planting.



With these actions, Roca Brasil Cerámica contributes to Sustainable Development Goal (SDG) No. 09: "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" and to Sustainable Development Goal No. 12: "Ensure sustainable consumption and production patterns".

OTHERS

MINERAL DEPOSITS

Roca Brasil Cerámica has engineers and technicians who monitor the mineral deposits, both in the form of exploration and in their environmental controls.

The recovery of the deposits is carried out in order to comply with the conditions and legal requirements of the licensing, provided for in the Environmental Control Plans (PCA) and their respective licenses.

The company has its own deposits and outsourced deposits, both categories are monitored by trained professionals, who generate quarterly or semi-annual monitoring reports, the Environmental Supervision Communiqué (CSA).

An annual budget is allocated for recovery of deposits and improvement of mining activities, a commitment that is part of environmental and social responsibilities and is also part of the company's culture.

PACKAGING

Roca Brasil Cerámica packaging is 100% recyclable and optimized so that only what is necessary is used, always with the smallest amount of material and without compromising the integrity of the product.

The wooden pallets come from reforestation.

The 1.00x2.00 and 1.20x2.50 m SuperSizes are packaged without the use of cardboard boxes.

EXTERNAL AIR QUALITY

Roca Brasil Cerámica owns 820 hectares of rural areas in Paraná and Santa Catarina. Of this total, 168 hectares are APPs (Permanent Preservation Areas), 153 hectares are Legal Reserves and 262 hectares are surplus natural forests maintained on the properties.

The preservation of natural areas makes a positive contribution to regional microclimates and to the quality of life in these regions. Forests have the ability to sequester carbon from the atmosphere.

The concern with quality is also present within the factories. The analysis of emissions from the atomizer chimney outputs is carried out every six months, in order to follow the standards defined by SEMA n° 016/14 and by Ordinance 001/2008/IAP/GP.

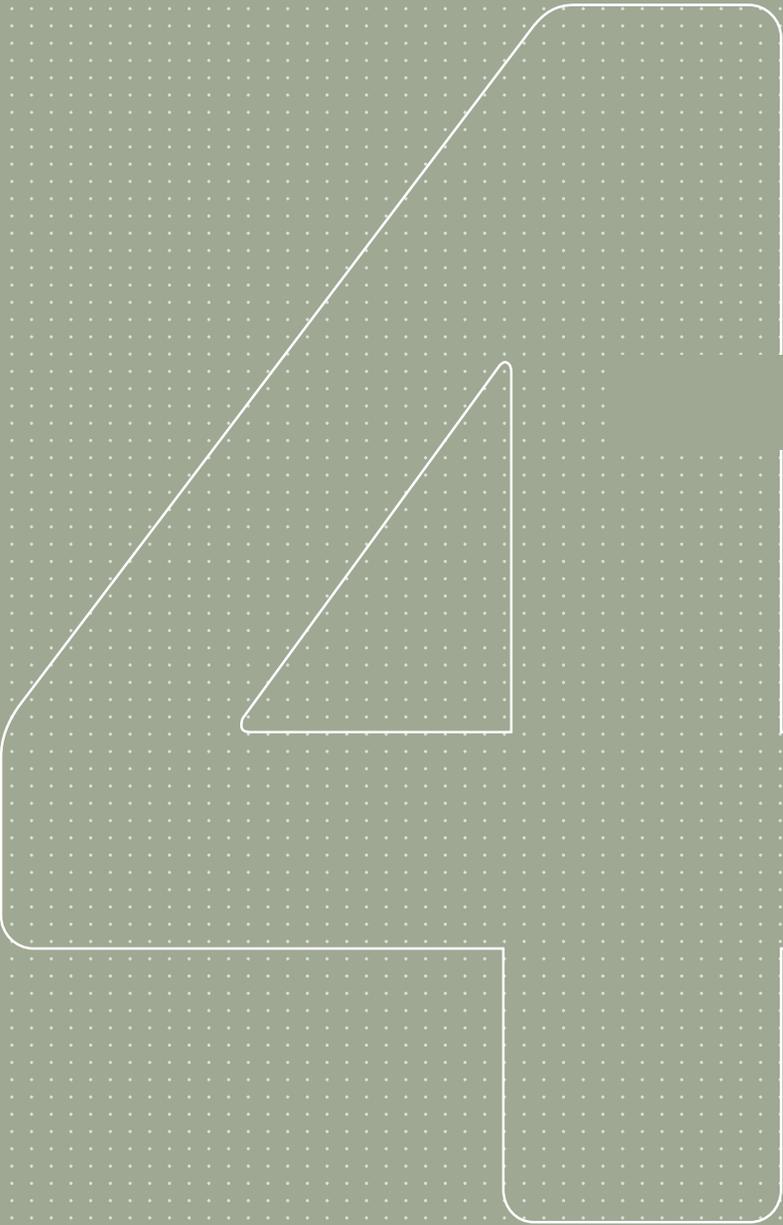
The factory also has several dust filters installed in the main places where dust is generated, so as not to compromise the health of employees.

