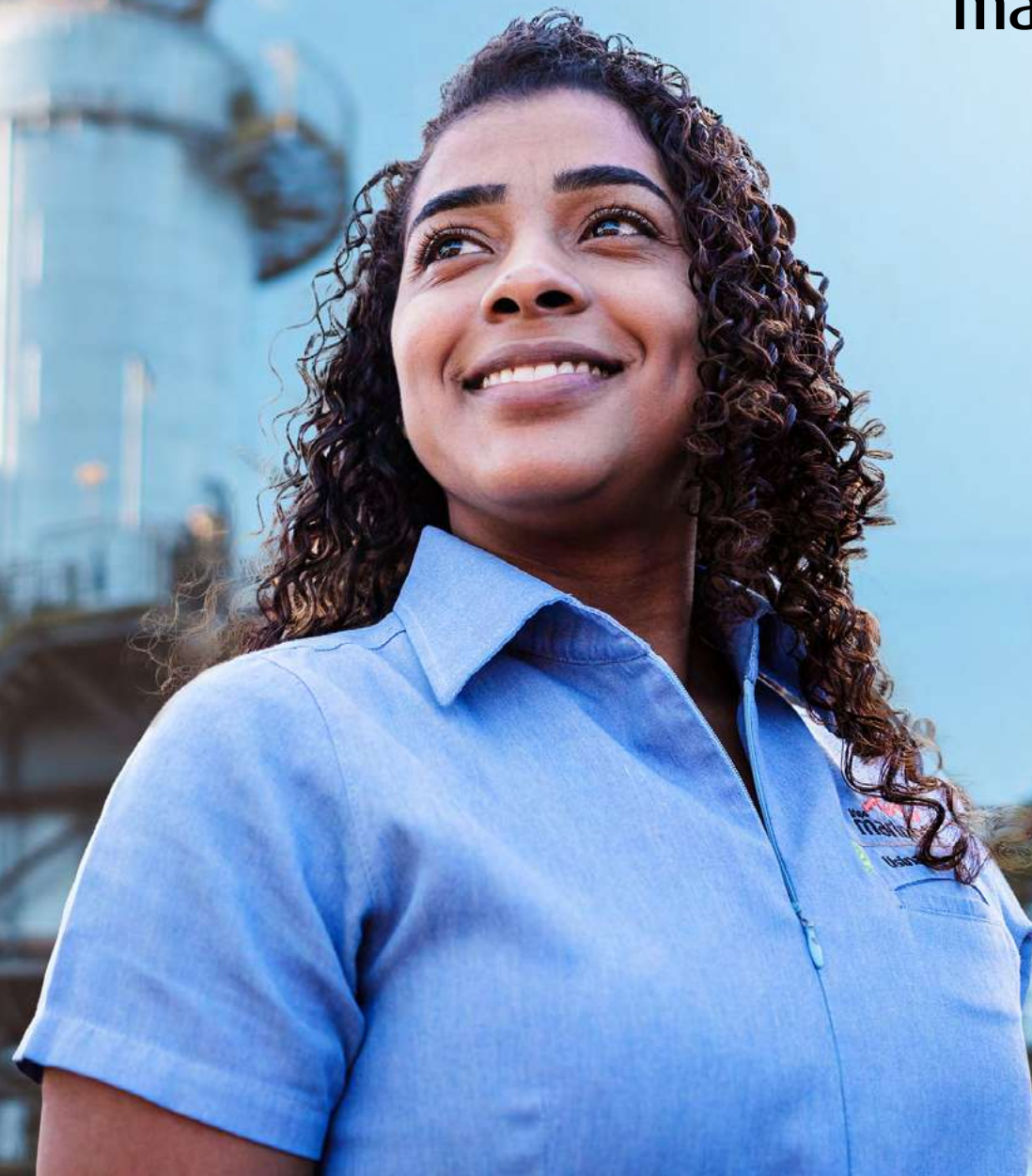




# Annual Report 2022





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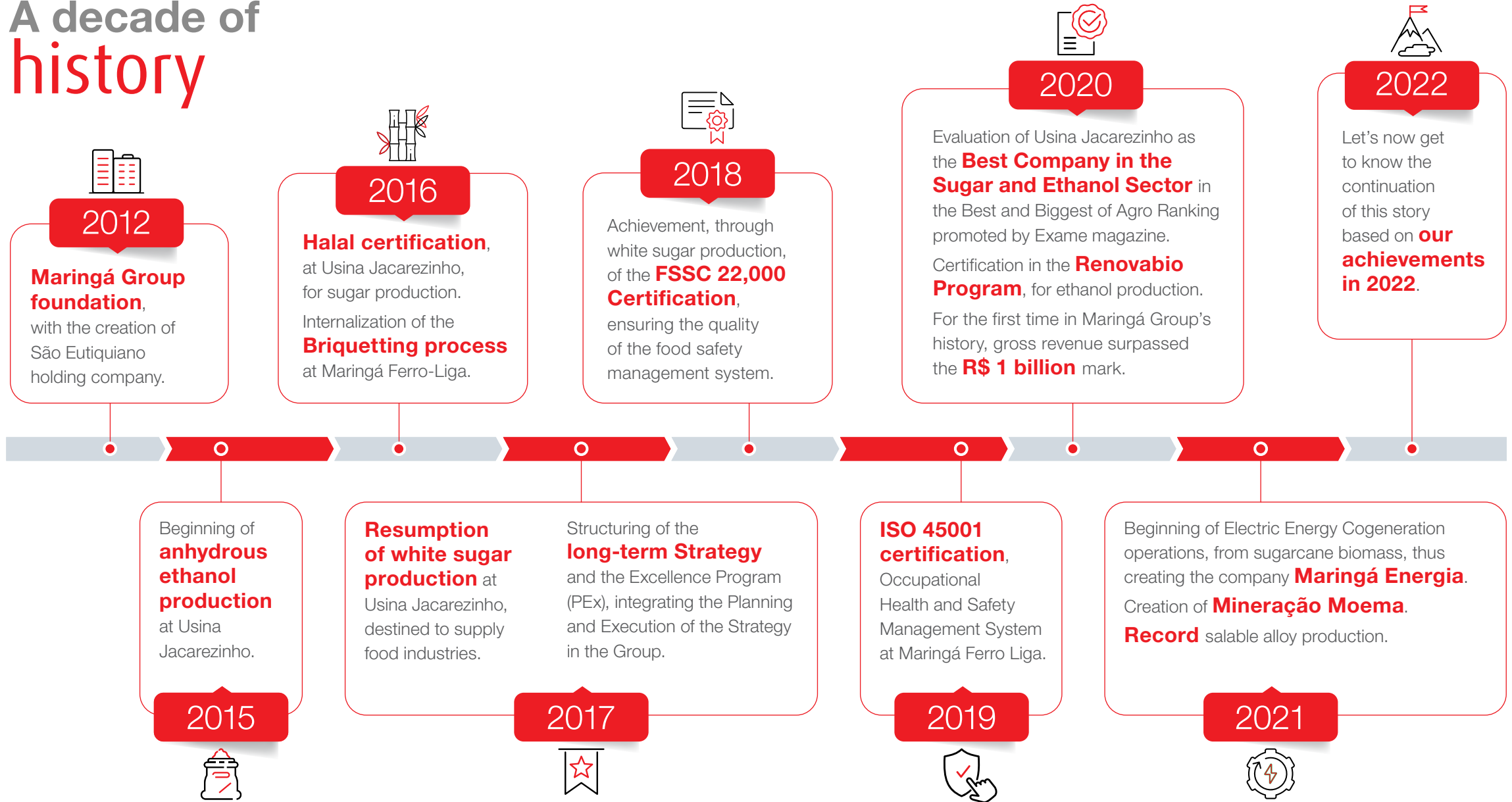


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## 90 Credits

# A decade of history





# About this Report

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For the second consecutive year, we prepared our Annual Report (RA) based on the Global Reporting Initiative (GRI) guidelines, expressing our commitment and transparency with our stakeholders and seeking to ensure the longevity of our businesses and contribute to a more sustainable planet.

The document incorporates updates to the universal standards proposed by the GRI, which became effective in January 2023. In it, we report our main activities and their results, as well as those of the subsidiaries – Maringá Ferro-Liga, Usina Jacarezinho, Canaveira Jacarezinho, Maringá Energia and Mineração Moema (the latter partially, as it is in the initial

stage of operation) – in economic, social, environmental and governance areas. The information refers to the period from January 1 to December 31, 2022, with annual publication. Compared to the previous document, there were some changes to the GRI data, which are reported as footnotes in the tables.

The verification and writing work was guided by the Materiality Matrix. This Matrix was prepared in 2021, based on an internal evaluation process and consultation with stakeholders, and enabled us to choose the priority topics for our stakeholders, that is, those that represent the most significant impacts (or potential impacts) of our operations.

The information was collected through interviews with employees, managers and directors of our companies, as well as through documents and meetings. The entire process, from planning to execution, was coordinated by the Strategy and Management Office – EEG, which had the support of KMZ content and Adesign consultants. The information from the Financial Statements, specifically, underwent an external audit by KPMG. The Greenhouse Gas Emissions inventory was carried out with the support of the consultancy GSS Carbono e Bioinovação, in accordance with GHG Protocol guidelines, and assured by Bureau Veritas. The Board of Directors validated the qualitative and quantitative content and approved the publication of the RA on August 30, 2023

Questions, suggestions and comments about this report can be emailed to [ri@grupomaringa.com.br](mailto:ri@grupomaringa.com.br).



Water Treatment Station

# Priority material topics GRI 3-1

The construction of the Materiality Matrix allowed us to identify challenges, risks and opportunities, as well as prioritize actions to minimize and improve the impacts of business on our stakeholders and the environment.

The Materiality Matrix was built from the identification steps. We used internal and external benchmarking, in addition to mapping stakeholders and priority topics linked to the impacts caused by our operations. There was prioritization, via research with shareholders, suppliers, service providers, employees, integrated producers, banks and investors, customers, unions, associations, organizations, community representatives, in addition to senior leadership. Finally, results were analyzed and the topics were validated by the leadership.

The stakeholder groups that participated in the prioritization stage were defined based on a classification that considered aspects such as dependence, influence and degree of relationship, both in the sugar-energy and steel sectors. Those selected were presented with a list of 18 topics so that they could identify the most relevant ones, which had 1,213 participations. From all the data collected, we consolidated the matrix, which includes ten priority material topics, presented below with their scope and adherence to the Sustainable Development Goals (SDGs) proposed by the UN.

The Priority Material Topics synthesize the basic expectations of our Stakeholders, which are a fundamental starting point for our Sustainable Strategy.

