

# SUSTAINABILITY REPORT



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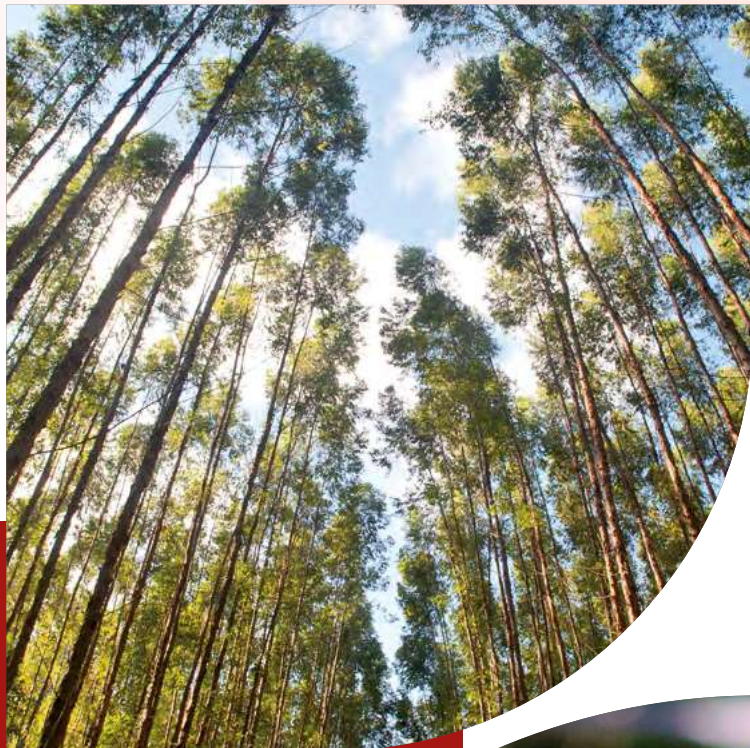
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# Message from Management

## Weathering Adversity

GRI 102-14

*“The grandeur of a profession is...above all, uniting men: there is only one true luxury, that of human relationships.” Antoine de Saint-Exupéry*

How does an organization approach sustainability in a year like 2020? During the most testing crisis the world has faced this century, what approach can an organization take to ensure it meets the needs of the present—across the environmental, social and economic spheres—without compromising the ability of future generations to meet their own needs.

In 2020, as the world waited anxiously for a vaccine to help control the spread of COVID-19, we were faced with big and tough decisions as we worked to contain the impacts from the pandemic amid overwhelming uncertainties—with virtually all our initial projections overrun by the force of events, we were left with no other choice in decision-making but to rely on humans’ most basic instinct: SURVIVAL. Staying alive until the storm subsided, or until we had at least a glimpse of a possible way forward.



So for FERBASA, just as for the rest of the world, 2020 came down to survival. But even the seemingly obvious decisions became, in many cases, particularly complex, especially in execution. In this report we share with you, dear reader, some of the decisions and strategies we implemented during that fateful month of March 2020, many of which we have already described in some of our previous publications.

We believed that, more than ever, it would take humility to ensure our decisions were timely and sound; rather than taking for granted the solidity of a company with over 59 years of history, we chose not to downplay the impacts from the pandemic, following the advice of English novelist Thomas Hardy: **“If a way to the better there be, it exacts a full look at the worst.”** Saint-Exupéry believed one of people’s most admirable traits is a sense of “gravity”, or the ability of a person, when faced with an impending storm, to say candidly, “Behold, there comes a fierce storm.” The more honestly one acknowledges it, the better one can appraise it.

Accordingly, although we had a healthy cash position, we decided to raise additional funding to mitigate any risks stemming from financial instability and uncertainties ahead. We believed that, despite the uncertain business conditions and the many contracts that were either canceled or postponed, it would be important for us to use the opportunity to build closer relationships with our communities by providing needed relief, especially given the impending economic crisis and resulting unemployment. In March, we approved as an immediate response a relief fund of R\$ 2.5

million to purchase and distribute groceries and hygiene products to these communities, in a program that within a few months was extended to include donations of ventilators and rapid test kits.

Safety became an even higher priority alongside the enhanced sanitary measures required during the pandemic. This included radical changes in work routines and in workplaces, and enhanced accident prevention efforts during a period when employees were under high emotional stress.

Our medical staff responded promptly by developing a crisis action plan and overseeing important organizational changes which included hiring an infectious disease specialist and other medical specialists, placing people in the at-risk group on leave, purchasing rapid test kits, migrating much of our workforce to telecommuting, and implementing guidance and measures to protect employees working at our production sites—the true heroes in what proved to be a difficult yet successful journey, in which we maintained our workforce with no layoffs, delivered strong financial results, and expanded our social investment.

Despite our growth amid the many challenges created by COVID-19—which required us to adopt measures that were then uncharted territory for us, such as telecommuting, a relatively novel approach to working that quickly became mainstream—there is no denying that such an unprecedented crisis has brought about important changes in society and organizations, compelling them to adopt a mentality that puts people above profits, with



the exception of those organizations that already had this mindset, which the pandemic reaffirmed and strengthened.

There have indeed been countless lessons learned from the pandemic, not least of which is the need to ensure we walk the talk when it comes to sustainability. It is important that we

carry into the future the many important lessons drawn from a harrowing crisis that has left us with no other choice, after needed and profound reflection, but to reconsider the many aspects that affect society’s ability to improve the human condition, which is largely shaped and determined by man himself.



# About the report

Ferbasa's Second Sustainability report brings the results and challenges faced in 2020, and is based on the Global Reporting Initiative (GRI) Standards - Core Level. This international standard is used to transparently report the company's economic, environmental, social and governance (ESG) performance. Given the adverse scenario, we have also included our main actions to fight the COVID-19 pandemic - both those conducted in-house and those focused on the very necessary support for the surrounding communities.

this document, demonstrating our commitment to developing people and to prosperity in the regions where we are present. It is our opinion that drafting this report not only provides a record of our progress in these themes, it also provides evidence that, year after year, our learning process converges to value the memory and values perpetuated by our Founder, honoring his purpose of promoting the urgent and essential social transformation, primarily through Education, the driving engine of progress. **GRI 102-46, 102-48, 102-49, 102-50, 102-51, 102-52, 102-53**

The material themes considered most relevant for our stakeholders are addressed throughout



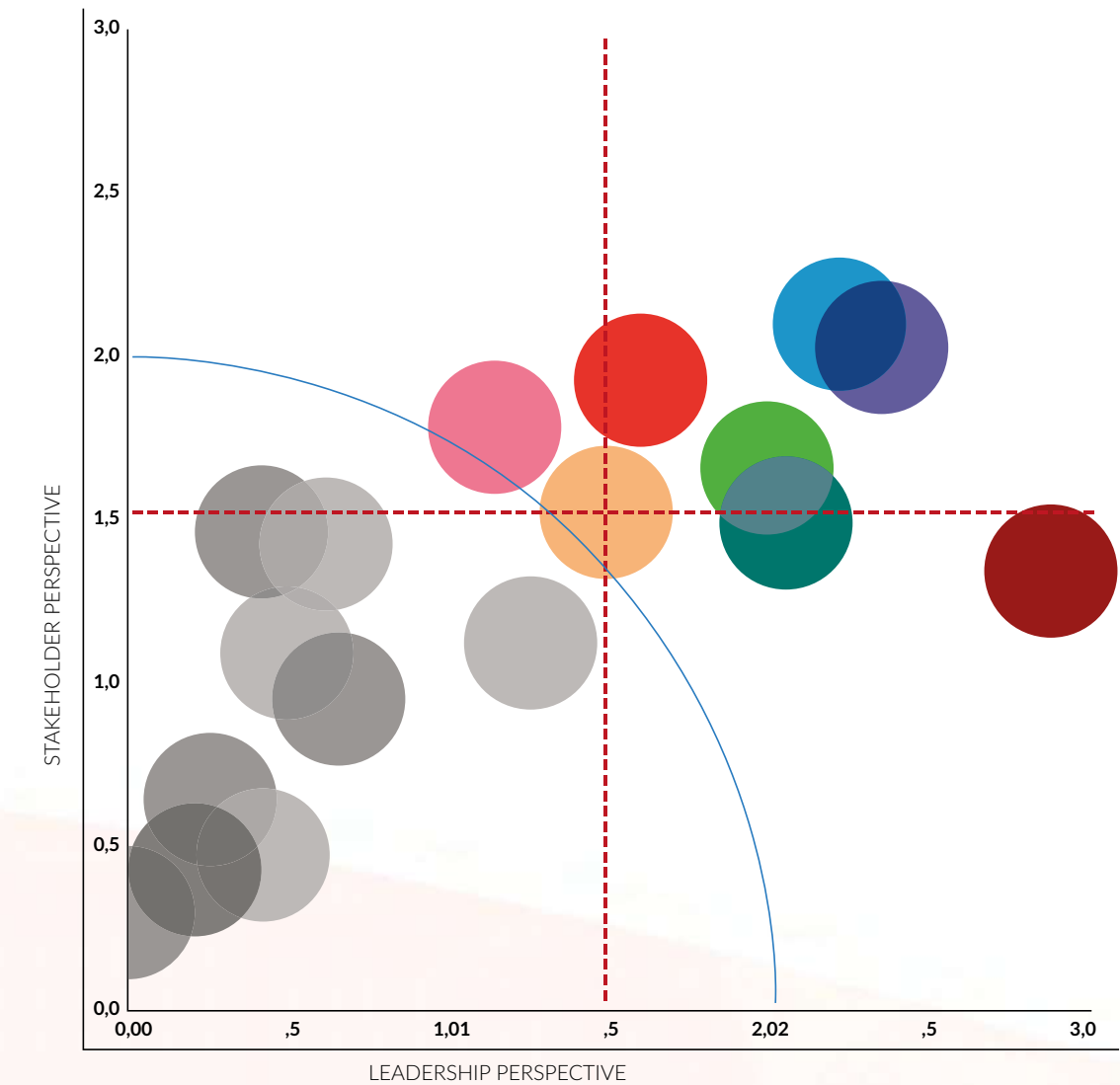




# Materiality and engagement

GRI 103-1, 102-40, 102-42, 102-43, 102-44, 102-47

Ferbasa's materiality matrix was created in 2018, after checking with the Company's main stakeholders - shareholders, investors, communities, employees, customers, banks, industry associations, suppliers, government agencies, regulatory bodies, third-sector organizations, and the media. We prioritize the following set of social, environmental and economic priorities for our activities:



- Governance, transparency and ethics
- Development of the regions where we are present
- Business and financial management
- Attracting, retaining and developing human capital
- Energy resources
- Product quality
- Waste and scrap management
- Water resources

Note: There was no change in the list of material topics comparing to the 2019 report.

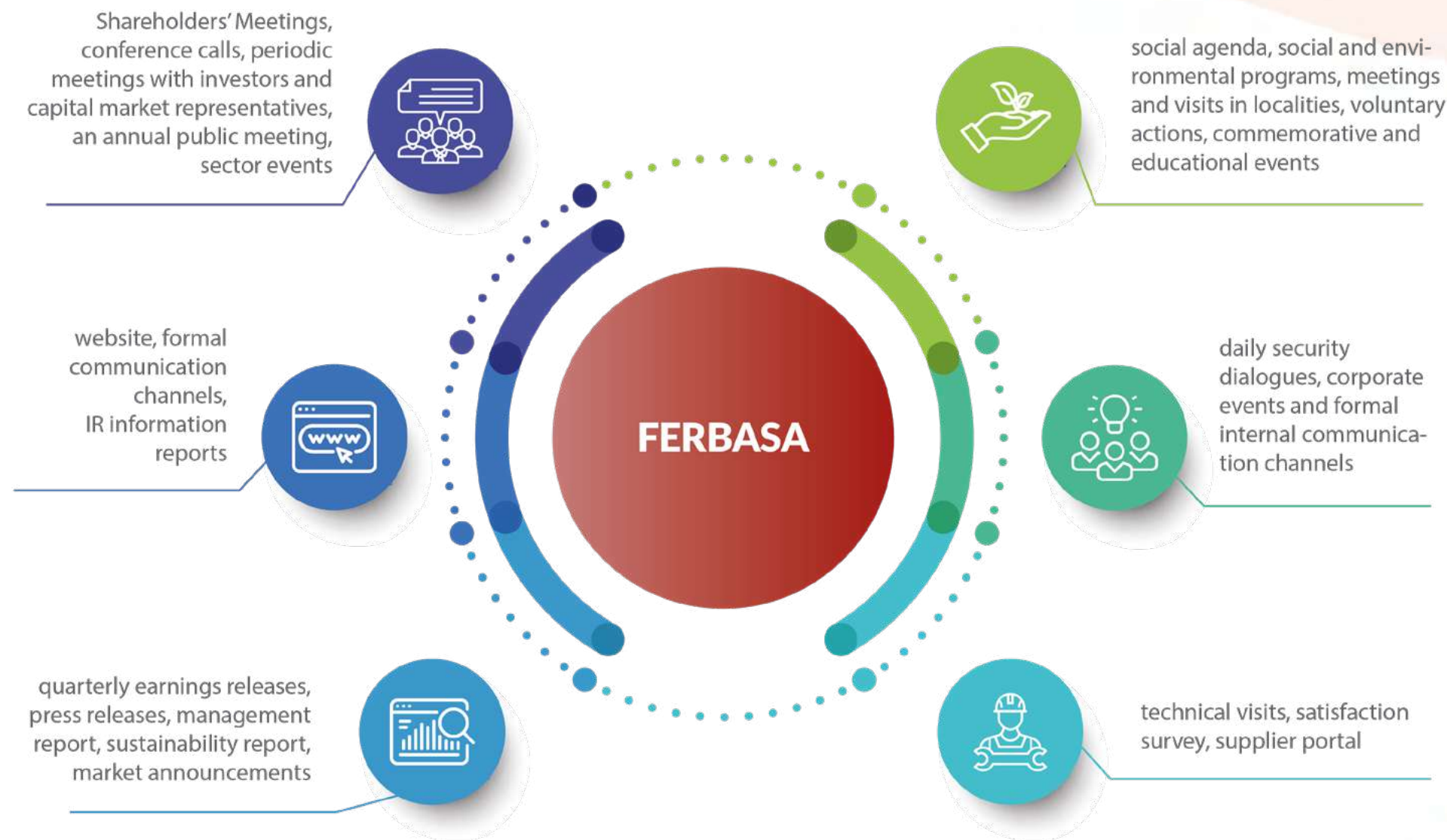
To strengthen our relationship with our main audiences and maintain an open dialog, Ferbasa has structured Q&A channels. The premise adopted by all communication tools is to ensure unlimited information transparency, integrity, impartiality and fairness.

### Transparent relationships with our investors

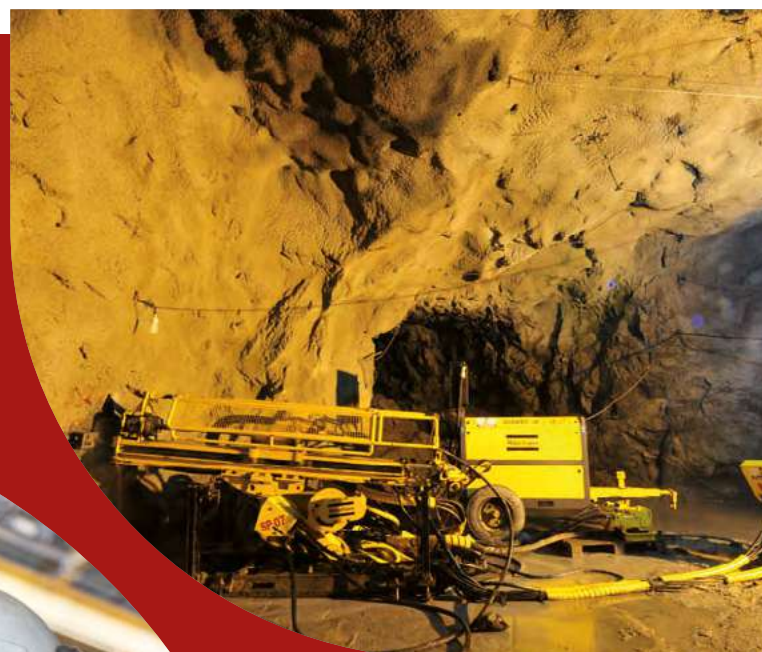
As an additional measure to expand the Company's communication with its investors and the market in general, in 2020 we held an online public meeting, together with APIMEC-SP, where all of the company's executives were present to disclose quarterly earnings and reinforce our culture and governance.

At the time, Management presented actions to fight the pandemic scenario and macroeconomic analyses, including the aspects of social support provided by Ferbasa.

## MAIN WAYS OF COMMUNICATION







# About Ferbasa

GRI 102-1

Established on February 23, 1961 by engineer José Corgosinho de Carvalho Filho, Ferbasa is the Brazilian leader in ferroalloy and the only manufacturer of ferrochrome in the Americas. It is active in metallurgy, mining, forestry and renewable energy. The company's main offices are located in Pojuca, Bahia; at sixty, it is one of the state's largest corporate groups.