SAVING RESOURCES

In 2022, tests were carried out to reduce the thickness of certain formats produced by the company. Thickness reduction is a simple decision, but tests must be carried out to guarantee the quality of the product. This simple decision results in resource savings, as the product is thinner, therefore lighter, less material is needed to buy it.

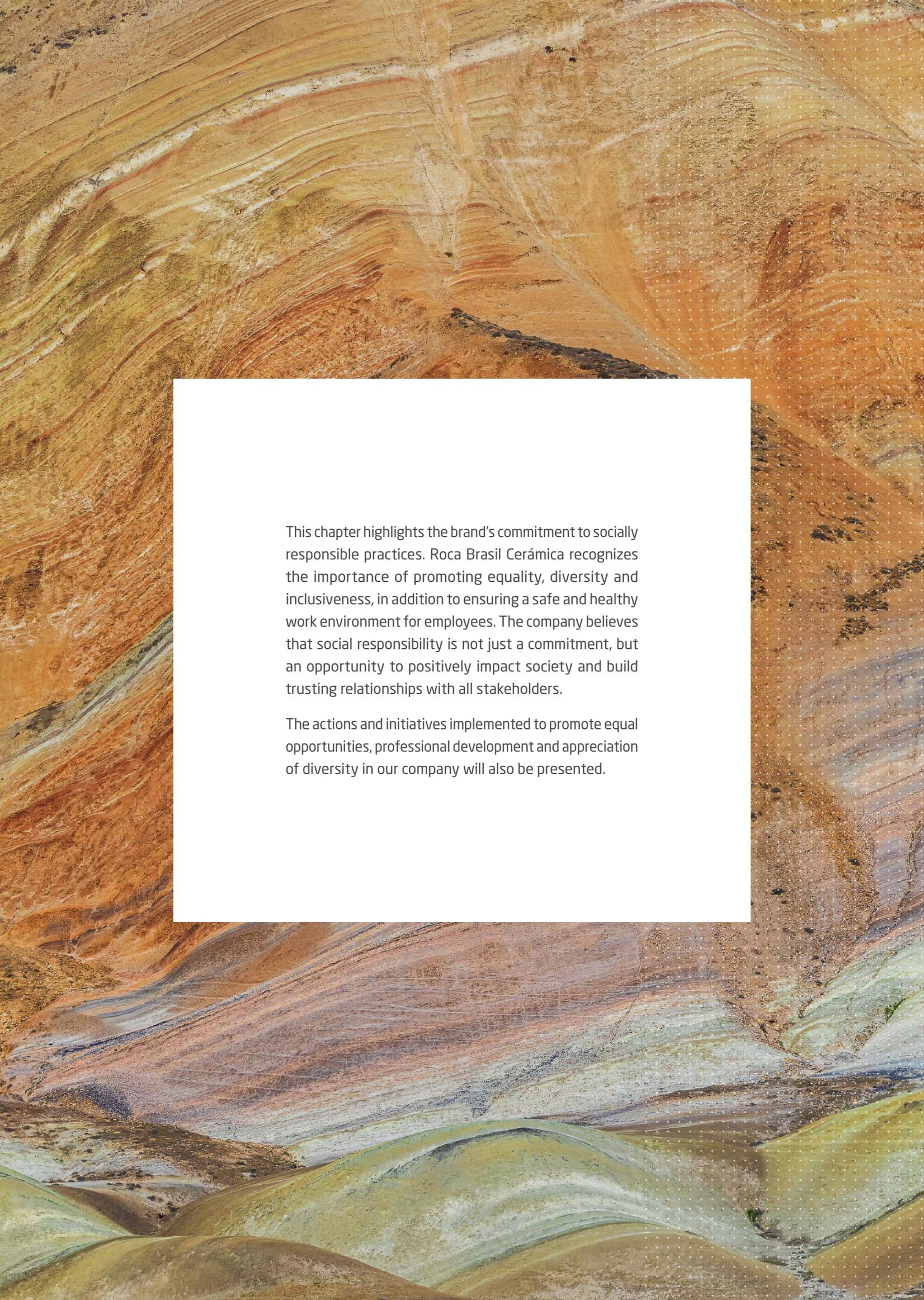
The first format tested was the 3x6 cm. Previously, this format was produced with a thickness of 7 mm, tests were carried out with a thickness of 6 mm. Currently, Roca Brasil Cerámica has a line of 3x6 cm products with a thickness of 6 mm. As a result, its customers have the option of purchasing a product with the same quality, but with less use of resources and, therefore, a lower environmental impact.

