

# Integrated Report 2022





# The world is CHANGING – and so is Votorantim Cimentos

To BUILD OUR FUTURE we are in a process of constant transformation

We are made up of people and are part of peoples' lives. From the ground up to the highest point of a city, we work together to build partnerships and lasting relationships. We strive to generate value, grow sustainably and create a positive impact for everyone. The front cover of this Integrated Report illustrates our journey of evolution through the story of two employees from our Rio Branco do Sul plant, in the state of Paraná, in Brazil.

The illustration shows Reginaldo Luis Von Kruger, who has been with us for 31 years. He is a production coordinator and is responsible for implementing the Inclusive Bagging program at the Rio Branco do Sul plant, to promote the inclusion of women and people with disabilities in this activity. Reginaldo represents our history and our evolution. We are convinced that our past and our present are fundamental to building the future we want. We are proud of the history of character, respect and strength that we have built. We are a company made up of people who achieve, believe and build—always together and with excellence, to go further and further.

Reginaldo is next to his daughter Vanessa Christine Von Kruger, who has been with us for six years. She joined our company as an intern and now works as a reliability engineer in the same site as her father. Vanessa represents our sustainability practices and our vision of the future. We are a company that pursues outstanding results every day, in line with our long-term vision and entrepreneurial essence. In addition, we believe that each of us must strive to create a positive legacy for the people, the environment and the communities where we are present.

This cover translates the concept behind our new brand and Our VC Way, symbolizing the diversity of our people, products and businesses, combining tradition, innovation and our vision of the future, and representing our journey of constant evolution.

We are very proud to be a global building materials and sustainable solutions company. We work tirelessly to grow and expand our operations, developing products and services to increase our competitiveness and meet the needs of society. Every day, we have the opportunity to do something new, creating changes while remembering our history.

Reginaldo and  
Vanessa

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# Transparency

GRI 2-3, 2-5

As part of our commitment to transparency, we have been publishing our annual integrated report featuring environmental, social and governance information, along with economic and financial highlights. The document details the strategies, impacts, risks and opportunities of our operations around the world, and includes results and the ways by which Votorantim Cimentos manages the most relevant topics for the business and our main stakeholders. By doing so, we believe we can help our audiences better understand and monitor our achievements.

This report was prepared based on the guidelines of the International Integrated Reporting Council (IIRC), the GRI Standards, the Global Cement and Concrete Association (GCCA) guidelines and the Sustainability Accounting Standards Board (SASB) standards for the Building Materials industry. It also considers the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD) regarding the disclosure of climate-related risks and opportunities. The GRI and GCCA performance indicators are continuously monitored by our leadership team and are directly linked to the principles of the United Nations (UN) Global Compact and Sustainable Development Goals (SDG).

The financial information includes the businesses that are consolidated in our results and follows the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC), as well as the guidelines issued by the Brazilian Accounting Pronouncements Committee (CPC).

Non-financial information relating to ESG (environmental, social and governance) topics is based on corporate procedures and on environmental and quality standards and certifications. Information pertaining to Argentina, where we do not have direct control of the operations and have an indirect stake of 49%, is consolidated in the financial statements as equity and is not included in social and environmental indicators.

This report covers the period between January 1 and December 31, 2022. The financial statements related to the fiscal year ended on December 31, 2022 were audited by PwC and the non-financial information (ESG) was assured by Bureau Veritas.



Employee in one of our plants in Brazil



# Materiality

GRI 2-29, 3-1, 3-2

In 2022, we reassessed the topics that are considered material for the sustainable management of the company. The materiality process, which is carried out every two years, was coordinated by an external consultant and was based on the GRI Standards, the AA1000 standard (Accountability 1000) and the recommendations included in the S&P Global Corporate Sustainability Assessment (CSA) for the Dow Jones Sustainability Index (DJSI). The assessment considered the concepts of double materiality (consideration of financial and non-financial impacts) and dynamic materiality (ongoing feedback from stakeholders and consideration of how current and future issues are or may become relevant to the company).

The materiality assessment included the participation of different stakeholder groups (employees, customers, suppliers, community members, partners in social projects, financial markets and non-governmental organizations), who responded to online questionnaires available in English, French, Portuguese, Spanish and Turkish. We received 352 responses prioritizing topics considered to be of high relevance.

Another questionnaire was administered to 19 members of management (board members, officers, general managers and managers), who ranked these topics based on Votorantim Cimentos' strategy and 2030 Commitments, as well as on their perspectives of the impacts of each of these topics on the company's legacy.

The identification of material topics reflects thoughtful prioritization on the part of management. There was an emphasis placed on the assessment of the main current and potential impacts of each topic. Votorantim Cimentos' Values and 2030 Commitments, which are in line with the UN Agenda 2030 for Sustainable Development, were also considered.

As a result of this process, seven topics were identified as material:

- | **3 environmental topics:** Climate change; Air emissions; and Responsible use of materials, waste and circular economy
- | **2 social topics:** Diversity and inclusion; and Safety, health and well-being
- | **2 governance topics:** Ethics, integrity and transparency; and Innovation and technology

Compared to the 2020 materiality assessment, five topics were maintained (Climate change; Responsible use of materials, waste and circular economy; Health, safety and well-being; Ethics, integrity and transparency; and Innovation and technology), one topic was revised (Diversity), one topic was added (Air emissions) and two topics were excluded, although they continued to be managed by the organization and are included in this report (Risk and crisis management and Responsible relationship with the communities).

## Phases of the materiality assessment

1

### IDENTIFICATION OF TOPICS

- | Business strategy, purpose and values
- | Internal and external commitments (VC 2030, Global Compact, SDGs, CCCA, etc.)
- | Industry benchmarking (15 Brazilian and international companies)
- | Business scenarios and trends
- | Topics identified by experts and organizations that set sustainability standards (SASB, Rep Risk, Dow Jones Sustainability Index, Sustainalytics)

2

### ASSESSMENT OF RELEVANCE

- | Online consultation with stakeholders and senior management: 352 responses from stakeholder groups and 19 responses from company leaders
- | Mapping of actual and potential impacts

3

### PRIORIZATION

- | Probability and magnitude of impacts identified by management
- | Perceptions of the stakeholders
- | List of topics that received the highest scores in the consultations
- | Concept of double materiality (financial and non-financial aspects – ESG)

4

### VALIDATION

- | Approval of material topics by management
- | Consolidation of a final list

5

### CONTENT DEFINITION

- | Definition of indicators and metrics to be reported based on industry standards (GRI, GCCA, SASB)
- | Correlation with Global Compact and SDG principles



GRI 3-2, 3-3

The GRI and AA1000 (2015) Standards were the bases for the materiality assessment and stakeholder engagement. The process, conducted by the consulting firm Contadino, identified seven material topics that informed the organization and content of this report.



**HUMAN RIGHTS**

- 1 Businesses should support and respect the protection of internationally proclaimed human rights, and
- 2 make sure that they are not complicit in human rights abuses.

**LABOR**

- 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 4 the elimination of all forms of forced and compulsory labor;
- 5 the effective abolition of child labor; and
- 6 the elimination of discrimination in respect of employment and occupation.

**ENVIRONMENT**

- 7 Businesses should support a precautionary approach to environmental challenges;
- 8 undertake initiatives to promote greater environmental responsibility; and
- 9 encourage the development and diffusion of environmentally friendly technologies.

**ANTI-CORRUPTION**

- 10 Businesses should work against corruption in all its forms, including extortion and bribery.

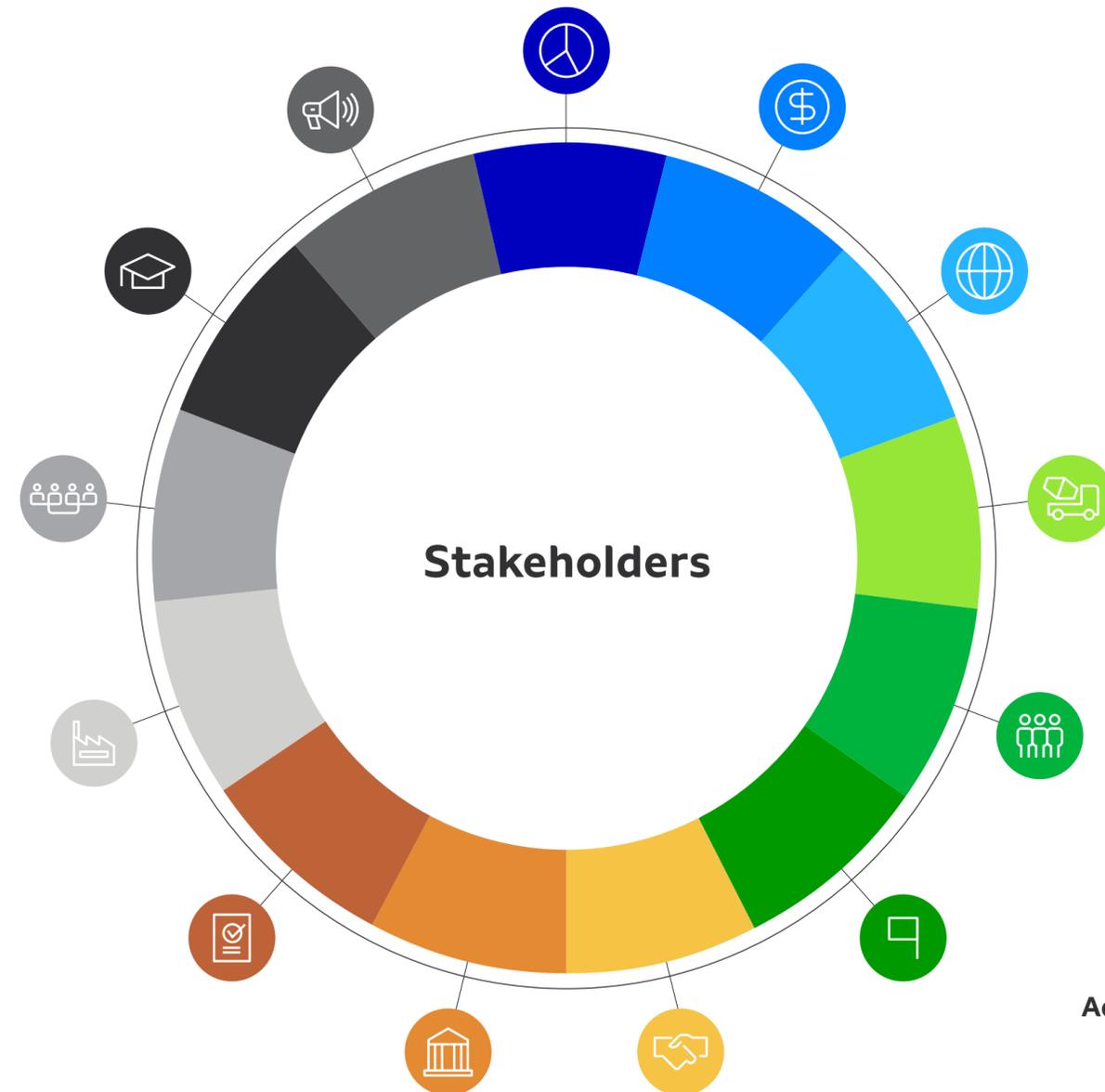
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# Our stakeholders

The stakeholder groups with whom we engage were determined based on the analysis of economic, social and environmental impacts, actual or potential, that our businesses have on individuals, groups of individuals and/or organizations. At the same time, we assessed how these stakeholders can affect our activities based on their demands and perceptions.



Stakeholders	Communication and engagement channels
<b>Shareholders</b>	Board of Directors meetings, results conferences, Integrated Report.
<b>Financial institutions</b>	Financial reports, investor briefings, Integrated Report.
<b>Communities</b>	Public meetings and consultations, open-door/plant tour programs, community councils, complaint mechanisms, Ethics Line, websites, Integrated Report, social media.
<b>Customers and consumers</b>	Website, apps (VC Online, Obra Fácil, Engemix app, VC Ajuda), social media, loyalty programs (such as Juntos Somos+; Asmenty; and Mercim), SAC, CRC, Integrated Report, satisfaction surveys, email marketing.
<b>Employees and contractors</b>	Workplace, ComVC, Psu Bulletin Board, internal town halls, Compliance Day, NesriNews (Tunisia), Construyendo contigo (Spain), Jousour Attawassoul (Morocco), Coffee/Tea with the CEO, discussions with the leadership team, meetings, performance evaluations, climate surveys, Integrated Report, events, intranet.
<b>Labor unions</b>	Negotiations, hearings, positive dialogue agenda and lawsuits.
<b>Suppliers and partners</b>	Meetings, apps (drivers app, Mi Ruta), websites, social media, Integrated Report.
<b>Government agencies</b>	Meetings, public consultations, website, Integrated Report.
<b>Regulatory bodies</b>	Meetings, participation in governance bodies, regulatory filings, websites, Integrated Report.
<b>Industry associations</b>	Meetings, participation in governance bodies, websites, Integrated Report, social media.
<b>Social organizations</b>	Meetings, participation in governance bodies, websites, Integrated Report, social media.
<b>Academia and research institutes</b>	Meetings, websites, Integrated Report, social media.
<b>Influencers/media</b>	Meetings, press releases, websites, industry publications, Integrated Report, social media.



# Lasting Results

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## GRI 2-22

In 2022, we faced significant socioeconomic challenges worldwide, resulting from the COVID-19 pandemic and the Russia-Ukraine war. In addition to the human impact, the conflict affected supply chains, sent energy and fuel prices soaring, and shook the global financial market, with a sharp rise in inflation. Despite this environment, we maintained the necessary strength, in line with our principle of “flexible solidity”, and operated with excellence, safety, ethics and integrity, adapting to the increasingly accelerating changes and challenges around the world.

Aligned with the Growth and Positioning pillar of our strategy, we continued to strengthen our presence in mature markets. We advanced the integration of the businesses added to our portfolio in 2021 (McInnis Cement, in Canada; Cementos Balboa, in Spain; and Superior Materials and Valley View, in the United States) and received approval from local authorities to conclude the purchase of some of the operations of Heidelberg Materials. The site in Málaga is among the most modern and sustainable plants in Spain. The incorporation of this asset will certainly enable significant gains for our ESG agenda.

We are a vertically integrated company, and we believe that business transformation drives solid results. Therefore, we continued to grow our adjacent businesses.

“Despite this environment, we maintained the necessary strength, in line with our principle of 'flexible solidity' and operated with excellence, safety, ethics and integrity, adapting to the increasingly accelerating changes and challenges around the world.”

**Luiz Pretti,**  
Chairman of Votorantim Cimentos’  
Board of Directors





We launched new types of mortars, expanded our aggregate sites and grew in the concrete market (with Engemix), in the waste management segment (with Verdera) and in the aglime business (with Viter). Aligned with this strategy, in 2022, we launched Motz, our carrier company that will connect paths and locations across Brazil through a digital platform.

As part of the evolution of our organizational culture, we launched a new corporate branding that reflects our Way of Being, Working and Thriving and is also aligned with the Sustainability pillar of our strategy and our 2030 ESG Commitments. Our “V” now has a new shape, and our global branding is more modern and contemporary; it symbolizes the diversity of our people, products and businesses, and honors the company’s 86-year legacy by combining tradition, innovation and our vision of the future.

Reinforcing our 2030 Commitments, through which we have established sustainability goals and targets to be achieved by the end of this decade, we approved the creation of a Sustainability and Innovation Committee in 2022. The new committee will come into effect in 2023, replacing the Decarbonization and ESG working group, and will support us in the evolution of environmental, social and governance issues.

We are ready to transform our business and adapt to new needs, while honoring our past, living in the present and focusing on the future we want to create. The journey will always be long and challenging, but we believe we are on the right track and will continue to pursue lasting results and create a positive legacy for society.

**Luiz Pretti**

Chairman of Votorantim Cimentos’ Board of Directors



Matrix packing

“The journey will always be long and challenging, but we believe we are on the right track and will continue to pursue lasting results and create a positive legacy for society”



# Trust in the Future

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## GRI 2-22

In 2022, we once again remained true to our principles and values and, consequently, celebrated another year of achievements and favorable results. We focused on offering products and services that meet the needs of our customers; diversified our portfolio; put the safety of our people first; promoted diversity in the workplace; leveraged innovation and technology to reduce our carbon footprint; made investments in expansion projects; increased our efficiency and competitiveness; and strengthened our relationship with the communities around us.

These initiatives ensured progress in all areas and strong financial results, despite a global environment of economic slowdown, with rising inflation, skyrocketing energy prices and high volatility. In line with the Financial Performance pillar of our strategy, our net revenue was R\$25.8 billion (16% higher than the previous year).

We made important progress on our decarbonization agenda, which is certainly one of the most relevant issues affecting the cement industry globally. And we challenged ourselves to go even further, by setting a more aggressive ambition for the future. With the approval of the Science Based Target initiative (SBTi), we want to reach a net emission of 475 kg CO<sub>2</sub>/tonne of cementitious product by 2030, which is 8.7% lower than our previous commitment (520 kg CO<sub>2</sub>/tonne of cementitious product).

“In 2022, we once again remained true to our principles and values and, consequently, celebrated another year of achievements and favorable results.”

**Marcelo Castelli,**  
Global CEO of Votorantim Cimentos





To achieve our new decarbonization target and to produce carbon-neutral concrete by 2050, we continued to invest in technologies for the use of alternative fuels and the development of clinker substitutes. We also accelerated our investments to increase the percentage of renewable energy sources in our energy matrix and in the development of new technologies.

Our biggest commitment—what moves us forward every day—is to continue to make our company more sustainable, both in the short and long term. To achieve that, we have safety as a non-negotiable value, ensuring that our teams practice safe behaviors and minimize risks. Throughout the year, we saw a meaningful improvement in our safety indicators. We had our lowest incident frequency rate in recent years (for both employees and contractors) and ended 2022 with zero fatalities in our operations.

We continued to work on initiatives to promote diversity, since we believe this approach broadens our perspectives of the world, creating both new paths and new possibilities. In 2022, we increased gender diversity among our employees, improved our inclusion rate for people with disabilities and increased the number of women in leadership positions.

After two years of restrictions caused by the COVID-19 pandemic, we were able to resume many of our in-person activities in the communities where we operate, with emphasis on volunteer initiatives in places of high vulnerability. In line with our efforts to promote social transformation, we invested in Soma, an innovative social-rent project that will provide

low-income families in the center of the city of São Paulo with access to decent housing.

As we like to say, we always hope for the best, while remaining well positioned and prepared for the worst. We are confident that we are on the right path, with defined strategies, as we continue to invest in people and technologies to build a better and more sustainable world.

**Marcelo Castelli**

Global CEO of Votorantim Cimentos

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# 03.

## Votorantim Cimentos

- 86-year legacy
- Operations and activities around the world
- Awards and Recognition

Employee in one  
of our plants in Brazil



# 86-year legacy

GRI 2-1, 2-6

We are Votorantim Cimentos S.A., a building materials and sustainable solutions company with 13,089 employees. We seek sustainable growth and continued competitiveness through solutions and initiatives that generate a positive impact for the company and society.

Since 1936, we have been established in Brazil, with corporate headquarters located in São Paulo and operations in all regions of the country. In addition to Brazil, we are present in 10 other countries, on four continents: Argentina, Bolivia, Canada, Luxembourg, Morocco, Spain, Tunisia, Türkiye, United States and Uruguay.

Our shares are 100% owned by Votorantim S.A., an investment holding company with businesses in building materials, finance, aluminum, renewable energy, mining and smelting, orange juice, infrastructure, long steel, real estate, investments, environmental management and energy transition. Together, the portfolio companies have approximately 500 operating sites around the world, with more than 40,000 direct employees.

Votorantim Cimentos follows a business-to-business (B2B) model, with strong participation in retail, industry, infrastructure, construction and agribusiness. We serve the private, public and civil construction sectors. The verticalization of our operations is one of the hallmarks of our portfolio, which includes cement, concrete, aggregates, mortars, grouts, finishing products, plasticizers, aglime and waste management (co-processing).

Employee in one  
of our plants in Brazil

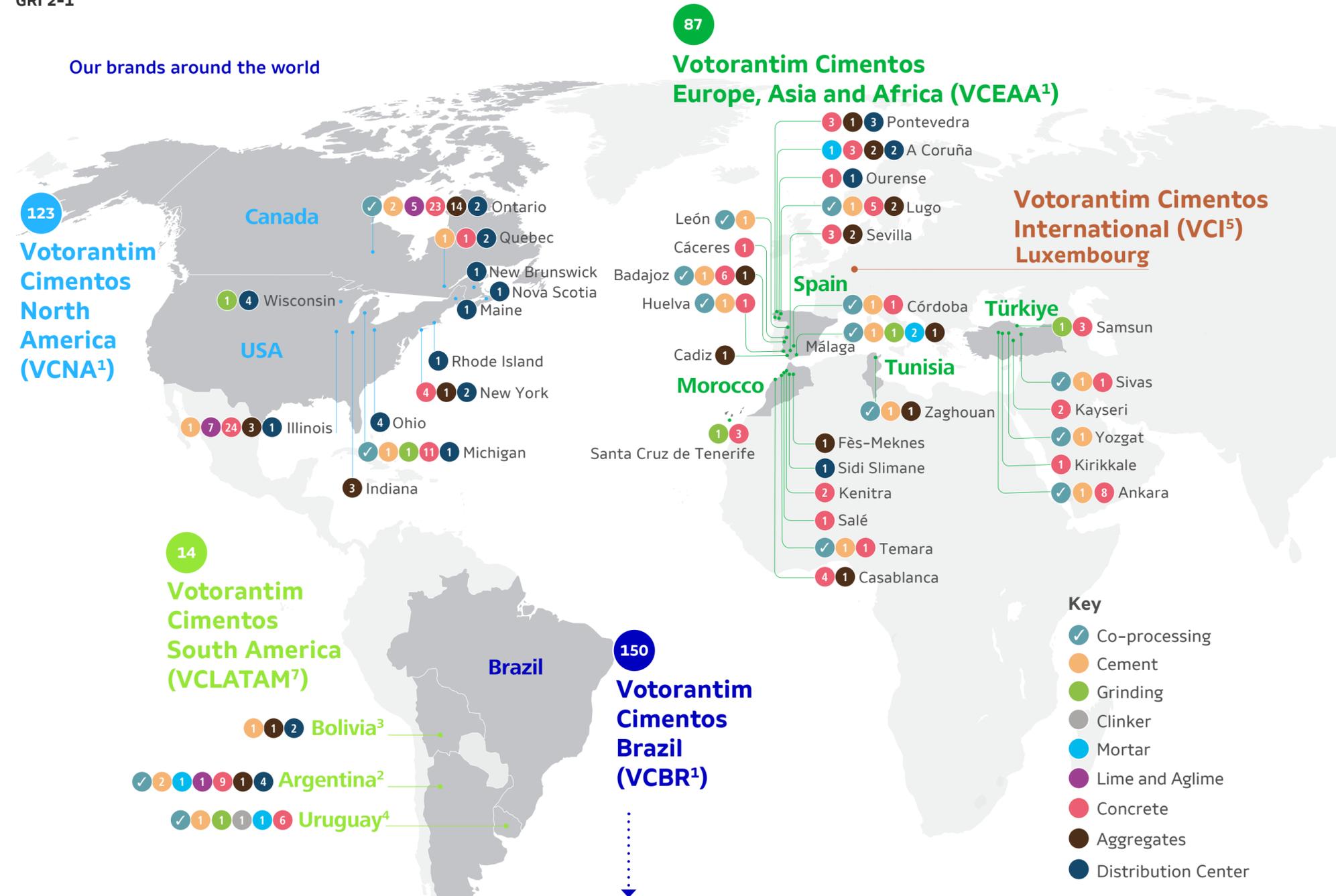




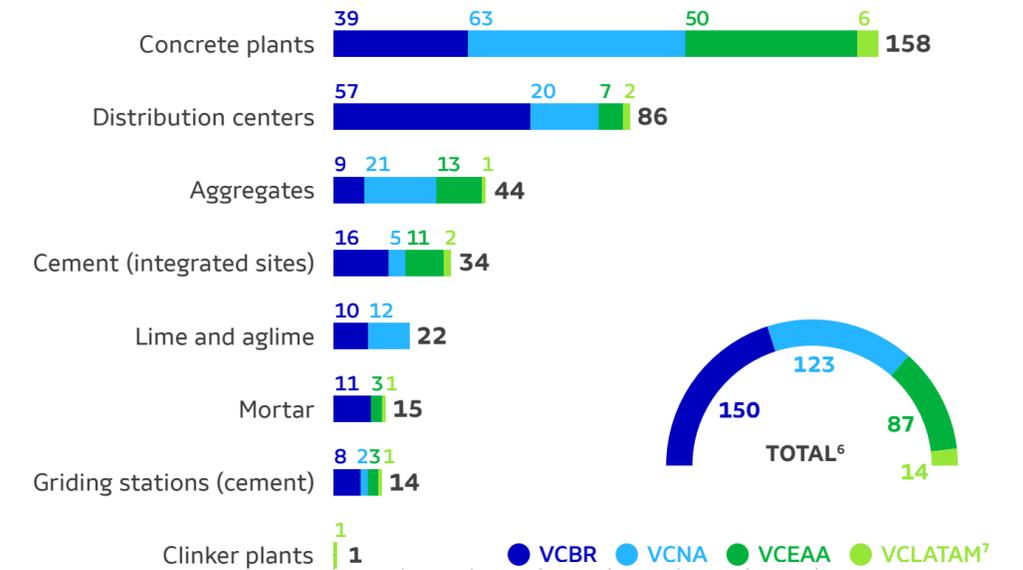
# Operations and activities around the world

GRI 2-1

Our brands around the world

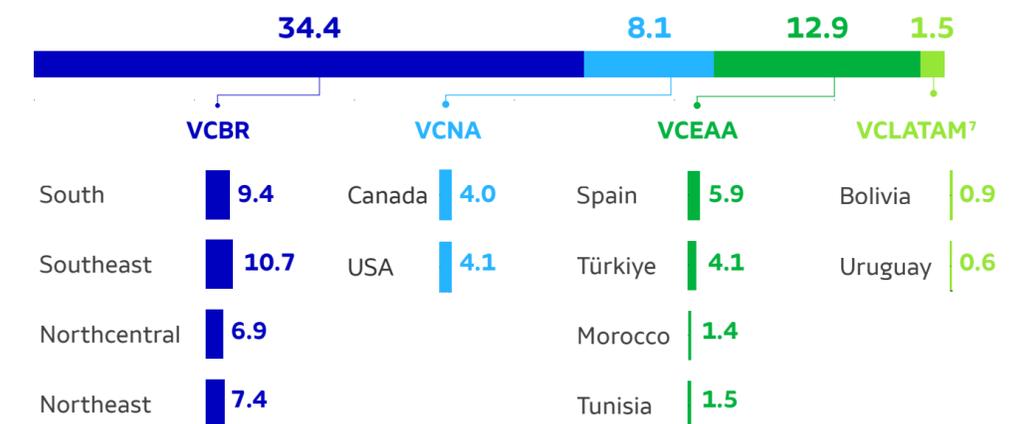


## Our facilities



## Installed cement capacity in million tonnes

Total global cement capacity: **56.8 million tonnes**



<sup>6</sup>The total does not include sites with co-processing technology, since these are already accounted for in cement plants. Considers the active sites in 2022.  
<sup>7</sup>Figures for Bolivia and Uruguay only, since Argentina's operations are not consolidated.

# Votorantim Cimentos Brazil (VCBR)

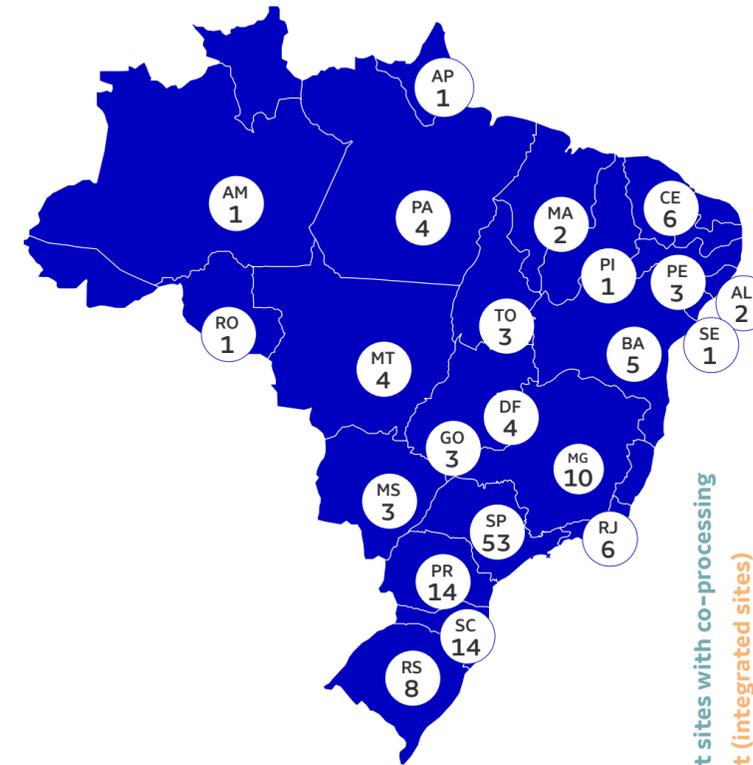
Cement sites with co-processing  
 Cement (integrated sites)  
 Grinding stations (cement)  
 Clinker plants  
 Mortar  
 Lime and aglime  
 Concrete plants  
 Aggregates  
 Distribution centers

State	City	Cement sites with co-processing	Cement (integrated sites)	Grinding stations (cement)	Clinker plants	Mortar	Lime and aglime	Concrete plants	Aggregates	Distribution centers
ALAGOAS	Arapiraca									●
	Maceió									●
AMAPÁ	Macapá									●
AMAZONAS	Manaus									●
BAHIA	Camaçari					●				
	Feira de Santana									●
	Itabuna									●
	Luis Eduardo Magalhães (LEM)									●
	Salvador							●		
CEARÁ	Crateús									●
	Fortaleza (Mucuripe)							●		●
	Juazeiro do Norte							●		●
	Pecém (city of Caucaia)			●		●				●
	Sobral	✓	●							
DISTRITO FEDERAL	Brasília							●		
	Sobradinho	✓	●			●	●			
GOIÁS	Edealina	✓	●							
	Goiânia							●		●
MARANHÃO	Imperatriz									●
MATO GROSSO	Cuiabá	✓	●	●		●				
	Nobres	✓	●				●			
MATO GROSSO DO SUL	Campo Grande									●
	Corumbá	✓	●						●	
MINAS GERAIS	Itaú de Minas	✓	●			●	●		●	
	Pratápolis						●			
	Três Corações									●
	Uberaba									●
	Uberlândia							●		●
PARÁ	Belém (city of Ananindeua)					●				●
	Primavera	✓	●							
PARANÁ	Santarém									●
	Cascavel									●
	Colombo							●		
	Curitiba							●		
	Guarapuava									●
	Londrina							●		●
	Maringá							●		●
	Ponta Grossa									●
	Quatro Barras									●
	Rio Branco do Sul	✓	●			●	●		●	

<sup>1</sup>Slag grinding

Cement sites with co-processing  
 Cement (integrated sites)  
 Grinding stations (cement)  
 Clinker plants  
 Mortar  
 Lime and aglime  
 Concrete plants  
 Aggregates  
 Distribution centers

State	City	Cement sites with co-processing	Cement (integrated sites)	Grinding stations (cement)	Clinker plants	Mortar	Lime and aglime	Concrete plants	Aggregates	Distribution centers
PERNAMBUCO	Caruaru									●
	Paulista			●						
	Petrolina									●
PIAUÍ	Teresina								●	
RIO DE JANEIRO	Cantagalo	✓	●							
	Rio de Janeiro							●		●
	São Gonçalo									●
	Santa Cruz <sup>1</sup>			●						
	Volta Redonda									●
	RIO GRANDE DO SUL	Caxias do Sul								●
	Canoas							●		
Esteio			●		●				●	
Passo Fundo									●	
Pinheiro Machado		●								
Sapucaia do Sul							●			
RONDÔNIA	Porto Velho			●						
SANTA CATARINA	Blumenau									●
	Chapecó									●
	Criciúma							●		●
	Campos Novos							●		●
	Florianópolis							●		●
	Imbituba			●						
	Itajaí			●						●
	Joinville							●		●
	São José							●		
	Vidal Ramos	✓	●							
	Americana							●		
	Araçariçuama								●	
	Araçatuba									●
	Araraquara							●		●
	Assis							●		
	Atibaia							●		
Barueri					●					
Bauru									●	
Botucatu							●			
Buri									●	
Cajamar					●		●		●	
Campinas							●		●	
Cotia							●			
Cubatão									●	
Diadema									●	



Cement sites with co-processing  
 Cement (integrated sites)  
 Grinding stations (cement)  
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 Distribution centers

State	City	Cement sites with co-processing	Cement (integrated sites)	Grinding stations (cement)	Clinker plants	Mortar	Lime and aglime	Concrete plants	Aggregates	Distribution centers
SÃO PAULO	Embu das Artes									●
	Guarulhos							●		●
	Itapeberica da Serra								●	
	Itapeva						●		●	
	Itapetininga							●		
	Itu							●		
	Jundiaí							●		
	Limeira					●		●		
	Lins							●		
	Osasco									●
	Ourinhos							●		●
	Ponte Alta						●	●		
	Porto Ferreira							●		
	Ribeirão Preto							●		●
	Regente Feijó							●		●
	Salto de Pirapora								●	
	Santa Isabel								●	
	Santo André							●		
	São José do Rio Preto							●		●
	São José dos Campos									●
	São Paulo							●		
Sorocaba							●			
Votorantim/Santa Helena	✓	●								●
SERGIPE	Laranjeiras	✓	●							
	Xambioá	✓	●					●	●	
TOCANTINS	Xambioá	✓	●				●	●		



# Awards and Recognition

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We received awards and recognition for many of our achievements in different regions. The 2022 highlights included:

**ANAMACO Awards** – Votorantim Cimentos was the winner of a Master Award in the Cement category, in the 31<sup>st</sup> ANAMACO (National Association of Construction Material Traders) Awards competition.

**The Best of Dinheiro** – Votorantim Cimentos had the highest score among companies in the industry in the Innovation and Quality category and ranked 187 out of 1,000 companies, in the 19<sup>th</sup> The Best of Dinheiro Awards presented by Isto É Dinheiro magazine. Votorantim Cimentos ranked 2<sup>nd</sup> in the Building Materials industry, 2<sup>nd</sup> in the Financial Sustainability, Human Resources and Social Responsibility categories and 3<sup>rd</sup> in Corporate Governance.

**Chairman appointment** – The CEO of VCNA, Filiberto Ruiz, was named Chairman of the Board of Directors of the Portland Cement Association (PCA), an association that plays a critical role in support of the cement and construction industries. This appointment is a testament to his leadership and reflects the prominent role that our company plays in the advancement of our industry toward a more sustainable future.

**Cement Industry Employers Association** – Our Sivas plant won an award in the Zero Accidents category for the longest time without lost-time injuries. In addition, Votorantim Cimentos Türkiye received recognition as the union member with the highest participation in safety training.



Employees in the  
Rio Branco do  
Sul plant, Brazil



**Companies that Best Communicate with Journalists** – For the fourth consecutive year, we received this award in the Civil Construction category. This recognition is based on an annual survey including 25,000 journalists from all over Brazil conducted by Negócios da Comunicação magazine and the Center for Communication Studies (CECOM), and audited by BDO Brazil consultancy.

**CR Reporting Awards** – Our 2020 Integrated Report was considered the report with the best integration of corporate and sustainability information and the organization’s financial results. We were also recognized in the Relevance and Materiality category for our good transparency practices.

**Diversity Leading Company** – This award, which recognized our efforts to embrace diversity in all its forms, was based on a review and audit of our people management policies and practices, including our diversity and inclusion policies. This recognition was granted to VC Spain and the VCEAA Corporate office. In addition, we received the Empowering Women’s Talent seal in recognition of the company’s efforts to promote female talent and leadership.

**Energy Efficiency** – The Charlevoix, Michigan (U.S.) plant earned top honors from the Portland Cement Association (PCA), the country’s leading cement industry association, for excellence in energy management.

**Environmentally Sustainable Company Green Seal** – The Itapeçerica da Serra aggregates site received the Environmentally Sustainable Company Green Seal from the local government. To obtain this certificate, the site’s environmental requirements were audited by a commission of environmental inspectors from the municipal government, which validated the two-year certification.

**Época Negócios 360º** – Votorantim Cimentos ranked 127<sup>th</sup> among the 150 best companies in a survey conducted by the Dom Cabral Foundation evaluating six dimensions: Financial Performance, Corporate Governance, Innovation, Vision of the Future, People and Social and Environmental Approach. Votorantim Cimentos ranked 3<sup>rd</sup> in Social and Environmental Approach in its industry.

**ESG Exame** – For over 20 years, Exame magazine has recognized organizations that have made a relevant contribution to sustainable development and for the creation of a more vibrant and diverse economy. In 2022, this survey was conducted by IBMEC and recognized 45 companies in 15 categories. Of the three companies recognized in the Civil Construction and Real Estate category, Votorantim Cimentos is the only manufacturer of building materials and sustainable solutions.

**Estadão Better Companies** – In 2022, Votorantim Cimentos ranked 1<sup>st</sup> in Sustainability in the Mining, Cement and Oil sector and 14<sup>th</sup> in the overall ranking. In the Innovation category, it ranked 2<sup>nd</sup> in the sector. In Corporate Governance, it ranked 3<sup>rd</sup> in the sector.

**Exame Best and Largest Award** – Votorantim Cimentos won the Exame Best and Largest Award in the Real Estate and Civil Construction sector, based on an assessment done by Exame magazine in partnership with IBMEC. In the overall ranking of the 738 largest companies, Votorantim Cimentos placed 40<sup>th</sup>.

**Excellence in Concrete Construction** – Sponsored annually by the American Concrete Institute (ACI), the Excellence in Concrete Construction Awards recognizes exceptional concrete construction from around the world. Projects are evaluated in seven categories and are recognized for their degree of innovation, complexity, achievement and value for



the way in which concrete was used in their construction. Engemix was recognized for the Faria Lima Plaza commercial building, in São Paulo. This was the company's second consecutive award (in 2021 Engemix was recognized for a residential building, also in São Paulo).

**GPTW Bolivia 2022** – Itacamba Cimentos featured in the Great Place to Work Institute's ranking of the best companies to work for in Bolivia, in the seventh position among companies with 200 to 700 employees.

**IAAP Convention** – During the annual Illinois Association of Aggregate Producers (IAAP) Convention, we received five awards related to our Prairie Material and Prairie Aggregates performance: Sustainability award, Rock Solid Excellence award, Rock Solid Gold award, Environmental Excellence Platinum award and Environmental Excellence Gold Award.

**Ontario Concrete Awards** – We received the Specialty Innovation Technology Award for CBM's Concrete Solutions TrueCure, along with our partners EXACT Technology, SKYGRid Construction, and Jablonsky, AST & Partners.

**Paul Harris 2022** – The Chuquiago Marka Rotary Club recognized the social responsibility initiatives and the sustainable approach of Itacamba Cimentos in Bolivia.

