



**Better aluminium for a better world**

Lucimara, a CBA employee, and her daughter Isabelly, who won the Aluminium Culture Center contest and received a bicycle made of aluminium as a prize



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An example of an aluminium application in building and construction

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Since the beginning, CBA has advanced sustainability in its operations and business

A preserved forest on the Legado das Águas reserve

## About this report

Welcome to the 2020 Companhia Brasileira de Alumínio (CBA) Annual Report, an account of CBA's key strategies and initiatives from January 1 to December 31, 2020. This report has been prepared in accordance with GRI standards: Essential option. It describes environmental, social, economic and operational aspects as well as the Company's business model using the methodology outlined in the Integrated Reporting (IR) framework. This report has been independently assured by PwC to ensure transparency and integrity. It has also been reviewed by the Global Reporting Initiative (GRI), the leading authority in sustainability reporting, as denoted by the Materiality Disclosures review mark. [GRI 102-50](#), [102-54](#), [102-56](#)

### BETTER ALUMINIUM FOR A BETTER WORLD

CBA has always advanced sustainability in its operations and business. To support clearer communications on sustainability, in 2020 the Company reviewed its first sustainability strategy, now referred to as its ESG (Environmental, Social and Governance) strategy bolstering the sustainability culture found throughout the Company. In order to engage internal and external stakeholders around sustainability, CBA developed a new brand positioning strategy that is more

inspirational and connected to emerging concepts around sustainability.

The core chapters of the report are also structured into Governance, Environmental and Social topics reflecting CBA's ESG Strategy. At the opening of each chapter, the topics covered are mapped to the relevant material topics, United Nations (UN) Sustainable Development Goals (SDGs) and Global Compact principles.

### EVOLUTION OF MATERIALITY ASSESSMENT

[GRI 102-40](#), [102-42](#), [102-43](#), [102-44](#), [102-46](#), [102-47](#)

In the second half of 2020 CBA also revisited its materiality assessment to identify the topics that are most material to the Company. The process began with an exercise to prioritize stakeholders on the basis of their dependence and influence on CBA's activities.

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## Steps in selecting priority stakeholders:

**1 Prioritize operations**  
Working with a multidisciplinary strategy review group, our operations were prioritized based on factors such as: size of operation, level of risk, proximity to community, stakeholder dependence and local impact.

**2 Prioritize stakeholder categories**  
In an exercise with members of the ESG Strategy Working Group—a multidisciplinary group of representatives from different departments selected by the Sustainability Committee—stakeholder categories were prioritized based on dependence and influence.

**3 Identify representatives for survey**  
Based on the prioritized stakeholder categories and operations, stakeholders were identified to respond to a survey, including interviews and an online survey.

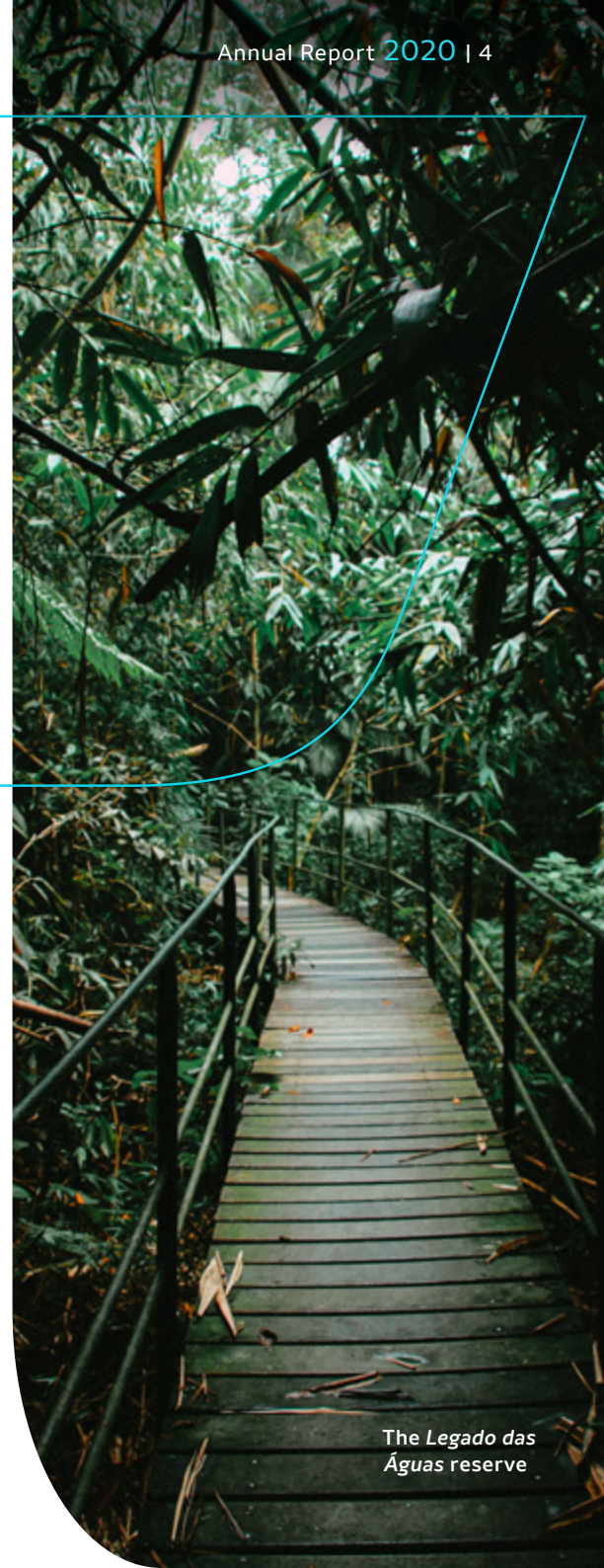
**PRIORITIZED OPERATIONS:**  
Alumínio (SP), Metalex, Itapissuma (PE) and Mirai (MG)

**PRIORITIZED STAKEHOLDERS:**  
Trade Associations, Academia, Customers, Financial Institutions, Suppliers, Community Leaders, NGOs, and Government Organizations

This was followed by the engagement activities outlined below:

- \* **Interviews** with C-Level representatives and other key management personnel at CBA.
- \* An **internal panel** with the ESG Strategy Working Group.
- \* **26 telephone** or videoconference interviews with representatives from Academia, NGOs, Cooperatives, Customers, Experts, Suppliers, Financial Institutions, Investors, Community Leaders and Government.
- \* **2 on-line surveys**, covering all of CBA's operations and all external stakeholder groups.

A materiality review is important in ensuring that the Company's strategy and disclosures address and are kept up to date with emerging trends and stakeholder expectations. The survey resulted in a matrix of 12 material topics. Most topics were already in the previous materiality matrix, with the exception of diversity, the only addition to this year's matrix. These topics were then categorized into the three ESG pillars, except that Innovation and Technology, one of the topics in the previous matrix, was this time classified as a cross-cutting topic spanning all three pillars. The newly defined material topics informed the initiatives and GRI disclosures reported in this document, and the evolution of CBA's ESG Strategy.



The Legado das Águas reserve

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## Material topics and linkage to the ESG pillars

### ENVIRONMENTAL

- \* Waste management
- \* Climate change
- \* Efficient and renewable energy
- \* Dam safety management
- \* Water stewardship
- \* Protection of biodiversity
- \* Materials efficiency and aluminium recycling

### SOCIAL

- \* Diversity and inclusion of minorities
- \* Employee health, safety and wellness
- \* Local development and impacts on surrounding communities

### GOVERNANCE

- \* Ethics and compliance

### CROSS-CUTTING TOPIC

- \* Innovation and technology



#### CLICK HERE

Learn about our material topics and how they relate to the SDGs in the GRI Appendix.

If you have any questions, suggestions or comments about this report, the report team can be contacted by email to:

[comunicacaocorpcba@cba.com.br](mailto:comunicacaocorpcba@cba.com.br)

GRI 102-53



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## Message from the Board of Directors

GRI 102-14

Year 2020 required an immense capacity of transformation. And CBA proved itself ready to tackle the challenges posed by the coronavirus pandemic in the year. Amid the uncertainties in the market, the Company was agile in seeking alternatives, capturing opportunities and delivering strong performance in such a critical period.

During the year, the COVID-19 pandemic also changed the way we work and the way we live. CBA maintained its focus on employee safety throughout, and was able to quickly adapt to the challenges by leveraging the best technologies available. The Company continued to build the digital mindset needed in today's industry landscape, and demonstrated the strength of its culture even in such an unprecedented time.

As important, or more important, than CBA's response to the COVID-19 pandemic was the transition of its sustainability strategy into an ESG model that addresses environmental, social and governance issues and puts sustainability at the heart of the business. The Board of Directors provided strong support in developing and implementing this strategy. CBA, which already implements best social and environmental practices and international certification standards in its operations across the supply chain, aspires to lead in sustainability. The Company recognizes that do so it must continuously strive to go further, look forward, and build the future.

It is with this clarity of purpose that the Company looks forward to an even better 2021. Regardless of the challenges—economic, social or sanitary—CBA will continue to build on its legacy of strengthening Brazilian industry, leading the way, and helping to shape both a more prosperous and a more sustainable future.

**Luis Ermírio de Moraes**

**Chairman of the Board of Directors,  
Companhia Brasileira de Alumínio (CBA)**

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## Message from the CEO

GRI 102-14

If we were to summarize year 2020 for CBA in one word, that word would be “transformation”. Both as a result of the COVID-19 pandemic and as part of our strategic plan, we transformed ourselves and adapted to a new way of working and interacting with each other. And despite the many challenges, each day we remained true to our purpose—aluminium solutions that transform lives—and to our long-term strategy. It was the strength and determination of #TeamCBA and our resilient corporate culture that enabled us to navigate this period with such a high level of commitment and dedication to people and to our work.

This was a year of learning and of accomplishments. We worked tirelessly to ensure the well-being and safety of our employees, CBA’s most valuable asset. We adapted work routines in our operations and offices. We invested in procedures and protective equipment, and in COVID-19 testing. We disseminated information to raise employee awareness about the sanitary crisis. Working with the Votorantim Institute, we supported initiatives across Brazil to improve the coronavirus response in the communities where we are present. Meanwhile, we worked shoulder to shoulder with our other business partners in navigating this difficult period.

Together, we made 2020 a year of transformation, resilience, solidarity and important progress toward the future of #OurCBA. An enhanced CBA 4.0 Journey program provided crucial support in accelerating the digital transformation that the Company—and the entire world—underwent in 2020 because of the COVID-19 pandemic. After identifying technology opportunities across business areas, our focus in 2020 was on developing related projects. Whereas before

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some tasks seemed impossible to be done remotely, we now know that, with a team like ours, everything is possible. We have worked closely together even while distancing, and I would like to thank everyone for their effort. As always, I am proud to be a part of #TeamCBA.

We also transitioned our sustainability strategy to an ESG (Environmental, Social and Governance) model. CBA's goal for 2030 is to provide an offering of low-carbon aluminium products and sustainable solutions to the world's problems, while developing the regions where it operates and positively influencing the end-to-end aluminium value chain. This is a highly important ambition that will impact not only our own Company, but also our stakeholders and broader society.

As another significant development in the year, we made Diversity a cross-cutting topic in our culture that is increasingly present in our day-to-day activities, at our plants, in our offices and in our interactions with customers and suppliers. We implemented a Diversity Committee, we set diversity goals, and we launched a Diversity & Inclusion Guide. This is a topic that is here to stay. The more we demonstrate respect for differences, the better for all of us. At CBA, people are a priority and everyone is welcome!

As another highlight in the year, we completed the acquisition of the Itapissuma rolling mill, strengthening CBA's position as a leading player in the packaging market. The rolling mill in Pernambuco and its administrative offices in São Paulo will now work in synergy with our other operations, continuously sharing experience and driving excellence in business performance and asset optimization.

Our commitment to best practices translated into strong financial results in the year. Net revenue grew 3% from 2019, to R\$ 5.4 billion. Total sales stood at 408,000 metric tons, a 16% improvement on the previous year. Adjusted EBITDA was R\$ 537 million, decreasing by 38% from the previous year. Year 2020 was also marked by CBA's first issues of green loans for sustainable projects. In total, CBA raised R\$ 500 million in two green-bond issues, a testament that our operations are environmentally sustainable. This further strengthens our belief that "the best aluminium for us is the best aluminium for the world".

**Ricardo Carvalho**

**CEO, Companhia Brasileira de Alumínio (CBA)**



Employees at the Itapissuma rolling mill

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# CBA's manifesto

Since our beginnings, we have been genuinely committed to making a positive impact on society and on the environment.

But we know that when it comes to sustainability there is no finish line. There's always more to be done.

And we are determined do it.

We think differently each day to create new solutions to today's problems. As leaders, we recognize our responsibility to the market and to society. We know that our actions can have a major positive impact.

When we raise the bar, we start a chain reaction that drives transformations beyond our industry.

That is why our purpose goes beyond our company walls.

It's not just about transforming our own way of doing business.

We want to increase awareness more broadly.

We want to inspire and engage our industry toward becoming more sustainable.

Because to us it only makes sense if we do it together.

Together with our employees, customers, suppliers, partners, communities and investors. A sustainable world is a more collaborative world.

We know that a better future can only exist if we all work together to make our world better and more sustainable today.



The Legado Verdes do Cerrado reserve

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# About CBA

We are CBA



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# 2020 at a glance

GRI 102-7

## People

**5,549**  
direct employees

**45%**  
increase in women employees from 2019

## Financial performance

R\$ **5.4**  
billion in net revenue

R\$ **537**  
million in adjusted EBITDA

R\$ **500**  
million in green loans issued

## Production

**1.71**  
million metric tons of bauxite processed

**307,000**  
metric tons of molten aluminium produced

**332,000**  
metric tons of aluminium products

Capacity to internally produce  
**100%**  
renewable electricity to supply the Aluminium Operation

## Investments

R\$ **14.9**  
million in innovation and technology

R\$ **11**  
milhões in safety

R\$ **11.5**  
million in the *Legado das Águas* and *Legado Verdes do Cerrado* nature

R\$ **3.3**  
million in social initiatives

R\$ **7.3**  
million in the COVID-19 pandemic response



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## Who we are

GRI 102-1, 102-2, 102-6

Companhia Brasileira de Alumínio (CBA) was founded over six decades ago with a commitment to doing things the right way and to producing high-quality aluminium with excellence at each stage of the value chain, from mine to end product. CBA is a company that has both learned from and taught others over the years, that has strived to improve each day, and that believes we can only build a better world if we all work together, shoulder to shoulder. Today, CBA is working to ensure a better future for the people who work and interact with the Company, for its industry, and for wider society and for the environment.

Casthouse products at the Alumínio plant

## 65 years of history

On June 4, 2020 CBA commemorated 65 years since it opened the Plant and the Company began operating as a bauxite mining company and aluminium producer. A range of activities were organized to mark the occasion. The Company's main corporate communications channel, Workplace, featured video testimonials from employees about stories that marked their journey with the Company, as well as posts with videos from partners and customers. At all operations with people working on-site, a special meal was prepared to celebrate the anniversary, with all recommended sanitary protocols in place to prevent COVID-19 transmission.

The celebrations also featured a live stream with pastry chef Carole Crema, who taught participants how to bake a special cake to mark such an important occasion. Many employees baked cakes with their families, with the live stream receiving 1,600 views on YouTube.

A thematic series of LinkedIn posts—featuring the history of the Company and videos about collaborations and value creation for customers, suppliers, communities and the aluminium industry—completed the celebrations.

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CBA is the only fully vertically integrated aluminium company in Brazil. The company's operations range from bauxite mining, through the refinery where bauxite is processed into aluminium oxide and smelters where molten aluminium is produced, to facilities where the aluminium is made into a range of primary products (ingots, slabs, billets and rod) and semi-fabricated products (caster rolls, sheet, foil, extruded profiles, and parts and components). These materials are supplied to the packaging, automotive and transportation industries and to strategic customers in the building and construction and consumer products industries, with whom the Company collaborates constantly to deliver increasingly lightweight and durable material solutions.

Much of the electricity used at CBA's largest plant in Alumínio (SP), southeastern Brazil, is sourced from 20 hydropower plants owned by the Company, a renewable energy source enabling low-carbon aluminium production.

A Casthouse  
employee at  
the Alumínio  
plant



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**NATIONWIDE PRESENCE**

GRI 102-2, 102-3, 102-4, 102-7, 102-10

# Our operations

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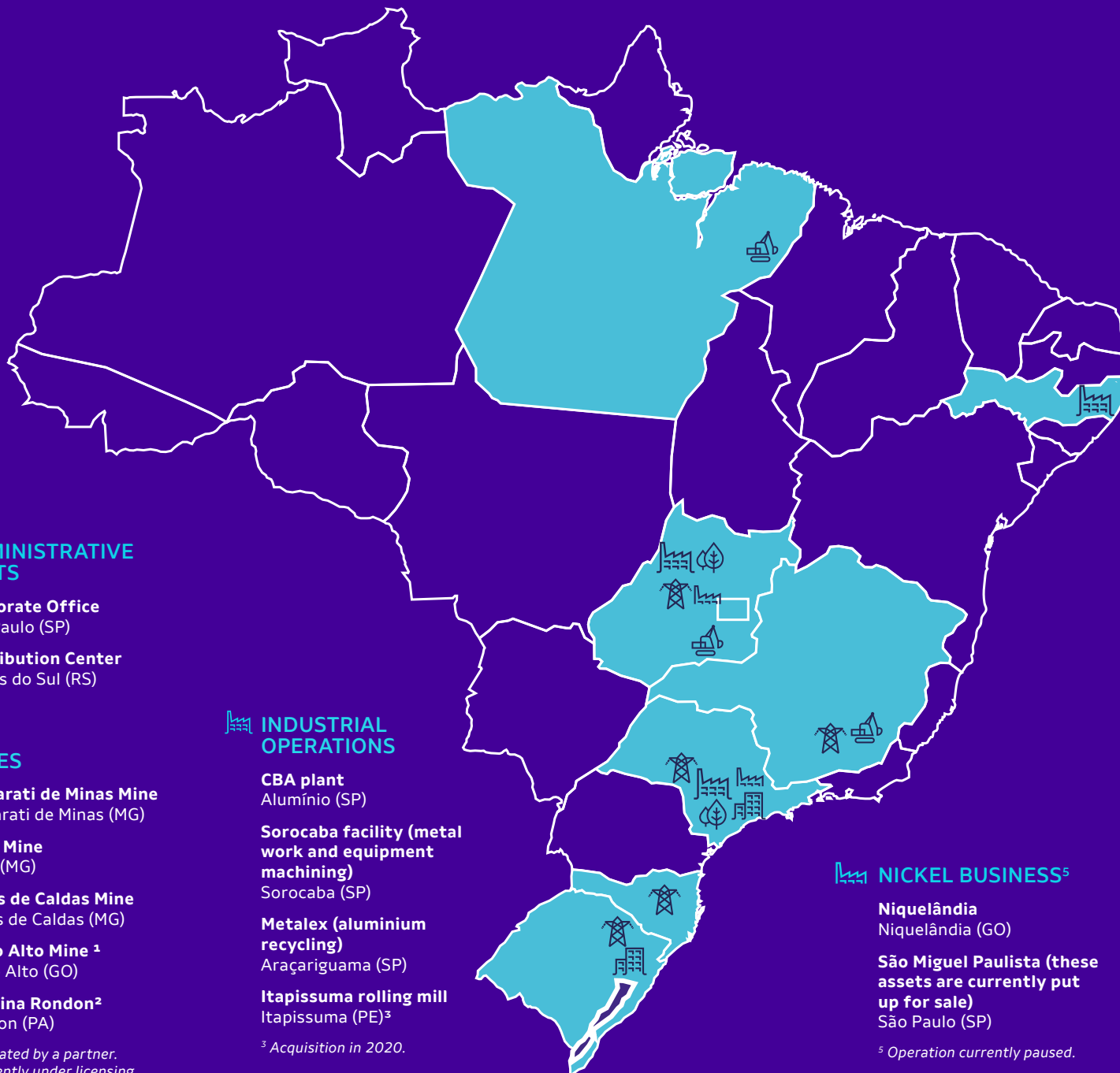
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**ADMINISTRATIVE UNITS**

**Corporate Office**  
São Paulo (SP)

**Distribution Center**  
Caxias do Sul (RS)

**MINES**

**Itamarati de Minas Mine**  
Itamarati de Minas (MG)

**Miraí Mine**  
Miraí (MG)

**Poços de Caldas Mine**  
Poços de Caldas (MG)

**Barro Alto Mine** <sup>1</sup>  
Barro Alto (GO)

**Alumina Rondon** <sup>2</sup>  
Rondon (PA)

<sup>1</sup> Operated by a partner.  
<sup>2</sup> Currently under licensing.

**INDUSTRIAL OPERATIONS**

**CBA plant**  
Alumínio (SP)

**Sorocaba facility (metal work and equipment machining)**  
Sorocaba (SP)

**Metalex (aluminium recycling)**  
Araçariguama (SP)

**Itapissuma rolling mill**  
Itapissuma (PE) <sup>3</sup>

<sup>3</sup> Acquisition in 2020.

**NICKEL BUSINESS**

**Niquelândia**  
Niquelândia (GO)

**São Miguel Paulista (these assets are currently put up for sale)**  
São Paulo (SP)

<sup>5</sup> Operation currently paused.

**LEGACY RESERVES**

**Legado das Águas**  
Miracatu (SP)

**Legado Verdes do Cerrado**  
Niquelândia (GO)

<sup>4</sup> Managed by Reservas Votorantim.

**HYDROPOWER DAMS**

**Iporanga**  
Juquiá (SP)

**Serraria SHP**  
Juquiá (SP)

**Porto Raso SHP**  
Tapiraí (SP)

**Barra**  
Tapiraí (SP)

**Alecrim**  
Miracatu (SP)

**Fumaça**  
Ibiúna (SP)

**França SHP**  
Juquitiba (SP)

**Jurupará SHP**  
Piedade (SP)

**Santa Helena SHP**  
Votorantim (SP)

**Votorantim SHP**  
Votorantim (SP)

**Itupararanga**  
Votorantim (SP)

<sup>6</sup> Managed by Votorantim Energia.

<sup>7</sup> Asset of CBA since 2014, managed by Votorantim Energia and supplying energy to Votorantim Cimentos. This plant was only included in the 2020 Report, because we previously only considered the UHEs that supply energy to CBA.

**Barra Grande**  
Pinhal da Serra (RS)

**Campos Novos**  
Campos Novos (SC)

**Canoas I**  
Cândido Mota (SP)

**Canoas II**  
Palmital (SP)

**Machadinho**  
Piratuba (SC)

**Piraju**  
Piraju (SP)

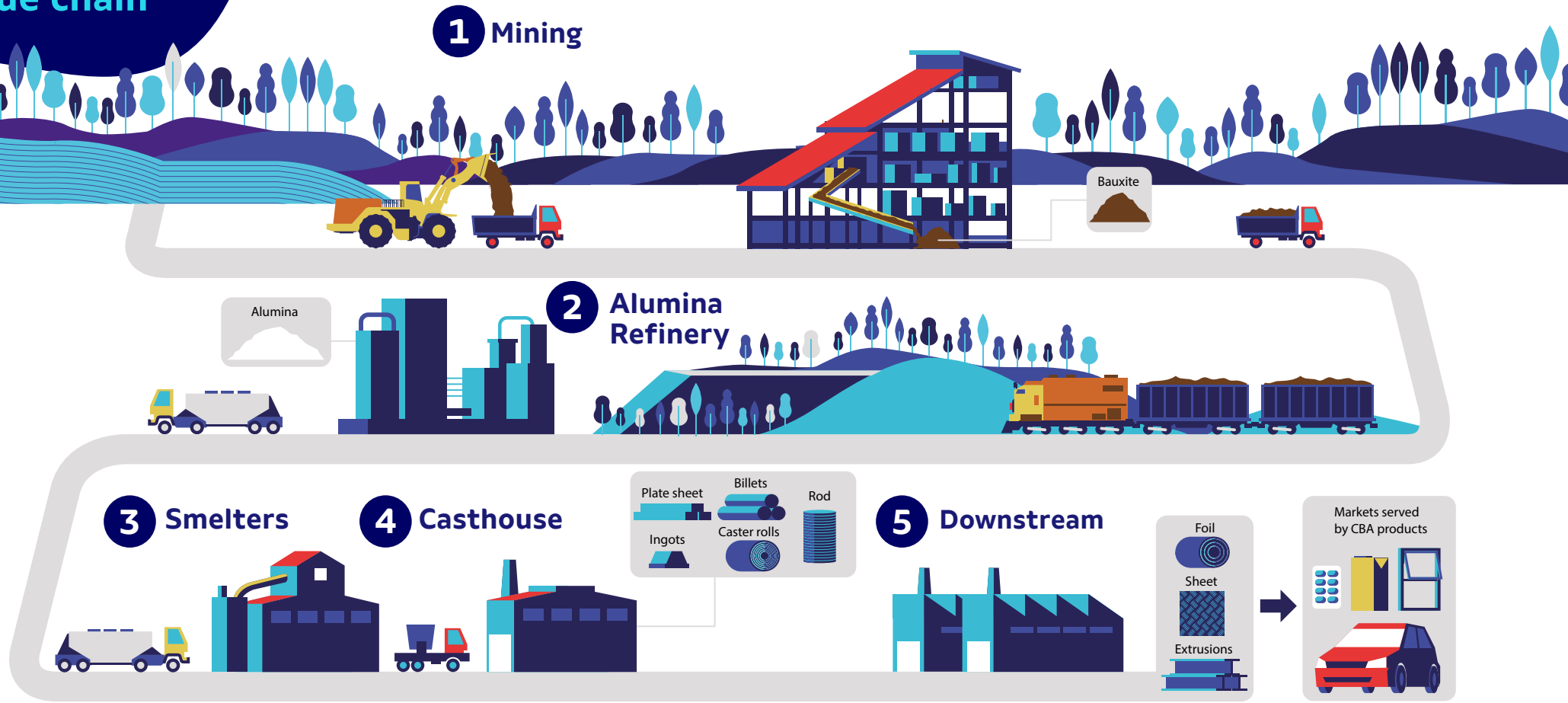
**Salto Pilão**  
Apiúna (SC)

**Salto do Rio Verdinho**  
Caçu (GO)

**Sobragi** <sup>7</sup>  
Belmiro Braga (MG)

**Ourinhos**  
Ourinhos (SP)

# The aluminium value chain



## 1 Mining

Bauxite is mined in Itamarati de Minas, Miraf and Poços de Caldas, in the southeastern state of Minas Gerais, and in Barro Alto, in the Midwest state of Goiás, using best practices in sustainable land management. The bauxite ore is then beneficiated and transported—first by truck and then by rail—to the plant in Alumínio (SP). Mined land is reclaimed and returned to surface landowners with the same or better physical and chemical properties than before it was mined.

## 2 Alumina Refinery

On arrival at the plant, the bauxite ore is blended based on its physical and chemical properties. At the Refinery, the first step in the process is extracting aluminium oxide (alumina) from the bauxite. This is achieved through chemical reactions using alkaline solutions at high temperatures, in what is known as the Bayer process. The bauxite residue, or red mud, is stored in a dam.

## 3 Smelters

The alumina is carried in silo trucks to smelting facilities. At the Smelters, anode paste—a mix of coal-tar pitch and petroleum coke—and electrolyte bath—consisting primarily of fluoride—are added to the alumina. Electrolytic reduction in Soderberg cells transforms the alumina into molten aluminium, which is then carried in trucks to different departments at the Casthouse.

## 4 Casthouse

The molten aluminium is fed along with master alloys and scrap into the Casthouse furnaces, where it is cast into ingots, billets, plate sheet, caster rolls and rod. In addition to the Alumínio (SP) plant, this process is used at our Metalex operation in Araçariçuama (SP) to produce billets, and at our Itapissuma (PE) operation to produce plate sheet and caster rolls. Both operations use a mix of ingots and scrap.

## 5 Downstream

Value-added, semi-fabricated products are manufactured via rolling, extrusion and surface treatment processes. Many of these products are custom-developed with our customers to meet their stringent needs. Our Alumínio (SP) plant produces the full range of semi-fabricated products, while the Itapissuma (PE) operation is dedicated to rolled products.



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## Inputs

### Financial capital

- Negotiation of mining land leases with surface landowners
- Asset maintenance
- Procurement of raw materials, services and inputs
- Investments in modernization and technology

### Intellectual Capital

- Research and development of new technologies
- Innovation to develop new products and services
- Collaborations with education and research institutions to drive innovation

### Social and Relationship Capital

- Investments in social programs for community development through participatory planning
- Relations with trade associations, customers, the media, governments and other stakeholders

### Manufactured Capital

- **Aluminium Business:** 4 Bauxite mines<sup>1</sup>, 1 Integrated aluminium plant, from alumina to semi-fabricated products, 1 Aluminium sheet and foil rolling mill; 1 Distribution Center; 1 Scrap recycling facility (Metalex); 1 Machining facility (Sorocaba)
- **Nickel Business:** 1 Mine and 1 Plant, both currently curtailed
- 21 hydropower plants<sup>2</sup>
- 2 Private Reserves: *Legado das Águas*<sup>3</sup> ("Water Legacy") and *Legado Verdes do Cerrado* ("Cerrado Green Legacy"), both managed by Reservas Votorantim
- 6 mine dams<sup>4</sup>
- Corporate Office

<sup>1</sup>- Three Mines are operated by CBA (Mirai, Itamarati de Minas and Poços de Caldas -MG) and in one CBA has mining rights but the mine is operated by a partner (Barro Alto-GO). CBA also has a mine project under licensing in Rondon (PA).

<sup>2</sup>- The plants are part of CBA's manufactured capital, but are managed by Votorantim Energia. For this reason, employees at these units are not accounted for as part of our human capital.

<sup>3</sup>- Legado das Águas is partially funded by CBA, along with other Votorantim portfolio companies. For this reason, employees at these units are not accounted for.

<sup>4</sup>- Two dams are for water impoundment, two are mine tailings dams, and two are industrial waste dams. All dams were either built in a single step, or downstream- or centerline-raised.

### Human Capital

- Direct and third-party employees
- Collaborations with institutions where students and researchers work on CBA projects

### Natural Capital

- Land for operations, especially mine operations
- Mined bauxite ore
- Water resources for CBA's operations and hydropower plants

# Value creation model



Aluminium solutions that transform lives.

### Mandate

**ESG sustainability strategy:** to provide an offering of low-carbon aluminium products and sustainable solutions to the world's problems, while developing the regions where CBA operates and positively influencing the entire aluminium value chain.



### The capitals

The word capital, in economics, is used to refer to any asset that can create value over time, including intangible assets such as reputation, training and knowledge creation. These assets, combined with tangible assets, reflect the wealth of an organization. In this Value Creation Model we use the capitals concept outlined in the Integrated Reporting <IR> framework. Inputs invested in each of the capitals are transformed through CBA's production process and returned to society in the form of outputs, denoting value creation by the Company.