Ferbasa was established initially to explore and supply chromite from mines located in the Center-North of Bahia. It has had a vertically integrated production cycle focused on meeting the demand of its metallurgical plant that produces chrome and silicon metal alloys since 1963. GRI 102-2





**FOREST RESOURCES**

Produces bioreducer, mostly used as a reducing agent to manufacture silicon alloys.



**METALLURGICAL INDUSTRIAL COMPLEX**

Transforms raw ores and other inputs into metallic alloys of chromium and silicon.



**MINES**

Produces chromite, calcium oxide (virgin lime) and quartz for its industrial complex.



**RENEWABLE ENERGY**

Currently has a multi-year agreement (PPA) with the Government, which expires in 2034. Once the agreement expires, the Company may decide to use or sell the energy generated by its wind-farms.

Ferbasa owns some 95% of the known chromite reserves in Brazil, and is committed to looking for strategic products that, among other goals, will expand its positive influence on the economy and on generating occupancy and income in the 16 cities and towns where it is active.

With people-centered management, Ferbasa invests in structuring initiatives to defend the environment and preserve workplace health and safety, all linked to developing human capital and the cities and towns where it operates.

In this regard, it offers its employees an attractive and competitive package of benefits and professional training. It also continuously strengthens the activities of its social responsibility program known as **Aqui Tem Ferbasa** [Ferbasa is Here], inspired by the legacy of José Carvalho, which are based on the pillars of Education, Art, Culture, the Environment, Sports, Rural and Community development and, since 2020, health. Our social initiatives are drivers of the transformations that are so badly needed in the Northeast, which according to the IBGE\* concentrates almost half of this nation's poverty. It is important to remember that this agenda is not something new for Ferbasa, as social elements are strongly embedded in our history and our very composition. In 1975, José Carvalho created the José Carvalho Foundation, a

non-profit institution that focuses on comprehensive training of low-income children and youth, giving them the capabilities to promote change in the vital fabric of society. To ensure the foundation's sustainability, he donated most of his shares in Ferbasa to the foundation, such that FJC is now the controlling shareholder, giving the company a unique and pioneer management model for Brazil, which remains to this day.

His altruism continues to bear fruit for many generations. The José Carvalho foundation uses the dividends it receives from Ferbasa and the profits from the sale of Tina & Rolf products to provide free, high-quality education for almost 4 thousand students in 6 of its own schools, for their entire life as students. It also develops socio-educational projects and programs that help develop citizen youth. **GRI 102-12**

- <https://www.ibge.gov.br/estatisticas/multidominio/condicoes-de-vida-desigualdade-e-pobreza/17374-indicadores-sociais-minimos.html?=&t=resultados>.

**THE COMPANY'S OPERATIONS ARE CERTIFIED IN THE STANDARDS**





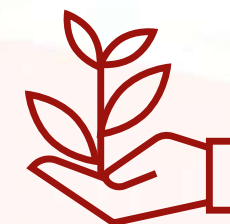
# Ferbasa Mission, Vision, and Values

GRI 102-16



## Mission

Serve the ferroalloy, chromium ore and renewable energy markets, ensuring customers, shareholders and employees are satisfied. Develop, design, and operate an integrated mining, forestry production, energy and metallurgy business model that is sustainable and competitive.



## Vision

Be a globally competitive company in ferroalloys and chromium ore, and as a generator of renewable energy, consolidating its position as a reference in sustainability.



## Values

Ethics and respect for our commitments;

Opportunities for personal and professional growth;

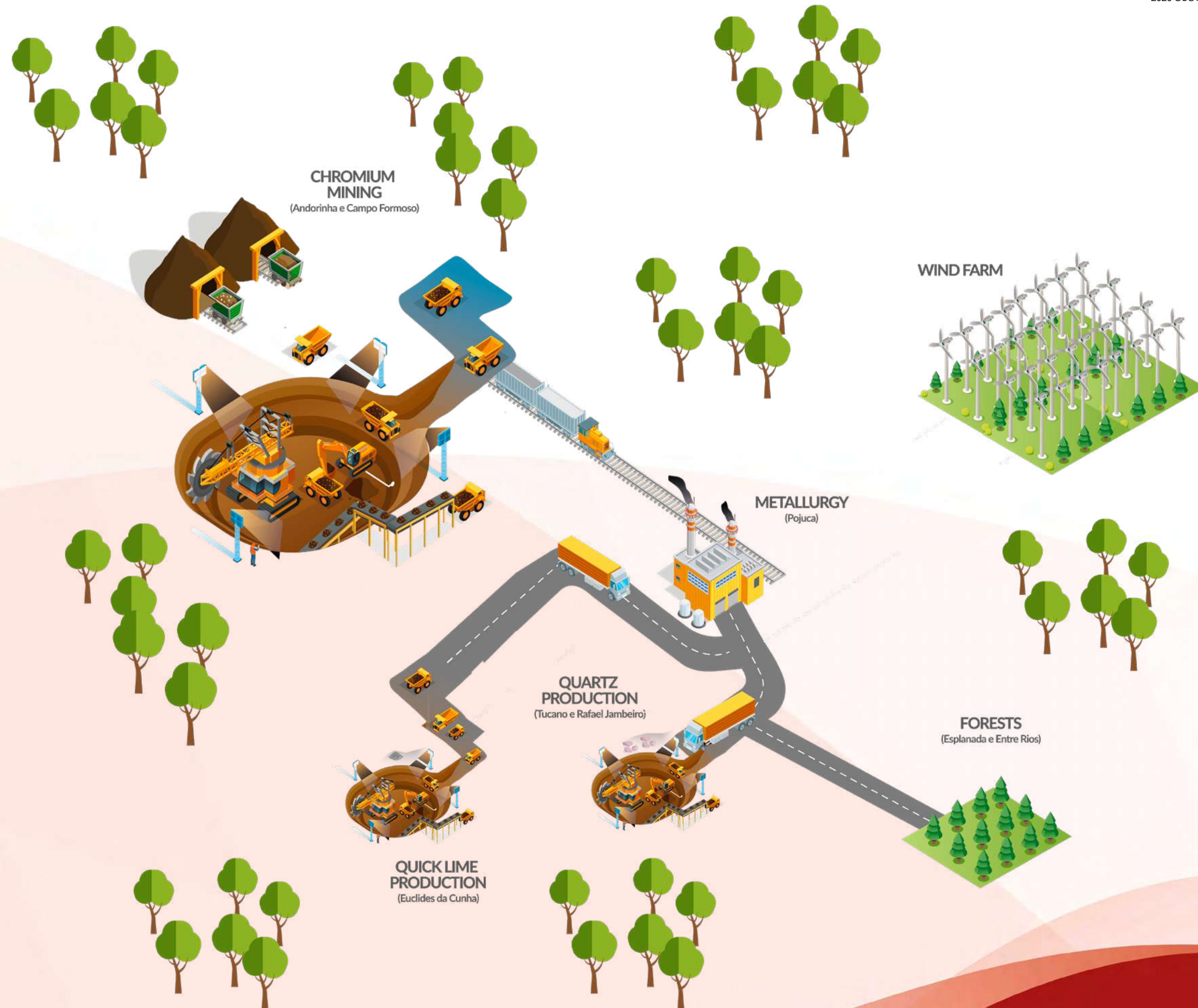
Quality, safety and robustness;

Simplicity and humility;

Sustainability and valuing life.









## Integrated approach

Ferbasa has a vertically integrated production cycle that includes a metallurgical plant where it manufactures chromium and silicon alloys. It also has mining operations for chromite, quartz and lime, generates renewable energy, and has a sustainable operation to manufacture bio-reducer from planted eucalyptus forests. **GRI 102-2**

Chromium and silicon alloys are produced at our industrial complex in Pojuca, BA and sold in Brazil and abroad, especially to Japan, the US and EU. This facility has 14 electric furnaces, 8 for ferrochrome and 6 for ferrosilicon. The former receive chromite from our mining complexes in the Jacurici Valley and Campo Formoso, in the Center-North of Bahia. The raw material is used to manufacture high and low carbon ferrochrome, any surplus ore is exported.

In addition to extracting and processing chromite, our mining operations extract high quality lime and turn it into virgin lime in Euclides, also in Bahia. Rolled quartz is extracted in Tucano, and rock quartz in Rafael Jambeiro, both in Bahia. These are mostly used to manufacture silicon alloys. **GRI 102-6**

With an area covering 64 thousand hectares in 9 municipalities in Bahia (see chart below), our Forestry Unit has 25 thousand hectares of forest planted in eucalyptus. Bio-reducer is manufactured in fully mechanized rectangular furnaces that offer working conditions that are safe, ergonomically correct and sustainable. The bio-reducer manufactured is used to manufacture ferrosilicon.







The Forest Resources unit plays an important role in controlling our GHG emissions. Soil utilization fulfills the requirements of federal, state and municipal environmental laws, and over 45% of the forest area is made up of native forest, between the legal reserve (the law demands 20%) and permanent conservation areas. We have 1,243 hectares approved as Private Natural Patrimony Reserve [Reserva Particular do Patrimônio Natural - RPPN] - Fully Protected Conservation Units held in perpetuity.

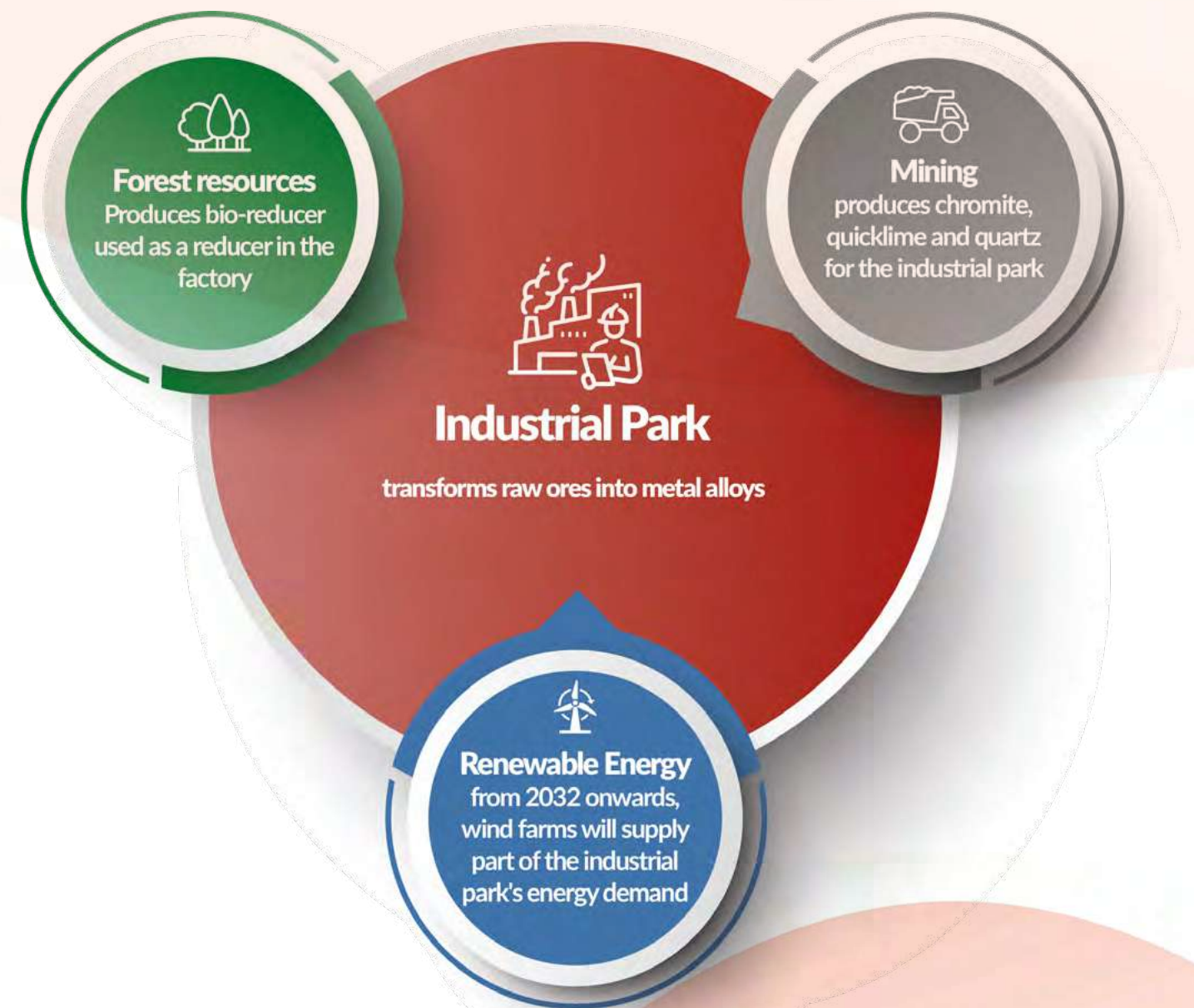
Ferbasa's renewable forests are planted as a mosaic, with corridors of native trees that serve as habitat for thousands of species of wild animals. Each year we work with the relevant agencies to release fauna to maintain the local biodiversity and reintroduce animals to their natural habitat.

Municipalities covered:

Araçás, Aramari, Cardeal da Silva, Conde, Entre Rios, Esplanada, Maracás, Mata de São João and Planaltino.

Closing the cycle of our vertically integrated production chain, in 2018 we purchased seven wind farms in the municipalities of Caetité and Pindaí, in southwestern Bahia. Energy generated by BW Guirapá will allow us to increase ensured supply of this important input and reduce the risks relat-

ed to the volatility of the Brazilian power industry after the 2034, when the agreement signed with the government following the Reserve Energy Auction expires. At this point, Ferbasa will be able to choose between selling or using the energy generated.





Ferbasa manufactures the following metal alloys:

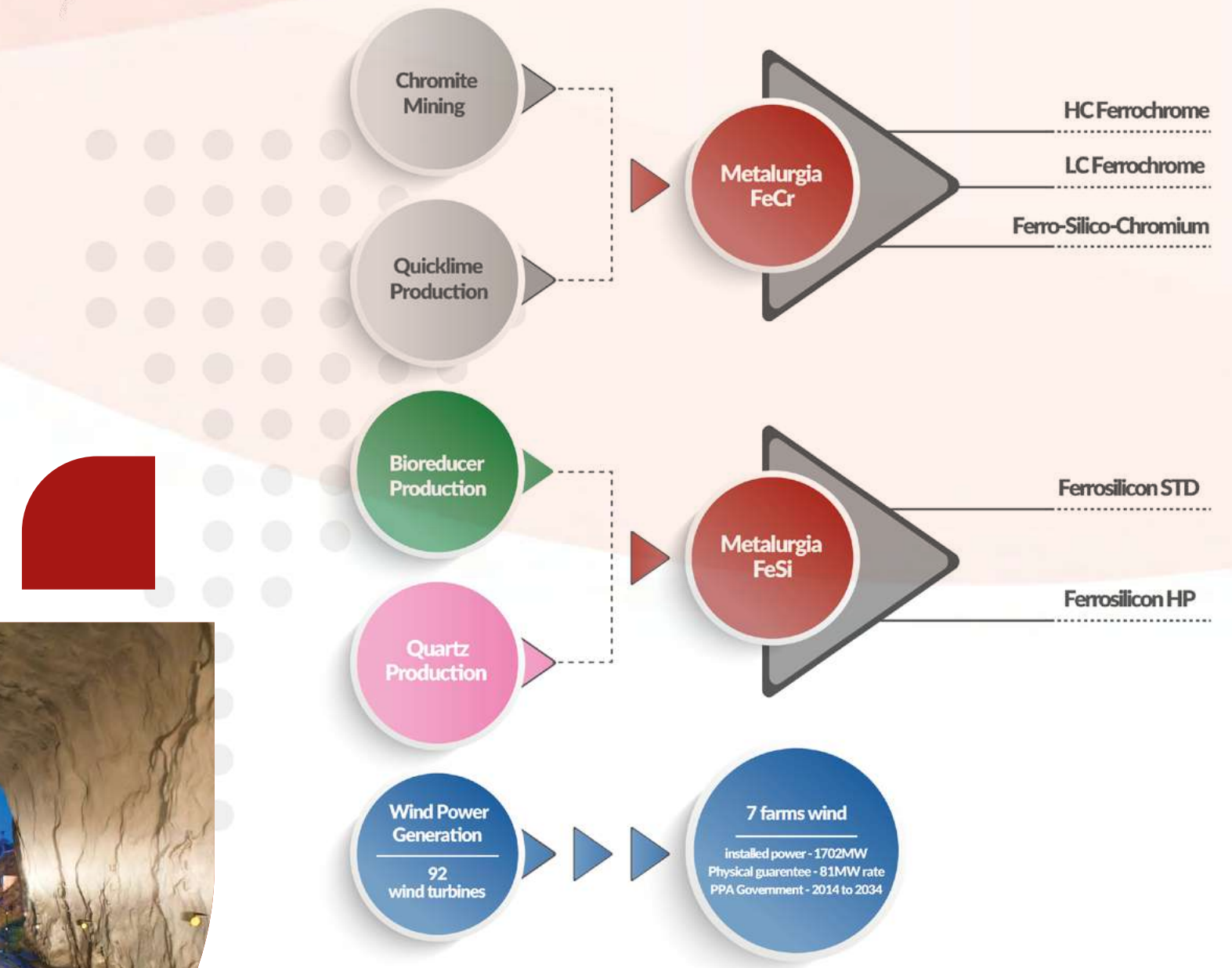
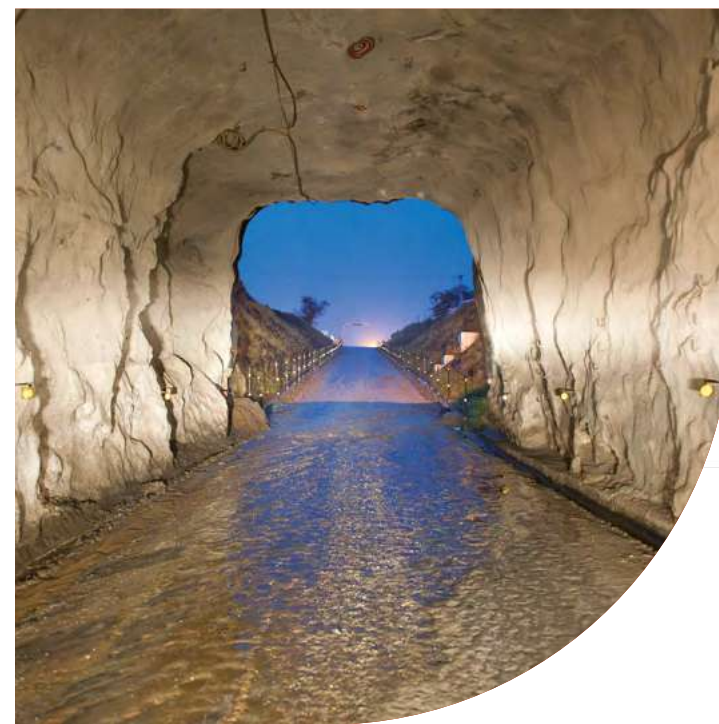
- High carbon ferrochrome (HCFerCr);
- Low carbon ferrochrome (LCFeCr);
- Ferro-Silico-Chromium (FeSiCr);
- Ferrosilicon 75 (FeSi 75);
- Ferrosilicon 75 High Purity (FeSi 75 HP);
- Innoculants.