Igor Santos (Industrial Processes Analyst), Fernando Hiromitus (PCP Supervisor) and Tamara Rodrigues (Industrial Process Supervisor)



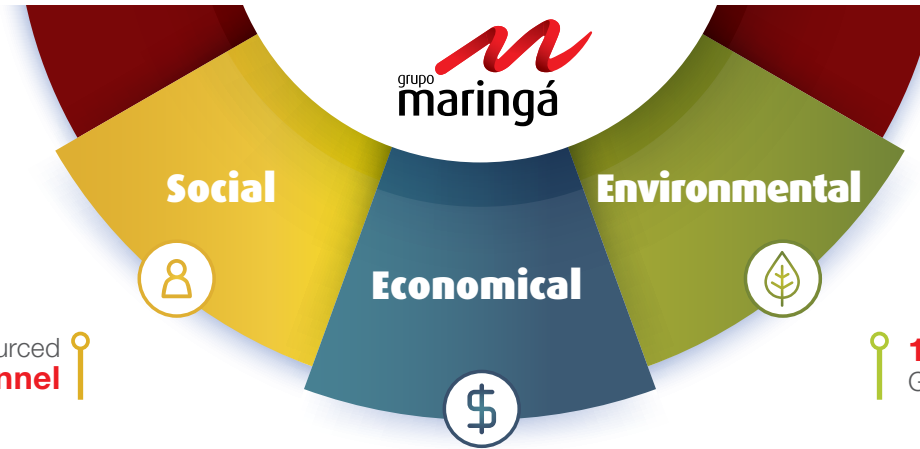
## Priority material topics

GRI 3-2

Material topic	SDG	Scope
Ethics, Integrity and Human Rights		Respect our Code of Conduct, which is in line with our values; guarantee the integrity and transparency of our relations; ensure that all conditions relating to human rights are practiced and monitored.
Health and Safety		Adopt the best practices in occupational safety and health; continuous improvement in safety management and reduction of accidents and injuries; ensure dignified working conditions in the value chain.
Energy Efficiency		Manage resources and monitor energy use, promoting actions that optimize it; privilege solutions and technologies based upon renewable energies; promote development and research for energy efficiency.
Innovation and Technology		Encourage and ensure innovative business practices; ensure data privacy and security; seek solutions that enhance the efficiency of our resources.
People Development, Diversity and Inclusion		Promote development (employees attraction, retention, training and careers); ensure diversity and inclusion at all levels of the organization.
Customer Relationship and Satisfaction		Clearly and transparently communicate about products and processes; raise awareness of socio-environmental issues; to make production more flexible and diversified to serve our customers.
Local Development and Impact on the Community		Support the development of local communities and monitor potential impacts on the company surroundings; so that positive impacts are generated for the community.
Sustainable Agricultural/ Forestry Practices		Manage the productivity and balance of land use and other natural resources; preserve soil quality; control the use of fertilizers, herbicides, pesticides and other agrochemicals.
Climate Change		Establish a strategy to combat climate change, carry out actions to mitigate the negative impacts of our operations; guarantee the reduction in the emission of Greenhouse Gases (GHG), both direct and indirect, and polluting gases; initiatives for the offsetting of GHG emissions.
Sustainable Supply Chain		Promote the qualification and selection of suppliers based upon economic and socio-environmental criteria; ensure best practices for responsible sourcing in the supply chain.



# Our highlights in 2022



Implementation of the outsourced **Ombudsman channel**

**1st Assurance** of Maringá Group's GHG emissions inventory

## Sugar-energy

**Usina Jacarezinho**

**Best TCH**  
(Tonne of Cane per Hectare) in the last six years:  
**90 tons/ha**

Grinding of **2.56 million tons** of sugarcane processed, the second-best rate in our history

Record white sugar production, with **77.4 thousand tons**

Start-up of the **yeast drying plant**

**Maringá Energia**

Investment in **road trains**, with better use in transporting sugarcane over long distances and saving fuel

**83,000 CBIOs** sold, generating gross revenue of **R\$ 10 million** and capturing carbon equivalent to **581,000 trees**

**Muda Zero Program**, for the benefit of Integrated Cane Producers (PICs)

Valor 1000 Recognition as the **second-Best Company** in the Industry Activity Area

Completion of the first phase of the **Sustainable Strategy Program**

## Mining

**Mineração Moema**

Extraction of over **60,000 tons** of high-grade manganese ore

**Improved product quality**, with the adoption of a wet beneficiation system

## Steel Industry

**Maringá Ferro-Liga**

Maintaining our position as the largest **manganese ferroalloys** producer in South America

Revamping **Furnace 4**, resulting in a **10% capacity increase**

Insourcing **forest harvesting** with state-of-the-art equipment, enhancing efficiency and reducing production costs

Achieving a reduction in the intensity of non-biogenic GHG emissions (scopes 1 and 2), **dropping from 1.27 to 0.85**, solidifying our global leadership position

Attaining the **10th position** in the **Steel, Mining, and Metallurgy sector** in the "Melhores e Maiores" (Biggest and Best) 2022 ranking, as recognized by Exame magazine

Successfully completing the construction of **more efficient and sustainable** rectangular furnaces at UPR Maringá, dedicated to bio-reductant production



# Message from the Board of Directors

GRI 2-22

## MARINGÁ GROUP IN THE YEAR 2022

The expressions “unpredictability” and “uncertainty”, usually associated with difficulties and risks, have invaded the daily lives of companies around the world, replacing the terms “challenges” and “performance”, usually associated with the perspective of business evolution. At the heart of this change is the less than encouraging expectation for the performance of the world economy for the coming years, motivated by factors such as high and resilient inflation, high interest rates, environmental problems, low growth and the war in Europe.

The Brazilian situation is consistent with the international scenario and has mitigating and aggravating factors, resulting in a less than encouraging outlook for economic activities. The new representatives of the central government, the federated states, as well as the parliaments, will have to build effective channels of understanding. After highly disputed general elections, the results didn’t provide the Executive Power at different levels, with some exceptions, with comfortable majorities capable of making their projects for the country viable.

In a context of budget constraints and high public debt, it will be a great challenge for governments in different spheres to build a positive economic scenario.

As would be natural in such circumstances, business decisions are already reflecting this scenario of unpredictability and uncertainty. The implementation of improvement, innovation or business expansion programs is being postponed in most private companies. The analysis of risks and returns, always carried out considering the likely macroeconomic scenarios several years ahead, is quite fragile. Without reasonable predictability of economic scenarios, companies tend not to implement new investments. This is the main obstacle to the occurrence of a virtuous circle of new business initiatives in the country. Lack of predictability is hardly compensated by the availability of credit, subsidized interest and tax exemptions.

The long experience of companies doing business in Brazil, in developing their projects in environments with varying degrees of uncertainty, has not been enough to

envison, with a reasonable degree of confidence, the risks embedded in the scenarios we currently have before us. At Maringa Group, the review of its capital expenditure planning for the coming years incorporated greater prudence, and very important initiatives for its future were postponed. The same prudential attitude guided the elaboration of the Business Plan for 2023/24.

## STEEL INDUSTRY (MARINGÁ FERRO-LIGA)

The change in performance between the first and second halves of 2022 in Maringá Ferro-Liga was remarkable, mainly the drop in selling prices. Its products are commodities and their prices are set internationally. At the same time, there was a worrying increase in production costs following the global trend. Furthermore to these difficulties that affected all companies in 2022, we noticed a decline in the performance of certain traditional suppliers who provide critical supplies for the ferroalloys production, which are experiencing challenging scenarios. Maringá Group continues to seek alternative sources of supply, mainly high-grade manganese ore, in order to increase supply reliability.





Camila dos Santos  
(Controlling Analyst)



Worthy of note are the advances made in recent years in the production of bio-reductant (charcoal), our main reductant. We have developed more efficient eucalyptus carbonization furnaces with much lower environmental impact. In terms of production costs and carbon emissions, the company's benefits are significant when compared to the use of petroleum and metallurgical coke, adopted by most alloy producers. Our customers benefit by reducing their carbon footprint. The MFL's leadership in this field is recognized internationally.

We faced the reduction in revenues and the increase in costs with several internal initiatives focused on preserving our market share, prioritizing the strengthening of our commercial relationships with customers.

In 2022, our production of manganese alloys reached 89.1 thousand t./year, a decrease of 10% compared to the previous year. Production was impacted by the maintenance shutdown of one of our main furnaces. Our sales reached 96.7 thousand tons, and net sales reached R\$899.2 million, representing a 7% decrease over the previous year.

The performance of Management and all employees in this difficult scenario led the company to a performance consistent with our historical averages, reaching adjusted EBITDA of R\$ 317.6 million and Net Income of R\$ 219.5 million. Shareholders' Equity reached R\$865.3 million, an increase of 20% in the year.

We expect that the year 2023 will continue to be challenging. However, the efficiency of our operational practices and our solid financial position allow us to foresee the maintenance of our profitability, as it already happened in 2022.

### **SUGAR-ENERGY (SUGARCANE PLANT JACAREZINHO AND MARINGÁ ENERGIA)**

Our subsidiaries Usina and Canaveira Jacarezinho and Maringá Energia experienced situations typical of these activities. On the one hand, a favorable situation of sugar prices in the domestic and foreign markets, counteracting the high volatility of ethanol prices due to fluctuations in international oil prices and changes in fuel taxation rules. On the other hand, climatic adversities reduced the volume produced and the richness of sugarcane. The Center-South region of Brazil harvested 540 million tons of sugarcane, one of the lowest harvests in the last eight years.

Continuing our policy of diversifying revenues through the use of by-products from sugar and ethanol production, in November 2022 we started the production of dry yeast intended for animal consumption.

The investments made in recent years in improving our sugarcane fields have preserved productivity, even in a scenario of adverse weather conditions, making it possible to maintain high levels of productivity in the sugarcane fields. We ended the season with a yield of 90 t./ha. Canavieira de Jacarezinho also faced a sharp increase in production costs, mainly for fertilizers, pesticides and fuel.

2.56 million tons of sugarcane were processed, with priority given to sugar production, which reached 77,444 t of white sugar and 80,176 t of VHP. 90,009 m<sup>3</sup> of anhydrous ethanol and 11,627 m<sup>3</sup> of hydrous ethanol were produced. Net sales for the year reached R\$653.0 million, an increase of 10%. Net Income was R\$110.7 million and adjusted EBITDA reached R\$289.6 million.

Sugar prices on the futures markets remained rewarding throughout the 2022/2023 harvest. The recent measures of tax reencumbrance on fuels carried out by the Federal Government may contribute to greater competitiveness of ethanol prices. In this scenario, we can expect another year

of good results. Maringá Energia has installed capacity of 25 MW, having started operations in the 2020/21 harvest. In its second year of activity, it sold 62 MWh of energy in nine months of operation, equivalent to an average of 10 MW. Net sales reached R\$ 29.4 million, a 39% reduction over the previous year. Basically operating in the short-term market, the company benefited from the high energy prices observed in 2021. In 2022 prices returned to normality and, in recent months, have been below historical prices. As a result, net income was R\$13.3 million and adjusted EBITDA was R\$20.1 million. During the 2023/24 harvest, the expansion of installed capacity to 50 MW should be concluded.