### SDG

On the right of the Value Creation Model, we map the outputs from the Capitals to the United Nations' 17 Sustainable Development Goals (SDGs), an ambitious plan of action for people, planet and prosperity. Learn more about the SDGs at <https://www.pactoglobal.org.br/ods>



## OUTPUTS

### Financial capital 8

- R\$ 5.4 billion in net revenue
- R\$ 537 million in adjusted EBITDA
- R\$ 500 million in green loans issued

### Intellectual Capital 9

- R\$ 14.9 million invested in innovation and technology
- Through open innovation, CBA has developed technology across a range of industrial processes
- An enhanced digital mindset for the CBA 4.0 Journey, with more than 40 completed projects
- An Innovation Roadmap that guides the Company's innovation project portfolio
- Innovation Days and Techdays with customers,

partnerships with trade associations, innovation events and participation in fairs, conferences and online events

- For the third consecutive year, CBA was named one of the five most innovative companies in the Mining, Steelmaking and Metalworking category of the *Valor Inovação 2020* innovation list.

### Social & Relationship Capital 1 2 6 8 10 11 16

- Projects creating a social legacy, sustainable value chains, and promoting ethics and transparency
- A Sustainable Procurement Program developed in partnership with the Votorantim Institute
- R\$ 7.3 million invested in COVID-19-related initiatives
- R\$ 2.7 million allocated to initiatives such as meal

vouchers for 5,949 families in 12 municipalities

- R\$ 3.3 million invested in social initiatives
- Transparent relations with all stakeholders
- 1,882 employees participated in CBA's volunteering program
- Corporate social responsibility projects across three pillars: Education Development, Public Management Support and Economic Development

### Manufactured Capital 7 8 9 12

- 1.72 million metric tons of bauxite processed
- 307,000 metric tons of smelting production
- 332,000 metric tons of aluminium products\* (\*CBA Plant (primary and semi-fabricated) + Metalex)
- Capacity to internally produce 100% renewable electricity to supply the Aluminio plant

- Products for the automotive, packaging and transportation markets as well as growth markets where there are opportunities for aluminium

- Recycled approximately 63,259 metric tons of internally generated aluminium scrap and 3,371 metric tons of externally generated scrap

### Human Capital 3 5 8 10

- Established three employee-related ESG goals for 2030: 50% gender and racial diversity in leadership positions within the Company; 100% of employees with assigned ESG targets; and ESG considerations embedded in all pillars of CBA's culture and business practices
- Joined the Young SDG Innovators Program, and issued guidance for hiring, retaining and substituting women in CBA's operations, and

for gender diversity and women's equity within the organization, among other sustainability commitments and initiatives

- Launched the e-CBA online training platform
- 5,549 direct employees
- 819 fixed third-party employees
- R\$ 11 million invested in occupational safety
- Human rights due diligence to minimize risks in the Company's operations

### Natural Capital 3 6 14 15

- Created 5 levers and associated projects relating to climate change management, circular economy, natural resources and dam management
- A leadership-level CDP score of A-, the highest possible rating for organizations making non-public disclosures
- Retained certification against the ASI Performance Standard and Chain of Custody Standard, cradle-to-gate, for Mirai, Itamarati de Minas, Poços de Caldas, Aluminio and Itapissuma operations
- R\$ 71.8 million in environmental investment
- Active participation in Global Compact working groups,

with a commitment to initiatives supporting the SDGs

- Commitment with Science Based Targets initiative
- Aluminium Lifecycle Assessments
- Greenhouse gas emissions assured. Only 2.66 t CO<sub>2</sub>e/t of molten aluminium at the electrolysis stage (Scope 1 and 2), compared to a global average of 12 t CO<sub>2</sub>e/t
- Greenhouse gas emissions inventory awarded Gold level reporting status in the Brazilian GHG Protocol Program

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A rolling line at the Itapissuma rolling mill

### LEADERSHIP IN ROLLED PRODUCTS

GRI 102-6, 102-10

In February 2020 CBA completed the acquisition of Arconic’s operations in Itapissuma for US\$ 50 million. The deal was previously approved by the Brazilian antitrust authority, CADE, in December 2019. The rolling mill has capacity to produce 50,000 metric tons per year of rolled aluminium products for packaging, making CBA the Latin American market leader in this segment. Located in the municipality of Itapissuma, in Brazil’s northeastern state of Pernambuco, the mill has been integrated into the Company’s Downstream business where it will synergistically share know-how and expertise with other CBA operations.

The now expanded range of rolled products has increased CBA’s capacity for exports to other countries. The Itapissuma facility’s product portfolio includes ultra-thin foil for aseptic packaging, thin and medium-gauge foil for flexible packaging, roofing and siding panels, high-value-added industrial plate for niche markets such as power transformers, gaskets and other automotive components, and special alloys. With the Itapissuma acquisition, CBA has strengthened its leadership as the largest producer of packaging foils in the Americas.

Like CBA’s other operations, the Itapissuma facility is certified against the Aluminium Stewardship Initiative’s (ASI) Performance Standard, which attests that it produces aluminium to internationally recognized standards on environmental, social and governance management. Learn more in the *Environmental* chapter.



CLICK HERE

And learn more in the *Environmental* chapter

With the acquisition of the Itapissuma Unit, the Downstream Business has now a production capacity of

# 85 thousand tons

of sheets per year

The integration of an existing rolling mill with its own corporate culture, amid a global pandemic, posed a major challenge, but one CBA successfully met. This was thanks to detailed planning with dedicated people assigned to ensuring the success of related initiatives. The integration was not about imposing CBA’s way of doing things. Instead, teams worked together and learned from each other in a way that valued everyone’s inputs and leveraged the best that each side had to offer.

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## A leader in sustainability

CBA has always been engaged around environmental, social and governance issues and has worked proactively to become increasingly sustainable. However, the Company's sustainability initiatives were previously decentralized and, while effective, were not directly embedded in its business strategy. In 2017, the Company implemented a specific strategy on sustainability, setting targets through 2025.

In another step in this area, CBA created a Sustainability Department and Sustainability Committee in 2019. Also that year, the Company adhered to the UN Global Compact, the world's foremost corporate sustainability initiative.

In 2020, CBA recognized the need to further develop our environmental, social and governance (ESG) practices, supporting the growth of our ESG culture within the Company. We undertook a realignment of our sustainability strategy, building on the strategy from 2018. With support from the Votorantim Institute, an ESG strategy was developed that puts sustainability as one of the core pillars of the business.

CBA understands that doing its part in building a better future is not enough. It aspires to lead and point the way to inspire its employees, partners, customers and suppliers. CBA's goal for 2030 is to provide **an offering of low-carbon aluminium products and sustainable solutions to the world's problems, while developing the regions where the Company operates and positively influencing the end-to-end aluminium value chain.**

As a shared responsibility, sustainability is among CBA's commitments.

Bauxite  
beneficiation  
at the Miraf mine

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## SUSTAINABLE SOLUTIONS FOR OUR PLANET

Consistent with an emerging global trend, CBA is connecting its core business to creating value for the world. This means working inter-dependently with governments and the third sector to protect ecosystems, and working as a network with other stakeholders to improve society and grow the business with ethics and integrity. CBA's ESG approach embodies this systematic way of doing things:

- \* In the **environmental** dimension, the most significant issues CBA addresses are emissions, energy, water, the circular economy, dams and biodiversity.
- \* In the **social** dimension, the most important topics are attracting and retaining talents, health, safety and quality of life, diversity

and inclusion, and CBA's social legacy.

- \* Lastly, the **governance** dimension involves issues such as ethics and transparency, sustainable value chains and ESG ownership (which has a direct bearing on progress in embedding sustainability into the CBA culture).

This strategy has clear benefits:

- \* Increased **market access**, with greater consumer preference and loyalty, a broader portfolio and opportunities for innovation.
- \* Increased access to **capital**, as global

investors increasingly consider ESG principles in their investment decisions.

- \* Greater **operational efficiency**, with lower costs, stable operations and improved management of natural resources
- \* A more consistent **organizational culture**, with increased collaboration across the aluminium value chain and a greater ability to attract, retain and develop employees.
- \* **Improved management of risks** relating to environmental, social and governance aspects.



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Producing aluminium with a low carbon footprint, doing business in a socially responsible manner that is recognized by society, and engaging around environmental issues were already among CBA’s differentiators. Throughout 2020, CBA worked to disseminate these ideas within the Company to ensure each department understands its role within the ESG strategy.

To achieve this ambition to lead in sustainability, in December 2020 the Sustainability Committee approved the ESG Strategy, with 15 programs grouped into 10 levers: 4 in the environmental pillar, 2 in the social pillar and 3 in the governance pillar, as well as 1 cross-cutting lever spanning all areas. Goals for 2030 were then set for each program. In total, the initiatives approved in December 2020 will involve more than R\$ 1 billion in direct investment through 2030.

See below the goals set for each of the 15 programs within our new ESG strategy.

As the ESG Strategy was approved by the end of 2020 and the objectives are initially being presented, the indicators for monitoring the achievement of these objectives will be reported from 2021 onwards.

Levers	Programs	2030 goals
1. Climate change management	P1. Greenhouse gas emissions management	<ul style="list-style-type: none"> <li>Reduce emissions by 40% (on average for cast products, cradle-to-gate)</li> <li>Offer customers a carbon-neutral product range</li> <li>Create a roadmap to becoming emissions neutral by 2050</li> <li>Develop a climate change adaptation plan</li> </ul>
	P2. Energy management	<ul style="list-style-type: none"> <li>Source 100% of our plants’ power requirement from renewable sources</li> <li>Reduce our energy intensity (electric power and fuels)</li> </ul>
2. Circular economy	P3. Aluminium recycling	<ul style="list-style-type: none"> <li>Increase the ratio of aluminium recycled from industrial and end-of-life scrap at Metalex to 80%</li> <li>Increase the ratio of aluminium recycled from industrial and end-of-life scrap in billet production at the Alumínio (SP) plant to 50%</li> <li>Increase the ratio of scrap collected from external sources for recycling</li> </ul>
	P4. Carton and flexible packaging recycling	<ul style="list-style-type: none"> <li>Recycle 40,000 metric tons of cartons and flexible packaging per year</li> </ul>
3. Natural resources	P5. Water stewardship	<ul style="list-style-type: none"> <li>Reduce water withdrawals per metric ton of molten aluminium by 20%</li> </ul>
	P6. Biodiversity	<ul style="list-style-type: none"> <li>Create/expand 1 hectare of ecological corridors for every 10 hectares of mined and reclaimed land</li> <li>10% of key suppliers and customers co-investing in forest and biodiversity programs</li> </ul>
4. Dam management	P7. Residue storage dams	<ul style="list-style-type: none"> <li>Eliminate residue disposal in dams</li> <li>Send 100% of dry red mud residue for use in cement production and other applications</li> </ul>

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Levers	Programs	2030 goals
5. Valuing people	P8. Diversity and inclusion	<ul style="list-style-type: none"> <li>Achieve 50% gender and racial diversity in leadership positions within the Company</li> </ul>
	P9. Health and safety	<ul style="list-style-type: none"> <li>Zero fatalities or severe injuries* in CBA's operations</li> <li>Achieve an injury frequency rate lower than 1**</li> </ul> <p>* Fatal injuries or injuries resulting in permanent disability **Per 1 million MHW</p>
6. Social legacy	P10. Social legacy	<ul style="list-style-type: none"> <li>Achieve 100% of social SLA.</li> <li>Provide 1-to-1 match funding for corporate social investment</li> <li>Contribute to strengthening recycling cooperatives in Brazil</li> </ul> <p>*To be defined for each municipality in which CBA operates</p>
7. Sustainable value chain	P11. Sustainable procurement	<ul style="list-style-type: none"> <li>100% of suppliers compliant with CBA's Sustainable Procurement Policy*</li> <li>Increase local sourcing from SMEs by 10%</li> </ul> <p>*The policy will be revised in 2021 to reflect the Company's ESG commitments</p>
	P12. Sustainable solutions for customers	<ul style="list-style-type: none"> <li>100% of billets produced at Metalex with greenhouse gas emissions lower than 1.4 tCO2/t</li> <li>Increase revenue from sustainable solutions for downstream customers*</li> </ul> <p>*At the Alumínio and Itapissuma plants</p>
8. Ethics and transparency	P13. Ethics and transparency	<ul style="list-style-type: none"> <li>Achieve an average rating of 4 for CBA's third party-audited Compliance Program*</li> </ul> <p>*Currently KPMG methodology</p>
9. ESG ownership	P14. ESG ownership	<ul style="list-style-type: none"> <li>100% of operations certified to the ASI Performance and Chain of Custody standards</li> <li>100% of employees with assigned ESG targets</li> <li>Apply ESG criteria in 100% of funding and investment decisions</li> <li>Embed ESG considerations in all pillars of CBA's culture and business practices</li> </ul>
10. ESG Communications	P15. ESG Communications	<ul style="list-style-type: none"> <li>Achieve a RepTrak® Score greater than 80*</li> </ul> <p>*In reputation survey</p>

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# 2030 ESG Strategy

**Mandate:** By 2030, deliver an offering of low-carbon aluminium products and sustainable solutions to the world's problems, while developing the regions where the Company operates and positively influencing the end-to-end aluminium value chain.



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## COMMITMENTS FOR A BETTER WORLD

GRI 103-2 - 412: Avaliação de direitos humanos

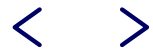
In 2020 CBA maintained its commitment to the Global Compact’s ten principles on human rights, labor, the environment and anti-corruption. The Company continued its support for the Agenda 2030 and the 17 Sustainable Development Goals, and for the São Paulo Environmental Agreement, which has included participation in meetings of the newly instituted Environmental Chamber for Climate Change. Also in the year, CBA newly joined the Science Based Targets initiative, under which the Company committed to set and meet targets aligned with limiting global temperature rise. This joint initiative of the UN Global Compact, the Science Based Targets Initiative (SBTi) and the We Mean Business coalition calls for businesses to demonstrate a high level of engagement around combating climate change. Only a handful of primary aluminium manufacturers globally have committed to this ambition.

Within the UN Global Compact, CBA has actively participated in the Thematic Groups on Energy & Climate, Anti-corruption, Human Rights & Labor, and Action for the SDGs. The Company has also participated in the #NãoVolte do Pacto Global (“#Don’t Turn Back from the Global Compact”) campaign since it was launched. CBA is one of the 15 companies selected to participate in the Young SDG Innovators Program, due to be launched in 2021. Internal objectives were also established for the evolution of gender equity in the organization. CBA has also committed to participating in the SDG Ambition program in 2021. In the Environmental Chamber for Climate Change, the Company has actively participated in the working group on Tools.

CBA is also a member of the Brazilian Business Council for Sustainable Development (CEBDS). In 2020, a case study about the Company was featured in the Sustainability Communications Guide published by CEBDS. CBA was among the companies to support the CEO manifesto on containing deforestation, which was submitted by CEBDS to Brazil’s vice president. [GRI 102-12](#)

We are one of the **15** companies selected to participate in the 2030 Young SDG Innovators Program

Heri Cristine Nakamura, production supervisor at the Alumina department (Alumínio plant)



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Office employees at the Itapissuma rolling mill

also engaged employees' families and the communities where CBA operates.

- \* Campaigns on safety, sustainability, environmental preservation, compliance, risk and crisis management, diversity, CBA 4.0 and other corporate topics, using tools such as Workplace, WhatsApp and corporate TV, in a 360° communications approach.
- \* Face-to-face communications with employees, strengthening the role of leaders as communicators, and digital networking through which employees can receive and share news and other content in real-time and interact with other employees at CBA, including its leadership team. Employees are encouraged to voice their opinions on different subjects, share ideas and co-create across departments.

These initiatives have been essential in ensuring that all employees are informed about CBA's decisions and programs during the COVID-19 pandemic, during which many employees have been required to work from home.

CBA also held institutional events in the year, including the launch of a Diversity & Inclusion Guide, a Safety and Target Setting Workshop, Women's Day, Compliance Day and a Leadership Summit.

In the following chapters of this report, we describe CBA's performance in 2020 across the three pillars of its sustainability strategy: Governance, Social and Environmental.

### Who we engage with

GRI 102-43

Sustainable business also requires solid and transparent relationships that create shared value with the Company's different stakeholders. That is why activities at CBA and in each of its operations are underpinned by engagement with both internal and external stakeholders. CBA's key engagement initiatives in 2020 included:

### INTERNAL STAKEHOLDERS

- \* Engagement meetings with employees in partnership with the Human and Organizational Development (DHO) department.
- \* Monthly breakfast talks between general managers and operations teams and employees. These events were previously attended in person, but during the pandemic have been attended partly in person and partly online.
- \* Open Discussions with executives.
- \* Communications on CBA's results.
- \* Coronavirus prevention campaigns that

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## EXTERNAL STAKEHOLDERS

All customer meetings and visits, as well as initiatives involving communities and local governments, have been held virtually. Some examples include:

- \* The launch of the new Metalex brand.
- \* Participation by CBA employees and executives in industry webinars on the aluminium market, sustainability, supply chains, customers, the job market and youth, and digital transformation..
- \* Proactive media outreach.
- \* Ads in trade journals and the wider media.
- \* Coronavirus response initiatives involving communities and suppliers, as detailed throughout this report.
- \* Reformulation of our dam drills to reflect social distancing recommendations issued by the World Health Organization (WHO).
- \* Virtual meetings with Joint Dam Committees.

CBA also actively engages with industry associations and other national and international organizations to strengthen our industry and address sustainability issues in the aluminium value chain. We have collaborations with universities and research institutes, and attend events and fairs in Brazil and internationally.

For more information about how we engage with employees and communities surrounding our operations, see the *Social* chapter of this report. Some of our key initiatives for customers and suppliers are described below.

## FLEXIBLE SERVICE

In a year marked by uncertainties, we continued to foster strong relationships with customers through our Key Account Managers (KAM), who are responsible for building closer, personalized and enduring relationships with key customers. As part of our service model, we also developed several tailored solutions with customers, assisting them with specific needs.

In October we organized our traditional conference with packaging customers, called Pack Day, as an online event with more than 80 participants, featuring presentations on trends and other topics. As a virtual event, the conference could be attended by customers in all markets in Brazil and internationally.

The Strategy & Marketing, Commercial and Quality Management departments work together to monitor and track customer satisfaction. The goal in this is to facilitate efforts to promote continuous improvement of our products and solutions. Beginning in 2021, the individual targets for employees involved in these processes will include indicators from customer satisfaction surveys.



An employee at the Itapissuma rolling mill

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An operator handling raw materials at the Itapissuma rolling mill



### THE POWER OF EXAMPLE

GRI 102-10, 103-1, 103-2 e 103-3 – 204: Procurement practices

Procurement activities and decisions have impacts on inventory levels, assurance of supply, cost-effectiveness, customer satisfaction, sustainability and communities.

CBA has a well-established procurement governance framework including standards, procedures, systems and training for employees involved in the procurement process. We have world-class systems for managing the end-to-end process of supplier negotiations, screening and onboarding, and a roadmap for improvements and progress on digitization in procurement.

In supplier relations, a key highlight in 2020 was the development of our Sustainable Procurement program, an initiative in partnership with the Votorantim Institute that aims to build engagement across the value chain—from mine to downstream.

The program is a way to raise awareness among different departments at CBA about the role that the supply chain can play in sustainability, and about important issues to consider besides pricing, quality and lead times. Social, environmental and governance considerations have now been included in supplier assessments, including aspects with the potential to generate significant impacts on the environment and local communities, supplier engagement around climate change, and the level of ethics and transparency that suppliers demonstrate in doing business.

Seven stages of the program have been mapped out, which will be implemented over the next five years, with defined owners and activities involving small, medium and large suppliers, including local suppliers:

1. Sustainable Procurement Policy and Strategy
2. Supplier screening and monitoring against ESG criteria
3. Supplier selection and requisitions based on ESG considerations, including inclusion criteria and criteria for selecting and onboarding local suppliers
4. Contract management in line with CBA's ESG commitments
5. Partnerships with Strategic Suppliers to codevelop sustainable solutions
6. Supplier Development
7. Sustainable Procurement Engagement and Communications



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The new Sustainable Procurement Policy is expected to be finalized in 2021, and is an essential part of our efforts to further establish CBA as a sustainability leader in our industry.

CBA's ESG strategy outlines three goals for the Procurement department, to be achieved by 2030:

- 100% of suppliers compliant with CBA's Sustainable Procurement Policy.
- Prioritize the onboarding and development of 50% of strategic and critical suppliers.
- Increase local sourcing from local small and medium enterprises (SMEs) by 10%.

In 2020 CBA underwent two independent audits for certification, with the Procurement department successfully passing the audit with no identified nonconformities.



## Our suppliers

GRI 102-9

# 4,898

## local and global suppliers

doing business directly with CBA

### Supplier geographies:

	2018	2019	2020
Midwest	229	206	223
Northeast	34	30	211
North	24	30	36
Southeast	2,634	2,290	3,397
South	221	165	286
<b>Subtotal – Brazil</b>	<b>3,142</b>	<b>2,721</b>	<b>4,153</b>
Other countries	138	122	182
<b>Total</b>	<b>3,280</b>	<b>2,843</b>	<b>4,335</b>

\* CBA's main supplier categories are natural gas, coal-tar pitch, coke, caustic soda, alloys and facilities suppliers such as janitorial and maintenance services and catering, and employee transportation. The Company also has strategic partnerships with logistics suppliers, including rail and maritime shipping suppliers.

\* CBA's relations with suppliers are governed by a Procurement Standard and Sustainable Procurement Policy.

\* Financial, social and compliance aspects are covered in CBA's risk matrix.

\* In 2020 CBA implemented a new supplier onboarding tool that has made supplier management more agile and the overall process more digital, transparent and auditable, while facilitating interaction with suppliers.

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## Efficiency and competitiveness

In 2020 CBA undertook an important effort to improve efficiency and competitiveness across its operations. The initiative is being implemented as part of the Company's competitiveness management program, launched in 2018, which identifies and manages process optimization initiatives Company-wide. Using a robust methodology, the program accelerates value capture and fosters discipline by monitoring progress on initiatives. A core element of the program is its support network, in which all departments work together to achieve greater competitiveness.

This drive for excellence was an ongoing, daily effort throughout the year, largely mediated by weekly Transformation Office (TO) meetings for each of the 13 work fronts. Initiatives were implemented at a fast pace and with a focus on tracking action plans, mitigating risks and resolving issues.

Constraints created by the COVID-19 pandemic led CBA to find alternative solutions to work around issues. Support from the competitiveness management program was crucial in generating a continuous pipeline of new initiatives, both through dedicated workshops and by encouraging employee creativity across the different work fronts. These initiatives



Thainá, Luana and Maurício in the Operational Control Center at the Miraf mine in Zona da Mata

helped to partially mitigate the effects from the pandemic and deliver results exceeding expectations in 2020.

During the year CBA launched an effort to capture value from operational excellence and competitiveness management initiatives in the form of sustainability gains. Some of the highlights from this effort in the year included:

- \* More than 600 initiatives in progress,

including more than 180 creating impacts on sustainability.

- \* 14 ideation workshops held to generate new ideas for the following year.
- \* 21 initiatives helped to avoid 280,000 metric tons of carbon emissions.
- \* More sustainable uses and new revenue streams from waste and co-products.



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## Financial and sustainability gains from competitiveness management

CBA-5

In 2020, through Competitiveness Management (CM), 273 initiatives were implemented, representing a competitiveness **gain of R\$291 million** captured in all areas of the Company, such as Production, Supply Chain, Tax, Asset Management, Engineering and Commercial.

### Sustainability gains

Type of gain	Unit of measure	Annualized gain from long-term initiatives
Nitrogen consumption savings	m <sup>3</sup>	359,000
Greenhouse gas emissions avoided	metric tons	280,000
Reuse/sale or reduction of waste materials	metric tons	20,000
Electric power savings	MWh	3,000
Reduced consumption of inputs and materials (lime, caustic soda, steel bars, etc.)	metric tons	17,000

*Note: for the Alumínio and Metalex plants. The Itapissuma mill has only been integrated into the competitiveness management process in 2021. Data taken from the Wave initiative management system.*

## Robust results despite the challenging circumstances

GRI 103-1, 103-2, 103-3 – 201: Economic performance

In 2020 the COVID-19 pandemic took a heavy toll on the global economy. Lockdowns across different countries and regions slowed demand and disrupted supply chains, affecting the aluminium sector. Governments launched stimulus programs over the course of the year, and commodities prices responded positively, influenced by financial markets. As the global economic outlook began to improve, London Metal Exchange (LME) aluminium prices started an upward trend in early June on the back of growing primary aluminium imports into China and rising production costs, especially for aluminium oxide (alumina). Chinese aluminium consumption accelerated in the third quarter as demand improved in the building and construction, infrastructure and transportation industries. World demand ex-China also steadily grew, especially in the building and construction industry, leading to decreased inventories.

Despite the challenging circumstances, the **aluminium sales volume** rose by 16% on 2019, to 408 thousand metric tons in 2020, primarily due to the 43% increase in the Downstream Business sales volume, which included additional sales made by the Itapissuma plant.



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**408 thousand metric tons**  
was CBA's aluminium sales volume in 2020



**R\$ 5.4 billion**  
in net revenue



**R\$ 537 million**  
in adjusted EBITDA

**Net revenue** rose by 3% to R\$ 5.4 billion in 2020, also driven by higher aluminium prices in local currency, which increased by 24% in the period—from an average of R\$ 7,067 per metric ton in 2019 to an average of R\$ 8,783 per metric ton in 2020 – reflecting the weakening of the Brazilian real against the US dollar.

**The Adjusted EBITDA** dropped 38% in 2020 compared with 2019, to R\$ 537 million, primarily driven by reduced recognition of tax credits from the exclusion of Value-Added Tax on Sales and Services (ICMS) from the tax base for Social Integration Program (PIS) tax and Social Security Tax (COFINS), coupled with lower sales of surplus electricity.

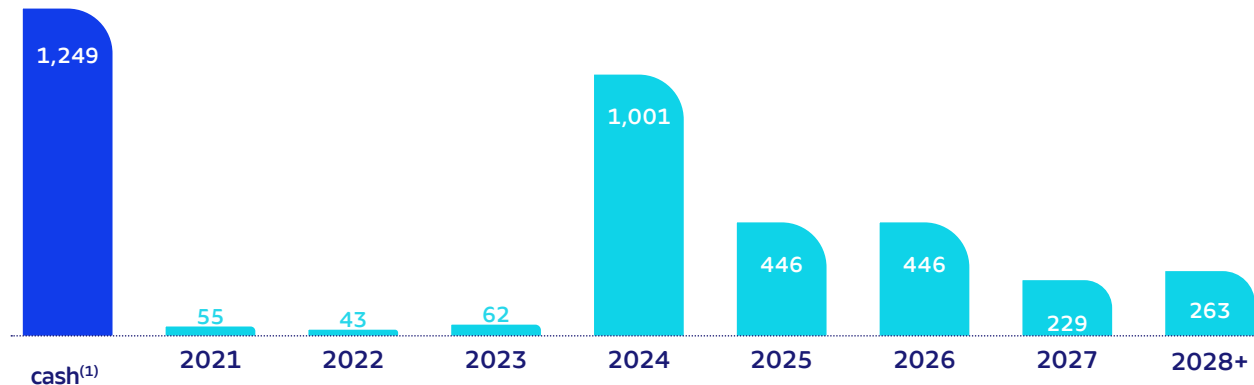
**Debt management**

Gross debt at the end of 2020 was R\$ 2.5 billion, 18% higher than in 2019, largely due to new green loans obtained and the 31% weakening of the Brazilian real against the US dollar in the period.

R\$ 198 million of loans were repaid early in the year as part of the liability management strategy, which aimed to lower the gross debt and debt costs, supported by the Company's strong cash generation. As a result the company closed the year with an average debt maturity of 4.7 years and no significant concentration through 2024.

The graph below summarizes our debt amortization profile:

**Debt Amortization Schedule**  
(R\$ million)



<sup>(1)</sup>Includes cash, cash equivalent and financial investments

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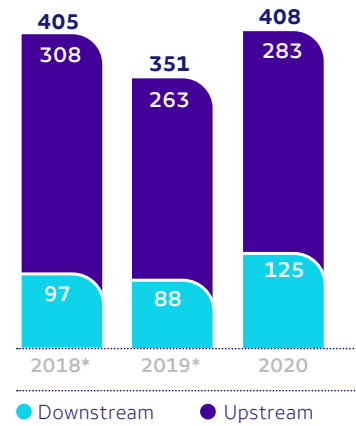
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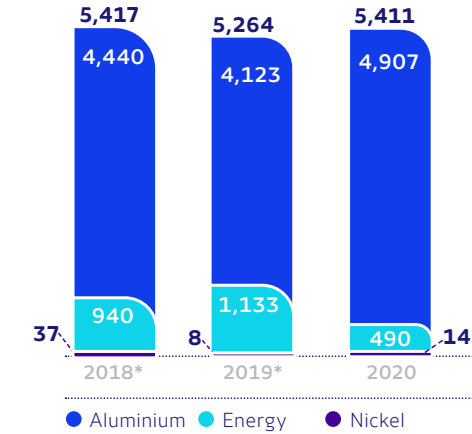
The Company's cash position ended the year at R\$ 1.2 billion, with 72% denominated in Brazilian reais. As a beneficiary of Votorantim S.A.'s revolving credit facility of US\$ 200 million, the Company also benefits from strong liquidity.

CBA's financial leverage as measured by the ratio of net debt to EBITDA, was 4.33 times, compared with 1.94 times in 2019, primarily reflecting the marking to market of derivatives amounting to R\$ 1.0 billion. Despite the higher leverage, the company has no liquidity risk as it has a lengthened debt-maturity profile and a cash position sufficient to meet all bank obligations maturing over the following 4.2 years.

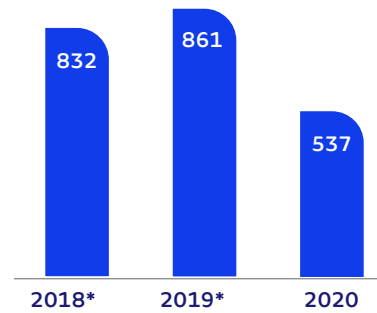
### Aluminium total sales (thousand metric tons)



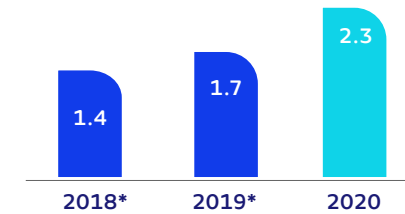
### Net revenue (R\$ million)



### Adjusted EBITDA (R\$ million)



### Net debt (R\$ billion)



\*Does not include Itapissuma Unit data.



**CLICK HERE**

to read CBA's financial statements



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Smelter pots converted to Green Soderberg technology

## GREEN LOANS

In February and August 2020 CBA obtained two bank loans totaling R\$ 500 million for sustainable projects and export finance. The loans were independently assured by Sitawi, a consulting firm specializing in social and environmental assessments of corporations and financial institutions. CBA's successful arrangement of these loans is a testament that its operations are genuinely environmentally sustainable.

The funds were obtained through export credit notes (notas de crédito à exportação, NCEs) and were the first green NCEs to be issued in Brazil, demonstrating CBA's leadership in sustainable finance. The terms of the loans require CBA to monitor performance indicators such as greenhouse gas emissions, waste and water consumption. While no reduction targets have been set for these key performance indicators (KPIs), CBA is required to monitor and annually report on performance in using the funds.