The details of all alloys produced by Ferbasa are available at



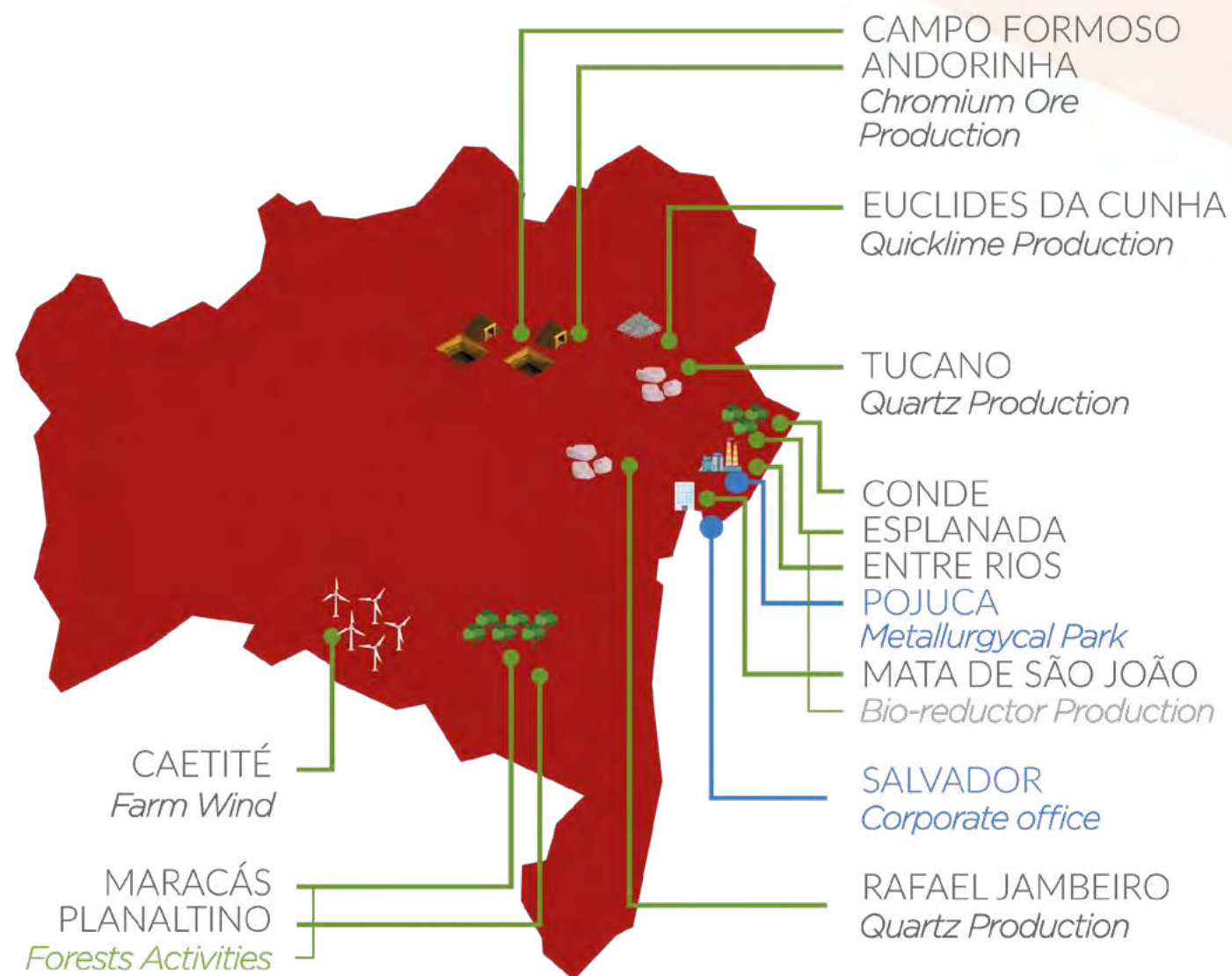
[http://www.ferbasa.com.br/conteudo\\_pti.asp?idioma=0&-conta=45&tipo=56201&id=211103](http://www.ferbasa.com.br/conteudo_pti.asp?idioma=0&-conta=45&tipo=56201&id=211103)





# Where we are located

GRI 102-4





# Ferbasa in numbers | 2020

GRI 102-7



**20.4%**

growth in the total volume of ferroalloys sold



**64 thousand**

hectares in forested land - 25 thousand planted in eucalyptus, 45% protected native forest and 1,243 hectares of Private Natural Patrimony Reserve.



**3,102**

direct employees

and **1,021**

indirect employees



**112.9 thousand**

tons of ferroalloys sold in Brazil



**110.2 th.**

tons of chromium ore (chromite) exported



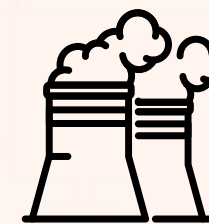
**168.4 million**

Reais in Cash Generation



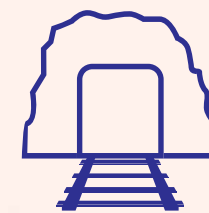
**406.8 million**

Reais in Adjusted EBITDA



**334.4 MVA**

installed capacity of the 14 electric furnaces



**2 mining complexes**

to extract chromite



**63.6 MW**

average generated by BW Guirapá



## Ownership structure

### Main Shareholders and Investment Funds 12/31/2020

	ON	%	PN	%	TOTAL	%
<b>Fundação José Carvalho</b>	29,086,696	98.80%	15,416,000	26.18%	44,502,696	50.39%
<b>Trigono Capital (5)</b>	400	0.001%	2,450,000	4.16%	2,450,400	2.77%
<b>Dimensional Funds</b>	-	-	1,231,482	2.09%	1,231,482	1.39%
<b>Kadima Asset Management (9)</b>	-	-	554,900	0.94%	554,900	0.63%
<b>Organon Capital</b>	-	-	500,000	0.85%	500,000	0.57%
<b>4um Investimentos</b>	-	-	449,386	0.76%	449,386	0.51%
<b>Cacahaca Trading LLC</b>	-	-	436,100	0.74%	436,100	0.49%
<b>Clube de Investimentos Sigma</b>	-	-	411,700	0.70%	411,700	0.47%
<b>Constância Fundo de Investimento em Ações</b>	-	-	316,650	0.54%	316,650	0.36%
<b>Other shareholders</b>	312,904	1.06%	33,930,482	57.63%	34,243,386	38.77%
<b>Shares in treasury</b>	40,000	0.14%	3,183,300	5.41%	3,223,300	3.65%
<b>Ferbasa share capital</b>	29,440,000	100%	58,880,0000	100%	88,320,000	100%







## Corporate Governance

Governance, transparency and ethics are among Ferbasa's material themes. To make sure it creates values for its stakeholders, the Company constantly improves its management structure and internal integrity and compliance mechanisms – this effort got an extra push in 2011, when Ferbasa was first listed as a Level 1 Corporate Governance company on the B3 exchange, showing its commit-

ment to good practices that apply to Brazilian listed companies, in addition to high levels of transparency and access to information.

The Company's main governance guidelines are its Bylaws, Disclosure Policy, and Risk Management Policy, available to the public at: [Policies and Bylaws](#). **GRI 102-17**



Ferbasa values the timely and symmetrical disclosure of information, complying with high standards of ethics and strengthening the confidence of its stakeholders. For this, it has formal policies to disclose material information and events, trade shares and manage risks. These are available on the Investor Relations ([Policies and Bylaws](#)) page.

**GRI 102-17**

### Board of Directors:

its remit is to work towards ensuring the perpetuity of Ferbasa, serving as a link between shareholders and management. It's main responsibilities are to set the Company's business goals, guiding the Executive Board in making strategic plans; approve annual budgets and investment plans' oversee and inspect the workings of the Executive Board and decide on its proposals; authorize all acts that exceed those of public administration. **GRI 102-18**

Board of Directors	Position
Geraldo de Oliveira Lopes	Chairman
Sérgio Curvelo Dória	Vice-Chairman
Bárbara Klein de Araújo Carvalho	Member
Guilherme de Alencar Amado	Member
José Ronaldo Sobrinho	Member
Marta Teixeira Barroso Fernandes	Member
Marcos Sampaio de Souza	Member
Paulo Roberto Magalhães Bastos	Member

### Executive Board:

elected by the Board of Directors each year, the Executive Board members oversee the Company's different control bodies, ensure implementation and compliance with the comprehensive health, safety, quality, environment, and other policies, draft and submit the annual budget and investment plan, and the financial and other statements to the Board of Directors. **GRI 102-18**

Executive Officers	Position
Marcio Lopes Fernandes de Barros	Chief Executive Officer
Ana Paula Fontes Mesquita de Oliveira	Administrative Officer
Claudiney Marcio de Araújo Pedrosa	Commercial Officer
Heron Albergaria de Melo	Financial and Investor Relations Officer
Oséias da Rocha Fiau	Industrial Officer
Sebastião da Cruz Andrade	Forestry and New Business Officer
Wanderley Lins de Oliveira	Mining Officer

\*Composition on 12/31/2020



## Oversight Board:

this independent oversight board is responsible for examining and approving the financial statements, balance sheets and other statements of the Company's economic-financial performance. **GRI 102-18**

Board of Auditors	Position
Cristiano Lima da Mota	Member
Massao Fábio Oya	Member
Emanuel Paixão de Oliveira	Member
José Augusto da Silva de Almeida	Alternate
José Santos Souza	Alternate
Maria Elvira Lopes Gimenez	Alternate

\*Composition on 12/31/2020

A complete list of the administrative bodies and the rules governing their composition are available in the Ferbasa Bylaws ([Policies and Bylaws](#)).

Since 2016, the governance structure has included three advisory committees: Strategy, Human Resources and Audit, focused on deepening the discussions of matters resolved by the Board of Directors. Made up of members of the BoD, they may include internal and external experts, advisors, and executives, depending on the matter at hand. **GRI 102-18**



## 2020 AGM

Given the pandemic, and as authorized by Provisional measure 931/2020 (signed into law 14,030/2020), the Annual General Meeting, initially scheduled for April 16, 2020 was postponed and took place on July 28, 2020. At the time, 66 investors participated via Distance Voting Bulletin (DVB), and only 3 were present at the company's headquarters in Pojuca, BA. Guidelines on preventive measures during the session were disclosed to the market ahead of time, and reinforced to all those present, who were also screened by the Medical Service and given COVID-19 quick tests. **GRI 102-18**

All of the documents regarding the 2020 Annual General Meeting are available on the Ferbasa IR page ([http://www.ferbasa.com.br/conteudo\\_pt.asp?idioma=0&conta=28&tipo=55555&ano=2020](http://www.ferbasa.com.br/conteudo_pt.asp?idioma=0&conta=28&tipo=55555&ano=2020))



# Risk Management and Compliance

Ferbasa has a Risk Management and Compliance area dedicated to assessing the adequacy, efficiency and efficacy of its control systems, based on monitoring the main risks to which the company is exposed.

These are coordinated by Internal Controls and overseen by the Audit Committee. Risks are assessed and classified based on their likelihood and consequent relevance. We reiterate that business managers are actively involved in monitoring the indicators that comprise the main risks inherent to the business. **GRI 102-11**



**We monitor five categories of risk.**



## Audit Committee

This committee serves the Board of Directors in an advisory capacity, as it defines the Company's essential guidelines and high-level controls. The Audit committee is specifically responsible for overseeing risk management activities to ensure balance, transparency and the completeness of the information. It is also responsible to ensuring there are no conflicts of interest, loss of independence, or breach of the integrity of independent audits. Members are elected for one-year terms.

Risks are handled according to the premises of The Committee of Sponsoring Organizations (Coso)\*, and these are reflected in the Risk Management Policy and Ferbasa's Handbook for Integrated Risk Management. These documents list the procedures to draft and monitor remediation plans, and for the continuous monitoring of contingencies and laws that apply to the Company's activities. Over the course of the year we reviewed the Company's operating risk matrix, bearing in mind their classification and degree of exposure (impact and vulnerability). **GRI 102-11**

\*A North-American organization that defines internationally accepted standards for internal controls and corporate risk assessment).



## Ethical Conduct Committee

Respect for the fundamental principles of ethics, transparency and integrity defined in the Ferbasa Code of Conduct are the basis of the work performed by the members of the Ethical Conduct Committee. This group reports to the Audit Committee and investigates, assesses and investigates reports of violation. It also guides, advises and receives reports.

Reports of violation of the Code may be made by any person by e-mail (comiteconduta@ferbasa.com.br) or phone (71 3404-3199). Anonymity is ensured, as is a confidential, impartial and independent evaluation. **GRI 102-17**

## Code of Conduct

The Code of Conduct, which is available to all Ferbasa audiences, defines how the Company relates to its audiences, formalizes the continuous search for excellence in all areas, and clearly defines the ethical posture expected from employees, regardless of their position or role. More than this, the document aims to be an individual and collective reference for employee mindsets and behaviors so that we all follow the same conduct standards. This standard also guides the Company's activities toward the environment and the communities surrounding its facilities, strengthening Ferbasa's governance and institutional image with guidelines based on ethics, seriousness, a sense of justice and commitment to the citizens.

This code is available at  
([http://www.ferbasa.com.br/conteudo\\_pt.asp?idioma=0&conta=28&tipo=55592](http://www.ferbasa.com.br/conteudo_pt.asp?idioma=0&conta=28&tipo=55592)).

## Institutional relations and public policies

**GRI 102-13 | 103 | 415**

Ferbasa believes in participating in diverse discussion forums as a means to promote sustainable socioeconomic development. This encourages good relationships with its stakeholders and, at the same time, keeps the Company apprised of sector agendas, ensuring it is actively involved in industry associations, such as:

The American Chamber of Commerce for Brazil - AMCHAM;  
 ABAF, the Bahia Association for Planted Forests;  
 ABEEÓLICA, the Brazilian Association for Wind Energy;  
 ABRACE, the Association of Large Energy Consumers and Free Consumers;  
 ABRAFE, the Brazilian Association of Ferroalloys and Metallic Silicon Producers;  
 CEPRAM, the State Environmental Board;  
 IBRAM, the Brazilian Mining Institute;  
 USUPPORT, the Association of Bahia Port Users;  
 The Bahia Forum on Global Climate Change and Biodiversity;  
 COMDEMA, the Pojuca City Environmental Defense Council;  
 CONERH, the State Water Resources Board;  
 The Entre Rios Environmental Board;  
 The Esplanada Environmental Board;  
 The Maracás Environmental Board;  
 The Mata de São João Environmental Board;  
 APA, the Northern Coast Management Board;  
 SINDIMIBA, the State of Bahia Union of Metallic Ores, Noble and Precious Metals, Precious and Semi-Precious Stones and Magnesite Producers [Sindicato das Indústrias Extrativas de Minerais Metálicos, Metais Nobres e Preciosos, Pedras Preciosas e Semipreciosas e Magnesita no Estado da Bahia].  
 CBHRI, the Northern Bay and Inhambupe River Basin Committee;  
 CBHI, the Itapicuru River Basin Committee;  
 The Bahia Federation of Industries (FIEB) Mining Working Group;  
 The Andorinha II dam Committee to Monitor Water Allocation



# Value Chain

GRI 103 | 415

Seeking to drive a continuous and sustainable prosperity cycle based on good practices in all links of the production chain, Ferbasa values a balanced and responsible relationship with customers and suppliers. Throughout its history it has conducted its business in an ethical and transparent manner. It also keeps management tools and other controls to ensure its Business Partners comply with Brazilian and international laws, and the Company's Code of Conduct.