**Prevencionar** – Votorantim Cimentos Spain was the winner of the Prevencionar Award in the Health and Wellness category. The award recognizes companies that stand out in advocacy, encouragement and support in the area of occupational health, safety and well-being.

**Progressive Rehabilitation** – Our Canadian Building Materials

(CBM) business was recognized by the Ontario Stone Sand and Gravel Association (OSSGA) for excellence in the progressive rehabilitation of lands used for aggregates mining and extraction.

**Resilience Award** – Presented to Itacamba Cimentos by the European Union, National Chamber of Industries, InfoRSE portal and Gente Motivando Gente magazine in recognition of our work in the areas of Employability and Solidarity.

**Safety Excellence** – Our U.S. based Prairie Materials' aggregates operations were recognized by the Illinois Association of Aggregates Producers (IAAP) and the Indiana Mineral Aggregates Association (IMAA).

**São Paulo Seal of Diversity** – We received the São Paulo Seal of Diversity, which is awarded by the government of the state of São Paulo to public, private and civil society organizations that include the issue of diversity in their human resources management, in recognition of good organizational practices, such as a strategic approach to equal rights and the promotion of citizenship.

**Sustainable Development Award** – The Spanish Aggregates Association presented the Sustainable Development Award to Prebetong Áridos (for its project Building Excellence in Safety through Technology – BEST), in the Health and Safety category, and to the Cortijo Nuevo pit in Seville, in the categories of Contribution to the Economy and Added Value to Society, and Restoration.

**Top Employer 2022** – Votorantim Cimentos Spain and the VCEAA Corporate office were recognized by the Top Employers Institute, a global authority that recognizes excellence in people management practices.

**Top of Mind 2022** – For the tenth consecutive year, we received the top of mind award from Amanhã magazine, underscoring our reputation and the quality of our brand. For 32 years, the magazine has sponsored this survey (a benchmark in the Brazilian state of Rio Grande do Sul for its methodological rigor) on the best-known and most recognizable brands. Our Votoran brand was top of mind in the Cement category, with 28.4% recall among the people in the state.

**Top of Mind Revenda Construção** – Promoted by the Revenda Construção magazine, this award recognizes companies with the best evaluation by building material resellers. Votorantim Cimentos won 1<sup>st</sup> place in the Cement category, and Votomassa won 2<sup>nd</sup> place in the Mortar category and 3<sup>rd</sup> place in the Grout category.

**Valor 1000** – Votorantim Cimentos ranked 50<sup>th</sup> among the 1,000 largest companies and 9<sup>th</sup> in the Building and Finishing Materials sector, in which it was also considered one of the largest companies by net revenue.

**Valor Innovation Brazil** – This is a survey carried out by the Valor Econômico newspaper in partnership with the Strategy & PwC consulting firm that measures the level of innovation in organizations. In 2022, Votorantim Cimentos ranked 129<sup>th</sup> among the 150 Most Innovative Companies and 4<sup>th</sup> in the Building Materials sector.

**Visão Agro 2022 Award** – For the 19<sup>th</sup> year, this award recognized companies that stood out in agribusiness transformation and production areas in Brazil. Viter was selected by the technical jury to receive the award in the Limestone category.



Employee in  
one of our  
plants in Brazil

# 04.

## 2022 Highlights



## FINANCIAL CAPITAL

### Solid and lasting results:

despite significant macroeconomic challenges globally, we maintained our operational resilience with a focus on cost management.

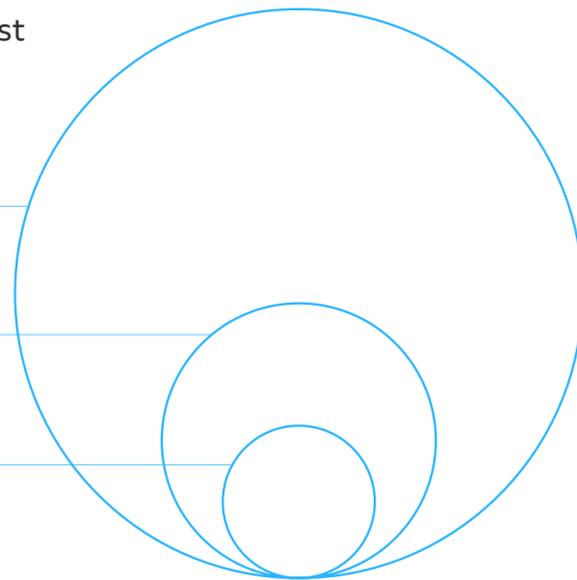
**R\$25.8 billion** net revenue

**R\$4.9 billion** adjusted EBITDA

**R\$1.1 billion** net profit

**1.55x** leverage

**R\$2.5 billion**  
in gross debt with sustainability-linked KPIs



## HUMAN CAPITAL

### New corporate branding

launched worldwide

**21%**

of leadership positions held by women

**278,000+**

hours devoted to training, development and education

**Increase**

in the percentage of people with disabilities

**Investment**

in accessibility and inclusion

**Zero**

fatalities in our operations



## MANUFACTURED CAPITAL

**Integration** of acquisitions and business combinations carried out in 2021: Cementos Balboa in Spain, McInnis Cement in Canada, Valley View Industries and Superior Materials in the United States.

**Approval** of the acquisition of Heidelberg Materials, in Málaga (Spain)

**36.8 million** tonnes of cement sold

**8.4 million** cubic meters of concrete sold

**23.7 million** tonnes of aggregates sold

**Investment** in a cement grinding and dispatch operation in Uruguay

**R\$2.0 billion** Capex investments



## NATURAL CAPITAL

**Approval** of a new decarbonization target by the Science Based Target initiative (SBTi)

**Commitment** to reach 475 kg of CO2/tonne of cementitious products by 2030

**Investment** in wind farms in VCBR and solar energy in VCEAA

**579 kg** of net CO2 emissions per tonne of cementitious product

**24%** reduction of CO2 net emissions compared to 1990

**73.9%** clinker/cement factor

**26.5%** of alternative fuels

**22.9%** of renewable energy



## INTELLECTUAL CAPITAL

### Participation

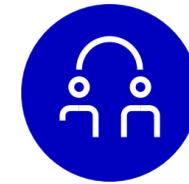
in GCCA's Innovandi program

### First Distribution Center

with Industry 4.0 technology

### Study and development of new technologies:

Cement Technological Radar, hydrogen application, CCUS (carbon capture, utilization and storage)



## SOCIAL AND RELATIONSHIP CAPITAL

### Investment in innovation

with social impact: Soma project

### Rede Transformar:

agenda in collaboration with suppliers to promote housing initiatives and the preservation of standing forests

### Return

of in-person volunteer activities

**R\$18.1 million** in external social investments

**226** sites with engagement plans

**6.7%** of employees engaged in volunteer activities

**441** initiatives sponsored



Açaí plantation in the state of Pará, Brazil

# 05. Sustainability and Strategy

- Evolving is Our Brand
- Sustainability and 2030 Commitments
- The Path to Decarbonization
- ESG ratings



# Evolving is Our Brand

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We are very proud to be a global building materials and sustainable solutions company. In recent years, we published our 2030 Sustainability Commitments, redefined our strategy (Our VC House) and revised our organizational culture (Our VC Way).

We grew and expanded our operations and developed products and services to increase our competitiveness and meet the needs of society. To capture our transformation, in 2022 we launched our new corporate branding: more contemporary and diverse. It symbolizes the diversity of our people, products and businesses combined with tradition, innovation and a vision of the future. The new visual identity seeks to connect our history, strategic objectives and sustainability commitments with the process of transformation and growth in current and new segments and activities.

“We want to create changes while remembering our history. We believe in sustainable growth through solutions that produce a positive impact and connect with people—hence the need to translate all that into a new brand that communicates everything we do, from the ground to the highest point of a city”, said Geraldo Magella, global general manager of Corporate Communications and Brand Management.

The new shape of the brand’s “V” symbol honors our legacy and introduces a new perspective that connotes a movement toward the future. The combination of new colors (our well-recognized shade of **blue** with **green**, representing our 2030 Commitments and sustainability practices) and new graphics and typeface reflect the company’s solidity, flexibility and alignment with Votorantim Cimentos’ global business portfolio.



“We want to create changes while remembering our history. We believe in sustainable growth through solutions that produce a positive impact and connect with people.”

**Geraldo Magella**, global general manager of Corporate Communications and Brand Management



# 2030 Strategy

Our 2030 strategy is represented by a house, a symbol of construction. Our foundations represent the values we do not compromise: Health and Safety (always first); Compliance and Risk Management; Our Way of Being, Working and Thriving; Low Indebtedness; Shareholder Remuneration; and Investment Grade.

Our value agenda is made up of five strategic pillars that support our house and guide our efforts and our aspirations, with specific short-, medium- and long-term initiatives:

**We are a building materials and sustainable solutions company.**

We seek sustainable growth and continuous competitiveness through solutions and initiatives that generate a positive impact for the company and society.

OUR ASPIRATIONS



WHAT WE WON'T COMPROMISE

Health and safety

Compliance and risk management

Our culture

Low indebtedness

Shareholder remuneration

Investment grade

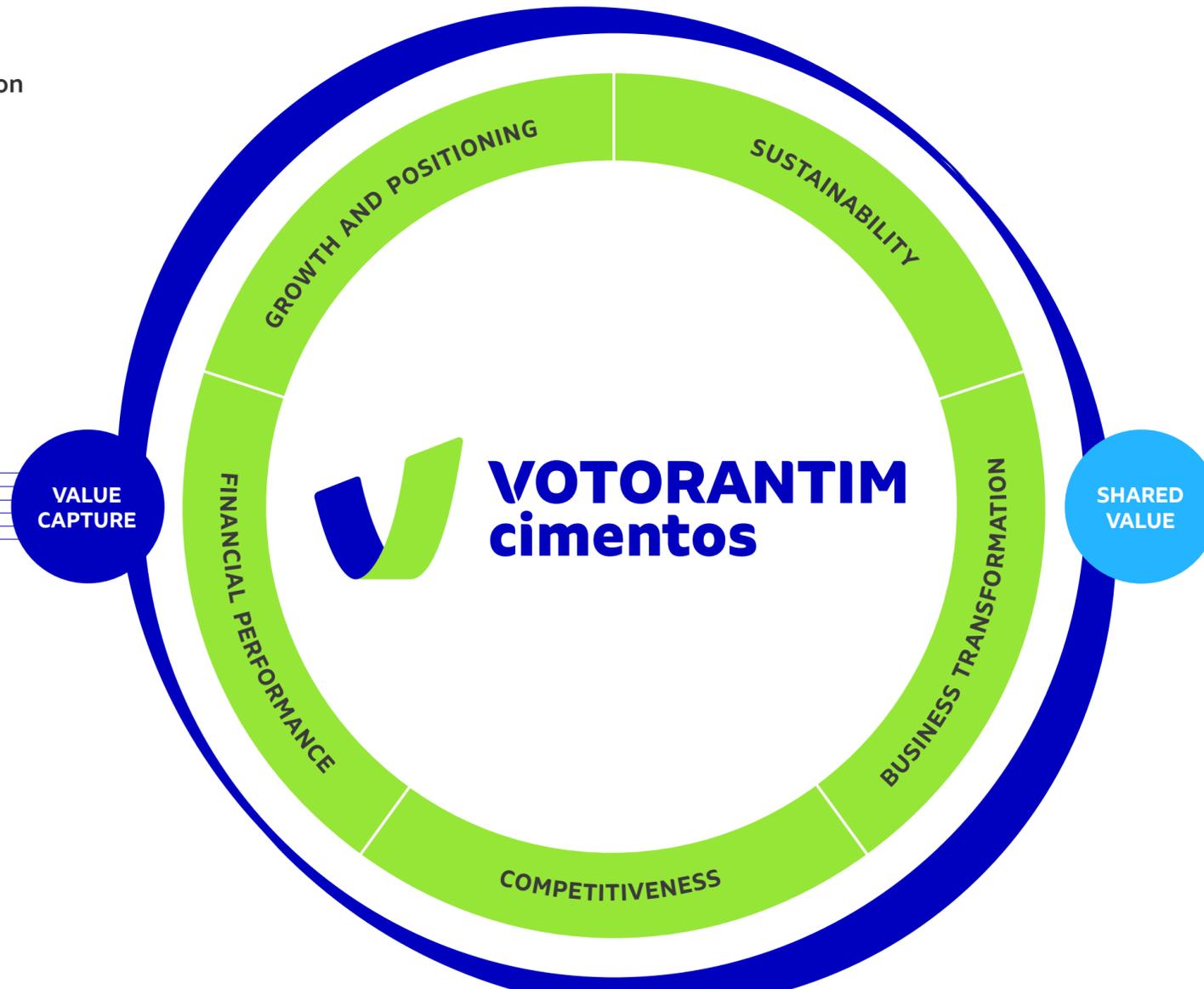


# Business Model

Click on the interactivity icon for more information

## Value capture (input)

- Financial Capital
- Natural Capital
- Human Capital
- Manufactured Capital
- Social and Relationship Capital
- Intellectual Capital



## Shared value (outputs)

- Financial Capital
- Natural Capital
- Human Capital
- Manufactured Capital
- Social and Relationship Capital
- Intellectual Capital

# Sustainability and 2030 Commitments

We have been leaders in the building materials industry in Brazil for almost nine decades and sustainability is one of the five strategic drivers of our operations worldwide. With that in mind, we seek to create a positive and long-term impact for the company and society, while also managing and minimizing the impacts caused by our activities.

We are committed to reducing greenhouse gas emissions, as well as air emissions such as particulate matter and other gases, in cement production. We remain focused on making our energy matrix more efficient and competitive, while also promoting the safety and well-being of all employees and fostering the socioeconomic development of the communities around our plants and offices.

We are an established company that has demonstrated significant adaptability to operate in a world in accelerated transformation and in different macroeconomic environments. This leads us to work in an increasingly sustainable manner as we strive to create long-term value for all our stakeholders.

Our strategy is in line with the United Nations Sustainable Development Goals (SDGs), as we believe that this is the way to help guide and ensure the sustainable continuity of our business. Our ESG journey is guided by our 2030 Commitments, with a set of targets related to seven pillars.

## 2030 commitments pillars

1. We operate with integrity and transparency
2. Safety, health and well-being are fundamental values
3. Innovation: we co-create sustainable solutions
4. A diverse and inclusive environment
5. Reducing our environmental footprint
6. Promoting a more circular business environment
7. Generating shared value in our communities

These commitments reflect Our Way of Being and are in line with megatrends in the construction sector, including the impact of factors such as demographic changes, globalization and future markets, climate-related challenges, and innovation and technology dynamics.

Since the publication of our 2030 Commitments in 2020, we have advanced, monitored and tracked our global performance against indicators, reporting the results to our Executive Committee and the Board of Directors. Monitoring and improving our performance against 2030 targets is a commitment shared by the entire organization. Accordingly, in 2022, the long-term compensation of company executives began to consider targets related to key performance indicators (KPIs), including an increase in the percentage of women in leadership positions and a reduction of CO2 emissions.



Our progress toward our 2030 targets is detailed on page 92.



Xambioart project  
in Xambioá, Brazil



# The Path to Decarbonization

GRI 3-3\_305 | SASB EM-CM 110a.2

Climate change is already a reality and is having a widespread impact in all parts of the world. Droughts, fires, floods and extreme weather events are becoming more frequent, threatening food supply and security and livelihoods around the planet and highlighting the fact that the climate crisis is also in many ways an economic and social crisis as well. According to the latest report by the Intergovernmental Panel on Climate Change (IPCC), the average temperature on the planet has already increased by 1.1°C compared to the pre-industrial era and is on the path to increasing by more than 4°C if we fail as a society to transform our lifestyles and bring climate action to the center of political and business decisions.

Like other large-scale industrial activities, the cement industry also produces CO<sub>2</sub> emissions, primarily due to the nature of its production process. Most of the emissions occur during calcination, a process in which limestone is subjected to high temperatures inside cement kilns to form calcium oxide. According to the International Energy Agency (IEA), the cement industry is responsible for 7% of all global CO<sub>2</sub> emissions.

Fighting the negative effects of climate change is at the core of our strategy and we recognize the role, relevance and importance of our decarbonization journey. We have implemented different initiatives to align our emission reduction targets with the ambition of the Paris Agreement signed in

2015: to limit global warming to well below 2°C compared to pre-industrial levels, making every possible effort to limit the increase in global temperature to 1.5°C.

In 2022, we approved a new CO<sub>2</sub> emission reduction target, in line with the Science Based Target initiative (SBTi). Created by four partner organizations (CDP, United Nations Global Compact, World Resources Institute and World Wide Fund for Nature), this initiative calls on companies to reduce their greenhouse gas (GHG) emissions, driving the transition toward a low-carbon economy.



Employees in one of our cement plants in Brazil



## SBTi emissions target

“The validation of the new target by the SBTi reinforces our ongoing commitment and efforts regarding the net-zero agenda. We have been working tirelessly to help decarbonize the entire value chain and create a positive legacy for society as a whole, seeking partnerships, leveraging the circular economy and developing new technologies.”

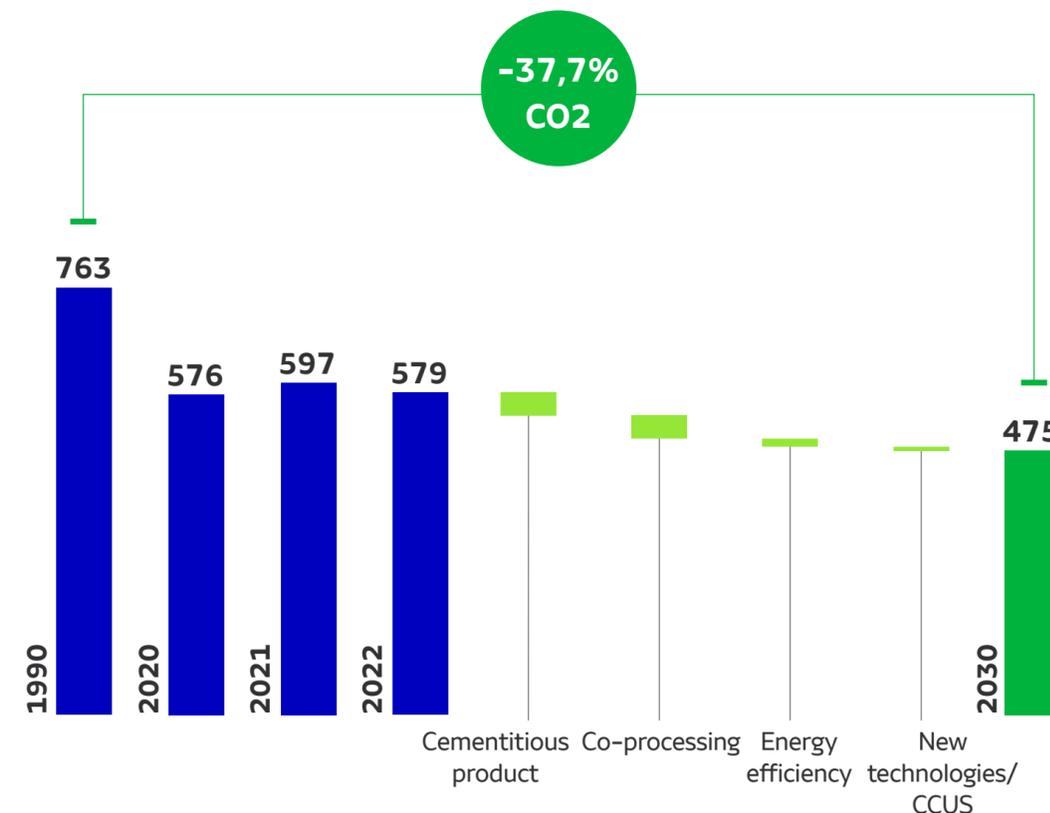
Álvaro Lorenz, Global Officer of Sustainability, Institutional Relations, Product Development and Engineering.



Our new commitment is to reach a net emission of 475 kg of CO<sub>2</sub>/tonne of cementitious product by 2030, a target that is 8.7% more aggressive than the previous one (520 kg of CO<sub>2</sub>/tonne of cementitious product) and represents a 24.8% reduction in our emissions compared to the base year 2018.

### CO<sub>2</sub> net emissions

(kg CO<sub>2</sub>/tonne of cementitious product)



### DECARBONIZATION PILLARS

To fulfill our new commitment, our decarbonization strategy is based on four main pillars:

**Cementitious product:** Substitution of clinker for by-products from other industries, including blast-furnace slag and fly ash from thermoelectric plants, in addition to other cementitious materials, such as calcined clay, natural pozzolans and other materials.



READ MORE ON PAGE 71.

**Co-processing** Substitution of fossil fuels used in cement production kilns for other materials, especially biomass and different types of waste.



READ MORE ON PAGE 71.

**Energy efficiency:** Optimization of the production process, use of renewable energy sources and investment in plant efficiency.



READ MORE ON PAGE 76.

**New technologies/CCUS:** Use of innovative processes and new materials, dematerialization of the value chain, carbon capture, utilization and storage, and partnerships with various entities and academia to increasingly optimize resources and reduce carbon intensity.



READ MORE ON PAGE 62.



Our investments are aligned with, and help drive, the decarbonization trajectory of our business. Currently, carbon is already regulated in our operations in Argentina, North America and Spain, and there is a movement to regulate emissions in other countries, including Brazil. Even in countries where regulation is not in place, our strategic planning process considers potential impacts and an internal carbon price to assess the attractiveness of projects. We have R\$1.5 billion forecasted for investment in decarbonization projects in the next five years.

“We recognize our responsibility and must position ourselves as industry leaders, directing our efforts and investments toward fighting climate change. In line with this strategy, we have just completed the acquisition of one of the most modern plants in Spain, which will contribute to accelerating our decarbonization journey.”



**Jorge Wagner**, CEO of VCEAA.

## Carbon-neutral Concrete

In a world that is rapidly urbanizing—according to UN Habitat, 68% of the world’s population will be living in cities by 2050—concrete is considered the best material to meet the need for housing and infrastructure. Only one resource is more consumed than concrete in the world: water. That is because concrete is an abundant, accessible and resilient product with numerous applications. Its main qualities are versatility, durability, resilience and resistance to fire, temperature changes and flooding. It provides excellent thermal insulation in buildings (which reduces energy consumption) and rigidity in road surfaces (which increases vehicle efficiency). Therefore, concrete is considered a highly sustainable product.

As part of our search for more sustainable solutions to produce, commercialize and use our products in different applications, we were one of the founders of the Global Cement and Concrete Association (GCCA) and, together with other companies in the industry, we work tirelessly toward our goals. In 2021, the GCCA launched a detailed roadmap that guides the efforts to produce carbon-neutral concrete by 2050. In 2022, during Middle East and North Africa Climate Week (MENA), the organization launched a plan to accelerate the 2050 carbon-neutral concrete roadmap. The initiative will be implemented in waves and aims to support cement and concrete companies in their local implementation of the global roadmap. In 2022, we helped to promote the vision and approaches outlined in the Portland Cement Association’s (PCA) roadmap to Carbon Neutrality in North America and joined efforts with the Brazilian Cement Association (SNIC), Brazilian Portland Cement Association (ABCP), the Brazilian Concrete Institute (IBRACON) and other companies in the industry to develop a roadmap to carbon neutrality in Brazil, a study that will be published in 2023.

## BRAZILIAN INITIATIVE IN SUPPORT OF THE VOLUNTARY CARBON MARKET

Aiming to contribute to the evolution of the voluntary carbon market, we joined Votorantim S.A. and other companies from different industries in the Brazilian Initiative in Support of the Voluntary Carbon Market. The goal of this group, in which McKinsey & Company is the knowledge partner, is to contribute to the development of the sector in Brazil and leverage the country’s position in international markets. The main deliverables planned include a proposal for practical strategies to overcome the biggest barriers to this market, including mechanisms to activate high-integrity supply and demand and governance initiatives. According to a study by McKinsey, Brazil has the potential to generate up to 15% of the world’s voluntary credits through natural solutions. These include carbon sequestration via reforestation, agroforestry systems in degraded areas, the conservation of forests threatened by deforestation and intensification of low carbon agricultural practices in large farming areas.



# ESG ratings



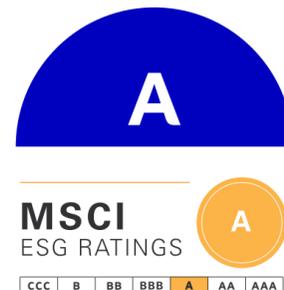
We continued to make progress related to risk assessments performed by rating agencies specialized in environmental, social and governance (ESG) issues. We also maintained our high score by CDP, a non-profit organization that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.



## CDP

For the fifth consecutive year we have maintained our assessment by CDP as one of the best companies in the Climate Change Program. Our score of A- placed us as the best cement company in Brazil and one of the top 10 in the industry worldwide.

<https://www.cdp.net/en/>



## MSCI ESG<sup>1</sup>

Our performance in 2022 in the MSCI ESG Rating was upgraded from BBB to A.

<https://www.msci.com>



## Moody's ESG Solution<sup>2</sup>

In 2022, we received a 52/100 score, an improvement compared to the 50/100 score we received in 2021. The Moody's ESG Solution methodology places this score at the "Robust" level.

<https://esg.moody's.io/>



## Sustainalytics

Our ESG Risk Rating was 21.3. The score represents a medium risk according to the Sustainalytics methodology.

<https://www.sustainalytics.com>



## Sustainalytics Recognition<sup>3</sup>

We were recognized by Sustainalytics as an ESG Industry Top Rated company, a distinction given to companies that strongly outperform in their respective industries.

<https://www.sustainalytics.com>

<sup>1</sup> The use of any data from MSCI ESG research LLC or its affiliates ("MSCI") by Votorantim Cimentos, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Votorantim Cimentos by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided "as-is" and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

<sup>2</sup> This ESG Assessment was originally conducted by V.E, which is now part of Moody's ESG Solutions

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# 06. Corporate Governance

- Ethics and Compliance
- Risk Management
- Crisis Management



# Corporate Governance

GRI 2-9, 2-17, 3-3\_205\_415

Ethics and integrity are part of Our Way of Being and values that we do not compromise. To further strengthen this aspect of our culture, we have a solid corporate governance structure that matches the standards and best practices adopted by publicly-traded companies, ensuring compliance, transparency and integrity in all our operations. The Corporate Governance, Risks and Compliance & Internal Audit department (GRC&IA) reports directly to the Chairman of the Board of Directors and the Audit Committee, and, administratively, to the Global CEO.

The Board of Directors is our highest governance body; it is advised by the Audit Committee, Finance Committee and Compensation and People Committee. In 2022, the Board approved the creation of a Sustainability and Innovation Committee, which will support the Board of Directors on the implementation of the ESG agenda within the organization starting in 2023.

Aiming to identify and discuss best practices and raise the level of maturity regarding governance within the company, in 2022 we carried out a self-assessment of the Board of Directors with the support of an external consultancy. The assessment was made through a questionnaire and interviews with members of the Board and C-level executives who interact with them.

Important decisions were made as a result of this more in-depth assessment: update of the Board's bylaws, implementation of a continuing education program for Board members, creation of an annual thematic agenda, decision to create the Sustainability and Innovation Committee, the consolidation of some of the working groups (WG) and the implementation of a new rule establishing that all Committees must have at least one Board member in their composition.

In addition, in 2022 we implemented Policy 001, which works as an umbrella for internal policies—more specifically corporate policies. It sets the guidelines for the development and review of policies (including our Code of Conduct), establishing that they must be reviewed every three years and confirming the required levels of approval.



Employees in  
the Tenerife  
plant, Spain



## Board of Directors

GRI 2-9, 2-11, 2-10, 2-12, 2-13, 2-14, 2-18

The Board of Directors is composed of seven members, four of whom are independent (including the Chairman). All members are elected after an evaluation process and serve a term of office of two consecutive years; none of them hold an executive position in the company. Internally, the Corporate Governance area advises the Board of Directors and other governance bodies, seeking to incorporate best practices into the company's everyday activities. The performance of the Board is periodically assessed by a specialized independent consultant.

The Board of Directors is responsible for monitoring strategic issues and setting policies to ensure agility and efficiency in decision-making. It proposes initiatives while also supervising ongoing projects through periodic reports from different areas, such as Sustainability, Government Relations, Legal, and Corporate Governance, Risks and Compliance, Ethics Line & Internal Audit. The Global CEO is responsible for executing the Board's decisions and managing the company's impacts on the economy, the environment and society.

## Committees

**Audit Committee** – Composed of four members (one independent member of the Board of Directors, two independent non-director members and one representative of the controlling shareholder). In line with best practices in governance, Clarissa Lins, an independent Board member, joined the Audit Committee in 2022. The Audit Committee is responsible for assisting the Board on the proper monitoring of issues related to business continuity, effectiveness and integrity of internal controls, risk identification and management, quality and integrity of financial reports, and work carried out by external auditors. It also oversees the company's compliance with all up-to-date accounting standards that corporations are required to follow. This review takes place during the fiscal year, as well as prior to the publication of financial statements. In addition, the Committee recommends the GRC & Internal Audit officer (non-statutory).

**Finance Committee** – Composed of four members—two Board members (one of them an independent member) and two non-Board members (one of them an independent member)—the Finance Committee is responsible for assisting the Board on the assessment and monitoring of financial issues, including the analysis of macroeconomic factors that may affect the company, the definition of financial guidelines (such as cash and liquidity management guidelines), and the monitoring and evaluation of risk mitigation alternatives.

### **Organization, Compensation and People Committee –**

Composed of four members, three of whom are independent, including its coordinator, and three are also members of the Board of Directors, this Committee assists the Board on the proper monitoring of issues related to compensation models, appointment of management candidates, succession plan and corporate culture.

### **Sustainability and Innovation Committee –**

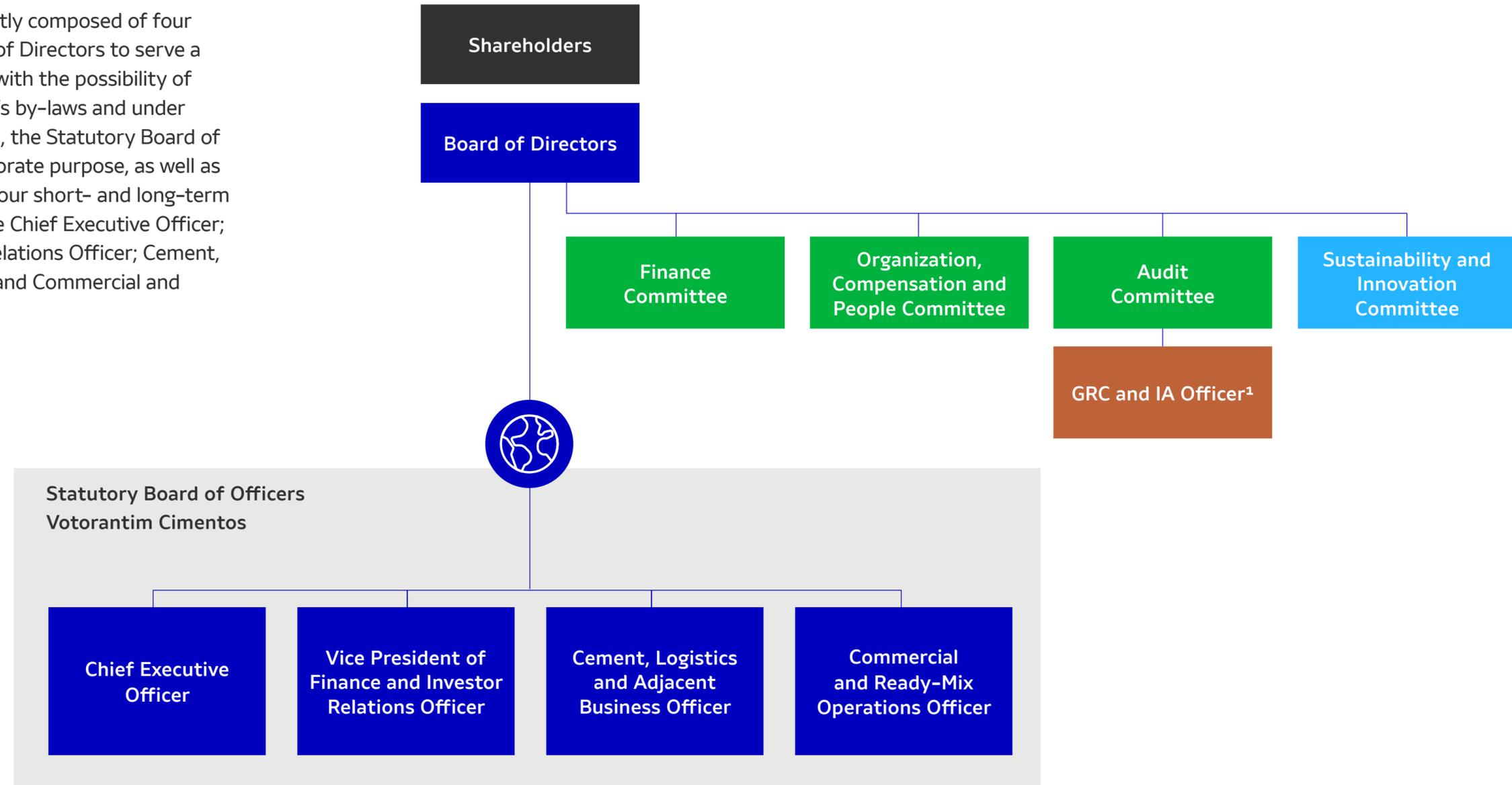
The Board of Directors decided that this Committee, which was created at the end of 2022, will start meeting in 2023. The committee is currently made up of two independent members (who are also Board directors, including the coordinator) and a shareholder representative. A fourth independent member is in the process of being identified and elected. This Committee will support the Board of Directors on topics related to decarbonization and ESG. It will also support the monitoring and implementation of key innovation initiatives.

The Global CEO is responsible for executing the Board's decisions and managing the company's impacts on the economy, the environment and society.



## Statutory Board of Officers

The Statutory Board of Officers is currently composed of four members, who are elected by the Board of Directors to serve a term of office of two consecutive years, with the possibility of being reelected. Guided by the company’s by-laws and under the supervision of the Board of Directors, the Statutory Board of Officers implements the company’s corporate purpose, as well as the mission, vision and values that guide our short- and long-term strategic objectives. It is composed of the Chief Executive Officer; Vice President of Finance and Investor Relations Officer; Cement, Logistics and Adjacent Business Officer; and Commercial and Ready-Mix Operations Officer.



<sup>1</sup>GRC and IA: Governance, Risk, Compliance and Internal Audit.



The composition of our governance bodies can be found in more detail on our [Investor Relations website](#).



# Ethics and Compliance

GRI 3-3\_205\_206

At Votorantim Cimentos, we believe that just as important as our results is the way by which we achieve them. As established by Our Way of Being (the first part of our cultural evolution journey, known as Our VC Way), we value our rich and expressive entrepreneurial essence. In this context, ethics, integrity and transparency are not only non-negotiable but also a way to ensure business perpetuity.

Our Compliance Program applies to the entire company and covers all our obligations (internal and external, voluntary and strategic). It is based on our Code of Conduct and Our VC Way and organized around seven major pillars: (a) Laws and Regulations; (b) Licenses, Authorizations and Certifications; (c) Contracts and Agreements; (d) External Reports; (e) Antitrust; (f) Loss and Fraud Prevention; and (g) Anti-Corruption. We believe that conducting business with integrity, ethics and compliance with applicable laws and requirements is part of

our culture, within the framework of our governance, and each employee's responsibility. It starts at the Board of Directors and includes the Committees that advise the Board of Directors, the Board of Officers and all areas of Votorantim Cimentos.

The Compliance area is responsible for overseeing the program by monitoring its effectiveness, seeking to continuously improve it, properly cascading it to the different parts of the organization and ensuring that appropriate measures are taken in cases of non-compliance. Equally as important, our culture of ethics and integrity is reflected in the day-to-day conduct of our employees, who continuously take this commitment to heart as we conduct business in diverse international markets. As a support department, Compliance works side by side with Legal, Risk Management, Internal Controls, People Management, Internal Audit and the Business Ethics Commission.



"We are committed to always choosing the right path, even if it is longer, more difficult or less profitable. The right path is the one that drives us to honor our sustainability commitments, strengthens our relationships, and guides our decisions and the creation of our legacy."

**Adjarbas Guerra Neto**, global director of GRC&IA.

Employee in  
our McInnis  
plant, Canada



## Policies and Commitments GRI 2-15, 2-23, 2-24, 3-3\_205\_206\_415

As a company operating internationally, we are mindful of and subject to the laws and regulations of the various countries where we are present and we are committed to following, supporting and, in certain cases, going beyond international standards and practices, such as the principles of the United Nations Global Compact and the United Nations Universal Declaration of Human Rights.

Our Code of Conduct is the key document from which other policies derive. We have global policies that regulate several practices: Anti-Corruption; Gifts, Entertainment and Hospitality; Conflict of Interests; Donations and Sponsorships; Government Relations; Third Parties Integrity Assessment; Trade Compliance Handbook; and Competition Handbook.

Contributions to political campaigns or party causes are addressed and prohibited by our Government Relations Policy. When allowed by local legislation, they can only be made after an assessment by the Compliance, Legal and Government Relations areas, strictly in accordance with legal definitions, in a transparent manner and properly registered in the company's official systems. In 2022, no political contribution was made.

We are mindful of and subject to the laws and regulations of the various countries where we are present and we are committed to following, supporting and, in certain cases, going beyond international standards and practices.

The VCBR Government Relations Manual also has regional versions that address VCNA's and VCEAA's local legal requirements. All employees who interact directly with public agents when performing their activities have received specific training.

We are signatories of the Letter of Commitment of the Business Movement for Integrity, Transparency and Anti-Corruption. Through it, we have furthered our commitment to adopting practical measures to fight corruption in the business environment and in public-private relationships. Unfair competition is an equally important topic for us. Since 2021, all new employees have been required to sign our Competition Handbook when they are hired.



## Education

In 2022, as part of our continuous improvement process, we updated our Compliance Program Booklet to include Our VC Way, the Ethics Line new version and the three lines of defense mechanism. We also revised our Conflict of Interest Policy to reinforce roles and responsibilities, update the frequency of conflict of interest declarations according to each targeted audience, and highlight the appropriate channels to report conflicts of interest.

We believe that misconduct must be addressed through corrective measures to retrain behaviors, stop noncompliance and prevent situations from happening again. Although this issue has been addressed through our Code of Conduct and several specific procedures, to strengthen the process and better communicate with our employees and leaders, in 2022 we launched our Disciplinary Measures Policy, which includes all the important guidelines and measures to be taken according to each type of deviation.

All policies must always be supported by training and communications as a strategy to reinforce guidelines and cascade them on a practical basis. Therefore, we continuously maintain an education program based on the risk employees are exposed to as part of their roles. In 2022, 98% of our employees were trained on our Code of Conduct.