The 20x20 line underwent the same process, the difference being that now this format has a product line with 7 mm thickness, smaller than the standard value of 8 mm.



SOCIAL





This chapter highlights the brand's commitment to socially responsible practices. Roca Brasil Cerámica recognizes the importance of promoting equality, diversity and inclusiveness, in addition to ensuring a safe and healthy work environment for employees. The company believes that social responsibility is not just a commitment, but an opportunity to positively impact society and build trusting relationships with all stakeholders.

The actions and initiatives implemented to promote equal opportunities, professional development and appreciation of diversity in our company will also be presented.

EMPLOYEES

2022 was a complicated year for everyone, especially for business owners, which required a lot of effort and dedication from the employees of Roca Brasil Cerámica.

From 2021 to 2022 there was a 9.7% increase in the number of employees. The company ended 2021 with 1,366 employees, while in 2022 that number increased to 1,498.

Roca Brasil Cerámica also values diversity and equal opportunities. From 2021 to 2022, there was an increase of more than 1 percentage point in the percentage of women in the company, with emphasis on Campo Largo, which ended the year with 31.7% of women.



EMPLOYEES							
Gender	2020	2021	2022	Age group	2020	2021	2022
	941	1.063	1.146	Less than 30 years old	314	451	505
Between 30 and 50 years old				669	752	789	
	225	303	352	More than 50 years old	183	163	204
Total				1.166	1.366	1.498	

NEW HIRES					
Gender	2021	2022	Age group	2021	2022
	233	202	Less than 30 years old	204	154
Between 30 and 50 years old			155	130	
	135	88	More than 50 years old	9	6
Campo Largo			310	201	
São Mateus do Sul	58	89			
Total	368	290			

TURNOVER					
Gender	2021	2022	Age group	2021	2022
	110	178	Less than 30 years old	69	113
Between 30 and 50 years old			71	140	
	57	90	More than 50 years old	27	15
Campo Largo			144	228	
São Mateus do Sul	23	40			
Total	167	268			

EMPLOYEES BY FUNCTIONAL CATEGORY

2020

Age group	Less than 30 years old		Between 30 and 50 years old		More than 50 years old	
	Male	Female	Male	Female	Male	Female
Executives	0	0	1	0	2	0
Management	0	0	11	2	7	1
Administration	86	31	247	59	70	15
Operation	172	25	275	74	70	149
Total by gender	258	56	534	135	149	34
Total	314		669		183	

2021

Age group	Less than 30 years old		Between 30 and 50 years old		More than 50 years old	
	Male	Female	Male	Female	Male	Female
Executives	0	0	1	0	2	0
Management	0	0	11	2	6	1
Administration	103	48	249	100	58	16
Operation	269	31	299	90	65	15
Total by gender	372	79	560	192	131	32
Total	451		752		163	

EMPLOYEES BY FUNCTIONAL CATEGORY

2022

Age group	Less than 30 years old		Between 30 and 50 years old		More than 50 years old	
	Male	Female	Male	Female	Male	Female
Executives	0	0	2	0	2	0
Management	0	0	12	2	5	1
Administration	128	87	213	112	44	19
Operation	267	23	362	86	111	22
Total by gender	395	110	589	200	162	42
Total	505		789		204	



TRAINING

For Roca Brasil Cerámica, only with well-qualified professionals is it possible to keep up with market and technology developments.