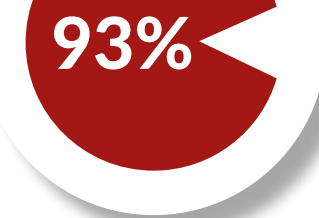


The pillars of reliability and quality were key for the company to handle the commercial adversity brought on by the pandemic, especially in the domestic market; as a result it was able to keep customer satisfaction levels above 90%. This is reflected in the survey we send out to customers each year that they can use to assess our products, services and supply of HCFeCr, LCFe-Cr, FeSi75 and FeSiCr.

Satisfaction Survey about products and services (positive assessments)

2018	2019	2020
96%	100%	93%

of respondents rated the product sold by Ferbasa with the highest score



declared themselves fully satisfied with the services provided by the company

The main issues that need attention, while not overly stressed, remain those related to commercial issues, in particular flexible negotiations and prices. Despite the instability and uncertainties of a non-typical year, our initiatives that focus on competitiveness remained, especially those related to our commercial terms.



### Complaint mechanisms - historical

GRI 103-2

Complaints	2018 <sup>1</sup>	2018 <sup>1</sup>	2020 <sup>2</sup>
Number of complaints registered by the mechanism	1	4	6
Number of complaints addressed	1	2	0
Number of complaints solved	1	1	2
Number of complaints registered before the period covered by the report	N/A	N/A	N/A

<sup>1</sup> Nos anos de 2018 e 2019 unidade Metalurgia não fazia parte do escopo.

<sup>2</sup> Dados referentes às unidades Mineração e Metalurgia.

Our purchasing and hiring gradually adapted to the year's difficult scenario, providing stability and ensuring output, thus contributing to balanced and secure supply. Throughout the year we continued to monitor our quality standards, following the standards and procedures of the Integrated Management System, audited in-house and ISO 9,001 certified.

Our on-time delivery indicator improved some 9% compared to the previous year due to actions focused on improving transportation and logistics.

### On-time order deliveries

2018	2019	2020
71,84%	71,22%	77,58%



In 2020 we entered into some

**17 thousand**

commercial transactions with suppliers in the state of Bahia.



This is an increase of

**58%**

in the number of annual transactions performed by the Company.

The Company continues to aspire to develop the economies of the regions where it is present and prioritizes doing business with regional companies. This guideline also supported us in helping local suppliers address the consequences of the crisis, such as the incentives granted to the companies providing transportation services to Ferbasa in order to reduce the economic impact of making the necessary adjustments to implement the required protection measures. **GRI 102-9**

Obs.: Não houve mudança significativa na cadeia de fornecedores com relação ao reportado no relatório de 2019. **GRI 102-10.**



Ferbasa agreements include clauses that prohibit child, forced or slave-like labor, and demands that its suppliers fully observe health matters and the International Labor Organization's (ILO) guidelines. All our service providers agree to perform their activities within all applicable laws, standards and administrative regulations governing the environment and related areas issued at the Federal, State and City level, including Federal Laws 6,938/81 (the National Environmental Policy) and 9,605/98 (the Environmental Crimes Act).



## GDPL

In 2019 we kicked off our project to adapt to the General Data Protection Law (Law 13,709/2018). We took a critical look at our internal processes and practices to structure a safe model that is fully compliant with applicable legislation to govern the collection, handling, sharing and storage of personal data. With this in mind, in 2020 a specialized consulting firm ran a diagnosis that created a working group of our employees. These employees are responsible for heading control actions in their own areas, and describe the plans that make up the GDPL Journey.

We expect these activities will be complete by 2H21. The plan includes measures such as training participants, analyzing the processes of the more critical areas, and creating policies and procedures to gather, classify, use, access, reproduce, transmit, store and dispose of personal data within the Company.





# Our essence

GRI 103 | 401

The inspiration for Ferbasa's people management has always been to nourish a positive, aggregating environment that can drive the development of individuals as protagonists of their own trajectory and that, above all, fosters comprehensive intellectual, social and emotional growth. In 2020, the company focused on maintaining a culture that humanizes relationships.

Despite the difficulties imposed by the pandemic, we highlight measures taken to motivate and integrate our teams, along with initiatives to map and improve our technical and behavioral skills.



## Developing human capital

Ferbasa's organizational culture safeguards its human capital by defining conducts that respect and recognize individuals. For this, we cultivate an environment that enables equal and inclusive growth, where the competencies of each employee are valued.

Among other initiatives, Ferbasa continuously evolves in engaging leadership in its management processes to lead their teams to their full potential. This translates into low turnover numbers (additional information is available on page 61 - new hires and employee turnover)

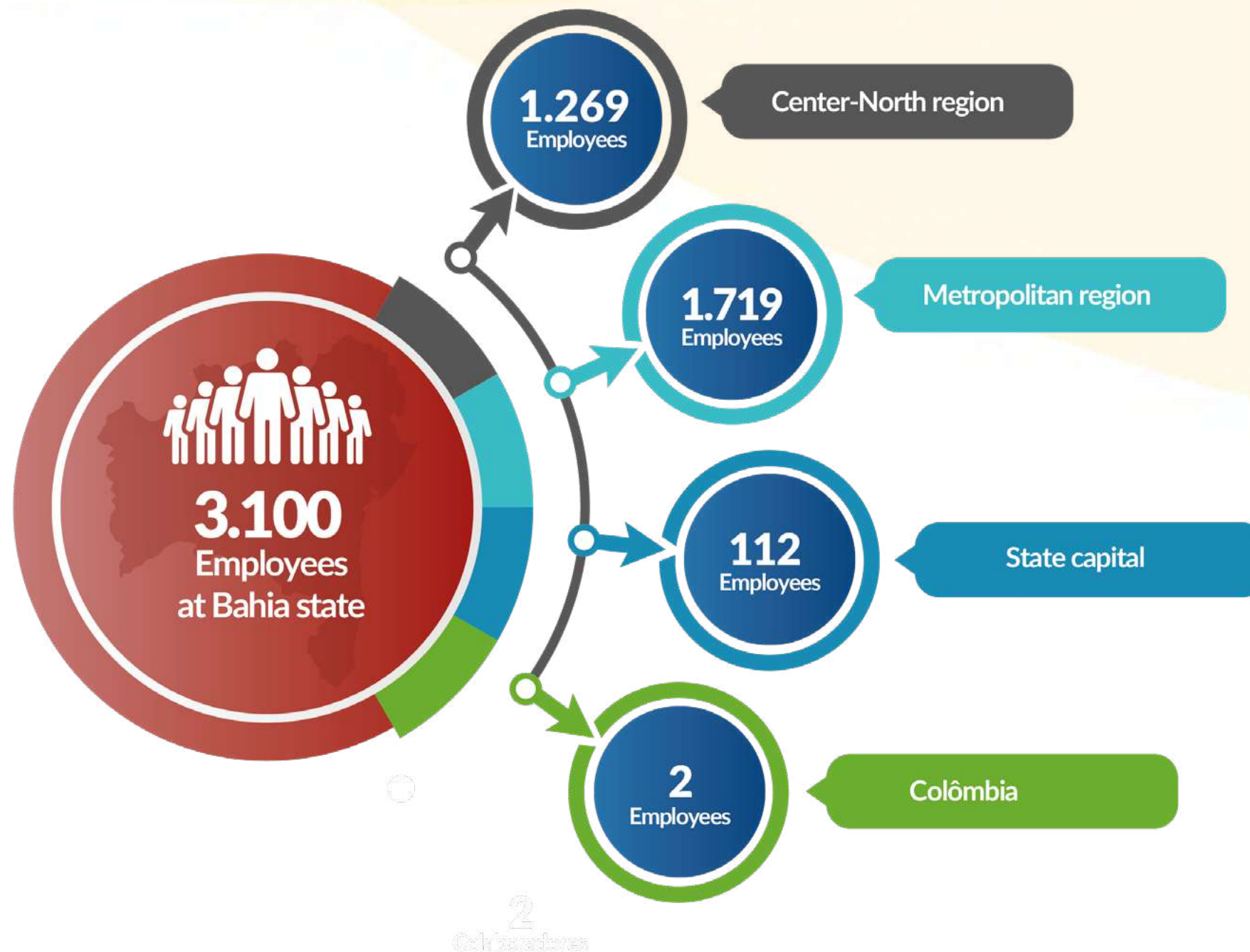
## People management

At the end of 2020 Ferbasa had 3,102 employees, among them 157 people with disabilities and 160 trainees. This is a slight (0.49%) increase compared to 2019, and reflects the Company's efforts to keep jobs,

especially during moments of crisis. We also kept the entire benefits package offered to all employees.







Increase of 0,49 of our employees panel



Also as a reflection of the current moment, we encouraged increased dialog and closer relationships among teams to minimize the distance imposed by limited transit between operating units, some administrative staff working from home, and restrictions on in-person meetings and events. Thus we used IT and communication technologies to foster a new model of interaction, which reinforced employee integration and engagement.



## Increased remote work

Online work was one of the measures used to protect against COVID-19. Starting on March 17, all of our corporate office employees and some of the administrative contingent in our operating units were quickly sent to work from home. Among the challenges were adapting the computing environment to give these people access to the Company infrastructure and systems.

The platform was incorporated into our routine and its effectiveness analyzed via surveys that measured employee satisfaction with the system from time to time, as well as team interaction and the functionality of the computer systems. It also provided means for professionals to assess their productivity and home-working environment, as well as their physical and mental health. The result of the third issue of the survey, which came out in December, showed that employees were highly receptive to the format.

94%

Maintained, strengthened or created new bonds with co-workers during telework

55%

Consider the home office after the pandemic a very positive possibility

59%

I would like to keep this format some days of the week

## People management indicators

### GRI 102-8

The Human Resource indicators below describe our staff by type of job, gender and age. They also show turnover and benefit distribution.

Employees by employee category	2018	2019	2020
Executive Board	8	8	8
Management	39	40	25
Heads/Coordinators	55	57	54
Technicians/supervisors	221	230	227
Administrative	420	446	450
Operational	2,444	2,037	2,346
<b>Total</b>	<b>3,187</b>	<b>3,087</b>	<b>3,102</b>
Individuals in governance bodies	2018	2019	2020
Board of Directors	8	8	8

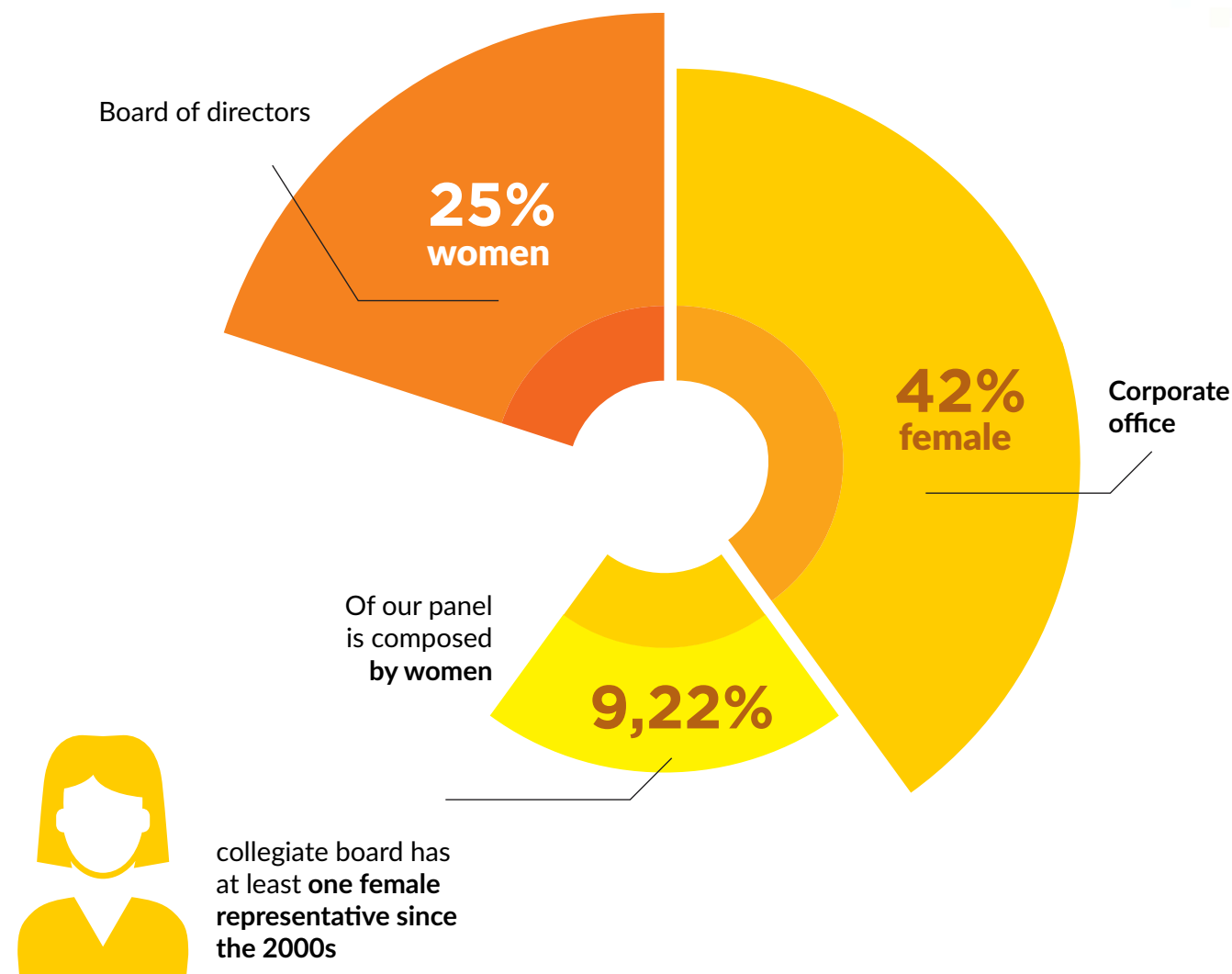
<sup>1</sup> Ferbasa had 7 officers and 8 directors at the end of 2020. As boards are statutory, they are not included in the headcount



Ferbasa prioritizes hiring all levels from the surrounding communities, and encourages career growth within the organization. In 2020, 45% of our 242 job openings were filled in-house.

ed. Women hold operational, administrative and leadership positions. Salaries are the same for the same position and function, regardless of gender.

We also value the female presence, despite being in an industry that is traditionally male-dominant.