The decision to issue green loans—or loans intended exclusively for use in projects creating positive environmental impacts—reflects CBA's sustainability strategy and responsiveness to customers' and creditors' increasing demand that companies reduce the environmental impacts from operations and supply chains, and demonstrate greater transparency around the use of funding.

**Investments:** CBA has committed to invest the proceeds from the green loans in four projects that will improve environmental indicators directly linked to production operations:

- \* **Upgrading Smelter technology (Green Soderberg):** the smelter pot feeding process is being switched to an automatic intermittent feed system that will reduce greenhouse gas (GHG) emissions and increase efficiency and safety.
- \* **Semi-Dry Paste:** project linked to the Green Soderberg project that is using anode paste containing a lower content of coal-tar pitch to improve the operation of the automatic feed system and potentially reduce GHG emissions.
- \* **Dry-Stack Disposal (Filter Press) :** switching from wet to dry disposal of Alumina Refinery waste will reduce water withdrawals and increase process safety.
- \* **Biomass Fired Boiler:** steam production using biomass as fuel in replacement of fuel oil and natural gas.



**CLICK HERE**

and learn more about the projects in the chapter *We make a positive impact on the environment*

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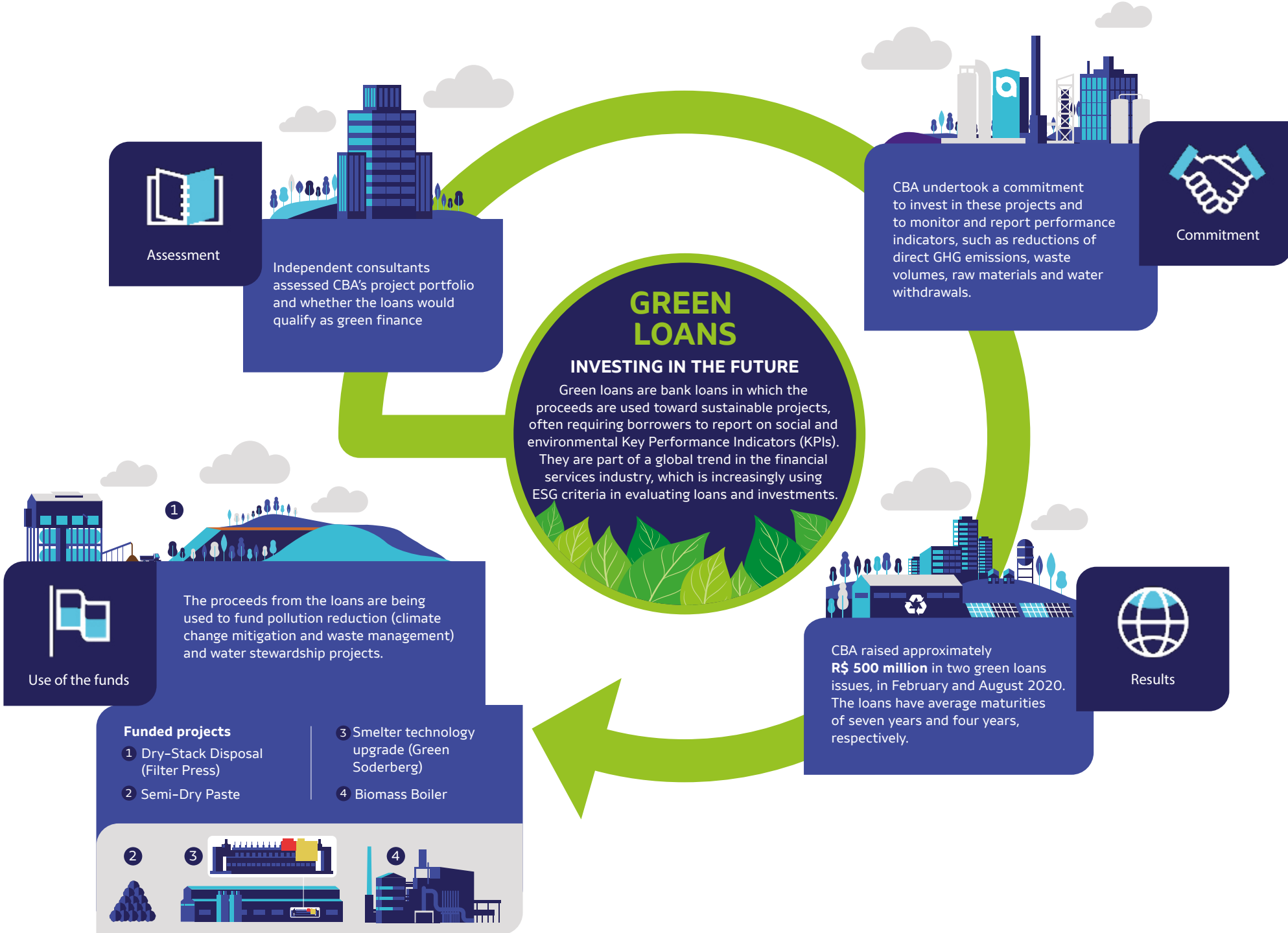
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# Governance

**Sustainability is about doing better, the right way**

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CBA employees  
(Photo taken before the COVID-19 pandemic)

**Ethics, respect, entrepreneurship and unity have always been guiding principles at CBA. The Company adheres to the highest standards of corporate governance, human rights and anti-corruption to ensure its operations are sustainable and its business is profitable.**



Rodrigo and Juliana, from the Site Clearance and Environmental Rehabilitation department

**MATERIAL TOPICS RELATED TO THIS CHAPTER:**

Ethics and compliance  
Innovation and technology

**GLOBAL COMPACT PRINCIPLES ADDRESSED IN THIS CHAPTER:**



**1.** Businesses should support and respect the protection of internationally proclaimed human rights within their sphere of influence.



**2.** Businesses should make sure that they are not complicit in human rights abuses.



**4.** Businesses should uphold the elimination of all forms of forced and compulsory labor.



**5.** Businesses should uphold the effective abolition of child labor.



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

**SDGS RELATED TO THIS CHAPTER:**



(8.2) (9.5,9.b) (16.5, 16.6, 16.10, 16.b)

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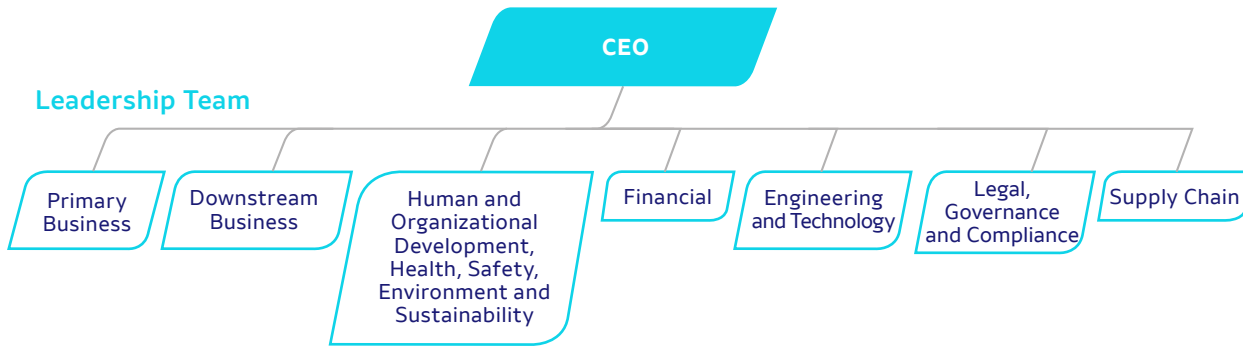


## We do things the right way

Corporate governance strengthens the Company's culture of compliance. As a member of the Votorantim S.A. group—a company guided by the principles of ethics, respect, entrepreneurship and unity—CBA has implemented and adheres to the Group Code of Conduct. The Company continues to disseminate them amongst employees joining in 2020, through on-line training, with 77% employee attendance. Each month, a section of the Code of Conduct was selected to be featured in internal communications, in formats that included testimonials, case studies and trivia. In 2021 CBA plans to launch e-learning refresher training on the Code of Conduct for employees who have been with the Company for more than two years. [GRI 102-16](#)

Renato Maia,  
Legal, Governance  
& Compliance  
Director (Photo  
taken before  
the COVID-19  
pandemic)

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**A MODERN GOVERNANCE STRUCTURE**

GRI 102-16

CBA’s governance model is aligned with the most recent management best practices.

The **General Shareholders’ Meeting** approves the Company’s accounts and financial statements, appoints members to the Board of Directors, and decides on mergers and acquisitions and asset valuations. It may also propose amendments to the Company’s By-laws.

The **Board of Directors** is appointed by the General Shareholders’ Meeting to monitor the Company’s performance and provide high-level direction on strategic and/or high-impact matters. It meets six times a year and has six members, two of whom are independent. As of December 2020, one seat on the Board was vacant.

The **Leadership Team** is composed of the CEO and seven executives (see the organizational chart above) who manage the Company’s day-to-day operations and meet weekly to discuss key projects and make strategic decisions on projects and investments.

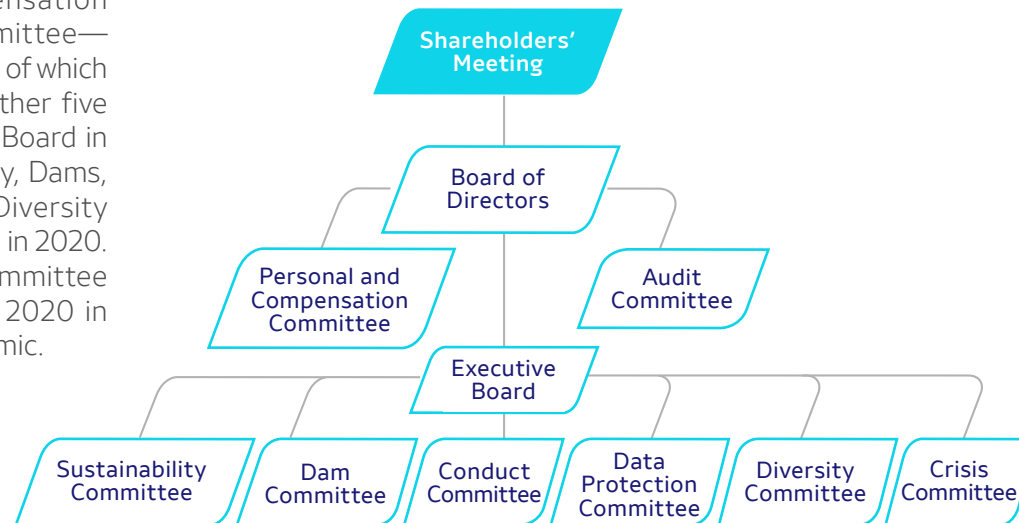
Both the Board of Directors and the Leadership Team are supported by committees that serve in an advisory capacity, without decision-making authority. Two committees—the Compensation Committee and the Audit Committee—advise the Board of Directors, both of which have independent members. Another five committees advise the Executive Board in decision-making: the Sustainability, Dams, Conduct, Data Protection and Diversity committees, the latter two created in 2020. Whenever necessary, a Crisis Committee is convened, as was the case in 2020 in response to the COVID-19 pandemic.

• Currently, one woman serves on the Board of Directors and two on the Leadership Team.

• In 2020 CBA revised its Governance Handbook to further enhance transparency in management. The Handbook describes the roles and duties of each management body in the Company’s governance structure.

**ORGANIZATIONAL STRUCTURE**

GRI 102-18



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Maurício, a mine automation technician

## ETHICAL AND TRANSPARENT BUSINESS CONDUCT

GRI 103-1, 103-2 and 103-3 – 205: Anti-corruption, GRI 103-1, 103-2 and 103-3 – 419: Social and economic compliance

Ethical conduct is an imperative in pursuing positive results for the business. More than a choice, it is a natural path that the Company follows, guided by policies such as its Compliance Program, Code of Conduct, Anti-corruption Policy, Compliance Quick Guide, Competition Manual and managerial standards on donations and sponsorship and dealing with government officials. CBA seeks at all times to comply with applicable laws and regulations and internal rules, and in doing so it applies the highest standards of ethics in its operations.

CBA’s Compliance Program addresses ethical matters in its interactions internally and with customers, suppliers, competitors, creditors, the media,

communities and the general public. The Program scope covers laws and regulations, contracts and agreements, antitrust, prevention of losses and fraud, and anti-corruption. The Compliance Program is managed by the Compliance & Governance department, which reports to the Audit Committee and the Board of Directors, both of which have independent members that can evaluate matters impartially and recommend continuous improvements. Following a risk assessment to evaluate Program maturity in 2020, anti-corruption, antitrust, and prevention of losses and fraud were the pillars on which the greatest progress had been made. In the year, 86,7% of action plans to mitigate and prevent identified risks were completed. One of the 2030 goals in CBA’s ESG strategy is to further evolve the Company’s Compliance Program—which is independently audited—to achieve a minimum maturity score of 4, on a scale of 1 to 5.

**Our Anti-Corruption Policy and Code of Conduct are available on the CBA website.**



**CLICK HERE I**

to see our Anti-corruption Policy and here to see our Code of Conduct

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**All employees who join CBA are instructed to take training on the Code of Conduct in order to test their knowledge of the content of this publication. In 2020, 77% of new professionals participated in these actions.**

Within the anti-corruption pillar of CBA's Compliance Program, the Company identifies situations creating exposure to corruption risk and establish controls to mitigate those risks. An Anti-corruption Policy establishes guidelines on the conduct expected of employees, management and third parties in dealing with national and international government organizations on behalf of CBA. The Policy covers topics such as gifts, hiring third parties, and facilitation payments.

In 2020, special e-learning training was provided on two policies:

- **Anti-corruption** – for all executive officers, general managers and department managers, and for coordinators, consultants and analysts

at the Procurement, Logistics, Commercial, Social Responsibility, Treasury, Health, Safety & Environment (HSE), Mining, Government & Union Affairs, Legal and Communications departments;

- **Anti-trust** – for all executive officers, general managers and department managers, and for coordinators, consultants and analysts at the Marketing, Commercial, Financial, Market Intelligence, Procurement, Legal, Communications, HSE, Planning, Production Scheduling & Control (PPC) and Logistics departments.

At the end of the year, 95.4% of the target audience had been reached in terms of Anti-Corruption training, and we started to capillarize the training of the Competitive pillar. For 2021, the

expectation is to carry out this same work at the Itapissuma and Metalex Units.

Other Compliance activities in 2020 included:

- **Videos, GIFs and quizzes** about topics in the Code of Conduct, especially Anti-Corruption and Prevention of Losses and Fraud, making these topics easier to understand.

- **Compliance Day**, an annual event for coordinator or higher-level positions. This year's edition was organized as a virtual event, featuring presentations by guest experts on preventing corruption.

- **A Compliance Game** for all employees. Participants had to solve a puzzle related to the Compliance Program and Code of Conduct.

- **A newly launched Trade Compliance program**, to ensure that export and import transactions conform to internationally recognized best practices and to avoid doing business with companies implicated in crimes related to money laundering, terrorism, or arms and drug trafficking, or that are under commercial sanctions.

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The Miraí mine office

## KEEPING A CLOSE EYE ON RISKS

GRI 102-30

CBA's risk management system and internal controls aim to not only preserve, but also to create new value for the Company.

### Managing business risks

The Risk Management and Internal Controls department is tasked with disseminating a risk management and internal controls culture Company-wide. Its duties include evaluating, managing, monitoring and reporting on the key business risks to which we are exposed, including strategic, financial, operational and legal/regulatory risks. CBA's risk management approach is based on international best practice (ISO 31000:2018) and works to establish and strengthen engagement with risk owners and liaisons in different locations and

business units in order to enhance risk management, strengthen the Company's risk culture and capture opportunities for improvements.

Risks are assessed and classified based on their impact and likelihood of occurrence, and then compiled into a Risk Map, which is revisited annually and regularly reported to CBA's leadership team and committees advising the Board of Directors. A multi-disciplinary Risk Management Committee monitors risk developments on a monthly basis and takes action to reduce exposure to those risks.

In 2020, CBA's risk management structure was further strengthened with the creation of a Risk Management Committee and Risk Management and Internal Controls department. The Company also reviewed its risk appetite and risk impact and likelihood-of-occurrence scales. In addition, CBA's Business Risk Map was revised and updated, and risk response procedures were put into place, including a crisis management plan.

In 2021 we plan to launch a new Compliance Portal that will automate workflows now processed by email, such as approvals of donations and sponsorship. An independent consulting firm will also conduct an audit to test the effectiveness of Compliance Program controls

## COVID-19 and compliance

Because of the Covid-19 pandemic, part of the compliance activities had to be adapted to a virtual format. We published videos with tips on working from home, and the integration of the Itapissuma rolling mill was also conducted remotely.

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An employee at the Mirai mine

### Managing market risks

The Financial Risk function is responsible for tracking and monitoring the market (commodities, foreign exchange and interest rate), liquidity and credit risks to which CBA is exposed. As part of its duties, it develops metrics and methods for managing these risks and exercises governance of financial risk management by implementing CBA's Financial Policy. Financial risk management aims to protect the Company's cash flows—including their operational (revenues and costs) and financial (financial assets and liabilities) components—against adverse market events, such as changes in exchange

rates, interest rates and commodities prices, and against adverse credit events, while helping to preserve cash liquidity.

### Internal controls

In 2016 CBA voluntarily implemented Sarbanes-Oxley (SOX) practices to ensure the effectiveness of internal controls over the financial statements is evaluated to a high standard.

CBA's internal controls matrix, based on the 2013 COSO Internal Control – Integrated Framework, is updated on an annual basis.

All controls are tested for effectiveness either by control owners or by the internal or external audit. Remediation plans are prepared to address any identified weaknesses. Internal control activities are documented and can be used by external auditors, which may also supplement their assessments with additional tests. The findings from tests conducted by the Company and by the external auditors are reported by control owners to the Leadership Team and the Audit Committee.

In 2020 the internal controls matrix relating to the financial statements and the segregation of duties matrix for access to the SAP system were reviewed and updated. Any control weaknesses identified were remediated to mitigate risks. Work also began on implementing loss prevention indicators to monitor the relevant controls and risk exposure.

Risk management and internal controls are one of the ways CBA ensures the sustainability of the business. Risks related to specific topics are discussed in the relevant chapters.

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Downstream employees at the Alumínio plant

**CBA is committed to the Global Compact and its ten principles**

**CBA’S COMMITMENT TO HUMAN RIGHTS**

GRI 103-1 103-2 103-3 – 412: Human rights assessment  
103-2 – 405: Diversity and inclusion

CBA’s commitment to human rights is evidenced in its day-to-day activities and is translated into actions benefiting people within and outside the Organization.

In 2021 CBA plans to make further progress on incorporating human rights principles into its Code of Conduct, followed by an employee awareness program.

CBA’s international certification from the Aluminium Stewardship Initiative (ASI)—which attests that the Company adheres to internationally recognized environmental, social and governance standards in the production of aluminium—includes assessment criteria on governance, integrity, human rights, freedom of association and collective bargaining. CBA was first certified in 2019 and was recertified in 2020.

In 2020 CBA’s operations also underwent human rights due diligence against ASI requirements. Action plans for areas of improvement identified in the due diligence will be implemented in 2021. CBA recognizes and respects the rights, lawful interests and local customs of

the communities where it operates, and each year seeks to increase engagement with these stakeholders through social programs around economic development, education and public management support (for more details, see the section Social development and strategy go hand in hand, in the chapter We do things better when we do them together). CBA has also committed to the UN Global Compact and its ten principles on human rights, labor, the environment and anti-corruption (read more in the section A leader in sustainability, in the chapter About CBA).

In relation to business partners, in 2020 all contracts with suppliers and third parties were vetted using Linkana, a software platform that screens suppliers on aspects related to human rights. These checks included searches on blocklists such as the Employers Using Forced Labor blocklist developed by the Brazilian Labor Office, and the Banned Nonprofit Organization Blocklist (CEPIM). The platform also requires suppliers to accept the CBA Code of Conduct and answer a Compliance Questionnaire providing further details about their internal practices and procedures. All contracts with suppliers contain anti-corruption provisions and provisions forbidding them to engage in any form of discrimination or to employ child, forced or slave labor.

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## An open channel for transparency

GRI 103-2, 103-3 – 412: Human rights assessment, 103-2 – 405: Diversity and inclusion

CBA's Ethics Hotline is a reporting channel where employees, suppliers and the general public can communicate grievances, complaints and reports on any violations of the CBA Code of Conduct, including matters related to diversity in the work environment.

The channel is operated by an external, fully independent firm, and all information is kept confidential. Reports can also be made anonymously. Any cases requiring investigation are submitted to the Business Conduct Committee.



In 2020  
**156**  
Ethics  
Hotline  
cases



**147**  
cases resolved

## Human rights in CBA's day-to-day activities

GRI 412-1, 412-2



In 2020 a human rights due diligence was conducted at the Itapissuma rolling mill.

**46.2%**

of CBA's operations underwent human rights reviews in 2020, compared with 38.5% in 2019.



Approximately  
**1,223**  
hours

of online training were provided on human rights policies and procedures relevant to CBA's operations in 2020.



A forklift operator in the Casthouse (Alumínio)



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# Innovation means continuously striving to do things better

GRI 103-1, 103-2, 103-3 – CBA topic: Innovation and technology

A worthwhile journey is one where you learn along the way. This has been the motto of CBA's cultural transformation program, launched in 2017. Initially dubbed "CBA of the Future", the program aimed to rethink business practices to ensure the Company is increasingly agile and competitive in a dramatically and rapidly changing world.

The aspirations of the program included creating value for internal and external stakeholders through sustainable business, cultivating valuable partnerships with customers, and fostering a sense of Company pride among employees.

As it continued its cultural change program, in 2019 CBA began an integrated digital transformation effort with the launch of the CBA 4.0 Journey. This strategy aims to embed a digital mindset in CBA's culture in order to optimize processes, operations and behaviors in a way that creates value across both production and administrative functions.

The program is referred to as a Journey based on the notion that, when it comes to a digital transformation, there is no finish line and there is always more to be done. The CBA 4.0 Journey is guided by four pillars:

- **People** – instilling new behaviors as part of a more agile mindset, fostering a digital culture and encouraging employees to think, act and do things differently.
- **Processes** – driving changes and redefining what CBA offers, how it is offered and how the Company operates to achieve competitive advantage, and maximizing results by simplifying, eliminating and reinventing existing processes.

- **Technology** – implementing enabling technologies, such as mobility, cognition and the Internet of Things, to drive business growth.
- **Cybersecurity** – minimizing corporate risks stemming from new technologies, and protecting data, information and people.

Nataly Yoshino,  
Market  
Development  
& Innovation  
Manager (Photo  
taken before  
the COVID-19  
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After structuring the strategy and identifying technology opportunities within the business and the changes needed to enable them, in 2020 CBA's focus was on developing the projects proper. The COVID-19 pandemic created an added stimulus for and accelerated the digital transformation, as technology became an important enabler of new approaches to working, as well as an important tool supporting the pandemic response. Even things that previously would have seemed difficult to do remotely—such as large events, training and hiring—became possible through technology.

Digitization has become a constant on the Company's agenda, with a focus on two fronts: CBA's technology roadmap (projects to implement new technologies) and related behaviors and mindsets and Minimum Viable Changes (MVC) to support the initiatives in the technology roadmap.

In 2020, 55 MVCs were proposed across different areas. Employees with the potential to take on new challenges were tasked with coordinating the initiatives through weekly or fortnightly project meetings.

The following are some of the projects completed as part of the program:

- **Digital Supply Chain**, a project to optimize logistics and procurement processes (read more in the section Progress in logistics of this chapter).
- **Development of an emergency drill app for the Palmital Dam**, in Alumínio, to support social distancing (learn more in the section Drier and safer dams, in the chapter We make a positive impact on the environment”).
- **Creation of a multidisciplinary forum** to address issues and difficult-to-implement improvements through hackathons. The Supply Chain function organized three hackathons in this format in 2020..
- **LMS DHO:** implementation of a Learning Management System that has enabled CBA to develop content faster and more dynamically, supporting a more democratic and accessible approach to knowledge management.

R\$ 14.9 million

was allocated to technology investments in process improvements and CBA's cultural transformation in 2020.



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### Innovation projects

**CBA disclosure-1:**

**Investments in technology and innovation**

	2018	2019	2020	Unit of measure
Innovation investments (CC) <sup>1</sup>	2,939,836	3,248,288	3,590,369	R\$
Percentage of expenditure out of total revenue <sup>1</sup>	ND <sup>2</sup>	14.80%	9.39%	% of revenue

<sup>1</sup>Calculated based on the Innovation and Market Development Cost Centre.

<sup>2</sup>ND = Not Available.



## Among the top innovators in Brazil

For the third consecutive year, CBA was named one of the five most innovative companies in the Mining, Steelmaking and Metalworking category of the *Valor Inovação 2020* innovation list.

CBA conducts assessments to benchmark its digital transformation progress against the market, with support from an external consulting firm that also assists CBA in prioritizing initiatives in its journey to accelerate value creation. A governance structure has been established to manage prioritized initiatives, including technology adoption, process changes, behaviors and information security.

And the journey continues. In 2021 CBA will triple investments in projects within its technology roadmap and initiatives to drive the changes stemming from these projects. This year, actions supporting our ESG strategy added a new, parallel element to the journey, as CBA's sustainability commitment has become an integral part of the cultural transformation.

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**Our 2030 ESG strategy establishes two goals for sustainable solutions for clients::**

Produce 100% of billets at Metalex with greenhouse gas emissions lower than **1.4 tCO<sub>2</sub>/t** of product

Increase **downstream revenues** at Alumínio and Itapissuma from sustainable solutions.

## CREATIVE COLLABORATION

Co-creation and co-engineering projects in collaboration with customers and partners have provided a deep understanding and insight into market opportunities, supporting delivery of customized aluminium solutions. Each solution creates a legacy of shared competitiveness that drives sustainability, genuine long-term partnerships, new business and business

models, and innovation and new technologies. CBA's versatility means it is increasingly well positioned for innovation in the industry, and the Company has set ambitious goals for introducing new products in its portfolio.

CBA is constantly monitoring trends and developments affecting the global industry.

Strategic Engagement is one of the most important components of CBA's approach to innovation. Alongside Strategic Planning, it provides a vital motive force and support for the Company's project pipeline. The project pipeline is governed by an Innovation Roadmap, a visual and descriptive tool that provides direction for CBA's short, medium and long-term project portfolio

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## Better quality of supply to the automotive industry

In January 2021 CBA received International Automotive Task Force (IATF) 16949-2016 certification covering the Alumínio (SP) operation and the Caxias do Sul (RS) Distribution Center. This standard has been developed specifically for the automotive industry, and applies to manufacturers of vehicles, parts, components or systems. IATF 16949-2016 certification attests to the quality of CBA's management system for the automotive segment.

The goal in seeking certification was to further enhance customer loyalty in the automotive market as part of CBA's strategy of growing market share as a leading supplier to the automotive industry. The certification process required an effort to integrate the commercial, processes and innovation, and logistics and management functions together. This recognition confirms CBA's commitment to product excellence, and underlines the benefits of aluminium for the automotive industry and the world. The Company plans to extend certification to other operations in the coming years.

## OPERATING MODEL

Market development projects are supported by a Market Development & Innovation department created in 2015. These projects are managed to create value for CBA's portfolio using a combination of different approaches and methods, including design thinking, rapid prototyping, lean startup, value proposition canvas, Kanban and scrum. They are also supported by squads—multidisciplinary teams of experienced people working toward specific goals and with a great deal of autonomy, including for decision-making. The entire process is further backed by CBA leadership and by the product development working group.

Ideas for product innovation projects come from a variety of strategic sources, including the IdeAI ideation program, market intelligence, technology and sales insights,

customers, strategic links to innovation ecosystems, innovation support programs, and industry events and conferences.

In addition to product innovation, CBA also engages in process-focused research and development (R&D) in areas such as additive manufacturing, graphene, alloy development, automation and robotization, nanotechnology (hardness testing of aluminium sheet), rotary friction welding (RFW) and other initiatives to reduce costs and increase productivity at CBA's plants. These projects use an open innovation approach that employs many of the previously described methodologies and leverages support and research from suppliers, specialized consulting firms, research institutions, universities and, more recently, startups.



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Research in the laboratory at the Itapissuma rolling mill

## MARKET INTELLIGENCE

GRI 103-1, 103-2, 103-3 – 202: Market presence



CBA's expertise in the Brazilian and global aluminium market enables us to develop robust strategies to build competitive advantage in target markets. In addition, interaction with customers, suppliers, consultancies, trade associations and other actors creates opportunities to

develop CBA's approach and create action plans to evolve across operational, commercial, cultural and sustainability aspects.

CBA works to strengthen the aluminium industry at different levels. Internally, this is achieved by disseminating market information in reports, presentations and through other channels to equip employees at all levels to engage in industry advocacy when interacting with stakeholders outside the organization.

Externally, CBA advocates for aluminium at customer and consumer events, in its interaction with industry organizations such as the Aluminium Stewardship Initiative (ASI), the Brazilian Aluminium Association (ABAL) and the International Aluminium Institute (IAI), through engagement with organizations on topics such as mining and environmental preservation in Brazil, and by attending important aluminium industry conferences in Brazil and globally.

## CONTINUOUS LEARNING

GRI 103-1, 103-2, 103-3 – 202: Market presence

Learning, unlearning and relearning. Unlearning is letting go of what used to work and working to understand what's needed for the next stage. These

practices are an integral part of project governance, especially for projects that are non-linear and involve significant uncertainties. That is why learning management and mistake tolerance are essential cultural attributes for intra-entrepreneurship.

Product development efforts also require strong market links in order to respond rapidly to demand and capture insights for the next sprints.

To this end, CBA organizes regular Innovation Days and Techdays with customers, partnerships with trade associations, workshops and hackathons with universities, and connections with startups and innovation hubs.

Strategic partnerships to codevelop markets are similarly important. In 2020 the Company concluded two important technical cooperation agreements, one for research on gaskets for the automotive and transportation industry, and the other with the Brazilian Industrial Research and Innovation Corporation (EMBRAPPI) for optimization of high-strength alloys for automotive applications. CBA is also actively engaged in research on multi-materials, biomimetics and advanced modeling.