[Click here to read our Code of Conduct.](#)

## Initiatives

In addition to everyday activities and responsibilities, the main activities carried out by the Corporate Governance, Risks and Compliance & Internal Audit (GRC&IA) Department in 2022 included:

- 1. Continued education:** (i) launch of a Government Relations e-learning program with a specific focus on the company's leadership and positions, as identified through an anticorruption risk assessment; (ii) launch of a Trade Compliance e-learning program addressed to highly-exposed positions such as imports and exports departments; (iii) launch of new Antitrust and Anticorruption training modules as well as a recycling strategy based on a risk exposure analysis; (iv) customized training on critical compliance policies for the company's different businesses, according to the needs identified by Internal Audit and the Business Ethics Commission.
- 2. Conflict of interest:** launch of a Conflict of Interests Declaration Platform, available to all employees. This tool complements our established Ethic Line by optimizing processes through increased transparency and formal responses to cases with guidance to employees, which includes the management of action plans and process documentation. The People Management area and company leaders received training on the new platform and on conflict-of-interest content, including information on the determinations of the Federal Law on Conflict of Interests.
- 3. Third parties:** (i) implementation of a third-party due diligence process at VCEAA; (ii) reevaluation to inform the review of suppliers' risk categories; (iii) improvement of the supplier due diligence process through the implementation of a systematic approval flow.

**4. Anticorruption risk assessment:** Like any other legal entity, our businesses involve occasional interactions with the public sector. Therefore, in addition to the compliance evaluations incorporated into the company's daily processes, in 2022, we conducted (i) a specific risk assessment within highly-exposed departments at VCNA focused on mapping interactions with the public sector to enable us to evaluate them, assess our level of control and identify our company representatives involved in these interactions to receive supplemental training on anticorruption issues; and (ii) a Compliance Heatmap created using big data to inform company-wide initiatives.

**5. Donations & Sponsorships:** launch of the Donations and Sponsorships Platform to ensure an effective workflow of approvals and risk analyses, and to document and confirm the proper destination of approved transactions.

**6. Awareness campaigns:** Campaigns to publicize the new Ethics Line, including videos, internal posts, posters in our sites, workshops and messages sent by leaders at internal events.

**7. Fraud prevention:** Intensification of activities to identify and address misconduct and fraud, in partnership with public security agencies, including the implementation of new technologies and tools to prevent and address procedures that are not in compliance with company guidelines.

**8. Implementation of continuous audit processes:** Creation of methods based on business and corporate guidelines to regularly monitor transactions that are relevant or risky. We are gathering insights from unusual transactions to enhance controls, improve compliance requirements and help manage processes to avoid or address anomalies.



Employee in the Toral de los Vados plant, Spain



Employees in the McInnis plant, Canada

## Compliance Day

For the sixth consecutive year, we hosted global and regional Compliance Day. In 2022, activities took place in the last quarter of the year in VCBR, VCEAA, VCNA and VCI. All Compliance Day activities were broadcasted in real time to all employees in each region and included messages from our Chairman, the Audit Committee Coordinator and our global and regional top management. To reach the highest number of employees, the events remained available on an internal platform for on-demand access.

The main message conveyed was that compliance is simple and is in our hands. We reinforced our pride in the positive legacy created by the company and its employees through almost nine decades and highlighted the importance of continuous engagement to be in constant evolution. Employees were invited to reflect on how the behavior of each individual directly impacts collective interests and the common good of the enterprise. Therefore, keeping our guard up, acting and making decisions in an ethical manner and even avoiding omissions through regulatory compliance are actions that must be taken for the benefit of everyone around us.

The event reinforced our internal commitment to our colleagues, team partners and leaders, as well as our responsibilities toward our external stakeholders, including contractors, suppliers, service providers, competitors, customers and the communities that surround our operations. Through activities and discussions, employees were reminded that it is up to us to maintain a safe and healthy business environment, promote open dialogue and create shared value. Activities that were held to ensure the engagement of all employees included practical case studies presenting compliance dilemmas and a “best sentence” contest answering the question “How is compliance in your hands?”.

# | How is compliance in your hands?

Theme of Compliance Day 2022

## Ethics Line

GRI 2-26

We believe that transparent, open dialogue is the best way to solve problems. Therefore, we encourage employees to express their concerns directly to their leaders or responsible areas (in the case of legal or compliance issues, for example). However, we know that, in some situations, employees may not feel comfortable discussing an issue with internal personnel. The Ethics Line is an important alternative in such cases—it is available 24 hours a day, seven days a week, to receive anonymous reports. Company and contracted employees and anyone who interacts with our operations can report suspected misconduct or irregularities (corruption, bribery, discrimination, harassment, etc.) or make inquiries about our Code of Conduct.

In early 2022, important improvements were made to the Ethics Line. The service is managed by a new independent external provider (Contato Seguro) and is now closer to the source of complaint. Interpreters are no longer used and the attendants are mostly psychologist and lawyers. Users continue to be able to interact with the Ethics Line in Arabic, English, French, Portuguese, Spanish and Turkish, and choose whether or not to identify themselves. In addition, we created a portal to register and follow up on reports that is simpler and more inclusive for people with disabilities.

The Ethics Line process ensures that all information remains within the specialized company, which screens all reports and forwards the complaints to the responsible area at Votorantim Cimentos, the Global Business Ethics area, which is part of the Global GRC & IA organization. We have channels available in the 11 countries where we are present. More information is available on our [Ethics Line](#) website.



## E-LEARNING TRAINING

At VCBR, as part of the continuous training of professionals who work with the Business Ethics Office, we created the e-learning training module “Corporate investigations: how to investigate complaints of harassment, discrimination and retaliation in the workplace.” All Business Partners (BPs) in the People Management area who lead or support the investigation of reports of harassment, discrimination and disrespect received by the Ethics Line were trained in 2022. Starting in 2023, training will be mandatory for new BPs who will be participating in future investigations.





# Risk Management

## GRI 2-12, 2-16

Our risk management process is based on the ISO 31000/18 standard and on the recommendations of the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and focuses on risk identification, assessment and response.

The identification of risks that can affect company goals is carried out through the analysis of indicators, questionnaires and interviews with operational and corporate areas, following a bottom-up and top-down approach. Risks are analyzed and classified according to their likelihood and impact, as per the risk appetite updated and approved by the Board of Directors in 2022. After classification, the risk response is determined, and the responsible areas develop action plans to prevent the risks and mitigate their potential impacts. The risks and action plans are monitored and periodically reported to the GRC & IA area and to the leadership team, according to their classification.

In 2022, we implemented a new system, VC Risk Management.

Annually, or whenever required, the risk management process is detailed and presented to the Audit Committee and the Board of Directors, from a global perspective.

In 2022, we implemented a new system, VC Risk Management. It aims to automate our management process, from risk identification to the conclusion of action plans, ensuring information traceability using transparent, efficient and simple management. To support employees involved in this process, we conducted in-person workshop sessions and launched a mandatory Enterprise Risk Management e-learning program for Votorantim Cimentos leaders and other identified functions. More than 80% of eligible employees have been trained. Initially implemented as a pilot project in Brazil, the new system will be furthered studied to be cascaded to other countries.



Employee in our Corporate Office in São Paulo, Brazil

## Climate Risk Management

Our climate risk management process is based on the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD), a business transparency initiative that we have been involved with since 2020 and have formally supported since 2021.

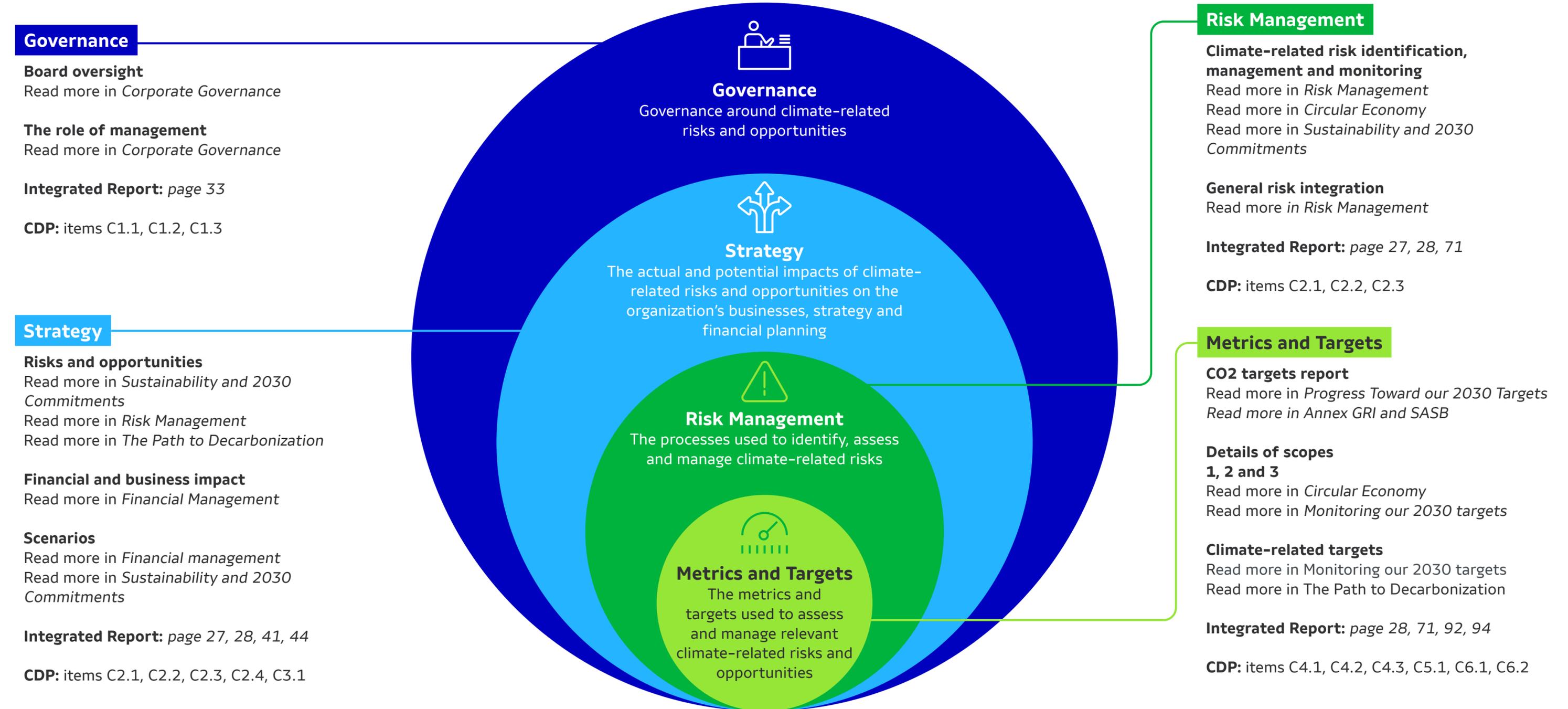
We map transition risks related to greenhouse gas emissions and the consequent increase in costs and losses. Our analyses include technological aspects, such as a potential overdependence of the industry on newer technologies (carbon capture and sequestration, for example). We also evaluate regulatory risks, such as carbon pricing mechanisms both in countries where regulations already exist (for example, Argentina, North America and Spain) and in countries with no official mechanisms in place (e.g., Brazil). Finally, we consider physical risks related to exposure to losses caused by the physical effects of climate change, such as droughts, rains and extreme weather events.

Conversely, the transition to a low-carbon economy offers business opportunities to our cement and concrete operations. Known for its excellent durability, versatility and resistance, concrete is considered a sustainable material with characteristics that make it resistant to fire, weather and floods, an important advantage in an environment threatened by climate change.



# TCFD Dimensions

GRI 201-2





# Internal Audit

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In 2022, we improved the process to create our Global Internal Audit Plan by refining the criteria for prioritizing the audits that are selected, considering aspects such as classification in the risk matrix, historical audit assessments and investigation procedures, insights from company executives and complaints received through the Ethics Line. The Annual Internal Audit Plan is recommended by the Audit Committee and approved by the Board of Directors annually.

We implemented a hybrid work model for office employees in different countries and for different processes and business units, to optimize certain assessments that could benefit from increased in-person attention and interaction.

We expanded the scope of our assessments, including audits in occupational safety protocols aimed at increased acculturation and contribution to accident prevention. We also evaluated controls related to environmental and cybersecurity issues. We improved our performance by adopting more preventive approaches, using tools and technologies to identify and address non-compliant procedures.

We also continued to share best practices among the different cement sites, promoting forums to discuss improvement opportunities and self-verification on non-audited sites, and we enhanced our governance and the implementation of comprehensive action plans. These initiatives are in line with our business transformation strategic pillar, in which we combine technology and innovation with compliance and ethical conduct in our businesses.

# Crisis Management

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A company's exposure to risks is an increasingly complex issue that requires intense risk management, continuous assessment and a rapid response to potential crisis scenarios. We have an organization dedicated to the crisis management process that coordinates the execution of business continuity plans for different types of events. By acting in response and recovery, our approach aims to mitigate possible short-, medium- and long-term impacts on our assets, business, people and reputation.

The coronavirus pandemic forced us to proactively adapt over the past few years, with ongoing monitoring of cases and trends in the different regions where we operate. This has taught us important lessons, enhanced our ability to respond and adapt and is guiding us in the review of the different operating strategies of the area.

We monitor, in real time, potential issues that may trigger crisis scenarios and focus our efforts on preparing the company, in a clear and objective way, to respond to these situations with increased efficiency and agility.



Employee in our Corporate  
Office in São Paulo, Brazil

# 07. Financial Management

- Solid Results
- Performance by Region
- ESG Financing

# Solid Results

## GRI 2-1

The year 2022 was marked by a challenging global economic environment due to the negative effects of the war in Ukraine, sanctions imposed on Russia by the United States and the European Union countries, new lockdowns in China to stop the spread of COVID-19 and economic recession in some of the countries where we operate. As a result of these challenges, the world faced a new crisis in global supply chains with a significant impact on the availability of certain equipment and replacement parts, as well as on the price of energy, freight, fuels and raw materials. In addition, countries around the world experienced higher-than-expected inflation as a consequence of macroeconomic effects of the COVID-19 pandemic. The combination of these negative impacts forced governments to implement tighter monetary policies.

Despite these challenges, we demonstrated operational and financial resilience through cost management and achieved solid results throughout the year. We ended 2022 with net revenue of R\$25.8 billion (16% higher than 2021), primarily due to price management that mitigated the slight decrease of volumes and the negative effect of the appreciation of the real in our operations abroad. In total, we sold 36.8 million tonnes of cement, 1% less than in 2021 (37.2 million tonnes). Our adjusted EBITDA (earnings before interest, taxes, depreciation and amortization) was R\$4.9 billion, 6% lower than 2021 (R\$5.2 billion). Our consolidated operational results were negatively impacted by pressure on costs and the appreciation of the real, which were partially mitigated by price dynamics.



“We managed the business in alignment with our VC 2030 Strategic House, operating within robust financial metrics and high liquidity, which enabled solid results despite a challenging year.”

**Bianca Nasser,**  
Global CFO

We maintained our growth and positioning strategy through the conclusion of the 2021 acquisitions and business combinations—McInnis Cement, in Canada; Superior Materials and Valley View, in the United States; and Cementos Balboa, in Spain—integrating processes and employees and making investments to improve the operational and environmental performance and efficiency of these businesses. At the end of 2022, we completed the acquisition of the operations of Heidelberg Materials in the south of Spain, including a modern integrated cement plant located in the city of Málaga, three aggregate quarries and 11 concrete plants in the Andalusia region.



Employee in our Sivas plant, Türkiye



## Performance by Region

In Brazil, the increase in interest rates, inflation and household debt had negative consequences to cement consumption in the country. The net revenue of R\$12.7 billion (compared to R\$10.3 billion in 2021) and an adjusted EBITDA of R\$2.5 billion (an increase of 2% compared to R\$2.4 billion in 2021) resulted primarily from price dynamics and growth in adjacent businesses, which offset the slight decline in volume during the year. The decrease in cement demand was due to a slowdown in the self-construction segment, as a result of a challenging macroeconomic environment, and was partially offset by the real estate and infrastructure segments.

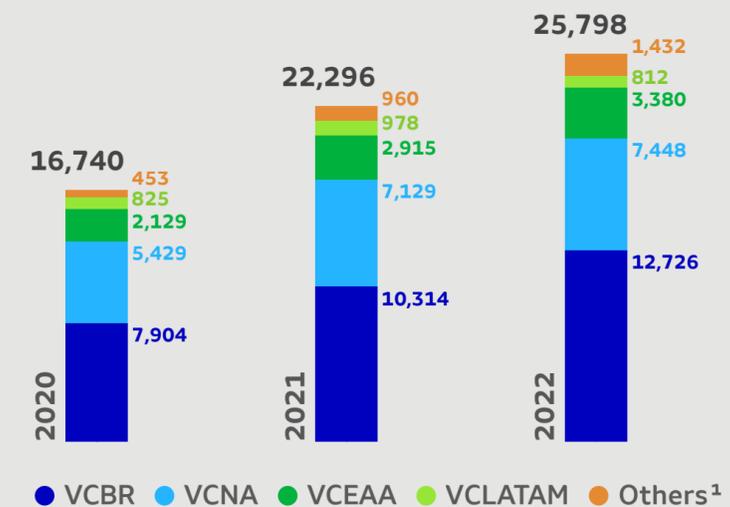
In North America, our net revenue in 2022 was R\$7.5 billion, 4% higher than in 2021, due to increased volume and positive price dynamics. On the other hand, cost inflation, operational challenges, the harsh winter at the beginning of the year and the appreciation of the real negatively impacted the operating results, leading to an adjusted EBITDA of R\$1.6 billion, down 15% compared to R\$1.8 billion in 2021

Over the past two years, we strengthened our presence in Spain by acquiring Cementos Balboa in 2021 and completing the acquisition of the operations of Heidelberg Materials in the south of Spain in 2022. As a result of these movements in the market, despite the complex macroeconomic environment, cost pressure and appreciation of the real during the year, VCEAA experienced important growth in 2022. Net revenue grew 16%, from R\$2.9 billion in 2021 to R\$3.4 billion in 2022, with R\$676 million adjusted EBITDA (20% higher than R\$562 million in 2021).

At VCLatam, we faced challenging market dynamics in both Uruguay, where a new player entered the market in 2021, and in Bolivia, where the economy was affected by general strikes in the end of the year. Net revenue in the region was R\$812 million (17% less than R\$978 million in 2021), with R\$138 million adjusted EBITDA (a 42% decrease compared to R\$237 million in 2021).

### Net Revenue

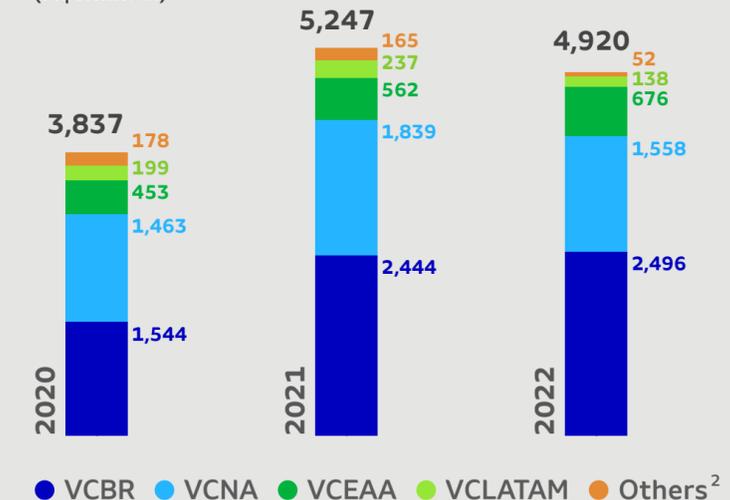
(R\$million)



<sup>1</sup>Net revenue mainly from Votorantim Cimentos Trading.

### Adjusted EBITDA

(R\$million)



<sup>2</sup>Adjusted EBITDA mainly from received dividends and non-recurring items.

## Indebtedness

As a result of the company's historical financial discipline and conservative management in the face of the uncertain environment during the year, we maintained strong liquidity, above the minimum cash position required by our financial policy. Considering our well-managed and long debt maturity profile, the main initiatives in 2022 included occasional and opportunity-driven liability debt management transactions focused on equalizing the cash generation and debt exposure currencies to mitigate volatility in our balance sheet.

As an example, in 2022 we repurchased a US dollar-denominated bond due in 2041 through a market repurchase offer (tender offer) using resources from the 14<sup>th</sup> issuance of a debenture in the Brazilian market, at a competitive cost. These liability management efforts contribute to reduce the debt costs and improve the currency equalization of our debts.

On December 31, our leverage ratio (net debt/adjusted EBITDA) was 1.55x, the same as in 2021. This reflects our positive operational results during the year and our financial discipline, despite the increase in Capex, payment of dividends to the shareholder and the acquisition of the operations in Spain. The ratio is still aligned with our internal financial policies and investment grade credit metrics.

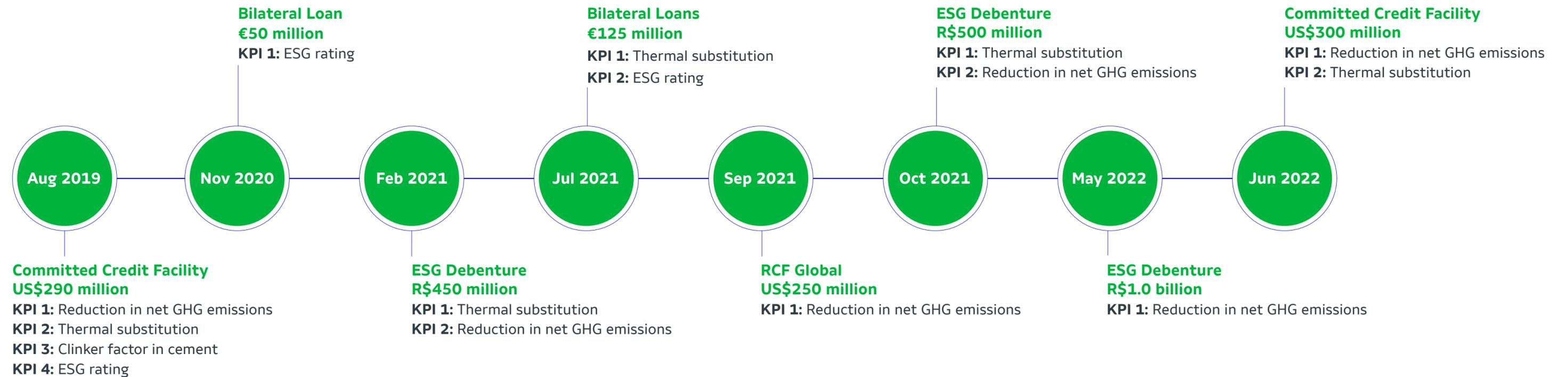


## ESG Financing

In 2019, Votorantim Cimentos was one of the pioneers in the issuance of debt linked to sustainability indicators. Since then, ESG instruments have been a strong focus of the treasury strategy and have become more relevant in our debt position.

In 2022, the company performed two sustainability-linked transactions: it entered into a US\$300 million committed credit facility with a bank syndicate and issued its 14<sup>th</sup> debentures in the local capital market in the amount of R\$1 billion. The main ESG indicators linked to our credit lines are the reduction of net greenhouse gas (GHG) emissions and thermal substitution.

### Sustainability-linked financing history

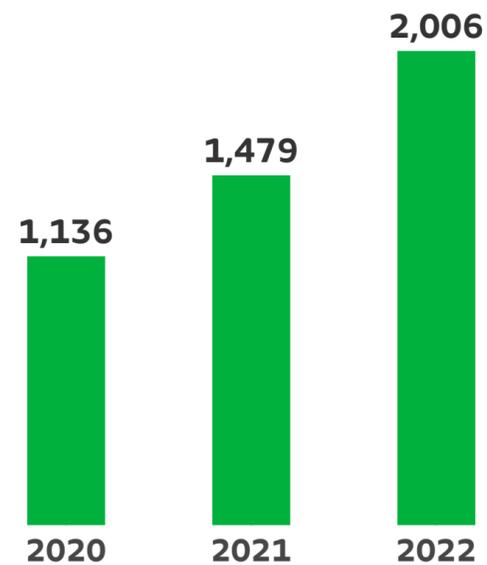




## Investments

During the year, we continued to invest in sustaining & modernization and expansion, with Capex investments totaling R\$2 billion (36% higher than in 2021). Since 2021, we have invested US\$40 million in a modernization project in Uruguay, which included optimizing our cement grinding site. The project unified our industrial operations in the country, concentrating our industrial activities in the town of Minas (100 kilometers from the capital Montevideo), thereby driving efficiency and sustainability. The inauguration of the new facility is scheduled for January 2023. In addition, we are investing in the expansion of our operations in North America to marginally optimize our production capacity.

## Capex investments (R\$million)



## Ratings

Despite the highly volatile global environment, we were able to maintain our credit ratings in 2022. Moody's, S&P and Fitch maintained our investment grade rating. We are one of the few Brazilian companies with an investment grade rating by the three main credit rating agencies, substantiating our solid business position and the strong liquidity of our operations.

	Moody's	Fitch	S&P
Rating	Baa3	BBB-	BBB-
Outlook	Stable	Stable	Stable
Date	Jun 2022	Jul 2022	Mar 2022

“Our investments are fully aligned with our Strategic House and are aimed at increasing our competitiveness and operational efficiency, while also leveraging decarbonization initiatives in all regions where we operate.”

**Osvaldo Ayres**, Cement, Logistics and Adjacent Business Officer.



Superior Materials concrete truck, United States

Employee  
in our Rio  
Branco do Sul  
plant, Brazil



# 08. Caring for People

- Respect and Appreciation
- Safety, Health and Well-being
- Diversity
- Training and Development

# Respect and Appreciation

GRI 2-7, 3-3\_401\_403\_405

Caring for people is essential and an integral part of our culture. In the 11 countries where we are present, we continuously strive to have inclusive practices to create healthy work environments, where everyone can be who they are, without judgment and with respect and genuine appreciation. More and more, we seek to create an environment of connection among all employees, enabling the company to evolve and become more modern, attractive and able to retain the best talent. We know that achieving our future business ambition will be challenging, but we are convinced that we have the right people to succeed, with courage to challenge the status quo, transform and thrive.

At Votorantim Cimentos, our people management practices focus on safety, health and well-being. Throughout our operations, we strictly comply with labor and regulatory obligations and local laws. We respect our employees' freedom of association and do not tolerate anti-union practices.

We ended 2022 with a total of 13,089 employees—5% more than in 2021 (12,466). One example that reflects our inclusive practices, to make Votorantim Cimentos increasingly diverse, is a 1% of increase in the number of women in leadership positions in the company (from 20.2% in 2021 to 21.0%).



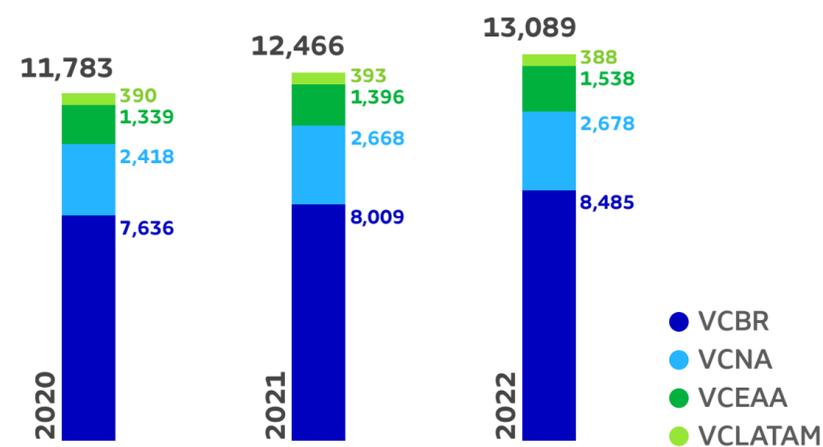
## ONLINE ASSESSMENT

Many of our employee activities and initiatives are assessed through PulsoVC, a quick survey tool to continually measure leadership, culture, organizational climate and engagement. It enables us not only to diagnose points for attention and improvement, but also to prepare and monitor specific action plans to adapt our strategies and establish a more inclusive culture and practices.

PulsoVC is much more than a climate survey. It is a continuous engagement tool that was piloted by several of our departments and businesses in Brazil in 2022. Our other regions are evaluating similar tools to be implemented in the future. Quick and practical questions regarding organizational climate, management processes, career plans and work environment can be posted and answered every 30 days, producing relevant information and reflecting the dynamism of our time.

## Employees by region<sup>1</sup>

GRI 2-7



<sup>1</sup>Company employees only



# Safety, Health and Well-being

GRI 3-3\_403, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7

Safety, health and well-being are non-negotiable values that we do not compromise. People are our most valuable asset and Our Way of Being is ethical and respectful. We promote a culture of safety—at home and at work—as a commitment from each of us, and we continually invest in preventing injuries, eliminating fatalities and ensuring a safe work environment.

“We believe that we cannot achieve excellence or remain competitive if we fail to consider the health and safety of our employees, partners and the general public. We are all responsible for ensuring safety and well-being,” said Dirlane Albino, Safety and Environment manager. Employees are encouraged to say something if they see something, and we have a Global Health and Safety Policy and Life-Saving Rules that provide guidelines on how to manage safety globally. This policy determines that Votorantim Cimentos will:

1. **Observe** and **respect** the law and regulatory requirements relating to occupational health and safety.
2. **Incorporate** illness and accident prevention in all processes involving our employees and contractors.
3. **Strictly comply** with our Critical Risk Protocols and Life-Saving Rules; full compliance is a condition of employment.
4. **Provide training** on occupational health and safety as part of the professional development of our employees.
5. **Audit and evaluate** the effectiveness of preventive measures against accidents at work.
6. **Seek continuous improvements**, aiming at zero accidents and illnesses at work.
7. **Implement and monitor** proactive indicators with a focus on safe behavior.

All employees and contractors must follow the guidelines established by the Global Health and Safety Policy and undergo proper training to execute their activities in accordance with the laws of each country. To ensure that our service providers also adopt best practices in safety, we have tools and a Contractor Management Manual with safety rules that must be followed by our business partners.



“We believe that we cannot achieve excellence or remain competitive if we fail to consider the health and safety of our employees, partners and the general public.”

**Dirlane Albino**, Safety and Environment manager

## Risk Prevention

GRI 403-2, 403-4, 403-5

Given that each of us plays a fundamental role in ensuring the safety of our operations, we have made several tools and approaches available to support our employees in everyday risk prevention:

- | **Pre-use checklist:** Mechanism for reporting issues or concerns with equipment, vehicles and tools.
- | **Occupational Hazard and Risk Identification and Assessment Matrix:** Tool used to identify hazards in all activities, helping to classify and identify control measures, when applicable.
- | **Preliminary risk analysis:** Enables the assessment of scenarios for the execution of tasks, considering factors that may increase their risk to help identify control measures.
- | **Safety Talks:** Opportunity to discuss the main activities planned for the day and steps to ensure that they are carried out safely.
- | **Duty to Refuse:** Gives permission to employees and contractors to refuse to perform a task whenever the control measures are insufficient or they do not feel confident in performing those tasks. This is a widely established practice (and one of the most publicized concepts) within Votorantim Cimentos.
- | **Disciplinary Measures:** Corrective action for cases when employees operate in situations that may result in accidents (for example, when a hierarchical superior prohibits or inhibits an employee from exercising his/her Duty to Refuse).

All personal and equipment accidents must be communicated and reported. We also have investigation and treatment systems for any identified anomaly. Systems such as Portal SIM and the software tool CAL are used to point out flaws, risks and nonconformities and generate action plans to minimize or eliminate them. In Brazil, workers participate in safety committees through the Internal Commission for Accident Prevention (CIPA, for its initials in Portuguese). Also, all employees around the world are regularly trained to perform the functions for which they were hired. Emphasis is placed on learning from all incidents, and even near-misses.

Focused on risk prevention and mitigation, the Morocco team internally developed VOTOPROTECT, the first lockout/tagout (LOTO) app that directly communicates with the plant's equipment and machines. This innovative app informs the control room, in real time, if electrical isolation and absence of voltage testing have been effectively performed. It also immediately notifies the corresponding supervisors via email of violations in the LOTO procedure, providing them the chance to block the start of the equipment. This app ensures the correct implementation of the LOTO procedure and compliance with our LOTO Critical Protocol requirements.



Employee in one of our plants in Brazil

## Safer Together

Creating a safety culture is a continuous journey that requires the participation of all of us. In 2022, we hosted Global Safety Day in all our sites around the world. This year’s event was planned around the theme “Safer Together” and addressed important issues such as reporting near accidents, preliminary risk analyses, analyses of key of indicators and proactive tools.

At VCBR, we continued the Safety Recognition Program and recognized 440 employees throughout 2022. We hosted Internal Occupational Accident Prevention Week (SIPAT, for its initials in Portuguese) virtually around the theme “Safety: this changes the game”. During the week, we reinforced the importance of safe behavior and risk prevention in all our activities.

We expanded the functionalities of the GENU system, implemented in 2019, to manage our health and safety processes more efficiently. The system includes the Professional Social Security Profile, Communication of Occupational Accidents, election process for the Internal Commission for Accident Prevention (CIPA) and management of personal protective equipment (PPE) for all our sites in Brazil. The Practical Safety Guide, launched in 2021, started to be used by all sites in 2022 to establish a safe way to carry out industrial activities.

In partnership with the Procurement area, we launched a new tool called Integra VC. This system aims to simplify the management and engagement of our contracted companies, ensuring our partners’ compliance with our safety standards. The tool was implemented in our cement operations in 2022 and will be expanded to the other business sites in 2023.

We expanded our Safestart behavioral program across the Brazilian aggregates, mortars, operations, logistics and concrete businesses—it is now implemented in 30 sites. In addition, the program was extended to our global operations, with training completed or in progress in Morocco, Spain and Türkiye.

At VCEAA, in 2022, we created a descriptive document with specific procedures to guide our employees on the safe handling of alternative fuels when carrying out co-processing activities in our sites. This initiative was created to address the increased use of alternative fuels in our cement kilns and our commitment to reinforcing safety in our operations. We also carried out audits with IUT (an Austrian consultancy specializing in waste management planning) and assessed the implementation of our Life-saving Rules.

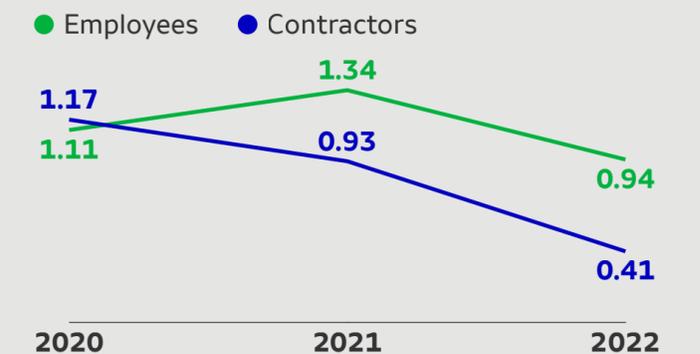
## Zero fatalities

We maintain several initiatives and use different tools to prevent and mitigate potential negative impacts on the health and safety of our employees. Our commitment is to achieve zero fatalities in our operations and reduce our accident frequency rate to below 0.4 by 2030. In line with our 2030 Strategy and Our VC Way, in 2022, thanks to the efforts of our employees and contractors and continued emphasis on safety as our number one value, we celebrated our second consecutive year with zero fatalities in our operations and reduced our accident frequency rate (employees + contractors) to 0.70. This was our best result in the last few years.

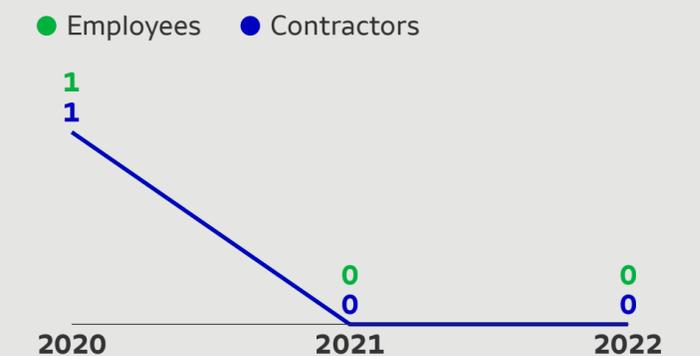
In North America, nine of 13 areas extended their track records of successive years with no lost-time incidents (LTIs), a significant accomplishment when considering the 5.4 million labor hours performed at the regions’ cement plants, concrete yards and aggregates sites during the year. Examples that stand out include our Prairie Materials and CBM Aggregates Divisions and our St Marys Cement Distribution Terminals, which in 2022 reached milestones of 15, 14 and 13 years, respectively, with no LTIs—among the longest records for all Votorantim Cimentos locations worldwide.

## SAFETY RESULTS

### Global frequency rate<sup>1 2</sup>



### Number of fatalities<sup>2</sup>



<sup>1</sup>Considers the number of lost-time injuries divided by the total hours worked x 1,000,000. Does not include Uruguay operations.

<sup>2</sup>Considers on-site occurrences in cement, aggregates, mortar, logistic, grout and concrete facilities.



# Health and Well-being

## SAFETY AND TECHNOLOGY

At Prebetong Áridos (Vigo, Spain), initiatives that are part of the Choose Safety, Choose Life campaign ensure that our employees and contractors go home safe every day. A good example is our Couso mine, where we achieved more than 3,000 days without accidents—an achievement that was made possible thanks to technology. The site implemented an app project named Building Excellence in Safety through Technology (BEST), which includes innovative solutions to improve safety management.

By reducing bureaucracy and replacing paper with digital tools, the app simplifies communication within the mine and points out potential improvements in real time. The first step is a preliminary risk assessment that happens before any task is performed. Periodic inspections ensure compliance with safety rules and enable us to recommend improvements. The system is also able to identify each of the workers contracted through third-party companies. Using a QR Code, users can check the types of training each worker has completed (and which activities he/she is prepared to perform). In addition, the app includes two specific online training platforms for logistics operators. In 2022, the BEST project received the main award from the Spanish Aggregate Association in the Health and Safety category.

We take care of our employees and focus on establishing a culture of health and well-being across our businesses. We are committed to achieving 90% favorability in our health and well-being surveys by 2030. We have a dedicated team focused on promoting quality of life and committed to implementing initiatives to make our company increasingly human.

In 2022, we had fewer cases of COVID-19 in all countries where we operate, thanks primarily to a worldwide increase in vaccination rates. Believing that health and well-being are issues of paramount importance, we are committed to continuing and expanding our global health programs, including:

- | **VC e o Bebê (“VC and Baby”) Program:** Aimed at pregnant women (employees or dependents), the program has more than 350 participants in Brazil and provides an allowance for children up to one year old.
- | **Momento Saúde e VC (“VC and Health”):** Includes breaks and time for self-care and reflection during our team meetings, through lectures and occupational therapy activities.
- | **Social service:** Social workers who support our employees in a wide range of issues.
- | **Employee assistance programs (EAPs):** In Brazil, we continued to implement Pillar, a multidisciplinary program that, among other benefits, offers nutritional and psychological support 24 hours a day, seven days a week. At VCNA, employees and their family members benefit from similar Employee Assistance Programs.