The company has the Roca Academy Program, which provides access to recorded classes on various topics applicable to the sector in which the company operates to its employees. Every year, new content is added and outdated content is updated in order to keep all employees in line with new market trends.

There are more than 23 hours of recorded classes, also including subjects related to sustainability. There are even classes on Life Cycle Assessment, to guide both the production sector on which factors can influence the carbon footprint and environmental footprints of a product, and to help the sales sector explain the sustainable aspects of the brand to their customers.

As a reflection of the alignment of its employees to improve with the company, the total number of hours of training was greater than 23,000 hours, or the equivalent of 970 full day.

Not counting the hours shown here, the company also provides training for external teams - such as safety training. In addition to education incentive programs (undergraduate, graduate and language courses for employees).

It is important to note that the numbers presented in the 2022 Sustainability Report referring to the years 2020 and 2021 differ from those presented in the previous report because this year's also include hours of external training, while the previous report only accounted for internal training - training External training is provided by people outside the organization.

The 2022 highlight goes to executive and management positions. In executive positions, there was an increase in the average hours of training per employee, 428% higher in 2022 when compared to 2021. In management positions, the increase was even greater, equal to 1,711%. There was also an increase in the average hours of training per employee equal to 112.7%.

On the other hand, comparing the number of total training hours - 35,717 hours in 2021 and 23,280 hours in 2022 - there was a reduction of approximately 35%.



7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

With these actions, Roca Brasil Cerámica contributes to Sustainable Development Goal (SDG) No. 07: "Ensure access to affordable, reliable, sustainable and modern energy for all", and to Sustainable Development Goal No. 08: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all".

TRAINING | BY FUNCTIONAL CATEGORY

2020	Training hours	Average hours per employee
Executive	72	24,0
Management	296	14,0
Administration	10.068	19,8
Operation	12.490	19,7
Total	22.926	19,7

2021	Training hours	Average hours per employee
Executive	8	2,7
Management	20	1,0
Administration	26.880	46,8
Operation	8.809	11,4
Total	35.717	26,1

2022	Training hours	Average hours per employee
Executive	56	14
Management	362	18
Administration	1.644	2,7
Operation	21.218	24,4
Total	23.280	15,5



HEALTH AND SAFETY

Roca Brasil Cerámica is also committed to the Health and Safety of its employees, recognizing that the protection and well-being of the team are essential for the success and sustainability of operations. The company is always committed to creating and maintaining a safe and healthy work environment, where all employees can carry out their activities with confidence, knowing that their safety is an absolute priority. We will discuss below the policies, procedures and programs implemented to identify, prevent and mitigate occupational risks, in addition to promoting Health and well-being practices in all areas of the company.

We believe that by taking a proactive and comprehensive approach to Health and Safety, we are investing in the care of our people and building a culture of responsibility that reflects our commitment to operational excellence and respect for human life.

The company has a Risk Management Program, in which it identifies dangers and possible injuries or health problems, assesses occupational risks indicating the level of risk, classifies occupational risks to determine the need to adopt preventive measures and implements measures to prevention, according to the risk classification and in the established order of priority.

The Risk Management Program covers all company employees, as well as service providers with and without a contract.

The Program has a team of 1 Health, Safety and Environment Supervisor, 1 Occupational Physician, 1 Occupational Nurse, 5 Occupational Safety Technicians and other contracted professionals who support the assessment of Occupational Health and ergonomics at the workplaces. work.