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**Among its key industry initiatives in 2020, CBA:**

- moderated a panel on “New aluminium technologies for the automotive industry” as part of the 2030 Priority Projects & Programs Roadmap Workshop during the International Symposium on Automotive Engineering;
- hosted a booth (with Innovation and Research & Development teams attending) at the 8th Brazilian Conference on Industry Innovation, an initiative organized by the National Industry Confederation (CNI) and the Brazilian Micro and Small Business Support Service (SEBRAE) as part of the Business Mobilization for Innovation (MEI) program;
- attended the Applied Circular Economy Forum: New Practices, Possibilities and Challenges, organized by the Brazilian Packaging Association (ABRE);
- participated in the Packaging and Sustainability Forum organized by the Packaging Institute;
- attended the 11th SAE Brazil Materials Symposium Minas Gerais;
- participated in Agrishow, an agricultural technology trade show in Brazil;
- sponsored the agribusiness innovation hub and AgTech Garage, a co-working space;
- remotely attended international aluminium

industry conferences such as CRU World Aluminium, the LME Metals Seminar, Metal Bulletin International Aluminium, the BMO Conference and the Woodmac Forum;

- sponsored the ABRE Packaging Awards Brazil 2020;
- participated in the Mining Hub in Belo Horizonte (MG), the largest mining innovation ecosystem in Brazil;
- attended ICSOBA 2020 (International Committee for Study of Bauxite, Alumina and Aluminium);

**ADVANCES IN SUPPLY CHAIN**

A component of the CBA 4.0 Journey, our Digital Procurement program aims to engage the entire Supply Chain department in developing a digital mindset within the Company, in order to optimize processes and drive innovation to create business value for CBA and its customers. With investments of R\$ 968,000 in 2020, the program made progress on several fronts, including the following:

- **Use of Robotic Process Automation (RPA)**, and Artificial Intelligence (AI) technology in spot purchases of low-value



Extruded profiles produced at the Alumínio plant

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An active bauxite mine in the municipality of São Sebastião da Vargem Alegre (MG)



materials, freeing up employees to focus on more complex and strategic materials categories, improving overall team productivity.

- **Implementation of a cargo density optimization system**, to migrate from an empirical load building process to a process based on pre-established rules and algorithms. This ensures vehicle space is better utilized and vehicle loading is standardized to improve transportation safety and reduce unnecessary expenses on dead freight. It also helps to reduce the number of vehicles being used, which translates into lower CO<sub>2</sub>-emissions.

- **More efficient supplier screening**, following implementation of a new digital platform that automates the process and allows the different departments and suppliers to complete the initial registration process themselves.

To increase capacity for bauxite receipt from CBA's mines, the rail yard at the Alumínio plant was expanded to 1 mt/year capacity for bauxite receipt from Barro Alto. In addition, a system was implemented that uses industry 4.0 technology to monitor trains and measure loading cycles in real time for trains transporting bauxite. The two initiatives combined resulted in 20% lower average cycle times per train in the fourth quarter of 2020, positively affecting productivity.

Another important development in logistics was the conclusion of an agreement with the Jundiaí road-rail terminal in São Paulo State. This will allow CBA to use the railway to ship finished products and imported raw materials for the Alumínio plant, and export cargo for customers, to and from port terminals in Santos. The arrangement will also support safer cargo transportation operations. In addition, diversifying transportation modes helps to reduce greenhouse gas emissions.

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In an initiative to improve service to customers, in 2020 CBA further perfected its approach to managing service levels by creating a fully seamless flow of information on order delivery logistics. As a result, customers and the Logistics department can now track deliveries from the time orders are shipped from the Company's

operations all the way to customers' doorstep, with improved On Time In Full (OTIF) performance.

In 2020 CBA handled 100% of the export container stuffing process at its Alumínio operation, handling an average of 1,700 t per month, with positive impacts on service levels.

The results from these initiatives include:

an **85%** reduction in external customer complaint rates

an OTIF percentage of **95%** in the Upstream business

**25%** reduction in average outbound vehicle waiting times in the Downstream business

a **7.5%** increase in average vehicle occupancy in the Downstream business, improving productivity and reducing greenhouse gas emissions from road transportation

Downstream operations at the Alumínio plant

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We do things better when we do them together

A social project in the municipality of Alumínio (SP)



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A packaging line operator at the Alumínio plant

# At CBA we believe we can only build a better world if we all work together.

## MATERIAL TOPICS RELATED TO THIS CHAPTER:

- Employee health, safety and wellness
- Diversity and inclusion of minorities
- Local development and impacts on surrounding communities

## SDGS RELATED TO THIS CHAPTER:

(3.6, 3.9)	(4.4)	(5.1, 5.2, 5.5)	(8.1, 8.3, 8.5, 8.8)	(10.3)

## GLOBAL COMPACT PRINCIPLES ADDRESSED IN THIS CHAPTER:



3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.



6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.

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## We take care of our people

It is this desire to work together that guides our people-related initiatives and decisions. A working group assists managers in optimizing initiatives, and every four months a presentation is delivered to senior management, all in line with CBA's overarching strategy of enhancing sustainability and its organizational culture in support of the business.

Six levers underpin CBA's cultural improvement efforts:

- \* New technologies
- \* Connection to our purpose
- \* New approaches to work and partnerships
- \* Diversity
- \* Sustainability
- \* Digital culture

In designing CBA's ESG strategy in 2020, three goals directly connected to people management were set to be achieved by 2030:

- \* 50% gender and racial diversity in leadership positions within the Company.
- \* 100% of employees with assigned ESG targets.
- \* Embed ESG considerations in all pillars of CBA's culture and business practices.

Promoting diversity, which was already high on CBA's agenda, became even more relevant in 2020 and was identified as a material topic in the year's materiality review. More information on this topic is provided later in this chapter.

The challenges created by the COVID-19 pandemic—with part of the team working from home, and with the need to implement significant new health and safety protocols in the Company's operations—helped to accelerate the cultural transformation in order to keep employees engaged, motivated and safe, even when working remotely.

Communications became more open and transparent, and hierarchies were flattened so that all employees felt more assured, independent and empowered to innovate and find solutions.

Temperature screening at the entrance to the Alumínio plant

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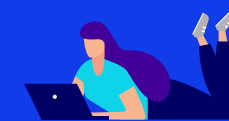


The administrative office at the Itapissuma rolling mill

### TECHNOLOGY SUPPORTING OUR PURPOSE

Technology has also helped to connect CBA's purpose to its people's values and aspirations. In 2020 CBA used a gaming approach to increase employees' understanding of their own work and how it connects to the core social and environmental pillars that guide CBA's strategy.

Around **90%** of employees had participated in the on-line game at year-end 2020.



### Networking

Workplace is a networking platform designed to increase the reach of internal communications and provide open access to information. With an intuitive interface, the platform has standard social networking features such as news feeds, events, archives, notifications and messaging. The purpose of the platform is to give employees a voice and foster a transparent and collaborative organizational culture. Workplace allows users to genuinely connect with coworkers, whether they're in the room next door or at any of CBA's 13 operations across Brazil. Currently around 80% of employees are active on the network. In 2020 the platform mediated approximately 180,000 employee interactions.

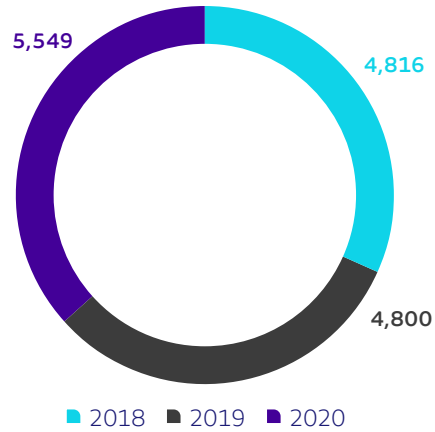


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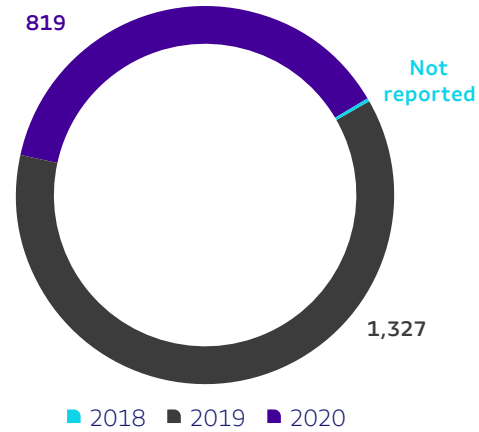
## CBA's workforce

GRI 102-8, 102-41

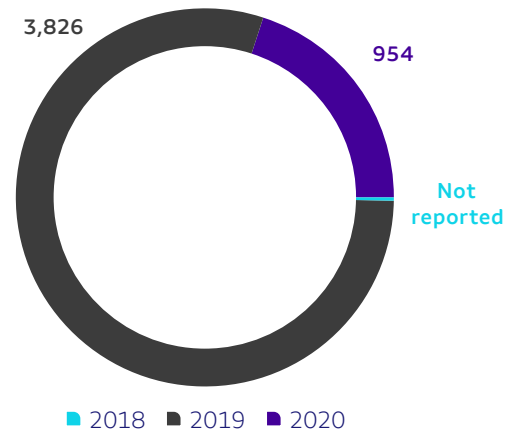
**Total number of direct employees**  
(at the end of the reporting period)



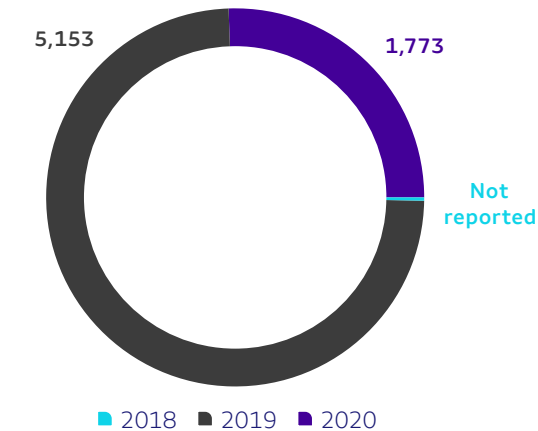
**Total number of fixed third-party employees**



**Total number of mobile third-party employees**



**Total number of third-party employees** (at the end of the reporting period)



A Casthouse furnace at the Alumínio plant

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## Total direct employees by employment contract and region

	2018			2019			2020			
	Southeast	Centro-Oeste	South	Southeast	Midwest	South	Southeast	Midwest	South	Northeast
Direct employees with indefinite-term employment contracts	4,466	182	15	4,569	180	13	4,720	174	14	516
Direct employees with definite-term or temporary employment contracts	153	0	0	35	3	0	123	2	0	0
<b>Total</b>	<b>4,619</b>	<b>182</b>	<b>15</b>	<b>4,604</b>	<b>183</b>	<b>13</b>	<b>4,843</b>	<b>176</b>	<b>14</b>	<b>516</b>

Nota 1: data for 2020 includes the Itapissuma acquisition.

Nota 2: data for this disclosure was obtained from the SAP system, the ApData system (Itapissuma) and internal controls at Metalex. The data excludes apprentices and interns.

All employees are covered by collective bargaining agreements. CBA also ensures compliance with local labor laws and regulations and collective bargaining agreements with local unions.

### GRI 202-1

#### Ratios of standard entry level wage by gender compared to local minimum wage

	2018		2019		2020	
	Men	Women	Men	Women	Men	Women
Significant operations	Brazil		Brazil		Brazil	
Standard entry-level wage at CBA	Not reported	Not reported	R\$ 1,091.2	R\$ 1,091.2	R\$ 1,207.8	R\$ 1,207.8
Minimum wage (use the national or local minimum wage depending on the operation)	Not reported	Not reported	R\$ 1,045.0	R\$ 1,045.0	R\$ 1,100.0	R\$ 1,100.0
Ratio	The lowest entry-level wage was 7% higher than the national minimum wage.		1.04	1.04	1.10	1.10

Nota 1: data for this disclosure was obtained from the SAP system, the ApData system (Itapissuma) and internal controls (Metalex). Scope of disclosure: Alumínio plant, mines (Poços, Itamarati, Mirai), Caxias DC, Niquelândia, SMP, Head Offices, Sorocaba Facility, Barão de Angra and Legado Verdes do Cerrado.

Nota 2: employees are paid the entry-level wages established for their categories under collective bargaining agreements, with no gender-based differences, at all significant locations of operation. The lowest entry-level wage paid to employees is 10% higher than the current minimum wage.

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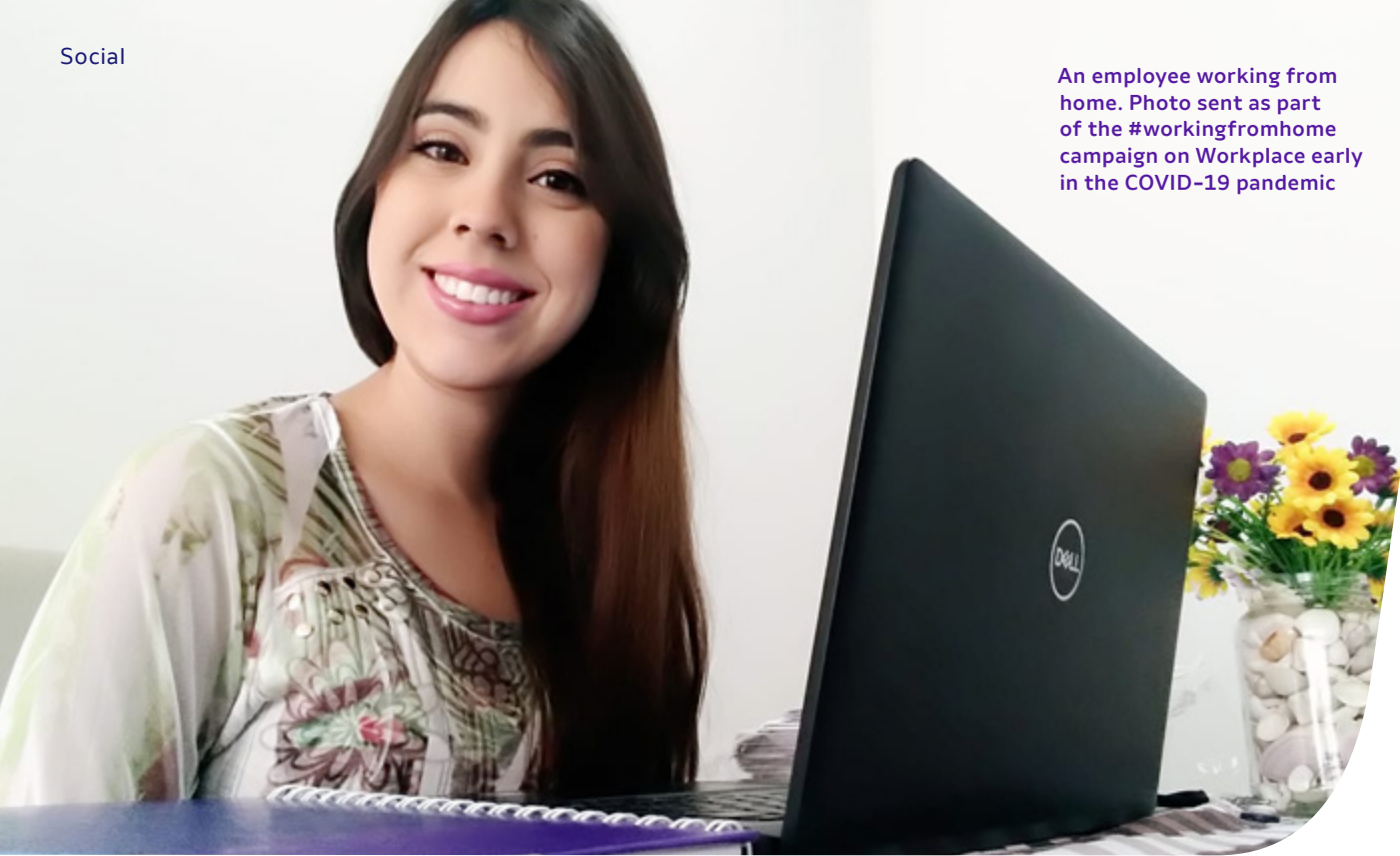
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An employee working from home. Photo sent as part of the #workingfromhome campaign on Workplace early in the COVID-19 pandemic

**DISTANT YET CLOSE**

Many of CBA's human resources practices had to be adapted in the year in response to the COVID-19 pandemic:

**Working from home:** employees in administrative positions and at-risk employees were assigned to work from home. CBA provided these employees with chairs, computers and headsets. Employee benefits packages were also reformulated to reflect the new working arrangements. In 2021 the DHO department

will update its working-from-home policy to outline the new benefits and employees who are eligible

**Shuttle buses and restaurant:** at CBA's plants and mills, shuttle bus routes were re-planned and, to maintain social distancing, an app was used to manage bus occupancy. An enhanced hygiene protocol was also implemented on all buses. COVID-19 measures at restaurants included enhanced hygiene practices, wider

chair spacing and installation of acrylic partitions between chairs. Meal hours were also extended to ensure maximum capacity was not exceeded in order to maintain social distancing.

**Virtual recruiting and introduction training:**

at a time when many companies are laying off employees because of the coronavirus crisis, CBA has not only retained its workforce but has hired more people, especially at the Alumínio operation, where smelting operations that had previously been shut down were restarted to increase primary aluminium production for export. From recruiting to introduction training, the entire hiring process for these new employees has been fully online. In addition, some of the basic safety training sessions have been conducted remotely. The same process was used for selection of interns and apprentices. CBA uses an online hiring platform that is compliant with the Brazilian General Data Protection Act, and ensures a more transparent and efficient hiring experience.

**e-CBA now online:** this platform allows employees at all departments, at all operations, to attend training online. e-CBA empowers teams to design training programs that are relevant to their work, and make those programs available to target audiences. It also allows employees to better manage their time, as the training programs are continuously available and employees can fit their training around their working hours.

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The Occupational Health team at the Alumínio plant



**Optimized assessments:** the pandemic also led to a redesign of the employee assessment process—known internally as the Votorantim Development System (VDS)—to make it more streamlined. Only employees who were newly hired or promoted in the year were required to undergo the complete assessment process, including committee assessments of employee performance. All other employees underwent a modified, fast-tracked assessment. Although the VDS system has now been simplified, all employees were able to fully utilize the Success Factors system to provide and request feedback from people at different levels of the organization, supporting their individual development.

**Christmas Event and Leadership Summit:** some of the Company’s traditional holiday celebrations and perks had to be adapted because of the pandemic—Christmas hampers were replaced with vouchers, and the year-end party was organized as an online event, with employees celebrating together, but from the safety of their homes. This was the first

time CBA organized a single Christmas event with all operations interacting simultaneously. The event featured a Christmas band, and employees could receive personalized Santa Claus audios for their children. The annual leadership summit—an event to celebrate achievements in the year—addressed sustainability, financial, social and diversity topics. Also organized as an online event, the summit featured virtual reality technology and guest speakers such as philosopher Mario Sergio Cortella and some of the leading names in sustainability.

**SUPPORT IN TIMES OF NEED**

CBA’s *Plenamente* program was another innovative initiative introduced in 2020.

Launched in June, *Plenamente* is a confidential channel that employees and their spouses and children can contact 24/7 for counseling on financial, legal, psychological and other issues. A total of 451 employees sought counseling from platform launch to year-end.

These employees made more than 1,400 telephone calls, with a usage rate of 10.5% in 2020. According to the organization providing the service, that rate is 5% above the market average. CBA believes the extensive use of the *Plenamente* service can be credited to initiatives to communicate and raise awareness about the services available. User feedback has been positive, with a notable 98% satisfaction with the quality of service.



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ALWAYS LEARNING, EVEN AT A DISTANCE

**All employee development programs were conducted remotely in 2020 as part of the measures in response to the COVID-19 pandemic. CBA's key initiatives in this area included:**



**Potenciar:**

young talents selected annually for this Votorantim program continued to work normally alongside teams at each subsidiary on their Challenge Projects, in which they were tasked with finding a solution to a real-world problem within the organization. In 2020 the primary challenge posed to young talents at CBA was “How to create an innovation mentality within the organization.”

**Votorantim Academy:**

some training programs were redesigned into online modules, while others were postponed, with training attendance decreasing as a result.

**Leadership Development:**

the primary theme addressed in this program was how to increase diversity within the Company (read more about diversity later in this chapter).

**Leadership Journey:**

participants completed four training modules—Safe Behavior, Culture, Management and Tools. The Sustainability and Customers modules will be completed in 2021.

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## MORE DIVERSE, AND MORE COMPLETE

GRI 103-1, 103-2, 103-3 – 405: Diversity and equal opportunity

CBA recognizes that people have different life stories, physical, psychological, social and cultural traits, world views, and experiences. CBA believes these differences all serve to enrich the Company’s culture. That is why CBA encourages people to respect differences, opposes any form of discrimination, and works to foster inclusion and a wholesome work environment.

In 2018 CBA launched an effort to achieve greater maturity in diversity, which has helped to create a better and more efficient working environment. This year the Company continued its efforts in support of diversity, by creating a welcoming atmosphere and encouraging employees to extend cordial and equal treatment to friends, relatives and those around us. As part of CBA’s commitment

to people, efforts to communicate and strengthen this new culture were made a priority in all areas of the Organization.

In 2020, diversity became a cross-cutting pillar of CBA’s culture. Initiatives are initially focused on generations (age), people with disabilities (PwDs), LGBTQIA+, racial equity and gender equity.

Some of CBA’s key related initiatives in 2020 included:



- Structural initiatives, such as the development of CBA’s formal position on diversity, and a reformulation of its communications to include inclusive imagery and words.
- Implementation of a Diversity Committee in July 2020, composed of employees in different positions and at different organizational levels, with a mission of fostering a culture of “thinking differently” and respecting and having empathy for one another.
- Development of Key Performance Indicators (KPIs) for diversity.
- Creating more than 50 vacancies for women employees and hiring women to fill 70% of apprentice positions



An employee at the Itapissuma rolling mill

To provide guidance in this area, in 2020 CBA launched a Diversity & Inclusion Guide and presented its Diversity Policy in a live stream on Workplace, with a panel of experts who discussed how to put diversity into practice in a corporate setting. Some of the guidelines outlined in these documents include:

- Valuing human and cultural diversity.
- Having utmost respect for people regardless of their gender, gender identity, color/race, age, physical or mental condition, sexual orientation, background, nationality, religion or belief system.
- Providing equal opportunity to all people at CBA, including equal compensation and treatment in performance assessments.
- Regularly reviewing policies and codes to ensure that the principles of respecting and valuing diversity and human rights are adhered to, upheld and enhanced.
- Treating all employees and all candidates with dignity and respect, without tolerating any biased or discriminatory behavior.
- Supporting new thinking and ideas and leveraging diversity of perspective to develop innovative solutions, products and services aligned with business strategy.
- Valuing partners—including suppliers and other stakeholders—that commit to supporting diversity and inclusion in their business strategies, and preferentially do business with suppliers demonstrating diversity.
- Ensure internal and external communications are inclusive and free of stereotypes or biased or discriminatory messaging.

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## Diversity by job category, age group and gender (in %)

GRI 405-1

	2018					2019					2020				
	Age group			Gender		Age group			Gender		Age group			Gender	
	< 30	30 – 50	> 50	Men	Women	< 30	30 – 50	> 50	Men	Women	< 30	30 – 50	> 50	Men	Women
Apprentice	100	0	0	75	25	100	0	0	84	16	100	0	0	66	34
Intern	99	1	0	43	57	97	3	0	42	58	99	1	0	35	65
Operational	22	70	8	95	5	21	70	8	94	6	19	71	10	92	8
Trainee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Technician/ analyst/ supervisor	17	74	9	76	24	16	76	9	74	26	16	74	10	73	27
Coordinator/ consultant	3	82	14	86	14	3	83	14	85	15	3	83	14	81	19
Manager/ general manager	1	80	18	86	14	1	82	16	85	15	0	84	16	85	15
Chief officer/ CEO	0	60	40	80	20	0	40	60	80	20	0	40	60	80	20
<b>Grand total</b>	<b>24</b>	<b>68</b>	<b>8</b>	<b>91</b>	<b>9</b>	<b>22</b>	<b>69</b>	<b>9</b>	<b>90</b>	<b>10</b>	<b>21</b>	<b>69</b>	<b>10</b>	<b>88</b>	<b>12</b>
Board of Directors members	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	100	83%	17%

Note: diversity performance is monitored through a set of indicators that are reported to the Executive Board. Data was taken from the SAP and APDATA system, and from internal controls at Metalex. The scope of this indicator includes the Alumínio plant, the Sorocaba facility, Barão de Angra, Caxias do Sul, São Paulo, São Miguel Paulista, Niquelândia, Legado Verdes do Cerrado, Itamarati de Minas, Mirai, Poços de Caldas, Barro Alto, Metalex and Itapissuma.

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In 2019, 8.3% of CBA's workforce were women.  
 In 2020 the figure was  
**12%**

Total direct employees by employment contract and gender GRI 102-8	2018			2019			2020		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Direct employees with indefinite-term employment contracts	4,328	335	4,663	4,355	407	4,762	4,860	564	5,424
Direct employees with definite-term or temporary employment contracts	130	23	153	25	13	38	79	46	125
<b>Total</b>	<b>4,458</b>	<b>358</b>	<b>4,816</b>	<b>4,380</b>	<b>420</b>	<b>4,800</b>	<b>4,939</b>	<b>610</b>	<b>5,549</b>

Note: all employees work full-time.



An employee at the Itapissuma rolling mill



### Women on the front lines of CBA's operations

GRI 103-1, 103-2, 103-3 – 405: Diversity and equal opportunity

At CBA, women are filling a range of traditionally male-dominant positions, such as front loader operator, forklift operator and truck driver. In the second half of 2020, a program in partnership with the National Industrial Training Service (SENAI) trained 20 women in the Alumínio community to become metallurgical process operators.

SENAI provided a total of 200 hours of training, including 24 hours of training on life skills, 16 hours of safety training, and 160 hours of technical training, which was partly administered in person and partly through distance learning due to the constraints created by the coronavirus pandemic. On completing the course, these women were better equipped to find job opportunities. CBA paid the costs of the program, and nine graduates were hired to work at the Company.

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## TAKING SAFETY SERIOUSLY

GRI 103-1, 103-2, 103-3 – 403:  
Occupational health and safety

In a year marked by the COVID-19 pandemic, protecting the health and safety of employees—both those who were able to work from home and those who were required work on site to keep CBA’s operations running—became more important than ever. Safety measures were adapted and enhanced to protect the integrity of all employees.

CBA has an integrated management policy that includes guidelines on occupational health & safety management. The system is based on local regulations on health and safety as well as industry best practices. All direct and third-party employees are covered by this policy. In 2020 CBA invested R\$ 11 million in improving facilities and modernizing or procuring new and safer equipment in compliance with Brazilian regulatory standards. [GRI 403-1](#)

Safety is among the issues addressed in the Company’s strategy. CBA has made it a priority to progressively reduce injury rates, and has set safety targets to be achieved by 2025 and 2030.



Caio, a safety technician at the Zona da Mata operations

## Safe practices

GRI 403-2, 403-4, 403-5, 403-7

The primary safety hazards in CBA’s operations are trip-and-fall hazards, chemicals, work at heights and molten metals. If any incidents occur, a root-cause analysis is conducted and an action plan is developed to prevent recurrence.

Potential risks are identified through a statutory Workplace Risk Prevention Program (PPRA), in statutory Workplace Environment Reports (LTCAT), and through Preliminary Risk

Analyses (PRA), in which employees identify risks and implement personal or collective protection measures in the work environment. Other safety tools include *Fale Fácil*, an easy-to-use tool for reporting and addressing unsafe conditions and behavior; and CBA’s Duty of Refusal policy, which encourages and empowers employees to refuse to perform a task if risk mitigation measures have not been adequately implemented or if they feel unfit to perform the task. In 2020, 27,952 reports were made using the *Fale Fácil* tool, of which 92.2% have been addressed, and 27,410 Duty of Refusal reports were received.

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Packaging extruded profiles at the Alumínio plant



CBA's Safe Behavior Program and other safety programs provide awareness training on the importance of identifying, and how to prevent, unsafe situations. Within the Company's Occupational Risk Observation (ORT) program, employees evaluate tasks and their potential associated risks. Direct and third-party employees are also trained on safety procedures during introduction training, as well as receiving statutory training for tasks involving risks.

Each of CBA's operations has an Internal Accident Prevention Committee (CIPA) composed entirely of employees elected by employees. Reported injuries and incidents are investigated by a multidisciplinary group of representatives from the Safety department, the CIPA, and the heads of the departments involved.

Audits, inspections and training are conducted regularly to ensure progress on safety is sustained.

In 2020 CBA continued investments and initiatives to improve working conditions in its operations and raise employee awareness about the potential risks of each task and how

to mitigate them. In the Primary Aluminium business, CBA's Occupational Health & Safety program administered training on safety tools and how to use them in day-to-day tasks, as well as implementing the following initiatives:

- \* Installation of a truck-mounted aerial work platform at the Smelters for use in overhead work above the electrolysis cells, in order to limit employee exposure to the risks involved in work at heights, exposure to heat and manual lifting.
- \* A new virtual reality training program at the Alumina Refinery about the risks involved in handling chemicals. Virtual reality safety training had already been successfully implemented in Downstream operations at the Alumínio plant in 2019.
- \* Biometric check-out of personal protective equipment (PPE) at the Mirai, Poços de Caldas, Niquelândia and Sorocaba sites. This had already been successfully implemented at the Alumínio plant in 2019.

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An employee at the Itapissuma rolling mill



CBA also works to improve contractors' safety performance through safety campaigns such as the Contractor Marathon, a method used to measure, track, monitor and recognize contractor performance within the CBA management system. Workplace injuries rose slightly in 2020 compared with 2019, increasing CBA's lost-time and no-lost-time injury frequency rate. This primarily reflected instances of failure to perceive risks and unsafe behaviors and conditions in certain situations. Although CBA outperformed both the national\* (2.72) and the international\* (2.90) average injury frequency rates, as published by respectively the Brazilian Aluminium Association (ABAL) and the International Aluminium Institute (IAI), the Company remains engaged in further reducing these figures.

\*Based on the most recently published official data for 2019.

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### CBA's targets for 2025 address three topics:

- \* Progressively reducing injuries to a frequency rate lower than 1. The updated figures for 2020 for this target can be seen in the table "Work-related injuries (direct employees)"
- \* A zero-fatality commitment. In 2020, there were no fatalities at the Company.

- Reducing health insurance claims through the Company's "For You" Quality of Life Program

The 2030 goals in CBA's ESG strategy include achieving zero serious injuries (injuries resulting in permanent, partial or total impairment, mutilation or death) in its operations and an injury frequency rate lower than 1 (out of every 1 million man-hours worked).

## Work-related injuries (direct employees)\* GRI 403-9

	2018		2019		2020	
	Total Aluminium	Total Nickel	Total Aluminium	Total Nickel	Total Aluminium	Total Nickel
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0	0	0	0	0	0
Number of high-consequence work-related injuries (excluding fatalities)	Not reported	Not reported	4	0	11	0
Rate of high-consequence work-related injuries (excluding fatalities)	Not reported	Not reported	0.42	0	1.06	0
Number of work-related injuries (including fatalities)	Not reported	Not reported	16	0	22	0
Rate of work-related injuries (including fatalities)	2.62	0	1.69	0	2.12	0
Injury severity rate	63.00	0	134.0	0	20.13	0
Number of lost days	Not reported	Not reported	1,271	0	209	0
Number of hours worked	9,135,179	330,471	9,484,314	333,172	10,382,117	308,758

\*The most commonly occurring incidents in 2020 were hand injuries.