- | **Estamos com VC (“We Are with You”) Program:** An initiative focused on mental health that offers different forms of online therapy for employees and their dependents.
- | **H1N1 Vaccine:** Every year, we offer the H1N1 vaccine free of charge to our employees.
- | **Themed months:** In all regions where we operate, we carry out initiatives to raise awareness among our employees of different health and well-being topics, such as Blue November on men’s health and prostate cancer; Yellow September on mental health; Pink October on women’s health and breast and uterine cancer.

## PROMOTING WELL-BEING

Our employee well-being activities are organized into the Mais Vida (“More Life”) program. The main initiative is VC em Movimento (“VC in Movement”), a fitness and gaming app (named VIK) that presents periodic challenges to fight sedentary lifestyles and rewards the most active participants. Currently, more than 2,300 VCBR employees use the app and belong to walking or running groups. Another initiative is Total Pass, an online fitness platform with classes for employees to take at home, in the park or wherever they like.

# Diversity

GRI 3-3\_405\_406

In an increasingly diverse and inclusive world, we are on a journey of transformation. We know that it is our people who really make a difference to ensure the longevity of our business and our innovations. We believe that what makes us equal is the certainty of knowing that we are different, and that respect for our individual uniqueness will enable us to become increasingly better. Recognizing that, we made public our Global Commitment on Support of Diversity, through which we expressly state that:

- 1. We do not tolerate** discrimination or prejudice of any kind, including race, religion, age group, gender, political belief, nationality, marital status, sexual orientation, physical/mental/intellectual condition or any other.
- 2. We hold respect** for people as an unconditional value and we do not tolerate any position that is not in accordance with our Code of Conduct.

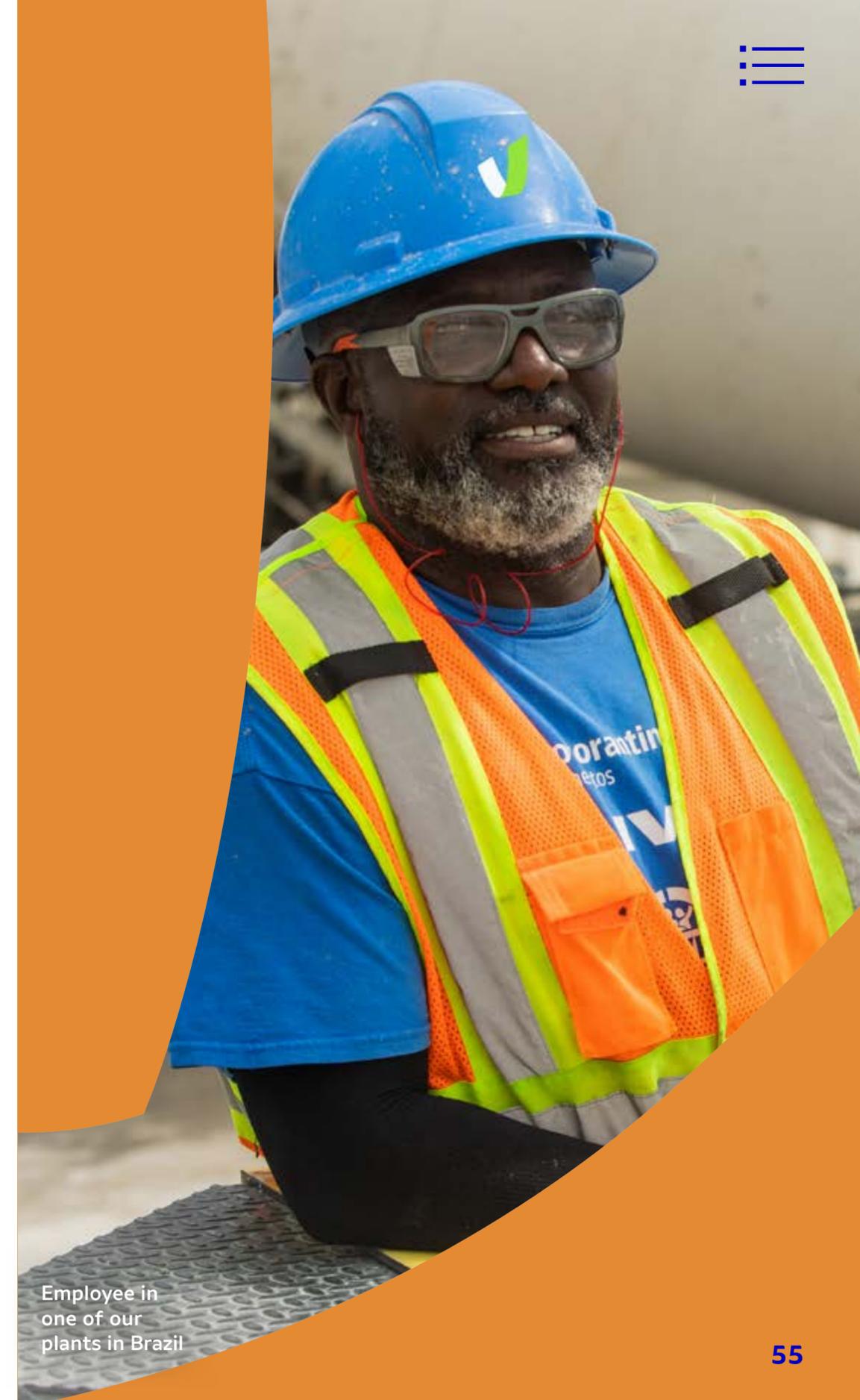
- 3. We are committed** to creating leaders who are engaged in the diversity agenda and who value and encourage the individual characteristics of the people who make up their teams as a competitive advantage of our business.
- 4. We maintain and foster** an environment in which each of us feels safe to express our true self.

We have a diversity ecosystem made up of our top leadership, managers, groups of allies, regional working groups and the Diversity and Inclusion area. Through different initiatives, we work to create an environment where people are free to be who they are, without judgment and with respect and appreciation.



“We are on a journey to promote diversity and inclusion in pursuit of a more equitable future. In line with Our Way of Being, we value and develop our employees, encouraging diversity and making people feel truly included.”

**Thatiana Soto**, global general manager of Organizational Development



Employee in one of our plants in Brazil



## Groups of Allies

In 2022, our Diversity Allies Groups continued to meet. We have a total of four groups in Brazil (Gender, LGBTI+, People with Disabilities and Race) that work to create opportunities for dialogue and to propose initiatives to advance the topic of diversity within the organization. The meetings take place every two months; throughout the year these groups meet on average five times.

## Diversity Partnerships

We are part of the Business Initiative for Racial Equality, an initiative to promote racial inclusion and fight racism; Business for LGBTI+ Charter, a commitment to promoting inclusion and fighting discrimination against the LGBTQIA+ population; Corporate Social Inclusion Network, an initiative that encourages companies in Brazil to promote the inclusion of people with disabilities in the job market; UN Women's Empowerment Principles, an initiative of the UN Global Compact and UN Women that aims to unite, strengthen and expand global efforts in defense of women's rights.; and National LGBTI+ Alliance, a civil, multiparty and non-profit organization aimed at promoting and ensuring the defense of human rights and citizenship, in particular of the LGBTI+ community.

## Maternity and Paternity Leave at VCBR

In Brazil, as signatories of the Brazilian Corporate Citizen program, we offer extended maternity and paternity leave to our employees, as another way of promoting diversity among our teams. In 2022, our LGBTI+ employees in Brazil were included in our Parental Leave Policy. That means that when they are a child's main caregiver, they are entitled to parental leave of up to 120 days and to receive daycare assistance for children up to 24 months. Similar benefits have been made available in other countries as well.

## #Pode Entrar (“#Come in”)

Our virtual live events (#PodeEntrar) to increase awareness of diversity and inclusion had an average of 1,000 views per event. In 2022, we hosted Cris Bartis, creator of the Mamilos podcast, to talk about gender equality challenges; Filipe Rollof, a key opinion leader on diversity, who spoke about LGBTI+ pride; Flavia Cintra, journalist and reporter for Globo TV network, to share her experiences as a person living with a disability; and Caroline Sodré, a historian with a master's degree in Afro-Brazilian education, who helped us understand the history of Brazil from an Afrocentric perspective.

## ACCESSIBILITY AND INCLUSION

We increased the participation of people with disabilities at VCBR by 45% and invested more than R\$10 million in construction and structural improvements in our sites to ensure inclusion of people with disabilities and access, including the improvement of bathrooms, locker rooms and access to our sites and the installation of special elevators for people in wheelchairs. In addition, we improved our Ethics Line to increase accessibility for people with hearing and visual impairments (*see more in Ethics Line, on page 40*). We also launched an exclusive platform to post positions available to people with disabilities.

## Awareness and Training

In Spain, the first ready-mix truck decorated to support the LGBTI+ community began circulating through the streets of Seville. The truck is painted in rainbow colors, a symbol of the sexual orientation equality movement. Similarly, to draw attention to violence against women, we have been using ready-mix trucks painted purple and displaying the motto “Zero tolerance” and the 016 number used to report acts of abuse and violence against women. VC Spain has a specific protocol to identify and deal with gender-related violence, both inside and outside the company.

In Türkiye, employees at the Yozgat plant participated in a two-day training program on issues related to violence against women. Following that, a graffiti installation was created to highlight the motto “No to Violence Against Women!”

In Brazil, we launched diversity training on our distance learning platform. The Anti-Male chauvinism module discusses unconscious biases and ways to fight structural machismo; the Anti-Racism course focuses on racial literacy, introducing key concepts in a clear, simple and objective manner.

As part of our Include to Transform program, in 2022 we held another Brazilian Sign Language course online for employees and continued to implement the Inclusive Conversations project, in which facilitators with market experience share their insights and good practices regarding the inclusion of people with disabilities. The program also includes training for people with disabilities to work in administrative functions. In 2022, 50 people were trained.

## Women at VC Strategy

Aligned with our commitment to increase the participation of women in leadership positions (25% by 2030), we launched our Women at VC strategy, which includes all our programs for attracting and retaining women. In 2022, we increased our percentage of women in leadership positions in all regions, to a global total of 21%. One of the highlights was the hiring of Bianca Nasser as our new CFO and member of our Board of Officers.

In Brazil, we held the third Lidera VC – Development Program for Women Leaders. Since the launch of the initiative in 2020, we have already trained more than 100 women in positions of general management, management and coordination in various areas of the company. In our industrial sites, we promoted the third Technical Internship Program for Women, which aims to train and prepare them for technical positions in our cement, aggregates, mortar and lime operations. The 2022-cycle of the program, which runs for at least one year, included the participation of 10 women.

Another initiative is the Reliability Engineer Program, which seeks to attract women in the market and introduce them to our company. The female engineers participate in practical projects, technical training and personal development courses in preparation for assuming leadership positions in the plant maintenance area, increasing the participation of women in our operations.

In celebration of International Black, Latin and Caribbean Women’s Day, we launched our Mentoring Program for Black Women in partnership with the Zumbi dos Palmares University. The program runs for eight months and is offered to self-declared Black women in analyst and consultant positions. In its first year, the program includes the participation of 28 women, who are being mentored by employees in manager or general manager positions.

Our work to promote gender diversity also extends to our local community. In partnership with the Social Transformation area, we continued to implement our Evolving Women program, which offers courses for forklift operators and ready-mix truck drivers in the communities where we operate. Throughout 2022, 14 women benefited from the program.

In December 2022, VCEAA Corporate launched the Equality Plan to continue to foster equal opportunities and diversity within our workforce, as well as to increase the number of women in management positions and to reinforce work-life balance measures. The plan was created based on an assessment of current practices and includes measures aimed at achieving equal treatment and opportunities between women and men in the company and eliminating discrimination based on gender. Globally, every year we commemorate International Women’s Day on March 8 to recognize the daily achievements of all women in our company.



Employees in the Cajamar plant, Brazil



# Training and Development

GRI 404-2

We believe in the importance of training as a tool for employee development. In 2022, we enhanced our learning platform, which reaches 100% of our VCBR employees and VCEAA. Our goal is to extend the platform to VCNA in 2023 to increase learning opportunities and expand the reach of our training and education strategy. During the year, we offered more than 44,000 hours of training around the world. We currently have 130 development tracks, which include training on technical subjects, compliance issues, leadership development, preparation for new challenges and gateway programs. This ensures that all our employees are participating in at least one track. In addition, we have more than 4,400 classes available, encouraging career ownership and continuous development.

At VCBR we have three technical schools that support the development of our employees: the Cement Operations Technical School, the Concrete School and the Sales and Marketing School. Each school has its own strategy to address fundamental knowledge that is specific to each business. In 2022, several training sessions were carried out by these schools.

At VCEAA, employees received more than 34,000 hours of training. More than 2,400 hours were dedicated to a tailor-made training program designed internally for VCEAA employees: The AFR Core Curriculum. The goal is to support the implementation of the AFR (Alternative Fuel and Raw

Materials) roadmap by ensuring that our employees have the required knowledge and skills. The program covers all AFR activities carried out in our cement plants, including sourcing and business development aspects, the cement production process and quality implications, safety and environmental challenges, and waste treatment platforms.

At VCNA, an Employee Training Advisor was appointed to help ensure consistent technical and operational training at the region's cement plants in Canada and the United States. The region also started a Graduate Program for certain positions within its Safety, Cement, Ready Mix and Aggregates businesses to ensure we are developing talent that will contribute to sustainable results and reinforce our company values for years to come. To extend its reach to attract and hire diverse talent, we established offshore recruitment initiatives aimed at finding qualified candidates from outside of the United States and Canada to work at VCNA operations.

VCNA also commemorated the 60<sup>th</sup> Anniversary of the St Marys Cement Concrete School for customers. Three-day courses were hosted by the St Marys Cement Technical Services Group, combining theory and practice in cement, concrete and aggregates, mostly intended for people relatively new to the business, aimed at educating and attracting a new generation of talent to our company.

## LEARNING EXPEDITIONS

In 2022, VCEAA started implementing a new type of training program. The Learning Expeditions (or LEX) are immersive experiences through which employees leave their comfort zone to discover, explore, research and learn about topics of interest or innovations in their area. VCEAA expects to promote 40 learning expeditions by the end of 2023, involving all functional areas in the four countries of the region (Morocco, Spain, Tunisia and Türkiye). The project facilitates interactions with other employees who are specialists in their areas to create informal knowledge networks and communities of practice to continuously foster creativity and outside-the-box thinking.



## Talent Development

In 2022, we promoted another cycle of our Trainee Program, which selected seven candidates at the beginning of their careers to work in different areas during the cycle. The program will last for 16 months, during which time trainees will be mentored by our leaders, do three job rotations and participate in in-depth training sessions on management, creativity, self-knowledge, projects, design thinking and self-development. We also continued to implement our Internship Program, which included more than 350 college students in 2022.

In 2022, the Potenciar Program celebrated its 10<sup>th</sup> anniversary and included 20 participants (trainees, reliability engineers and high-potential employees in the beginning of their careers). The program offers essential training in the pillars Me, Us and All, with immersions and in-depth studies on self-knowledge, business and ESG practices, and the implementation of projects with impacts related to the Sustainable Development Goals (SDG). More importantly, Potenciar facilitates the exchange of experiences among participants from Votorantim Cimentos and other Votorantim S.A. portfolio companies.

Based on their potential to assume their first position in management, we identified 850 leaders and employees to participate in our Leadership Development Journeys. Created around fundamental pillars for the exercise of leadership (Self-knowledge, People Management, VC Business and VC Culture), these journeys address the challenges of each pipeline and encourage leadership and continuous learning. The program includes asynchronous content and group forums to exchange experiences and ideas.

In partnership with the Votorantim Academy, which serves as a knowledge hub for the Votorantim S.A. portfolio companies, we nominated 1,220 employees from different areas and positions to participate in workshops, courses and training sessions focused on various current topics in the area of human and organizational development.

## Performance and Career

Every year, we carry out a career management process to identify potential candidates for new positions and challenges within the company, while also fostering the career development of our teams. The process includes opportunities for reflection and development through workshops and leadership training aimed at assessing potential and facilitating individual career conversations with members of the team.

At the end of the career management cycle, employees receive formal feedback and support—in the form of guidance from managers and the People Management team and specific training—to develop their individual career plans. Based on collective indicators, each site or area makes the necessary adaptations to organize training (according to skills that need to be further developed, for example). Everything is done to support our quest for excellence, in a culture of high performance. As part of the process to map and develop successors, we reinforce career management tools and practices to ensure greater depth and focus in group discussions and in the preparation and follow-up of individual development plans.

## INDUSTRIAL MANAGEMENT MODEL AT VC

In 2022, we implemented the Votorantim Cimentos Production System (VCPS) in our Cement operations in Brazil. The project was divided into a development phase and an implementation phase. In the development phase, carried out in 2022, we identified and defined the management and governance processes of eight areas that are considered key by the company: Mining, Quality, Production, Maintenance, Human Resources, Industrial Management, Safety and Environment. The implementation phase, scheduled for 2023, aims to implement the processes in all plants in Brazil. The initiative is an evolution in our industrial management culture that will ensure that our actions are controlled by well-defined processes and controls and not just by people. More than 290 employees were involved in the project, including specialists and leaders who aspire to build a simple and reliable management model, considering the best practices and existing processes, to guide our operations to work with excellence to achieve sustainable results.



- Path to Growth
- Industry 4.0
- Logistics
- Customer Focus

Employee in the  
Hasanođlan plant, Türkiye

# 09. Competitiveness and Innovation



# Path to Growth

GRI 2-6, 3-3

A business has no future if it does not pay close attention to the need to innovate. When it comes to production, processes, partnerships with suppliers and customers, we must be open to the future, to developing new ideas, to embracing new concepts.

We defined an innovation strategy that aims to pave the way for the future of civil construction in a simple, agile and sustainable manner. To this end, we have a multidisciplinary Innovation Commission, made up of our employees, which encourages the generation of ideas, and the systematization and acceleration of new projects, which are developed internally or through partnerships.

In 2022, the members of Votorantim Cimentos' Innovation Commission met four times to analyze new projects and review the status of those already in progress. Of the more than 150 ideas presented, we currently have 19 in our Innovation Funnel, and three of these projects have already been implemented (Predictive Concrete, Soma and Vloz).

Employees can submit suggestions through Inova VC, an initiative that also promotes training in project management concepts and participation in events with external guests

through the *Intraempreendedores* ("Internal Entrepreneurs") Program. Through access to exclusive experiences, participants receive support to enhance their ideation processes and perfect their vision for innovation. In the second half of the year, we organized a workshop to review our innovation territories, to start building on our global approach to innovation. We revisited VCBR's strategy and defined six territories (1) job site optimization; 2) retailer performance; 3) decarbonization; 4) waste recycling; 5) decent housing and 6) the plant of the future.

At VCNA, we joined Plug & Play, an ecosystem that catalyzes technological advancement by connecting blue chip corporations with a network of 30,000 of the brightest startups across the globe. As a first step, we are prospecting startups working on sustainability and new constructions methods.

We believe that the diversity of our employees contributes to an environment of innovation. With that in mind, throughout the year our global Working Groups continued to work to address significant issues for the organization, namely: new technologies, alternative fuels and raw materials, clinker factor reduction and carbon capture and storage technologies.



"We are committed to pursuing initiatives that will contribute to our objective of accelerating the innovation agenda in pursuit of sustainable solutions for both our company and our industry."

**Filiberto Ruiz**, CEO of VCNA



## Carbon Capture, Use and Storage (CCUS)

Carbon capture, utilization and storage (CCUS) is an important lever in our decarbonization journey that will be fundamental in helping us produce carbon neutral concrete by 2050. CCUS consists of capturing CO<sub>2</sub> from the industrial process to be used by other industries, recycled as fuel or stored. This new technology is still being studied and its contribution is forecasted to only become significant beyond 2030, after commercial viability has been determined and the necessary infrastructure has been established according to the Global Cement and Concrete Association (GCCA).

Within the scope of the GCCA, we participate in the Innovandi Open Challenge program, which aims to accelerate the development of new technologies that can lead the industry toward the goal of zero emissions. In 2022, the program facilitated the creation of partnerships between startups and the cement companies that are members of GCCA to pursue solutions to the major climate-related challenges we are facing. We participate in one of the six existing consortia, linked to carbon capture at cement plants. One of these initiatives is focused on capturing carbon from the atmosphere at a lower cost, using an exclusive biphasic amine.



“We continuously monitor innovation initiatives worldwide in the areas of cement, concrete and aggregates, to map out solutions that can help drive our safe and sustainable growth, and our competitiveness.”

**Silvia Vieira**, R&D General Manager

## Technological Radar

“We continuously monitor innovation initiatives worldwide in the areas of cement, concrete and aggregates, to map out solutions that can help drive our safe and sustainable growth, and our competitiveness,” said Silvia Vieira, R&D General Manager. The instrument we use is the Technological Radar created by the Research & Development (R&D) area, through which specialists in our teams comment on news and articles on topics that are relevant to the business and assess the technical and economic viability of ideas.

Since the implementation of this tool, in 2020, more than 5,500 news and articles have been analyzed and helped guide our research, development and innovation projects. The Technological Radar is available to our teams on Workplace, an online collaborative tool that facilitates teamwork, real-time communication and information sharing.

## HYDROGEN INJECTION

Hydrogen has been extensively studied to increase thermal efficiency in cement operations and to enable increased use of alternative fuels. In 2022, we invested R\$9 million on technology to inject hydrogen into one of the kilns at the Rio Branco do Sul plant. The initiative was carried out through the installation of a unit that promotes electrolysis and separates hydrogen and oxygen molecules. Hydrogen is injected into the kiln burner in the coke transport line. This results in more efficient combustion and increased operational stability, reducing thermal consumption and enabling the increased use of alternative fuels. At VCNA, we are in the process of acquiring two hydrogen electrolysis units to be installed in the kiln and calciner of the St Marys Cement, Bowmanville plant. The installation of similar projects in other plants of the company is being studied.



# Industry 4.0

In line with our strategic pillar of business transformation, we continued to invest in initiatives related to industry 4.0 and artificial intelligence, aiming to gain efficiency, optimize costs and increase competitiveness in all regions where we operate.

At VCBR, we created an area dedicated to planning and managing industry 4.0 initiatives and developed a roadmap of initiatives to guide us along this journey of transformation over the next five years. The year was marked by studies, proofs of concept and projects using artificial intelligence (AI), internet of things (IoT), augmented reality (AR), cloud computing and big data incorporating the concept of data lake.

Several AI initiatives were implemented to optimize process stability, increase the usage of alternative fuels (replacing fossil fuels) and enhance operational performance. We continued to work on predictive maintenance using mathematical models to monitor strategic assets. Through an online platform, the Spectrum project monitors various process information and equipment data to anticipate failures. In 2022, the project avoided R\$36 million on maintenance expenses.

We continued to implement the Predictive Concrete project, which was created by the R&D area and uses artificial intelligence to help predict concrete strength at 28 days based on production parameters. Potential deviations are identified

in advance, enabling corrections to be done in a preventive manner. By reducing standard concrete deviations, we increase customer satisfaction and technical efficiency, while also reducing our production costs and carbon footprint. In 2022, the project yielded R\$4.8 million in savings and prevented the emission of 6,900 kg of CO2 into the atmosphere. The initiative is already underway in Brazil, and we are studying its expansion to VCEAA and VCNA in 2023

At VCEAA, we revised the roadmap for the region and digitalized several operations. At the Yozgat plant, in Türkiye, our projects focus on plant reliability and efficiency, in line with our 2030 Commitments. To provide more detailed information to our control room, we installed thermal (infrared) cameras in eight kilns, in addition to a cooler. We also installed a system known as Expert Optimizer (EO) to stabilize and optimize industrial processes. Considered the most modern system available, it includes linear and non-linear predictive models that can help us make the best operational decisions.

In addition, all our plants in the region now use the Laboratory Information Management System (LIMS). VCEAA chose this tool because it enables easy access to information, which is transparently shared with the operational teams. This leads to improvements in performance throughout the entire process, including, for example, lower electricity consumption. Also, information can be accessed from different locations, facilitating collaboration and reducing the need for training.

## DECARBONIZATION 4.0

In line with our decarbonization strategy, we developed three initiatives aiming at optimizing the thermal consumption of clinker kilns in Brazil. The first one consisted of using Machine Learning (ML) to support alternative fuel co-processing decisions, connecting the operational vision with demand and the market. In the second initiative, we used ML to support kiln operation using recommendations to optimize thermal consumption. The third initiative consisted of using virtual sensors—smart algorithms that simulate the result of a process variable that cannot be measured in real time—in kiln operation.



Employees at CBM  
Toronto, Canada

In the area of artificial intelligence (AI), we are working on a few proofs of concept. Our challenge is to consolidate and extract value from information that is currently available in several different platforms. The concept of big data has evolved into the concept of a data lake, a repository that allows users to “drink” from the source. Many reports that used to be done manually are now created electronically, enabling people to use their time and skills to analyze information to increase productivity, for example. Another path of no return is connectivity and mobility. Every employee has a smartphone and almost all apps run on phones. Therefore, expanding these connection opportunities is a way to make work more agile.

VCNA’s Prairie Materials is leading an effort to partner with engineers and students from UCLA’s Samueli School of Engineering. VCNA is participating in the program by sharing concrete performance data and other relevant information that is being used to “train” machine learning models to propose and predict the structural and environmental performance of various AI-generated concrete mixes, including those made with Portland-Limestone Cement (PLC).

## Cybersecurity

In Information Technology, one of our focus areas was cybersecurity. We developed a platform that gives us more accurate control of our operations and includes a new two-factor authentication feature to legitimize remote access via VPN from the internet, especially because since the beginning of the pandemic, many employees started using their work computers outside the company.

Other initiatives included the implementation of Extended Detection and Response, a next generation antivirus with even more advanced protections than the traditional EDR (Endpoint Detection & Response), and an immutable backup, with layers of protection to avoid compromising backup copies. The company also installed LGP, a privacy management platform for centralizing requests from holders, discovering data processing in business flows and controlling authorizations for accessing websites (cookies). Each year, we run a pentest to assess our protection, detection and response mechanisms. After the test, all attention points are prioritized, and risk mitigation actions are taken according to the established level of urgency.

The encryption of notebook hard disks was also an initiative implemented during the year to prevent data from being accessed in the event of loss or theft. And, still in progress, we have a project to increase control over accounts with higher permission levels in the administration of our IT infrastructure, through the use of electronic password vaults.

In addition to initiatives to prevent and detect potential cyberattacks, the company is also developing a business continuity plan (BCP) that includes crisis management, a recovery plan and a contingency plan, among other initiatives. In 2023, we will be designing a Cyber BCP considering large impact situations, including specific scenarios of persistent and advanced ransomware attacks that can indicate improvements and serve as the basis for conducting tabletop tests.



# Logistics

The breadth of our operations has always required enormous logistical efforts—to transport raw materials to our plants, and our products to retailers and consumers. With the mission of simplifying and streamlining the work of drivers and shippers, in March we launched our digital carrier, Motz. The company was created in 2020 as an internal project to facilitate our own logistics. The following year, we expanded our reach and incorporated our plants and distribution centers—and while still in an experimental phase, under the name Mov-C, we facilitated the transportation of 11 million tonnes of goods.

In 2022, we extended our services to any interested party, and under the new Motz brand, we acquired 40 customers and saw our volume of cargo grow by almost 50%, to 16 million tonnes (of which approximately 10% are external). Our revenue totaled approximately R\$1 billion. Our goal is to reach 24 million tonnes/year in the next five years, with at least 30% external customers.

For example, if an independent driver transports our materials from a plant to a distribution center, Motz can schedule a different shipment in the opposite direction. Our biggest advantage is our reach: including our plants and distribution sites, we have more than 100 dispatch points in Brazil. Our driver database already includes 25,000 individuals. In 2022, R\$8.4 million were invested in systems, with another R\$10 million forecasted for 2023. One of the innovations is a tool that speeds up payment for drivers.

## Distribution Centers

Aligned with the Growth & Positioning and Competitiveness pillars of our 2030 Strategic House, we reinforced our distribution infrastructure by launching a new distribution center (DC) in Ceará and transferring our São Miguel Paulista DC to Guarulhos, in the São Paulo metropolitan area. The new logistics centers also strengthen our #customerfocus principle, since they raise the level of our services and expand the reach of our products.

Our new DC in Crateús (CE) expanded our presence in the Northeast Region. Located 350 kilometers from Fortaleza, it has a distribution capacity of 2,100 tonnes of cement and adhesive mortar per month, which enables us to expand our deliveries to customers in the states of Ceará and Piauí.

The new facility in Guarulhos has the capacity to distribute 1,000 tonnes per day of our entire product line: cement, adhesive and basic mortars, grouts, limes and waterproofing products. The DC has a unique closed circuit to reuse water used by forklift washers, which reduces on-site water consumption. This feature is in line with our 2030 Sustainability Commitments, which aim to reduce the company's environmental footprint by incorporating clean technologies into our operational processes to create a future with lasting results for customers, partners and society.

## TRANSFORMING WITH MOTZ

The launch of Motz is yet another initiative aligned with the Business Transformation pillar of our 2030 Strategic House. We are innovating through new business models and accelerating digital transformation. Unlike other logtechs that only offer a freight platform, we are responsible for the entire logistical flow, moving products from one location to another. Independent drivers have a cargo app, while shippers use a dedicated portal that consolidates the entire process, including order placement, transportation, delivery and freight payment. Motz works with dry cargo in the civil construction product chain, and can serve several segments, such as agribusiness, mining and steel, among others.

“We are innovating through new business models and accelerating digital transformation. Motz comes to expand our areas of activity beyond the civil construction sector.” **Luis Eduardo de Oliveira Vallim**, director of VCBR Logistics.





Employees in  
a Distribution  
Center in Brazil

## LOGISTICS 4.0

In 2022, shipping processes in our distribution center in Uberaba (MG), Caxias do Sul (RS), Petrolina (PE) and mortar plant in Belém (PA) were fully automated. When trucks enter the site, drivers use a QR Code to open the gate. When forklift operators are notified of their arrival, they set the orders aside. The drivers proceed to the loading docks and, once the process is concluded, they collect all tax documents at the exit to continue their journey. One of the challenges is to get drivers used to the new process, since they may be resistant to change. The goal is to have all 85 VCBR sites automated by 2024. Similar initiatives already exist in our other regions.

### Pre-programmed Routes

One of the main features of our app for truck drivers is a route planner that optimizes routes (reducing the time and distance traveled) and space in trucks (especially in cases of shared shipments). The app is also very intuitive. Users can easily learn how to perform tasks, resulting in easier and faster work. The app has three features that are especially attractive to drivers: the possibility of booking a trip without having to be present at the site, digital delivery confirmations and the possibility of closing deals online, which expedites payment. Our initial goal was to have an 80% adoption rate; currently, 84% of drivers are already using the new tool.

### Better Planned Production

Another important initiative in the VCBR's Logistics area is the Production Planning (PCP) system. Many activities that used to be done manually, using spreadsheets, are now centralized in a system that synchronizes the supply chain. This helps to avoid losing sales due to product shortages, reduces transportation costs (especially those associated with emergency supplies to plants) and prevents products from having to be discarded because they have passed their expiration date.

In two years, approximately R\$10 million were invested in new software. In 2022 alone, we achieved R\$8 million in cost savings.

### Green Logistics

Greenhouse gas emissions are a constant concern for us, and logistical processes have high potential for emissions. In 2022, we introduced a new concept and began tracking our emissions avoided through the choice of different modes of transportation. In Brazil, for example, by replacing road transport with rail and water alternatives, we prevented the emission of 94,000 tonne/CO<sub>2</sub>e per year, which is equivalent to the emissions produced by more than 16,000 vehicles. Water transportation is concentrated at the Barra dos Coqueiros port (state of Sergipe), from where bulk cement from the Laranjeiras plant (also in Sergipe) is transported to the Port of Manaus (state of Amazonas) by sea/river.

Another initiative that contributes to lower emissions is the use of an app for drivers that optimizes delivery routes. The software tool, customized for our company, resulted in an estimated average savings of 234 m/tonne shipped in 2022 alone, by calculating the most efficient routes. This translates into an average savings of 100 ml of diesel per tonne shipped, which is equivalent to 0.264 kg of CO<sub>2</sub>e avoided per tonne of product shipped.

In North America, VCNA operates an extensive intermodal distribution network that leverages water, roads and railways to transport its products. In particular, VCNA leverages a cost-effective and sustainable maritime distribution network of vessels and terminals to supply cement to markets across the U.S. and Canadian Great Lakes region and, thanks to the additional capabilities gained through the integration of the McInnis business and St Marys Cement, to Eastern Canada and the Northeastern coast of the United States.



# Customer Focus

GRI 3-3, 2-6

Our customers are at the center of our strategy. Therefore, we constantly seek to develop solutions and offer products that can fully meet their needs. The market conditions are very different in each of the regions where we operate. In Latin America, cement is mostly sold in bags. In North America, cement is sold in bulk, with bags only accounting for less than 3% of sales. In Europe, this percentage varies from country to country. What is common in all regions is our mission to supply a high-quality product, ensure our wide reach (with direct access to customers), apply technology, strengthen the sales ecosystem and reduce our carbon footprint while increasing productivity in work sites.

While we have very specific strategies to reach each regional market, the launch of the new Votorantim Cimentos branding in the second half of 2022 represented an important milestone to not only position the company as an international player but also to set our eyes on the future. The new, revitalized branding unifies the visual identity of our global sites, with an architecture and hierarchy that allows for new ways to further showcase our local brands in their respective markets (read more on *New Branding*, on page 24).

In the Brazilian market, our cement packaging was redesigned to reflect the new branding. The advertising campaign to introduce the new packaging of Votoran, Itaú, Poty and Tocantins cements, including TV, radio, social media and point of sales communications, was launched nationally on October 9. In the coming years, the new branding will also be used in our products in other countries where we operate.

Our customer service strategies also need to be adapted according to the needs of each region. At VCEAA, for example, two years ago we started a go-to-market project based on market trends, technology, product portfolio, sustainability targets and satisfaction surveys.

These surveys use the net promoter score (NPS) methodology and help us develop action plans to continually improve the quality of our services. As a result, our NPS at VCEAA has been steadily improving—in 2022, our scores in Morocco, Spain and Türkiye placed us in the “great” category (above 59 points). Our main project in 2022 was the creation of a roadmap to adapt our product portfolio considering the need for more durable and sustainable types of cement.



“We did a very careful job, including qualitative research and tests with external and internal stakeholders. Our goal is for the new packaging to reflect the strength of our brands in all regions of Brazil.”

**Hugo Armelin**, director of Marketing, Sales and Concrete Operations.



New cement packaging, Brazil

## 09. COMPETITIVENESS AND INNOVATION

One example of a customer partnership at VCNA during the year was an innovative new 60-story office tower in Chicago, developed by a team including a real estate developer, a structural and civil engineering firm, a construction company and Prairie Materials, which provided technical expertise and more than 52,500 yards of concrete. The structural design combined steel and low-carbon concrete to achieve a 19% reduction in carbon emissions, equating to total verifiable savings of over 7 million kilograms of CO<sub>2</sub>, which is equivalent to more than 1,500 cars off the road for a year, or approximately 800,000 gallons of gas.

### More Products and Services

For the first time, we held a workshop called Customer-Centered Laboratory in Tunisia, following the success of this activity in Morocco in the past three years. In these two countries, we have loyalty programs that are highly rated by consumers. And customer adoption and use of our digital sales portal (eCare, launched in 2021) continue to increase, turning it into a global success case in our industry and currently accounting for approximately 60% of our business in Morocco, Spain and Tunisia. In Türkiye, it surprisingly exceeds 95%. The system allows customers not only to place orders and download invoices, but also to register and monitor complaints and schedule deliveries. It is a great success precisely because it puts our customers—and their needs—first.

In Brazil, we continued to work tirelessly to serve retailers and help ensure the evolution and continuity of their businesses. Our main initiative in this area is Juntos Somos+, a partnership with other major brands in the sector that has more than 81,000 subscribers and is the largest civil construction loyalty program in the country.

Focused on offering increasingly more products to our customers, we expanded our Imperplus and Superfix mortar additive lines to different regions in Brazil and expanded our Votomassa product line with the launch of Votomassa *Piso sobre Piso Interior Finish* and *Porcelanatos Interno Cinza*. With these new products, our customers gain an exclusive option for indoor areas that can be used according to the needs of their projects. The new Votomassa is packaged in 100% recyclable paper, produced from renewable sources and with a protective barrier that prevents the internal content from coming into contact with moisture in the air, better preserving the product and preventing lumps.

Also, in line with the digitalization movement, we invested in *Papo de Obra*, a YouTube channel created to educate workers (and final consumers) on construction-related matters. Currently, the channel has more than 250 videos published, 28 million views and 150,000 subscribers.

### Low-carbon Products

To fulfill our commitments related to decarbonization and more sustainable alternatives, we have been working to expand our portfolio of low carbon products. In this direction, Spectra concrete, which has high-modulus of elasticity properties, enables the design and construction of highly durable structures with lower costs and a carbon footprint that is up to 25% lower than conventional concrete. This product line, which has been sold by VCNA for the past few years, arrived in Brazil in 2022 and is already available in the cities of São Paulo (SP), Campinas (SP), Porto Alegre (RS), Fortaleza (CE), Goiânia (GO), Curitiba (PR) and Brasília (DF).



Employees in our Cajamar plant, Brazil



Our cement and concrete with lower carbon footprint earned important recognition for Engemix. For the second consecutive year, the company won the Excellence in Construction Award, presented by the American Concrete Institute, this time for the Faria Lima Plaza project. Located in Largo da Batata, São Paulo, the building is known for its inclined pillars that change direction along the 110-meter-high structure. As in 2021, Engemix was once again recognized for using a smaller amount of cement in the concrete used in the project, which consequently lowered the building's CO2 emissions.

In North America, we increased the production of Portland Limestone Cement (PLC) by 200%. Marketed by VCNA's St Marys Cement plant as Envirocem, this type of cement uses more limestone, leading to a 10% reduction, on average, in greenhouse gas emissions. In total, St Marys Cement produced 4 million tonnes of low carbon cement. As a result, we estimate that we have prevented the emission of 335,000 tonnes of CO2 into the atmosphere, which is equivalent to removing 8,000 cars from the streets for a year.

This increase in market share of PLC cements resulted from a combination of changes in local regulations (which previously required a higher percentage of clinker in cement mixes) and consumer awareness activities led by VCNA that show this type of cement, and concrete that uses PLC, maintains substantially similar properties compared with traditional cement and concrete mixes—with added environmental benefits. This work involved collaboration with other Votorantim Cimentos plants in Brazil and around the world, where legislation already permitted different combinations of raw materials. At VCNA's CBM, Prairie Materials, United Materials and newly acquired Superior Materials plants, the more eco-friendly mix accounted for more than 90% of concrete sales in 2022.

## More Aggregates

In 2022, to better meet the needs of our customers, we invested to improve our Aggregates operation in Brazil. We expanded our Araçariguama (SP) plant, which now has a 21% higher installed capacity. The main segment served is the civil construction industry which is in line with the growth strategy for adjacent businesses and further leverages operational and commercial synergies with other businesses.

In Brazil, we launched granules, a new type of product that consists of the coarse portion of stone dust (the fine fraction of gravel grade 0). It is intended for use in concrete blocks, interlocking floors and concrete pipes and can also be used in flexible pavement. In addition to productivity gains, the product provides better finishing and greater resistance, reducing losses caused by broken parts, both in manufacturing and in storage.