In addition to the Risk Management Program, the Grupo Lamosa Occupational Safety Model is being implemented. The Model has 12 steps divided into 3 steps and establishes the responsibilities of each member of the company in relation to safety, safe behavior training, standardization of safe procedures, among other steps. Annual audits are carried out to assess the company's commitment to implementing the model and progressing to other stages.

Non-routine activities that pose risks are evaluated by the Occupational Safety team, the person in charge of the area and the team that will carry out the activity. What the company calls Work Permits are opened, where possible risks involving confined spaces, height, electricity, lifting and hot work (welding) are observed. Previously It has already been verified whether the workers have specific training established by the Ministry of Labor and whether they are qualified according to the Occupational Health Certificate.

Routine activities are assessed through the annual risk inventory, where they are observed and classified into physical, chemical, biological, accident and ergonomic risk agents. For each risk, the level of occupational risk is indicated, determined by combining the severity of possible injuries or health problems with the probability or chance of their occurrence. Afterwards, the need to adopt preventive measures is identified and an action plan is drawn up.

The risk assessment is an ongoing process and is reviewed every two years or when there is any change in the process.

In the event of accidents or incidents at work, a committee is formed consisting of 1 Safety Technician, the Area Supervisor, the Maintenance Supervisor, the Plant Manager and the Employee involved in the event, to carry out the investigation of the incident. . The investigation uses the Fishbone methodology followed by the 5 whys. After applying the methodology and finding the root causes, an action plan is drawn up and monitored by the investigation committee and the Plant Safety Committee.

The company encourages employees to report risks and dangers encountered in their activities, to avoid any type of incident or accident.

This occurs through the opening of Safety Alerts, which are sheets where employees describe the unsafe behavior, unsafe condition or incident.

Alerts can be delivered directly to the immediate leadership who must describe the action taken to mitigate the risks. The alerts can be placed in the alert boxes anonymously and are collected by the Occupational Safety team to proceed with the dealings.

Employees also have the right to refuse to carry out the activity, as established by the company's internal rules.

The Lamosa group also has a transparency line, where complaints can be made anonymously or identified. The report can be made through the Lamosa website, by email or by telephone.

All accidents and incidents are investigated, through analysis, to find the causes that originated them and to take actions to avoid the repetition of these events, as well as to prevent their recurrence, using the A3 research methodology.

When an accident occurs, the injured worker or his closest companion (witness of the incident) must notify his immediate boss. The immediate supervisor of the worker and the affected area must seek immediate care and, based on the severity of the injury, request first aid and first aid services. The affected worker's immediate supervisor, in coordination with and in support of the safety manager, must carry out the investigation and prepare the safety report.

The investigation is carried out in all accidents and incidents by the Accident Investigation Commission.

The company also keeps the Occupational Health Medical Control Program (PCMSO) always updated, as determined by the Ministry of Labor and Employment. The PCMSO is an integral part of the company's broader set of initiatives in the field of workers' health, with the objective of preventing, monitoring and controlling possible damage to employee health and integrity, as well as detecting previous risks, especially with regard to work-related illnesses.

The PCMSO works in accordance with the Risk Management Program, where it identifies risks that may affect the health of employees, as a result of which it can request a series of clinical and complementary tests specific to each type of risk level of the company.

In order to include workers in the development, implementation and evaluation of the Health management system, Roca Brasil Cerâmica has Basic Management Units (UGBs), which are formed by groups of employees. All employees participate in some UGB in their sector, according to the scale and shift.

Each UGB actively participates in the safety management system, where it completes a checklist every day to check the safety items in its sector, holds a Daily Safety Dialogue and monitors the monthly results of safety indicators for the entire company. In addition to alerting their immediate superiors of any unsafe condition found.

The company also has the Internal Commission for Accident Prevention (CIPA), which conducts monthly safety awareness campaigns.

In short, meetings of the Basic Management Units are held daily, while those of the Internal Commission for Accident Prevention and the Occupational Safety Committee are held monthly. This shows the commitment of the company and its employees to the safety of their activities.

Below are some of the trainings related to safety for the company's employees and contractors.