### Workforce by employment contract and gender

Type of employment agreement	2018			2019			2020		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Permanent	2,835	204	3,039	2,725	209	2,934	2,725	217	2,942
Temporary	92	56	148	84	69	153	91	69	160
<b>Total</b>	<b>2,927</b>	<b>260</b>	<b>3,187</b>	<b>2,809</b>	<b>278</b>	<b>3,087</b>	<b>2,816</b>	<b>286</b>	<b>3,102</b>

### Workforce by employment type

Type of employment agreement	2018			2019			2020		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Full-Time	2,829	204	3,033	2,713	208	2,921	2,719	217	2,936
Part-Time	98	56	154	96	70	166	97	69	166
<b>Total</b>	<b>2,927</b>	<b>260</b>	<b>3,187</b>	<b>2,809</b>	<b>278</b>	<b>3,087</b>	<b>2,816</b>	<b>286</b>	<b>3,102</b>

### Employees by age group

	2018	2019	2020
< 30	716	648	531
30 to 50	2,074	2,042	2100
> 50	397	397	471
<b>Total</b>	<b>3,187</b>	<b>3,087</b>	<b>3,102</b>

## New hires and employee turnover

GRI 401-1

Employees hired by age range	2018		2019		2020	
		Pct.		Pct.		Pct.
< 30	239	0.08	207	0.07	68	0.02
30 to 50	99	0.03	51	0.02	71	0.02
> 50	0	0	2	0.00	1	0.00
<b>Total</b>	<b>338</b>	<b>0.11</b>	<b>260</b>	<b>0.09</b>	<b>140</b>	<b>0.05</b>

Employees hired by age range	2018		2019		2020	
		Pct.		Pct.		Pct.
<b>Men</b>	<b>251</b>	<b>0.08</b>	<b>175</b>	<b>0,06</b>	<b>121</b>	<b>0.04</b>
<b>Women</b>	<b>87</b>	<b>0.03</b>	<b>85</b>	<b>0.03</b>	<b>19</b>	<b>0.01</b>
<b>Total</b>	<b>338</b>	<b>0.11</b>	<b>260</b>	<b>0.09</b>	<b>140</b>	<b>0.05</b>

Turnover by age group	2018		2019		2020	
		Pct.		Pct.		Pct.
< 30	112	0.04	177	0.06	37	0.01
30 to 50	55	0.02	135	0.04	64	0.02
> 50	22	0	42	0.01	28	0.01
<b>Total</b>	<b>189</b>	<b>0.06</b>	<b>354</b>	<b>0.11</b>	<b>129</b>	<b>0.04</b>

Turnover by gender	2018		2019		2020	
		Pct.		Pct.		Pct.
<b>Men</b>	<b>130</b>	<b>0.04</b>	<b>287</b>	<b>0,09</b>	<b>118</b>	<b>0.04</b>
<b>Women</b>	<b>59</b>	<b>0.02</b>	<b>67</b>	<b>0.02</b>	<b>11</b>	<b>0.00</b>
<b>Total</b>	<b>189</b>	<b>0.06</b>	<b>354</b>	<b>0.06</b>	<b>129</b>	<b>0.04</b>





## Compensation and benefits

The traditional vocation of recognizing and valuing its employees throughout their professional journey with Ferbasa translates into our formal benefits policy. Likewise, consolidating high-performing teams is based on a balance between fair compensation and salaries that are compatible with the markets where we are, and a commitment to the continuous development of our people. For this, we provide the following to all our employees:

- Medical and dental care;
- Transportation and meal support;
- Group life insurance;
- Personal accident insurance;
- Private Pension funds;
- Profit sharing;
- Vacation bonus;
- Partnerships with education institutions

and service providers that offer competitive discounts in different areas such as language courses and car insurance.

This competitive package of benefits was maintained in full during the pandemic, and some of our employees also received grocery kits in the more critical months of the health crisis as one more way to support our families.



## Program Variable Compensation

To encourage our executive group to engage in the actions and targets of our strategic plan, in 2017 we created a Variable Compensation Program. The expectation is that, in addition to maximizing the Company's results, this will provide our leaders with equal opportunities for growth by adopting and monitoring transparent, meritocratic processes.

This program is linked to the Company's performance and, this past cycle, rewarded 92

participants. The effort consists of monitoring the performance of the group vis-à-vis the sustainability, operating and financial efficiency goals and objectives, as well as the search for zero accidents, and the Evaluation by Competencies program. All of these aim to ensure management is aligned with the Company's values and culture. It is important to reiterate that each year the Board of Directors discusses and approves Executive Board indicators, which are then cascaded down to the teams.

Type of expenditure	2019 (in R\$ thousand)	2020 (in R\$ thousand)	Variation (%)
Employees (own)	3,087	3,102	0.49
<b>Supplementary</b>			
Meals	9,138	9,010	-1.40
Compensation	193,424	200,446	3.63 <sup>(1)</sup>
Medical and care	22,622	22,965	1.52
Profit sharing	33,508	15,657	-53.27 <sup>(2)</sup>
Private Pension funds	3,226	3,110	-3.60

1 - Amounts and percentages include salaries, payroll taxes and fees, vacation pay, Christmas bonus (13th salary), termination costs and other benefits.

2 - Drop in employee profit sharing due to lower profits

# Performance Assessment

A set of eight competencies guides the actions to develop people at Ferbasa, and serve as the basis for the performance evaluations that identify employee potential, steer their progress and subsidize managers when they must make decisions regarding human capital. They are also used to appoint potential successors for leadership positions.

Throughout the year we maintained the activities of the Competence-based Management Program; 84% of our employees were evaluated using top-down methodology, with one-on-one structured feedback sessions for all hierarchical levels. At the end of the process, the professional development strategies are broken down into individual development plans for each employee.

## Skills:

Strengthen and disseminate values and culture;

Market-centric;

Committed to results;

Promote and disseminate the Integrated Management System;

Work together with other areas;

Develop efficiency-focused solutions;

Be an agent of change;

Inspire, engage and develop people.

Because of the pandemic, employees on leave, recent hires and young apprentices did not participate in the evaluation process.

Employees whose performance was evaluated by employee category (%)

	2018			2019			2020		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Management	77	100	78	75	0	75	100	50	96
Heads/Coordinators	84	100	87	82	100	85	95	100	96
Technicians/supervisors	86	80	85	87	80	86	95	90	94
Administrative	74	75	74	79	71	76	77	82	79
Operational	70	26	69	80	34	79	86	37	84
Trainees	0	33	12	0	0	0	0	-	0
Total	72	58	71	81	62	79	86	69	84





# Training and capacity building

GRI 103 | 404 | 404-2

Ferbasa's training and capability building policy focuses on the comprehensive and lasting evolution of its employees, and on fostering and strengthening internal talents. With this in mind, the Annual Training Plan has measures focused on improving and/or developing competencies, achieving strategic goals, professional growth, and increased productivity. Additionally, as an incentive, Ferbasa covers 50% of the cost of language or graduate courses for employees who have been with the company for two years or more, as per the Company's internal rules.

During the course of the year we provided 34,064 hours of training, an average of 10.98 hours per employee. Provisional Measure 927 has been suspended and gradually we are returning to in-person activities. This PM lifted

the requirement to provide the legally required trainings. Given this situation, Ferbasa created a schedule to offer the required training grid, bearing in mind the restrictions in this period and respecting the measures of medical and health protocols adopted by the Company, and the requirement for periodic practices.



## Average hours of training per year per employee

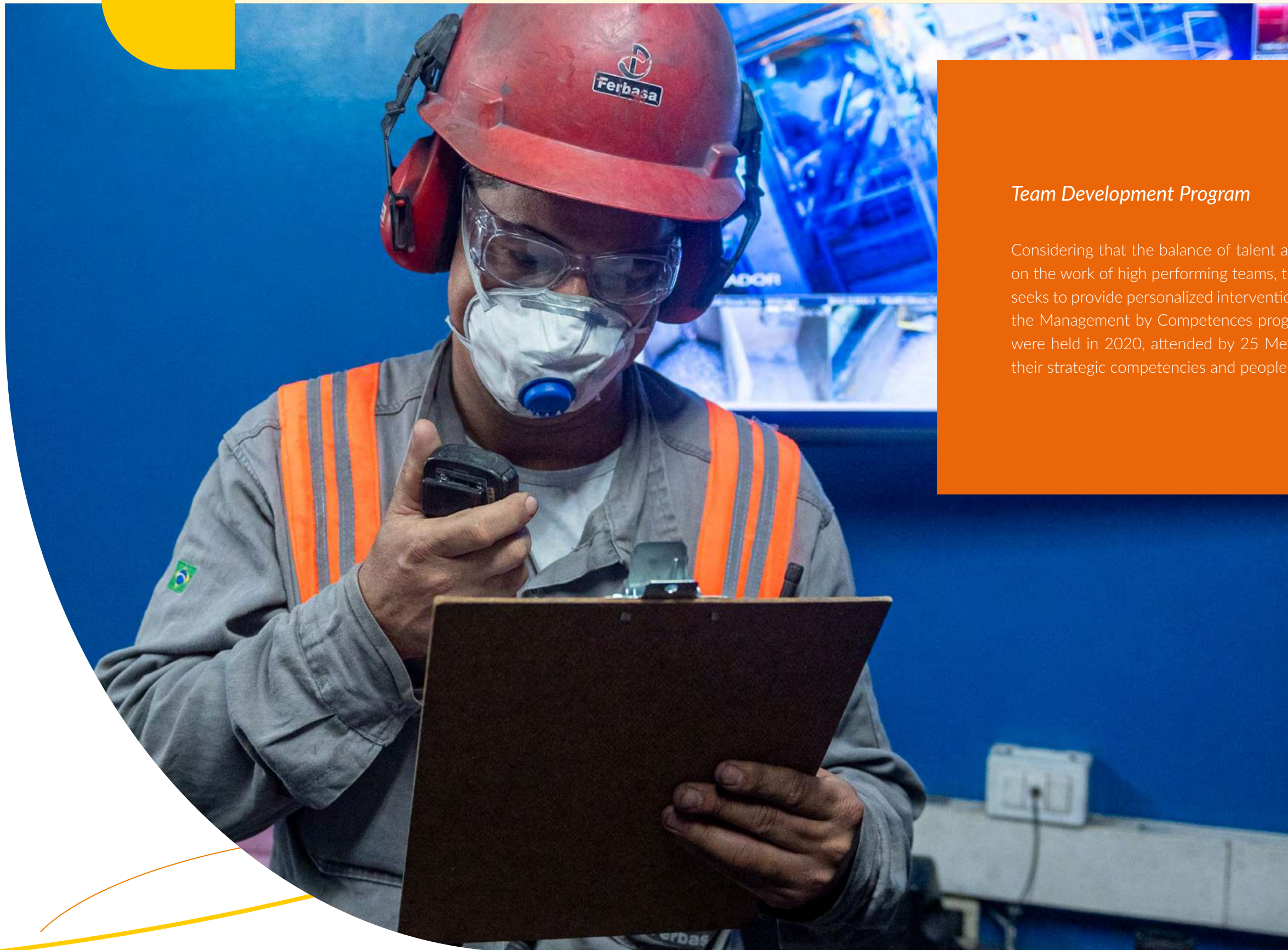
GRI 404-1

Average hours of training per employee by gender			
	2018	2019	2020
<b>Men</b>	15.9	17.02	10.15
<b>Women</b>	15.83	14.33	19.16
<b>Total</b>	15.9	16.78	10.98

Average hours of training per employee by employee category			
	2018	2019	2020 <sup>1</sup>
<b>Executive Board</b>	0.0	0.0	0.0
<b>Management</b>	34.74	26.75	5.78
<b>Heads/Coordinators</b>	47.87	37.61	9.53
<b>Technicians/supervisors</b>	28.15	35.99	12.8
<b>Administrative</b>	15.61	15.63	7.63
<b>Operational</b>	13.84	14.45	11.52
<b>Trainees</b>	8.63	1.86	36
<b>Total</b>	15.9	16.78	10.98

<sup>1</sup> 2020 was impacted by the COVID19 pandemic. As a result, the number of hours of training dropped 34% compared to the previous year.





### *Team Development Program*

Considering that the balance of talent and skill has a positive influence on the work of high performing teams, the Team Development Program seeks to provide personalized intervention in the main needs mapped by the Management by Competences program. Nineteen virtual meetings were held in 2020, attended by 25 Metallurgy Supervisors to improve their strategic competencies and people-management skills.





Company defined medical and health protocols with Ferbasa's medical Service describing all of the prevention measures adopted. These documents were approved by an expert infectologist retained to evaluate and propose improvements in the measures implemented.

In addition to requiring masks, minimal distancing, hand disinfection and daily temperature measurements when entering facilities and vehicles, we also:

- Suspended activities in our corporate office, with administrative employees working from home, including part of the administrative staff of our operating units;
- Employees belonging to risk group were sent home and remain working from home, including pregnant women and nursing mothers, with no loss of benefits;
- All work-related travel was suspended, and in-person visits, events and meetings were limited to 6 people;
- Shifts and transportation routes were staggered so that buses held no more than 50% of their capacity;
- Cafeteria hours and layout were changed to reduce the risk of contamination;
- Constant campaigns in all communication channels to inform our employees of the prevention measures required to deal with the disease;
- We created the Health and Safety Patrol, made up of 134 employees working on the front-line to fight the dissemination of the Coronavirus.

## Measures to Fight and Prevent COVID-19

Never in the history of Ferbasa has protecting people been so important. There is no way this could have been different, given the health situation in 2020. Although the Company was diligent and its main priority has always been the health and safety of its employees, the pandemic brought this concern to a whole new dimension, and timely decisions were made regarding life-preserving interventions.

To ensure a working environment that was as safe as possible for its employees, the

## Ferbasa Health Structure to Fight COVID-19

### Human Capital



**26**  
healthcare professionals

**01**  
expert infectologist consultant

### Contagion rate;



**382**  
employees contaminated (Through December 31, 2020)

### Hospitalization rate;



**07**  
employees hospitalized (0.22%)

### Death Rate



**01**  
death

### Work performed



**12,045**  
appointments

**3,660**  
tests performed

Investments in protocols, procedures, PPE, systems to increase security and protect workers;



**R\$2.59**  
million

### Long-Term Stay Program (LTSP)

Regarding our commitments in light of the uncertainties emerging from the pandemic, although our manufacturing activities were not significantly impacted, the Company invested in a Long-Term Stay Program to keep our operations running at some minimum level, safely and protected, should disease progression reach non-sustainable levels.





## Integrated Management System

Ferbasa has a solid Integrated Management System certified by ISO 9,001, ISO 45,001 and ISO 14,001 (ABS Quality Evaluations), which covers all employees and contractors working in the Metallurgy, Mining (Ipueira mine) and Forestry Units. These are recertified annually with in-house and external audits. Certifications show the sustainable path the Company has traveled for over two decades, and its commitment to safety, product quality, compliance with the terms/specifications agreed with the customer, and protection of the environment. **GRI 403-8**

Likewise, facility environmental and workplace health and safety compliance, constant investments in process improvement, reengineering projects, collective and personal protection equipment, training and contingency action plans, and behavioral initiatives are all part of our multidisciplinary approach to reach our strategic "zero-accident" goal in all our activities.

Regarding our products, our entire portfolio is labeled with safety information as required by law, including Chemical Product Safety Data Forms (equivalent to MSDS) that list prevention measures. **GRI 403-7**



### *A focus on people*

Ferbasa's Integrated Management Policy is based on safeguarding the health and safety of its direct and indirect employees. Given the characteristics of each location and the activities performed, the Internal Accident Prevention Committees (Comissões Internas de Prevenção de Acidentes - CIPA), the Workplace Health and Safety Specialized Engineering Services (Engenharia de Segurança e em Medicina do Trabalho - SESMT), and the emergency brigades are independent. All units have 15 multi-sector committees that coordinate to monitor and report incidents. This year, we held 180 meetings, analyzing the outcome of over 9,400 behavioral approaches.

We believe that, by incentivizing safe behavior in our day-to-day operations, we will be diligently ensuring that all life is preserved as every accident, be it onsite or offsite, can and should be avoided.



# Risk and safety management

GRI 403-2, 403-3

Ferbasa identifies the risks associated with its activities using tools that assess aspects and impacts, hazards and damages, and by developing internal procedures for performing its operational activities. This risk control and monitoring are part of our effort to eliminate all accidents in all our operations, and also reduce the incidence of chronic occupational diseases.

As one more way to ensure active listening, the safety committees meets once a month with company employees and contractors to present updated health and safety indicators. These meetings are also used for employees to make suggestions or criticism regarding the Company actions and structures. GRI 403-4





# Viva+ Program

GRI 403-6

The Viva+ quality of life program monitors employees, promoting mental and physical well-being in a human way. In this area, we develop activities and campaigns to prevent, educate and inform employees and family members, who also have the support of professionals in different medical specialties.

## Viva+ actions in 2020:

- Monitoring over 300 employees and dependents with chronic diseases, kept away from in-person activities as a COVID-19 prevention measure;
- 36 pregnant women participated in the **Mother's Love** project (instructions on care during pregnancy, the importance of pre-natal care and early infant care);
- Health education, in the form of 30 lectures given by Ferbasa physicians in our cafeterias to answer questions about the Coronavirus, in addition to 7 live events and 12 information campaigns, broken down into a number of continuing measures addressing themes such as prevention and self-care during the pandemic, how to handle stress, organizing a new routine, nutrition and immunity, and men's health, among others.

- Flu vaccine, with 99.39% of the target population vaccinated;
- In-person and online workplace exercise;
- Online nutritional follow-up of a group of people with chronic diseases;
- Psychosocial orientation in crisis response for employees and family members;
- One-on-one psychological care and ambulatory care for employees for issues other than occupational health;

In September, as part of the Yellow September (mental health) campaign, employees and their families were given free and confidential access to the **OrienteME** (GuideME) app for virtual psychological follow-up, focusing on the emotional problems accentuated by the crisis.

# My Novamed Physician

Health issues play an important role in Ferbasa's agenda, as it seeks to expand its service structures, even though it offers all employees and dependents a healthcare plan that includes high-quality physicians, clinics, hospitals and diagnostic labs. As a result, the Company invested in a program entitled "My Novamed Physician" in Pojuca, Bahia. This clinic will provide basic and specialized physician visits with no co-pay, in addition to laboratory and imaging tests performed by professionals dedicated to caring for the families served, in comfortable facilities using modern technological equipment.