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## Work-related injuries (other employees)\* GRI 403-9

	2018		2019		2020	
	Total Aluminium	Total Nickel	Total Aluminium	Total Nickel	Total Aluminium	Total Nickel
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0	0	0	0	0	0
Number of high-consequence work-related injuries (excluding fatalities)	Not reported	Not reported	1	0	4	0
Rate of high-consequence work-related injuries (excluding fatalities)	Not reported	Not reported	0.24	0	1.05	0
Number of work-related injuries (including fatalities)	Not reported	Not reported	8	0	13	0
Rate of work-related injuries (including fatalities)	2.11	2.84	1.91	0	3.42	0
Injury severity rate	150	0.00	113.2	0.0	15,78	0.0
Number of hours worked.	3,305,346	351,045	4,194,453	303,441	3,802.486	1,207.106

\*The most commonly occurring incidents involving contractors were foot and hand injuries.

Notes:

- Information on injuries involving direct employees can be compiled from our safety platform, ObraSoft.
- Calculations were based on 1 million hours worked and calendar days.
- Data is compiled in accordance with the guidelines outlined in NBR 14280, with injuries ranked by injury frequency rate from levels II to V and by severity rate based on consecutive days lost.
- Information by gender is not available as the relevant disclosures have not been segmented by gender.
- The scope of this disclosure includes the following operations: Alumínio (SP), Itapissuma (PE), Miraí (MG), Itamarati de Minas (MG), Poços de Caldas (MG), Sorocaba Facility (SP), Machining and Sheet Metal Shop, Metalex, Casthouse and Recycling Facility (SP), Caxias do Sul Distribution Center (RS), Head Office and Sales Office (SP), Niquelândia (GO) and São Miguel Paulista (SP).

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CIPA members at the Alumínio plant during SIPAT 2020

## A special SIPAT event

The Internal Occupational Accident Prevention Week (SIPAT) program in 2020 was organized under the theme, “Minding others’ safety by minding your own choices.” Because of the pandemic, activities were staggered throughout the day so direct and third-party employees in all three work shifts could participate.

CBA’s traditional Parody Competition, another highlight of the event, was streamed online at all operations. The ten highest-voted parodies continued to the finals. On the last day of the event, a musical performance and the announcement of the winners were live streamed on YouTube. To compete in the contest, employees were asked to submit a parody video up to three minutes long with a script containing tips on coronavirus prevention and general health and safety. Family members and friends who were sheltering in place together were encouraged to join in on the fun. The winners received vouchers that they could trade in for experiences.



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## No room for the virus

The COVID-19 pandemic shut down the world and has affected everyone’s daily lives. CBA spared no effort to keep its operations running while protecting employees and their families at all times.

As a first step in its response, **CBA created a hotline, called É Corona?** (“Is It Corona?”), that employees could use to ask questions about the disease, such as if they were experiencing symptoms they thought could be related to COVID-19. Suspected cases were tested and followed by the Occupational Health department. Confirmed cases were actively monitored via daily phone calls to assess the seriousness of the symptoms.

**Temperature screening** was implemented at the entrances to all facilities. Where the temperature reading was 37.3°C or higher, the individual was instructed to seek external medical attention, with the Health department monitoring their case. Because

many employees commute to and from the workplace on shuttle buses, properly spaced **bus seats have been marked** to ensure employees are social distanced.

Where an employee tested positive for COVID-19, CBA contact-traced all employees who potentially had been near the individual, such as people who rode the same shuttle bus or worked the same shift. People who had been in contact with a confirmed case were immediately quarantined to prevent spreading the virus.

At CBA’s plants and mine sites, employees continued to work on fixed shifts following a decision taken before sheltering in place began. This policy, combined with **employee rotation at offices and some plants** during the pandemic, helped to limit contact between people. It also made it easier to contact-trace people who were in close contact with employees confirmed to have COVID-19.

## As part of a preventive approach, CBA created a crisis committee to design and manage the coronavirus response.

The committee held periodic meetings to monitor and act on developments. A survey was conducted to determine each employee’s level of risk depending on their physical condition (such as age and any individual or family history of disease) and position.

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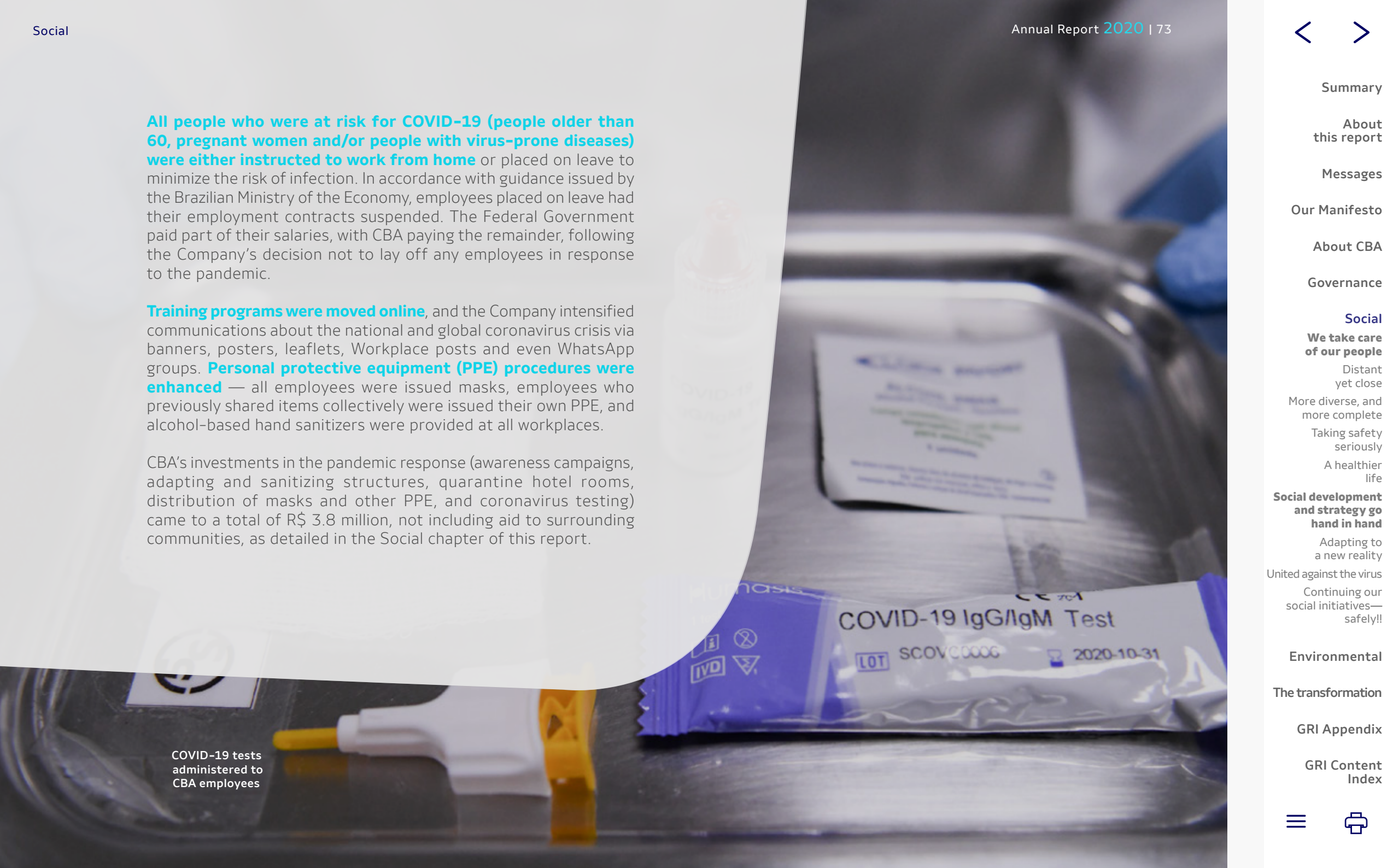
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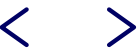

**All people who were at risk for COVID-19 (people older than 60, pregnant women and/or people with virus-prone diseases) were either instructed to work from home** or placed on leave to minimize the risk of infection. In accordance with guidance issued by the Brazilian Ministry of the Economy, employees placed on leave had their employment contracts suspended. The Federal Government paid part of their salaries, with CBA paying the remainder, following the Company's decision not to lay off any employees in response to the pandemic.

**Training programs were moved online**, and the Company intensified communications about the national and global coronavirus crisis via banners, posters, leaflets, Workplace posts and even WhatsApp groups. **Personal protective equipment (PPE) procedures were enhanced** — all employees were issued masks, employees who previously shared items collectively were issued their own PPE, and alcohol-based hand sanitizers were provided at all workplaces.

CBA's investments in the pandemic response (awareness campaigns, adapting and sanitizing structures, quarantine hotel rooms, distribution of masks and other PPE, and coronavirus testing) came to a total of R\$ 3.8 million, not including aid to surrounding communities, as detailed in the Social chapter of this report.

COVID-19 tests administered to CBA employees





## A HEALTHIER LIFE

GRI 403-3, 403-6.

All CBA employees and their dependents are eligible for health insurance with national coverage. In addition, occupational physicians and nurses at the Occupational Health department provide health support to workers, which includes assisting employees on illness or injury leave and referring them to proper treatment and rehabilitation. Under CBA's Occupational Health Surveillance Program (PCMSO, as per Regulatory Standard NR 7), employees who are exposed to risks identified by the Occupational Safety department as part of the Company's Workplace Risk Prevention Program (PPRA, as per NR 9) and in Environmental Reports are referred for supplementary tests and healthcare procedures.

Health indicators are used to assess the results of occupational health services and programs, and to identify opportunities for improvement

and medical conditions needing attention. These include indicators such as population health profiles, episodes of medical and nutritional support, absenteeism and medical leave, employee participation in exercise, and occupational examination results.

In 2018, CBA launched an initiative to encourage employees to improve their quality of life by taking care of their health. The initiative, called Por Você ("For You"), is a wellness program that is open to participation by all employees and their dependents. Program activities span four categories: Exercise, Nutritional Advice, Well-being and Prevention. Services include special discounts at gyms, nutritional advice and support, road races, sports championships and special support for people with hypertension, diabetes, obesity, or mental disorders, and for sedentary people and smokers. Other program initiatives include preventive health campaigns, including flu vaccination, DST/AIDS

awareness, cancer prevention (Pink October, Blue November), healthy nutrition, mental health and hearing health campaigns.

For You currently has 1,700 registered participants across all operations. In 2020 the program was adapted in response to the pandemic, with additional online initiatives to encourage employees to continue taking care of their health when at home.

Because of social distancing requirements, in-person nutrition advice sessions were temporarily suspended. After they were resumed toward the end of the year, 177 sessions were held that helped employees to shed a total of 107.5 kg.

Each year CBA encourages employee participation in road races by paying entry fees for participants in the For You program. Typically 100 to 150 people have participated in these initiatives in previous years. In 2020, to avoid having to forgo these events due to social distancing requirements, the races were organized in a new format of individual, timed runs. Each employee completed the racecourse at their own convenience and sent the results to the event organizers. Employee participation rates were exceptional: 430 employees ran a combined total of 1,500 km in 3, 5 and 10 km runs

### Virtual challenge

Between November and December 2020, CBA ran a virtual "For You Challenge" to encourage employees to either establish or maintain exercise routines. Participants were divided randomly into teams and had to record their exercise activities on an app, earning points as a team. The top-scoring teams in the 28-day challenge received participation prizes. A total of 494 employees signed up for the challenge, including 134 who self-identified as being sedentary. Of these, 84 reported having continued their exercise routines after the challenge. In total, participants engaged in 5,300 exercise sessions, ran or walked 8,750 km, and cycled 17,000 km.



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# Social development and strategy go hand in hand

GRI 103-1, 103-2, 103-3 – 413: Local communities,  
GRI 103-1, 103-2, 103-3 – 203: Indirect economic impacts,  
GRI 103-1, 103-2, 103-3 – 202: Market presence

CBA's purpose is to deliver "Aluminium solutions that transform lives." And that applies to everyone—employees and communities alike—including in social outreach. The Company recognizes that it can contribute to the development of the communities where it operates. CBA has not only the capacity, but a commitment to development. Since the Company's social outreach strategy was revised in 2016, it has guided interaction with communities and investments in the regions where CBA operates in a way that addresses their specific needs. Social outreach initiatives are also aligned with the Company's ESG strategy, in which three 2030 goals have been set that relate to CBA's social legacy:

- \* Achieve 100% of social SLA.
- \* Secure 1-to-1 match funding from co-investors for corporate social investment (i.e. co-investors pledging a dollar for every dollar invested by CBA, to enhance the impact from initiatives)..
- \* Contribute to strengthening recycling cooperatives in Brazil.

Eliton, a Downstream employee, and his daughter, Belle, enjoy running races supported by the For You Program



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Competitiveness Management function currently measures the environmental impacts of each project, working with the Sustainability department.

### ADAPTING TO A NEW REALITY

In 2020, CBA had planned to implement 30 projects across its three pillars of social action. However, with the COVID-19 pandemic and the restrictions on in-person and field meetings, the number of projects was downsized to 18 initiatives. In total, the Company invested R\$ 3.3 million. Most of the funding that would have otherwise gone to projects postponed to 2021 is being used toward the coronavirus response. In 2021, health will be incorporated as a fourth priority pillar for social investment.

**In 2020 CBA invested R\$ 325,000 in health-focused public management support in partnership with the Votorantim Institute**, benefiting the municipalities of Alumínio, Miraí, Muriaé, São Sebastião da Vargem Alegre, Rosário da Limeira, Niquelândia, Divinolândia and Itapissuma. This was in addition to funding allocated to the COVID-19 response.

CBA's approach to social management conforms to the Company's Integrated Management Policy and Social Responsibility Policy, as well as ASI certification requirements. Social initiatives are carried out jointly with the Votorantim Institute, which works to enhance the quality of Votorantim group companies' social investment, provides social program planning solutions and methodologies, and raises funds to expand initiatives.

#### **CBA's social programs are organized around three priority pillars:**

- \* Education development
- \* Public management support
- \* Economic development

Initiatives and investments within these pillars provide capacity building for education and school officials; help to modernize public administration practices in partnership with the Executive and Legislative branches of the municipalities where CBA operates; and advance inclusive business models that create new sources of income and revenue, helping municipalities to achieve economic independence. In addition to the three priority pillars, CBA supports the protection of children's rights by providing capacity building to the Municipal Council for the Rights of Children and Adolescents (CMDCA) so it is better equipped to fulfill its mandate.

CBA has not developed economic impact assessments related to sustainability, and has no plans to do so at this time. The

## CBA's social investment (in R\$)

	2018	2019	2020
Funded by CBA	3,778,000	3,658,000	1,093,438
Funded by Instituto Votorantim	785,000	1,124,000	1,263,000
CBA-funded as regulatory requirement	-	-	-
Contributed by Instituto Votorantim	140,000	140,000	147,000
BNDES onlending	-	946,000	-
VSA COVID-19 Fund	-	-	5,200,000
CBA Match Funding for COVID-19 Response	-	-	2,100,000
Tax-deducted funds	349,000	330,000	600,000
<b>Total</b>	<b>5,052,000</b>	<b>6,198,000</b>	<b>10,403,438</b>

### Operations with implemented local community engagement, impact assessment, and development programs GRI 413-1

	2018	2019	2020
Total number of operations	13	13	13
Total operations with programs implemented	7	6	8
Percentage of operations with programs implemented	53.8%	46.2%	61.5%

The Inter-municipal  
Seamstress  
Association of Santo  
Antônio do Rio Preto  
(CONFISARP), in Mirai



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## WHEREVER WE OPERATE

In its mining operations, CBA uses world-class methodologies and practices to not only mitigate potential environmental impacts, but also benefit and create value for the communities where the Company operates.

In the Primary Aluminium business, CBA's focus is on supporting communities' economic independence, while also strengthening local recognition of the company and its social license to operate. In the Downstream business, CBA is developing an initiative to increase value creation across the supply chain.

CBA works to promote job creation and entrepreneurship in all locations where the Company operates, while its Public Management Support programs help to modernize public administration or implement municipal programs, such as master plans or basic sanitation plans.

## UNITED AGAINST THE VIRUS

GRI 203-1, 203-2

In 2020, CBA's Public Management Support initiatives became even more important because of the pandemic, and had to be adapted to increase their focus on health issues.

Refurbished ventilators for donation

Cities around the world have been required to develop and implement crisis plans in response to the COVID-19 crisis, and in some municipalities where CBA operates, the Company's support has been vital in helping to organize the pandemic response. With support from the Votorantim Institute, and with a sense of urgency, CBA reorganized its efforts to focus on donations of personal protective equipment (PPE) for healthcare workers, ICU equipment—such as ventilators—for hospitals, telemedicine services, and three months' worth of food stamps for nearly 6,000 families.

When the pandemic broke out, the Votorantim Institute established a partnership with Beneficência Portuguesa, a healthcare provider in São Paulo. With its medical and technical expertise, the institution provided comprehensive support and advice to help organize a rapid response amid the uncertainties.

Crisis preparedness and responsiveness were two of the key benefits from the partnership. A municipal vulnerability index was developed to assess conditions in each city. CBA and the Votorantim Institute were then able to prioritize and allocate resources to address the most pressing needs.

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### An effective response

GRI 203-1

 **18**  
municipalities  
prioritized

**R\$ 7.3**   
million  
invested  
in COVID-19-related  
initiatives

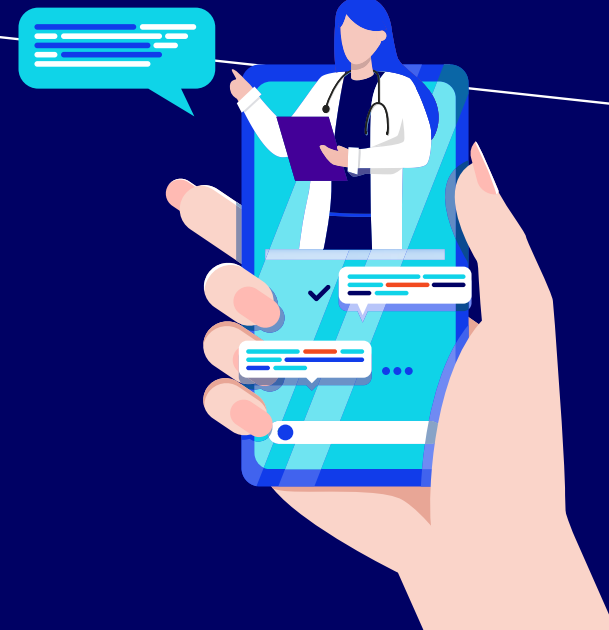
 **14,000**  
health  
professionals  
benefited with PPE

**R\$ 2.7**   
million  
allocated to  
initiatives such as meal  
vouchers for 5,949 families  
in 12 municipalities

 **800,000**  
residents  
indirectly benefited

Innovative telemedicine initiatives were implemented in Muriaé, Alumínio and São Roque.

Sorocaba, Igarassu, Poços de Caldas, Cataguases, Niquelândia, Itapissuma and Itamaracá received equipment to help set up ICUs for regular hospitals and field hospitals.



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Downstream employees at the Alumínio plant with milk they collected for donation

### The power of volunteering

The Volunteering Challenge promotes healthy competition among direct and third-party employees at Votorantim group companies. Participants select schools or charities where they would like to engage in volunteer work. In a year in which many people were especially vulnerable because of the COVID-19 pandemic, employee engagement in helping those in need became all the more meaningful. At CBA, the volunteering program saw a significantly higher level of participation than in 2019, with all employees demonstrating an eagerness to help, an example of solidarity, mutual cooperation and mobilization capacity.

They were able to contribute in three key ways:

- \* by donating time (e.g., shopping for groceries for people unable to leave their homes while in quarantine))
- \* by donating talent (e.g., teaching music, often online)
- \* by supporting a cause (e.g., donating time or money to an organization in Brazil)



254 initiatives



62,000 people

directly or indirectly benefited

CBA ranked first place for outstanding performance in Engagement among the Votorantim companies participating in the Volunteering Challenge in 2020. The Company also ranked second place in the Medium-Scale Strategic Initiatives category, and third place in the Large-Scale category.



1,882 employees

participated, more than twice as many as the 774 in 2019

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### REFURBISHED VENTILATORS

CBA was involved—with one of its employees as sponsor—in a partnership between the Votorantim Institute and the National Industrial Training Service (SENAI) to repair ventilators. Technicians trained at SENAI repaired the ventilators and the Institute paid for the parts and post-repair calibration and certification. The refurbished ventilators were then returned to their original hospitals for use. The initiative began in São Paulo and later expanded to five other states: Pernambuco, Goiás, Pará, the Federal District and Mato Grosso. A total of 287 ventilators had been refurbished by January 2021.

### CONTINUING SOCIAL INITIATIVES— SAFELY!

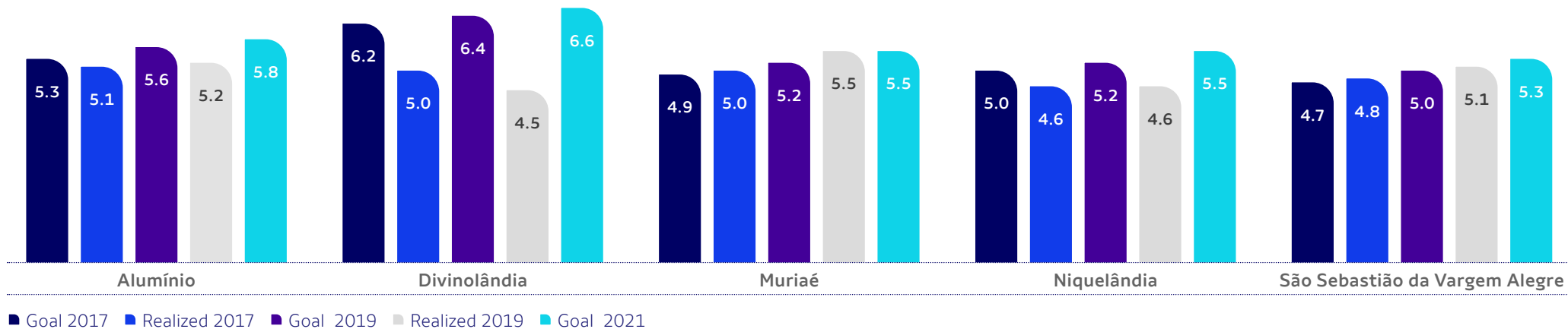
Besides its efforts to assist communities during the COVID-19 pandemic, other of CBA’s social programs were continued in 2020, and were re-planned to help support the response to the pandemic and its effects.

**Partnership for Education (Parceria pela Valorização da Educação, PVE)** – PVE investments were maintained in all five host municipalities: Alumínio (SP), Divinolândia (SP), Muriaé (MG), São Sebastião da Vargem Alegre (MG) and Niquelândia (GO). When schools were closed, CBA supported

municipal officials in setting up distance learning for public school students, and organized webinars with specialists to advise municipal education secretaries. The Federal Government Basic Education Development Index (IDEB) for 2019, as measured in 2020, improved in three of the five municipalities CBA supports—Alumínio, Muriaé and São Sebastião da Vargem Alegre—and was level in Niquelândia with 2017 (see the charts for further details). This program also made a significant contribution to supporting municipal education secretaries in setting up distance learning, and in organizing an action plan for resuming classes.

### Basic Education Development Index in municipalities CBA supports

Final years



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## NUMBER OF INDIRECT STUDENTS BENEFITED BY THE PVE

### • Alumínio

# 2,774

### • Divinolândia

# 1,165

### • Niquelândia

# 4,942

### • Muriaé

# 8,000

### • São Sebastião da Vargem Alegre

# 477

Sources: Alumínio, Divinolândia, Niquelândia and SSVVA – [www.qedu.org.br](http://www.qedu.org.br); Muriaé: Municipal Education Department.



## Environmental Education Program (Programa de Educação Ambiental, PEA) –

Because of the Covid-19 pandemic, in 2020 the Company continued the Program's eight initiatives, but used digital resources so that both internal and external stakeholders could participate. The biggest challenge was in adapting initiatives to the online environment using platforms such as Workplace, e-CBA, YouTube and WhatsApp. The topics covered included sustainable mining, Atlantic Forest fauna, forest fire prevention, environmental preservation and conservation of springs, the United Nations (UN) Sustainable Developing Goals (SDGs), sustainability at home, waste, water resources and environmental education technology. The effort was worth it: more than 8 thousand participations were recorded in the areas of influence of the facilities in Poços de Caldas, Itamarati de Minas, Miraí and Barro Alto.

## Votorantim Program for Childhood and Adolescence (Votorantim pela Infância e Adolescência, VIA) –

In Alumínio and Niquelândia, VIA program funding was repurposed in 2020 to support the COVID-19 response, with the program playing a crucial role in protecting the rights of children and adolescents while sheltering in place because of the pandemic.

## Economic Development Plans –

The schedule of CBA's "Alumínio 50 Years" (*Alumínio 50 Anos*) project was affected by the COVID-19 pandemic, but the initiative continued to engage with communities using digital formats. The project had already developed a future vision based on inputs from community meetings before the pandemic (between January and February

2020), and is preparing to implement the development plan in the first half of 2021, using digital tools and meeting formats. Work on the Economic Development Plan for Niquelândia was put on hold in 2020 and will be resumed in 2021.

**Economic development** – Despite the pandemic, the following initiatives within this social investment pillar continued to receive support remotely in 2020, generating income for participants. CBA's three economic development initiatives are within the ReDes program, a partnership with the Brazilian Development Bank (BNDES) to promote sustainable development by providing technical and financial support to strengthen inclusive value chains that can generate income opportunities:

- \* Intermunicipal Seamstress Association of Santo Antônio do Rio Preto, in Miraí (MG): 22 direct beneficiaries;
- \* José Marti Cassava and Cassava Product Association, in Niquelândia (GO): 18 direct beneficiaries;
- \* Doces Vidas Acorda, a rapadura sugar production association in Niquelândia: 12 direct beneficiaries.

These initiatives all achieved their established income generation goals, which was especially important in the context of the pandemic.

GRI 203-2



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### OTHER CBA INITIATIVES

#### Lab Cidadania (“Civics Lab”):

an initiative run by Votorantim S.A. and its portfolio companies, with support from Instituto Votorantim, that develops innovative solutions for promoting a democratic culture at the municipal level.

Presenting the Civics Lab project to the municipal government of Mirai (Photo taken before the COVID-19 pandemic)



**1,400**  
people  
participated directly

**100,000**  
people  
benefited indirectly by  
political education  
awareness-raising and  
communication activities

**300**  
students  
benefited directly  
by educational  
content

Source: CBA data.

#### Engaja:

a methodology that uses management tools developed by the Votorantim Institute and implemented by Votorantim portfolio companies to improve engagement with the communities where they operate. The goal of the program is to strengthen risk management and leverage opportunities created by engagement with local stakeholders on different fronts.

**39**  
farmers  
directly benefited

Source: CBA data.

**Technical Assistance – Grape Growing:** technical consulting to support farmers in improving produce and yields, helping to improve livelihoods in agriculture.

**21**  
farmers  
directly benefited

Source: CBA data.

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# Environmental

**We make a positive impact on our environment**

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The Legado das  
Águas reserve





A eucalyptus plantation in a reclaimed mine area

**Making aluminium for the benefit of all. It is with this in mind that, since our inception, we have made a genuine effort to positively impact society and the environment.**









**MATERIAL TOPICS RELATED TO THIS CHAPTER:**

- Waste management
- Climate change
- Efficient and renewable energy
- Dam safety management
- Water stewardship
- Protection of biodiversity
- Materials efficiency and aluminium recycling

**GLOBAL COMPACT PRINCIPLES ADDRESSED IN THIS CHAPTER:**

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

**SDGS RELATED TO THIS CHAPTER:**

<b>6</b> CLEAN WATER AND SANITATION  (6.3, 6.4, 6.5, 6.6)	<b>7</b> AFFORDABLE AND CLEAN ENERGY  (7.2, 7.3)	<b>8</b> DECENT WORK AND ECONOMIC GROWTH  (8.4)	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE  (9.4)	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES  (11.5, 11.b)	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION  (12.2, 12.4, 12.5)	<b>13</b> CLIMATE ACTION  (13.1, 13.3)	<b>15</b> LIFE ON LAND  (15.1, 15.2, 15.3, 15.5, 15.a)
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## Respect for nature

CBA is actively engaged around preserving biodiversity and tackling climate change. The Company is an industry leader in mine reclamation and in low-carbon aluminium production, and exercises good stewardship of water, energy and waste. By doing so, CBA is charting a path to industry leadership in sustainability.

### GLOBAL BEST PRACTICES

One of the greatest testaments to CBA's commitment to sustainability is the Company's certification against the ASI Performance Standard and Chain of Custody Standard, which was first obtained in 2019 and maintained in 2020. This certification attests that CBA's aluminium conforms to internationally recognized social, environmental and governance standards across the aluminium lifecycle. CBA was the first aluminium producer in the Americas to receive certification to both standards concurrently, covering the Company's mines, an aluminium plant, corporate offices, and all product types. In 2020 CBA's operations underwent desktop and on-site audits for continued ASI certification, and the Itapissuma operation

### Aluminium foil produced by CBA

was integrated into CBA's certification against the ASI Performance Standard. Metalex is currently preparing to undergo ASI certification audits in 2021. The Itapissuma operation also plans to obtain certification against the Chain of Custody Standard for its products. CBA's goal for 2030 is for 100% of Aluminium Business operations to be certified.



#### CBA's ASI certification currently covers:

- \* **Its Corporate Offices**, in São Paulo (SP);
- \* **Three bauxite mining operations** in Minas Gerais—Poços de Caldas, Itamarati de Minas and Mirai;
- \* **Processes at the plant in Alumínio (SP):** Refinery, Smelters, Casthouses and Downstream;
- \* **Processes at the Itapissuma mill (PE):** Casthouse and Downstream;
- \* **CBA's complete product portfolio**, from billets and ingots to sheet, rolled products and anodized and coated extruded profiles.

## The value of recycling

GRI 103-1, 103-2, 103-3 – 301: Materials

Aluminium is a unique metal. It combines light-weight strength with flexibility, plus infinite recyclability while retaining its properties. Aluminium is recognized as a solution for developing less resource-intensive and more circular supply chains that re-utilize materials and minimize waste and environmental impact. Reusing materials is an important way to reduce pressures on the world's natural resources, while also minimizing waste from discarding end-of-life products.

This makes recycling process scrap one of the most important processes at CBA. Recycling provides an additional source of raw materials in the value chain by reusing scrap produced on- and off-site. This supports not only higher production volumes but also increased cost efficiency. It also provides savings on raw materials, inputs and electric power, generating higher value-added aluminium and reduced environmental impact.

In a process known as remelting, process scrap is recycled into new products. Scrap recycling is carried out at Alumínio, Itapissuma and on a dedicated basis at Metalex. Located in Araçariçuama (SP), Metalex recycles internal aluminium scrap as well as scrap purchased externally or supplied by customers and partners. In 2020, Metalex reformulated its brand positioning to underline its commitment to sustainability and innovation.

The Metalex facade in Araçariçuama (SP)

### New brand positioning:

- \* **Market:** Metalex is a CBA company with a market-leading position in aluminium scrap recycling.
- \* **Benefits:** with process excellence and efficient service, CBA produces a wide range of conventional and premium alloys for a variety of industries..
- \* **Results:** by acting with integrity, a focus on innovation and sustainable practices, CBA is able to create value for customers, the market and broader society.