Maringá Energia is a company in the process of developing and consolidating its operations. New investments and energy trading strategies should be adopted in the coming years.

## MANAGEMENT

Initiatives related to ESG (Environmental, Social, and Governance) principles remain a top priority for Maringá Group Management. We have advanced a lot in recent years towards attitudes that generate value for our employees, customers, shareholders and other stakeholders. In 2022, we released an Annual Report

emphasizing our advances in this area. Our governance model is constantly improving and persistently evolves towards the consolidation of professional management, respect for the individuality of our employees and their families, as well as cooperation with the communities in which we operate.

Like most Brazilian companies, Maringá Group faced significant difficulties in 2022, subjecting our operating structures and our management and governance model to important challenges that were overcome, maintaining the average profitability of recent years and preserving liquidity. The continuous improvement of our operating structures and the continuous advances in our management and governance model give us confidence of good performance in the years ahead.

## FINAL COMMENTS

The Board of Directors would like to thank all those who contributed with their support for performance. A special mention goes to our more than 1,900 employees for their commitment and dedication. Without the support of our partner customers and suppliers, together with banks and investors, it would not have been possible to achieve the results presented here.



# Message from the Executive Board

GRI 2-22

In 2022, we celebrated the first decade of Maringá Group. During this period, we achieved great progress in our businesses, improved results and overcame numerous challenges through governance structuring, investments in product diversification, operational improvements, implementation of new technologies and people development.

We continue to advance strongly to improve the sustainability of our businesses and add even more value to our activities, aligning the strategic vision with disciplined execution, which are pillars of our corporate culture.

After two years of high demand for metallic and agricultural commodities, an effect of the strong global economic recovery after the end of the pandemic, the accommodation of demand and international prices was expected. Considering that 2021 was exceptionally positive, largely due to external

factors, such as commodity prices, the exchange rate and the record demands of some sectors, the isolated analysis of the economic and financial results, which showed a decline in comparison with the prior year, does not hide the advances and achievements we recorded in 2022.

We had important fluctuations throughout the year, with the increase in the price of inputs and raw materials impacted by events such as the conflict between Russia and Ukraine, global inflationary process and government interference in the domestic fuel market. Our business was directly impacted by these events and quick decisions were crucial to adjust operations and adapt to the changes.

With the outbreak of the War in Ukraine, we reinforced the supply of raw materials and inputs, mainly fertilizers for the crop and reductant for the production of ferroalloys, guaranteeing the continuity of operations.



Anderson Godoy,  
Almir Silva and  
Artur Fernandes  
(Electricians)

At Maringá Ferro-Liga, we remain market leaders in South America. In 2022, we produced 89 thousand tons of ferroalloys, a volume affected by the repowering of another one of our furnaces. This operation mobilized more than 250 people, including own employees and third parties, and it was completed without accidents, on time and with the desired quality. Sales volume reached 96.7 thousand tons of alloys (-13.4%), impacted by lower production volume and lower steel production in Brazil (-5.8%) and Worldwide (-4.3%) and supported by the continuity of the resale operation. Net revenue totaled R\$857.1 million (-8.9%), the second-best year for the Company.

Furthermore, to the investment in increasing the capacity of the furnaces, we launched another relevant project, which will expand the capacity of our Poço Preto Hydroelectric Power Plant, in yet another step towards increasing our own generation of electricity – always ensuring that all input we consume comes from renewable sources.

Another impacting work was completing the installation of the new furnaces at the Bio-reductant Production Unit (UPR) Maringá. That provides us with more operational efficiency, reducing the environmental impacts of producing the bio-reductant (charcoal) with the reduction of CO<sub>2</sub>eq emissions in the production of ferroalloys.

In 2022, we continue to develop our activity at Mineração Moema, reaching the production of 60,000 tons of high-grade manganese ore in the State of Pará.

In the sugar-energy sector, despite the above-average rainfall in the second half of the year, making the harvest quite challenging, we recorded the second largest grinding in our history, with 2.56 million tons. Furthermore, we had a record production of white sugar, reaching 77 thousand tons, as a result of the investments we have made in recent years. We promote the best agricultural practices, which we also try to disseminate among integrated sugarcane producers. Also, we achieved the best productivity in the last five years, with 90 tons of sugarcane per hectare, well above the national and regional averages.

Another important highlight in the year was the maintenance of energy trading, with an average of 10 MW, through the company Maringá Energia, still preserving 124 thousand tons of bagasse, which were sold throughout 2022. We started the energy export expansion project, which will extend to 2023 and which will allow Maringá Energia to reach an average export of approximately 34MW.

In 2022, we worked once again to increase the product portfolio, strengthening the circular economy of our processes. In record time, we built the Yeast Processing

and Drying Factory, a nutritious ingredient used in animal feed, which is a new market niche. We started the operation at the end of the period, which is why its effects will be felt throughout 2023.

We made progress in the robustness of our strategy related to climate change with the assurance and public record of the Group's carbon inventory and the recertification of the Usina Jacarezinho in Renovabio. At Maringá Ferro-Liga, we stand out as a world reference in low carbon emissions, with intensity of greenhouse gas emissions of 0.85 tCO<sub>2</sub>eq/t of net alloy, due to our extensive use of renewable energy and our own production of eucalyptus bio-reductant. In this business, in the last two years, through eucalyptus reforestation, we removed more CO<sub>2</sub> than we emit considering scopes 1, 2 and partially 3. In sugar-energy, from 2020 to 2022, we generated 238,000 CBIOS, which is equivalent to carbon capture by 1.6 million trees, and we sold more than 207,000 CBIOS, generating gross revenue of R\$15.6 million.

The business environment in 2023 will remain challenging, but we understand that Maringá Group is prepared to overcome the adversities of the world market. Taking the opportunity to thank our stakeholders for their trust and the tireless support of each of our employees, we invite everyone to read our Annual Report.

## The Board

# About us

GRI 2-1 | 2-6 | 2-7

- *Maringá Group*
- *Our production*
- *Competitive differentials*
  - *Certifications*
  - *Awards*
  - *Associations and external initiatives*
- *Business model*

Veronica Crepaldi  
(Warehouse  
Administrative  
Assistant)



# Maringá Group

We are Maringá Group, a privately held organization established in 2012, represented by the holding company São Eutiquiano Participações S.A. Headquartered in the city of São Paulo (SP), we operate in the sugar-energy, steel and mining sectors through, respectively, the companies Usina Jacarezinho, Canaveira Jacarezinho and Maringá Energia, located in the municipality of Jacarezinho (PR); Maringá Ferro-Liga, located in the municipality of Itapeva (SP); and Mineração Moema, in Marabá (PA).

We understand the importance of our role in the country's sustainable development, operating in the steel production chain, in the production of food, in addition to energy from renewable sources. In order to remain in constant evolution, we rely on professional management, emphasizing the adoption of robust corporate governance practices, ensuring transparency and respect for all our stakeholders.

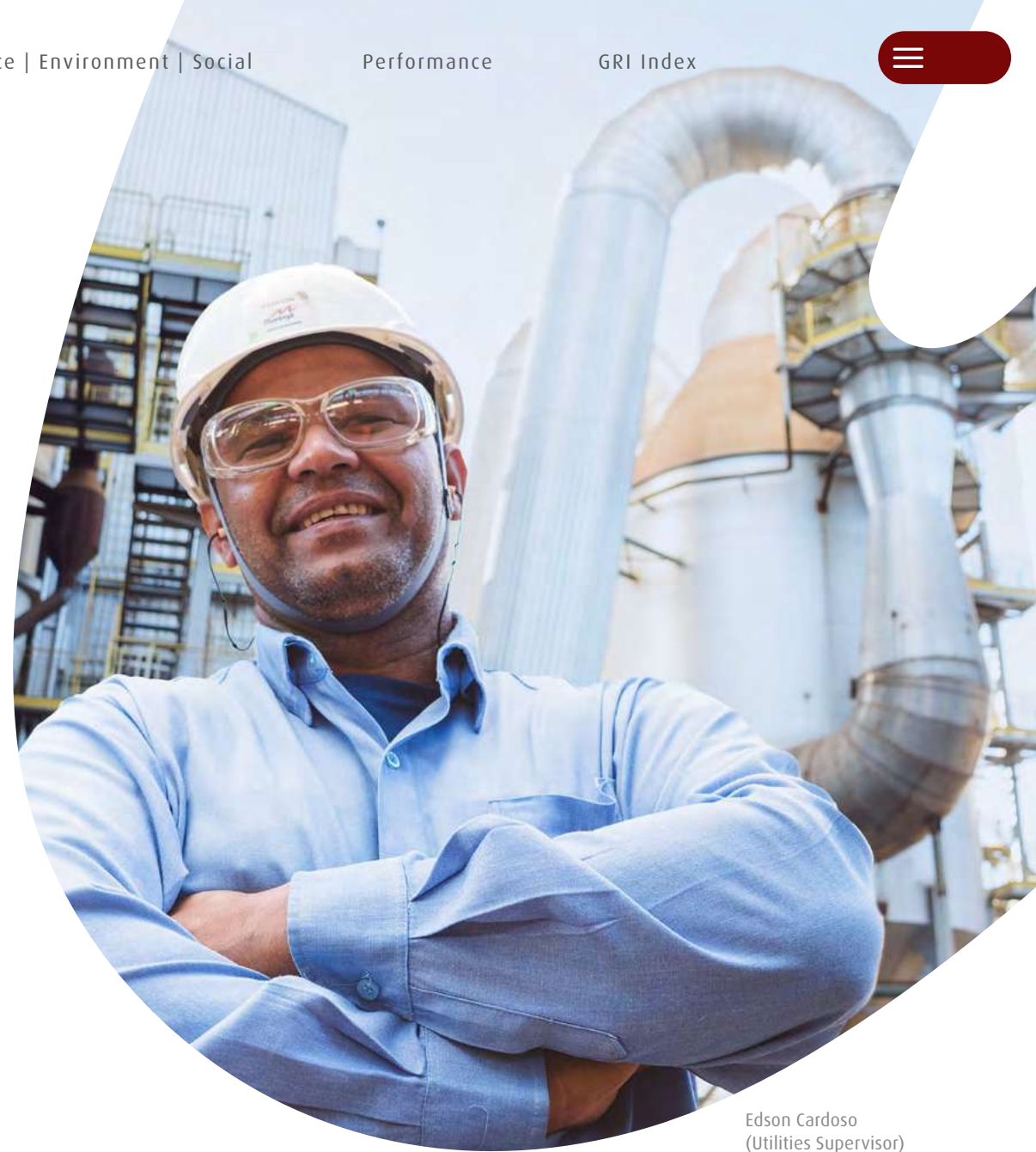
We celebrated ten years of our journey in the same year in which we were recognized as the second-Best Company in the Industry Activity Area by Valor 1000, promoted by Valor Econômico newspaper, bringing satisfaction and pride to more than 1,900 people involved in such achievement.