This unit will initially serve workers and dependents in the Metallurgy and Forestry units. The following specialties will be available at this unit:

- Pediatrics;
- Ophthalmology;
- Internal Medicine;
- Cardiology;
- Physical Therapy;
- Psychology;
- Gynecology.

In addition to visits and tests, patients may also undergo low-complexity procedures at this facility. The medical center should open its doors in early 2022.



# Health and safety indicators

GRI 403-9

Although our priority is to adapt to the scenario created by the current health crisis, Ferbasa Health and Safety Management never interrupted its plans for the year. We had fewer accidents in 2020 than in 2019, and the rate and frequency indicators were close to target, as shown in the following table:

	2020 Target	2020 Result
<b>Lost Time</b>	0.36	0.43
<b>No Lost Time</b>	3.27	4.46

Accumulated severity in 2020, which considers days lost, was 51.0 - 1.1% of the days worked in the year, and 12 (twelve) times less than in 2019. The accumulated result was 621.0 (the International Labor Organization (ILO) recommends 500 as a reference).

## Workplace Accidents 2020

	Employees	Workers who are not employees, but whose work and/or workplace is controlled by the organization
Number of hours worked	592,445	204,827
Number of fatalities as a result of work-related injury	0	0
Rate of fatalities as a result of work-related injury	0	0
Number of serious work-related injuries (excluding deaths)	02	02
Rate of serious work-related injuries (excluding deaths)	3.37	9.76
Number of recorded work-related injuries (including deaths)	38	11
Rate of recorded work-related injuries (including deaths)	64.14	53.70

<sup>1</sup> Accidents and statistics are classified according to NBR 14280, specific software (SESUITE) is used to manage these incidents.

<sup>2</sup> Data for 2018 and 2019 was not processed according to GRI.



During the period, we addressed safety behavior to make employees aware of their responsibility for preventing accidents in a more intense manner, with weekly targets set for all areas.

After 2019, when there were no lost time accidents, the Metallurgy area reported two mild incidents that produced no consequences or long-time absence. There were also no occupational diseases that must be reported, nor deaths resulting from occupational diseases.

Regarding investments in this area, Metallurgy increased the number of lifelines and anchors in all buildings. This work was certified according to international standards. Forestry performed a safety culture diagnosis with the support of independent consultants. This included interviews with employees of different hierarchical levels to measure team maturity regarding safety and accident prevention. Mining completed its fire-fighting project and had it approved by the State Fire Department. It also revamped the medical center at the Pedrinhas mine and purchased a rescue vehicle for teams in the quartz producing area. In Ipueira, we continued a modern automation program that will allow operators to remotely operate longhole drill rigs and fan drills from the surface.

### *Integrated SIPAT (Internal Workplace Accident Prevention Week)*

One of the most important and awaited events on the annual calendar, the 2020 SIPAT was virtual and, for the first time ever, programming was unified and broadcast simultaneously to all sites. The theme was "bodily health starts with educating the mind"; each day was dedicated to a specific topic. There were lectures on laughter therapy, risk perception, and waste management. In addition, the teams in the 4th Quality Control Circle presented some of their work.

To make the whole event fun, there was a parody competition on the relationship between physical and mental health, with videos recorded by employees. This material was broadcast all week on our communication channels, and prizes were awarded at the end of the event.



### *Quality Control Circle*

The Quality Control Circle (QCC) was first created in 2016, and seeks to incentivize the search for innovative, effective and creative solutions via teamwork focused on continuous process improvement. With this in mind, groups of employees were trained in the use of international quality methods and tools, and continue developing simple and low-cost projects, such as reusing materials that were formerly consigned to scrap or waste. The benefits achieved in quality, health, safety and environment are measured at the end of each cycle.

In 2020, all members of the 10 teams that participated in the 4th cycle were rewarded for the additional dedication required to complete these activities. The projects presented in the 4 QCCs received investments of some R\$ 670 thousand and resulted in savings that exceeded R\$ 8 million.

## A+ Supplier - Safety

Valuing safe practices of suppliers who work in our operating units every day is the core of the A+ Supplier program, launched during the course of the year. In the first cycle 18 companies were involved and audited using the following criteria:

- 1 - Commitment to HS&E;
- 2 - Organization and Cleaning;
- 3 - Engagement with Ferbasa Programs;
- 4 - Compliance with the Legal Program Action Plan.

Evaluations were completed in December, and highlighted suppliers who demonstrated greater commitment with the Company's safety culture, and knowledge of its Integrated Management Policy. The goal for the coming year is to intensify this effort, with educational activities and evaluations performed at the same time, thus promoting improvement in those points that require attention found in 2020.



## Fire in the Metallurgical Plant

On November 01 a fire damaged the command and power cables in the ferrosilicon furnaces. The fire was controlled due to the swift and accurate actions of the fire brigade, which quickly contained the flames and avoided a larger fire and more serious damages. There were no victims and none of the other areas of the plant were affected.

Production of FeSi 75 was interrupted for 8 days for maintenance and to investigate the causes of the incident. This required rescheduling some of the alloy shipments. The market was promptly notified of the fire, its consequences, and the measures adopted (link to notices). The Metallurgy area fire-fighting program was updated in 2020, as instructed by the State of Bahia Fire Department.









# Management *Environmental*

Ferbasa's activities are guided by environmental conservation, prevention and mitigation of potential environmental impact from its activities, and austere management that values the responsible use of all natural resources, in particular those that are not renewable.

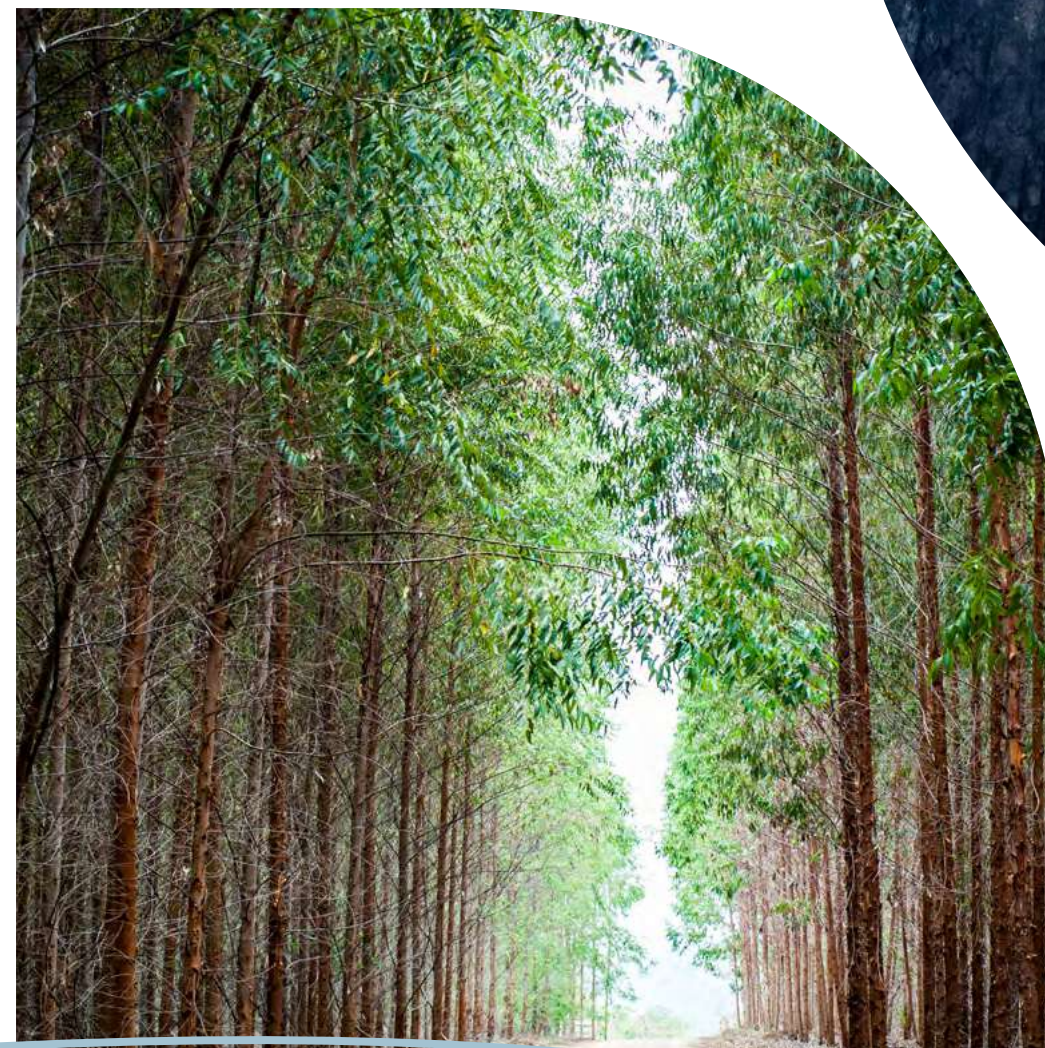




With this focus, the Management System combines indicators that monitor the use and recirculation of water; waste reutilization, recycling and coprocessing; greenhouse gas (GHG) emissions; and energy efficiency. Our initiatives corroborate our dedication to use increasingly sustainable practices, the priority we assign to investments to constantly improve our environmental area, and our increasingly challenging targets to fight waste (#ZeroWaste).

Thus, in 2020 we reinforced our commitment to sustainability and the continuity of the actions underway. The Company remains compliant with the environmental permits required for its operations, including emissions, effluent and waste control. It also continues to search for more efficient and less impactful equipment and processes. Our work to recover riparian forests continues uninterrupted, as does our effort to control waste from our manufacturing processes across their entire chain (origin, temporary storage or warehousing, transportation and final destination).

We should also stress the Company's vertically integrated activities as the driver of major environmental gains, such as the synergy whereby the Forestry area supplies the Ferrosilicon plant with bioreducer (from our planted eucalyptus forests). This is the only such plant in Brazil with bag filters in all furnaces and the only that is CO<sub>2</sub>-neutral.





## Progress in environmental initiatives

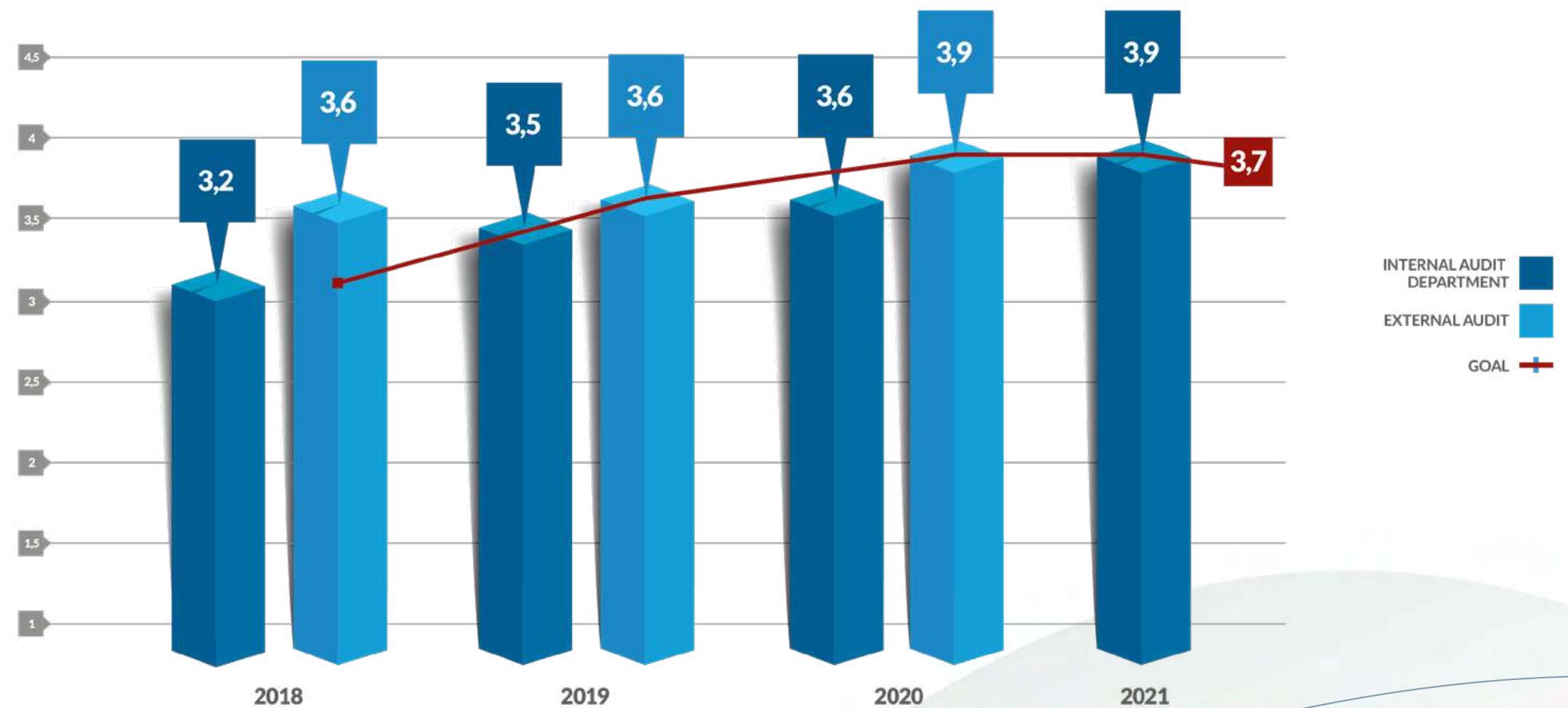


This year we prioritized initiatives to improve dedusting controls in our metallurgical plant. We implemented a program to increase the efficiency of our bag filters, and a pilot program that implemented modern solutions for fugitive emissions from tapholes in our ferrosilicon 75 furnace, completed in the second quarter of 2021. The goal is to ensure the model is efficient before the year is out, and then roll it out to the other FeSi furnaces.

Another important advance was to create the Byproducts and Waste Committee, focused on adopting best practices in waste management and investigating alternatives to reduce waste generation and/or transform waste into byproducts. We should point out the change in the process used to wash quartz in the Tucano plant, enabling the water to be reused in the mining closed-circuit, avoiding the hauling of fines from the producing unit to the processing unit, and enabling the sale of the byproduct, or its reuse to recover pit topography, as per the demands of the Plans to Recover Degraded Areas [Planos de Recuperação das Áreas Degradadas -PRAD].

## PLOA

The Area Cleaning and Organization Program (PLOA) applies to the entire Company and aims to continuously encourage, inform, raise awareness, and assess measures to keep workspaces organized and preserve the Company's assets. This initiative is guided by the principles of environmental management; it has delivered positive results and work environments that are cleaner and better organized and signaled. Each year, both internal and independent audits are performed; in 2020 our units performed as follows:





## Environmental Education

From the point of view of raising awareness, the Environmental Education Project has a multidisciplinary team of facilitators who work to raise awareness among employees and the surrounding population about social themes and those related to the environment. In light of the limitations imposed by the pandemic, throughout the year we kept only those internal activities that focused on fighting waste and improved management of solid waste.

Here we call attention to the cycle of lectures performed in the Forestry Area and the live event on Solid Industrial and Sanitary Waste transmitted during the Workplace Accident Prevention Week - SIPAT, which told employees and their family members about different waste classifications, with hints on how to avoid generation and the importance of proper disposal.



## Biodigester Project

One project, our anaerobic food waste biodigester, stands out due to the quick and efficient results achieved. This is a closed system where microbes break down organic matter. The solid waste from the Ipueira cafeteria is processed into biofertilizer and biogas that are used to generate power, irrigate greenhouses and remedy soils degraded by mining, significantly improving the quality of our recovered areas.

This is a pioneering initiative in the region. The environmental area periodically and systematically monitors how the process is doing to measure results and propose improvements. We expect to share our knowledge with the surrounding communities, in a joint effort with the Social Responsibility team.

By implementing this project, Ferbasa will be complying with article 80, item VII of State Decree 14.024/2012, which forbids feeding untreated organic waste to animals. This effort was completed in-house, with no support from third parties, and at lower cost.

# Materials

GRI 103 | 301

Ferbasa adopts a quality control and critical materials policy with specific procedures, based on ISO 14,001. This includes reviewing documents that demonstrate the inputs acquired are sourced from environmentally compliant extraction, processing and transportation activities, as applicable.

Mineral materials must also comply with legal requirements overseen by the National Mining Agency [Agência Nacional de Mineração - ANM], while inputs of forest origin, such as our

bio-reducer, are monitored at the federal (Ibama) and state (Inemma in Bahia) levels.

Depending on availability, Ferbasa tries to use materials that come from other company recycling chains, such as mill scale from steel plants, which in 2020 replaced 87% of the ore that would be used as an iron source in its plants, helping preserve natural resources.