The rebranding effort highlighted attributes such as customer proximity, customer service and product quality. The aim was to reframe the brand so that it reflects market expectations, and positions Metalex as a sustainable company. The new logo conveys a sense of lightness, while the color green signifies environmental stewardship and a more sustainable future.

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## Expanded recycling

Metalex will invest R\$ 50 million in a new scrap treatment line that will allow it to process a wider range of end-of-life scrap (window and door frames from demolition sites, car parts, discarded equipment, etc.) and process scrap. This will enable CBA to expand its recycling capacity to produce even more sustainable billet products.

In the first phase of the expansion, a new sidewall furnace will be installed that will expand billet production capacity from 75,000 to 90,000 metric tons per year once the project is complete in 2021. In the second phase, the new recycling line will increase the ratio of scrap in the billet production mix from 60% to 80%. The new recycling line is scheduled to start operation in 2023.

In addition to increased efficiency and productivity, the project will also help to minimize environmental impacts, with process upgrades further reducing the facility's carbon footprint. When the complete line is fully operational, overall greenhouse gas (GHG) emissions across the value chain, including mining, will be as low as 1.4 t CO<sub>2</sub>e per metric ton of aluminium produced when only CBA-produced ingots are used to supplement scrap materials. This project is fully aligned with the Company's strategy of supplying low-carbon aluminium to the market.

**Recycling is so important to CBA that it has set specific recycling goals in its ESG strategy: to increase the ratio of aluminium recycled from industrial and end-of-life scrap at Metalex to 80%; to increase the ratio of aluminium billets recycled from industrial and end-of-life scrap at the Alumínio (SP) plant to 50%; and to increase the ratio of scrap collected from external sources for recycling.**

### Recycled input materials used

GRI 301-2

	2018		2019		2020		
	Plant	Metalex	Plant	Metalex	Plant	Metalex	Itapissuma
<b>Customer scrap recycled (t)</b>	24,483	43,093	19,389	42,599	15,048	42,752	2,459
<b>Third party-purchased scrap (t)</b>	12,765	838	4,372	913	3,283	88	0
<b>Total raw materials consumed (t) – Includes molten aluminium, ingots and scrap</b>	380,302	70,310	337,947	69,288	386,087	76,837	70,770
<b>Percentages recycled</b>	9.8%	62.5%	7.0%	62.8%	4.45%	55.8%	3.5%
	18.0%		16.5%		11.1%		

Note 1: Alumínio plant – includes only end-of-life scrap. Remelted customer scrap not included.

Note 2: information on the Alumínio plant was compiled from Rel\_Bol\_Fun; Metalex: information compiled from the Production Journal spreadsheet; Itapissuma: information compiled from Caster and Smelter Production Control spreadsheets and MES Discoverer reports.

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## IMPROVED SCRAP MANAGEMENT

A recycling working group is responsible for planning and approving scrap purchases and sales, and for managing inventories.

In 2020, as part of an effort to maximize consumption of recycled materials and reduce inventories, CBA blended slow-moving with fast-moving inventories to increase consumption of internal process scrap. The Company also started implementation of an app-based inventory management and material handling system (Smart) to manage process, customer and third-party scrap. The system has the advantage that it supports plant-wide tracking of material movements, providing a real-time view of available inventories. In addition, CBA implemented a Daily Routine Management (GRD) program to monitor scrap stocks, further enhancing inventory management.

Two internal and independent audits during the year assessed the effectiveness of these control systems.

Feeding the  
furnaces at the  
Casthouse



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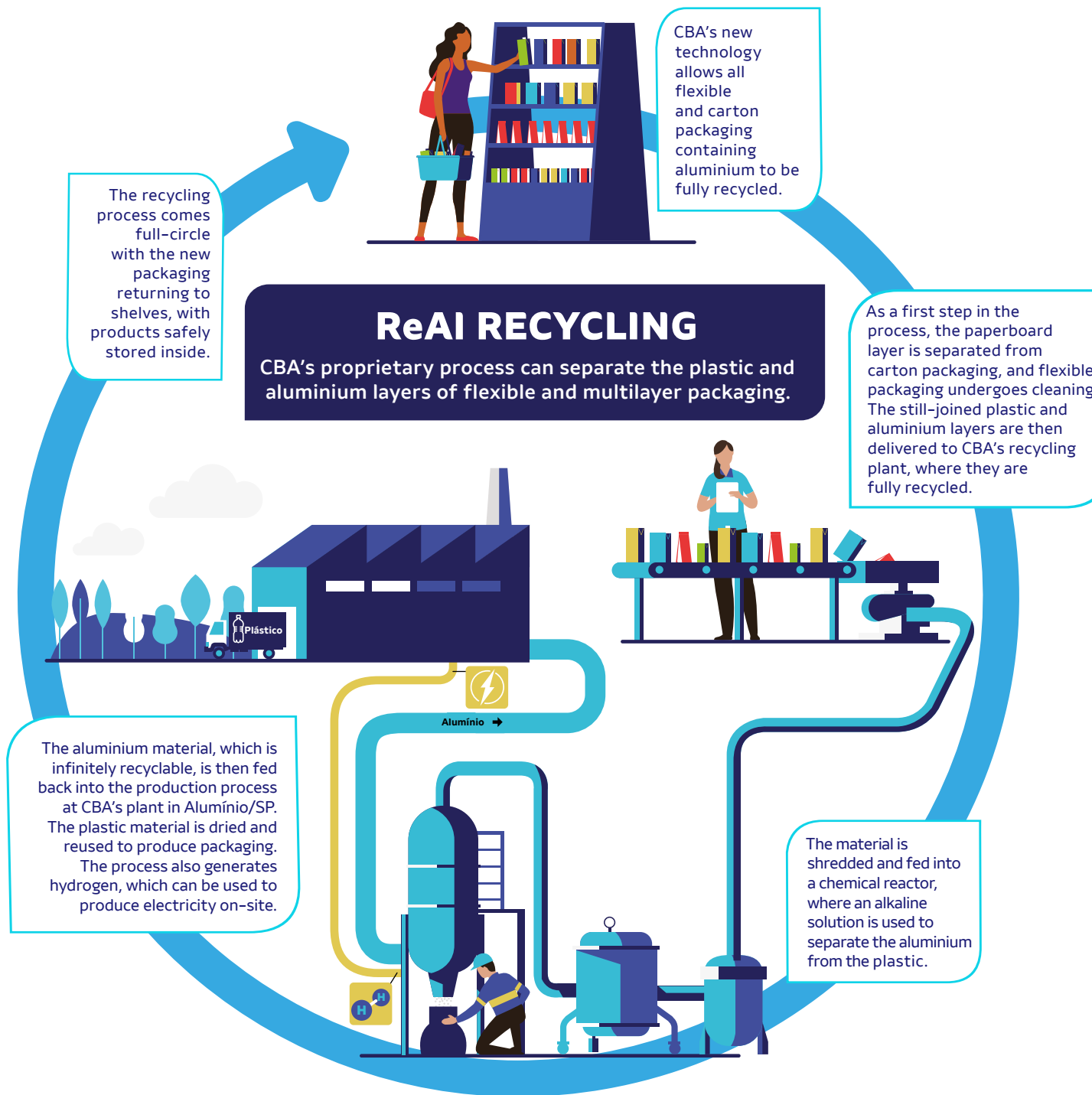
## INNOVATION IN RECYCLING

In 2020 CBA made an important breakthrough that will enable multilayer packaging containing aluminium to be fully recycled. Currently only the paper portion of multilayer cartons, for example, can be recycled back into the process. The plastic and aluminium are reprocessed together, creating new materials. This poses a major obstacle from a circular-economy perspective. Flexible packaging, another multilayered material, is non-recyclable with current technologies and is often disposed of in landfills.

The innovative physical and chemical process developed at CBA—dubbed ReAl—uses an alkaline solution that can isolate the plastic from any of these packaging materials, allowing the aluminium to be recycled. Unlike aluminium, plastic will not react in an alkaline solution, and can be cleanly removed from the process and then fully recycled. In addition to the benefit of recycling the aluminium and plastic layers, the process will generate hydrogen that can be used to produce clean energy on-site.

The proprietary process will create added value for the entire packaging supply chain and its different actors, at low operating costs.

CBA's ReAl technology has now been patented and the recycling plant is due to begin operating in 2022, increasing packaging recycling rates in line with Brazil's National Solid Waste Policy. Learn more about the initiative in the infographic opposite.





Scrap bales for recycling at Metalex

## Waste management

GRI 103-1, 103-2, 103-3 – 306: Waste, 306-1, 306-2

Depending on their nature and characteristics, process materials are either reused internally, treated using new technologies, or recycled externally to the extent possible. Measures are implemented to minimize waste generation and impacts from waste disposal, in accordance with the Brazilian Solid Waste Policy.

Waste management activities include storage, protection to prevent

contamination, segregation and disposal in dams and at other waste recipients, including customers, suppliers and trucking companies. Potential impacts include liability for contamination or noncompliance with legal requirements.

In 2020, CBA created a dedicated team to manage and enhance environmental and financial gains from byproducts. Their mission is to capture value from waste through either internal reuse or sale of byproducts. A work plan has been developed and priorities set. Working under

the Environment department, the team also includes members from the Procurement and Technology departments, who meet on a regular basis to discuss projects and the amounts generated and sold of each waste material, especially those creating the most significant impacts on the business.

Below are three examples of successful value creation from waste in 2020:

- \* **Waste from tank fouling at the Alumina Refinery** – these materials are now being reused in the grinding stage instead of being disposed of at the dam.
- \* **Refractory materials from Casthouse furnaces** – these materials were previously disposed of at an on-site landfill for inert materials, and are now being sold for reuse in other processes.
- \* **Spent potlining** – a method was developed for segregating this material into a fraction that can be used internally and another that can be sold.

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Where byproducts are sold, CBA ensures that all legal and internal management requirements are followed so that these materials are disposed of compliantly, and all companies involved in the process undergo periodic audits by the CBA team to ensure they are compliant with statutory environmental requirements.

One important initiative that has helped to significantly reduce waste volumes was the recently commissioned oil distillation plant. After a three-year project—including design, construction and commissioning—the plant began operation in the Downstream division of the Alumínio plant in August 2020, and achieved process stability in December.

In addition to improving quality in the cold rolling process, the new plant will reduce consumption of cold rolling oil by treating spent oil for reuse internally. It will also reduce the amount of waste generated by the cold rolling process—spent rolling oil was previously sent for external disposal. As of December 2020, more than 330,000 liters of cold rolling oil had been treated at the plant for reuse.

Bauxite mine tailings and red mud from the Refinery, which are stored in residue storage dams, are also waste materials from our operations. CBA is currently carrying out studies toward the reuse of bauxite mine

tailings in the building and construction industry, in a collaboration with a startup being developed via the Mining Hub. Research is also being conducted into the use of bauxite residue in the production of cement.

CBA's goal for 2025 is to reduce gross waste volumes at its mines and plants by 35% (from a 2017 baseline). Waste management is handled by an outsourced company, which submits a managerial report on activities

every month. The outsourced company schedules collections for qualified recipients authorized by CBA's environmental sector.

Waste management practices are evaluated in audits and by benchmarking the Company against best practices in other major industries. CBA's technology team also collaborates with external experts in developing applications for waste materials in both internal and external processes.

## Waste generated by composition

(in tons)

GRI 306-3

	2020		
	Aluminium	Nickel	Total
<b>Hazardous waste (class I)</b>	<b>6,821</b>	<b>2,858</b>	<b>9,679</b>
<b>Nonhazardous waste (class II)</b>	<b>1,256,206</b>	<b>393</b>	<b>1,256,599</b>
Non-inert waste (class II A)	1,247,636	227	1,247,863
Inert waste (class II B)	8,571	165	8,736
<b>Total</b>	<b>1,263,027</b>	<b>3,250</b>	<b>1,266,277</b>

*Note 1: hazardous waste materials generated at CBA include: general contaminated waste, oil, solvents, batteries, used lubricating oil, healthcare waste, HMM sold to Anglo; corrugated asbestos roofing, diatomite/dirty oil/aluminium slag/oil-impregnated solid waste. Nonhazardous waste: dross from the scrap remelting process, plastic/cardboard/used refractory materials/bronze, iron, copper and aluminium scrap/alkaline water/industrial effluents/food waste/water treatment sludge/algae/refractory lining/resin waste/general waste/electronic scrap, wood.*

*Note 2: data compiled from invoice reports and information provided by the department where the waste is produced. In 2020, contaminated materials (PPE, rags and other materials) were recorded by weight. The information was compiled from disposal certificates.*

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## Waste diverted from disposal, by recovery operation

(in tons)

GRI 306-4

	2020					
	Aluminium		Nickel		Total	
	Within the organization	Outside the organization	Within the organization	Outside the organization	Within the organization	Outside the organization
<b>Hazardous waste</b>						
Preparation for reuse	331	2,507	0	948	331	3,455
Recycling	0	1,473	0	12	0	1,485
Other recovery operations	0	549	0	1,800	0	2,349
<b>Total hazardous waste</b>	<b>331</b>	<b>4,529</b>	<b>0</b>	<b>2,760</b>	<b>331</b>	<b>7,288</b>
<b>Nonhazardous waste</b>						
Preparation for reuse	17,196	30	0	0	17,196	30
Recycling	0	34,742	0	170	0	34,911
Other recovery operations	0	2,046	0	0	0	2,046
<b>Total non-hazardous waste</b>	<b>17,196</b>	<b>36,817</b>	<b>0</b>	<b>170</b>	<b>17,196</b>	<b>36,987</b>
<b>Total waste diverted from disposal</b>						<b>61,802</b>

Note: the method of disposal is determined by the type of waste and legal requirements.

Scrap recycled at  
CBA plants



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## Waste directed to disposal, by disposal operation

(in tons)

GRI 306-5

	2020					
	Aluminium		Nickel		Total	
	Within the organization	Outside the organization	Within the organization	Outside the organization	Within the organization	Outside the organization
<b>Hazardous waste</b>						
Incineration (with energy recovery)	0	874	0	0	0	874
Incineration (without energy recovery)	0	2	0	0	0	2
Landfilling	0	1	0	2	0	3
Other disposal operations	0	1,085	0	0	0	1,085
<b>Total hazardous waste</b>	<b>0</b>	<b>1,962</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1,964</b>
<b>Nonhazardous waste</b>						
Incineration (with energy recovery)	0	5,454	0	10	0	5,465
Incineration (without energy recovery)	0	0	0	0	0	0
Landfilling	26	309	28	190	54	500
Other disposal operations	1,192,485	0	0	0	1,192,485	0
<b>Total non-hazardous waste</b>	<b>1,192,511</b>	<b>5,764</b>	<b>28</b>	<b>201</b>	<b>1,192,539</b>	<b>5,965</b>
<b>Total waste directed to disposal</b>						<b>1,200,468</b>

Note: the method of disposal is determined by the type of waste and legal requirements.



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The difference between total waste generated and disposed of in 2020 is due to the disposal of legacy waste from previous years and on-site storage for subsequent disposal. In 2020, the GRI amended Disclosure 306 – *Waste and its related calculations*, with a distinction now being made between waste generated and waste disposed of. For this reason, CBA is presenting historical from previous years.

## Helping the climate

GRI 103-1, 103-2, 103-3 – 305: Emissions

Climate change is today one of society’s chief concerns. The aluminium industry is generally

seen as carbon-intensive due to its consumption of fossil fuels and electricity in production. Because CBA produces low-carbon aluminium—with most of its electricity requirement sourced from clean hydroelectric dams owned by the Company—this provides a competitive advantage. In 2020 CBA incorporated climate change into its methodology for assessing strategic and operational risks.

CBA has also developed KPIs to track and compare its greenhouse gas (GHG) emissions against competitors. Although the Company’s emissions are among the lowest in the industry, CBA has undertaken efforts to reduce them

even further. The managers of CBA’s most emissions-intensive operations (Alumina Refinery, Smelters, Casthouse, Metalex and Asset Management) now have GHG reduction metrics in their variable compensation targets.

Concurrently, CBA has published greenhouse gas emissions inventories as part of the Brazilian GHG Protocol Program. As in previous years, the Company’s inventory report in 2020 was awarded Gold level reporting status, a distinction given to inventories that provide complete scope 1 and 2 information and have been independently assured as to the traceability and reliability of reported data.



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## GHG emissions

(in thousands of metric tons of CO<sub>2</sub>eq)

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

	2018	2019	2020
<b>Direct GHG emissions</b>			
Stationary combustion	456.1	421.6	284.7
Mobile combustion	13.3	17.6	15.3
Fugitive emissions	4.9	6.5	4.2
Industrial processes	862.1	813.5	759.6
Agricultural	0.01	0.1	0.08
Solid waste	0	0	0.001
<b>Total scope 1</b>	<b>1,336.5</b>	<b>1,259.2</b>	<b>1,063.9</b>
<b>Biogenic CO<sub>2</sub> emissions</b>	<b>1.9</b>	<b>5.4</b>	<b>2.3</b>
<b>Indirect GHG emissions</b>			
Electricity	17.8	9.8	66.0
Indirect transmission and distribution losses	0.0	0.0	1.3
Purchased heating	0.0	0.0	5.1
<b>Total scope 2</b>	<b>17.8</b>	<b>9.8</b>	<b>72.5</b>
<b>Biogenic CO<sub>2</sub> emissions</b>	<b>0.0</b>	<b>0.0</b>	<b>266.2</b>
<b>Other indirect GHG emissions</b>			
Transmission and distribution Upstream	28.7	25.0	22.2
<b>Total scope 3</b>	<b>28.7</b>	<b>25.0</b>	<b>22.2</b>
<b>Biogenic CO<sub>2</sub> emissions</b>	<b>0.0</b>	<b>2.6</b>	<b>2.6</b>

Note: the gases covered by the GHG Protocol tool are: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub> (no NF<sub>3</sub> emissions were produced). The method used to consolidate emissions was operational control. Scope of disclosure for scopes 1 and 2: Alumínio (Aluminium Plant), Metalex, Itapissuma, São Miguel Paulista, Niquelândia, Mirai, Itamarati de Minas and Poços de Caldas. Scope 3 information is for Alumínio (Aluminium Plant) only, relating to bauxite transportation (by rail and road). Information about restatements of emissions data is provided in the GRI Content Index, under disclosure 102-48.

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## Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions

(in metric tons)

GRI 305-7

	2017	2018	2019		2020				
	Total	Total	Plant	Metalex	Total	Plant	Metalex	Itapissuma	Total
Nitrous oxides (NOx)	649	330	361	32	393	253	11	61	325
Sulfur oxides (SOx)	99	50	58	2	60	33	2	1	36
Volatile Organic Compounds (COVs)	1	4	-	4	4	-	1	8	8
Particulate Matter (PM)	1,376	1,063	1,069	3	1,072	907	4	27	938
Total fluoride	113	160	157	-	157	172	-	-	172

Note: for fluoride and PM emissions from smelting operations, data was calculated as the average for all sources, multiplied by total production in the year. For boilers (oxides), data was calculated as the average in kg/h on a sampling basis times the number of running hours in the year. For Metalex, the data is derived from stack emissions monitoring. At Niquelândia there were no fixed-source emissions in 2018 as production was curtailed. Data for the Itapissuma operation were included in 2020.



In 2020 CBA achieved significant reductions in NOx (21%), SOx (69%) and PM (14%) Performance is satisfactory, with all measured items within the ranges permitted by applicable regulations, and with the start of operation of the biomass boiler, further reductions were achieved in PM, NOx and SOx emissions.

A biomass boiler to produce steam at the Alumina department

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## Emissions intensity

(in t CO<sub>2</sub>e/t Al)

GRI 305-4

	2019	2020
<b>Casthouse production</b>	3.47	3.08
<b>Semi-fabricated aluminium</b>	5.14	4.67
<b>Smelters – molten aluminium</b>	2.55	2.66

*Note 1: the calculation includes scope 1 and 2 emissions (market-based). Metrics used for this disclosure: emissions are reported only for the Aluminium Business (Mines and Aluminium Plant) with cast house production as the denominator (3.08t CO<sub>2</sub>e/t casthouse Al) and proportional emissions from the Downstream Business with semi-fabricated products as the denominator (yielding 4.67t CO<sub>2</sub>e/t semi-fabricated Al). Scope 1 and 2 emissions data were also included for the Smelters only, as this data is globally comparable, unlike the metrics above, which are compared internally (2.66 t CO<sub>2</sub>e/t primary Al).*



In terms of gross emissions, scope 1 and 2 emissions decreased by 13.3% in 2020, despite the inclusion of the Itapissuma rolling mill.

The main factor reducing scope 1 emissions was the implementation of the Biomass Boiler, which significantly reduced natural gas consumption at the Alumina Refinery, which in turn drove down scope 1 emissions. In addition to the Biomass Boiler, this figure was also impacted by lower production.

Scope 2 emissions, however, did rise, although with little significance in relation to the scope 1 reduction presented. Owned by a third party, the Biomass Boiler’s emissions are recorded in scope 2 as thermal energy purchases.

There was also a negative impact on scope 2 emissions due to the 98% decrease in 2019 to 81.4% in 2020 of electricity from traceable renewable sources to supply the Aluminium operation. The company is assessing the acquisition of certificates to trace electricity purchased from renewable sources to offset this increase.

Scope 3 emissions contracted by 10% on 2019 due to the lower consumption of diesel oil in bauxite transportation. This reduction reflects the lower production in the period.

Compared with the global industry average, CBA’s emissions performance is highly competitive as CBA’s electricity requirement is largely derived from clean energy sources. This differential helps lower electrolysis emissions, which is the greatest consumer of energy in aluminium production. For the sake of comparison, the global average as reported by the International Aluminium Institute (IAI) is 12 tCO<sub>2</sub>e/t Al, compared to 2.66 tCO<sub>2</sub>e/t Al at CBA. However, compared to the Company’s historical emissions, our performance worsened in the year because of the aforesaid renewable energy issues.

When benchmarked against GHG emissions in the global aluminium industry, CBA is a top performer. Under the ASI Performance Standard, for example, operations generating emissions higher than 8 metric tons of CO<sub>2</sub>e per metric ton of primary aluminium in the electrolysis process are required to present a reduction plan in order to receive certification. At CBA, emissions from the electrolysis stage are 2.66 tCO<sub>2</sub>e/t Al, well below the ASI threshold.

CBA also performs well against statistics published by the CRU. According to CRU data, the Company’s smelter GHG emissions are in the first—and lowest—quartile on a global basis.

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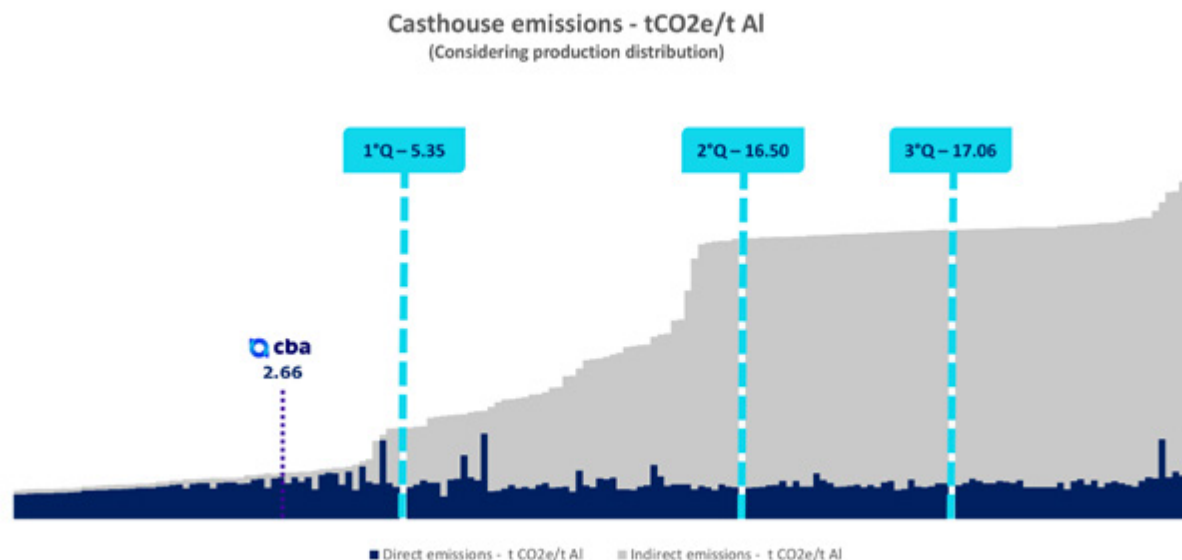
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But despite CBA's excellent emissions performance, the Company continues to work toward its target of reducing gross greenhouse gas emissions from its mines and plants (scope 1 and 2) by 16% by 2025 from a 2017 baseline. We achieved the target in 2020, decreasing emissions by 17.6% on 2017

With the introduction of CBA's ESG 2030 strategy, the reduction target has become even more ambitious: a 40% average decrease for cast products, from the mining stage, in relation to the 2019 rates. Other goals as part of this strategy include creating a carbon-neutral product line, developing a plan to become emissions-neutral by 2050, and developing a climate change adaptation plan.

In 2020 CBA newly joined the Science Based Targets initiative, committing to set and meet targets aligned with limiting global temperature rise. The Science Based Targets initiative, on

### Smelters emissions in 2020



Source: CRU - Smelter Cost Model CRU (2020)

which this commitment is based, is a joint initiative of the UN Global Compact, the World Resources Institute and the World Wide Fund for Nature

(WWF) to enable companies to set ambitious GHG reduction targets that can effectively contribute to mitigating impacts from climate change. Only a handful of primary aluminium manufacturers globally have committed to this ambition, which sets CBA apart as a leader in climate change action.



Ingots produced at the Alumínio plant

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Further strengthening this commitment, in 2020 CBA responded for the first time to the CDP's climate change disclosures questionnaire, one of the most widely recognized by global investors. The Company actively participated in initiatives as part of the CDP's Benchmark Club program, and worked to better structure its climate-related initiatives. **As a result, CBA received a leadership-level score of A-, the highest possible rating for organizations making non-public disclosures.**

Examples of new climate change initiatives that positively affected the Company's CDP rating include:

- More detailed planning of initiatives to minimize climate risks and optimize opportunities.
- Calculation of emissions by product and detailed assessment of impacts from emissions reduction projects.
- Assessment of climate change scenarios to inform adaptation measures (in partnership with the Center for Sustainability Studies at Fundação Getulio Vargas (FGV))
- A study to assess the impacts on CBA from carbon pricing in Brazil (in partnership with the FGV Center for Sustainability Studies)
- Raising employee awareness and helping to engage industries around tackling climate change.

To keep abreast of climate change issues, CBA also participates in a range of programs supported by climate change experts. Since subscribing to the São Paulo Environmental Agreement in 2019, for example, CBA has actively participated in meetings of the newly instituted Environmental Chamber for Climate Change, and is a member of one of the working groups advising the Chamber on tools for calculating greenhouse gas emissions. The Company also continued to participate in the emissions trading simulation led by the FGV Center for Sustainability Studies and in the Global Compact's Thematic Group on Energy & Climate. In 2021, beyond current areas of engagement, CBA plans to participate in the Brazilian Business Council for Sustainable Development's (CEBDS) working group on climate change.

### BIOMASS TO STEAM

In March 2020, utility partner company Combio Energia S.A. started operation of a new boiler system at the Alumina Refinery. CBA replaced its natural gas- and oil-fired boilers with a new boiler fueled by wood-chip biomass. The new boiler system—along with the Green Soderberg technology

being introduced at CBA's Smelters, the Semi-Dry Paste project and the switch to dry disposal (filter press) for dams—is part of a set of projects for which CBA secured loans in 2020 that are funded by green loans.

**The boiler achieved steady-state operation, providing two important benefits:**

- **Significantly lower scope 1 and 2 CO<sub>2</sub>e emissions compared to 2019<sup>1</sup> (from 0,55 to 0,31 tCO<sub>2</sub>/t aluminium oxide).**
- **Cost savings, as biomass is cheaper compared to the previously used fossil fuels.**

In total, Alumina Refinery emissions fell 46.2% on 2019, largely thanks to the new boiler system. Lower carbon emissions from the Refinery mean end products now have a reduced carbon footprint—and aluminium produced with low carbon emissions has a higher market value and can unlock new markets.

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## PARTICULATE AND OTHER GAS EMISSIONS

Besides greenhouse gas emissions, CBA's production process generates particulate and other gas emissions, such as fluoride and sulfur and nitrogen oxides. Permanent controls ensure that these emissions are kept within established limits.

CBA's decision to expand exports in the year required the Company to restart half of its smelters in 2020. Until their operation stabilizes, there is a natural increase in gas emissions.

## HIGHER PRODUCTIVITY WITH TECHNOLOGY UPGRADE OF THE SODERBERG FURNACES

As part of the project to upgrade the Smelter technology (Green Soderberg), the smelter pot feeding process is being switched to an intermittent feed system that will reduce greenhouse gas, particulate and fluoride emissions and increase efficiency and safety. It will also reduce water consumption by intermittently switching off the wet scrubber systems. By feeding materials (aluminium oxide and electrolyte bath) intermittently in regular quantities and at regular intervals, the use of these resources is optimized.

In 2019, 36 of a total of 1,040 pots were switched to the new system as a pilot. In

2020, drawing from experience gained from implementation in 2019, several important improvements were made to optimize the process, parts and equipment and to adjust the system design. In 2021, we plan to convert an additional 34 pots with the improvements made to the pilot pots and tested in 2020. CBA expects to complete the project in 2029, in an estimated total investment of R\$ 373 million.

When all pots have been converted to the new system, the wet scrubber systems will be switched off, eliminating the need for water in the process.

This initiative is one of several projects for which CBA secured loans in 2020 that are funded by green loans.

Another initiative linked to the Green Soderberg project, and also funded by green loans, involves the use of anode paste containing a lower content of coal-tar pitch to improve the operation of the automatic feed system. This project will implement the modifications needed in the paste preparation process to meet quality specifications while producing sufficient quantities for the estimated production volumes outlined in CBA's strategic plan. Lower pitch content in the anode paste has the potential to reduce GHG emissions. The project is expected to involve an investment of R\$ 52.7 million.

## Efficient and renewable energy

GRI 103-1, 103-2, 103-3 – 302: Energy

Aluminium production, and especially the electrolysis process, consumes large amounts of electricity. According to the São Paulo State Municipal Energy Report, published by the Department of Infrastructure and the Environment, the municipality of Alumínio was the state's second-largest consumer of electricity in 2019, with CBA accounting for 99.5% of that consumption.

CBA manages electricity consumption in collaboration with Votorantim Energia (which manages the 20 hydropower plants owned by CBA and other plants in which CBA has a stake). Energy efficiency projects are managed by the relevant departments. Two initiatives that are helping to significantly improve energy efficiency are the smelter technology upgrade (Green Soderberg) and the biomass boiler, as described in greater detail in the section *Helping the climate* in this chapter.



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The facade of  
the Aluminio  
plant

The 2030 goals in CBA's ESG strategy related to energy are: to source 98% or more of plants' power requirement from renewable sources, and to reduce energy intensity (electric power and fuels) by a percentage to be defined.