In the United States, we concluded the integration of the Valley View business, which was acquired in 2021, into our Prairie Materials business. The transition was extremely successful, surpassing our expectations. Thanks to the acquisition of the new business site, we increased the volume of aggregates products offered to the market by 20% and improved our efficiency. Motivated by these results, VCNA furthered its strategies for adjacent businesses, with an eye on new opportunities. And at VCEAA we started construction of a new aggregates plant in the city of Meknes, Morocco.

## Engemix

Since 2021, we have opened three concrete branches in Brazil, in Colombo (PR), Goiânia (GO) and Jurubatuba (a neighborhood in São Paulo). And we continued to implement our main initiatives, such as the Customer Councils and the Engemix app, which guarantees the time of delivery by ready-mix trucks—70% of customers already monitor deliveries via cell phone. In addition, the app now offers the option of scheduling orders. As a result, direct sales to final consumers already account for 25% of Engemix's revenue (up 30% compared to 2021). One of the main sales channels is the 0800 333 OBRA phone number, which receives more than 4,000 calls per month.

## VLOZ

Customer focus is a key part of our strategy. To increase the sales power of retailers, in partnership with PagSeguro we launched Vloz, a credit card machine that provides our customers with more freedom and flexibility when buying our products. Since its launch, more than 4,000 customers have registered to use Vloz, which is part of our innovation territories.



# 10. Creating a Positive Legacy

- Circular Economy:  
Cimentitious, Co-processing and Viter
- Energy Efficiency
- Environmental Management
- Sustainable Procurement
- Social Transformation
- Monitoring our 2030 targets

Social initiative  
in the Heliópolis  
Community,  
Brazil



# Circular Economy: Cimentitious, Co-processing and Viter

GRI 3-3\_301\_306, 306-1

Our business model is designed to capture value for all our stakeholders, in a systematic and circular way, ensuring long-term development and the creation of economic opportunities, and environmental and social benefits. The concept of a circular economy is incorporated into all of our production processes and replaces the end-of-life concept through the reduction, alternative reuse and recovery of processes and materials to reduce waste, optimize goods and assets and increase effectiveness.

## Cementitious product

The cement production process begins with the production of clinker in high-temperature kilns—and it is at this stage that most direct CO<sub>2</sub> emissions are produced. We promote the circular economy and the preservation of natural resources by using by-products from other industries and alternative raw materials, such as blast furnace slag, fly ash, calcined clay and limestone filler, to replace clinker. Using cementitious materials in cement production diversifies and expands cement

applications and offers an environmentally friendly solution for the disposal of by-products from other production processes, while also reducing our clinker/cement ratio and, consequently, our CO<sub>2</sub> emissions.

Our constant search for new cementitious materials is supported by an area dedicated to mapping new opportunities, such as the use of calcined clays on a global scale. In Brazil, in partnership with Companhia Brasileira de Alumínio (CBA), we are conducting studies in the use of waste from the production of alumina in the Palmital Dam, in the town of Alumínio (SP), as a substitute for clinker in the production of cement. In addition, we created a global working group to exchange best practices and test new solutions.

Reducing our clinker factor is one of the levers of our decarbonization roadmap. In 2022, our clinker factor was 73.9%; we are committed to reaching a clinker factor of 68% in 2030.

## Verdera and Co-processing

During the cement production process, kilns reach temperatures as high as 1,500°C, requiring a high amount of thermal energy. Through co-processing, we reuse industrial, urban and biomass waste as alternative fuels, helping to reduce the amount of waste sent to landfills and the use of fossil fuels, which also has a positive impact on our CO<sub>2</sub> emissions. We have been co-processing waste since 1991 and are pioneers in the use of this technology in Brazil.

Co-processing is one of the drivers of our decarbonization roadmap. To support us in the implementation of our strategy, in 2019 we created our Verdera business unit, which operates in the environmental solutions chain by repurposing waste. Through Verdera, we help companies reduce their environmental liabilities and create a positive impact by helping preserve the planet's non-renewable resources.

In 2022, through Verdera in Brazil, we transformed 1.3 million tonnes of waste and biomass into alternative fuels to be used in our cement kilns (an increase of almost 20% compared to 1.1 million tonnes in 2021). We have a robust investment plan (R\$977 million over the next five years) to increase our waste management capacity worldwide.



VCNA began promoting its co-processing activities under the Verdera brand, following the model launched in Brazil. The approach is mutually beneficial as the region can attract new customers while offering a complete waste disposal service. The move illustrates our international growth strategy and how we can leverage our presence in multiple countries to build or extend our brands. The ultimate goal is to reduce greenhouse gases, promote circular economy and advance our business and industry toward a more sustainable future.

### Thermal Substitution

Globally, we have already replaced 26.5% of the fuels we consume with alternative energy sources, and we are committed to reaching 53% thermal substitution by 2030.

At VCEAA, we achieved a 33.2% thermal substitution rate in 2022, as a result of our investments to modernize our plants. In our site in Balboa (Spain), acquired at the end of 2021, we were able to reach a thermal substitution rate of more than 30% after we built a dedicated facility to co-process alternative fuels, in September 2022. And these numbers tend to grow even more as a result of the recent incorporation of a new site, in Málaga, which is among the most efficient, and lowest emitting plants in Spain. This will unlock significant gains in technology, knowledge and productivity.

At VCBR, we achieved a 31.3% thermal substitution rate in 2022. We invested more than R\$27 million in the

modernization of our plants to enable the increase in co-processing rates. We concluded the implementation of the Bypass project in Vidal Ramos. Announced in 2021, the project aims to remove chlorine from clinker kilns to reach up to 50% of thermal substitution. In this same plant, we acquired an unbaler that allows us to transport compacted waste, thus reducing the number of trips and, consequently, our carbon emissions resulting from waste transportation. In addition, we adapted sheds, dosers and peripheral equipment in the plants that co-process waste.

In Brazil, in 2022, we also signed an engagement agreement with an agency specialized in leveraging investments and competitiveness, to conduct studies related to the modernization of our plant in Salto de Pirapora, in São Paulo. The project includes the modernization of the different stages of the cement plant's production line, primarily aimed at increasing the site's thermal substitution rate and reduce CO2 emissions.

In Uruguay, we are currently the only cement plant to use alternative fuels, with a thermal substitution rate of more than 30%.

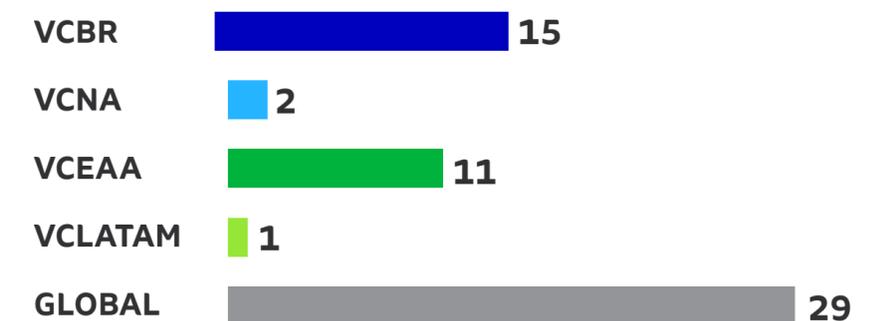
At VCNA, we completed the adaptation of our plants in Bowmanville (to double our co-processing capacity) and Charlevoix (50% increase in the use of alternative fuels) and started the process to obtain co-processing permits for our St Marys plant. We increased VCNA's thermal substitution rate to 6.8% in a highly-regulated operating environment.

## WASTE MANAGEMENT PLATFORM

We expanded our waste management platforms in our VCEAA operations through a partnership with the Veolia group, one of the largest global players with expertise in waste management, for the construction of a waste pretreatment platform in Morocco. In addition, we are finishing the construction and permitting of a large waste preprocessing facility in Spain, expected to be operational in the second quarter of 2023.

In Brazil, we started the process of expanding our waste pre-crushing facility in Itaperuçu, Paraná, with investments totaling R\$6.8 million in 2022. The total project investment is R\$24.5 million, to be implemented over the next few years. These initiatives will increase access to and quality control over the waste used in our kilns, while also reducing costs and increasing co-processing productivity. This model is similar to the one we have in place in our plant in Rio Branco do Sul, Paraná.

### Cement plants with co-processing activities



## Viter

Limestone with a high magnesium content, which is not suitable for cement production, finds a market in Brazil's large agricultural segment through Viter, our exclusive Agribusiness brand. Waste that used to be sent to landfills is reused as a key agricultural input, reducing our environmental liabilities and contributing to the circular economy.

We believe that the soil is the basis for all activities and through Viter we awaken its maximum potential. In 2022, we invested on diversification and created a Research and Development area to continue to develop new products for the Agribusiness, keeping our focus on market and customer needs. In the town of Itapeva (SP), we have an experimental station, a greenhouse, laboratories and an area for tests. One of our research lines is soil correction, including new nutritional concepts and other ways of supplying nutrients (e.g., through the leaves). As the results of our R&D efforts, we are developing solutions to enhance crop production and improve the quality of their outputs through providing protection against intense insolation and high temperatures. Additionally, a key driver for our new developments is the customer need for technologies that thoroughly fit in their operational processes, making their lives easier.

Waste that used to be sent to landfills is reused as a key agricultural input, reducing our environmental liabilities and contributing to the circular economy.

To improve the customer experience, we also offer a delivery service to save customers from having to spend time contracting and arranging freight.

To expand our product offering in the south region of Brazil, we are expanding the Rio Branco do Sul (PR) site, which is expected to start production of high-magnesium Itaú Limestone and Optimix in October 2023. Another expansion project underway aims to increase aglime production by the Itapeva plant starting in 2023. We also implemented a loading scheduling system at the Nobres (MT), Salto de Pirapora (SP) and Rio Branco do Sul (PR) plants to reduce waiting times and improve the customer experience (an initiative that is expected to be replicated in all other sites starting in 2023).

At VCNA, the Valley View Industries business acquired in 2021 and integrated into VCNA's Prairie Materials site in 2022, enhances our ability to supply agricultural limestone to farmers and growers located in the center of America's agricultural heartland.

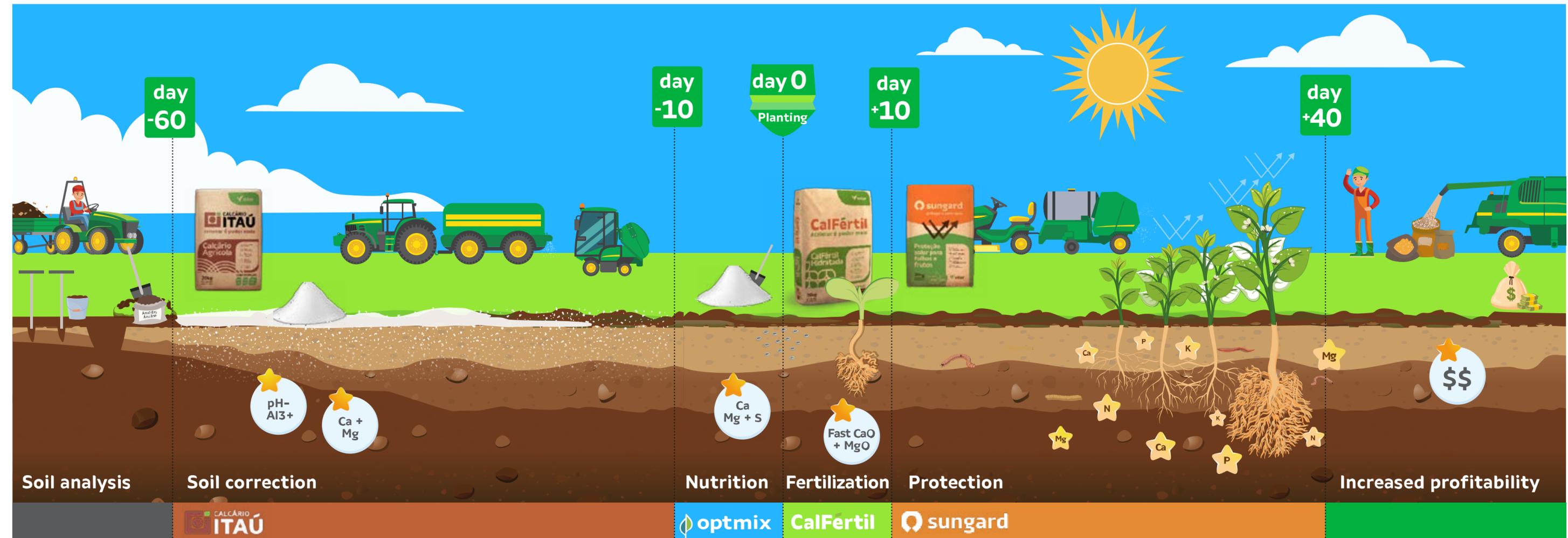


Viter employees at a cotton plantation in Brazil



## Increased fertility

Learn about the products offered by Viter to improve agricultural production:



### Itaú Limestone

Essential for reducing soil acidity and neutralizing toxic aluminum. It is made up of finely grinded high-reactivity calcium and magnesium carbonates. Liming also improves the absorption of nutrients by plants, renewing the soil's productive potential. It is indicated in the pre-planting stage.

### Optimix

A mineral fertilizer made up of an industrial mixture of dolomitic limestone and agricultural gypsum. It is a soil corrective and conditioner that increases productivity both on the surface and on the subsurface. It also contains magnesium and sulphur, which enable roots to expand their exploration area.

### CalFertil

It is a calcium and magnesium compound with a high degree of purity and fineness. Because it is highly soluble, it acts fast and is easier to apply than regular limes. It helps to enhance the soil's physicochemical properties by increasing aeration and promoting root development. It is a popular choice for sugar cane plantations.

### Sungard

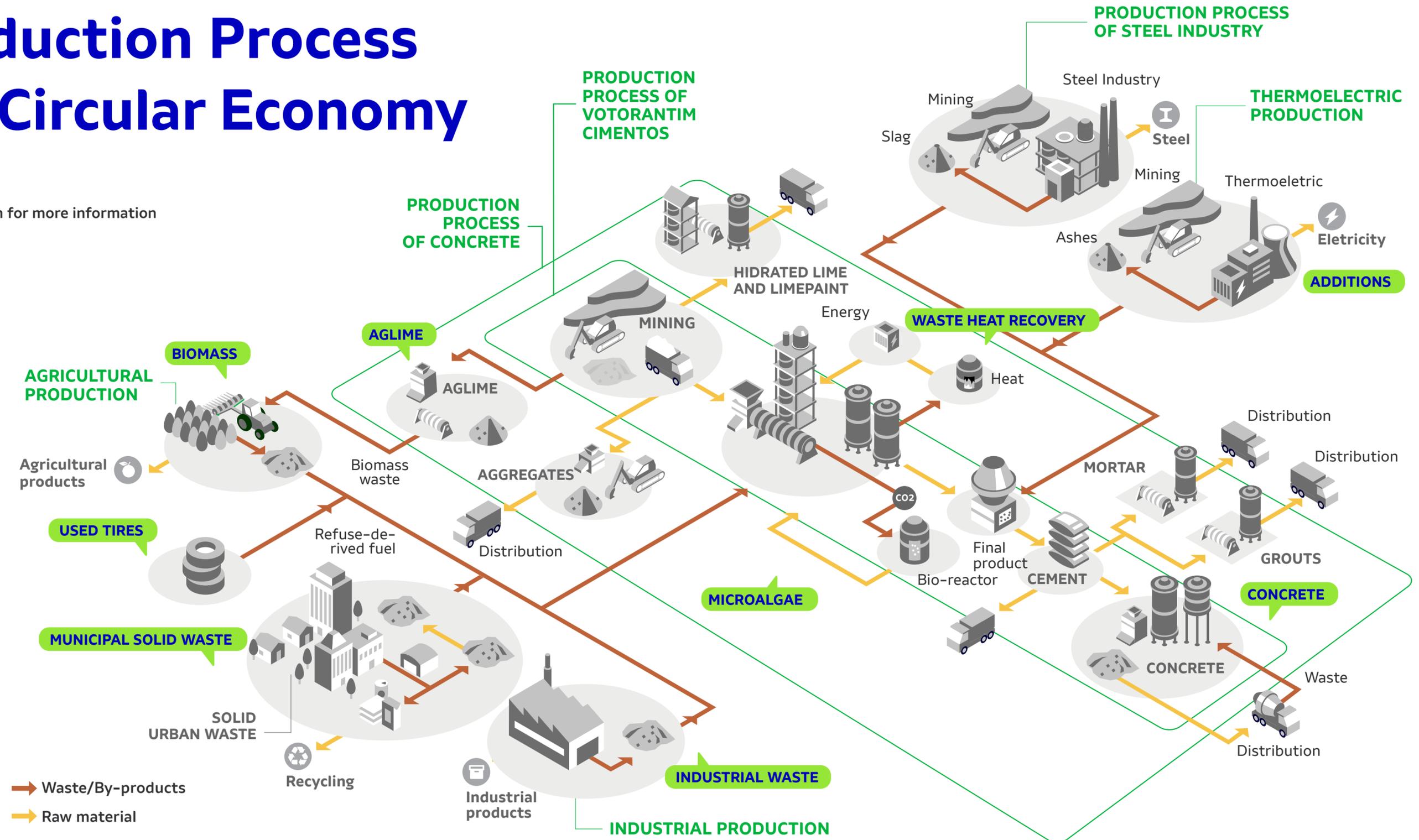
Our sunscreen for leaves and fruits increases thermal comfort and protects plants from scalding, even on the hottest days. When it was first launched it was used in citrus farming, but it has already shown positive results with coffee, avocados, tomatoes, melons and watermelons. It increases productivity and helps preserve fruit color.



# Our Production Process and the Circular Economy

Click on the interactivity icon for more information

1. Mining
2. Grinding
3. Clinker production
4. Cement grinding
5. Distribution



# Energy Efficiency

GRI 3-3\_302

Cement production requires large amounts of electricity. Therefore, the search for sustainable sources that can reduce consumption and emissions while also preserving natural resources is a continuous effort in the industry. Our commitment is to have 45% of the energy we consume globally come from renewable sources by 2030. In 2022, this percentage was 22.9%, up from 18.5% in 2021.

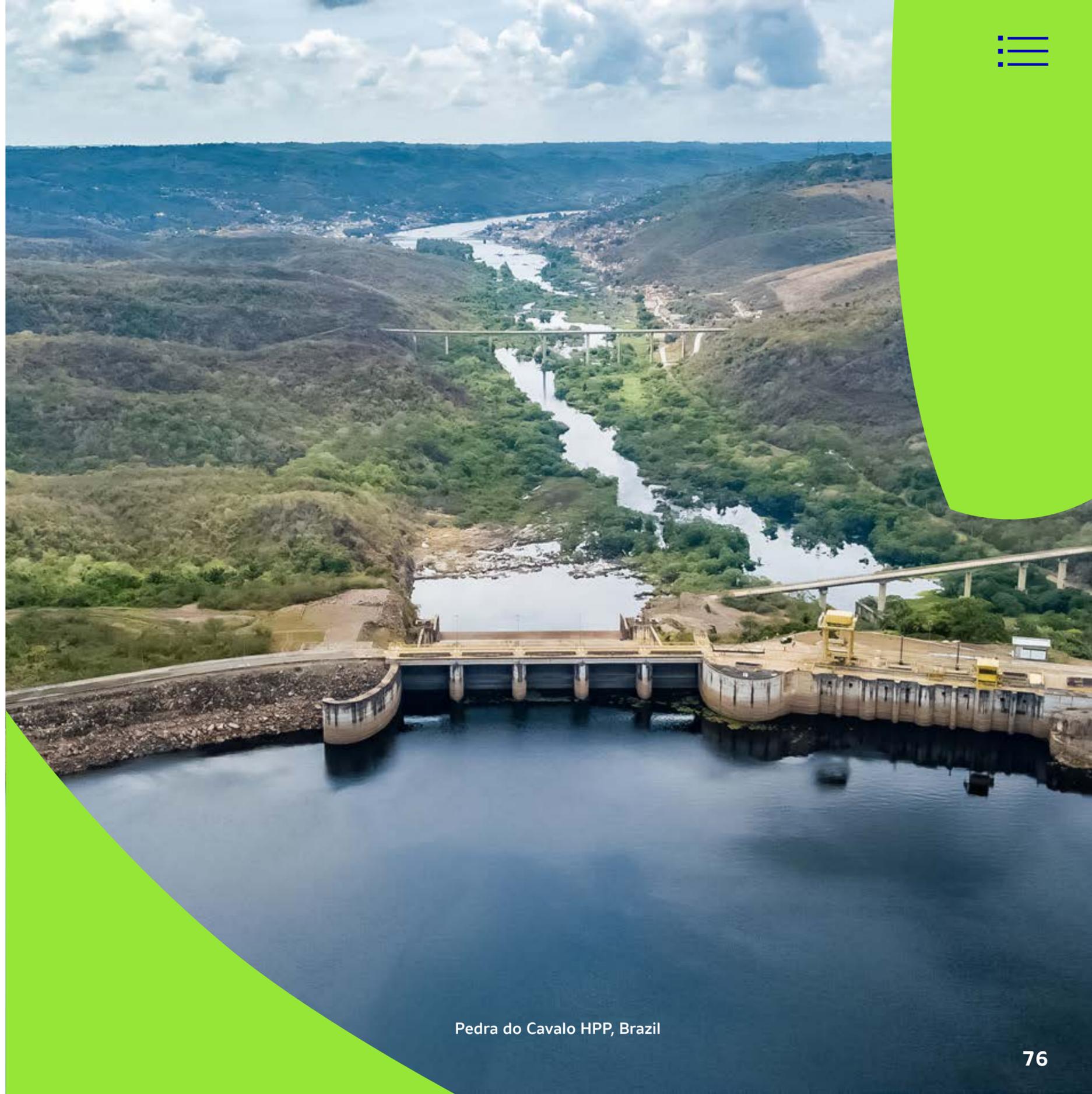
In 2022, we invested in the completion of a photovoltaic generation facility in our Toral de los Vados plant, in Spain. With an installed capacity of 6.2 MW, the facility is expected to supply 30% of the electricity used by the plant starting in 2023. We also started construction of another similar facility in Alconera, also in Spain.

In addition, 83% and 100% of the electricity used by our Asment Temara (Morocco) and Tenerife (Spain) sites, respectively, come from wind sources, which are completely renewable. Finally, in Tunisia, we have a waste heat recovery (WHR) facility that converts the heat resulting from combustion into electricity and reuses the water used to cool the turbine, reducing electricity purchases by 29%.



“We are working to achieve maximum efficiency in our processes while also adopting a renewable energy matrix.”

**Fabio Cirilo**, global manager of Sustainability and Energy



Pedra do Cavallo HPP, Brazil



Ventos do Piauí wind farm, Brazil

In Brazil, we have similar efforts in this area. Since February 2022, we have been managing the 160 MW Pedra do Cavalo hydropower plant (state of Bahia), which previously we had been co-managing with Auren, formerly named Votorantim Energia. In addition, we own four small hydropower plants and participate in the Machadinho hydropower plant (HPP) consortium. Also, starting in January 2023 our Ventos do Piauí wind farm, in the state of Piauí, will start generating clean electricity, further strengthening our strategic position in renewable energy generation and consumption. The wind farm is expected to add 55 MW to our installed generation capacity, increasing the share of renewable energy in our matrix in Brazil to 49%.

In 2022, we continued to carry out studies to increase the energy efficiency of our plants around the world. In Brazil, we are replacing cement engines in Cantagalo to optimize energy consumption by the plant. We installed filter capacitors in the Zona Norte branch of Engemix, aiming to eliminate noise that causes energy dissipation, resulting in higher production capacity and full use of energy.

At VCNA, the St Marys plant in Charlevoix, where we made major investments to modernize and improve operational and environmental efficiency, earned the 2022 Energy & Environment Award for Energy Efficiency from the Portland Cement Association (PCA), the leading association and advocate for the cement industry in the U.S. The Charlevoix plant was recognized for its energy management and year-over-year reductions, competing among a field of its top competitors.

In Uruguay, we invested in a new mill that is expected to increase our energy efficiency and, consequently, reduce production costs. We are also building a solar plant and wind power plant that will start operating in 2023.

# Environmental Management

## GRI 3-3\_300

Our environmental approach is guided by our [Global Environmental Policy](#). We also have our Green Rules, a set of 10 rules that translates our policy into practical terms and guides the activities of all areas and the behavior of all employees regarding environmental issues. In addition, we have internal procedures specifically related to our Environmental Management System (EMS) and regulations that apply to each business.

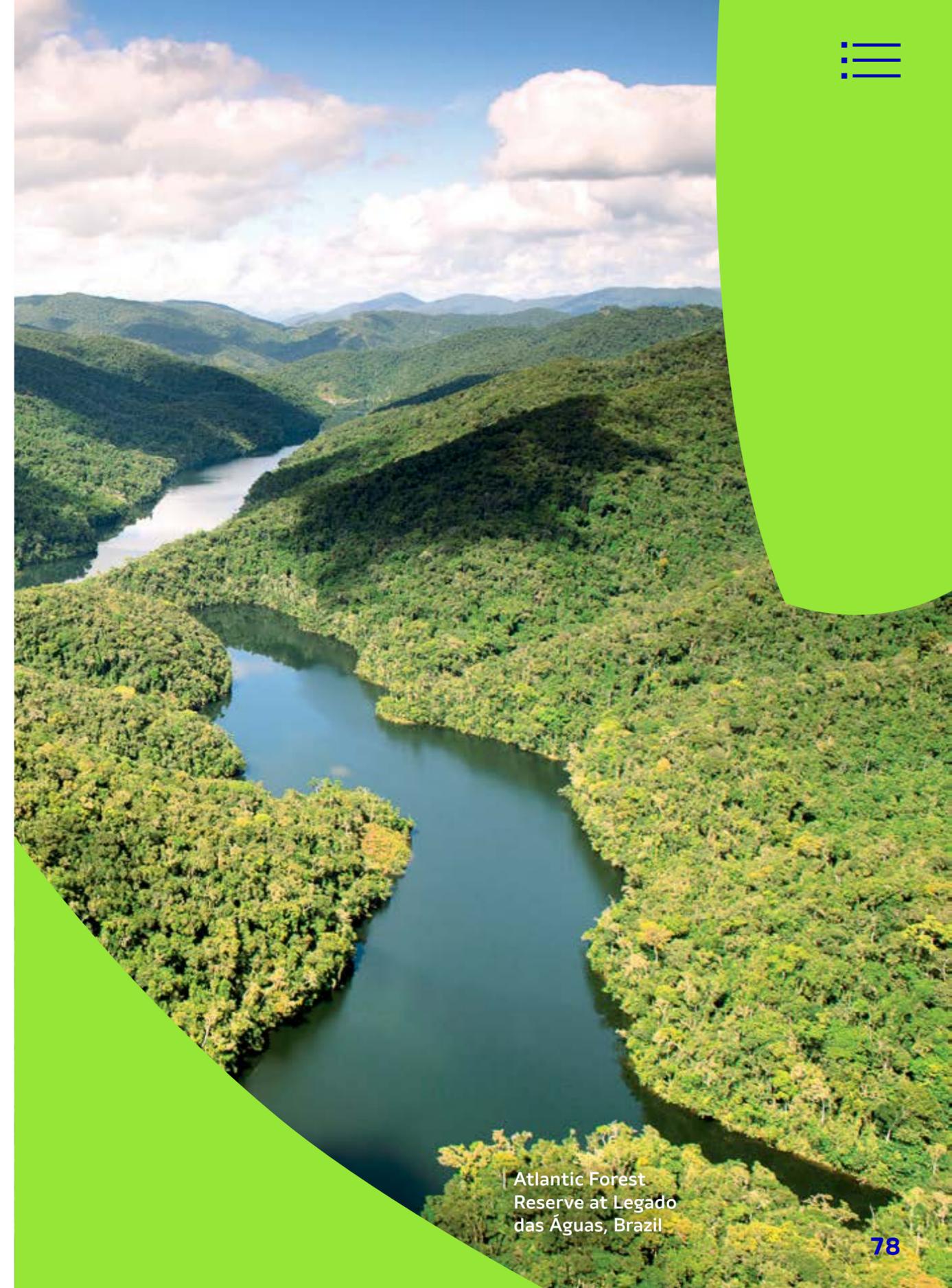
Our EMS is based on the ISO 14001:2015 standards, which guided the creation of our Operational Environmental Performance Indicator (OEPI) to monitor the results of our sites. The indicator includes legal requirements, new and renewed licenses, grants, environmental authorizations and compliance with their conditions, environmental risk management, solid waste management, water management, contamination prevention, air emissions, biodiversity and recovery of degraded areas.

At VCEAA, all our plants are ISO 14001 certified. In addition to monitoring routine environmental indicators, internal, external and certification

audits, risk management and compliance, we also use a self-assessment tool for all industrial managers as a way to ensure compliance with laws and internal regulations.

In Brazil, in the second half of 2022, we hosted Environment Week, with the theme “Protect to last”. The activities included lectures (delivered by employees from different sites) that addressed issues like recycling, co-processing, recovery of mined areas, ESG and sustainable tourism. In line with best practices in environmental management, we implemented initiatives that included reuse of internal waste (e.g., transforming used uniforms in key chains, reusing pallets in internal areas of the Cantagalo plant and reusing drums for recyclable waste collection in Porto Velho).

All active VCNA cement plants maintain ISO 14001 certifications as well, and operate under the oversight of their respective regulatory authorities that require environmental performance within established thresholds determined to be safe for employees, lands and the communities surrounding our operations.



Atlantic Forest Reserve at Legado das Águas, Brazil



Our McInnis plant in Canada

# Air Emissions

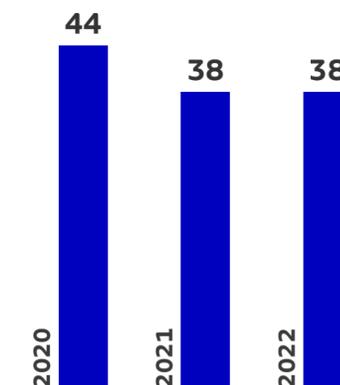
GRI 3-3\_305 | SASB EM-CM-120a.1

We recognize that air pollutants—including particulate matter (dust), nitrogen oxide (NOx), sulfur oxide (SOx) and others—are emitted during the cement production process, and we are formally committed, as expressed through our Global Environmental Policy, to implement environmental standards to assess and monitor our emissions and set reduction targets. In 2020, we committed to reducing our emissions of PM, NOx and SOx to 30 g, 1,400 g and 490 g per tonne of clinker, respectively, by 2030.

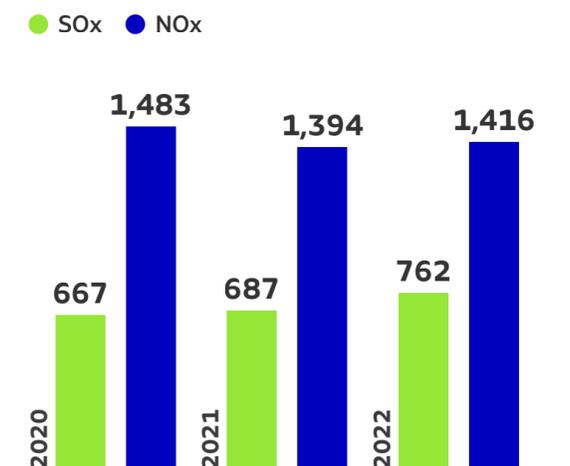
To ensure compliance in our operations, we monitor our air emissions (fixed and mobile) according to the guidelines established by Internal Standard number 3532 - Monitoring Air Emissions and applicable local laws. We have an investment plan that includes new technologies and the modernization of our plants to reduce their main pollutants by 2030:

- | **Particulate Matter (PM):** Investments directed toward bag filters, a more efficient technology that can retain more particles. We plan to replace 100% of our electrostatic filters with bag filters. In 2022, we replaced our filters in Niebla (Spain), Sobradinho (Brazil) and Itaú de Minas (Brazil).
- | **Nitrogen Oxide (NOx):** Investments directed toward NOx reduction. In 2022, we installed new systems in the Santa Helena (Brazil) and Xambioá (Brazil) sites.
- | **Sulfur Oxide (SOx):** At VCNA's Bowmmanville plant, a new wet scrubber installed in 2021, was extensively tested, trialed and operated during the year, with dedicated staff added to manage its operations. This investment has the potential to reduce the plant's SOx emissions by up to 90%.

**Particulate matter emissions**  
(g/tonne clinker)  
GRI 305-7



**NOx and SOx emissions**  
(g/tonne clinker)  
GRI 305-7





# Biodiversity

## SASB EM-CM 160a.1

We are committed to protecting water resources and biodiversity by managing protected areas and developing mine rehabilitation plans. The implementation of biodiversity management plans in sensitive areas is one of our 2030 Commitments.

In Brazil, for the past 11 years we have maintained partnerships with the Brazilian Society of Speleology and the Brazilian Atlantic Forest Biosphere Reserve to support initiatives to preserve caves and conserve habitats in the Atlantic Forest. We also sponsor Legado das Águas, an area of 31,000 hectares in the state of São Paulo that constitutes the largest private reserve of the Atlantic Forest in the country. In addition to protecting highly sensitive habitats, Legado das Águas promotes the conservation of ecosystem services, such as water supply and ecotourism, generating income and other benefits for local communities.

Biodiversity conservation management covers aspects of all phases, from the planning process to the closure of an asset. In 2022, more than R\$4 million were invested in ARO resources (Asset Retirement Obligation) for the closure of mining areas, including activities related to the demobilization of facilities and environmental recovery.

One of the highlights was the conclusion of the environmental recovery project at the Boa Vista site (Sobradinho plant), with the planting of 3,500 seedlings of native species from the Cerrado biome in an area of 1.3 hectares. This not only contributed to the recovery of biodiversity in the site area, but also led to the creation of an ecological corridor that facilitates the transit of fauna species between adjacent natural areas. The environmental recovery project was considered successful by the Institute of the Environment and Water Resources of the Federal District (Brasília Ambiental), which issued the official discharge term for the mine.

In our Fazenda São Miguel (Itaú de Minas), also in Brazil, we manage an area of 5,800 hectares, of which 1,823 hectares are legal reserve and permanent preservation areas and 557 hectares of surplus preservation areas. Over the past few years, we have been carrying out awareness campaigns with a focus on reducing fires, especially during periods of drought. The implementation of activities in the area includes partnerships with the Environmental Police and local rural producers, specific training with the Brigade of the Serra da Canastra National Park, and signs and communication campaigns for the population and through the media. This work resulted in a 47% reduction in fire outbreaks and 40% reduction in burned areas compared to 2021.



Employee in our  
Cajamar plant, Brazil



## VCNA and VCEAA

At VCNA, in Aberfoyle (Ontario, Canada), we created a vernal pool to help amphibian species reproduce and reoccupy their space in the wild. Another successful initiative is CBM's McMillan aquaculture project. It started in 2014 and our monitoring indicates that nutrient levels in the wetlands surrounding the mine have now reached the desired level, 10 years after they had been deemed too low. Thanks to the success of the initiative, we are considering implementing this same technique in other areas.

We are also evaluating an initiative to develop an ecosystem in the wetlands surrounding the southern area of our CBM Aggregates division's Sunderland mine. The activities being carried out include the monitoring of water level and quality, erosion control and the planting of vegetation along the banks to attract native species back.

Lastly, CBM is also assessing an area in Godfrey, Ontario, to host a bee pollination project. To attract more bees, they are organizing the planting of different types of plants, such as buckwheat, and also studying long-term improvements in the quality of the soil in the region.

At VCEAA, at our Malaga site (Spain), artificial water points were created to increase ecological connectivity at the La Utrera mine. The initiative is part of the mine's Biodiversity Management Plan and aims to retain rainwater and make it available for use by the local fauna, strengthening trophic relationships and ecological dynamics at the site. Once the water points are installed, temporary monitoring will be carried out to determine the patterns of colonization and use by different species of animals.

## What does the year 2030 that you're creating today look like?

To help create awareness of the impacts that our everyday activities have on the planet, the UN Global Compact (in partnership with Votorantim Cimentos, Oxiteno and Imagine 2030) developed an interactive platform that help users understand how their choices contribute to creating the world of the future. By answering 10 questions, they can learn more about the 17 Sustainable Development Goals set by UN to be achieved by 2030, and understand how each choice reflects on the environment and society. Click [here](#) to take the test.

## Sustainability in the quarry

In 2022, the Prebetong Lugo quarry became one of the first quarries in Spain to achieve Sustainable Mining Management certification (UNE 22480:2019), which confirms that the company implements continuous improvements with regard to economic, social and environmental criteria linked to mining activities. The certification process takes into consideration aspects such as occupational safety, occupational risk prevention and proper management of natural resources, in addition to local engagement and hiring of local labor and suppliers.



Employees in the Rio Branco do Sul plant, Brazil



# Water

Recognizing the importance of water for the survival and quality of life of populations, we adopt measures for its sustainable use and to prevent our water withdrawal activities from having a negative impact on water courses.

To adopt more efficient standards for water consumption, our sites have been supporting different initiatives. One example is our new distribution center in Guarulhos (SP), inaugurated in 2022, where we installed a closed circuit to reuse water used by forklift washers.

At the Port of Imbituba, in the state of Santa Catarina, ship unloading and coke loading operations require a large amount of water to reduce airborne dust. Since the beginning of operations in 2003, by using a treatment plant that can treat 40 m<sup>3</sup>/h of industrial effluent, we have stored up to 420 m<sup>3</sup> of raw and treated water. Most importantly, everything works in a closed circuit.

In 2020, faced with the need to expand our water treatment and storage capacity, we doubled the amount of equipment to treat water and increased the capacity of the storage tanks in our unit to 1,226 m<sup>3</sup>. The key to not relying solely on public water systems is reusing rainwater. Our calculations show that in almost 20 years, approximately 1,000 m<sup>3</sup> of rainwater were captured and stored every month, corresponding to half of the water used to keep coke moist, a process that must be done several times a day.

Votorantim Cimentos Tunisia installed a reverse osmosis unit to reuse the rejected water from the Waste Heat Recovery system. Now, 80% of the treated discharged water is reused in the production process, and 20% is used for cleaning and watering the quarry area.



# Sustainable Procurement

Our supply chain has the potential to cause impacts on the environment, working conditions and human rights. Therefore, we pay close attention to ensure that our suppliers comply with the law and with our procedures.

In 2020 we created the Sustainable Procurement Program in Brazil to boost social and environmental benefits, generate income in the locations where we operate, reduce the carbon footprint of our supply chain, increase diversity and inclusion among our suppliers and drive the creation of innovative solutions in collaboration with our partners. Initially created to last for three years, in 2022 we reassessed our approach and decided to maintain and expand the program in the coming years.

In line with our Purchasing Policy, the Procurement Department seeks to create value not only through competitive prices, but also by ensuring optimum total cost of ownership, by preventing supply breaches and by fostering sustainable practices along the entire supply chain. Even though each of our regions has its own Procurement department, they all maintain close collaboration through monthly meetings and a Global Sourcing program for selected categories that provides leverage to negotiate purchases for all the countries at once.