Materials used in production and packaging (in tons)					
[JS1] GRI 301-1					
Name of the Material	Used in the final product or packaging	Renewable/non-renewable sources	2018	2019	2020
Reducing agents (metallurgical coke, other)	Final	Non-renewable source	64,566.10	62,428.73	75,367.579
Reducing agents (bio-reducer)	Final	Renewable source	105,268.69	115,407.78	164,827.864
Waste from other processes (mill scale) <sup>1</sup>	Final	Renewable source	24,902.55	27,151.52	32,679.759

<sup>1</sup>Mill scale from steel plants maintains the target of 100% of iron ore in 2021; while in 2020 it replaced only 82.9% as not enough scale was available in the market. GRI 301-2



# Energy

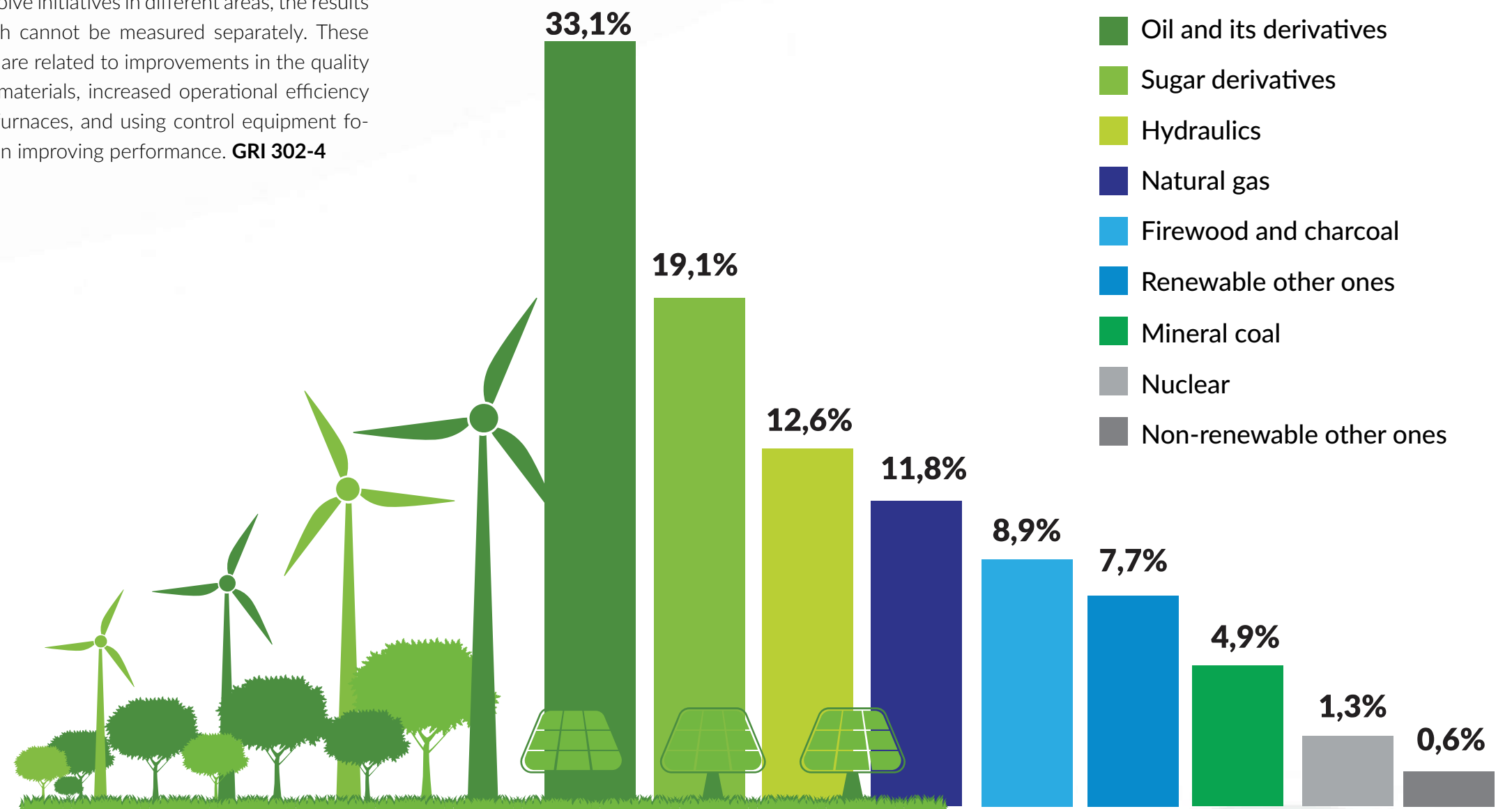
GRI 103 | 302

Energy management is extremely important in Ferbasa's agenda, as it combines two issues that the Company feels are essential: competitiveness and sustainability. With power-intensive operations, Ferbasa pays close attention to ensured supply of this essential input, and seeks to ensure supply for all its operating units, either through self-generation or long-term agreements with independent generators. Thus, there is a corporate department that closely follows the uncertainties surrounding regulatory changes and the potential impact of higher rates.

This theme also includes targets related to becoming a reference in sustainability and, transversally but no less importantly, help diversify the nation's energy matrix with clean and renewable power generated by the 92 wind turbines in BW Guirapá.

Today, the power generated by the wind park that Ferbasa purchased in 2018 is fully allocated to the agreement the company signed with the government in 2011, following the Reserve Energy Auction. This agreement expires in 2034. Going forward, we expect this operation will contribute to our operational security.

Internally, our projects to reduce energy consumption involve initiatives in different areas, the results of which cannot be measured separately. These savings are related to improvements in the quality of raw materials, increased operational efficiency of our furnaces, and using control equipment focused on improving performance. **GRI 302-4**



Brazilian Energy Matrix  
Data available at [www.epe.gov.br/pt/abcdenergia/matriz-energetica-e-eletrica](http://www.epe.gov.br/pt/abcdenergia/matriz-energetica-e-eletrica)

## Energy consumption indicators

### GRI 302-1

The following numbers are based on internal controls, and vary according to the output of the different operational units. In 2020, with the increase in alloy output, fuel and power use also increased.



Fuel consumption – nonrenewable (in GJ*)	2018	2019	2020
Diesel	176,055.47	177,63.53	188,251.95
Gasoline	4,014.27	4,256.33	3,273.37
<b>Total</b>	<b>180,069.74</b>	<b>177,019.86</b>	<b>191,523.32</b>

Electricity consumed (GJ)	2018	2019	2020
Electricity	6,353,810.00	6,374,922.00	6,610,966.00

Electricity sold (GJ)	2018	2019	2020
Electricity	450,023.00	860,688.00	128,145.00

Total energy consumed (GJ)	2018	2019	2020
Non-renewable fuels	180,069.74	177,019.86	191,523.32
Energy consumed	5,903,787.00	5,514,254.00	6,482,821.00
Energy sold	450,023.00	860,688.00	128,145.00
<b>Total</b>	<b>6,533,879.74</b>	<b>6,551,961.86</b>	<b>6,802,489.32</b>

<sup>1</sup>Electric power consumption: The sum of the monthly energy consumed by the Ipueira Metallurgical and Mining units.

<sup>2</sup>Energy purchased: The sum of all purchasing agreements signed by the units.

<sup>3</sup>Energy sold: Energy sold by Ferbasa to third parties or provided to CCEE, which pays Ferbasa the PLD (price for settling differences).



# Water

GRI 103 | 303, 303-1, 303-2

We recognize that water is a natural asset that is essential for life, and that access to water is scarce and limited in the Brazilian Northeast. As a result, Ferbasa uses sustainable practices across its entire production chain, and implements continuous improvements to ensure the conscious and efficient use of water that complies with its water intake concessions. Water is monitored by hydrometers that measure gross water flow (intake) and effluents (industrial and sanitary).

In the metallurgical unit water is captured from the Catu River, which flows into the Pojuca and is part of the North Recôncavo basin. Water is used in our industrial processes. After treatment in our Water and Effluent treatment centers (ETA and ETE respectively), it is considered drinkable. Stakeholders have made no complaints regarding taking water from the river.

We installed a Diesel-powered generator in the ferrosilicon plant so that water does not have to be used to cool the furnaces should the power go down. This reduced the amount of water taken from our emergency tank by some 35%. This project will be replicated in the ferrochrome furnaces starting in December 2021.

In all, we consumed R\$ 1,498.76 MI liters of water (water captured and discharged by our Forestry and Metallurgy units). Regarding our production processes, in 2020 water use averaged 4.89 m<sup>3</sup> per ton of alloy produced. In 2019 this was 4.77 m<sup>3</sup>, so water use increased some 2.5%. This does not exceed our annual permit and is the result of improvements in cooling alloys and slag, and the start of our project to render LCFeCr slag inert, with advances in the management of solid waste and emissions in the metallurgical complex. **GRI 303-5**

Fresh water for mining is taken from the Andorinha II Public Dam, as part of the grant received from ANA, the National Water Agency. Industrial water runs on a closed circuit with 96% recovery. About 4% fresh water must be added to the processing water used.

Our Forestry operation, which uses far less water than other areas, takes water from underground and surface sources for which it has permits from the environmental agency. Water is used to make bioreducer, for human use, building maintenance, road construction and maintenance, civil construction and for emergency fire fighting.

Average consumption **4.89 m<sup>3</sup>/t** increased by **2.5%**  
of water per alloy produced in 2020. in the indicator

Total amount of water captured from all areas and stressed areas by source (MI) GRI 303-3	2018	2019	2020
Source	All areas	All areas	All areas
<b>Metallurgy surface waters (total)</b>	1,315.79	1,113.11	1,451.13
<b>Surface and underground water Forestry (total)</b>	53.81	65.51	58.58
<b>Mining surface waters (total)</b>	465.69	326.43	319.28
<b>Ferbasa surface and underground water (Total)</b>	1835.29	1505.05	1,828.99

## Water discharge

The parameters monitored are those defined by Inema in the operating permit or capture grants. The frequency of water discharge is also controlled and defined by this body. Recirculating water (industrial effluent) may, on occasion, be discharged outside suitable parameters (coli-forms and BOD) due to the quality of the intake water. The water suffers no significant change during our processes. Effluents are discharged underground via gullies after biological filtration, as per the Effluent Treatment and Monitoring Plan. The discharge specifications are listed in Conama (National Environmental Board) resolutions 430 (05/13/2011). All units comply with the specifications of their operating permits. Conama 357 (05/17/2005) is used as the reference for water.

The closed-circuit process used in our mining operations enables 96% water recovery, so all of the water is reused. Our forestry operation generates only a small amount of effluent, some 270 m<sup>3</sup>/year, which are physically, biologically and chemically treated to comply with the discharge

standards in applicable legislation. Likewise, we mitigate the expected impact (contamination of the water table) during our preventive assessments, implementing a system of gullies and the devices listed in the environmental control plans.

Total water discharged from all areas and stressed areas by source, if applicable (µL) GRI 303-4

2020

Business unit	Type of source	All areas	
Metallurgy		Surface water	10.68
Mines		Surface water	00
Forestry		Fresh water (total dissolved solids ≤1,000 mg/L) Treated Sanitary and Industrial Effluent	0.27





## Waste

GRI 103 | 306, 306-1

In 2020, Ferbasa published its Solid Waste Management Policy, where it commits to fully managing waste produced based on the life cycle of its products, from source through storage and destination.

Based on this, we perform multidisciplinary activities coordinated by shipping, logistics, sales, environmental and production (especially when it comes to reuse in Metallurgy), depending on the final destination of the waste (treatment, use or reverse logistics). Each unit monitors waste generation daily, and the entire workforce receives training in this topic. Our units are also equipped to receive and store waste, in this case the amount, source and classification are recorded. When waste comes from an environmental accident, the Integrated Management Committee works quickly to assess, analyze and immediately correct whatever caused the incident.

The main items we monitor are low-carbon slag from the Metallurgical area, waste from our mining operations, and eucalyptus bark generated by Forestry. Waste considered critical (due to volume, difficulty of disposal or other criteria) is analyzed by the Committee to Manage Byproducts and Waste on a monthly basis.

The main waste from our chromite mines, after water has been removed, are steriles, which are stored in our Controlled Steriles Warehouse for reuse, reprocessing or even for sale as a byproduct. If none of these is possible, steriles are environmentally recovered according to the PRAD approved by the relevant environmental authority.

Quartz fines are sold as byproducts or used to recover the topography of exhausted pits, as per the PRAD.

### Waste directed to disposal

GRI 306-5 (2021)

Total waste directed to disposal, by composition (t)	
Composition	2020
Composition	Amount sent for final disposal
Non-hazardous waste	598,67
Hazardous waste	166,11

Total waste directed to disposal, by operation (t)				2020	
Non-hazardous waste	Onsite	Offsite	Total		
Incineration without energy recovery	0,00	0,00	0,00		
Landfilling	0,00	306,67	306,67		
Other recovery operations	17,9	274,10	292,0		
<b>Total</b>	<b>17,9</b>	<b>580,77</b>	<b>598,67</b>		
Hazardous waste	Onsite	Offsite	Total		
Incineration without energy recovery	0,00	106,59	106,59		
Landfilling	0,00	59,52	59,52		
Other recovery operations	0,00	0,00	0,00		
<b>Total</b>	<b>0,00</b>	<b>166,11</b>	<b>166,11</b>		

	Onsite	Offsite
<b>Total waste sent for final disposal</b>	<b>17,9</b>	<b>746,88</b>

### Generated waste GRI 306-3 (2020)

Total waste generated by composition (t)		2020
Category	Amount generated (t)	
Hazardous	2.780,91	
Non-hazardous	90.935,62	
<b>Total</b>	<b>93.716,53</b>	



## Dam Management

Among Ferbasa's mining operations are the five tailings dams located in the Ipueira and Coitezeiro mines. These structures adopt the best engineering practices, with a focus on people's safety, environmental preservation and legal compliance. Robust and resistant, the dams were built on compacted soil and without upstream heightening, with heights, volumes and other characteristics under the limits established by the National Policy for Dam Safety – PNSB (Law 12.334/2010). Inspections are periodically carried out by the internal team, government agencies and external consultants.

It is important to mention the application of technologies that reduce the need for waste disposal, in addition to the constant improvement in all phases of production processes - initiatives that, among other objectives, seek to increase the useful life of structures, in addition to controlling

the direction of solids to dams and increase the percentage of water reuse of the process.

Besides the aforementioned tailings containment, the Company also operates 09 (nine) water dams in the Mining and Forestry units. The classification criteria of these dams are under discussion with INEMA, for standardization in accordance to CNRH Resolution No. 143 and INEMA Ordinance 16.481 of 2018.

\* CNRH Resolution n. 143 defines the overall criteria used to classify dams by category of risk, given the potential associated with the dam and its volume, as per article 7 of Federal Law 12.334 of September 20, 2010.

## Mine Closures

All our mining units have plans for mine closure based on DNPM Directive 237 of 10/18/2001 (NRM 20, Mine Suspension, Closure and Resuming Mining operations), with preliminary data on the status of the areas, the plans to fully decommission all structures, and instructions on the environmental and socio-cultural measures to be performed until the mine has been fully decommissioned, given the impact on the stakeholders involved.

In 2020 we provisioned R\$ 15.3 million for the mine decommissioning plan, which covers all of our operations. **GRI MM10**







# Social *Responsibility*

Open and transparent dialog with our stakeholders is the starting point for the social actions model adopted by Ferbasa to promote structured and long-lasting territorial development. To this end, activities in 2020 focused on facing not only the difficulties arising from the pandemic, but also on consolidating tools that enable us to systemically read the social reality of the areas where we have operations.

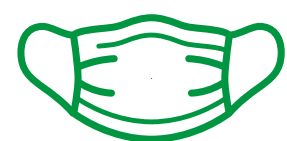


We are convinced we can prosper sustainably, with processes focused on continuous, joint learning, always respecting the environment, optimizing resources, and maintaining the discipline and flexibility to embrace different group thinking, searching for convergent, fair and equitable solutions.

Considering the legacy of our Founder José Carvalho, and certain that all of us, and in particular private institutions, must go beyond individual goals, the Company seeks to generate shared value with its social responsibility program entitled *Aqui tem Ferbasa* [Ferbasa is Here], which is based

on the pillars of Education, Art & Culture, Rural & Community Development, the Environment, and Sports & Health. **GRI 103 | 203**

Given the hardships resulting from the recent humanitarian crisis, we created a Social Intervention Plan to support the communities served by the Program. The main initiatives are listed below: **GRI 203-2**



**1.4 million**

invested in social measures to fight COVID-19.



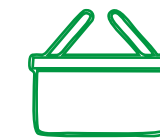
**10 million**

total invested in CSR activities



**3,250**

families included in the prevention campaigns.



**7,500**

grocery kits donated.



**02**

Respirators donated, and involvement as a quota holder in the delivery of one more facility to the Bahia State Government;



**7,500**

cleaning and personal hygiene kits donated;



**200h**

Of free online SENAI, SESI, SEBRAE and SENAC courses to enable professional staff to keep up their qualifications/licenses online



**1,440**

quick Covid tests donated;



Hospital material and equipment donated to the healthcare services of the surrounding cities and towns.