We are a member, of Copersucar, which is responsible for selling all of our sugar and ethanol production, a partnership since that dates back to 1968. Excess energy is sold on the free market. In 2022, with the insertion of dry yeast, we incorporated Aleris as a client.

At Grupo Maringá  
we have over

**1,900**  
employees

who are celebrating a  
decade of history together.



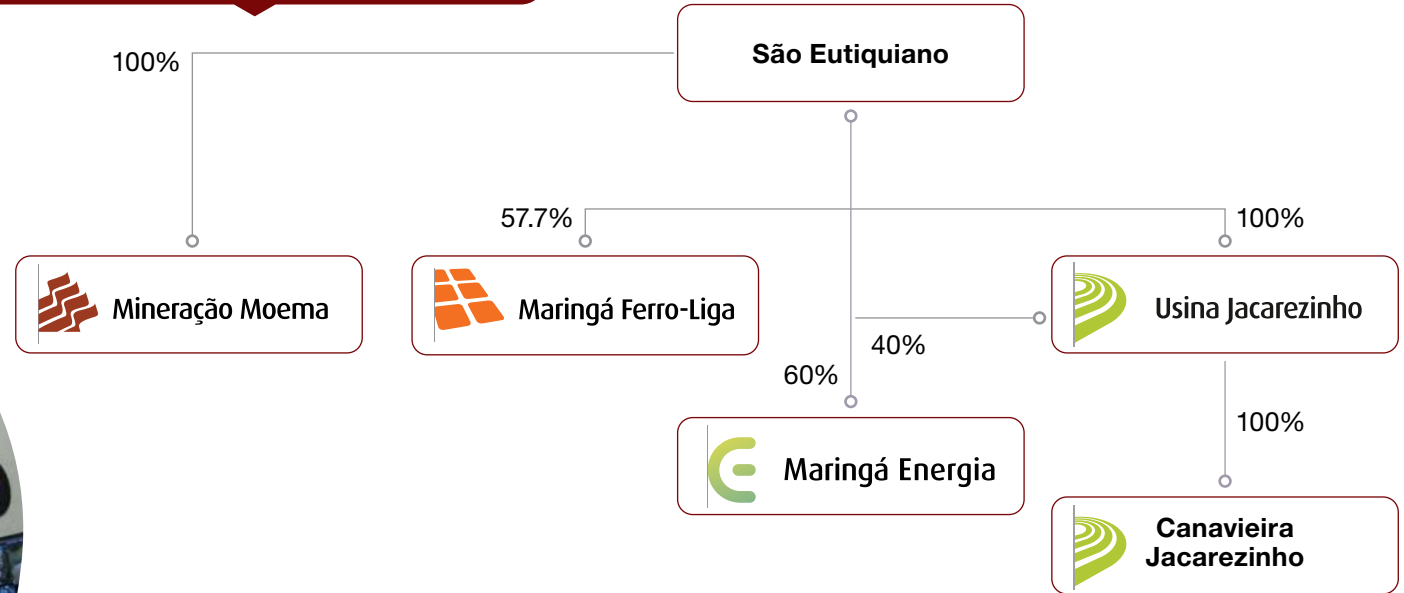
Edson Cardoso  
(Utilities Supervisor)

Maringá Ferro-Liga is the largest producer of manganese ferroalloys in South America, a fundamental input for the production of steel, sold to companies in Brazil and abroad. More than 600 employees work there, helping us to supply ferro-silico-manganese and high-carbon ferromanganese to national and international customers in the steel industry. Our team also operates in the forestry area, cultivating eucalyptus, occupying 5,000 hectares of our own, and in our Bio-reductant Production Units, which supply the factory. Furthermore, we have six Hydroelectric Generating Centers (CGHs), that supply an important portion of our energy demand.

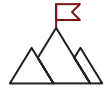
In 2021, we inaugurated Mineração Moema, in the North Region, whose manganese ore extraction operations, still incipient, are strategic for us. In 2022, 49 employees worked at the unit.



**Corporate organization chart**



Energy Operation Center



## Mission GRI 2-23

Acting in the steel production chain and in the sugar-energy sector, offering high-quality products with efficiency and competitive costs, taking care of the environment, perpetuating the business and generating value for stakeholders.



## Vision GRI 2-23

To be a business group recognized for its performance, governance, ethics and sustainability



## Values GRI 2-23

**Integrity** – *We value integrity.* We work transparently and under high standards of ethical conduct, we honor our commitments, ensuring our credibility and reliability.

**Excellence** – *We continuously strive for excellence.* Efficiency, quality and innovation are pursued with agility and focus on value creation.

**Learning** – *Restlessness about evolving and growing.* We nurture relentless learning through best practices, critical thinking and knowledge sharing, strengthening our ability to innovate and overcome challenges.

**Collaboration** – *We are better together.* Company results are more important than individual achievements. We work as a team, valuing everyone's dialogue and contributions.

**Respect** – *We respect people and the planet.* We value the safety and well-being of our employees and the community. We care for the environment and respect our customers and partners.



José Batista (Automotive Maintenance Lubricator)



# Our production



## Sugar-energy

**VHP (Very High Polarization) Raw Sugar** – With high sucrose content and later being refined by other industries, it serves as raw material for various processes, as it can be transformed into different types for human consumption. Its crystals are covered by a thin layer of honey containing other non-sucrose components, which gives it a darker color. Highly demanded by large refineries.

**White sugar** – Submitted to more than one processing step, it requires refined techniques and severe controls typical of food industries as it can be used directly for human consumption. It is also used by industries such as beverage and food manufacturers.

**Anhydrous ethanol** – With 99.7% pure ethanol, practically without water, it is added to gasoline by fuel distributors, in accordance with federal regulations, providing a reduction in carbon emissions by vehicles.

**Hydrated ethanol** – Contains 93% pure alcohol and is sold directly to consumers at gas stations, and can be used straight or mixed with gasoline in flex-fuel cars. It stands out for its environmental advantages throughout its production and use by vehicles, compared to alternatives derived from fossil sources.

**Electricity** – Generated for sale from sugarcane biomass, residue from the sugar and ethanol production processes in our mills.

**Yeast** – After recovery and drying of the yeast used in the fermentation of sugarcane juice during ethanol production, the product is sold to animal feed manufacturers.



## Steel Industry

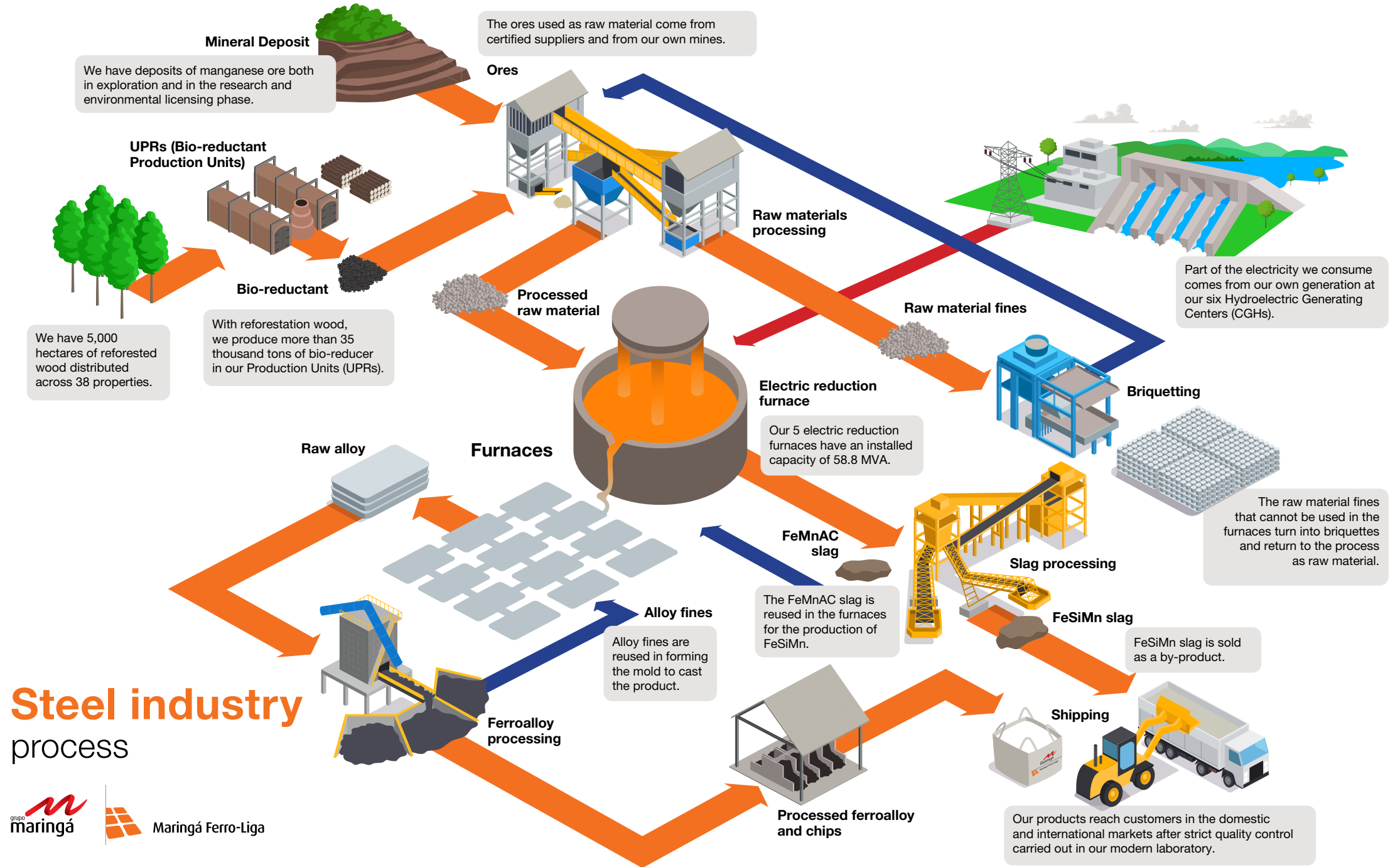
**Ferro-silico-manganese** – Used especially in the manufacture of carbon steel, standard steel plates and rebars, containing different portions of manganese and silicon. Adding it reduces unwanted levels of sulfur and oxygen and improves the mechanical properties of steel, increasing its strength and malleability.