- Security Integration - where the Service Order is applied with all the activities carried out by the employee, their risks, forms of prevention, duties and rights;
- Training in the use of Personal Protective Equipment (PPE);
- Work at Height Training is for employees who carry out activities above 2 meters in height;
- Training in Pallet Truck, Forklift or other equipment is for employees who carry out activities using such equipment;
- Electricity Training is for employees who work with electrical maintenance;
- Emergency Brigade Training is a brigade formed to respond to situations of fire principle or other safety occurrence;
- CIPA - training for CIPA elected officials;
- NR12 - training regarding the standard operating procedure of the equipment, where they are described how to use them, their protection components and what to do in case of emergency;
- Training on the Lamosa Group's Security Model training consisting of 6 modules.

In order to provide employees with easy access to work-related medical services, the Campo Largo unit has a medical outpatient clinic available during administrative hours, while the São Mateus do Sul unit has an occupational physician who attends once a week.

Health promotion campaigns are also carried out, such as flu vaccination, Health motorcade (where tests are carried out to detect skin, prostate, breast and cervical cancer), oral Health motorcade, blood pressure measurement, blood glucose check and other campaigns.

FIGHT AGAINST CORRUPTION AND DISCRIMINATION

All Roca Brasil Cerámica employees are informed about the anti-corruption procedures and policies adopted by the organization.

The company prides itself on having no cases of corruption. There were also no cases of termination or renewal of contracts with business partners due to corruption-related violations.

There were also no cases of legal proceedings related to corruption brought against Roca Brasil Cerámica or its employees in the reporting period.

With regard to discrimination, all employees have access to the reporting channel called the Transparency Line. To date, there have been no reports or occurrences of discrimination recorded.

BENEFITS

Roca Brasil Cerámica also offers benefits to its employees:

- Life insurance for employees, interns and apprentices;
- Health Plan for employees and interns;
- Private pension for employees;
- Dental Plan for employees and interns;
- Pharmacy agreement for employees, interns and apprentices;
- Restaurant for all employees;
- Food allowance for employees;
- Chartered transport for administrative staff, interns, apprentices and third parties residing in Curitiba;
- Profit sharing for employees;
- School material for employees;
- Purchase of products for staff after three months at home;
- Day care assistance for employees - employees can leave children up to 6 months old at the day care center.

3 GOOD HEALTH AND WELL-BEING



8 DECENT WORK AND ECONOMIC GROWTH



With these actions, Roca Brasil Cerámica contributes to Sustainable Development Goal (SDG) No. 03: “Ensure healthy lives and promote well-being for all at all ages”, and to Sustainable Development Goal No. 08: “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.

SOCIAL ACTIONS

Roca Brasil Cerámica firmly believes in the importance of its role in social transformation, committing itself to having a positive effect on people's lives and on the communities around it. This chapter discusses methods of donating to company social action projects, which are a way to help make society more equitable and just. Through these donations, Roca Brasil Cerámica aims to

strengthen and support non-profit organizations, community initiatives and relevant projects to build an inclusive and sustainable future.

Through the Rouanet Law, Roca Brasil Cerámica donates values following the internal premise of supporting projects that are from the regions where its factories are located, in order to positively impact the local community.

Throughout this section, through your donations, the projects and initiatives supported by the company will be explored, emphasizing the advantages achieved.



Project Medicando Alegria helps patients at Hospital Infantil Waldemar Mon Astier in their recovery. From Monday to Thursday, every morning there are theater performances including music, circus and storytelling for children, their companions and hospital staff. During the ten months of presentations, the project aims to help more than 50,000 children and their families.

It is essential to recognize the anxiety and emotional discomfort often associated with these circumstances when it comes to people who need to be admitted to hospitals and their families. In this context, artistic initiatives play a significant role, offering a way to ease these anxieties and promote well-being. By participating in project activities, patients can find a way to relax, have a good time and move into a peaceful and inspiring environment. These artistic initiatives not only distract people who are going through difficult times, but also create a sense of togetherness, hope and self-expression. These artistic practices make the hospital more welcoming and human, reducing anxiety and improving the general well-being of patients.