Ferbasa also signed an agreement with the Andorinha, BA Department of Health to contract physician-hours to provide 24x7 care for the community, and supported the construction of a COVID-19 specialized Care Center in the same location. **GRI 203-2**

We also put into practice the priorities listed in our annual plan. **GRI 103 | 413, 413-1**

## Active listening

Transparent relationships with our stakeholders are one of the premises of the work performed with the communities. For this reason Ferbasa constantly tries to improve resource utilization and communication processes. Reports of our socioenvironmental activities are prepared based on technical and monitoring visits, as well as on periodic analyses of the initiatives. We also conduct measurements among beneficiaries to assess the effectiveness of the projects in the **Aqui Tem Ferbasa** program. Annual criteria to guide the review of the investments made are defined based on these social diagnoses and surveys.

In 2020 we prioritized virtual service to the communities, expanding the use of digital tools such as

sharing information using message apps. A highlight of this was the 1st Community Leadership Forum, with representatives from 64 locations in 13 municipalities. This virtual event expanded our knowledge of the group's demands and expectations, and tried to equalize everyone's understanding of the structure of the social responsibility program and its lines of action. It also offered an opportunity to share the Company's history and value to this audience.

### 1<sup>st</sup> Community Leadership Forum | Participating municipalities

Andorinha, Pojuca, Catu, Campo Formoso, Entre Rios, Pindaí, Caetité, Araçás, Esplanada, Itanagra, Conde, Mata de São João and Cardeal da Silva





## 2020 highlights

### Education

GRI 203-1

Given that Education is considered the main pathway to build a better world, Ferbasa's social work in this area is clearing a path to the future with continuous and structuring initiatives that include inclusion and equality. As a result, we believe that those individuals who benefit directly or transversally from the program will have better opportunities, contributing to the sustainable progress of the areas where we are active.

Among the educational activities during the year, the new model adopted for **Ferbasa Educa** (Ferbasa Educates) became important by allowing employees, contractors and family members to complement their primary and secondary education. The entire effort was digital, with no loss or delay for the 141 students.

However, because of the pandemic, only part of the activities in the **Profissão Talento** (Profession Talent) program were completed, the remainder being postponed to 2021. The pandemic also resulted in interrupting the Electromechanical and Industrial Lubrication courses, as well as the practical classes in boiler-making created for employees and community members.

In light of this, we helped employees take free online courses offered by SEBRAE, SENAI, SESI and SENAC. This helped keep students focused on their studies, promoted social interaction, albeit virtual, and expanded their knowledge on entrepreneurship, commercial skills and professional qualification for youth and adults, among other themes. In addition to students in the Profissão Talento program, the campaign was extended to 46 communities served by **Aqui Tem Ferbasa**.



### Good Reading and FERBASA Cultural Circuit

Add to multiply. With this in mind, we combined two initiatives, one focused on Education and the other on Culture. The result is citizenship and solidarity!

This allowed us to share promotional films created by our partners in the **Boa Leitura** (Good Reading) and **Circuito Cultural** (Cultural Circuit) programs, providing emotional support for the audiences served. During São João (the feast of St. John), one of the more traditional events in northeast Brazil, according to players from Canta Luiz, a project that Ferbasa has supported since 2018, stressed the importance of adopting protective measures in videos that also valued northeastern culture, paying homage to Luiz Gonzaga, considered the Rei do Baião.

**Contest for Children**- To encourage playful and creative ways to fight the pandemic, the children in the families benefited by the **Aqui Tem Ferbasa** program were invited to participate in a video contest showing hints on personal hygiene, focusing on how to properly wash their hands. **The 166 participants** received material and instructions on how to prevent the disease, in addition to gifts.



## A Champion in School

GRI 203-1

The **Um Campeão na Escola** (A Champion in School) program was created in 2016, and combines education and sports to create a future with more opportunities for 126 vulnerable children and youth. These students, originally in the public school system, have received a free education at the José Carvalho Foundation since 2019. In the morning or afternoon, depending on when they have classes, they are taught football (soccer) by Esporte Clube Bahia, with a view to possibly joining one of the state's soccer teams in future.

All in-person activities were suspended in March 2020 due to the pandemic. Formal JCF classes and tutoring in Portuguese, math, English and IT were offered to students virtually, in that period of the day when they were not in formal classes. In addition to the support of the JCF multidisciplinary team, these students and their families received grocery kits and psychosocial support.



## Rural & Community Development

GRI 203-2

Our rural and community development effort includes projects to generate occupations, jobs and income, as well as initiatives to recover roads and bridges, fostering employability, entrepreneurship and accessibility. The aim is to incentivize those benefited by the program to become social protagonists in their territories, strengthening local economies and making them increasingly sustainable and inclusive.

Historically, we have used funds to train people in farming activities, expand their access to water, restore infrastructure and improve local sanitation. We have also supported local crafts, bee-keeping and the production of manioc flour.

In 2020, 8,799 families benefited from this program. In part because we hired seamstresses to make masks, provided technical support for community gardens, and allowed some of our forest land to be used for sustainable activities. These areas are also where some 200 families in Tucano, Alagoinhas, Araçás, Maracás and Entre Rios (all in Bahia) put their hives.

The support provided to bee-keeping cooperatives benefits some 700 families that combined,

produce some 100 tons of honey. The projects in our **Nossa Horta** (Our Garden) and Mandala programs benefited 34 families. Virtual technical support was provided to 10 gardens producing vegetables for these families, and to be sold at farmer's markets and to restaurants, although restaurant activities were curtailed by the pandemic.

The most important achievement in the year was the completion of a bridge over the Pojuca River, which helped solve the mobility problems of those living in some of the villages surrounding Pojuca, as this is their only access to the town.

### Corporate Volunteering

To encourage more responsible and collaborative citizenship, we created an in-house volunteering program that collected over a ton of food donated to 13 institutions, ultimately benefiting 445 families.





Construction of a square in the Corujão community in Pojuca, BA is another highlight. This ample and tree-lined area was inaugurated in the second half of 2021.

This initiative helped the socialization of the 400 or so families in the region, which now have a location where they can express citizenship and respect for the collective in a practical and sustained way.



## Real and Potential Impacts

The operational, environmental and social responsibility areas address potential impact in a combined way. Preventive measures are taken whenever possible, by identifying socio-environmental risks. To expand these efforts, and make them even more coordinated, an intersector group monitors community demand and response. The challenge is to address the root cause of the issues directly, converging towards measures to avoid untimely impact.

A strategy to optimize the logistics of its truck fleet running between the mines and metallurgy plant was put in place due to larger loads of ore shipped for metallurgical processing or export. This reduced daily truck traffic by 37.5%, and mitigated potential environmental risks (particulate, noise and smoke), also reducing any inconvenience for the population.

Regarding real impact on the surrounding communities, Ferbasa conducted a diagnostic of all business units (Mining, Metallurgy, Forestry and Renewable Energy) that revealed the need to monitor the flow of people in its Forest locations, as often the only way the local population can reach other regions is by going through company land. Further dialog between this unit and the population showed opportunities in the form of minor adjustments in the route taken by large trucks carrying bio-reducer and timber, and limiting the flow of daily traffic flowing through the communities, in particular in the areas surrounding Fazenda Juruaba. **GRI 413-2**









# Performance in 2020

In this very atypical year, marked by uncertainties in the global economy, Ferbasa once again demonstrated its ability to adapt. Our decisions focused on protecting lives and protecting the Company's cash position, making management adjustments that were able to mitigate adversity and keep operating activities within some semblance of normal.

The country's macroeconomics and the international scenario were greatly affected by high levels of instability. This impacted exchange rates, the prices of our products, and the cost of financial transactions. Nevertheless, with the changes we implemented and especially by reviewing the product mix of our Metallurgy BU and focusing on increased exports we delivered positive results and output above expectations. Our ferroalloy and chromite exports reached record levels. It is important to add that this result was also influenced

by a decline in global commodity prices, offset by the valuation of the US dollar compared to the Brazilian Real.

By year end our adjusted EBITDA and net revenue were up compared to 2019. However, our net income dropped due to our exchange hedge transactions.

### ALLOYS SOLD DOMESTICALLY X EXPORTS IN 2020 (IN THOUSAND TONS)

#### Domestic Market

# 112.9

(-9.9% compared to  
2019)

#### Foreign Markets

# 115.2

(+59.3% compared to  
2019)

### Consolidated results - 2020 highlights

Adjusted EBITDA of

# R\$406.8

million

Cash generation of

# R\$168.4

million

Consolidated net income of

# R\$70

million

Expansion

# 27 %

in ferroalloy output;

Increased

# 20.4 %

sales volume;

increase in

# 30 %

in the average US Dollar value practiced;

Record exports of

# 110 thousand

tons of chromite

### RELEVANT ACTIONS

Cost reductions in all areas;

Postponed investments and non-strategic actions;

Effort made to shift sales to exports;

Hired a consulting firm specializing in the Asian markets, increasing exports to China, starting to sell chromite and ferroalloys directly.



## 2020 Results

### Sale of ferroalloys (tons)

Year	Volume sold	Change (%)
2018	226.0	-
2019	222.7	-1.5
2020	268.1	+20.4

### Net revenue (R\$ million)

Year	Net revenue	Change (%)
2018	1,381.1	-
2019	1,279.5	-7.4
2020	1,622.0	+26.8

### Cost of goods sold (COGS) as a percent net revenue (%)

Year	COGS (%)
2018	66.7
2019	83.1
2020	75.5

### Adjusted EBITDA (R\$ million)

Year	Adjusted EBITDA	Change (%)
2018	430.4	-
2019	241.7	-43.8
2020	406.8	+68.3

### Net income (R\$ million)

Year	Net income	Change (%)
2018	309.2	-
2019	221.5	-28.4
2020	70.0	-68.4

Read more about Ferbasas financial results at ([http://www.ferbasa.com.br/conteudo\\_pt.asp?idioma=0&conta=28&tipo=55551&id=0&submenu=0&img=0&ano=2020](http://www.ferbasa.com.br/conteudo_pt.asp?idioma=0&conta=28&tipo=55551&id=0&submenu=0&img=0&ano=2020)) GRI 102-45

## Operating performance and innovation

Ferbasa was able to keep up its activities with a successful program to control the pandemic. During the year, both output and sales increased due to a combination of factors such as a favorable exchange rate, lower cost of energy in the free market, operating equipment in good order and significant demand for its products in the international market.

In late 2019, the second ferrosilicon casting machine came on-stream, allowing Ferbasa to increase the output of special silicon alloys (FeSi HP) and thus reduce its costs. It also made more efficient use of inputs, and reduced fines and process losses. By running both machines simultaneously, Ferbasa increased its FeSi HP capacity by 26.9%, to 40 thousand tons a year.

In that same period the Company also signed a strategic partnership in Colombia for the supply of high-quality metallurgical coke. The first shipments were used in the first half of 2020, reducing impurities in the production of HC FeCr, and mitigating our exposure to the fluctuations of the spot market.

The forestry segment fulfilled all of the operating and financial targets for the year. We continue

genetic improvement to increase the future productivity of our planted areas, and increase the quality and stability of the bioreducer raw material. The experimental results of a project implemented since 2014 suggest that the clones produced have the potential to increase annual output by 19%. These gains should start with planting these clones on a commercial scale in 2021, and seven years later this timber should be harvested.

Generation of the BW Guirapá wind farm was 19% below the contracted energy for the year, mostly due to non-actionable factors such as the climate. Wind speeds were lower than needed to generate the expected amount of energy, especially in the summer when the wind deficit was 40%. Added to this, the National System Operator (ONS) limited transmission to 1.2% of contracted energy.

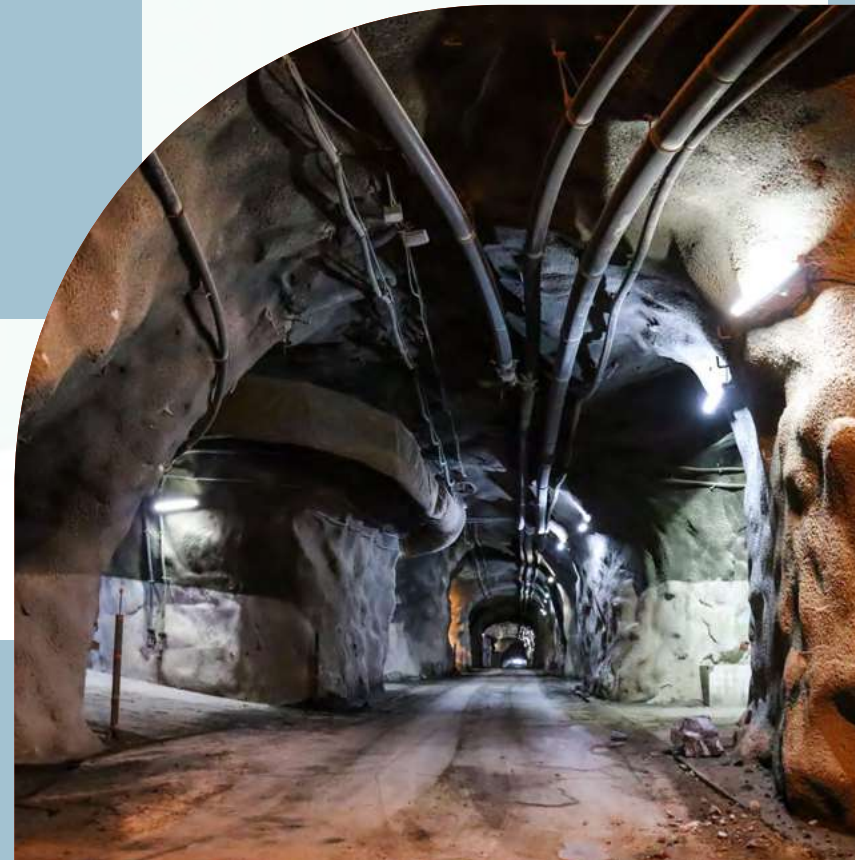
Another factor that affected the input of our wind-farm were unscheduled maintenance stops. An action plan was drawn up to investigate the issues and improve wind turbine management. Among our investments is a project to implement an automated system to control generation equipment.





## Investments in Metallurgy

Despite cost containment, R\$ 14.4 million were invested in the Pojuca (BA) plant. The most important improvements were the installation of a Diesel generator for emergency use in the ferrosilicon 75 line, a railroad scale to weigh chromite from the mining operation, and a new system to weigh inputs used to make LC FeCr.



## Optimized harvesting and modernized furnaces

Mechanized forestry harvesting has reduced the cost of timber, while the use of rectangular furnaces - more modern and efficient -, increased bio reducer output from 103 thousand tons in 2014 to some 140 thousand tons in 2020. These innovations reduced the cost of bio reducer, and thus its share of the cost of silicon alloys in this period.

## Hard Lump System

In addition to supplying the metallurgical plant, the mining unit has constantly invested to expand its presence in the export market by increasing its output, enabled by the Hard Lump Project. This system uses X-Ray sensors to separate the chrome ore, driving up productivity since 2014, with new equipment and facilities being added after that.

Starting in 2020, the hard lump system was used to extract chromite from reject piles, increasing total output and optimizing the exploration of mineral reserves.

## Main Indicators | Production 2020

- 538 thousand tons of chromite;
- 174 thousand tons of quartz;
- 15 thousand tons of virgin lime;
- 296.4 thousand tons of ferroalloys;
- 201.2 thousand tons of chrome alloys;
- 95.2 thousand tons of silicon alloys;
- 143 tons of bio reducer;
- 80.2% installed capacity utilization in the metallurgical plant;
- 63.3 MW avg. power generated at the BW Guirapá wind farm





# GRI

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## GENERAL CONTENTS

## GRI 101: Foundation 2016

GRI 101 has no content

## ORGANIZATIONAL PROFILE

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	102-51 Date of most recent report	2019	
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	102-53 Contact point for questions regarding the report	comunicacao@ferbasa.com.br	
	102-54 Claims of reporting in accordance with the GRI Standards	This report was prepared in accordance with the GRI Standard guideline: essential option	
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## MATERIAL TOPICS

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GRI 413: Local communities 2016	413-1 Operations with local community engagement, impact assessments and development programs	117	
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GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	10	
	103-2 Management approach and its components	44	
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GRI 415: Public Policy 2016	415-1 Political contributions	There were no donations or support to political organizations in the last three years.	16

## CLOSURE PLANNING

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Mining Sector Supplement – Closure Planning	MM10 Number and percentage of operations with plans to close activities	113	

### Objetivos do Desenvolvimento Sustentável

- |                               |  |   |
|-------------------------------|--|---|
| 1. No Poverty                 | 7. Affordable and Clean Energy             | 13. Climate Action                        |
| 2. Zero Hunger                | 8. Decent Work and Economic Growth         | 14. Life Below Water                      |
| 3. Good Health and Well-being | 9. Industry, Innovation and Infrastructure | 15. Life on Land                          |
| 4. Quality Education          | 10. Reduced Inequality                     | 16. Peace and Justice Strong Institutions |
| 5. Gender Equality            | 11. Sustainable Cities and Communities     | 17. Partnerships to achieve the Goal      |
| 6. Clean Water and Sanitation | 12. Responsible Consumption and Production |   |

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**Ferbasa**