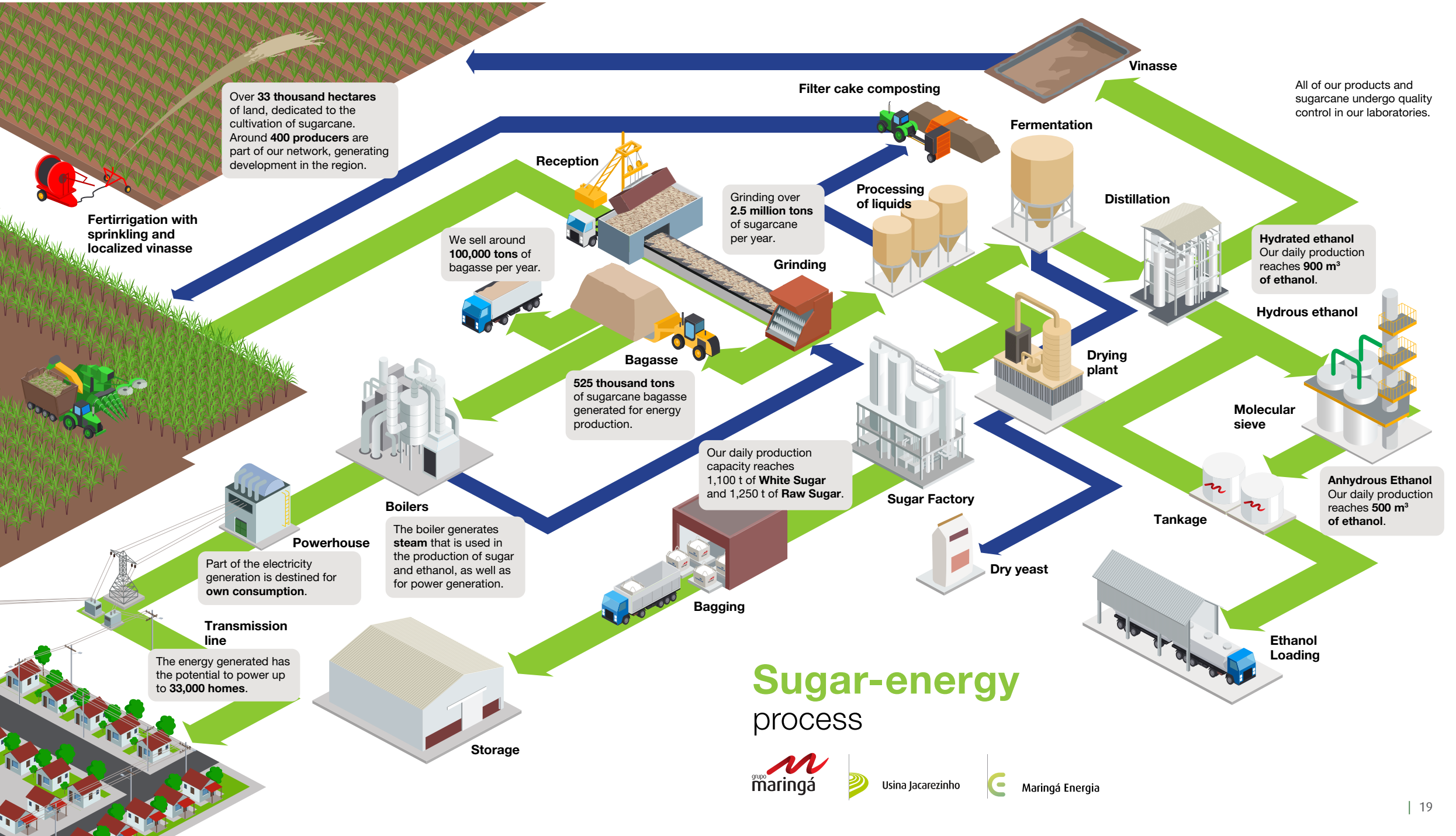
**High-carbon ferromanganese** – Mainly used in the production of steel plates with critical surfaces and high carbon long steel, widely used in the automotive and white goods industries. It also contributes to reducing unwanted sulfur and oxygen levels and improving the mechanical properties of steel.



## Mining

**Manganese ore** – Extracted in the region of Marabá (PA), which has the second largest mineral reserve in the country, it is used in the production of ferroalloys.





# Sugar-energy process



# Competitive differentials

We continuously seek to increase the quality of products and processes, in order to remain competitive. We want to be prepared to serve current and new markets and to live up to the trust and preference of our stakeholders. Among the characteristics and assets, both tangible and intangible, that contribute to the good performance of our business and prominent position in the sectors in which we operate are:

- Corporate governance in continuous improvement;
- Commitment to sustainable development;
- Flexibility in the industrial units of Usina Jacarezinho and Maringá Ferro-Liga: in the first, it is possible to plan a larger production of sugar or ethanol, according to the demands and market prices; at Ferro-Liga, we are in a position to meet specific customer requests regarding the composition of ferroalloys, and we also have the flexibility to produce FeSiMn and FeMnAC, according to the customer's needs;
- Constant expansion of the product portfolio in the sugar-energy sector, advancing in the circular economy, with maximum use of sugarcane and its residues in the origination of products (yeast, for example), generation of electricity (Maringá Energia) and application in crop plantations (using waste as fertilizer);
- Own production of bio-reductant to feed the furnaces of Maringá Ferro-Liga, with environmental gains and cost reduction;
- Increased security in the supply of manganese ore, the main raw material in the production of ferroalloys, with the operations of Mineração Moema and the acquisition of other assets;
- Self-generation of electricity through biomass and Hydroelectric Generation Centers, which meet 100% of the needs of our units in the sugar-energy sector and 17% of the demand for energy for the production of ferroalloys – selling the excess generation from biomass to the free market ;
- Considered the only producer of manganese ferroalloys in the State of São Paulo, with easy access to the national steel industry and the main ports in the Southeast.

## Certifications

**ISO 9001** – We hold certification for the production of manganese alloys, sugar, ethanol and sugarcane.

**FSSC 22000 (Food Safety System Certification)** – Awarded to Usina Jacarezinho. It is internationally recognized as a reference standard for the food industry, which guarantees safety throughout the entire production process.

**Halal** – Usina Jacarezinho's sugar is certified for Islamic people, meeting all manufacturing, quality and handling criteria required by the religion.

**ISO 45001** – Since 2019, Maringá Ferro-Liga has been certified in the health and safety standard, which was renewed in 2022 without identifying non-compliance.

**Renovabio** – Usina Jacarezinho has been certified since 2020 in the program, which is an initiative of the Ministry of Mines and Energy to promote the participation of biofuels in the Brazilian energy matrix.



Ferroalloy Big Bag

## Awards

**Valor 1000 Yearbook** – We occupy the second position among the Best Brazilian Companies in the Industry Activity Area in the ranking prepared by the newspaper Valor Econômico in partnership with the Center for Studies in Finance of the Getulio Vargas Foundation (EAESP/FGV) and Serasa Experian. We also evolved from position 648 to 511 in the Net Revenue ranking.

**Biggest and Best of Exame** – Maringá Ferro-Liga was the tenth best company in the steel, mining and metallurgy sector in the magazine's ranking.

**#EuSouParanapanema** – In the Water Users category – Communication Modality, the award was given in recognition of environmental education initiatives developed to celebrate World Water Day, celebrated on March 22, a date that is part of our Sustainability agenda. The distinction is granted by the Paranapanema River Basin Committee, located on the border between Paraná and São Paulo.

**Globo Rural** – Usina Jacarezinho was ranked 10th in the 18th Best of Agribusiness Awards, by Globo Rural magazine.



# Associations and external initiatives

GRI 2-28

## STEEL INDUSTRY

### Brazilian Association of Large Industrial Energy Consumers and Free Consumers (Abrace)

– One of the oldest entities in the electricity sector, defends, based on studies and technical documents, the importance of energy at competitive prices for the development of the productive sector in Brazil. Through Maringá Ferro-Liga, we have been associated since 2015.

### Brazilian Association of Ferroalloys and Silicon Metal Producers (Abrate)

– It brings together the main Brazilian industrial groups producing ferroalloys and silicon metal, which contribute to the sustainable development of Brazil. Our steel business has been associated since 1983, with our industrial director Rodrigo Junqueira as vice-president since 2019.

### Brazilian Asset Maintenance and Management Association (Abraman)

– Non-profit organization founded with the assumption of promoting and developing maintenance and asset management professionals through knowledge, standards and practices. Through our steel business, we have been associated since 2017.

### Municipal Council for the Defense of the Environment (Comdema)

– Local environmental management instrument that brings together public agencies, companies, politicians and organizations in search of solutions for the rational use of natural resources and for the recovery of environmental damage.

### International Manganese Institute (IMni)

– Maringá Ferro-Liga has adhered to the entity's Code of Conduct since 2017, committing, among other aspects, to respect the concept of sustainability and implement continuous efforts to exercise the best practices and standards in the market in the areas of safety, health and environment. It is also committed to conducting its business and operations so as to support the positive image of the manganese industry.

### Sociedade de Investigações Florestais (SIF), of the Federal University of Viçosa

– It is a partnership between the university and the main forestry companies in Brazil, aiming to support the development of research and professional qualification based on scientific, economic and socio-environmental projects.

## SUGAR-ENERGY

### Environmental Protection Agency (EPA) Certification

– Required for ethanol exports to the US, attesting that the fuel complies with all requirements related to the reduction of Greenhouse Gas (GHG) emissions.

### Halal Certificate nº alv.jo.2104.2038.Bra

– Since 2018, sugar production has been certified for its compliance with Islamic laws and standards.

### Food Safety System Certification (FSSC 22000)

– Our white sugar production has been certified since 2018, ensuring food safety.

**Renovabio** – In 2020, we were certified in the National Biofuels Program, thus being qualified to issue and market CBIOS.