The initiative also aims to: valuing life and the individual; stimulate interpersonal relationships; reduce patient stress; positively impact the care and recovery of children; help improve the general health of the patient; reflect on patient and family satisfaction and on the image of the hospital; collaborate for the well-being of hospital professionals and companions; promote the economy of economic resources; democratize culture; stimulate artistic curiosity; encourage the development of solidarity; promote interest in activities that imply quality of life.

The project aims to benefit patients, companions and professionals from hospital units. Presentations are commonly held at the front desk (longer presentations) and in patient rooms (shorter presentations). In this way, people who cannot move or are displaced can also participate.

Roca Brasil Cerámica donated R\$368,000 to the project. The social action took place at the Waldemar Mon Astier Children's Hospital, in Campo Largo, which is a reference in Paraná for the public care of children and adolescents.



Project Cordas do Iguaçu uses music as a tool to transform and promote social inclusion, offering opportunities and human development with the teaching of string instruments (violin, viola, cello, double bass, etc.).

The project began in 2011 in the metropolitan region of Curitiba, in Tunas do Paraná, one of the cities with the worst Basic Education Development Index (IDEB) in the state and among the four poorest cities in Paraná.

José Maria Magalhães, musician and director, is the creator of the project, a social initiative promoted by SESI in Barra do Ceará. In 1976, he began his studies there and today he is a member of the Orquestra Sinfônica do Paraná and founder of the Quarteto Iguaçu group.

Over the years that the project has been active, there has been an expansion to other cities, such as Curitiba and ferry Nova and, currently, the project has a team of fourteen teachers, offering free violin, viola and cello lessons to several students.

In its trajectory, Cordas do Iguaçu reached several high levels, participating in concerts by several well-known MPB artists, such as Fagner, Alceu Valença, and Daniel, among others. In addition, the project also creates exclusive presentations, such as Rock Classics and Cinema Classics.

In addition to classes, the project presents opportunities for participants, for example in 2020 the project was invited to participate in the Eurochestries festival, which brings together young musicians from different countries around the world. Furthermore, Cordas do Iguaçu was the only Brazilian orchestra to participate in the 2022 edition of Eurochestrie.

Roca Brasil Cerâmica is one of the sponsors of the project and donated an amount of R\$ 200,000 for it.



Project Visita da Coruja was enrolled by Toto Lopes. Toto has been an artist for 30 years and has been participating in voluntary work for many years. At Pequeno Príncipe Hospital, in Curitiba, for example, he has been a volunteer for 11 years.

Eight scenic performances were broadcast throughout the project. The objective was to raise awareness and democratize access to culture for patients, their families and employees of the Hospital Pequeno Príncipe, in Curitiba, who have restricted circulation due to hospitalization or due to COVID-19. In addition, eight remote reading circles for various public schools in Curitiba were part of the program.

Through stories, it is possible to get in touch with customs, beliefs, landscapes, smells, textures, symbols and many other characteristics that expose us to the peoples that originated them. In traditional narratives, it is possible to play with differences and continuities between different cultures, bringing the opportunity to create an environment of identity awareness and empathy and familiarity with what is different.

Roca Brasil Cerâmica contributed a total of BRL 65,000, equivalent to almost 40% of what was needed to carry out this project.

2022 GOALS

Life Cycle Assessment of products manufactured at the São Mateus do Sul Factory - In total, 3 ACVs were finalized: one for all products manufactured in SMS and another two for two specific lines, Pro and Pro Max.

Creation of environmental education programs at the factories
The Program is in progress and the project will unfold in actions that will be disclosed internally.

Launch of the Health, Safety and Environment Policy (of Grupo Lamosa) - The policy already exists and is being added in line with Lamosa's organizational models.

Expansion of recycling and conversion of values for the use of the environment and employees - Some modifications, such as the rest area, have already been carried out, while others are ready for implementation.

Increase in Employee Health campaigns - Carrying out Health carts, ergonomics, vaccination campaigns and adherence to campaigns such as Pink October and Yellow September.

Increased sales in the European market - Sales expanded to two European countries.

NEXT STEPS 2023 GOALS

Conclude the development stage of the environmental education project.

Implementation of the waste tracking system, using tracking sheets.