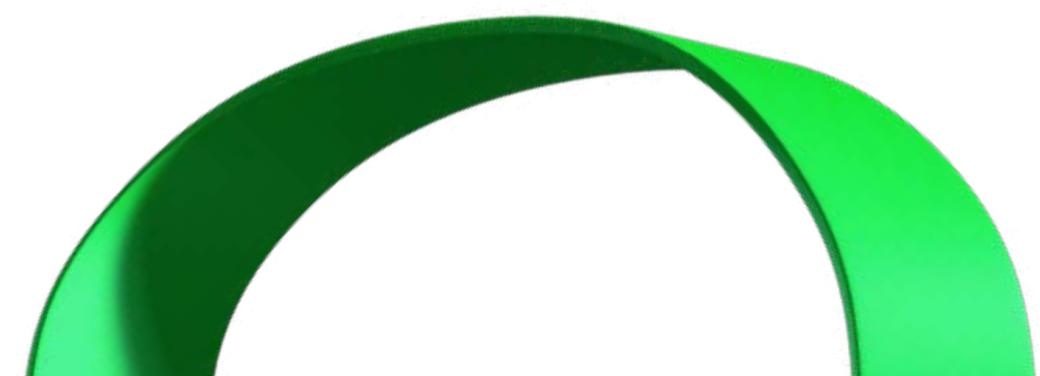
In 2022, initiatives to support the five key objectives of the Sustainable Procurement program included:

**Increase local purchases** – One of our 2030 Commitment is to increase the percentage of local purchases to 60%. In 2022, this percentage was 54.0%. This KPI has been strongly affected by higher fuel prices, since most of the pet coke used in Brazil is imported. Nevertheless, we continued to increase our local purchases from areas surrounding our operations. For example, we signed a five-year contract with a local supplier from Primavera (PA), through which we will not only hire their services, but also help them develop and prepare to be an important supplier for our local plant.

**Strengthen our relationships with suppliers that have superior ESG practices** – For our purchases to be truly sustainable, our partners must follow best practices in social and environmental management and comply with all established requirements. Today, 100% of our suppliers in Brazil go through a registration process where all financial, legal and environmental requirements for each supply category are evaluated. Depending on a risk analysis, suppliers will then be re-evaluated every year (high risk, such as sand), two years (medium risk, such as maintenance services) or three years (low risk, such as office supplies). Our goal is to help all our suppliers improve so we can continue working together.

**Increase purchases from suppliers with diverse leadership teams** – In 2022, we carried out a survey in Brazil to gather information about the profile (gender, color, disability and age) of the executives of these companies. We sent a questionnaire to more than 9,000 registered suppliers from our database and received 1,000 responses so far. The next step will be to analyze the data to plan initiatives to prioritize diverse suppliers in selected categories.

**Engage our teams to incorporate best practices in sustainability into procurement** – Several initiatives are already part of our daily routine. For example, working together with our catering service providers, we have set goals to increase purchase from small local farms, to reduce water consumption and to avoid wasting food. All critical categories have pre-established minimum sustainability requirements (and only after they are met will our negotiations discuss price). Our new mining service contracts require a minimum of 8% female drivers. We require all electric engines to have an energy efficiency seal.





**Reduce waste production along the supply chain** – In 2022, we completed a pilot project to upcycle uniforms to produce handicrafts at the Santa Helena plant, in the town of Votorantim. This creates an optimal solution for waste disposal, while also empowering low-income women and supporting the local economy by generating income through the sale of the items produced.

In 2023, we plan to continue to invest in other circular initiatives in our plants. Currently, objects such as hammers and industrial cups are disposed of as scrap metal, but it is possible to create reuse mechanisms. We already do that with refractory items: bricks used to build kilns are reprocessed when these kilns are disassembled and go back to being bricks, completing the reuse cycle.

## Pillars of the VCBR Sustainable Procurement Program

Pillars	2022 Achievements
<b>Sustainable Supply Chain policy and strategic plan</b>	<ol style="list-style-type: none"> <li>1. Procurement Policy: inclusion of social and environmental criteria</li> <li>2. Sustainable procurement training for category managers and Supply Chain leaders</li> <li>3. Strategic goals (2030): endorsement by senior leadership</li> <li>4. Definition of KPIs for the 2030 strategic goals</li> <li>5. Local purchases target for part of the team</li> <li>6. VC Integrated Report: report on the Sustainable Supply Chain Program</li> </ol>
<b>Incorporating sustainability into the process (planning, sourcing and contract management)</b>	<ol style="list-style-type: none"> <li>1. Creation of a Sustainability Risk Matrix for categories and suppliers</li> <li>2. Quarterly Risk Committee meetings</li> <li>3. High-risk suppliers mapped, and seven action plans monitored by the Risk Committee in three years</li> </ol>
<b>Incorporating sustainability into the process (registration and re-registration)</b>	<ol style="list-style-type: none"> <li>1. Re-registration routine, according to each supplier's risk level</li> <li>2. Inclusion of a Sustainability Survey (voluntary) in registration and re-registration processes</li> <li>3. Creation of a dashboard to monitor the process</li> <li>4. First analyzes of the Sustainability Survey</li> </ol>
<b>Supplier portfolio management</b>	<ol style="list-style-type: none"> <li>1. Initiative rescheduled for 2023</li> </ol>
<b>Sustainable technical requirements</b>	<ol style="list-style-type: none"> <li>1. Definition of technical requirements including social and environmental criteria applied to procurement processes</li> <li>2. Call for proposals in six pilot categories, between 2021 and 2022</li> <li>3. Communication to internal requesters via contract management</li> </ol>
<b>Internal customer assessment of suppliers (IQF)</b>	<ol style="list-style-type: none"> <li>1. Review of our assessment instrument (IQF – Supplier Qualification Index) and, in 2022, audits including the support of 135 internal auditors to assess 175 partners, from 21 categories, working in 22 VC sites</li> <li>2. Review of the categories, questions and sites that will carry out assessments</li> <li>3. Inclusion of two new award categories: Local Supplier and Sustainable Supplier</li> </ol>
<b>Pact with strategic suppliers</b>	<ol style="list-style-type: none"> <li>1. Quarterly Committee meetings to monitor the implementation of projects</li> <li>2. 39 projects mapped and 32 completed in the three years</li> <li>3. Launch of Rede Transformar (“Transformar Network”) for social co-investment with suppliers, totaling R\$825,000 raised together with our suppliers.</li> </ol>
<b>Development of local suppliers</b>	<ol style="list-style-type: none"> <li>1. Signature of contracts with local maintenance providers in Corumbá and Primavera, working in partnership with the Social Transformation area of Votorantim Cimentos. Mapping of potential suppliers in Cuiabá and Xambioá to be developed in 2023.</li> </ol>
<b>Supplier recognition program (VC Partner)</b>	<ol style="list-style-type: none"> <li>1. Annual recognition event hosted</li> </ol>
<b>Communications of the Sustainable Supply Chain Program</b>	<ol style="list-style-type: none"> <li>1. Training: sustainable procurement, Risk Matrix, Local Procurement Matrix, IQF</li> <li>2. Events: engagement with strategic suppliers for the development of innovation and sustainability projects, Rede Transformar and VC Partner</li> <li>3. Communication of the results of the Sustainable Supply Chain Program at external events and through the media</li> </ol>

# Social Transformation

## Value for Communities

GRI 413-1

Our social performance is based on a deep respect for human rights. We implement initiatives to foster diversity, guarantee income and housing, fight prejudice, promote culture, education, income generation and protect the rights of children and adolescents. We are present in more than 300 locations around the world, where we work to create a positive legacy for present and future generations.

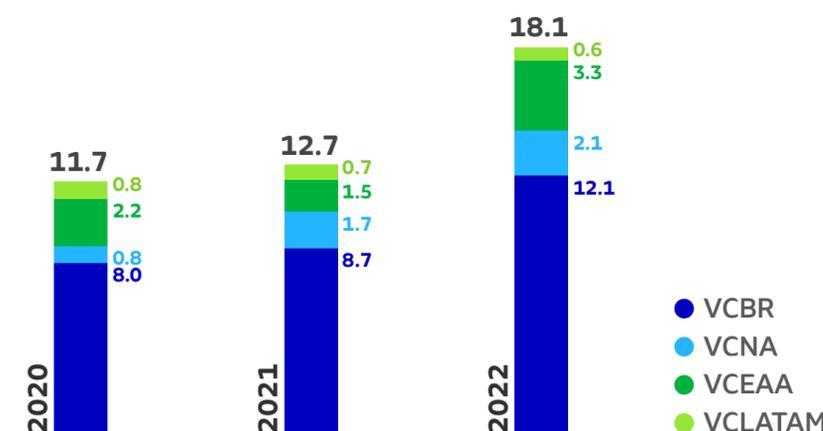
Generating shared value is part of our social strategy, which includes specific commitments to be fulfilled by 2030:

- | **90% of our operations** with community engagement, impact assessment and/or development programs.
- | **20% of our employees** engaged in volunteer initiatives.
- | **60% local supply** by encouraging local purchases.

We have procedures and policies that support our social strategy on a global and local level, such as the Procedure for Implementing and Executing Community Relationship Plans, the Corporate Volunteer Policy and the Social Intervention Guide for Environmental Licensing. In 2022, we began developing a Relationships with Indigenous Peoples and Communities Policy, which establishes guidelines for our social activities and relationships with these groups.

We continued to invest in social transformation projects, totaling R\$18.1 million globally. We prioritized initiatives connected to the business (e.g., social housing), efforts to strengthen public management and improve education, and others aligned with local needs and priorities for our communities. In addition, in Brazil we coordinated the social initiatives implemented by the Pedra do Cavalo HPP, including voluntary investments and institutional commitments made with the community.

### External social investment (R\$million)



Xambioart project in Xambioá, Brazil

## Volunteer Program

In 2022, with the return of in-person activities, volunteering activities were also resumed with great intensity in all regions. In Brazil, *Joga Junto* (“Playing Together”), our corporate volunteering program, ended the year with a campaign that engaged 577 employees in education, housing and accessibility initiatives. In partnership with Habitat for Humanity Brazil, 189 volunteer employees participated in “Bricklayer’s Day” and used our products to change living conditions and create a positive legacy within vulnerable communities.

At VCNA, employees from all sites joined forces with others from the communities around our sites and offices to plant 7,000 trees on our properties and in public places, such as town squares, parks and schools. Adults and children from local schools participated in the activity, which included the distribution of resources and an educational component that stressed the importance of trees for environmental preservation. The activity was such a success that it will be repeated in 2023.

At VCEAA, we organized more than 40 volunteering initiatives, including planting trees, cleaning beaches, plogging, facilitating awareness sessions in schools and collaborating with soup kitchens. Employees dedicated more than 1,900 hours to volunteering activities to benefit the communities where we operate. At our plant in Vigo, Spain, our employees participated in a volunteer environmental initiative as part of the Libera project, “United against waste”. The activity aimed to raise awareness about reducing waste production as a way to preserve life and biodiversity. In addition, our employees at the Madrid office collaborated with a soup kitchen center offering hot meals to people at risk of social exclusion. In Morocco, we delivered breakfast to an orphanage and a nursing home during Ramadan (Iftar). In Tunisia we carried out a tree planting campaign and in Türkiye we distributed food to people at risk of social exclusion.

Employees in a volunteer initiative in the Heliópolis Community, Brazil

## REDE TRANSFORMAR (“TRANSFORM NETWORK”)

In 2022, we launched the Rede Transformar program, a social and environmental impact initiative that strengthens Our Way of Thriving. The program operates in two strategic areas, housing and the standing forest, and aims to raise funds from our suppliers and partners to improve housing conditions of vulnerable families, strengthen the bioeconomy and accelerate social impact businesses.

During the year, the program’s first investments were made, totaling R\$825,000 raised together with our suppliers. The first cycle of renovation of unhealthy houses took place in Curitiba, Paraná, in partnership with the company MC Química, one of the Rede’s partners.

By 2025, Rede Transformar intends to improve the housing conditions of 700 families (in partnership with Habitat for Humanity) and to accelerate 38 bioeconomy-related businesses (with the support of Prosas) in the Amazon region.



## SOCIAL RENT - SOMA

We are investing in the construction of a building in downtown São Paulo that will offer affordable rent to 110 low-income families. The initiative is part of the SOMA (Organized System of Affordable Housing) Project, which offers investors the chance to combine profitability with social impact and is supported by Votorantim Cimentos and other companies. The building, with housing units measuring 25 square meters, is expected to be completed by the end of 2023.

Conceived by Grupo Gaia, Din4mo and Incorporadora MagikJC, the project will provide low-income families with access to decent housing in the center of São Paulo, with a positive impact on people's lives and on urban occupation and mobility. This development model can be replicated in other Brazilian cities; the goal is to build ten new buildings in the next five years.

The initial investment in the project is R\$14.5 million, raised through Real Estate Receivables Certificates (or CRIs, a financial instrument for real estate investments). Criteria for the selection of families will be defined in collaboration with other organizations that advocate for decent housing access.

In addition to being fully aligned with our ESG strategy and our 2030 Commitments, the project contributes to the Business Transformation pillar of our 2030 Strategic House since it introduces us to a new type of social business investment. The project also strengthens our Way of Thriving by helping create a positive legacy and lasting results.

## Housing

In Brazil, for the fifth year, we invested in LAB Habitação, a program carried out by Artemisia and Gerdau, with support from Votorantim Cimentos, Vedacit and Léo Social. The initiative aims to drive business in the housing sector, strengthen its solutions and amplify the positive impact they produce. In 2022, we selected 15 impact businesses related to low-income housing; land regularization; access to quality housing; energy, water, waste and sanitation; employability and training; and home renovations, which we will continue to support next year.

Working closely with our internal stakeholders, we held the 2<sup>nd</sup> Reforma VC event in Brazil, a home renovation program involving our employees from the Engemix business. This year, house renovations took place in the city of São Paulo, in partnership with Comuta, a social impact business accelerated by LAB Habitação.

We continued our partnership with Habitat for Humanity in Brazil and, throughout the year, carried out 416 home renovations in the communities of Heliópolis (São Paulo), Parolim (Curitiba) and Recife, generating a positive impact for 1,596 low-income individuals, including female-headed households.

Through another partnership with Habitat for Humanity, we joined efforts to improve housing conditions in Brazil and invested in Rede Colabora. The initiative brings together 60 housing-related impact businesses and aims to expand knowledge and promote social agendas, such as the inclusion of female labor in civil construction and credit for low-income populations.

At VCNA, we also partnered with Habitat for Humanity by donating concrete to the organization's site in the state of Illinois.

## 10. CREATING A POSITIVE LEGACY

### Education

We actively participate in the Partnership for the Enhancement of Education (PVE, for its initials in Portuguese) program, carried out jointly with the Votorantim Institute. In 2022, 499 schools and 57,994 students benefited from the initiative. In the town of Cachoeira (BA), the program facilitated the creation of school committees including teachers, students and family members to discuss the implementation of educational projects and the creation of a Municipal Anti-Racist Plan. In Limeira (SP), the Municipal Department of Education started a Situational Strategic Planning process with a focus on process organization and preparation for tactical decision-making. Student unions were also created in the schools.

In addition to the PVE program, we offered professional training to 113 women in the communities of Xambioá, Laranjeiras and Itaú de Minas. In the town of Vidal Ramos, we invited 150 people from the community for a lecture on diversity. And in Itaú de Minas, we developed a mental health program for public school students through our Community Council.

In Spain, we organized several sessions in local schools close to our cement plants to increase awareness among students—especially girls—of STEM-related careers.

In Tunisia, employees in our cement plant worked in partnership with a local school to offer environment awareness sessions.

In Morocco, as in previous years, our cement plant sponsored 20 women from the Ain Atig region to participate in an employability program that included sewing, cooking, baking and hairdressing. And in Türkiye, we participated in the Million Women Mentors program led by Stem Connector, through which STEM university students are mentored by STEM professionals.

In addition, four technical managers participated in a six-month mentoring program that included networking and preparation for professional life, among other topics. One of the participants had the opportunity to complete a summer internship in our Hasanoğlan cement plant. In the city of Sivas, we continued to sponsor the local sports club Çimento Spor Klubü, which offers activities for young people in the community.

At Cementos Itacamba, in Bolivia, we sponsored training to help prepare community firefighters to put out fires in local forests. We helped repair and renovate the Germán Busch School, in Yacuses, eight schools in the town of Puerto Quijaro, and the Antonio Rainer School, and provided scholarships to students of Infocal, a technical school located in Santa Cruz.

At VCNA, for the 25<sup>th</sup> consecutive year, children of our employees were able to apply for US\$2,000 and US\$1,000 renewable college scholarships, as part of a program that combines continuing education with employee engagement.





### Supporting Local Labor and Income Generation

Keeping our commitment to accelerate the development of communities through activities increasingly connected to our business, we continued to invest in the professional training of the local workforce through our Evoluir program. In 2022, 133 students from the communities of Corumbá (MS), Itaú de Minas (MG), Edealina (GO), Nobres (MT) and Vidal Ramos (SC) benefited through courses such as Electromechanical Technician, Mechanical Fitter, Machinery Lubrication, Pneumatic Systems and Machine Elements, Forklifts and Mobile Machinery.

We continually seek to support entrepreneurship and the creation of jobs and income in our communities. In 2022, we offered a sewing course to women from the community of Machado, in Laranjeiras (SE); in Primavera (PA), as part of the Castanha and Siquiriba projects, we offered four vegetable garden courses, with an income increase of more than 40% for the 10 benefited families; in Xambioá (TO) we trained 69 women for the job market by offering classes in baking, confectionery and sewing as part of the Community Council initiative. And in our site in Itacamba (Bolivia), we supported projects related to fish farming and community gardens.

Through the ReDes Program, developed in partnership with the Votorantim Institute, we generated R\$435,000 in income, benefiting groups that work with waste management, recycling and fishing, among other activities, in the communities of Itaú de Minas, Rio Branco do Sul and at the Pedra do Cavalo HPP. We also trained 75 people in Laranjeiras and Primavera through our Valor Program.

Close to our plant in Xambioá (TO), we started the implementation of a volunteer action plan to strengthen the relationship with indigenous peoples and communities through the support of production chains made up of the Suruí Aikewara indigenous people.



Açaí seed in the Primavera region, Brazil

### AGROFORESTRY SYSTEM – PRIMAVERA (PA)

In partnership with the Votorantim Institute, we are supporting the technical and practical training of small farmers in the Primavera region in Agroforestry Systems (AFS), based on a benchmark methodology used in Tomé-Açu. The objective of the project is to share knowledge about the systems, foster family income generation, create opportunities for local development and support standing forests. The first session was attended by more than 30 local farmers and included practical soil preparation and planting activities.



## iV VENTURES

With a focus on innovation and to advance relevant social issues, we are members and investors of iV Ventures, a “Venture Philanthropy” fund—a first-of-its-kind initiative in which all Votorantim S.A. portfolio companies participate. The fund has R\$20 million to invest in impact startups that are developing solutions in the areas of Social Interest Housing, Water and Sanitation, and Low Carbon Economy. In 2022, the first three investments were made: Deep ESG (a platform for measuring ESG indicators), iWaste (a waste treatment solution for large generators) and Green Franchises (a franchise of recycling cooperatives with a methodology for increasing efficiency and income). We will continue our participation in 2023 to further leverage positive social impact in line with our sustainability commitments.

## Social Collaboration

In Bolivia, Cementos Itacamba invested in the expansion of the Príncipe de Paz Hospital, in Puerto Quijaro, which included the construction of new wings with rooms, laboratories and a pharmacy; the donation of a generator to supply energy to the San Juan de Diós Hospital, in Puerto Suarez; and the donation of air conditioners and computers to the Yacuses public health clinic.

In Spain, we collaborated with the Virgen de la Milagrosa Institution, in Málaga, for the collection of Christmas products for donation. This collaboration was born as a result of the pandemic and, since then, different campaigns have been carried out to help the more than 95 people that the religious institution serves in the El Palo area.

Also in Spain, in 2022, with the company’s support, VCEAA employees from the Toral de los Vados, Niebla and Vigo plants donated a total of €6,500 to the food banks of Toral and Sil-Ponferrada. These funds will be used to purchase food and basic need items for distribution to NGOs and other social assistance institutions in the area.

In Morocco, we donated approximately €6,000 to purchase food baskets to the plant’s neighboring community during the Aid Adha feast, which is considered to be the most important cultural event in Morocco, and to organize Itfar (a meal taken at sundown to break the daily fast during Ramadan) in an orphanage and a retirement home.



ReDes Program in Brazil

## COMMUNITY COUNCILS

Made up of citizens who care about the well-being of their communities, the councils work on issues of local interest to promote social development and serve as a forum to promote open dialogue with members of the communities surrounding our operations. In 2022, we continued our partnership with these groups to encourage the empowerment of communities based on their local talents and resources.

In 2022, we engaged the community of Fercal, in the Federal District, in the creation of a call for proposals for development projects focused on education, culture and the strengthening of local organizations. A participatory process involving leaders, local authorities and community representatives supported different organizations in the development and presentation of projects.

We engaged 14 communities around our Sobradinho plant and supported six projects that were selected by the judging committee. One of them was from Mel da Terra Association, which will use the funds to help strengthen the volunteer firefighting brigade and promote cultural projects.



# Our impacts

GRI 3-3

We map the actual or potential, negative and positive impacts of our activities on the environment, economy and people, correlating them with our material topics. In our analysis, we consider our key activities: construction of plants, mining, production, logistics, sales, research, process management, communication and co-processing.

	GHG emission	NOx and SOx emissions	Emissions of particulate matter	Waste management	Dependence on fossil fuels	Use of natural resources	Effluent production	Impact on soil, biodiversity and vegetation suppression	Impact on archaeological and paleontological sites	Noise	Tax generation	Revenue/return generation	Job creation and income generation	Pressure on local infrastructure	Human rights	Diversity	Training and human development	Employee health and safety
Related material topics	CM	AE	AE	CE	CM, CE	CE	CE	CM, CE		SW	E	IT	D	E, SW, D	D	D	SW	
Construction of plants	-		-	-	-	-	-	-	-	-	+	+	+	-		+	+	-
Mining	-		-	-	-	-		-	-	-	+	+	+	-		+	+	-
Production	-	-	-	-	-	-	-	-	-	-	+	+	+	-		+	+	-
Logistics	-		-	-	-			-		-	+	+	+	-		+	+	-
Sales						-					+	+	+	+		+	+	-
Research	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Process management	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Co-processing	+			+	+	+					+	+	+	+			+	-

Key **CM** Climate change  
**AE** Air emissions

**CE** Responsible use of materials, waste and circular economy

**E** Ethics, integrity and transparency  
**IT** Innovation and technology

**SW** Safety, health and well-being  
**D** Diversity and inclusion



# Monitoring our 2030 targets

On track for 2030 Deviation from the path to 2030

Pillar	SDG	Initiatives in 2022			
<b>1. We operate with integrity and transparency</b>		We reviewed some of our internal policies, such as Anti-Corruption and Risk Management, and instituted Policy 001, which guides all internal procedures. We improved our Ethics Line by bringing it closer to our employees and created a simpler portal to file and monitor reports, which is also more inclusive for people with disabilities.			
Pillar	SDG	Indicator	2030 Target	Initiatives in 2022	
<b>2. Safety, health and well-being are fundamental values</b>		Lost-time injuries	Global lost-time injury rate lower than 0.40	Our accident frequency rate went from 1.14 in 2021 to 0.0.70 in 2022, reflecting our emphasis on strengthening our culture and accident prevention initiatives.	
		Fatalities	Achieve zero fatalities in our operations	Health and safety are non-negotiable values. In 2022, we once again ended the year without employee fatalities.	
		Employee satisfaction and well-being	Achieve at least 85% favorability in climate surveys	We achieved 75.9% favorability in satisfaction and well-being surveys (67.4% in 2021).	
<b>3. Innovation: we co-create sustainable solutions</b>		Revenue from sustainable solutions	30% of revenue from sustainable solutions	Revenue from sustainable solutions went from 24.8% to 31.4%, thanks to increased sales of products with a lower environmental footprint.	
		<b>4. A diverse and inclusive environment</b>		Gender diversity in leadership positions	At least 25% of leadership positions occupied by women
Employee perception	Achieve at least 90% favorability in the diversity and inclusion survey			The favorability in diversity and inclusion surveys was 81.1% (the same as the previous year).	



Pillar	SDG	Indicator	2030 Target	Initiatives in 2022	
<b>5. Reducing our environmental footprint</b>	   	Net CO2 emissions	Achieve 475 kg of net CO2 emission per tonne of cementitious product	Our CO2 emissions went from 597 kg/tonne of cementitious product to 579, as a result of the implementation of the decarbonization roadmap globally.	
		Dust emissions per tonne of clinker	Reduce the emission of dust per tonne of product to 30g/tonne of clinker	We maintained our emissions of particulate matter at 38 g/tonne of clinker. Investment plan for filter modernization under implementation.	
		SOx emissions per tonne of clinker	Reduce the emission of SOx per tonne of product to 490g/tonne of clinker	In 2022, we had an increase in SOx emissions from 687 to 762 g/tonne of clinker. The increase is concentrated in two plants (Brazil and Canada) - ongoing efforts to reduce emissions.	
		NOx emissions per tonne of clinker	Reduce the emission of NOx per tonne of product to 1,400g/tonne of clinker	In 2022, we had an increase in NOx emissions from 1,394 to 1,416 g/tonne of clinker. The increase is primarily concentrated in two plants (Spain and Tunisia). Plans to install abatement systems currently being developed.	
		Renewable electricity	Achieve 45% renewable electricity	Renewable energy sources accounted for 22.9% of our consumption, compared to 18.5% in 2021, as a result of the implementation of energy initiatives globally.	
		Water and biodiversity management plans	Evolve in the implementation of our water and biodiversity management plans in sensitive areas	At VCBR, seven sites have biodiversity management plans that include initiatives to address specific local needs (e.g., conservation of habitats, monitoring of fauna, mapping of water bodies, training of firefighting and fire prevention teams, environmental education for students and workers).	
<b>6. Promoting a more circular business environment</b>	 	Thermal substitution	Achieve 53% thermal substitution	Our thermal substitution rate was 26.5% in 2022 (compared to 22.4% in 2021) thanks to the modernization of our plants with co-processing technology and the development of new sources of waste and biomass.	
		Percentage of clinker in cement	Reduce the clinker/cement factor to 68%	We continue to work in the optimization of our portfolio of products, exploring circular economy opportunities and developing cementitious materials to reduce our clinker factor. As a result of this effort, we ended the year with a clinker factor of 73.9% (compared to 74.9% in 2021).	
		Percentage of returned concrete recycled	70% returned concrete recycled	The percentage in 2022 was 89%, compared to 93% in 2021. Despite the reduction, we keep the result above the target.	
<b>7. Generating shared value in our communities</b>	   	Operations with community engagement, impact assessment and/or development programs	90% of operations with community engagement, impact assessment and/or development programs	The percentage of our sites with engagement programs increased from 45.1% to 62.6%.	
		Employees engaged in volunteer initiatives	20% of employees engaged in volunteer initiatives	We increased the percentage of employees engaged in volunteer initiatives from 4.9% to 6.7%.	
		Local supply	60% local supply	We decreased the percentage of our expenses with local suppliers from 56.3% to 54.0%.	



# 11. Annex

- GCCA Charter
- KPIs GCCA
- GRI Content Index
- SASB Content Index
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# GCCA Charter

## Sustainability Pillars and Reporting

Requirement	Specification	Page on Integrated Report	Additional information
<b>Health and Safety</b>	Apply the good safety practice guidelines of the GCCA	51	Global Health and Safety Policy
	Promote the sharing of good health practices	51	Life Saving Rules
	Report annually to the GCCA employee safety data in line with the guidelines	96	–
<b>Climate changes and Energy</b>	Develop a climate change mitigation strategy, and publish targets and progress	93	Our 2030 commitments
	Report annually to the GCCA climate change data in line with the guidelines	96	–
<b>Social Responsibility</b>	Publish a Code of Conduct incorporating the principles of internationally proclaimed human rights	37	Code of conduct
	Apply the Social Impact Assessment guidelines	85	Social Transformation
	Establish a systematic dialogue process with stakeholders	5,40	Materiality, Ethics Line
<b>Environment and Nature</b>	Apply the Environment and Nature guidelines	68	Global Environmental Policy and Green Rules Brazilian Business Committee for Biodiversity
	Set emission targets and report publicly on progress	93	Our 2030 commitments
	Report annually to the GCCA emissions, biodiversity and water in line with the guidelines	96	–
<b>Circular Economy</b>	Promote the principles of circular economy across the value chain	93	Our 2030 commitments
	Apply the guidelines developed for fuel and raw material use in cement production	93	Our 2030 commitments
	Report annually to the GCCA circular economy data in line with the guidelines	96	–

# KPIS GCCA

<b>Climate protection</b>	<b>2020</b>	<b>2021<sup>1</sup></b>	<b>2022</b>
Total CO2 emissions - gross (million tonne)	20.4	24.9	23.2
Total CO2 emissions - net (million tonne)	19.6	24.0	22.3
Specific CO2 emissions - gross (kg/tonne of cementitious product)	599	619	604
Specific CO2 emissions - net (kg/tonne of cementitious product)	576	597	579

Scope: Cement operations in Brazil, VCNA, VCEAA, Bolivia and Uruguay. The emissions were calculated considering the guidelines of the Cement CO2 and Energy Protocol from GCCA.

<sup>1</sup> Increase due to a change in scope and the acquisition of two new cement operations (McInnis and Balboa), which were still at a lower level of thermal substitution and clinker factor, in addition to reduced thermal substitution in some regions due to limited access to waste caused by the pandemic in a time of increased cement production.

<b>Responsible use of fuels and raw materials</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Specific heat consumption of clinker production (MJ/tonne of clinker)	3,398	3,584	3,615
Alternative fossil fuel rate (%)	11.6%	10.3%	11.6%
Biomass fuel rate (%)	12.3%	12.1%	15.0%
Alternative raw materials rate (%)	7.5%	6.6%*	6.9%
Clinker / cement ratio (%)	74.0%	74.9%	73.9%

Scope: Cement operations in Brazil, VCNA, VCEAA, Bolivia and Uruguay.

\* Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

<b>Safety<sup>1,2</sup></b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Number of fatalities (directly employed)	1	0	0
Number of fatalities per 10.000 directly employed <sup>3</sup>	0.87	0	0
Number of fatalities (indirectly employed)	1	0	0
Number of fatalities (third party)	0	0	0
Number of days lost due to injuries (calendar days / directly employees)	1,522	1,602	2,639
Total Number of days lost due to injuries (calendar days / directly + indirectly employees)	2,149	2,613	3,604
Lost time injuries per 1 million man-hours (directly employed)	1.11	1.34	0.94

Scope: VCBR, VCNA, VCEAA and Bolivia.

<sup>1</sup>Figures do not include Uruguay operations, except for number of fatalities.

<sup>2</sup>Considers occurrences on-site cement, aggregates, mortar, logistic, aglime and concrete facilities.

<sup>3</sup>Considers the GCCA methodology. Number of fatalities per 10000 people directly employed = (Number of fatalities in a year/number of directly employed) x 10000.

<b>Emissions reduction<sup>1</sup></b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Overall coverage rate (KPI1) <sup>2</sup>	85%	82%	93%
Continuous measurement of Coverage rate (KPI2) <sup>3</sup>	100%	100%	100%
Dust - coverage rate (%)	100%	100%	100%
NOx - coverage rate (%)	100%	100%	100%
SOx - coverage rate (%)	100%	100%	100%
VOC/THC - coverage rate (%)	96%	96%	99%
PCDD/F - coverage rate (%)	85%	83%	93%
Hg - coverage rate (%)	98%	96%	95%
HM1 <sup>4</sup> - coverage rate (%)	98%	96%	95%
HM2 <sup>5</sup> - coverage rate (%)	98%	91%	95%
Dust - specific emissions (g/tonne of clinker)	44	38	38
NOx - specific emissions (g/tonne of clinker)	1,483	1,394	1,416
SOx - specific emissions (g/tonne of clinker)	667	687	762
VOC/THC - specific emissions (g/tonne of clinker)	54	118	98
PCDD/F - specific emissions (ng/tonne of clinker)	110*	18*	25
Hg - specific emissions (mg/tonne of clinker)	8	11	10
HM1 <sup>4</sup> - specific emissions (mg/tonne of clinker)	14	19	30
HM2 <sup>5</sup> - specific emissions (mg/tonne of clinker)	688	475	1,281
Dust - absolute emissions (tonne/year)	1,041	1,122	1,083
NOx - absolute emissions (tonne/year)	35,385	41,150	40,525
SOx - absolute emissions (tonne/year)	15,918	20,282	21,805
VOC/THC - absolute emissions (tonne/year)	1,298	3,473	2,793
PCDD/F - absolute emissions (mg/year)	2,866	541	703
Hg - absolute emissions (kg/year)	200	311	296
HM1 <sup>4</sup> - absolute emissions (kg/year)	324	564	863
HM2 <sup>5</sup> - absolute emissions (kg/year)	16,407	14,022	36,663

Scope: Global.

<sup>1</sup>Includes only cement business.

<sup>2</sup>KP1: Monitoring of all pollutants mentioned in the emissions guidelines.

<sup>3</sup>KP2: Monitoring of PM, NOx and SOx.

<sup>4</sup>HM1: Cadmium and Thallium.

<sup>5</sup>HM2: Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel, Vanadium.

\*Restatements of information GRI 2-4: error made in previous reporting periods.



<b>Local impact on land and communities</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Sites with existing community engagement plans (%) <sup>1</sup>	33.4%	46.1%	62.6%
Sites with existing mine rehabilitation plans (%) <sup>1</sup>	93.7%	91.1%	100%
Mines with high biodiversity value in which biodiversity management plans are actively implemented <sup>2</sup>	70.0%*	77.8%*	77.8%

<sup>1</sup> Scope: Global

<sup>2</sup> Scope: VCBR

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used

<b>Specific water consumption</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total water consumed (liters) per tonne of cement produced <sup>1</sup>	294*	310*	331 <sup>3</sup>
Total water consumed (liters) per m <sup>3</sup> of concrete produced <sup>2</sup>	612	533	326

<sup>1</sup>Scope: Global. In VCBR operation we also consider the gypsum mine in Ponta da Serra. The data was obtained by measurement and estimates.

<sup>2</sup>Scope: VCBR and Uruguay. In 2022, it was made a study to determine reference values of water consumption in concrete sites based on primary data. The data was obtained by measurement and estimates.

<sup>3</sup>Increase in water consumption in the North, Northeast and South regions of Brazil in 2022.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.



# GRI Content Index



2023

<b>Statement of use</b>	Votorantim Cimentos has reported in accordance with GRI Standards for the period January 1, 2022 to December 31, 2022
<b>GRI 1 used</b>	GRI 1: Foundation 2021

For the Content Index - Essentials Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for disclosures 2-1 to 2-5, 3-1 and 3-2 are aligned with the appropriate sections in the body of the report.