## MARINGÁ GROUP

### Brazilian GHG Protocol Program (PBGHGP)

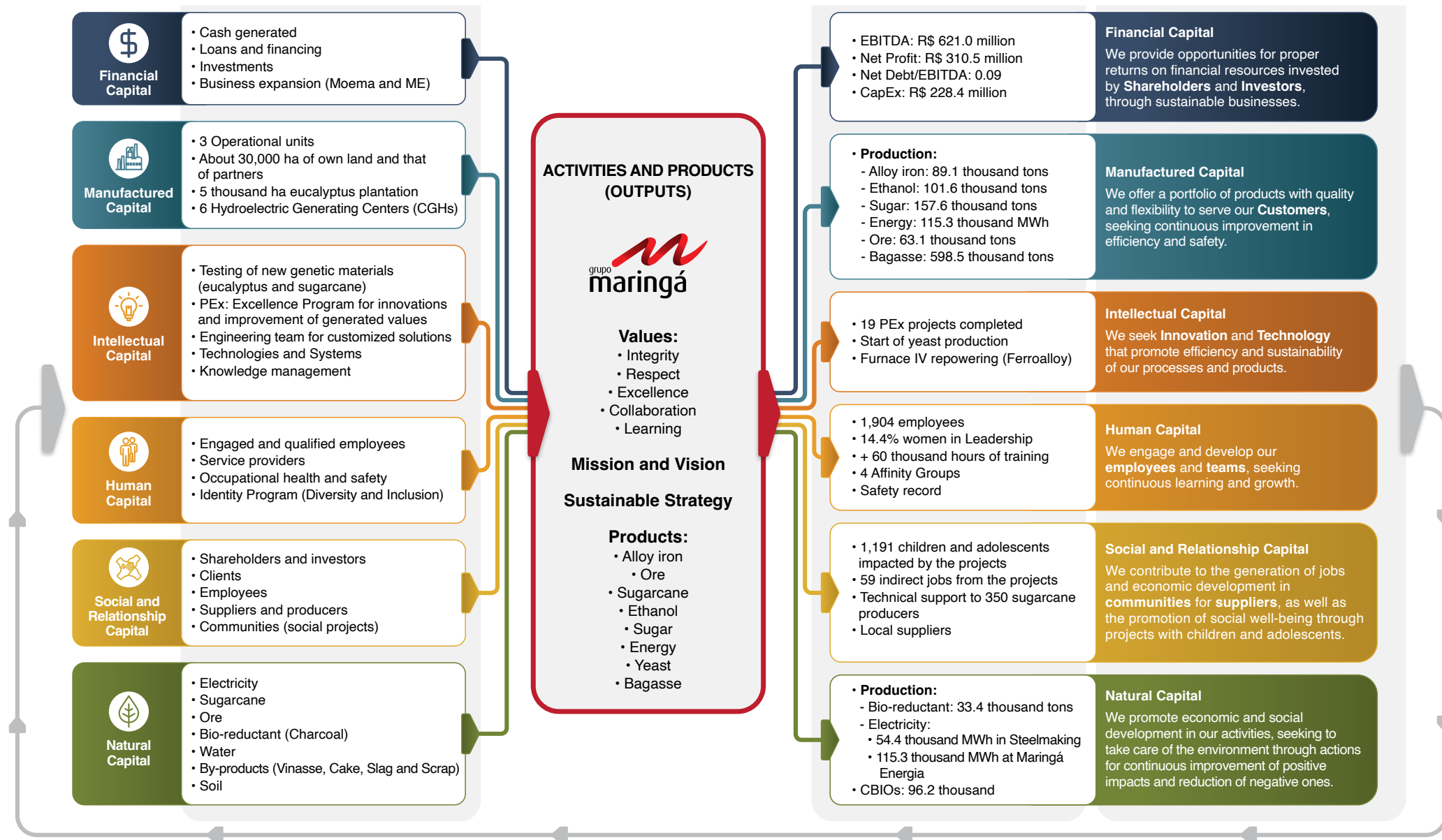
– In 2023, we voluntarily joined the PBGHGP, which aims to encourage a corporate culture for the preparation and publication of Greenhouse Gas (GHG) emissions inventories. The initiative stems from the Sustainable Strategy Program.

### Business Pact for Integrity and Against Corruption

– Voluntary commitment undertaken by us since 2022, whose objective is to unite private and public companies to promote a more ethical market.

# Business model

We adopt management methods, policies, resources and practices – constantly improved – to meet the interests of our stakeholders and reduce possible negative impacts of our operations, benefiting society in different dimensions: economically, socially and environmentally.





# Sustainable strategy

GRI 2-13

- *Strategic management*
- *Sustainable Strategy Program*

View from Usina  
Jacarezinho



# Strategic management

Our strategic management consists of connecting planning with the execution of our business activities, with a short- and long-term vision, in order to ensure our sustainable development. It is a set of actions to adequately manage resources, assess risks and ensure better decisions for the constant evolution of the business. It is imperative that decisions permeate the different areas and employees of our companies.

Considering the dynamic characteristics of the markets in which we operate and their variables, we seek to ensure strategic agility, remaining able to face challenges and seize opportunities. To this end, we held workshops to update our guidelines, evaluating the Mission, Vision and Values, strategic maps and projections. This exercise, which involves key people, coordinators, managers and directors, results in a diagnosis, definition of objectives, projects, actions, indicators and targets.

Results are monitored monthly, in each business unit, through Strategy Meetings. These meetings aim to assess the evolution of our strategy, from the macro and micro perspectives, recognizing efforts, highlighting

critical points and exploring opportunities through the interaction of key people in our business. In order to share expectations and challenges, we promote the Quarterly Meeting, conducted by the directors in each business, dedicated to discussing our performance in the economic, social and environmental dimensions.

Furthermore, the directors meet weekly, evaluating and directing the different themes of each unit, such as the market, production, efficiency, expenses, investments, risks, people and sustainability. Monthly, they present the performance and other relevant points to the Board of Directors, which evaluates the results, guides actions and defines long-term priorities.

More than monitoring and controlling plans, strategy execution activities seek to stimulate reflections for improvements and route corrections, strengthening our organizational learning competence. We understand that more important than the strategy designed is the strategy implemented. Therefore, it is essential that each employee understands their role, as it is for us to manage the various efforts to make our strategy effective.



Eliana Vicente  
(Automotive Welder)



# Sustainable Strategy Program

GRI 3-3

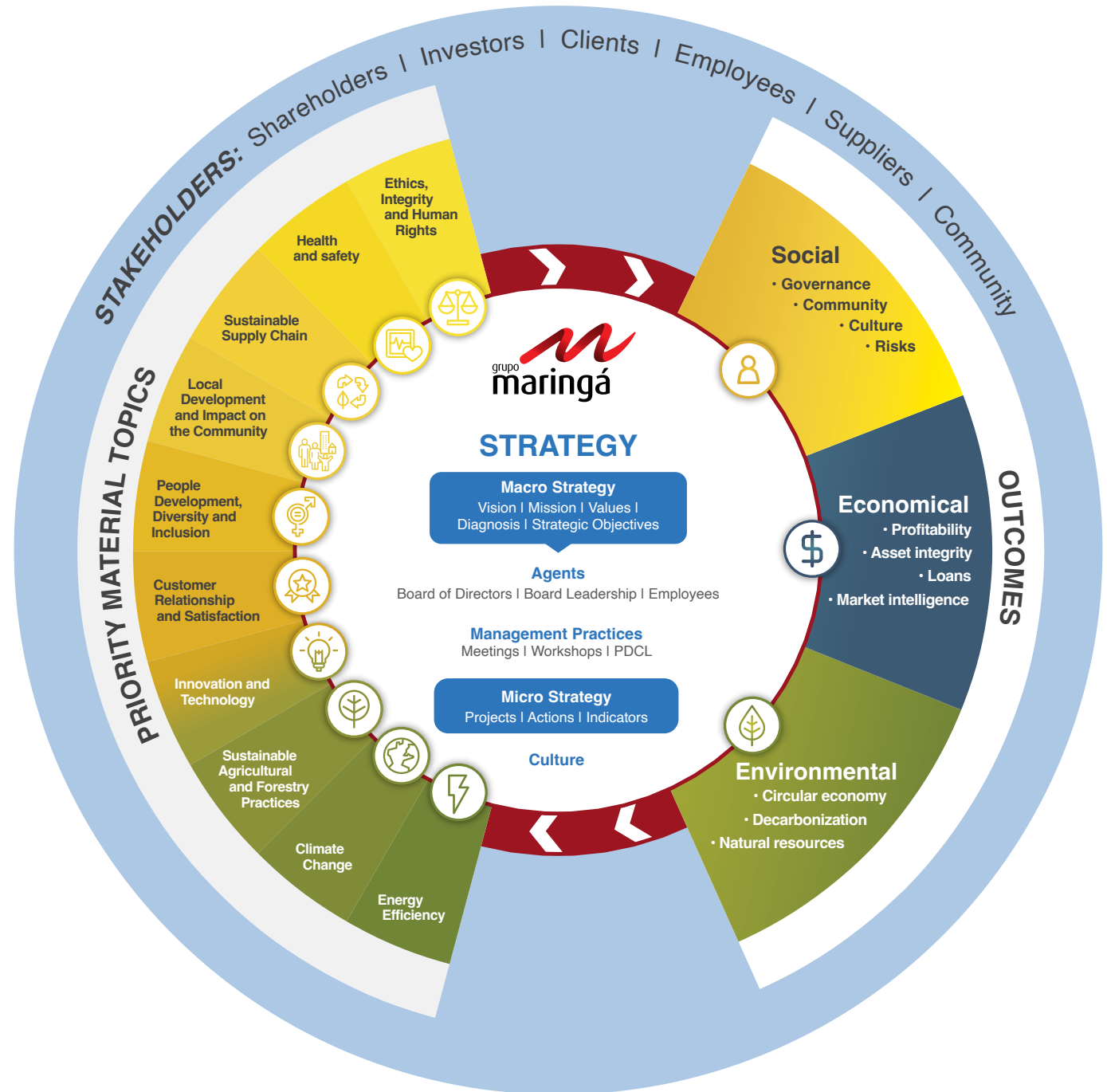
Much has been discussed about sustainable development, ESG and the role of companies in these matters. Since 2017, we have annually updated our commitment to the social, economic and environmental contributions of the businesses, not only with the definition of strategic guidelines, but also with their breakdown in goals, indicators, projects, actions and continuous development of people, organizational culture and of governance. In December 2021, we started the Sustainable Strategy Program (PES) to promote sustainability by reinforcing our management model, aligning macro and micro strategies, and fostering a cross-cutting vision of our priority material topics, practices, and agents of our strategy. Thus, we seek to improve the reflection, planning and execution of the strategy, contributing to the continuous improvement of our social, economic and environmental impacts, meeting the priority expectations of our stakeholders and advancing towards the perpetuity of the business.

In 2022, we held four workshops to update our macro strategy, with a five-year perspective, involving over 50 leaders from the steel, sugar-energy and corporate areas. In this work, we updated our Mission, Vision and Values statements, the cultural and strategic diagnosis, as well as the strategic maps. Among the main defined changes, emphasis should be placed on social, economic and environmental impacts and considering priority material topics.

Next, we began updating our micro strategy, made up of projects, actions, targets, indicators and the development of our culture. First, we established Working Groups (WGs) that defined the 2023 strategic efforts of five priority material topics. Furthermore, aiming to improve the execution of the strategy, we developed proposals for improvement in the Excellence Program (PEX), which consolidates the efforts of managing strategic projects and training leaders, as well as in the processes of managing goals and indicators of the businesses, areas and leaders, and on the agendas of management meetings.

In 2023, in addition to defining the strategy for the other priority material topics, the Sustainable Strategy Program will focus on strongly implementing such plan, ensuring not only compliance with the plans, but strategy effectiveness. To this end, we will make balanced progress on strategic issues, increasing our competitiveness, optimizing our practices, strengthening governance, developing people and the organizational culture, in order to ensure our sustainable strategy, based on social, economic and environmental results.