## Total energy consumption

(in thousands of GJ)

GRI 302-1

	2018			2019			2020		
	Aluminium Business	Nickel Business	Total	Aluminium Business	Nickel Business	Total	Aluminium Business	Nickel Business	Total
<b>Total energy from nonrenewable sources<sup>1</sup></b>	18	2	20	60	2	62	2,709	0.9	2,710
<b>Total energy from nonrenewable sources<sup>2</sup></b>	12,071	17	12,088	7,850	18	7,868	5,035	7	5,042
<b>Electricity consumption<sup>3</sup></b>	21,299	39	21,338	19,877	38	19,915	19,409	34	19,443
<b>Total energy consumption within the organization<sup>4</sup></b>	33,388	58	33,446	27,787	58	27,845	27,153	42	27,195

Note 1: including hydrous ethanol; anhydrous ethanol (% contained in gasoline); biodiesel and biodiesel (% contained in diesel).

Note 2: including natural gas, fuel oil (HFO); fuel oil (LSFO); gasoline; diesel; LPG and petroleum coke.

Note 3: data on electricity sold is confidential.

Note 4: including self-generated electricity and purchased electricity consumed by CBA. The conversion factors published in the Brazilian Energy Balance (Balanço Energético Nacional) 2019 were used.

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## Energy intensity by product

(in GJ/ton)

GRI 302-3

Product	Energy consumption/production
Casthouse production	109.63
Semi-fabricated aluminium	321.81
Smelters – molten aluminium	88.63
Beneficiated bauxite	15.93
Nickel	0

Note: includes renewable and nonrenewable fuels consumed within the Organization.

At the Alumínio plant, the biomass boiler started operation in March 2020, reducing consumption of natural gas and LSFO. At CBA's mines there were no changes related to fuels, but only a reduction in production volumes and reduced travel by car. At Metalex, due to the COVID-19 pandemic in 2020, production volumes fell short of original estimates, affecting energy consumption. Production at Niquelândia and São Miguel Paulista is currently curtailed. At Itapissuma there were no changes related to energy sources in 2020.

The Alumínio plant has set sustainability targets for the Smelters, Casthouse and Alumina Refinery that aim to reduce consumption of natural gas and electricity.

No energy consumption targets have been set for the Poços de Caldas mine. The Miraf operation has set the following target: maintain electricity consumption at or lower than 3.75 KW/t of crushed ore in 2020. The Itamarati de Minas operation has not set any targets. At Metalex, an action plan has been implemented with targets for reducing energy consumption. The plan is being monitored and managed by the relevant department. Production at Niquelândia and São Miguel Paulista is currently curtailed. At Itapissuma, a target has been set to reduce consumption of natural gas in the remelt process, which is monitored on a monthly basis by management. No targets have been set for reducing electricity consumption.



Operating equipment from a cabin at the Alumínio plant

## Water stewardship

GRI 103-1, 103-2, 103-3 – 303: Water & effluents

Aluminium production is water-intensive, and CBA recognizes the need to manage and minimize impacts and pressures on local water resources. Water is used primarily in the initial treatment of bauxite, at the Refinery, in gas scrubbers and in cooling processes. At CBA's mines, water is used to wash ore at the Miraf plant and for road spraying.



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## Water withdrawal and effluent discharge

(in megaliters)

	2018			2019			2020		
	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA
<b>Total water withdrawal (GRI 303-3)</b>	3,189	124	3,313	3,042	134	3,176	2,716	137	2,854
<b>Total water discharge (GRI 303-4)</b>	1,063	209	1,272	4,447	557	5,004	10,779	220	11,000
<b>Total water withdrawal (GRI 303-5)</b>	2,126	-85	2,041	-1,405	-423	-1,828	-8,063	-83	-8,146

## Water withdrawal by source

(in megaliters)  
GRI 303-3

	2018			2019			2020		
	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA
<b>Surface water, including water from wetlands, rivers, lakes, and oceans</b>	2,992	118	3,110	2,900	110	3,010	2,131	117	2,248
<b>Groundwater</b>	72	0	72	136	0	136	579	0	579
<b>Rainwater (harvested and stored directly by the organization)</b>	118	2	120	0	22	22	0	19	19
<b>Utility-supplied water</b>	7	4	11	6	1	7	7	1	9
<b>Total withdrawal</b>	3,189	124	3,313	3,042	133	3,175	2,716	137	2,854

Note: no water withdrawals are made from areas with water stress. All water withdrawals are freshwater.

Bauxite at the Miraf mine is washed using 98% water from the production process, via a recirculation and filter system

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## Effluent disposal

(in megaliters)

GRI 303-4

Method of disposal	2018			2019			2020		
	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA	Aluminium Business	Nickel Business	Total CBA
Surface water, including water from wetlands, rivers, lakes, and oceans	811	206	1,017	4,442	516	4,958	6,913	173	7,086
Water sent to other organizations	252	3	255	5	41	46	3,867	47	3,914
<b>Total discharge</b>	<b>1,063</b>	<b>209</b>	<b>1,272</b>	<b>4,447</b>	<b>557</b>	<b>5,004</b>	<b>10,779</b>	<b>220</b>	<b>11,000</b>

Note: the Alumínio plant produces no effluent discharges. The Sorocaba facility has a sump in which effluents are periodically collected and then discharged at the treatment plant at Alumínio. The volume is negligible and is therefore discounted. Production at Niquelândia and SMP is currently curtailed. Priority substances are defined based on applicable legal requirements and parameters specified as environmental license conditions. With the exception of 106 megaliters, all water discharges are freshwater. No discharges are made in areas with water stress.

## Water efficiency

CBA-2 – CBA disclosure

2018			2019			2020		
Aluminium	Metalex	Mines	Aluminium	Metalex	Mining	Aluminium	Metalex	Mines
83,86%	90,74%	59,31%	86,3%	91,03%	56,3%	86,5%	89,16%	49,7%

Note: data compiled using a water balance tool based on the Water Accounting Framework for the Minerals Industry (Sustainable Minerals Institute (SMI) and Minerals Council of Australia (MCA)). Data on water recycling was not compiled at Niquelândia.

The wastewater treatment plant in Miraf

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A potable water treatment facility at the Alumínio plant

Our aim is to reduce **water withdrawal** intensity per metric ton produced at the Alumínio plant by **20% by 2030**

In 2020, water reuse at the Alumínio plant was increased with the implementation of a close-circuit project and continued harvesting of rainwater. The system started operation in September 2020 and harvested approximately 15,000 m<sup>3</sup> of rainwater in the year, avoiding this volume of water withdrawal for plant processes.

Consumption was reduced primarily in the first half of the year due to the lower production volumes as a result of the COVID-19 pandemic—seven gas scrubbers and Casthouse facilities were shut down. When production resumed, water consumption returned to normal levels.

## CONSUMPTION REDUCTION TARGETS

GRI 303-1

CBA has internal guidelines in place on managing water and effluents. It also conforms to the legal requirements and the practices prescribed for ASI certification. The target for 2025 was to reduce water withdrawal by 22%, from a 2017 baseline. In 2020 the Company managed to achieve a reduction of just over 20.9%, fulfilling the target set for 2025. In the years ahead we will continue making efforts to maintain this target and achieve the goal set by the new ESG strategy, mentioned below.

CBA's ESG strategy also includes a target to reduce water withdrawal intensity per metric ton (m<sup>3</sup>/t Al) produced at the Alumínio plant by 20% by 2030 compared with 2019 — Alumínio is CBA's most water-intensive operation. This will involve all stages of the production process, and the benefits will include not only a reduction of water waste, but also higher process efficiency and increased use of harvested rainwater at the plant, which already discharges no effluents into water bodies. The Smelter technology upgrade (Green Soderberg) project is supporting this target, and upon completion is expected to reduce water consumption by more than 120,000 m<sup>3</sup> per year.

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Quality Supervisor Rodrigo Domingos comparing the water entering the Water Treatment Plant in Mirai (left) to the water returned to the environment (right).

water main in January and March resulted in higher-than-normal water consumption. The consumption target for untreated water used in ore beneficiation was 396.5 m<sup>3</sup> in 2020, and actual consumption in the year was 279.8 m<sup>3</sup>, well below target.

The Mirai operation has set a target for recycling plant water, and monitors consumption of surface water and groundwater. The Itamarati de Minas operation has not set water reduction targets due to its negligible water requirement. At Itapissuma, water consumption decreased by 26% compared to 2019. Water discharges are monitored and reported to state authorities on a quarterly basis, and are kept within regulatory limits.

### WATER AND EDUCATION

Environmental education initiatives focused on water resources in 2020 included the following:

- As part of CBA's Environmental Education Program, schools and communities surrounding its mine operations received information about water stewardship, supporting engagement and contributing to local preservation.
- At our Mirai operation, headwater preservation projects were implemented in partnership with the Federal University of Viçosa - UFV and farmers.

- Plans were developed to support reduction of the Company's water footprint, with CBA voluntarily participating in the El Agua nos Une project. The initiative, led by the Swiss Agency for Development and Cooperation (COSUDE), aims to improve corporate water stewardship practices through water footprint assessments, and is being implemented in Brazil by Fundação Getulio Vargas. CBA also participated in a Global Compact event on water stewardship.
- CBA organized an online seminar on SDG 6 (Clean water and sanitation) during Environment Week at CBA, which was live-streamed at all operations and to direct third-party employees. Guest speakers included Samuel Barreto, of The Nature Conservancy, and professor Herly Carlos of the Federal University of Viçosa (UFV).

### WHERE OUR WATER COMES FROM— AND WHERE IT GOES

GRI 303-1, 303-2

**Alumínio:** water supplied to the Alumínio plant is sourced from four river intakes and two wells near the plant. The system operates as a closed-circuit, which means no effluents are discharged into the environment. Instead, effluents are treated and then reused, mainly in the wet gas scrubbers at the smelters, and in some secondary processes at the refinery.

The Poços de Caldas operation uses two metrics to monitor water consumption: consumption of treated water (utility water for human consumption) and untreated water. The operation had set a treated water consumption target of 335.5 m<sup>3</sup> in 2020, but actual consumption in the year was 402.8 m<sup>3</sup>. Water losses from a ruptured



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Dust suppression on service roads near the Mirai mine

Quality specifications for treated water for reuse are defined depending on the requirements of the process where the water is consumed. The most recent water resource assessment in the region was an assessment supporting water withdrawal applications in 2015.

**Metalex:** utility water is used at offices, bathrooms and the restaurant. A deep-cased well supplies water to production processes, and water is recirculated to a cooling tower. Wastewater is then discharged into the local utility’s sewer system.

**Mines:** Mirai and Itamarati de Minas each use two water withdrawal sources—one from

groundwater and the other from surface water. Sewage is treated at an on-site treatment plant and then discharged into the residue storage dam. Effluents from the dam are treated at a water treatment plant before being returned to the environment. The Poços de Caldas mine has six surface water withdrawal points for operational water requirements, while water for human consumption is supplied by the local utility. Process effluents flow through oil separators before being discharged directly into recipient water bodies, and sanitary sewage is sent to the local utility’s sewer system. Monthly monitoring data show that mine effluents have been kept within regulatory limits, with only one parameter deviating in 2020 at the Poços

de Caldas operation: the surfactant limit was exceeded in one of the separator tanks, but was promptly remediated.

**Itapissuma:** water is sourced from two deep cased wells for plant operations. Process effluents are discharged back into the environment, and sanitary sewage is treated at a biological wastewater treatment plant. Washing effluents are sent for external treatment, and effluents from groundwater remediation undergo treatment. Monthly monitoring data show that effluents have been kept within regulatory limits.

Because CBA’s Nickel operations are currently curtailed, their water consumption levels are negligible. Aluminium Business operations for which water data is not provided use water for human consumption only.

A climate change adaptation project is currently underway which will include a water risk assessment using mathematical models at each of CBA’s operations. However, no assessment data is currently available. All operations that discharge effluents into water bodies or to utility sewer systems are required to conform to applicable regulations and/or agreements with the parties concerned.

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## Drier and safer dams

GRI 103-1, 103-2, 103-3 – CBA topic: Dam Safety Management

In addition to dams being fundamental structures in the production process, this issue has a major potential impact. CBA operates six dams in the municipalities of Alumínio (SP), Itamarati de Minas (MG), Miraf (MG) and Niquelândia (GO): two are for water impoundment, two are mining dams, and two are industrial waste dams. Four dams, including the water impoundment dams, were built in a single step, which means they have never been subsequently raised. The residue storage dam in Alumínio (SP) has had two downstream raises built prior to reaching its final configuration. The dam in Niquelândia (GO) has had mostly centerline raises. All dams operated by CBA have been built with appropriate materials and never using waste to build the dam embankments. A Dam Safety Committee created in 2019 holds weekly meetings dedicated to discussing dam safety.

As part of the 2030 goals in CBA's ESG strategy, the Company aims to eliminate waste disposal in dams, and to find alternative applications for 100% of the dry red mud residue CBA produces.

As required by Brazilian regulations, all of CBA's dams, including mine and industrial waste dams, have a dedicated Dam Safety Plan (DSP) and Emergency Response Plan (ERP). The Company's dam safety procedures include maintaining alarm and video monitoring systems operational at all times, registering and training residents and employees in self-rescue zones, and conducting emergency evacuation drills on a regular basis. The Company manages dam

safety in a standardized fashion, subject to the applicable legal requirements in the states of Goiás, Minas Gerais and São Paulo, environmental agencies and regulatory agencies.

CBA uses an Integrated Dam Safety Management System (SIGBAR) supplied and managed by a specialized consulting firm. The system comprises ten modules, each addressing a different aspect of dam safety:



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In 2020 CBA installed automated instruments that now provide monitoring data in real time. The Company also invested in topographic monitoring using unmanned aerial vehicles, which make surveying more accurate and versatile.

### DAM SAFETY IN 2020

**Alumínio:** technology has played an important role in mitigating risks involving the Palmital Dam in Alumínio. As the Company’s most significant investment, CBA plans to install filter presses that will change the method of disposal of residue from the alumina refinery. Removing most of the water from the residue will allow us to switch from wet disposal (with a low concentration of solids) to dry disposal. The refinery currently produces approximately 1,600 metric tons per day of residue, with a 45% solids concentration. Once the filter presses have been commissioned, most of the water will return to the production process, and only dry residue—with a 75% concentration of solids—will be disposed of at the Palmital Dam. A drier dam is a safer dam. This initiative is one of several projects for which CBA secured loans in 2020 that are funded by green loans.

CBA is investing R\$ 298.3 million in building the filter presses at Palmital. Construction began in 2019 and is scheduled to be completed in 2024. In preparation for the switch to the new disposal method, CBA has reduced the volume of water in the dam, which was down by 80% in 2020

compared with 2017. In addition to increasing the useful life of the dam and process safety, this technology allows the caustic soda present in the red mud to be re-utilized, improving operational and cost efficiency.

**Zona da Mata:** CBA’s mine operations in Zona da Mata include three dams—two in Itamarati de Minas (one for residue storage and the other for water impoundment) and one in Miraf (residue storage). In 2020 the instruments used to monitor the bauxite residue dams—including water level and flow sensors and surface targets—were automated. The alarm system was also integrated with the dam monitoring system, which will automatically trigger evacuation sirens when needed. One of the benefits is that instrumentation data, which in 2019 was collected manually on a quarterly basis, will now be measured automatically every six hours. A study is currently underway on implementing on-site mobile beneficiation in bauxite mining operations, without the use of water, which would eliminate the need for residue storage dams.

**Niquelândia:** the two dams at Niquelândia are currently not in operation as this facility has been curtailed, but stringent dam safety measures are still in place. Measures to reduce the volume of water in the Jacuba dam were completed in 2020, and new valves were constructed to lower the water level in the Mosquito dam. A total of 41 automated instruments were installed at the Jacuba dam and 20 at the Mosquito dam, with automatic

readings now being taken every six hours. Robotic total stations have also been installed at these dams, increasing the frequency and accuracy of surface target readings. During the year, studies were initiated toward the decommissioning of the Jacuba dam.

### The volume of water in the Palmital Dam was



**77%**  
lower  
in 2020 compared  
with 2017

### Payment of mining taxes

#### CBA-6 - CBA DISCLOSURE

<b>Total mining taxes paid to the Brazilian Mining Agency</b>	R\$ 2.29 million	R\$ 3.06 million
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## Volume of water removed from the dam

### CBA-4 – CBA disclosure

- 541,273 m<sup>3</sup> of water were removed from the Palmital dam in 2020, reducing the impounded water volume by 77% compared to 2017, in line with the planned removal of water volumes in preparation for the switch to dry disposal (filter press).

## Total amounts of overburden, rock, tailings, and slimes and their associated risks

(in tons)

GRI G4 MM3

	2018			2019			2020		
	Plant	Mines	Total	Plant	Mines	Total	Plant	Mines	Total
<b>Overburden</b>	0	0	0	0	0	0	0	0	0
<b>Tailings (sand + other tailings<sup>1</sup>)</b>	113	0	113	141	0	141	110	0	110
<b>Mud</b>	581	913	1,494	507	763	1,270	457	610	1,067
<b>Total</b>	694	913	1,607	648	763	1,411	567	610	1,177

<sup>1</sup>At the Alumínio plant, 1,740.4 metric tons of equipment cleaning residues from the refinery were returned to the production process, instead of being disposed of as was done previously. In addition, 3,371.31 metric tons of calcium carbonate were repurposed as soil amendments in agriculture. In Mirai (MG), red mud volumes were less than in previous years, partly because production volumes were lower than in previous years, and partly due to mass recovery. In Itamarati de Minas (MG), production was curtailed in 2020 and therefore no residue was generated.



The Palmital residue storage dam at the Alumínio plant. Near the dam, the residue has visibly dried as impounded water is removed

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## DRILLS

### CBA-3 – CBA disclosure: Participation in emergency drills

As it does each year, in 2020 CBA conducted emergency drills involving the communities surrounding its dams, municipal and state civil defense departments, environmental authorities, fire departments, and municipal health departments. Because of the restrictions caused by the COVID-19 pandemic, CBA used innovative technology to adapt the drill format so residents could participate while observing social distancing guidelines.

In Itamarati de Minas and Mirai, drill participation rates were respectively 88.5% and 87.5%, higher than the rates in 2019 (60% and 71%). In Niquelândia, 100% of eligible respondents participated in the survey.

At the Palmital dam, responses were submitted via a Dam Warning app (see the inset for more details). A total of 467 app-based check-ins were made, representing 84% of the number of app downloads. Including the 114 people who registered manually using paper forms, and the 7 participating employees, a total of 588 people participated in the drill.

CBA and Civil Defense representatives during an emergency drill at the Alumínio plant (Palmital dam)



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## Technology-enabled drills during the pandemic

In 2020 CBA found an innovative solution for the emergency drill at the Palmital dam in Alumínio (SP): a Dam Warning app. The app shows users the dam's flood footprint and the location of muster points in the city, and was upgraded in 2020 so drill participants could check in using the app without having to go to the muster points. This avoided large gatherings at these locations.

When checking in on the app, participants were prompted to indicate how many people were with them and to respond to a drill feedback questionnaire. The app was used at Alumínio, where the number of drill participants is significantly larger than in other locations, and because good internet coverage is available throughout most of the municipality.

The app has other useful features in addition to emergency drills. For example, it warns users ahead of sirens being tested to avoid false alarms. In addition, when users are in the self-rescue zone, even when not at home, the app will show their location and plot the shortest route on foot to the nearest muster point. That way, in an emergency, users away from home can find their way easily.

A Dam Warning app demonstration during the drill



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Fauna on the Legado das Águas reserve

## Producing biodiversity

GRI 103-1, 103-2, 103-3 – 304: Biodiversity, 304-2

CBA produces aluminium, but also forests and biodiversity. It is part of the Company’s management approach to identify, prevent, control and mitigate environmental impacts from its operations and promote continuous improvement in environmental quality. The Company achieves this both through direct actions—such as enrichment planting and monitoring—and by raising employee and community environmental awareness in the municipalities where it operates.

In all areas where it is present, CBA strives to not only minimize the environmental impacts from its operations, but also to rehabilitate

the land and restore its vegetation. Restored forests provide a habitat to which native fauna can return, including birds, wild animals and even large mammals. With this in mind, CBA has increasingly implemented ecological corridors through which wild animals can roam safely and undisturbed.

The ESG strategy introduced in 2020 includes two goals directly related to biodiversity::

- \* Create or expand 1 hectare of ecological corridors for every 10 hectares of mined and reclaimed land;
- \* 10% of key suppliers and customers

### co-investing in forest and biodiversity programs.

Each of CBA’s three mine operations has a Biodiversity Management Procedure and an Environmental Education Program (PEA) with activities for both employees and residents in surrounding communities. The operations have been assigned specific targets for the reclamation and re-sloping of mined land and environmental rehabilitations.

For a better understanding of this process, it is important to note that CBA operates in areas subject to environmental licensing. Excavation cycles are short – typically 3 to 6 months. After the depletion of the ore bodies, the areas undergo reclamation, which embraces the processes of re-sloping, soil improvement, plantation and maintenance. The resumption of field activities takes between 3 and 5 years, according to the crop previously agreed with the rural landowner, who receives the productive areas from CBA in a better condition. A quick guide is also provided containing technical, environmental and legal advice.

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When land is reclaimed into coffee plantations, for example, the process takes an average of five years (the same time required for reforestation with native tree species). Eucalyptus planting and pastureland take three years. In 2020, the third-party company responsible for reclamation work at the Poços de Caldas operation spent six months with 75% of its staff on leave, as they were in the at-risk group for COVID-19. As a result, some activities had to be postponed.

**CBA's goal is to return the land in its original or better condition after mining is completed. We implemented fauna monitoring as a bioindicator of environmental quality in reclaimed areas, and maintained experimental family farming areas in partnership with the Federal University of Viçosa.**

## Amount of land mined and rehabilitated

(in hectares)

GRI G4 MM1

	2018	2019	2020
Total land disturbed and not yet rehabilitated at the start of the reporting period	59.7	46.6	84.4
Amount of land newly disturbed within the reporting period	31.8	27.4	24.7
Total amount of land newly rehabilitated within the reporting period	38.4	39.7	41.7
Total land disturbed and not yet rehabilitated at the end of the reporting period	53.1	34.3	67.4

Note 1: assumptions used: total land disturbed and not yet rehabilitated at the start of the reporting period = ore bodies that have been exhausted as of December 31, 2019 and access roads no longer being used. Amount of land newly disturbed within the reporting period = ore bodies exhausted in 2020 and their access roads if no longer being used. Total amount of land newly rehabilitated within the reporting period = ore bodies in the first item (liabilities) that were rehabilitated in 2020. Total land disturbed and not yet rehabilitated at the end of the reporting period = exhausted mine land and access roads no longer being used that will not have been rehabilitated by the start of 2021.

Note 2: sources of information: PG-VM-SSMA-082 Biodiversity Management; Environmental Rehabilitation and Forest Restoration Manual (MANUAL-VM-AL-ZM-001), which covers the entire process from soil improvement to planting seedlings and seeds; field measurements by the surveying department, and information from mine-site meetings and mine plans.

Note 3: in Miraf (MG), mine areas exhausted up to June 30, 2020 were re-sloped and reclaimed into native vegetation and cropland. In Poços de Caldas (MG), the areas that have been re-sloped and rehabilitated are in the municipalities of Divinolândia (SP) and Caldas (MG) and are part of ANM: 808.111/1973 and ANM: 582/1944. Of the 24.33 hectares rehabilitated, 16.46 were reclaimed into eucalyptus plantations and 7.87 into pastureland). Although all indicators related to critical environmental risks directly or indirectly affect biodiversity, only two are within the scope of Biodiversity Management: mine rehabilitation and quality of mine rehabilitation. CBA has performed well on mine rehabilitation since 2014, achieving 100% rehabilitation of mined land within the prescribed periods and a high, 96.8% quality rating for rehabilitated land. In Itamarati de Minas, the 2.41 hectares of rehabilitated land relate to the rehabilitation of access roads (under amendments to mining easement agreements) and decant ponds, and maintenance and improvements to rehabilitated land.

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As part of its biodiversity conservation initiatives, CBA owns the *Legado Verdes do Cerrado* (“Cerrado Green Legacy”) reserve (32,000 hectares in Goiás) and is a cofounder of the *Legado das Águas* (“Water Legacy”) reserve (31,000 hectares in São Paulo), two private reserves managed by Reservas Votorantim. The benefits from these reserves include biome conservation, livelihoods for communities, climate change mitigation, food security, research and innovation in biodiversity conservation, and dissemination of best practices in land use and more sustainable technologies.

In addition, the practices and strategies

that have been developed and implemented on the Legacy reserves can be replicated Company-wide in areas such as social, economic and environmental development and sustainable business. Research collaborations between the Company and universities help to develop new knowledge and practices in land management, and make new discoveries about the biodiversity of the biomes hosting the Legacy reserves. This informs experiments with new production models that are inclusive and increasingly integrated with local biodiversity assets, reconciling production with conservation.

The Legacy reserves are managed in

alignment with: the Aichi goal to safeguard ecosystems, species and genetic diversity by creating and effectively managing protected areas; the Kyoto Protocol, through initiatives to reduce greenhouse gas emissions (use of the direct seeding method, and ongoing research on methods of calculating carbon sequestration in the *Cerrado* biome); and the Global Compact.

**NATURE THRIVES IN THE CERRADO**

Located in the municipality of Niquelândia, in Brazil’s midwestern state of Goiás, *Legado Verdes do Cerrado* is a private sustainable development reserve owned by CBA. Research has shown that the reserve contributes to water conservation in its host river basin, ensuring that water of good quality and in sufficient quantity is available for human consumption, for agricultural activities and for conserving biodiversity.

*Legado Verdes do Cerrado* has seven ongoing research projects that are eligible for research and development tax incentives under Lei do Bem (Law no. 11 196/05). Research areas include agroforestry systems, soil quality in karst areas, biodiversity and endemism, allometry in the *Cerrado*, BioLeve, monitoring of the Traíras River and low-impact soy.

The Legado das Águas reserve



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In 2020, CBA invested approximately R\$ 1.8 million in this reserve, but with the outbreak of the novel coronavirus pandemic, the watchword now was caution. Although initially planning to open the reserve for public visitation in the year, the initiative was postponed to 2021. Limited research and crop-growing activities continued, such as soy and maize farming—including cultivation of low-impact soy, which uses special cropping techniques requiring less pesticides. In total, 80% of the area is reserved for conservation of native Cerrado savannah vegetation. Only 20% of the area is used for agriculture and forestry activities (forest regeneration and seedling production).

Abnormally warm weather during planting and heavy rainfall during the harvest resulted in a 50% crop failure. But there was also plenty of good news in the year. Cattle farming was above target, as were the reserve's traditional activities: agroforestry expanded by 10 hectares, and all harvested bananas, papayas and cassava were donated to a local cooperative, a CBA partner in the ReDes (Sustainable Development Network) program, which aims to improve livelihoods and income generation.

More than 50,000 trees were delivered to several municipalities in Goiás for rehabilitation of springs and public parks. And

an important awareness program paid off in the year. Engagement with landowners neighboring the park throughout the year enabled a successful fire response on several occasions. An estimated 10,000 hectares of the Legado Verdes do Cerrado reserve would have been destroyed had it not been for the coordinated response using water trucks and water pumps.

In 2021, CBA plans to:

- \* launch new research lines, including monitoring of traíra populations and characterization of fauna and flora, including red-listed species.
- \* conduct reforestation projects in protected areas in partnership with local farmers, as part of an effort to rehabilitate springs
- \* reach 300,000 seedlings produced per year at the nursery
- \* further expand agroforestry systems.



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## RESUMING ACTIVITIES AT LEGADO DAS ÁGUAS

Three different phases punctuated the year at the Legado das Águas (“Water Legacy”) reserve, a protected area founded and sponsored by CBA and three other Votorantim companies. During the first months, there were visitors on the trails and at the hotel, and researchers monitoring the fauna and flora across the reserve’s 31,000 hectares of Atlantic Forest in the municipalities of Juquiá, Miracatu and Tapiraí, in Brazil’s southeastern state of São Paulo.

But when the government issued shelter-in-place orders in response to the coronavirus pandemic in March 2020, all activities were suspended, including seedling production for environmental offsets, tree planting and excursions. All partnership agreements with local suppliers were maintained, and the reserve’s 50 employees used the time to attend training, such as rescue and first-aid training. This period also saw greater proximity to surrounding municipalities, which benefited from a pandemic response plan led by the Votorantim Institute and received technical support and donations of personal protective equipment (PPE) for health-care providers, as well as food stamps for at-risk families.

A series of 18 live webcasts was launched, in which researchers talked about their research projects at the park. Digital

outreach was intensified: children’s coloring pages featuring plants and animals were posted on the reserve website, and interaction increased on Instagram (where the reserve now has 29,000 followers) and Facebook (170,000 followers). In July, with the reserve still closed, a ticket pre-sale campaign was launched under the slogan, “Come immerse yourself in nature when this is all over!” Meanwhile, reserve staff had already adapted the facilities to make them pandemic-safe, with new signage and markings, permitted and restricted areas and walkways, hand sanitizer stations and instructions on social distancing.

Finally, on September 26, Legado das Águas reopened with a maximum occupancy of 40% on the trails and at the hotel—a limit that was soon reached. Reforestation and environmental offset projects were also resumed.

People living in São Paulo can now bring home a memento from the park. Since December 2020, plants grown in nurseries at the park’s Atlantic Forest Biodiversity Center have been sold at the Pátio Caeté store in Vila Leopoldina. The center cultivates native plants from the biome for reforestation and landscaping, with a production capacity of 200,000 seedlings per year, of more than 80 different species.

In research and development, current studies at the park include research on wildlife zoonosis management and environmental impacts caused by domestic fauna, soil



fertilization and mycorrhizal fungi dispersal by mammals in Atlantic Forest areas, fauna monitoring, productivity of violacea species, pests and treatment of violacea seeds, and success rates in relocating orchids.

Plans for 2021 include efforts to further establish Legado das Águas as a regional tourist destination, although many restrictions are likely to remain in the early months of the year. There are also plans to expand research activities through new local and international collaborations revolving around Brazilian biodiversity in Atlantic Forest areas.



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# Message from the Sustainability Committee

**The transformation we want in the future starts now**

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Glauber, an employee at the Alumínio plant, and his children



Since CBA is genuinely committed to making a positive contribution to society and to the environment. Such is the importance the Company attaches to this commitment that it has been permanently inscribed in CBA's sustainability manifesto. As pioneers on this journey, CBA knows that sustainability is a never-ending endeavor, and that it can always strive to do more and better. And that is what the Company is determined to do, as it works to find solutions to the world's toughest challenges and invest in initiatives creating positive impacts on society. It is clearer than ever that building a more sustainable future is a shared responsibility. We all have to strive for a more collaborative world and start transforming our tomorrow now, working shoulder to shoulder with employees, customers, suppliers, partners, communities and investors.

At CBA, sustainability is a strategic pillar and is increasingly a core part of its everyday activities. As a leader in its industry, the Company's goal is to provide thought leadership for an increasingly sustainable planet. Creating aluminium solutions that

transform lives is a part of its DNA. Increasingly, the challenge is to ensure that environmental and social considerations are embedded in all initiatives and firmly underpin every aspect of the Company's operations. This mission extends beyond just changing the way business is done: CBA's aspiration is to inspire others and increase awareness of the need to protect nature, preserve biodiversity, and tackle climate change.