Increase in the percentage of recycled materials at the units and optimization of the disposal of production waste.

Update on chemical inventory.

Planting of seedlings in the internal area of the Campo Largo unit.

Increase in the number of formats with reduced thickness.





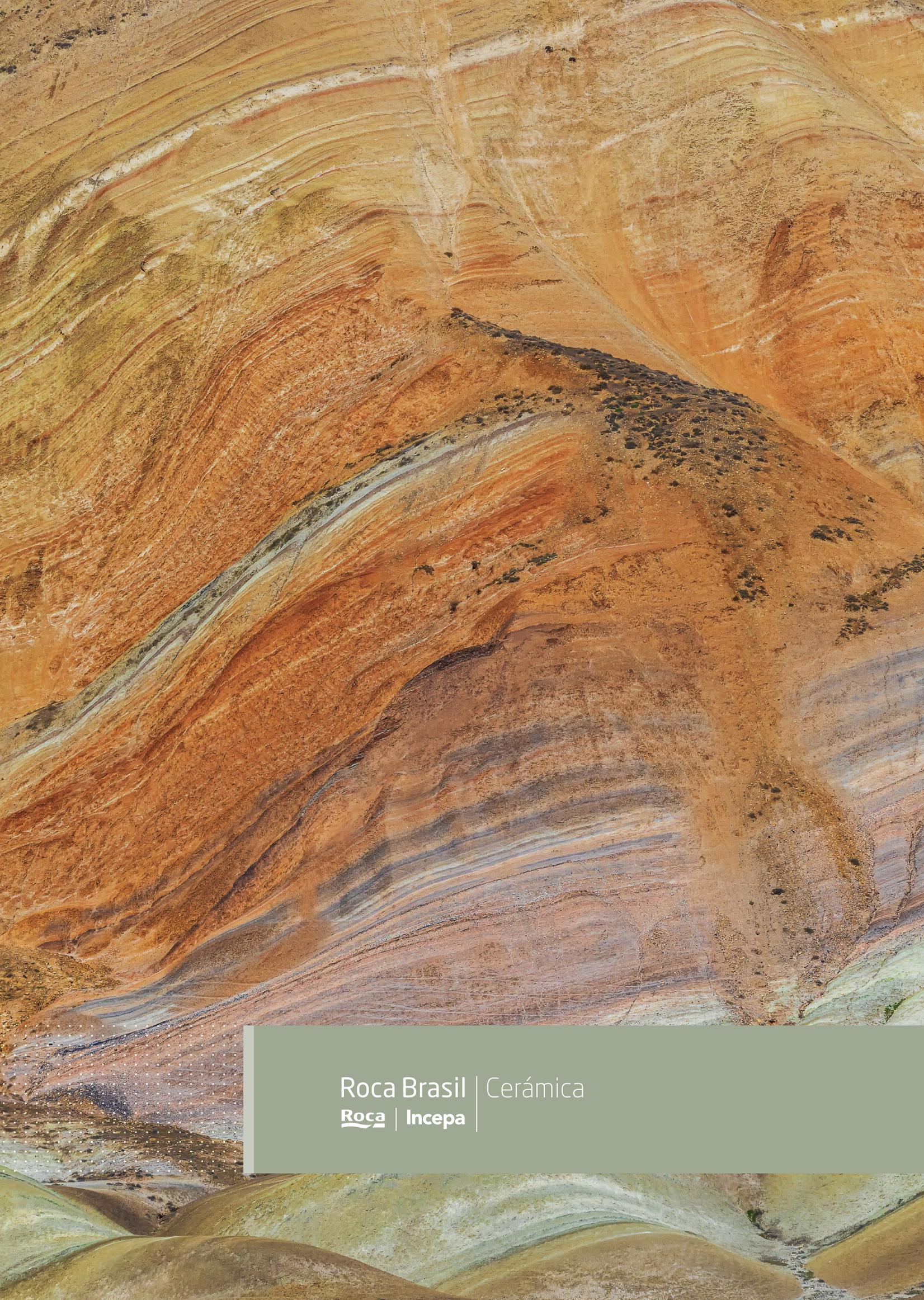
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