The Sustainable Strategy Program seeks to improve the reflection, planning and execution of the strategy, contributing to the continuous improvement of our social, economic and environmental impacts, meeting the priority expectations of our stakeholders and advancing towards the business continuity.



# Governance

GRI 2-9 | 2-10 | 2-11 | 2-12

- *Corporate governance*
- *Ethics and integrity*
- *Risk management*
- *Investments, innovation and technology*



## Corporate governance

Even as a privately held organization, since our incorporation as a Group in 2012, we have chosen to adopt some of the best corporate governance practices recommended by national and international organizations. We believe that, in addition to increasing the transparency and credibility of our actions and rendering of accounts, solid governance contributes to qualifying decisions, minimizing the possibility of fraud and increasing efficiency and assertiveness in defining and executing strategies, as well as in identifying and mitigating risks.

Our model includes maintaining a professionalized Board of Directors, with at least 60% of independent members with strategic functions. We seek a composition that favors robustness and diversity of experiences, in view of the potential contribution to our business. Members meet monthly, and extraordinarily whenever necessary.

Wellington de Oliveira (Systems Analyst) and Anderson de Azevedo (Database Administrator)

## Composition of the Board of Directors

- **Nelson Magalhães Graça** – Chairman
- **Guilherme Dale** – Independent Director
- **Henrique Luz** – Independent Director
- **Marconi Vianna** – Independent Director

To advise the Board of Directors, we established three committees: People, Audit, Risks and Compliance, and Mining. The first contributes with guidelines to plan and improve the management of our employees, and the second supports internal audits and the contracting of specialized companies that act in the improvement of our risk control and monitoring. The Mining Committee, in turn, supports the Group's mining activities.

The chairman of the Board of Directors also sits on the board of directors of the holding company São Eutiquiano S.A., where, along with three other independent directors, he contributes to decision-making and direction for the business.

Our Boards are responsible for updating and implementing the corporate strategy, putting it into practice to achieve the goals set, in addition to monitoring performance and identifying business opportunities.

Directors are supported by Corporate Management (Controlling, Strategy and Management Office, Finance, Procurement, HR, Communication and IT) and Business Unit Management (Steel and Sugar-Energy). The former are responsible for adopting measures or proposing solutions to increase efficiency and continuous improvement in the management model of the controlled companies. The others ensure operational excellence and the development of their teams of professionals.

The Board of Directors and the managers appoint key people to compose the Working Groups that manage strategic themes for the business. In 2022, the following WGs were in operation: Compliance, Diversity and Inclusion, IT, Leadership Development, Social Responsibility, Climate Change and Goals.



Furnace run area

# Ethics and integrity

GRI 2-16 | 2-23 | 2-26 | 3-3 - Ethics, Integrity and Human Rights

We ensure conduct and practices in line with our values and guidelines are adopted, complying with all rules and laws applicable to the business. We have a Code of Conduct that expresses the importance of transparency, honesty and integrity for us, and provides guidance on the behaviors and attitudes we expect in relation to various aspects, including relations with suppliers, customers, co-workers, the press, etc. Furthermore, to having an acknowledgment term signed by all employees, our Code of Conduct is also attached to contracts signed with commercial partners, who must comply with it.

Recently, the publication was revised, meeting demands for improvement identified in the Materiality work, as well as by the Compliance WG. The new version should be launched in 2023, with the incorporation of more aspects mainly related to human rights – such as those linked to respect for diversity – and different types of harassment.

In 2022, we undertook efforts to develop the topic with our leadership and, in 2023, we will start a recurrent course on Ethics and Integrity, encouraging continuous development in relation to these values. We also maintained as practices delivery of the Code of Conduct

to all professionals who joined us, as well as the transmission of guidance on its content as part of the integration activities.

Additionally, we maintain a robust set of manuals, standards and policies referring to varied topics, relevant and applicable corporately and in all our business units. Among these documents are the Golden Rules and Consequences Policies, related to health and safety at work, the Integrated Quality, Health, Workplace Safety and Environment Policies, the Emergency Response Plans, the Information Security Policy and the Data Privacy Policy.

Another change carried out in 2022 was the outsourcing of the Ombudsman Channel, following best market practices and providing more confidence to the process. This is a channel to receive reports on violations of the Code of Conduct and/or other internal policies or legislation.

The new resource is managed by an external specialized company, which provides assistance by trained and



Denis Campos  
(Strategy and  
Innovation Analyst)

experienced professionals, ensuring the applicant's anonymity, if he so wishes. With the structure, the reports are sent safely and quickly for treatment by our authorities, without conflicts of interest. Internal and external audiences can access the Ombudsman through the website or via telephone, 24 hours a day, seven days a week. Since its launch in July, as expected, we have received a significant increase in the number of reports, totaling 26, more than the 12 in the previous semester. The completion and answers to the reports were provided for 90% of the cases in an average time of 45 working days.



# Risk management

GRI 2-16 | 2-23 | 2-26

Year after year, we progress in making risk management more robust and enhancing our effectiveness in risk identification and mitigation. Thus, we gradually strengthened our lines of defense, clarifying the roles and responsibilities of each area and key people.

The internal audit work conducted in 2021 and 2022 is evidence. Following standards applicable to publicly traded companies, and with the support of an independent consultancy, we assess the compliance of our controls to identify potential problems and fix them. We prioritize the analysis of the processes considered most critical to the business, such as purchases, activities of the personnel department, receipt of goods, tax, labor and legal compliance. In 2022, the internal audit work pointed out 112 new risks which, added to the previous ones, totaled 182. Of these, 92 were mitigated and the others include a mitigation action plan.

Furthermore, to the internal audit indicating we are on the right path, it also proved to be relevant in the internal maturation of the risk management culture. This result is reflected in the intense level of engagement of leaders and managers and in the perception, shared at different levels and areas, that the improvement of our control

practices represents an opportunity insofar as it provides optimization of processes and qualification of people.

In the annual updates of our strategic planning, we assess weaknesses and threats to our businesses, deliberating on actions to remedy and mitigate them, respectively. The execution of the measures and their results are supervised by the Audit, Risks and Compliance Committee, which supports the Board of Directors. Furthermore, based on the diagnosis we produced in 2019 on the main risks to the business, we identified around 200 opportunities for improvement in relation to processes, which have been developed and monitored since then.

Although we maintain this approach in relation to the risks inherent to the environmental, social, economic and operational dimensions, we understand that there is room for us to evolve towards an even more synergistic risk management between the different areas and business units. The idea is to provide greater detail and leveling to treat each of the threats already identified and that we can now consider. Thus, the challenge launched by the Board of Directors for the coming periods is the construction of a new, unified structure for risk management, based on organizations that stand out in this area. The purpose is to have a comprehensive model



Among the 2023 priorities, we have the construct a new corporate structure for risk management.

that considers all business units, gradual evolution of the maturity of our processes and people to manage risks, as well as synergy with other corporate efforts. This diagnosis will guide new control instruments, mitigation plans and responsibilities to respond to threats.

In view of the General Data Protection Law (LGPD), we keep evolving to ensure it is complied with. We have a process that involves all sectors with access to digital information – personal or business-sensitive data – and we focus on raising awareness and disseminating information related to the topic to all employees. We also consolidated and updated policies, such as Information Security and Privacy, and our set of rules, comprising more than 15 rules related to information security. During the period, there were no incidents of breaches of privacy or loss of customer and employee data.



Yeast packaging

# Investments, innovation and technology

## GRI 3-3 - Innovation and Technology

As a fundamental element of our strategy, the Investment Plan is continuously evaluated, even though it is designed considering a five-year period. The reviews seek to ensure that resources are allocated on time and in order to prioritize projects with the greatest impact on our business units, in line with our sustainable strategy, so as to optimize social, economic and environmental impacts. In 2022, we invested R\$228.36 million in assets, a 57% increase compared to the previous year.

In order to protect ourselves from exchange rate fluctuations, prices and production costs, we have invested in recent years in projects that result in the diversification of revenue sources and the introduction or expansion of assets – enabling greater independence in relation to strategic inputs. At the same time, we improve the environmental impacts of our business. Furthermore, we allocate resources to the constant increase in sugarcane productivity, which involves agricultural practices, but also machinery and precision technologies. At Maringá Ferro-Liga, we aim for a 20% increase in production by 2027 – a goal for which the gradual repowering of the furnaces and the sintering plant will be fundamental.

The actions developed by the IT team, in collaboration with the business areas, include innovations and customizations to improve efficiency and mitigate process risks. In 2022, we made progress in adopting Business Intelligence (BI) tools in areas such as Human Resources and raw material control. An important evolution was also the increase in the use of artificial intelligence at Maringá Energia, with the modeling of cogeneration on an AI platform to maximize industrial processes in real time.

Regarding information security, in 2022 we completed actions to further shield our networks and systems by migrating to the SD-WAN technology, segregating networks and investments in edge security, that is, in firewalls that protect our internal environments from external ones, thus improving digital security and access performance and providing significant cost reduction. To validate the effectiveness of our technologies, we periodically carry out vulnerability analysis, penetration tests and social engineering, supported by specialized companies.

Thus, the priority material topic Innovation and Technology will continue to be heavily worked on in 2023, and we have already planned more than R\$ 200 million in investments for the year.





# Environment

- *Forests*
- *Bio-reductant*
- *Agricultural practices*
- *Fires*
- *Renovabio*
- *Electricity*
- *Emissions*
- *Solid waste*
- *Biodiversity*

Our respect for the environment is manifested in the constant search for more efficient processes – which is reflected in less consumption of natural resources and less disposal of waste and effluents –, in the selection and use of technologies and inputs whose impacts on the earth, the water and air are kept to a minimum, and for the compliance with all legal obligations applicable to the business.

The actions we take to benefit the quality of life on the planet are in line with our values and strategy, which contributes to tackling climate change. These include carrying out internal employee awareness campaigns, such as those promoted on World Water Day, Tree Day, River Day, among other dates, to the decision to expand our own generation of energy and bio-reductant from renewable sources, with the consequent reduction in Greenhouse Gas (GHG) emissions.

In the region of Itapeva (SP), where we operate Maringá Ferro-Liga, we have almost 5 thousand hectares dedicated to preservation divided into APP (Permanent Preservation Area) and RL (Legal Reserve). In Paraná, in Jacarezinho and surroundings, the area reaches 2 thousand hectares, between legal reserve and Permanent Preservation Area.

Eucalyptus Forests



# Forests

## GRI 3-3 - Sustainable Agricultural and Forestry Practices

We maintain 5 thousand hectares of land dedicated to sustainable forestry, which are home to more than 9 million eucalyptus trees, that make our steelmaking activity greener and more profitable. The trees are used in the production of bio-reductant necessary for the production of ferroalloys. During the year, we harvested 213,000 m<sup>3</sup> of eucalyptus, which resulted in 33,000 tons of charcoal. That is environmentally advantageous due to the lower amount of pollutant emissions compared to those caused by mineral coal or metallurgical coke.