<b>GRI Standard</b>	<b>Disclosure</b>	<b>Page</b>	<b>Omission</b>	<b>SDG</b>
<b>GRI 2: General Disclosures 2021</b>	2-1 Organizational details	13, 14, 45, 124	-	-
	2-2 Entities included in the organization's sustainability reporting	120	-	-
	2-3 Reporting period, frequency and contact point	4	-	-
	2-4 Restatements of information	96, 97, 110, 111, 112, 113, 114, 115, 116, 117, 119	-	-
	2-5 External assurance	4, 122	-	-
	2-6 Activities, value chain and other business relationships	13, 61	-	-
	2-7 Employees	50, 116	-	-
	2-8 Workers who are not employees	-	Information unavailable	8.5
	2-9 Governance structure and composition	33, 34	-	5.5, 16.7
	2-10 Nomination and selection of the highest governance body	34	-	5.5, 16.7
	2-11 Chair of the highest governance body	34	-	16.6
	2-12 Role of the highest governance body in overseeing the management of impacts	34, 41	-	16.7
	2-13 Delegation of responsibility for managing impacts	34	-	-
	2-14 Role of the highest governance body in sustainability reporting	34	-	-
	2-15 Conflicts of interest	37	-	16.6
	2-16 Communication of critical concerns	41	Information unavailable	-
	2-17 Collective knowledge of the highest governance body	33	-	-
	2-18 Evaluation of the performance of the highest governance body	34	-	-
	2-19 Remuneration policies	-	Confidentiality constraints	-
	2-20 Process to determine remuneration	-	Confidentiality constraints	-
	2-21 Annual total compensation ratio	-	Confidentiality constraints	-



<b>GRI Standard</b>	<b>Disclosure</b>	<b>Page</b>	<b>Omission</b>	<b>SDG</b>
<b>GRI 2: General Disclosures 2021</b>	2-22 Statement on sustainable development strategy	8, 10	-	-
	2-23 Policy commitments	37	-	16.3
	2-24 Embedding policy commitments	37	-	-
	2-25 Processes to remediate negative impacts	-	Information unavailable	-
	2-26 Mechanisms for seeking advice and raising concerns	40	-	16.3
	2-27 Compliance with laws and regulations	107	-	16.3
	2-28 Membership associations	120	-	-
	2-29 Approach to stakeholder engagement	5, 7, 104	-	-
	2-30 Collective bargaining agreements	116	-	8.8
	<b>GRI 3: Material Topics 2021</b>	3-1 Process to determine material topics	5	-
3-2 List of material topics		5, 6	-	-
<b>MATERIAL TOPICS</b>				
<b>Economic performance (Climate Change)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6,26, 91	-	-
<b>GRI 201: Economic Performance 2016</b>	201-2 Financial implications and other risks and opportunities due to climate change	42	-	13.1
<b>Anti-corruption (Ethics, integrity and transparency)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 36, 37, 91	-	-
<b>GRI 205: Anti-corruption 2016</b>	205-1 Operations assessed for risks related to corruption	105	-	16.5
	205-2 Communication and training about anti-corruption policies and procedures	106	-	16.5
	205-3 Confirmed incidents of corruption and actions taken	106	-	16.5
<b>Anti-competitive behavior (Ethics, integrity and transparency)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 36, 37, 91	-	-
<b>GRI 206: Anti-competitive behavior 2016</b>	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	107	-	16.3
<b>Materials (Responsible use of materials, waste and circular economy)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 71, 91	-	-
<b>GRI 301: Materials 2016</b>	301-1 Materials used by weight or volume	110	-	8.4, 12.2
<b>Energy (Climate change   Responsible use of materials, waste and circular economy)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 76, 91	-	-
<b>GRI 302: Energy 2016</b>	302-1 Energy consumption within the organization	109	-	7.2, 7.3, 8.4, 12.2, 13.1
	302-2 Energy consumption outside of the organization	109	-	7.2, 7.3, 8.4, 12.2, 13.1
	302-3 Energy intensity	109	-	7.3, 8.4, 12.2, 13.1



GRI Standard	Disclosure	Page	Omission	SDG
<b>Emissions(Climate change   Air emissions   Responsible use of materials, waste and circular economy)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 28, 79, 91	-	-
<b>GRI 305: Emissions 2016</b>	305-1 Direct (Scope 1) GHG emissions	113	-	3.9, 12.4, 13.1,14.3, 15.2
	305-2 Energy indirect (Scope 2) GHG emissions	113	-	3.9, 12.4, 13.1,14.3, 15.2
	305-3 Other indirect (Scope 3) GHG emissions	113	-	3.9, 12.4, 13.1,14.3, 15.2
	305-4 GHG emissions intensity	113	-	3.9, 12.4, 13.1,14.3, 15.2
	305-5 Reduction of GHG emissions	113	-	13.1, 14.3, 15.2
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	79, 114	-	3.9, 12.4,14.3, 15.2
<b>Waste(Responsible use of materials, waste and circular economy)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 71, 91	-	-
<b>GRI 306: Waste 2020</b>	306-1 Waste generation and significant waste-related impacts	71	-	3.9, 6.3, 6.6, 11.6, 12.4, 12.5
	306-2 Management of significant waste-related impacts	114	-	3.9, 6.3, 8.4, 11.6, 12.4, 12.5
	306-3 Waste generated	114	-	3.9, 6.6, 11.6, 12.4, 12.5, 15.1
	306-4 Waste diverted from disposal	115	-	3.9, 11.6, 12.4, 12.5
	306-5 Waste directed to disposal	115	-	3.9, 11.6, 12.4, 12.5
<b>Occupational health and safety (Safety, health and well-being)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 50, 51, 91	-	-
<b>GRI 403: Occupational health and safety2018</b>	403-1 Occupational health and safety management system	51	-	8.8
	403-2 Hazard identification, risk assessment, and incident investigation	51, 52	-	8.8
	403-3 Occupational health services	51	-	8.8
	403-4 Worker participation, consultation, and communication on occupational health and safety	51, 52	-	8.8, 16.7
	403-5 Worker training on occupational health and safety	51, 52	-	8.8
	403-6 Promotion of worker health	51	-	3.3, 3.5, 3.7, 3.8
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	51	-	8.8
	403-9 Work-related injuries	117	-	3.6, 3.9, 8.8, 16.1
	<b>Diversity and equal opportunity (Diversity and inclusion)</b>			
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 50, 55, 91	-	-
<b>GRI 405: Diversity and equal opportunity 2016</b>	405-1 Diversity of governance bodies and employees	118, 119	-	5.1, 5.5, 8.5
<b>Non-discrimination (Diversity and inclusion)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 55, 91	-	-
<b>GRI 406: Non-discrimination 2016</b>	406-1 Incidents of discrimination and corrective actions taken	107	-	5.1, 5.5, 8.5



<b>GRI Standard</b>	<b>Disclosure</b>	<b>Page</b>	<b>Omission</b>	<b>SDG</b>
<b>Public policy(Ethics, integrity and transparency)</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	6, 37, 91	-	-
<b>GRI 415: Public policy 2016</b>	415-1 Political contributions	104	-	16.5
<b>NON MATERIAL TOPICS</b>				
<b>GRI 201: Economic performance 2016</b>	201-1 Direct economic value generated and distributed	103	-	8.1, 8.2, 9.1, 9.4, 9.5
<b>GRI 202: Market presence 2016</b>	202-2 Proportion of senior management hired from the local community	104	-	8.5
<b>GRI 204: Procurement practices 2016</b>	204-1 Proportion of spending on local suppliers	103	-	8.3
<b>GRI 303: Water and effluents 2018</b>	303-3 Water withdrawal	110	-	6.4
	303-4 Water discharge	111	-	6.3
	303-5 Water consumption	111	-	6.4
<b>GRI 304: Biodiversity 2016</b>	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	111	-	6.6, 14.2, 15.1, 15.5
	304-3 Habitats protected or restored	112	-	6.6, 14.2, 15.1, 15.5
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	112	-	6.6, 14.2, 15.1, 15.5
<b>GRI 308: Supplier environmental assessment 2016</b>	308-1 New suppliers that were screened using environmental criteria	104	-	-
	308-2 Negative environmental impacts in the supply chain and actions taken	104	-	-
<b>GRI 401: Employment 2016</b>	401-1 New employee hires and employee turnover	116, 117	-	5.1, 8.5, 8.6, 10.3
<b>GRI 404: Training and education 2016</b>	404-1 Average hours of training per year per employee	119	-	4.3, 4.4, 4.5, 5.1, 8.2, 8.5, 10.3
	404-2 Programs for upgrading employee skills and transition assistance programs	58	-	-
<b>GRI 408: Child labor 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	108	-	5.2, 8.7, 16.2
<b>GRI 409: Forced or compulsory labor 2016</b>	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	108	-	5.2, 8.7
<b>GRI 411: Rights of indigenous peoples 2016</b>	411-1 Incidents of violations involving rights of indigenous peoples	108	-	2.3
<b>GRI 413: Local Communities 2016</b>	413-1 Operations with local community engagement, impact assessments, and development programs	85, 119	-	-
<b>GRI 414: Supplier Social Assessment 2016</b>	414-1 New suppliers that were screened using social criteria	104	-	5.2, 8.8, 16.1
	414-2 Negative social impacts in the supply chain and actions taken	104	-	5.2, 8.8, 16.1



# SASB Content Index

Topic	Accounting Metric	Category	Unit of Measure	Code	Page
<b>Greenhouse Gas Emissions</b>	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tons (t) CO <sub>2</sub> -e, Percentage (%)	EM-CM-110a.1	113
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Qualitative	Not applicable	EM-CM-110a.2	6, 28
<b>Air Quality</b>	Air emissions of the following pollutants: (1) NO <sub>x</sub> (excluding N <sub>2</sub> O) (2) SO <sub>x</sub> (3) particulate matter (PM <sub>10</sub> ), (4) dioxins/furans (5) volatile organic compounds (VOCs) (6) polycyclic aromatic hydrocarbons (PAHs) (7) heavy metals	Quantitative	Metric tons (t)	EM-CM-120a.1	79, 114
<b>Energy Management</b>	1) Total energy consumed (2) percentage grid electricity (3) percentage alternative (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	EM-CM-130a.1	109
<b>Water Management</b>	(1) Total fresh water withdrawn (2) percentage recycled (3) percentage in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m <sup>3</sup> ), Percentage (%)	EM-CM-140a.1	110
<b>Waste Management</b>	Amount of waste generated, percentage hazardous, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	EM-CM-150a.1	114
<b>Biodiversity Impacts</b>	Description of environmental management policies and practices for active sites	Qualitative	Not applicable	EM-CM-160a.1	80
	Terrestrial acreage disturbed, percentage of impacted area restored	Quantitative	Acres (ac), Percentage (%)	EM-CM-160a.2	Not reported
<b>Workforce Health &amp; Safety</b>	1) Total recordable incident rate (TRIR) (2) near miss frequency rate (NMFR) for (a) fulltime employees and (b) contract employees	Quantitative	Rate	EM-CM-320a.1	117
	Number of reported cases of silicosis <sup>2</sup>	Quantitative	Number	EM-CM-320a.2	117
<b>Product Innovation</b>	Percentage of products that qualify for credits in sustainable building design and construction certification	Quantitative	Percentage (%) by annual sales revenue	EM-CM-410a.1	Not reported
	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	Quantitative	Reporting currency, Percentage (%)	EM-CM-410a.2	103
<b>Pricing Integrity &amp; Transparency</b>	Total amount of monetary losses as a result of legal proceedings associated with cartel activities price fixing and anti-trust activities <sup>3</sup>	Quantitative	Reporting currency	EM-CM-520a.1	107
Activity Metric	Accounting Metric	Category	Unit of Measure	Code	Page
<b>Production by major product line<sup>4</sup></b>	Not applicable	Quantitative	Metric tons (t)	EM-CM-000.A	103



# Annex GRI and SASB

## Economic Performance

### Direct economic value generated and distributed GRI 201-1

	2020	2021	2022
<b>Economic value generated (R\$thousands)</b>	<b>19,600,528</b>	<b>25,914,457</b>	<b>30,109,824</b>
Net revenue	16,740,228	22,295,681	25,797,366
Cement	11,542,316	15,584,206	18,834,971
Concrete	3,561,241	4,771,898	4,635,936
Aggregates	545,417	670,253	819,675
Mortar	604,661	731,441	780,465
Others	486,593	537,883	726,319
<b>Economic value distributed (R\$thousands)</b>	<b>8,941,224</b>	<b>11,630,113</b>	<b>12,388,278</b>
Employee remuneration <sup>1</sup>	2,900,373	3,430,794	3,381,112
Taxes and fees <sup>2</sup>	3,431,588	4,154,439	4,726,195
Third-party capital remuneration <sup>3</sup>	2,136,807	2,418,168	3,135,517
<b>Economic value retained<sup>4</sup></b>	<b>10,659,304</b>	<b>14,284,344</b>	<b>17,721,546</b>

Scope: Global.

<sup>1</sup>Direct remuneration, retirement plan and pension plan, social charges and benefits.

<sup>2</sup>Federal, State, Municipal and Deferred taxes and contributions.

<sup>3</sup>Financial expenses and passive exchange variations and rents.

<sup>4</sup>Non-controlling interest, profit (loss) retained and profit (loss) from discontinued operations.

### Production by major product line SASB EM-CM-000.A

	2020	2021	2022
Sales of cement (million metric tonnes)	32.4	37.2	36.8
Sales of aggregates (million metric tonnes)	22.7	24.4	23.7
Sales of concrete (million m <sup>3</sup> )	7.1	8.1	8.4

Scope: Global.

### Financial revenue through sustainable solutions VC 2030 | SASB EM-CM-410a.2

	2021	2022
Financial revenue through sustainable solutions <sup>1</sup> (%)	24.8%	31.4%

Scope: VCBR, VCNA, VCEAA

<sup>1</sup> Products and/or services that mitigate our environmental footprint or offer environmental benefits compared to traditional options.

### Suppliers GRI 204-1 | VC 2030

	2020	2021 <sup>1</sup>	2022 <sup>2</sup>
Total amount spent with suppliers (R\$billion)	3.2	8.4	13.4
Total amount spent with local suppliers (R\$billion)	1.2	4.7	7.2
Spent with local suppliers <sup>3</sup> at significant operating locations (%)  GRI 204   VC 2030	37.8%	56.3%	54.0%

Scope: VCBR, VCNA, VCEAA.

<sup>1</sup> Change in scope: in 2020, the scope of the indicator was VCBR. As of 2021, the scope of the indicator was expanded to include VCBR, VCNA and VCEAA.

<sup>2</sup>In 2022, the scope of the total amount spent with suppliers was expanded to include all the spent categories.

<sup>3</sup>Local suppliers: Due to the territorial extension of the countries where we operate, specific criteria were adopted for each of the regions. VCBR: local suppliers are those located within a 200km radius from the operating site; VCEAA: local suppliers are those located in the same country of the operating site; VCNA: suppliers within the United States or the province (Canada) where the plant is located.



### Contracting of suppliers GRI 308-1, 308-2, 414-1, 414-2

	2020	2021	2022
Total number of new suppliers	836	1,262	1,719 <sup>3</sup>
Total number of new suppliers selected according to environmental criteria GRI 308-1 <sup>1</sup>	836	137	50
New suppliers selected according to environmental criteria (%) GRI 308-1 <sup>1</sup>	100%	10.9%	2.9%
Number of suppliers identified as causing negative environmental impact and actions taken GRI 308-2 <sup>2</sup>	Not monitored	7	0
Total number of new suppliers selected according to social criteria GRI 414-1 <sup>1</sup>	836	806	1,213
New suppliers selected according to social criteria (%) GRI 414-1 <sup>1</sup>	100%	63.9%	70.6%
Number of suppliers identified as causing negative social impact and actions taken GRI 414-2 <sup>2</sup>	Not monitored	0	0

Scope: VCBR.

<sup>1</sup> Change in the indicator's accounting method starting in 2021: number of suppliers approved in the registration process for categories that consider environmental and social criteria and number of suppliers that were re-approved for the first time and received a purchase order in the current year. 100% of suppliers go through an approval process via the SIPM Ariba platform. As part of this process, suppliers that fall into environmental and social categories must meet certain procurement criteria. VSA performs the analysis and rejects the approval of suppliers that do not meet the pre-defined criteria. The assessment included the suppliers of alternative fuels and inputs (Verdera), according to the criteria for prioritization established by Supply Chain.

<sup>2</sup> In 2021, risk mapping was carried out for each procurement category. Action plans were created for suppliers with greater risk potential, which are periodically monitored by the Risk and Sustainability Committee.

<sup>3</sup>In 2022, the figures was impacted by the rehomologation process ongoing.

### Local hires GRI 202-2

Senior management hired from the local community (%) <sup>1</sup>	2020	2021	2022
VCBR	81.3%	81.6%	91.7%
VCEAA	56.3%	60.0%	50.0%
VCNA	95.8%	87.5%	90.0%
VCLATAM	47.0%	46.7%	47.1%
Employees from the local community (%) <sup>2</sup>	2020	2021	2022
VCBR	82.4%	89.6%	90.0%
VCEAA	98.4%	98.4%	95.6%
VCNA	99.8%	99.2%	99.7%
VCLATAM	75.9%	75.6%	75.8%

Scope: Global.

<sup>1</sup> Includes senior managers, general managers, directors and CEO.

<sup>2</sup> Employees born or naturalized in the country of operation are considered to be local hires at VCNA, VCEAA and in Uruguay. At VCBR and in Bolivia, due to specific local characteristics, we adopt regional criteria.

### Government relations GRI 415-1

	2020	2021	2022
Political contributions	0	0	0

Scope: VCBR, VCNA, VCEAA.

### Consumer relations GRI 2-29

Net Promoter Score (NPS) survey results	2020	2021	2022
VCBR	61	71	67
VCEAA	-	36	55

Scope: VCBR, VCEAA.

The indicator can range from -100 to 100.



**Operations assessed for risks related to corruption** GRI 205-1

	2020	2021	2022
<b>Operations assessed (%)</b>	<b>25%</b>	<b>50%</b>	<b>50%</b>
Significant corruption-related risks identified through this assessment	<p>For VCBR, the Compliance area performed a pilot Anti-Corruption Risk Assessment including two specific areas and exposures in relationships with the Government.</p> <p>For the other regions, the Compliance area maintained the continuous self assessment of its Compliance Program at a global level, including the Anti-Corruption pillar. The self-assessment of several areas of the company aims to provide insight into the maturity level of the pillars of the Compliance Program of Votorantim Cimentos through an integrated and consolidated perspective, while also guiding the strategy and priority actions to strengthen and improve compliance in the coming years</p>	<p>Even though our core business is not related to commercial transactions with governments, at Votorantim Cimentos, like any other legal entity, interactions with the public sector are part of the company's inherent activities. Therefore, in addition to the compliance evaluations incorporated into the company's daily processes (for example, integrity assessments of M&amp;A partners and critical third parties, as well as risk assessments for new business models), at VCBR and VCEAA we carried out specific anti-corruption assessments.</p> <p>At VCBR, we mapped all the interactions with the public sector, which enabled us to qualify them, assess our level of control over them, identify the parties involved and train them on anti-corruption issues. This mapping confirmed an original perception regarding the absence of significant risks related to corruption and served as a resource to inform integrity processes.</p> <p>At VCEAA, because of the diverse legal framework in the region, we carried out an anti-corruption risk assessment that focused on mapping and evaluating each country's legislation; we also did a self-assessment of our Compliance Program, including the Anti-Corruption pillar.</p> <p>In the other regions, the Compliance area continued to work on priority issues/gaps identified in previous self-assessments, including anti-corruption training and the background check process.</p>	<p>Although our core activities are not related to commercial transactions with governments, interactions with the public sector are part of Votorantim Cimentos' regular business, like with any other legal entity. Therefore, in addition to compliance assessments incorporated into the company's daily processes (for example, integrity assessments of partners in M&amp;A transactions or critical third parties, as well as risk assessments for new business models), Votorantim Cimentos annually performs a specific anti-corruption risk assessment within its businesses. In 2022, assessments were carried out at VCBR and VCNA. At VCBR, a risk heatmap was created for the sites considering three aspects (i) employee profile (for example, profile of users of the Ethics Line; compensation and performance information that can inform the development of initiatives; existence of conflicts of interest; participation in Compliance training; profile of potential fraudsters; etc.); (ii) site profile (for example, level of interaction with public authorities; environmental risks; performance and level of local participation; etc.); and (iii) third-party profile (for example, the site's procurement autonomy; contracting critical services; dependence on suppliers; supplier integrity profile; etc.). At VCNA, the company created a complete map of interactions with the public sector for two specific areas with high exposure associated with relationships with governments. This work enabled the identification of these interactions and the assessment of the level of control over them, and provided feedback on cross-cutting anti-corruption processes, such as better identifying and training the parties responsible for anti-corruption issues, and supporting a study to reassess third-party risk categories, among others. The mapping exercise confirmed the previous perception of an absence of significant risks related to corruption. For the other regions, the Compliance area continued to work on priority topics/gaps raised in previous self-assessments, such as anti-corruption training and the background check process.</p>

Scope: Global.



### Anti-corruption communication and training GRI 205-2

	2020			2021 <sup>1</sup>			2022		
	Number of employees	Number	Communicated Percentage	Number of employees	Number	Communicated Percentage	Number of employees	Number	Communicated Percentage
<b>Employees</b>									
President/Director	17	17	100%	38	38	100%	35	35	100%
Manager/General Manager	321	321	100%	366	366	100%	329	329	100%
Coordinator/Consultant	481	481	100%	618	618	100%	719	719	100%
Technician/Analyst/Supervisor	2,421	2,421	100%	2,909	2,809	97%	3,129	3,093	99%
Operator	6,173	5,293	86%	8,131	7,295	90%	7,916	7,866	99%
Total number of employees	9,413	8,533	91%	12,062	11,126	92%	12,128	12,042	99%
<b>Board of Directors</b>	<b>11</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>13</b>	<b>100%</b>	<b>13</b>	<b>13</b>	<b>100%</b>
<b>Business partners</b>	<b>-</b>	<b>9,480</b>	<b>~50%</b>	<b>-</b>	<b>21,402</b>	<b>~70%</b>	<b>-</b>	<b>10,532</b>	<b>~70%</b>

	2020			2021			2022		
	Number of employees	Number	Trained Percentage	Number of employees	Number	Trained Percentage	Number of employees	Number	Communicated Percentage
<b>Employees</b>									
President/Director	17	1	6%	38	17	45%	35	25	71%
Manager/General Manager	321	103	32%	366	104	28%	329	279	85%
Coordinator/Consultant	481	145	30%	618	213	34%	719	562	78%
Technician/Analyst/Supervisor	2,421	645	27%	2,909	878	30%	3,129	2,240	72%
Operator	6,173	832	13%	8,131	1,109	14%	7,916	3,258	41%
Total number of employees	9,413	1,726	18%	12,062	2,321	19%	12,128	6,364	52%
<b>Board of Directors</b>	<b>11</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>0</b>	<b>0%</b>

Scope: VCBR, VCNA, VCEAA.

The indicator does not include intern and apprentices.

<sup>1</sup> Change in scope: in 2020, the scope of the indicator was VCBR and VCEAA. As of 2021, the scope of the indicator was expanded to include VCBR, VCNA and VCEAA.

### Anti-corruption GRI 205-3

	2020	2021 <sup>1</sup>	2022
Number of cases of corruption confirmed by the Business Ethics Line	0	0	0

Scope: Global.

<sup>1</sup> Change in scope: in 2020, the scope of the indicator was VCBR, VCEAA and VCNA. As of 2021, the scope was expanded to global.



### Competition GRI 206-1 | SASB EM-CM-520a.1

	2020	2021	2022
Total number of legal actions for unfair competition, trust and monopoly Practices <sup>1</sup>	2	4	3
Value of legal actions (R\$million)	6,344	7,754	8,345

Scope: Global.

<sup>1</sup>Considers only legal actions above R\$98 million, in line with the standards applied for M&A and Due Diligence.

### Compliance with laws and regulations<sup>3</sup> GRI 2-27

	2020	2021	2022
Total number of significant monetary fines received in the year <sup>1</sup>	1	2	0
Total monetary value of significant fines received in the year (R\$million)	1.2	2.8	0
Total number of non-monetary sanctions <sup>2</sup>	1	0	1
Number of cases (fines + sanctions) brought through dispute resolution mechanism	1	3	1

Scope: Global.

<sup>1</sup> Significant monetary fines: value above R\$1 million.

<sup>2</sup> Non-monetary sanctions that cause interruptions or adjustments over R\$5 million.

<sup>3</sup> In 2020 and 2021, the scope of the standard included data from GRI 307-1 and GRI 419-1. With the new GRI 2021 Standard, the contents 307-1 and 419-1 are grouped as GRI 2-27.

### Discrimination GRI 406-1

Total number of incidents of discrimination received by the business ethics office and corrective actions taken	2020	2021 <sup>1</sup>	2022
Race/color	5	1	1
Age group	0	0	2
Gender	0	0	4
Religion	0	1	0
Political opinion	1	0	0
Nationality or nacionality	4	0	2
Social origin	0	0	0
Physical conditions	0	0	3
Harassment and abuse of power	0	0	0
Other incidents (discrimination)	0	4	4
Total number of incidents analyzed	10	6	16
Analyzed and considered unfounded	6	1	6
Analyzed and considered well-founded	1	3	4
Analyzed and considered inconclusive	2	1	1
Under analysis	0	1	3
Without sufficient information for investigation	1	0	2

Scope: Global.

<sup>1</sup> Change in scope: in 2019 and 2020, the scope of the indicator was VCBR, VCEAA and VCNA. As of 2021, the scope of the indicator was expanded to global.



**Child, forced or compulsory labor** GRI 408-1, 409-1

Operations and suppliers at significant risk for incidents of child labor **[GRI 408-1]**

Operations and suppliers at significant risk for incidents of forced or compulsory labor **[409-1]**

**2022**

Compulsory and child labor are issues included in the Votorantim Cimentos Code of Conduct, which addresses our commitment to the United Nations Universal Declaration of Human Rights and the UN Global Compact and has among its principles to eliminate all forms of forced or compulsory labor and eradicate all forms of child labor from our production chain. These practices are prohibited in all company and commercial partners' facilities. It is also prohibited to hire any organization that does not follow our company's conduct guidelines. This issue is also addressed in the event of complaints to our Business Ethics Office, which is prepared to carry out investigations and verify the materiality of the complaint. All the suppliers contracted must be submitted to the registration process. The Office of Labor (within the Ministry of Economy) Restricted List is cross-checked with our SAP list of suppliers. If there is evidence of misconduct, the supplier is demobilized and blocked to prevent future hiring. The Votorantim Cimentos General Conditions Term states that all suppliers must follow our Code of Conduct (ethics, values and compliance with labor legislation). Through the new SIPM tool, suppliers must accept our General Conditions Term; otherwise they are rejected in the certification process. They must also fill out a Compliance Survey, in which they need to address several topics, including child labor. If the survey answers are unsatisfactory, the supplier is submitted for analysis by the Compliance area and may be rejected in the certification process.

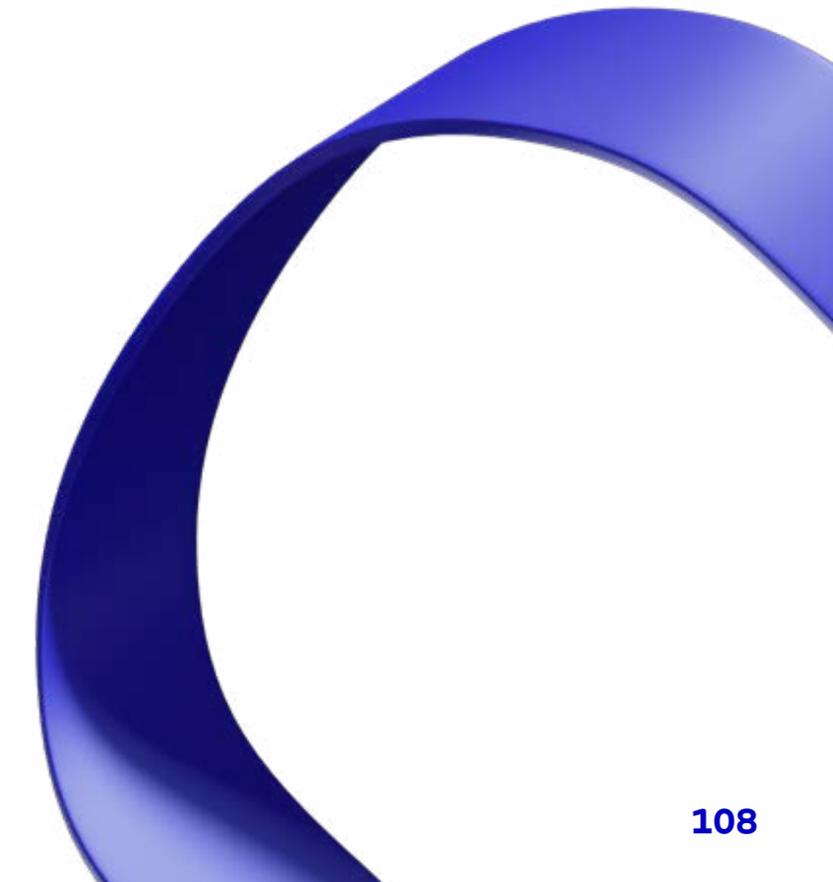
Scope: Global.

**Indigenous rights** GRI 411-1

	<b>2020</b>	<b>2021<sup>1</sup></b>	<b>2022</b>
Incidents of violations involving rights of indigenous peoples	0	0	0

Scope: Global.

<sup>1</sup> Change in scope: in 2020, the scope of the indicator was VCBR, VCEAA and VCNA. As of 2021, the scope of the indicator was expanded to global.





## Environmental Performance

### Energy consumption inside the organization GRI 302-1|SASB EM-CM-130a.1

Non-renewable sources (GJ)	2020	2021	2022
Cement	75,249,280	95,601,831	87,786,327
Aggregates	77,412	71,983	62,680
Concrete	220,288	254,853	273,810
Mortar	11,785	15,206	15,217
Limes and agricultural inputs	24,900	24,328	24,967
<b>Total</b>	<b>75,583,666</b>	<b>95,968,201</b>	<b>88,163,001</b>
Renewable sources (GJ)	2020	2021	2022
Cement	10,244,265	12,857,184	15,049,833
Aggregates	11,049	9,079	7,224
Concrete	36,073	35,518	36,975
Mortar	15,090	33,999	51,083
Limes and agricultural inputs	1,695,075	1,759,473	1,802,608
<b>Total</b>	<b>12,001,552</b>	<b>14,695,253</b>	<b>16,947,722</b>
Electricity (MWh)	2020	2021	2022
Cement	3,707,824	4,242,316	4,087,920
Aggregates	4,368	8,943	8,112
Concrete	3,086	3,394	3,720
Mortar	7,601	8,544	8,447
Limes and agricultural inputs	50,094	50,096	50,083
<b>Total</b>	<b>3,772,973</b>	<b>4,313,292</b>	<b>4,158,283</b>
Total consumption (GJ)	2020	2021	2022
Cement	98,841,710	123,731,351	117,552,672
Aggregates	104,187	113,256	99,107
Concrete	267,470	302,590	324,178
Mortar	54,238	79,963	96,709
Limes and agricultural inputs	1,900,314	1,964,147	2,007,876
<b>Total</b>	<b>101,167,919</b>	<b>126,191,306</b>	<b>120,080,542</b>

Scope: all VCBR operations and VCEAA, VCNA and VCLATAM cement operations.

### Energy Management SASB EM-CM-130a.1

	2020	2021	2022
Grid electricity (%)	81.8%	84.3%	82.1%
Renewable Energy (fuel + electricity) (%)	14.3%	13.6%	16.3%
Alternative fuels (%)	23.8%	22.4%	26.5%
Renewable Energy (electricity) (%)	-	18.5%	22.9%

Scope: all VCBR operations and VCEAA, VCNA and VCLATAM cement operations.

### Energy consumption outside the organization GRI 302-2

Transport and distribution (GJ)	2020	2021	2022
VCBR	3,862,299	4,322,852	4,271,695

Scope: VCBR.

### Energy intensity GRI 302-3

Fuels	2020	2021	2022
Clinker (MJ/tonne of clinker)	3,398	3,584	3,615
Aggregates (MJ/tonne of product)	27.7	26.4	24.9
Concrete (MJ/m <sup>3</sup> of product)	141	144	147
Mortar (MJ/tonne of product)	38.9	62.4	85.8
Lime and agricultural inputs (MJ/tonne of product)	819	816	931
Electricity <sup>1</sup>	2020	2021	2022
Cement (kWh/tonne of cement)	109	109	109
Aggregates (kWh/tonne of product)	1.4	2.9	2.9
Concrete (kWh/m <sup>3</sup> of product)	1.7	1.7	1.8
Mortar (kWh/tonne of product)	11.0	10.8	10.9
Lime and agricultural inputs (kWh/tonne of product)	23.8	22.9	25.5

Scope: all VCBR operations and VCEAA, VCNA and VCLATAM cement operations.  
The cement business has the highest energy consumption (98%).



## Environmental investments

Total Environmental Capex and Opex (million R\$)	2020	2021	2022
Environmental investments (Capex)	39.6	108.8	154.2
Environmental expenses (Opex)	69.8	86.3	93.6

Scope: Global.

## Material used GRI 301-1

	2020	2021	2022
Total raw material (tonne)	54,048,612	61,810,222*	58,595,488

Scope: VCBR, VCNA and VCEAA cement operations.

Materials include raw materials used in the clinker and cement production.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

## Water withdrawn by source GRI 303-3 | SASB EM-CM-140a.1

	2020		2021		2022	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
<b>Water withdrawn - Cement (megaliter)<sup>1</sup></b>						
Surface water	13,110	5,978	13,107	6,080	14,178	6,279
Groundwater	1,054	177	2,818	221	2,663	281
Rainwater	14.4	0.9	43.4	0.2	20.1	0.0
Produced water	39,663	16,806	41,496	14,954	42,684	16,624
Third-party water	363	138	258	196	287	197
Other sources	0.1	0.0	0.0	0.0	26.2	26.2
<b>Total</b>	<b>54,205</b>	<b>23,099</b>	<b>57,723</b>	<b>21,451</b>	<b>59,858</b>	<b>23,407</b>
<b>Water withdrawn - Concrete (megaliter)<sup>2</sup></b>						
Surface water	0.0	0.0	8.8	0.0	0.0	0.0
Groundwater	1002	0.0	1,042	0.0	684	0.0
Rainwater	0.0	0.0	0.0	0.0	0.0	0.0
Produced water	0.0	0.0	0.0	0.0	0.0	0.0
Third-party water	155	0.0	164	0.0	57.1	0.0
Other sources	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>1,157</b>	<b>0.0</b>	<b>1,214</b>	<b>0.0</b>	<b>741</b>	<b>0.0</b>

<sup>1</sup> Scope: Global. In VCBR operation we also consider the gypsum mine in Ponta da Serra. The data was obtained by measurement and estimates.

<sup>2</sup> Scope: VCBR and Uruguay. In 2022, it was made a study to determine reference values of water consumption in concrete sites based on primary data. The data was obtained by measurement. and estimates.



### Water discharge by source GRI 303-4

	2020		2021		2022	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
<b>Water discharge - Cement (megaliter)</b>						
Surface water	44,429	17,997	45,828	15,729	47,389	16,632
Groundwater	164	12.8	119	2.3	276	1.6
Sea water	0.0	0.0	0.0	0.0	0.0	0.0
Water sent to third-party supplier	40.1	11.3	29.8	13.9	48.2	7.1
<b>Total</b>	<b>44,632</b>	<b>18,021</b>	<b>45,977</b>	<b>15,745</b>	<b>47,713</b>	<b>16,641</b>

Scope: Global. In VCBR operation we also consider the gypsum mine in Ponta da Serra. The data was obtained by measurement and estimates.

### Water consumption GRI 303-5

	2020		2021		2022	
	All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
<b>Water consumption - cement (megaliter)</b>						
Total water withdrawn  GRI 303-3	54,205	23,099	57,723	21,451	59,858	23,407
Total water discharged  GRI 303-4	44,632	18,021	45,977	15,745	47,713	16,641
Total water consumed  GRI 303-5	9,573	5,078	11,746	5,706	12,145	6,766

Scope: Global. In VCBR operation we also consider the gypsum mine in Ponta da Serra. The data was obtained by measurement and estimates.

### Biodiversity and resource conservation GRI 304-1 | GRI G4 MM2, MM10

	2020	2021	2022
Total number of mines <sup>1</sup>	127	135	134
Mines with closure plans (%) GRI G4 MM10	93.7%	91.1%	100%
Total number of high biodiversity value units <sup>2</sup> GRI 304-1	10*	9*	9
Number of high biodiversity value areas with existing biodiversity management plans <sup>2</sup> GRI G4 MM2	7*	7*	7
Units with high biodiversity value with existing biodiversity management plans (%) <sup>2</sup> GRI G4 MM2	70.0%*	77.8%*	77.8%

<sup>1</sup>Scope: Global.

<sup>2</sup>Scope: VCBR. According to the "Votorantim Cimentos Biodiversity Management Plan Manual", the identification of areas of high biodiversity value considers three factors: (i) The importance of the area of high biodiversity relevance overlapping with the mining area; (ii) The percentage of overlap between the area of high biodiversity relevance and the mining area (considering a 5-km radius from the center of the mine); (iii) The distance of the area of high biodiversity relevance to the mining center. We apply the methodology and rank all areas that are close to or overlap with areas of high biodiversity value, according to these criteria.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.



### Biodiversity GRI 304-3

#### Habitats protected or restored (in km<sup>2</sup>)

	2020	2021 <sup>1</sup>	2022
<b>Amazônia</b>	<b>33.7</b>	<b>22.0</b>	<b>37.2</b>
Type of area	LR, PPA	LR, PPA	LR, PPA
Status of the area	Preserved	Preserved	Preserved
<b>Caatinga</b>	<b>5.8</b>	<b>7.5</b>	<b>7.5</b>
Type of area	LR, PPA	LR, PPA	LR, PPA
Status of the area	Preserved	Preserved	Preserved
<b>Cerrado</b>	<b>25.5</b>	<b>28.1*</b>	<b>28.9</b>
Type of area	LR, PPA, PRNH, WRA	LR, PPA, PRNH, WRA	LR, PPA, PRNH, WRA
Status of the area	Preserved	Preserved	Preserved
<b>Mata Atlântica</b>	<b>87.7</b>	<b>45.4</b>	<b>47.0</b>
Type of area	LR, PPA	LR, PPA, PRNH	LR, PPA
Status of the area	Preserved	Preserved	Preserved
<b>Pantanal</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>
Type of area	LR, PPA	LR, PPA	LR, PPA
Status of the area	Preserved	Preserved	Preserved
<b>Pampa</b>	<b>4.2</b>	<b>2.4</b>	<b>2.4</b>
Type of area	LR, PPA	LR, PPA	LR, PPA
Status of the area	Preserved	Preserved	Preserved

Scope: VCBR.

Brazilian classification of areas: Legal Reserve (LR), Permanent Protection Area (PPA), Private Reserve of Natural Heritage (PRNH), Wildlife Refuge Area (WRA).

<sup>1</sup>Change in the indicator's accounting methodology from 2021.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

### Biodiversity GRI 304-4

#### Total number of species in the IUCN Red List and with habitats in areas affected by operations

	2020	2021 <sup>1</sup>	2022
Critically endangered	1	0	0
Endangered	26	0	2
Vulnerable	39	7	6
Near Threatened	28	12	10
Least concern <sup>2</sup>	N/A	N/A	N/A

#### Total number of species in the National Conservation List and with habitats in areas affected by operations

	2020	2021 <sup>1</sup>	2022
Critically endangered	0	0	0
Endangered	2	1	1
Vulnerable	17	10	8
Near Threatened	13	2	3
Least concern <sup>2</sup>	N/A	N/A	N/A

Scope: VCBR.

<sup>1</sup> Change in the indicator's accounting method: in previous years, the indicator considered the accumulated wealth, which explains the high number of species in all categories. As of 2021, the indicator considers only the species sampled in the year.

<sup>2</sup> Information not available due to a focus on identifying species of greatest concern for conservation.



### Direct CO2 emissions GRI 305-1, 305-4 | SASB EM-CM-110a.1 | GCCA

	2020	2021 <sup>1</sup>	2022
<b>Cement</b>			
Gross absolute CO2 emission (tCO2)	20,421,293	24,877,550	23,213,320
Net absolute CO2 emission (tCO2)	19,630,033	23,999,550	22,267,306
Gross specific CO2 emission (kg CO2/t cementitious product)	599	619	604
Net specific CO2 emission (kg CO2/t cementitious product)	576	597	579
<b>Aggregates</b>			
Absolute CO2 emission (tCO2e)	5,199	5,168	4,786
Specific CO2 emission (kgCO2e/t aggregates)	1.6	1.7	1.7
<b>Concrete</b>			
Absolute CO2 emission (tCO2e)	20,455	19,007	20,387
Specific CO2 emission (kgCO2e/t concrete)	11.2	9.4	9.7
<b>Mortar</b>			
Absolute CO2 emission (tCO2e)	1,674	1,563	1,573
Specific CO2 emission (kgCO2e/t mortar)	2.4	2.0	2.0
<b>Lime and agricultural inputs</b>			
Absolute CO2 emission (tCO2e)	184,422	194,582	196,644
Specific CO2 emission (kgCO2e/t lime and agricultural inputs)	87.8	89.1	100
<b>Total - Scope 1 (tonne of CO2e)</b>	<b>20,633,043</b>	<b>25,097,870</b>	<b>23,436,711</b>
<b>Biogenic emissions - Scope 1 (tCO2e)</b>	<b>1,322,731</b>	<b>1,524,961</b>	<b>1,777,255</b>

Scope: Cement operations in Brazil, VCNA, VCEAA, Bolivia and Uruguay and other business in Brazil. The emissions from cement operation were calculated considering the guidelines of the Cement CO2 and Energy Protocol from GCCA. Emissions from other businesses were calculated considering the guidelines of the Brazilian GHG Protocol Program. The gases included in the calculation for scope 1 were: CO2, CH4, N2O.

<sup>1</sup> Increase due to a change in scope and the acquisition of two new cement operations (McInnis and Balboa), which were still at a lower level of thermal substitution and clinker factor, in addition to reduced thermal substitution in some regions due to limited access to waste caused by the pandemic in a time of increased cement production.

### Absolute CO2 emission per revenue

	2020	2021	2022
Absolute CO2 emission per revenue (kgCO2/R\$)	1.23	1.13	0.91

Scope: Total scope 1 absolute emissions and global net revenues.