It's more than about doing things the right way and having a minimal carbon footprint. It's more than about minimizing the impacts from aluminium production and setting the standard for mine reclamation. It is necessary to reinvent and have good initiatives that put the Company at the forefront of its industry, while also working to improve quality of life for the communities where it operates. Throughout 2020, the novel coronavirus pandemic made it even clearer that the call to action has gone to a new and more pressing level: CBA needs to do even more and further enhance its initiatives, and be even more transparent in communicating them.



**This is the future that CBA aspires for. And this is what it will work toward.**

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## GRI 102-13

### MEMBERSHIP OF ASSOCIATIONS

CBA is an active member of industry associations in the regions in which it is present, where it contributes to discussions on issues affecting the aluminium supply chain and work with other stakeholders to support local sustainable development. These associations include:

- \* the Brazilian Aluminium Association (ABAL), where CBA is represented on the Board and on several committees, subcommittees and working groups
- \* the International Aluminium Institute (IAI)
- \* the Aluminium Stewardship Initiative (ASI)
- \* the Poços de Caldas Association of Mining Companies (ASMPC)
- \* the Serra do Brigadeiro State Park Advisory Board
- \* the Committee on Tributaries of the Pomba and Muriaé in Minas Gerais (COMPE)
- \* the Committee for Integration of the Paraíba do Sul River Basin (CEIVAP)
- \* the Brazilian Association for Business Communications (ABERJE)
- \* the Brazilian Packaging Association (ABRE)
- \* the Brazilian Association of Aluminium Window and Door Manufacturers (AFEAL)
- \* the Brazilian Association for Photovoltaic Solar Power (ABSOLAR)
- \* the Brazilian Association of Truck Equipment Manufacturers (ANFIR)
- \* the Global Aluminium Foil Roller Initiative (ALUFOIL)
- \* the Mining Industry Association of Goiás and the Federal District (SIEEG-DF)
- \* Mining Industry Association of Minas Gerais (Sindiextra)





GRI 102-44, 102-46, 102-47

Material topics	Topic description	Related SDG	Source of impact	Extent of impacts
Local development and impacts on surrounding communities	Economic impact on the regions where we operate. Economic development, job and income opportunities, and taxes. Social investment and volunteering. Public management support	4, 8, 10	Within	Impacts related to local development (e.g. livelihoods, tax revenue and dependence) originate within the organization.
Climate change	Inventorizing and reporting on direct and indirect greenhouse gas (GHG) emissions. Climate change risks. Adapting to climate change.	1, 13	Within and outside	Related impacts (e.g., GHG emissions and contributions to global warming) originate within the organization and its value chain (e.g., suppliers).
Waste management	Strategies and technologies to minimize waste and increase recoveries and reuse. Reducing and mitigating negative impacts from waste disposal.	12	Within and outside	Impacts related to waste management (e.g., contamination) can be generated both within the organization and by suppliers, customers and consumers.
Efficient and renewable energy	Energy savings and efficiency. A commitment to decarbonization through the use of renewable energy and biofuels.	7	Within and outside	Impacts related to energy (e.g., emissions, energy shortage) can be caused by the organization, by suppliers and by energy providers.
Innovation and technology	Strategies and capabilities to rapidly create value from emerging technologies. Process automation across the value chain. Technological disruption. Leveraging advanced analytics to increase resilience and efficiency in remote operations. Data science-driven optimization	8, 9	Within and outside	Impacts related to research and innovation in healthcare (e.g., new patents/processes) originate within the organization or its business partners.
Dam safety management	Safety of surrounding communities. Reducing disposal and increasing the useful life of mining dams. Environmental monitoring. Dam monitoring and control and material handling.	1	Within	Dam-related impacts (e.g., dam failure, breaches and contamination of the soil and water) originate within the organization.
Employee health, safety and wellness	Employee and third-party safety. Preventing injuries/fatalities. Safe behavior. Occupational health. Mental health. Promoting employee wellness.	3, 8	Within and outside	Impacts related to employee health and safety (e.g., injuries, mental stress) can originate both within the organization and at its contractors and suppliers.
Protection of biodiversity	Actions to reduce negative impacts and enhance positive impacts on biodiversity. Biodiversity conservation practices. Research and development to leverage the potential of Brazilian biodiversity.	6, 15	Within and outside	Impacts related to biodiversity (e.g., soil erosion, loss of flora and fauna species) can be generated both by the organization and by its suppliers.
Water stewardship	Mapping water-stressed areas. Strategies for water management, recovery, reducing consumption, reuse and minimizing water intensity. Strategies for water security and to prevent contamination of water resources in the region, protecting the health of surrounding communities.	1, 6	Within and outside	Potential impacts related to water resources (e.g., water shortages, contamination of surface water bodies) can be generated by the organization and by its suppliers.
Diversity and inclusion of minorities	Inclusion of women in leadership positions. Gender equality. Diversity in the Board of Directors. Nondiscrimination and inclusion of minorities (ethnicity, LGBTI+, indigenous peoples, people with disabilities, 50+, refugees, etc.).	5, 8, 10	Within and outside	Impacts related to diversity (e.g., discrimination, reducing inequalities) can originate both within the organization and at other stakeholders (e.g., suppliers, customers, etc.).
Materials efficiency and aluminium recycling	Resource efficiency. Using inputs/raw materials with less environmental impact. Using recycled materials.	8, 9, 12	Within and outside	Potential impacts (contamination, improper disposal) can be generated both by the organization and by other links in the value chain: suppliers, customers and consumers.
Ethics and compliance	Ethical conduct and business practices. Anti-bribery and corruption. Policies on business integrity and compliance and anti-bribery provisions in procurement contracts.	16	Within and outside	Potential impacts (misappropriation of funds, reputation, fines) can originate both within the organization and at other stakeholders (e.g., governments, suppliers, customers, etc.).

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## GRI 102-48

Any identified restatements in relation to the 2019 report are described in the relevant topic.

In relation to GHG emissions, in 2020 CBA joined the SBTi initiative and, as part of the process, a review was conducted of the data in the GHG inventories for 2018 and 2019. As a result, certain restatements were required in the data for 2018, as follows:

- 1 Mines – Material**– Misstated ROM diesel consumption data for both Miraf and Poços de Caldas. Emissions increased from 4,173.62 tCO<sub>2</sub>e (E1+E2) to 8,570.940 tCO<sub>2</sub>e (E1+E2).
- 2 Alumina – Material** – Misstated HFO oil data. In 2018 no HFO oil was consumed. As a result, 734,988.234 in fuel oil consumption was excluded, reducing emissions by 2.290,64 tCO<sub>2</sub>e.
- 3 Smelters – Immaterial** – Anode consumption data was outdated, resulting in a difference in emissions of less than 1 metric ton of CO<sub>2</sub>e.
- 4 Scope 2 – Immaterial** – Scope 2 emissions from the Alumina Refinery, Casthouse and Downstream operations included consumption at the Sorocaba facility and Head Offices (this was in a hidden row that

was included in the calculation), but the amount was negligible. This consumption was removed.

**5 Nickel – Immaterial** – The Nickel spreadsheet was missing Natural Gas, Charcoal, LPG and Landfill figures (the data has now been added). In Scope 2, only the energy consumption at Niquelândia was included (consumption at São Miguel Paulista has now been added). Overall, these changes resulted in a difference of 381.4 tCO<sub>2</sub>e, which is negligible compared to the consolidated figure.

## GRI 103-1, 103-2 and 103-3 – 307: Environmental compliance

Environmental compliance is the cornerstone of CBA's environmental management system. It is a prerequisite for developing and operating its mines and facilities, and ensures they conform to applicable environmental laws and regulations while respecting stakeholders.

CBA conforms to both legal as well as other environmental requirements, including those established by customers, under agreements and in environmental certification standards (ISO14001:2015 and ASI). The Company also works preventively to eliminate any risk of noncompliance with applicable legislation. As a result, CBA has not been subject to any significant fines or sanctions for noncompliance with environmental laws or regulations.

All of CBA's operations are assessed for environmental compliance using CAL 4.0 software from IUS Natura. The system can also categorize requirements into critical and noncritical requirements in order to better prioritize action plans. In its mine operations, CBA uses Onegreen software, implemented in 2020, to manage licenses and license requirements. The Company plans to roll out the software to its other operations in 2021.

Different communications channels can be used to address environmental compliance concerns at CBA, including the Ethics Hotline, formal complaints, letters, etc.

In 2020 CBA's operations underwent internal and external audits, compliance assessments, certification audits, and other assessments. Due to the pandemic, compliance assessments were adapted to a virtual format, both reducing costs and streamlining the overall process.

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## GRI 304-2

In 2020 CBA identified no significant direct or indirect impacts on biodiversity from pollution, introduction of invasive species, reduction of species or habitat conversion at the Alumínio plant.

**At CBA's mines in Zona da Mata** there were similarly no significant direct or indirect impacts on biodiversity or relating to the extent of areas impacted. Conversely, forest offsets at mine sites generate a positive impact. At the Miraí and Itamarati de Minas mines the most significant impacts result from clearing vegetation and stripping overburden for mining. However, when the mine is decommissioned the mined land is rehabilitated to its original or better condition. CBA monitors fauna and flora bioindicators in partnership with the Federal University of Viçosa.

In its Zona da Mata operations, the Company monitors air quality and black smoke from diesel vehicles and equipment, and all unpaved service roads are water-sprayed for dust suppression. Water and effluents are monitored for a range of physical, chemical and biological parameters, including micro and macro-organisms in watercourses, stormwater systems, containment ponds, effluent treatment systems, and water treatment systems.

**At the Miraí mine**, fauna is monitored by taxon in the Zona da Mata area and in reclaimed and forest offset areas. CBA also manages invasive species. If any invasive species is identified, containment action is taken to prevent adverse effects on reclamation and local biodiversity. In addition, working in partnership with the municipality of Miraí, CBA planted 7.3 hectares of native tree species in protected areas for conservation of springs in connection with the road widening works in Dores da Vitória.

**In Itamarati de Minas**, 46.57 hectares of native tree species were planted as forest offsets for clearing, loss of trees species for which felling is forbidden or threatened species, and disturbances in protected areas, as a requirement under ANM Operation License 830.652/1980 for Miraí. There are currently no active mining or beneficiation activities at this operation.

**At Itapissuma**, direct and indirect impacts on biodiversity will be identified in an ongoing assessment that is due to be completed in the first half of 2021.

In 2020 there were two tier IV forest fires on CBA properties. In relation to risks associated with decommissioning, CBA has procedures in place for managing the decommissioning process, including preliminary assessments and carefully and responsibly planned action to mitigate any environmental risks.

### GRI 304-3 Habitats protected or restored

Biome	2018			2019			2020		
	Area approved by independent external professionals or conforming to external parameters/protocols		Total area (km <sup>2</sup> )	Area approved by independent external professionals or conforming to external parameters/protocols		Total area (km <sup>2</sup> )	Area approved by independent external professionals or conforming to external parameters/protocols		Total area (km <sup>2</sup> )
	Yes	No		Yes	No		Yes	No	
Amazon	0	0	0	0	0	0	0	0	0
Caatinga	0	0	0	0	0	0	0	0	0
Cerrado	0	296	296	0	384	384	0	0	0
Atlantic Forest	0.001	36	36	0	240	240	15	36	51
Tropical wetlands	0	0	0	0	0	0	0	0	0
Pampas	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
<b>Total km<sup>2</sup></b>	<b>0.001</b>	<b>331</b>	<b>331</b>	<b>0</b>	<b>624</b>	<b>624</b>	<b>15</b>	<b>36</b>	<b>51</b>

Note: the data was compiled from official Rural Environmental Registration data via the CSI Geoprocessing and Data Processing System.

2020	
Total areas protected (km <sup>2</sup> )	Total areas restored (km <sup>2</sup> )
50.509	0.538

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## CBA 7: Significant spills

Significant spills can cause impacts such as contamination of the soil and water, and can potentially affect neighboring communities. To mitigate these risks, CBA has a chemicals management procedure that includes requirements on adequate storage and use of chemicals. Chemical storage areas are required to be bunded and have emergency kits available to respond in the event of any spills. CBA's operations also have emergency responder teams who are trained to respond in these situations. The Company has a procedure on managing contaminated areas that includes preliminary assessments of potential contaminated sites, investigation of the soil and groundwater at these sites, and adequate remediation where contamination is detected.

CBA's procedure on incident reporting and investigation, PG 016, was amended to revise the criteria for classifying environmental incidents, with significant incidents (tier IV) now defined as follows:

- A spill of any amount where the contaminated soil cannot be immediately removed, but can be removed using advanced remediation methods.

- A spill of any amount in watercourses, whether or not remediation is required.
- A discharge of effluents in violation of applicable environmental legislation
- Failure of a decant pond if sediments reach water bodies.
- A "tier III" spill outside the plant.

All spill incidents that occurred in 2020 were classified as tier I to III, i.e. none were classified as significant. Reporting non-significant spills is important as it allows mitigation action to be taken to prevent more severe spills.

*Note: information was compiled from the Obrasoft system HSE dashboard.*

*Scope of disclosure: Mines (Poços de Caldas, Mirai and Itamarati), Alumínio plant, Metalex, Nickel operations (Niquelândia and São Miguel Paulista) and offices, and Itapissuma.*

## GRI 307-1

### Non-compliance with environmental laws and regulations

In 2020 there were no significant fines for non-compliance with laws and/or regulations in the environmental area. CBA received notices of environmental violations that were appealed against to the appropriate authorities. There have currently been no decisions to impose fines/sanctions. CBA continued to pay installments under a settlement agreement concluded in the previous year, paying a total of R\$ 299,649.83 in 2019.

*Note: data compiled from the Espaider system.*

## GRI 405-2

In relation to the ratio of basic salary and remuneration of women to men, the entry-level wage bracket is the same for each position with no gender-based differences. Average length of service is higher for men than for women. As a result, there have been more salary increases for men under collective bargaining agreements. Because this information is sensitive, the data are not being disclosed to protect confidentiality

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## GRI 412-3

	2018	2019	2020
Total number of investment agreements and contracts finalized during the reporting period	Not disclosed	490	539
Total number of investment agreements and contracts that include human rights clauses or that underwent human rights screening	Not disclosed	161	280
Percentage of investment agreements and contracts that include human rights clauses or that underwent human rights screening	58%	33%	52%
Definition of significant investment contracts/agreements	Significant contracts are contracts with a term longer than six months and/or a value greater than R\$ 1 million.		

## GRI 413-2

### Operations with significant actual or potential negative impacts on local communities

	2019	2020
Total number of operations	13	13
Total operations with significant potential impacts	4	4
Location of operations with significant potential impacts (municipality/State)	Alumínio (SP), Miraí (MG), Itamarati de Minas (MG) and Niquelândia (GO)	Alumínio (SP), Miraí (MG), Itamarati de Minas (MG) and Niquelândia (GO)

Note: these operations have significant potential impacts, but there are currently no significant negative impacts

## GRI 413-2 (continuation)

No actual negative impacts have been identified at CBA's operations. However, there are significant potential impacts as identified through two different methodologies. The first is the Company's strategic risk matrix, which identifies social impacts affecting the community. Risks are considered significant if rated as "extreme" in terms of social impact. The risk of dam failure at the four operations listed in the table falls under this definition, although the likelihood of occurrence is extremely low due to the controls that are in place. The second methodology is based on a Prioritization of Communities for Social Action spreadsheet based on the potential impact from the decommissioning of the relevant operation, denoting economic dependence. The Alumínio and Miraí operations have a potential impact rated as significant.

For dam-related impacts, a robust management system is in place to ensure safe operation. In relation to economic dependence, affected locations are covered by social action plans providing public management support and development of local supply chains.

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### GRI 103-3, 419-1: Social and economic compliance

CBA tracks all legal proceedings through a software-based management system. The tax department received a single delinquency notice in 2020 to collect Value-Added Tax on Sales and Services (ICMS), with an associated fine of R\$ 185,638.29 (restated for inflation as of December 2020). The tax department also paid R\$ 7,259.98 in connection with a delinquency notice relating to Financial Compensation for Mineral Resource Exploitation (CFEM) during the reporting period. In other cases, the Company submitted an appeal and the proceedings are currently pending.

Civil and labor claims and fines and awards related to social and economic matters were a total of R\$ 13.6 million in 2020, largely relating to settlements and awards in labor claims

#### GRI 419-1

Non-compliance with laws and regulations in the social and economic area

	2018	2019		2020		Unit of Measure
		Tax	Civil/labor	Tax	Civil/labor	
<b>Total number of significant fines received in the year</b>		3	Not available	1	144	Number
<b>Total monetary value of significant fines received in the year</b>	R\$ 39.4 million	R\$ 4,220,384.10	R\$ 27.4 million	R\$ 185,638.29	R\$ 13.6 million	R\$

*Note: includes administrative proceedings pending in 2020, with the amounts involved restated for inflation as of December 2020. The Company tracks all legal proceedings through a software-based management system.*

#### GRI MM7

### Extent to which grievance mechanisms were used to resolve disputes, and the outcomes

	2018	2019	2020
<b>Total number of grievances received in the period</b>	20	26	16
<b>Number of grievances relating to land use, customary rights of local communities and indigenous peoples</b>	0	0	0
<i>Status of grievances</i>	Resolved	Resolved	15 resolved 1 ongoing
<b>Outcomes of grievances</b>	All grievances were responded to and referred for resolution.	All grievances were responded to and referred for resolution.	All grievances were referred for resolution and responses given to stakeholders.

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### GRI MM7 (continuation)

In 2020, 13 grievances were received in Zona da Mata, 2 in Poços de Caldas and 1 in Barro Alto. These grievances largely related to impacts from the Company's operations, such as dust, sediment transport during the rainy season, farm gates left open, poor road conditions during the wet season, debts owed by contractors, and property devaluation due to proximity to dams. Grievances relating to dust emissions were resolved via water spraying using tank trucks for dust suppression. Carried sediments and poor road conditions during the wet season were addressed by the Mine Operations team through interventions in affected areas. Field teams were instructed to double-check that farm gates have been closed when leaving farm properties. The grievance relating to property devaluation is unsubstantiated. The Legal department is preparing a formal response to the party involved. This entire process is documented and managed using a control spreadsheet.

CBA has an Integrated Management Policy under which it commits to:

- \* maintain a responsible and open channel of communication with all stakeholders to ensure their expectations are met
- \* engage with and ensure its relations with stakeholders support ethics, good corporate citizenship, transparency and sustainable development by regularly assessing its social, economic and environmental impacts
- \* recognize, prevent, manage and mitigate environmental impacts from the Company's operations: depletion of natural resources and changes in local biodiversity and water, air and soil quality

Under this Policy, CBA has a procedure in place for documenting external communications with surrounding communities in its area of influence in order to improve relations with stakeholders and monitor potential reputational damage and their perceptions of the Company and its operations, as well as to identify opportunities

to strengthen partnerships. A spreadsheet is used to document community requests, claims, suggestions and complaints, and to monitor cases until resolution/response to the party concerned. This procedure is currently used in CBA's mining operations.

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# GRI Content Index (GRI 102-55)

Finished products at the Downstream department



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## GRI Content Index



For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with the appropriate sections in the body of the report. The service was applied to the Portuguese version of the report.

GRI Standards		Contents	Page and/or link	Comments or Reason for Omission	Assurance
GRI 101: Foundation 2016					
<b>Organizational Profile</b>					
GRI 102: General Disclosures 2016	102-1	Name of the organization	12		
GRI 102: General Disclosures 2016	102-2	Activities, brands, products, and services	12, 14		
GRI 102: General Disclosures 2016	102-3	Location of headquarters	14		
GRI 102: General Disclosures 2016	102-4	Location of operations	14		
GRI 102: General Disclosures 2016	102-5	Ownership and legal form	133	Closely held corporation	
GRI 102: General Disclosures 2016	102-6	Markets served	12, 17		
GRI 102: General Disclosures 2016	102-7	Scale of organization	11, 14		
GRI 102: General Disclosures 2016	102-8	Information on employees and other workers	57, 65		
GRI 102: General Disclosures 2016	102-9	Supply chain	27		
GRI 102: General Disclosures 2016	102-10	Significant changes to the organization and its supply chain	14, 17, 26		
GRI 102: General Disclosures 2016	102-11	Precautionary principle	133	CBA uses a conservative approach to managing risks. In assessing potential impacts from risks (financial, reputational, environment, health and safety, social and human rights, and legal and regulatory), the worst-case impact is assumed in informing actions to address those risks. We believe this approach aligns with the Precautionary Principle, although it is not formally applied.	
GRI 102: General Disclosures 2016	102-12	External initiatives	23		
GRI 102: General Disclosures 2016	102-13	Membership of associations	123		
<b>Strategy</b>					
GRI 102: General Disclosures 2016	102-14	Message from the CEO	6, 7		

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<b>Ethics &amp; Integrity</b>					
GRI 102: General Disclosures 2016	102-16	Values, principles, standards, and norms of behavior	36, 37		
<b>Governance</b>					
GRI 102: General Disclosures 2016	102-18	Governance structure	37		
GRI 102: General Disclosures 2016	102-30	Effectiveness of risk management processes	40		
<b>Stakeholder Engagement</b>					
GRI 102: General Disclosures 2016	102-40	List of stakeholder groups	3		
GRI 102: General Disclosures 2016	102-41	Collective bargaining agreements	57		
GRI 102: General Disclosures 2016	102-42	Identifying and selecting stakeholders	3		
GRI 102: General Disclosures 2016	102-43	Approach to stakeholder engagement	3, 24		
GRI 102: General Disclosures 2016	102-44	Key topics and concerns raised	3, 124		
<b>Reporting Practices</b>					
GRI 102: General Disclosures 2016	102-45	Entities included in the consolidated financial statements	134	<p>The entities included in the financial statements are: Companhia Brasileira de Alumínio (all operations: Alumínio plant, mines, Nickel business, and CBA-owned hydropower dams), Metalex Ltda., CBA Itapissuma Ltda., CBA Energia Participações S.A., CBA Machadinho Geração de Energia Ltda., Baesa-Energética Barra Grande S.A. and Enercan-Campos Novos Energia S.A.</p> <p>Energy subsidiaries, such as CBA Energia Participações S.A., CBA Machadinho Geração de Energia Ltda., Campos Novos Energia S.A. (Enercan) and Energética Barra Grande S.A. (Baesa), are covered by the consolidated financial statements but not by this report. These do not represent omissions.</p>	
GRI 102: General Disclosures 2016	102-46	Defining report content and topic Boundaries	3, 124		
GRI 102: General Disclosures 2016	102-47	List of material topics	3, 124		
GRI 102: General Disclosures 2016	102-48	Restatements of information	125		

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GRI Standards	Contents		Page and/or link	Comments or Reason for Omission	Assurance
GRI 102: General Disclosures 2016	102-49	Changes in reporting	135	Information for the Itapissuma operation, which was integrated into the group in February 2020, has been incorporated into the report in the current reporting cycle. No changes have been omitted.	
GRI 102: General Disclosures 2016	102-50	Reporting period	3		
GRI 102: General Disclosures 2016	102-51	Date of most recent report	135	2019 CBA Annual Report.	
GRI 102: General Disclosures 2016	102-52	Reporting cycle	135	Annual.	
GRI 102: General Disclosures 2016	102-53	Contact point for questions regarding the report	5		
GRI 102: General Disclosures 2016	102-54	Claims of reporting in accordance with the GRI Standards	3		
GRI 102: General Disclosures 2016	102-55	GRI Content Index	132		
GRI 102: General Disclosures 2016	102-56	External assurance	135	This report will again be assured by independent auditors PwC to ensure the information in the report is reliable and traceable. The assurance opinion will be incorporated in the report as received from PwC. CBA engaged the independent auditors to conduct the assurance engagement in accordance with all applicable procurement rules, and has no relationship with the auditors which could compromise their independence. Assurance is sought by CBA's CEO, who is responsible for signing a statement of acceptance of the assurance before the report is published. There are no omissions in this topic.	

### Non-Material Topics

Topic - 201: Economic Performance					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	29		
GRI 103 Management Approach 2016	103-2	The management approach and its components	29		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	29		

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<b>Topic - 202: Market presence</b>					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	49, 75		
GRI 103 Management Approach 2016	103-2	The management approach and its components	49, 75		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	75		
GRI 202 Market Presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	58		
<b>Material topic: Local development and impacts on surrounding communities</b>					
<b>Topic - 203: Indirect economic impacts</b>					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	75		
GRI 103 Management Approach 2016	103-2	The management approach and its components	75		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	75		
GRI 203: Indirect economic impacts 2016	203-1	Infrastructure investments and services supported	78, 79		
GRI 203: Indirect economic impacts 2016	203-2	Significant indirect economic impacts	78, 82		
<b>Topic - 204: Procurement Practices</b>					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	26		
GRI 103 Management Approach 2016	103-2	The management approach and its components	26		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	26		
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on locally-based suppliers	136	CBA does not monitor the proportion of spending on local suppliers.	
<b>Material topic: Ethics and compliance</b>					
<b>Topic - 205: Anti-corruption</b>					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	38		
GRI 103 Management Approach 2016	103-2	The management approach and its components	38		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	38		
GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	136	No incidents of corruption were identified in 2020.	

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<b>Material topic: Materials efficiency and aluminium recycling</b>					
<b>Topic - 301: Materials</b>					
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	88		
GRI 103 Management Approach 2016	103-2	The management approach and its components	88		
GRI 103 Management Approach 2016	103-3	Evaluation of the management approach	88		
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## Independent auditors' limited assurance report on the sustainability data contained in the Annual Report for 2020

To the Board of Directors and Stockholders  
**Companhia Brasileira de Alumínio**  
Alumínio - SP

### INTRODUCTION

We were appointed by **Companhia Brasileira de Alumínio ("Company" or "CBA")** to submit our limited assurance report on the compilation of sustainability data contained in the **Annual Report for 2020 of Companhia Brasileira de Alumínio** for the year ended December 31, 2020.

### MANAGEMENT'S RESPONSIBILITIES

The Company's management is responsible for the preparation and proper presentation of the sustainability data included in the **Annual Report for 2020**, pursuant to the criteria of the Global Reporting Initiative (GRI STANDARDS) and for the internal controls that it deems necessary to support the preparation of this data free of material misstatement, whether due to fraud or error.

### INDEPENDENT AUDITORS' RESPONSIBILITY

Our responsibility is to express a conclusion on the sustainability data included in the **Annual Report for 2020**, based on our limited assurance engagement carried out pursuant to Technical Communication CTO 01 – "Issuance of an Assurance Report Related to Sustainability and Social Responsibility", issued by the Brazilian Federal Accounting Council (CFC), based on the Brazilian standard NBC TO 3000 – "Assurance Engagements Other than Audit and Review", also issued by the CFC, which is equivalent to international standard ISAE 3000 – "Assurance engagements other than audits or reviews of historical financial information", issued by the International Auditing and Assurance Standards Board (IAASB). These standards require the enforcement of ethical and independence requirements, as well as other responsibilities, including as to the Brazilian Standard on Quality Control (NBC PA 01) and, therefore, the maintenance of a comprehensive quality control system, including documented policies and procedures for the fulfillment of ethical requirements, professional standards, and applicable legal and regulatory requirements.

These standards also require the engagement to be planned and performed to obtain limited assurance that the sustainability data included in the **Annual Report for 2020**, taken as a whole, is free of material misstatement.

A limited assurance engagement conducted pursuant to Brazilian standard NBC TO 3000 and ISAE 3000 mainly consists of making inquiries to

Company management and other professionals involved in the preparation of the sustainability data, as well as applying analytical procedures to obtain evidence that enables the issuance of a limited assurance conclusion on the data taken as a whole. A limited assurance engagement also requires the performance of additional procedures when the independent auditor becomes aware of matters that lead the auditor to believe that the data taken as a whole might present material misstatements.

The selected procedures were based on our understanding of the aspects related to the compilation and presentation of the sustainability data included in the **Annual Report for 2020** on other conditions of the engagement and on our analysis of the areas in which material misstatements might exist. The following procedures were adopted:

- (a) Planning the work, taking into account the materiality and the volume of quantitative and qualitative data, and the operating and internal control systems that were used to prepare the sustainability data included in the Company's **Annual Report for 2020**;
- (b) Understanding the calculation methodology and the procedures adopted for the compilation of indicators through interviews with the managers responsible for the preparation of the data;
- (c) Applying analytical procedures to quantitative data and making inquiries regarding the qualitative data and its correlation with the indicators

disclosed in the sustainability data included in the **Annual Report for 2020**;

(d) Comparing the financial indicators with the financial statements and/or accounting records.

The limited assurance engagement also included tests to assess compliance with the guidelines and criteria of the Global Reporting Initiative (GRI Standards), Core option, applied in the preparation of the sustainability data included in the **Annual Report for 2020**.

We believe that the evidence we obtained is adequate and appropriate to provide a basis for our limited assurance conclusion.

## SCOPE AND LIMITATIONS

The procedures applied in a limited assurance engagement are substantially less comprehensive than those applied in a reasonable assurance engagement, the objective of which is to issue an opinion on the sustainability data included in the **Annual Report for 2020**. Consequently, we were not able to obtain reasonable assurance that we might become aware of all significant matters that might be identified in an assurance engagement, the objective of which is to express an opinion. If we had performed an engagement for the purpose of expressing an opinion, we might have identified other matters and possible misstatements in the sustainability data included in the **Annual Report for 2020**. Therefore, we do not express an opinion on this data.

Non-financial figures are subject to more underlying limitations than financial figures, due to the nature and diversity of the approaches used to determine, calculate and estimate these figures. Qualitative interpretations of the relevance, materiality, and accuracy of the figures are subject to individual assumptions and judgments. Furthermore, we did not consider the figures reported for prior years in our engagement, nor future projections and targets.

The sustainability indicators were prepared and presented in accordance with the criteria of the GRI Standards and, therefore, do not aim to provide assurance with regard to the compliance with social, economic, environmental, or engineering laws and regulations. However, the aforementioned standards establish the presentation and disclosure of possible cases of non-compliance with such regulations when meaningful sanctions or significant fines are applied. Our limited assurance report should be read and understood in this context, which is inherent to the selected criteria (GRI Standards).

## CONCLUSION

Based on the procedures performed, described herein, no matter has come to our attention that leads us to believe that the sustainability data included in the **Annual Report for 2020** of **Companhia Brasileira de Alumínio** has not been compiled, in all material respects, in accordance with the guidelines of the Global Reporting Initiative (GRI STANDARDS).

São Paulo, April 8, 2021

PricewaterhouseCoopers

**Independent Auditors**

**CRC 2SP000160/O-5**

**Maurício Colombari**

**Accountant Regional Accounting Council (CRC)  
1SP195838/O-3**

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Luciano Francisco Alves | **Chief Financial Officer**

### Coordination

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**Communication** | Fernanda Diniz Bolzan de Oliveira and Bruna Azevedo Di Monaco Zuquim

**Environment** | Marcus Vinicius Vaz Moreno

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Quintal 22

### Technical consulting

BSD

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Adesign

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Felix Reiners

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### Independent Audit

PricewaterhouseCoopers – PWC

### Translation

LATAM – Latin American Translations



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