### Indirect CO2 emissions GRI 305-2, 305-3

Indirect CO2 emissions - Escopo 2 (tCO2)	2020	2021 <sup>1</sup>	2022
Cement	532,913	771,610	631,297
Concrete	190	429	158
Aggregates	270	1,130	346
Mortar	469	574	360
Lime and agricultural inputs	3,092	6,333	2,133
<b>Total - Scope 2</b>	<b>536,934</b>	<b>780,076</b>	<b>634,294</b>
Other indirect emissions - Scope 3 (tCO2e) <sup>2</sup>	2020	2021	2022
<b>Total - Scope 3</b>	<b>249,061</b>	<b>4,581,726*</b>	<b>4,192,705</b>
<b>Biogenic emissions (tCO2)</b>	<b>30,661</b>	<b>30,297</b>	<b>28,685</b>

Scope: Cement operations in Brazil, VCNA, VCEAA, Bolivia and Uruguay and other business in Brazil. The emissions from cement operation were calculated considering the guidelines of the Cement CO2 and Energy Protocol from GCCA. Emissions from other businesses were calculated considering the guidelines of the Brazilian GHG Protocol Program. The gases included in the calculation for scope 2 e 3 were: CO2, CH4, N2O.

<sup>1</sup>Increased due to the acquisition of two new cement operations (McInnis and Balboa) and the change in emission factor in Brazil.

<sup>2</sup>Until 2020, the scope 3 considered only transportation and distribution. In 2021, we refined our Scope 3 inventory including the emissions from category 1 (purchased goods and services), category 3 (fuel and energy related activities, not included in scope 1 and 2), category 4 (upstream transportation and distribution), category 9 (downstream transportation and distribution) and category 15 (investments) which are the most relevant categories according to the screening made during the SBTi process.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

### Reduction of GHG emissions GRI 305-5

	2020	2021	2022	Base year/ denominator
CO2 reduction as a direct result of initiatives (%)	-25%	-22%	-24%	1990 <sup>1</sup>
CO2 reduction as a direct result of initiatives (%)	-	-	-7%	2018 <sup>2</sup>

Scope: Cement operations in Brazil, VCNA, VCEAA, Bolivia and Uruguay.

<sup>1</sup> 1990 sectoral base year.

<sup>2</sup> 2018 SBTi base year.



### Other air emissions GRI 305-7 | SASB EM-CM-120a.1

	2020	2021	2022
Number of kilns reported	36	39	40
<b>NOx</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (tonne/year)	35,385	41,150	40,525
Specific emissions (g/tonne clinker)	1,483	1,394	1,416
<b>SOx</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (tonne/year)	15,918	20,282	21,805
Specific emissions (g/tonne clinker)	667	687	762
<b>PM (Dust)</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (tonne/year)	1,041	1,122	1,083
Specific emissions (g/tonne clinker)	44	38	38
<b>Mercury</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (kg/year)	200	311	296
Specific emissions (mg/tonne clinker)	8	11	10
<b>VOC</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (tonne/year)	1,298	3,473	2,793
Specific emissions (g/tonne clinker)	54	118	98
<b>Dioxins/Furans</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (mg/year)	2,866	541	703
Specific emissions (ng/tonne clinker)	110*	18*	25
<b>HM1<sup>1</sup></b>	<b>2020</b>	<b>2021</b>	<b>2022<sup>6</sup></b>
Absolute emissions (kg/year)	324	564	863
Specific emissions (mg/tonne clinker)	14	19	30
<b>HM2<sup>2</sup></b>	<b>2020</b>	<b>2021</b>	<b>2022<sup>6</sup></b>
Absolute emissions (kg/year)	16,407	14,022	36,663
Specific emissions (mg/tonne clinker)	688	475	1,281
<b>Polycyclic Aromatic Hydrocarbons (PAHs)<sup>3</sup>   IEM-CM-120a.1</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Absolute emissions (tonne/year)	-	80	70
Specific emissions (g/tonne clinker)	-	0.01	0.01
<b>Monitoring data</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total monitoring coverage rate (KP1) <sup>4</sup> – Total coverage rate	85%	82%	93%
Continuous monitoring coverage rate (KP2) <sup>5</sup>	100%	100%	100%

Scope: Global.

<sup>1</sup> HM1: Cadmium and Thallium.

<sup>2</sup> HM2: Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel, Vanadium.

<sup>3</sup> Setor average in Spain, extrapolated to Tunisia, Morocco and Turkey.

<sup>4</sup> KP1: Monitoring of all pollutants.

<sup>5</sup> KP2: Monitoring of PM, NOx and SOx.

<sup>6</sup> Increase due to a revision in the methodology used to calculate HM1 and HM2 emissions in 2022.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

### Management of significant waste-related impacts GRI 306-2

2022

As per its Global Environmental Policy and Green Rules, Votorantim Cimentos aims to minimize waste production through reuse, recycling and responsible waste disposal.

To prevent waste from reaching the environment, it is necessary to:

- Store waste in closed, ventilated, access-controlled spaces and on impermeable bases that have areas to drain and collect contaminated liquids.
- Avoid contact between rainwater and waste; if there is contact, the rainwater must be collected for inspection.
- Train employees to take action in case of incidents, according to the Emergency Plan and the internal and external Communication System.
- Dispose of waste according to its characteristics and classification.

In addition, internal waste management, separation and temporary storage until final disposal is performed by Votorantim Cimentos. Waste transportation and final disposal is carried out by service providers.

Scope: Global.

### Waste generated by composition GRI 306-3

	2020	2021	2022 <sup>1</sup>
Hazardous waste (tonne)	14,250	3,733*	3,189
Non-hazardous waste (tonne)	138,250	99,115*	173,830

Scope: Global. \*Restatements of information GRI 2-4: error made in previous reporting periods.

<sup>1</sup> Significant increase in the generation of waste for co-processing at VCBR in 2022.

### Waste management SASB EM-CM-150a.1

	2020	2021	2022 <sup>1</sup>
Amount of waste generated (tonne)	152,500	102,848*	177,019
Hazardous waste (%)	9.3%	3.6%*	1.8%
Recycled waste (%)	27.5%	60.8%*	33.6%

Scope: Global. \*Restatements of information GRI 2-4: error made in previous reporting periods.

<sup>1</sup> Significant increase in the generation of waste for co-processing at VCBR in 2022.



### Waste diverted from disposal and directed to disposal GRI 306-4, 306-5

	2020		2021		2022	
	Hazardous	Non-hazardous	Hazardous	Non-hazardous	Hazardous	Non-hazardous
<b>Diverted from disposal <small>GRI 306-4</small></b>						
<b>Total (tonne)</b>	<b>222</b>	<b>47,180</b>	<b>1,547</b>	<b>66,713*</b>	<b>805</b>	<b>66,334</b>
Composting	0.6	3,049	0	1,580*	0	2,026
Reuse	0	27,867	34.3	35,620	48.1	16,640
Recycling	38.7	14,103	727	26,161	392	42,404
Recovery	183	1,249	371	2,149	342	3,004
On-site storage	0	913	414	1,203	22.8	2,261
<b>Directed to disposal <small>GRI 306-5</small></b>						
<b>Total (tonne)</b>	<b>14,028</b>	<b>91,070</b>	<b>2,186</b>	<b>32,402</b>	<b>2,384</b>	<b>107,496</b>
Incineration	12.2	1,086	19.3	255	64.2	773
Landfilling	5.5	86,758	185	12,071	186	21,676
Deep well injection	0	0	0	33.5	0	58.6
Others	14,010	3,226 <sup>1</sup>	1,982	20,042 <sup>1</sup>	2,134	84,988 <sup>1</sup>

Scope: Global

<sup>1</sup> For non-hazardous waste, it includes the use in co-processing. Significant increase in the generation of waste for co-processing at VCBR in 2022.

\*Restatements of information GRI 2-4: error made in previous reporting periods.

### Recycled concrete VC 2030

	2021	2022
Percentage of recycled concrete returned	93.4%	88.7%

Scope: VCBR, VCNA, VCEAA.



## Social Performance

### Employment GRI 2-7

By type of employment		2020	2021	2022
Full-time	Female	1,507	1,679	1,735
	Male	9,796	10,210	10,491
	<b>Total</b>	<b>11,303</b>	<b>11,889</b>	<b>12,226</b>
Part-time	Female	264	332	467
	Male	216	245	396
	<b>Total</b>	<b>480</b>	<b>577</b>	<b>863</b>
By employment contract		2020	2021	2022
Temporary (or determined)	Female	15	13	11
	Male	132	136	117
	<b>Total</b>	<b>147</b>	<b>149</b>	<b>128</b>
Permanent (undetermined)	Female	1,756	1,998	2,191
	Male	9,880	10,319	10,770
	<b>Total</b>	<b>11,636</b>	<b>12,317</b>	<b>12,961</b>
<b>Total employees</b>	<b>Female</b>	<b>1,771</b>	<b>2,011</b>	<b>2,202</b>
	<b>Male</b>	<b>10,012</b>	<b>10,455</b>	<b>10,887</b>
	<b>Total</b>	<b>11,783</b>	<b>12,466</b>	<b>13,089</b>

Scope: Global.

### Collective bargaining agreements GRI 2-30

	2020	2021	2022
Total number of employees	11,783	12,466	13,089
Employees covered by collective bargaining agreement	9,358	9,791	10,309
Employees covered by collective bargaining agreement (%)	79.4%	78.5%	78.8%

Scope: Global.

### Turnover GRI 401-1

Total number and rate of employee turnover		2020		2021		2022	
By gender	Number	Rate	Number	Rate	Number	Rate	Rate
Female	485	4.1%	566	4.5%	713	5.4%	
Male	1,589	13.5%	1,976	15.9%	2,146	16.4%	
By age group	Number	Rate	Number	Rate	Number	Rate	Rate
Under 30 years old	800	6.8%	924	7.4%	1,028	7.9%	
30-50 years old	984	8.4%	1,214	9.7%	1,350	10.3%	
Over 50 years old	290	2.5%	403	3.2%	476	3.6%	
By region	Number	Rate	Number	Rate	Number	Rate	Rate
VCBR	1,530	20.0%	1,798	22.4%	2,044	24.1%	
VCEAA	147	11.0%	152	10.9%	145	9.4%	
VCNA	367	15.2%	557	20.9%*	647	24.2%	
VCLATAM	30	7.7%	34	8.7%	23	9.1%	
<b>Total rate of turnover</b>		<b>17.6%</b>		<b>20.4%</b>		<b>21.8%</b>	

Scope: Global.

\*Restatements of information GRI 2-4: error made in previous reporting periods.

**New hires** GRI 401-1

<b>Total number and rate of new employee hires</b>		<b>2020</b>		<b>2021</b>		<b>2022</b>	
<b>By gender</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Rate</b>
Female	406	3.4%	417	3.3%	753	5.8%	
Male	1,404	11.9%	1,792	14.4%	1,967	15.0%	
<b>By age group</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Rate</b>
Under 30 years old	832	7.1%	800	6.4%	1,233	9.4%	
30-50 years old	937	8.0%	1,269	10.2%	1,297	9.9%	
Over 50 years old	124	1.1%	140	1.1%	190	1.5%	
<b>By region</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Number</b>	<b>Rate</b>	<b>Rate</b>
VCBR	1,431	18.7%	1,622	20.3%	2,133	25.1%	
VCEAA	81	6.0%	209	15.0%	209	13.6%	
VCNA	365	15.1%	342	12.8%	359	13.4%	
VCLATAM	26	6.7%	36	9.2%	19	3.5%	
<b>Total rate of new employee hires</b>		<b>16.2%</b>		<b>17.7%</b>		<b>20.8%</b>	

Scope: Global.

**Occupational health and safety** GRI 403-9 | VC 2030

<b>Work-related injuries – Employees</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Fatalities	1	0	0
Rate of fatalities <sup>1</sup>	0.04*	0.00	0.00
Number of high-consequence accidents <sup>2</sup>	0	2*	2
Rate of high-consequence accidents <sup>2</sup>	0.00	0.08*	0.07
Number of injuries <sup>3</sup>	25	34*	25
Rate of lost-time injuries <sup>3</sup>	1.11	1.34*	0.94
Severity rate	67.7	63.1	98.9
Number of hours worked	22,478,029	25,382,557	26,689,680

**Occupational health and safety** GRI 403-9 | VC 2030

<b>Work-related injuries – Contractors</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Fatalities	1	0	0
Rate of fatalities <sup>1</sup>	0.06	0.00	0.00
Number of high-consequence accidents <sup>2</sup>	1	1	1
Rate of high-consequence accidents <sup>2</sup>	0.06	0.04	0.05
Number of injuries <sup>3</sup>	20	22	9
Rate of lost-time injuries <sup>3</sup>	1.17	0.93	0.41
Severity rate	36.7	42.6	44.2
Number of hours worked	17,102,640	23,720,780	21,814,314
<b>Total work-related accident rate (employees + contractors)  VC 2030 </b>	<b>1.14</b>	<b>1.14*</b>	<b>0.70</b>
Near accidents (employees + contractors)  EM-CM-320a.1	-	11,079	10,091
Near miss frequency rate (employees + contractors)  EM-CM-320a.1  <sup>3</sup>	-	45.1	76.6

Scope: VCBR, VCNA, VCEAA and Bolivia. Figures do not include Uruguay operations, except for number of fatalities.

<sup>1</sup>The rate was calculated considering the GRI standards: (Number of fatalities as a result of work-related injury/Number of hours worked) \*1,000,000 hours.<sup>2</sup>The number and rate of high-consequence accidents include amputations or six-month leave of absence and exclude deaths. Rates were calculated based on 1,000,000 hours worked.<sup>3</sup>The number and rate of accidents consider only lost-time incidents. Rates were calculated based on 1,000,000 hours worked.<sup>4</sup>The rate of near accidents was calculated based on 2,000,000 hours worked.

\*Restatements of information GRI 2-4: change in the measurement methodologies or in the definitions used.

Among employees, the main work-related injuries involve the ankles, feet, hands and fingers, and include sprains and fractures. The greatest risks for high-consequence injuries are dangerous energies, moving and rotating parts, high temperatures, possibility of hot flour leakage, movement of machines and equipment, lifting of loads and activities at height and in confined spaces. These risks are determined after a systematic study of the processes and assessment of the hazards and risks involved.

**Health** SASB EM-CM-320a.2 | VC 2030

	<b>2021</b>	<b>2022</b>
Number of reported cases of silicosis	0	0

Scope: VCBR.

**Satisfaction and Well-being** SASB EM-CM-320a.2 | VC 2030

	<b>2021</b>	<b>2022</b>
Favorability in satisfaction and well-being surveys (%)	67.4%	75.9%

Scope: VCBR, VCNA, VCEAA.




**Diversity** GRI 405-1 | VC 2030

	2020			2021			2022		
	Under 30 years old	30-50 years old	Over 50 years old	Under 30 years old	30-50 years old	Over 50 years old	Under 30 years old	30-50 years old	Over 50 years old
<b>By age group (%)</b>									
President/Director	0%	38.9%	61.1%	0%	40.0%	60.0%	0%	40.5%	59.5%
Manager/General Manager	1.0%	72.2%	26.7%	0.2%	72.1%	27.7%	0.3%	73.4%	26.4%
Coordinator/Consultant	5.8%	75.7%	18.5%	5.4%	77.3%	17.3%	6.5%	73.8%	19.8%
Technician/Analyst/Supervisor	15.6%	67.8%	16.6%	15.5%	69.1%	15.5%	15.0%	69.6%	15.4%
Operator	17.1%	59.9%	23.0%	18.4%	60.3%	21.4%	18.1%	60.0%	22.0%
Intern	95.8%	4.2%	0%	94.6%	5.4%	0%	96.8%	3.2%	0%
Apprentice	100%	0%	0%	100%	0%	0%	100%	0%	0%
<b>Total employees</b>	<b>18.9%</b>	<b>60.7%</b>	<b>20.5%</b>	<b>19.9%</b>	<b>61.0%</b>	<b>19.1%</b>	<b>19.6%</b>	<b>61.0%</b>	<b>19.4%</b>
<b>Board of Directors (%)</b>	<b>0%</b>	<b>38.1%</b>	<b>61.9%</b>	<b>0%</b>	<b>23.5%</b>	<b>76.5%</b>	<b>0%</b>	<b>0%</b>	<b>100%</b>

Scope: Global

The percentage corresponds to the number of employees within each functional category that meets the diversity criteria.

	2020		2021		2022	
	Female	Male	Female	Male	Female	Male
<b>By gender (%)</b>						
President/Director	8.3%	91.7%	7.5%	92.5%	10.8%	89.2%
Manager/General Manager	18.8%	81.2%	17.9%	82.1%	19.8%	80.2%
Coordinator/Consultant	29.3%	70.7%	30.6%	69.4%	31.1%	68.9%
Technician/Analyst/Supervisor	22.8%	77.2%	24.1%	75.9%	24.6%	75.4%
Operator	7.9%	92.1%	8.7%	91.3%	9.1%	90.9%
Intern	57.4%	42.6%	57.9%	42.1%	59.9%	40.1%
Apprentice	50.8%	49.2%	57.1%	42.9%	57.2%	42.8%
<b>Total employees</b>	<b>15.0%</b>	<b>85.0%</b>	<b>16.1%</b>	<b>83.9%</b>	<b>16.8%</b>	<b>83.2%</b>
<b>Gender diversity in leadership positions <sup>1</sup> (%)   VC 2030</b>	<b>20.1%</b>	<b>79.9%</b>	<b>20.2%</b>	<b>79.8%</b>	<b>21.0%</b>	<b>79.0%</b>
Board of Director (%)	9.5%	90.5%	17.6%	82.4%	14.3%	85.7%
Finance Committee (%)	-	-	-	-	25.0%	75.0%
Organization, Compensation and People Committee (%)	-	-	-	-	25.0%	75.0%
Audit Committee (%)	-	-	-	-	25.0%	75.0%

Scope: Global.

The percentage corresponds to the number of employees within each functional category that meets the diversity criteria.

<sup>1</sup> The calculation of gender Diversity in leadership Positions includes the Positions of CEO, director, manager, general manager and coordinator.



### Diversity GRI 405-1 | VC 2030

People with disability (%)	2020	2021	2022
President/Director	0.0%	0.0%	0.0%
Manager/General Manager	1.0%	1.0%	0.8%
Coordinator/Consultant	0.8%	0.5%	0.7%
Technician/Analyst/Supervisor	1.5%	1.5%	1.5%
Operator	2.6%	2.5%	4.5%
Intern	0.0%	0.0%	0.0%
Apprentice	0.0%	0.0%	0.0%
<b>Total employees</b>	<b>2.0%</b>	<b>2.0%</b>	<b>3.2%</b>
Board of Director (%)	0.0%*	0.0%	0.0%

Scope: Global.

The percentage corresponds to the number of employees within each functional category that meets the diversity criteria.

### Internal perceptions of diversity and inclusion |VC 2030|

	2021	2022
Favorability in climate surveys (%)	81.1%	81.1%

Scope: VCBR, VCNA, VCEAA.

### Social transformation GRI 413 -1 | VC 2030

Operations with implemented local community engagement, impact assessments, and/or development programs	2020	2021	2022
Total number of operations <sup>1</sup>	323	336	361
Number of operations with implemented local community engagement, impact assessments, and/or development programs	108	155	226
Operations with implemented local community engagement, impact assessments, and/or development programs (%)  VC 2030	33.4%	46.1%	62.6%
Global social investment (R\$thousand)	2020	2021	2022
VCBR	7,975	8,750	12,064
VCEAA	2,151	1,510	3,295
VCNA	810	1,730	2,151
VCLATAM	769	726	633
<b>Total</b>	<b>11,705</b>	<b>12,715</b>	<b>18,143</b>

Scope: Global.

<sup>1</sup>Number of operations considered for the social engagement plan.

### Volunteer initiatives VC 2030

	2021	2022
Employees engaged in volunteer initiatives (%)	4.9%	6.7%

Scope: Global.

### Average hours of training GRI 404-1

By functional category	2020		2021		2022	
	Female	Male	Female	Male	Female	Male
President/Director	1	8	3	9	4	17
Manager/General Manager	22	27	60	25*	27	32
Coordinator/Consultant	24	33	42*	30*	18	21
Technician/Analyst/Supervisor	24	31	19	19	32	32
Operator	11	13	8	16	15	26
Average hours of training (female + male)		18		18*		23

Scope: Global.

\*Restatements of information GRI 2-4: error made in previous reporting periods.



# Membership Associations

## GRI 2-28

Participation in industry associations is key to maintaining and consolidating partnerships, promoting the continuous development of our teams and engaging with responsibility and leadership in business forums and in relations with governments. That is why, in all regions where we operate, we strive to participate in different organizations, in addition to endorsing external initiatives and projects. Globally, we participate in the following initiatives:

### Global

- | Federación Interamericana del Cemento (FICEM)
- | Global Cement and Concrete Association (GCCA)
- | Global Cement and Concrete Research Network

### Bolivia

- | Asociación Boliviana de Gestión Humana (ASOBOGH)
- | Cámara de Exportadores de Santa Cruz (CADEX)
- | Cámara de Industria, Comercio, Servicios y Turismo de Santa Cruz (CAINCO)
- | Centro de Conciliación y Arbitraje
- | Fundación Germán Busch

- | Instituto Boliviano del Cemento y Hormigón (IBCH)

### Brazil

- | Associação Brasileira da Indústria de Materiais de Construção (ABRAMAT)
- | Associação Brasileira de Cimentos Portland (ABCP)
- | Brazilian Business Council for Sustainable Development (CEBDS)
- | Brazilian Council for Sustainable Construction (CBCS)
- | Green Building Council Brazil
- | Instituto Brasileiro de Mineração (IBRAM)
- | Instituto Brasileiro do Concreto (IBRACON)
- | Sindicato Nacional da Indústria de Cimento (SNIC)
- | Sindicato Nacional da Indústria de Produtos de Cimento (SINAPROCIM)

### Canada

- | Cement Association of Canada (CAC)
- | Concrete Ontario (Ready Mixed Concrete Association of Ontario)
- | Ontario Stone, Sand & Gravel Association (OSSGA)

### Morocco

- | Arab Association for Cement & Building Materials (AUCBM)
- | Association Marocaine des Producteurs de Béton (AMBPE)

- | Association Professionnelle des Cimentiers (APC)
- | Confédération Générale des Entreprises du Maroc (CGEM)

### Spain

- | Asociación de Fabricantes de Morteros (ANFAPA)
- | Asociación Industrial de Canarias (ASINCA)
- | Asociación Nacional de Empresarios Fabricantes de Áridos (ANEFA)
- | Asociación Nacional Española de Fabricantes de Hormigón Preparado (ANEFHOP)
- | European Cement Association (CEMBUREAU)
- | Fundación Laboral Andaluza del Cemento y el Medio Ambiente (FLACEMA)
- | Fundación Laboral del Cemento y el Medio Ambiente (CEMA Foundation)
- | Instituto Español del Cemento y sus Aplicaciones (IECA)
- | OFICEMEN (Association of Cement Manufacturers in Spain)

### Tunisia

- | Arab Association for Cement & Building Materials (AUCBM)
- | Chambre Nationale des Producteurs de Ciments de la Tunisie (CNPC)

### Türkiye

- | Çimento Endüstrisi İşverenleri Sendikası (ÇEİS) (Cement Industry Employers' Association)
- | Türk Çimento (Turkish Cement Manufacturers' Association)
- | Türkiye Hazır Beton Birliği (THBB) (Turkish Ready Mixed Concrete Association)

### United States

- | American Concrete Pavement Association (ACPA)
- | Illinois Association of Aggregate Producers (IAAP)
- | National Ready-Mixed Concrete Association (NRMCA)
- | Portland Cement Association (PCA)

### Uruguay

- | APPCU, Private Promoters of Construction Uruguay
- | Cement Manufacturers Association
- | Construction Chamber of Uruguay
- | Construction League
- | DERES – Companies for the Sustainable Development (WBCSD local chapter)
- | Exporters Union of Uruguay
- | Spain-Uruguay Business Chamber
- | Trade Defense League

## ENTITIES INCLUDED IN THE ORGANIZATION'S SUSTAINABILITY REPORTING |GRI 2-2|

Votorantim Cimentos International S.A .  
 – “VCI”, Votorantim Cimentos N/NE S.A. –  
 “VCNNE”, Silcar Empreendimentos, Comércio e Participações Ltda., Pedreira Pedra Negra Ltda., Fazenda São Miguel Ltda., Calmit Mineração Participação Ltda, Lidermac Industria e Comércio Ltda., CRB Operações Portuárias S.A., Motz Transportes Ltda. St. Marys Cement Inc. (Canada), MacInnis Cement ULC. Québec Inc. (aka GP Co), McInnis Cement Limited Partnership Aka, Rosedale Securities Limited, McInnis USA LLC, McInnis Marine USA, LLC, Superior Materials Holdings LLC, VCNA Prairie Aggregate Holdings Illinois Inc., VCNA Praire LLC, VCNA Praire LLC, VCNA US Inc., VCNA United Materials LLC, VCNA United Materials Builders LLC, Votorantim Cimentos North America, Inc., Votorantim Cement EAA Inversiones S.L. “VCEAA”, Votorantim Macau – Investment Company, Limited, Votorantim Cement Corporation Limited., Votorantim Cement Trading S.L., Votorantim Cimentos España, S.A., Cementos Cosmos S.A., Prebetong Áridos S.L., Prebetong Hormigones S.A., Cementos Antequera S.A., Cementos Asment EAA, Morteros de Galicia S.L., A.G. Cementos Balboa, S.A.U., Comercial Cosmos SUR S.L., Asment de Temara S.A., Sociéte Marocaine SMBRM, Alpaca Inversiones S.A.C., Votorantim Cimento Sanayi ve Ticaret A.S, Ybitas Yozgat Isci Birliği Insaat Malzemeleri Ticaret ve, Sanayi A.S., Societe Les Ciments de Jbel Oust – CJO, Sociedad Financiera y Minera Sur, S.L, Compañía General de Canteras, S.A., Votorantim Cimentos Latam, S.à.r.l. – “VC LATAM”, GB Minerales Y Agregados S.A., Itacamba Cemento S.A. , Itacamba Cemento S.A., Yacuces S.L., Cementos Artigas S.A., Great Lakes Slag Inc. contextoRedigir



# External Commitments

## GRI 2-23

Globally, we participate in the following initiatives through our headquarters:

### **Benchmark Club of the Carbon Disclosure Project (CDP):**

Organization that assesses how companies manage climate-related risks and fight climate change.

### **Brazilian Business Council for Sustainable Development (CEBDS):**

Represents the World Business Council for Sustainable Development (WBCSD) in Brazil.

**Brazilian Council for Sustainable Construction (CBCS):** Civil organization aimed at generating and disseminating knowledge and good practices in sustainability in civil construction in Brazil.

**Business Ambition for 1.5°C:** Initiative to encourage companies to commit to setting science-based targets in line with the goal of limiting global temperature rise to 1.5°C above pre-industrial levels.

**Business Initiative for Racial Equality:** Initiative championed by companies and institutions that are committed to promoting racial inclusion and fighting racism.

**Business for LGBTI+ Charter:** Commitment signed with the Forum of LGBTQIA+ Rights Companies to promote inclusion and fight discrimination against the LGBTQIA+ population.

**Business for Nature:** Global coalition formed by influential organizations and companies that are committed to establishing and disclosing biodiversity protection targets.

**Corporate Social Inclusion Network:** Initiative that brings together and encourages companies in Brazil to promote the inclusion of people with disabilities in the job market.

**Global Cement and Concrete Research Network:** Known as Innovandi, this initiative was launched by the GCCA in 2019 to manage innovation projects.

**Global Compact:** United Nations initiative that encourages companies to adopt 10 principles in the areas of human rights, labor, environment and anti-corruption.

**Green Building Council Brazil:** Global coalition to promote the transformation of the construction industry toward sustainability.

**Letter of Commitment to the Business Movement for Integrity, Transparency and Anti-Corruption:** By signing this document, we reaffirmed our commitment to adopting practices to fight corruption in business and public-private relationships.

**National LGBTI+ Alliance:** Civil, multiparty and non-profit organization aimed at promoting and ensuring the defense of human rights and citizenship, in particular of the LGBTI+ community.

**Race to Zero Campaign:** Global campaign to rally leadership and support from businesses, cities, regions and investors for a healthy, resilient and zero carbon recovery that prevents future threats, creates decent jobs and unlocks inclusive and sustainable growth.

**SBE VC RBMA Technical Partnership:** Partnership with the Brazilian Society of Speleology and the Atlantic Forest Biosphere Reserve to develop and implement sustainable management practices in the Atlantic Forest and in cave areas.

**Science Based Target Initiative (SBTi):** Drives ambitious climate action in the private sector, enabling companies to set science-based emission reduction targets.

**Task Force on Climate-Related Financial Disclosures (TCFD):** Develops recommendations for climate-related disclosures.

**Vanzolini Foundation:** Non-profit organization created to improve the effectiveness of the sustainable development process in Brazil. It manages environmental product declarations (EDP), which are documents that are requested by customers seeking LEED certification.



# Assurance Letter



GRI 2-5

## INDEPENDENT VERIFICATION STATEMENT – BUREAU VERITAS

### INTRODUCTION

Bureau Veritas Certification Brazil (Bureau Veritas) has been engaged by Votorantim Cimentos to conduct an independent verification of its 2022 Integrated Report (hereinafter referred to as Report).

This verification was conducted by a multidisciplinary team, including verifiers with knowledge of financial and non-financial data.

### SCOPE OF WORK

The scope of this verification covered the Global Reporting Initiative™ Standards and Principles<sup>1</sup> for Sustainability Reporting, including the GRI 2013 Mining & Metals Sector Supplement, and is hereinafter referred to as a sectoral supplement, and refers to accountability for the period from January 1 to December 31, 2022.

The scope of verification additionally covered two GCCA (Global Cement and Concrete Association) Guidelines, namely: (1) Reporting and Monitoring of Safety in Cement Production of Feb/20 and (2) Reporting and Monitoring of CO<sub>2</sub> emissions in cement production of Oct/19.

In geographical terms, we clarify that we verify data and information from Votorantim Cimentos at a global level.

### RESPONSIBILITIES OF VOTORANTIM CIMENTOS AND BUREAU VERITAS

The obtaining, calculation and presentation of the published data are the sole responsibility of Votorantim Cimentos. Bureau Veritas is responsible for providing an independent opinion to the interested parties, in accordance with the scope of work defined in this statement.

### METHODOLOGY

The verification covered the following activities:

1. Interviews with those responsible for the material topics and the content of the Report;
2. Analysis of documentary evidence provided by the Votorantim Cimentos for the period covered by the Report (2022);
3. Verification of performance data in relation to the Principles that ensure the quality of information, in accordance with GRI standards and the sector supplement;
4. Verification of performance data against the criteria set out in the GCCA Guidelines described in the scope of work;
5. Evaluation of the systems used to compile data;
6. Remote evaluations in the following Units: Global Corporate Center, São Paulo/SP; operational units of Santa Helena/SP, Rio Branco do Sul/PR, Brasil, and Temara, Morocco.
7. Documentary analysis of stakeholder engagement activities developed by Votorantim Cimentos.

The verification level adopted was *Hybrid (Limited\* and Reasonable\*)*, in accordance with the requirements of ISAE 3000<sup>2</sup> incorporated into Bureau Veritas internal verification protocols.

\* Limited Verification Level: All indicators except those described below.

\* Reasonable verification level: GRI indicators 305-1/305-2/305-3/305-4/305-5 (Emissions and intensity of GHG emissions), GRI 302-1/302-2/302-3 (Energy consumption inside and outside the organization and energy intensity) and GRI 403-9 (work related accidents).

<sup>1</sup>Materiality, Stakeholder Inclusion, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability

<sup>2</sup> International Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information.

In addition to this scope of verification, the Greenhouse Gas (GHG) inventory of Votorantim Cimentos Brazil was subject to an exclusive verification, carried out through a specific protocol of Bureau Veritas.

### LIMITATIONS AND EXCLUSIONS

Excluded from this verification was any assessment of information related to:

- Activities outside the defined evaluation period;
- Position statements (expressions of opinion, belief, objectives or future intentions) by Votorantim Cimentos;
- Accuracy of economic and financial data contained in this Report, extracted from financial statements, verified by independent auditors;
- Data and information regarding operations and activities that are not part of the scope of the Report.

### OPINION ON THE REPORT AND THE VERIFICATION PROCESS

- Votorantim Cimentos prepared the Report following the GRI Standards and Principles, also contemplating the Mining & Metals Sector Supplement;
- We verified the performance of a new materiality test, carried out in 2022, according to the new criteria of GRI 3 – Materials Topics 2021. In our understanding, the result obtained realistically reflects the topics relevant to the Report. However, we emphasize the importance of achieving balance in the stakeholder engagement process by updating the materiality test. Of the total responses received, regarding the 2022 cycle consultations, we found little significant participation of community members and social project partners;



- As a result of the deepening of the ESG theme at Votorantim Cimentos, we highlight the creation of a Sustainability and Innovation Committee, which will take effect from 2023 and will support the Board of Directors in matters related to sustainability. In this same context, we noted a maturation in the establishment and monitoring of sustainability indicators, critical analysis and projections for the next 5 years, as well as the definition of a specific budget for 2023;
- The Report publishes information on the indicators associated with the material aspects of the GRI standards and the sectoral supplement. However, we emphasize the importance of implementing data collection and presentation standards common to all geographical regions of the company's operations, since part of the indicators verified by our team is limited to the geographical scope Brazil (VCBR);
- The published safety indicators include the criteria of the GCCA Cement Production Safety Guideline. We evidenced the completeness and reliability of safety data in a more in-depth manner (Reasonable scope);
- The published CO2 emission indicators include the criteria of the GCCA's Reporting and Monitoring of CO2 emissions in cement production Guideline (Reasonable scope);
- The data presented to meet the GHG emissions indicators are part of the GHG emissions inventory of Votorantim Cimentos. This inventory was verified by Bureau Veritas through an independent assurance process. We note that the presentation of the data regarding the inventory followed the methodology of the GRI standards;
- We note that the Report presents SASB indicators associated with the company's material topics. However, the analysis of these indicators was not part of Bureau Veritas' scope of verification;
- Regarding the management of the Mine Closure Plans (indicator MM10), we found that there is an opportunity to optimize the form of management, associating the updating of the Plans (incl. their scope) to the Economic Utilization Plans (PAE) of the mines. It was not possible to evidence the provisioning of resources for the execution of mine closure plans;
- We evidenced that the company improved the system of monitoring protected areas in its operational units, but kept the presentation of indicator 304-3 limited to the geographical scope Brazil (VCBR) and without data of restored areas;

- Regarding the indicators of risk of occurrence of child and forced or slave labor (GRI 408-1 and 409-1), we found that Votorantim Cimentos declared that it is planning a risk mapping process of operations and suppliers.

### RECOMMENDATIONS

- Seek a greater balance in stakeholder engagement by updating the materiality test, regarding the proportion of responses obtained (consultations) on material topics;
- Prioritize efforts to obtain global consolidated data on protected and restored areas of the company's operating units (last cycle recommendation);
- Regarding the data collection process of units from abroad, improve the systematization of the collection process, defining calculation memories and data traceability, in order to obtain a minimum basis of reliability of the information received (recommendation of the past cycle);
- Implement a mechanism for associating the Economic Use Plans of mines with the closure plans of the mines (MM10 indicator), aligning the requirements applicable to both, especially with regard to guarantees for the provision of financial resources for the execution of the closure plans (recommendation of the last cycle);
- Carry out a complete mapping of the risks related to child labor and (analogous to) slave labor in operations and suppliers, according to the premises of indicators GRI 408-1 and 409-1.

### CONCLUSION

Based on the verification work conducted, the evidence presented to us and according to the scope of work defined in this statement, nothing has come to our attention that could indicate that:

- The information provided in the Report is not balanced, consistent and reliable;
- Votorantim Cimentos has not established appropriate systems for the collection, compilation and analysis of quantitative and qualitative data used in the Report;

- The Report is not in accordance with the Principles for defining content and ensuring the quality of the GRI Standards and its Mining & Metals sector supplement.

### INDEPENDENCE AND IMPARTIALITY STATEMENT

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

Bureau Veritas has a quality management system, certified by a third party, according to which it maintains documented policies and procedures for compliance with ethical, professional and legal requirements.

The verification team has no link with Votorantim Cimentos, conducting this work independently.

Bureau Veritas has a Code of Ethics throughout its business to ensure that its employees maintain the highest standards of ethics, integrity, objectivity, confidentiality, and professional competence/behavior in their daily activities.

At the end of the process and Verification, a Detailed Report was generated, kept as a record in our Management System.

### CONTACT

[www.bureauveritascertification.com.br/faleconosco.asp](http://www.bureauveritascertification.com.br/faleconosco.asp)

telephone (11) 2655-9000.

São Paulo, March 2023.

#### Alexander Vervuurt

Lead Auditor Assurance Sustainability Reports (ASR)  
Bureau Veritas Certification – Brazil



# Corporate Information

## BOARD OF DIRECTORS

Luiz Antonio dos Santos Pretti (Chairman)<sup>1</sup>  
 Clarissa Lins<sup>1</sup>  
 Fabio Ermírio de Moraes  
 Francisco de Sá Neto<sup>1</sup>  
 Johann Markus Akermann<sup>1</sup>  
 José Roberto Ermírio de Moraes  
 Sérgio Malacrida

<sup>1</sup>Independent members

## AUDIT COMMITTEE

José Écio Pereira da Costa Júnior (Chairman)<sup>1</sup>  
 Clarissa Lins<sup>1</sup>  
 Diego Fresco Gutierrez<sup>1</sup>  
 Luiz Aparecido Caruso Neto

<sup>1</sup> Independent members

## FINANCIAL COMMITTEE

Sergio Augusto Malacrida Junior (Chairman)  
 Cristina Betts<sup>1</sup>  
 Luiz Antônio dos Santos Pretti<sup>1</sup>  
 Marcio Yukio Yamachira

<sup>1</sup>Independent members

## ORGANIZATION, COMPENSATION AND PEOPLE COMMITTEE

Francisco de Sá Neto (Chairman)<sup>1</sup>  
 Sergio Augusto Malacrida Junior  
 Luciana Domagala<sup>1</sup>  
 Luiz Antonio dos Santos Pretti<sup>1</sup>

<sup>1</sup>Independent members

## SUSTENTABILITY AND INNOVATION COMMITTEE

Luiz Antonio dos Santos Pretti (Chairman)<sup>1</sup>  
 Clarissa Lins<sup>1</sup>  
 José Roberto Ermírio de Moraes Filho

<sup>1</sup>Independent members

## EXECUTIVE LEADERSHIP

Marcelo Strufaldi Castelli – Global CEO  
 Filiberto Ruiz – CEO, VCNA  
 Günther Smetana – CEO, VCLATAM  
 Jorge Alejandro Wagner – CEO, VCEAA  
 Osvaldo Ayres Filho – Global Officer of Cement, Logistics and Adjacent Businesses  
 Bianca Patrocínio – CFO  
 Adjarbas Guerra Neto – Global Officer of Governance, Risks, Compliance and Internal Audit  
 Álvaro Lorenz – Global Officer of Sustainability, Institutional Relations, Product Development and Engineering

## HEADQUARTERS GRI 2-1

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Bureau Veritas

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We are grateful for the support and dedication of the corporate and industrial areas of Votorantim Cimentos and, especially, to the Santa Helena and Rio Branco do Sul sites, which were part of the assurance process and the collection and verification of the information that is included in this document.

Questions about this document or about Votorantim Cimentos, as well as comments and suggestions that may help us improve our reporting process, can be directed to [vc-ri@vcimentos.com](mailto:vc-ri@vcimentos.com). **GRI 2-3**