Furthermore to this benefit, eucalyptus forests, during the growth period and until cutting (the average cycle is seven years between planting and harvest), improve air quality, reduce noise pollution, increase biodiversity, provide thermal comfort, prevent erosion and reduce pressure on native forests. It is also on our radar to establish partnerships with beekeepers to use our areas and take advantage of our forests for the production of honey, which, in addition to economic benefits, positively impacts the environment due to the importance of bees for ecosystems.

The Maringá Ferro-Liga forestry area works from the planning of the eucalyptus plantation, selecting genetic materials and management practices to be used, all the way to the delivery of the product for the production of ferroalloys. In order to achieve the objective of increasing our wood availability without increasing the productive area, we adopted a series of measures, such as contracting solutions for precision silviculture, such as georeferencing, soil nutritional analysis, survey of rainfall and temperature throughout the time periods. We also entered into a partnership with suppliers of seedlings of varieties adapted to the climatic conditions of the region and with characteristics aimed at obtaining the most suitable wood for the production of charcoal bio-reductant. Currently, the average density recorded in our eucalyptus forests is 490 kg/m<sup>3</sup>, and the forecast is to exceed 550 kg/m<sup>3</sup> with the changes that are underway. In some cases, the new genetic materials may represent a reduction in the interval to cut trees, from seven to six years.

In areas dedicated to forestry, we adopt practices for good soil conservation, such as attention to the slope of planting areas and maintenance of post-cut tree residues (leaves and bark) on the ground. The application of pesticides and insecticides is scheduled and rational, avoiding excesses and waste. The constant monitoring of tree growth also allows us to adopt the necessary measures, such as fertilizer corrections, to achieve the results planned.

**A notable aspect of our forestry operations is the high degree of mechanization in wood harvesting, which covers at least 70% of the process. This index may vary according to the group of farms harvesting each year. Making use of the most advanced equipment available on the market, this mechanization not only speeds up the process and reduces costs, but also provides greater comfort and safety for operators. In terrain with a slope that prevents our mechanization, we adopt a semi-mechanized approach to cutting.**



Bio-reductant

# Bio-reductant

The bio-reductant originating from our eucalyptus forests – 33 thousand tons in 2022 – meets approximately 50% of our need for bio-reductant in the production of ferroalloys. The remaining demand is supplied by external suppliers.

The use of charcoal stands out in the sector and is increasingly recognized and requested by customers and markets committed to the agenda of sustainable development, due to its environmental benefits, especially related to emissions. For Maringá Ferro-Liga, the advantages are also economic, since the production and use of its own bio-reductant represent lower costs in the manufacture of its products. For these reasons, we intend to expand our bio-reductant production capacity, and we estimate to reach 42 thousand tons/year in 2024 with investments in two new production units, as well as the expansion and modernization of existing ones.

With the new investments, we aim to leverage the advantages provided by the bio-reductant, but also to increase the use of eucalyptus.

In 2022, as part of the process of gaining efficiency and increasing the production of bio-reductant, we completed the installation of new furnaces at UPR Maringá. The 96 round furnaces to carbonize wood were replaced by 31 new rectangular ones, with capacity to produce around 1,100 tons of bio-reductant per month. Furthermore, to being more efficient, they are equipped with gas burners, which reduce GHG emissions into the atmosphere. The new equipment increases the comfort of those who work close to them and the surrounding communities, eliminating the odor from carbonization. For 2023 we will do the same replacement in two more of our UPRs.



# Agricultural practices

## GRI 3-3 - Sustainable Agricultural and Forestry Practices

Adopting appropriate and ecologically correct agricultural practices contributes to increasing productivity, avoiding the occupation of new areas with planting, reducing the use of inorganic products and increasing the use of organic products in fertilization. It also ensures the preservation and sustainability of the production process.

In Jacarezinho, we work to identify and select the best agricultural technologies and techniques, which are subject to validation by our Agricultural Development team before being widely applied to our own plantations or suggested to Integrated Cane Producers. Thus, we intend to achieve greater productivity, profitability and longevity of sugarcane plantations.

Among the solutions we employ is the Interrotational Method Occurring Simultaneously (Meiosi), which consists of crop rotation, combining sugarcane with other species of economic and environmental interest, such as, in our case, soybeans. Furthermore, to bringing the financial return of a new crop, the practice provides agronomic gains, with improved fertility of the soil profile, and contributes to the reduction of some pests.

Although the main factor to adopt Meiosi with crop rotation is not financial, the resources obtained from the sale of soy contribute to the cost of setting up and maintaining

sugarcane fields. Also with a view to soil conservation, we respect their characteristics in our area of operation, where they can be sandy or clayey. If they are sandy, and therefore more susceptible to erosion, we promote later planting, in March or April, when there is less rainfall, and we try to keep the soil covered, protected with soybean or sunn hemp crops.

When we adopt the raw sugarcane harvest in our cultivation areas, that is, without burning, we obtain 10 to 15 tons of straw deposited on the ground. That protects against the action of rain, retains moisture, reduces temperature variation and, consequently, contributes to fertility and conservation. All of our planting is done with level furrows, and there is traffic control in the sugarcane fields, in order to avoid soil compaction, providing greater water infiltration and less surface runoff.

As for fertilization, we increased the use of organic fertilizers, optimizing the use of filter cake and vinasse, waste from the sugar-energy industry that contain important nutrients, such as phosphorus and potassium. Since 2021 we have adopted a composting and filter cake enrichment system to obtain a fertilizer that meets the specific nutritional needs of the areas where it will be applied. During the year, we used 76,000 tons of waste in our sugarcane fields, always seeking to use it in soils with lower phosphorus content. With regard

to vinasse, we expanded the areas where we use it by conventional spraying, which reached 6,200 hectares. In the next harvest, we will put into practice a project to expand the fertirrigated areas, applying the product locally. For this, the necessary equipment has already been acquired.

During the year, we also increased the use of poultry litter, purchased from poultry producers in our area of operation. It is a product that has given good results and contributes to reducing the use of chemical inputs. Regarding pest control, we are increasingly looking for biological alternatives, which have proven to be feasible due to the good quality of the solutions available in the market. We have already adopted these products to control leafhoppers, borers and nematodes.

Another way to minimize our impacts is the use of technologies that make precision agriculture possible. We increased the use of autopilot in the machines, which leads to less trampling in the cane field, greater operational efficiency, less emissions and lower fuel consumption. The constant increase in the use of telemetry has also resulted in a significant decrease in the number of liters of fuel used per ton of sugarcane. This technology allows the remote collection and sharing of data to monitor and diagnose crops and operations and also prevents unnecessary wear and tear on equipment.

# Fires

We stopped burning sugarcane fields years ago. We try to make producers aware of the need to do the same. Crop management has evolved and it has been found that, in addition to being unnecessary, the use of fire damages productivity and the sucrose content of sugarcane. It also prevents the use of straw as fertilizer, and soil conservation. Fires are still harmful due to carbon emissions in the atmosphere, and because they represent potential damage to society. For us, they can also impair performance in the industrial process and impact the Renovabio program by affecting the environmental energy efficiency score.

The process to disseminate preventive actions and how to behave in cases of fire is continuous, as it consists of promoting a

cultural change, whether among producers or among the population. We deliver messages to them via radio stations, posters on buses, billboards and visits to schools, in addition to having created a reporting channel via WhatsApp and website. In Jacarezinho, we have 78 people in the fire brigade and 11 firefighting trucks, on call 24 hours a day to monitor sugarcane fields, Permanent Preservation Areas and Legal Reserves. Additionally, in the field of firefighting, we created a Mutual Aid Plan, in partnership with a plant in the region of Ourinhos (SP), which also operates in the sugar-energy sector. In 2022, communication to the community was intensified. For 2023, we are considering adopting satellite images and monitoring cameras.

The fires in our areas are mostly caused by people who walk through the sugarcane fields and end up setting fire to the plantations, either criminally or accidentally.

# Renovabio

In 2022, in Jacarezinho, we underwent an audit that resulted in the recertification of the Renovabio program – National Biofuel Policy, which aims to expand the production of the material in Brazil and increase its participation in the transport energy matrix. The Federal Government’s initiative sets goals in this regard that are compatible with market growth and based on predictability and sustainability, with the ultimate goal of contributing to the reduction of GHG emissions.

We obtained recertification in the Renovabio Program, improving our Energy-Environmental Efficiency score from 53.30 to 55.79 (gCO<sub>2</sub>eq/MJ) for hydrous ethanol and from 53.60 to 56.14 (gCO<sub>2</sub>eq/MJ) for anhydrous, as well as increased eligibility volume from 92.24% to 94.39%. Such achievement is due to the expansion of the requirement

of the Environmental Registry in renewals, new contracts with integrated producers, reductions in the number of fires and in the use of fossil fuels and the use of sustainable alternatives in agricultural management. The indicator reflects our individual contribution to the mitigation of a specific amount of GHG regarding its fossil substitute (in terms of tons of CO<sub>2</sub> equivalent). For the calculation, criteria related to both agricultural practices and the industrial stage to obtain ethanol are considered. The score is multiplied by the volume of biofuel that meets the program’s eligibility criteria and indicates the amount of CBIOS we can trade. Credits are purchased by fossil fuel distributors to offset their polluting emissions and may also be purchased by others interested in these credits as an investment modality. From 2020 to 2022, we generated 238,000 CBIOS, which is equivalent to carbon capture by 1.6 million trees, and we sold more than 207,000 CBIOS, generating gross revenue of R\$15.6 million.



Sugarcane cultivation

# Electricity

GRI 3-3 - Energy Efficiency | GRI 302-4

In 2022, at Maringá Ferro-liga, we recorded energy consumption of 329.1 thousand MWh in operations, a decrease of 4% compared to the previous year. The reduction is mainly due to the scheduled renovation of one of the electric furnaces, seeking greater production efficiency, implementing new technologies in the operation and safety in the process. At Usina Jacarezinho, consumption was 36.55 thousand MWh, with an increase of 9%, due to the increase in installed power (yeast and pumps), in addition to the extension of the harvest period. All input consumed internally by the Group is clean, coming from water, solar, wind or biomass sources.

At Maringá Ferro-Liga, since 2015 we have maintained a partnership with the Brazilian Association of Large Industrial Energy Consumers and Free Consumers (Abrace) in the pursuit of greater energy efficiency. Within the scope of our project dedicated to the subject, in 2022 we continued the process of replacing the lighting in our operations, replacing steam lamps for others with LED technology. We also exchanged air compressors and inverters, which are large energy consumers, for more efficient appliances. Investments in the project have already exceeded R\$ 1.3 million.

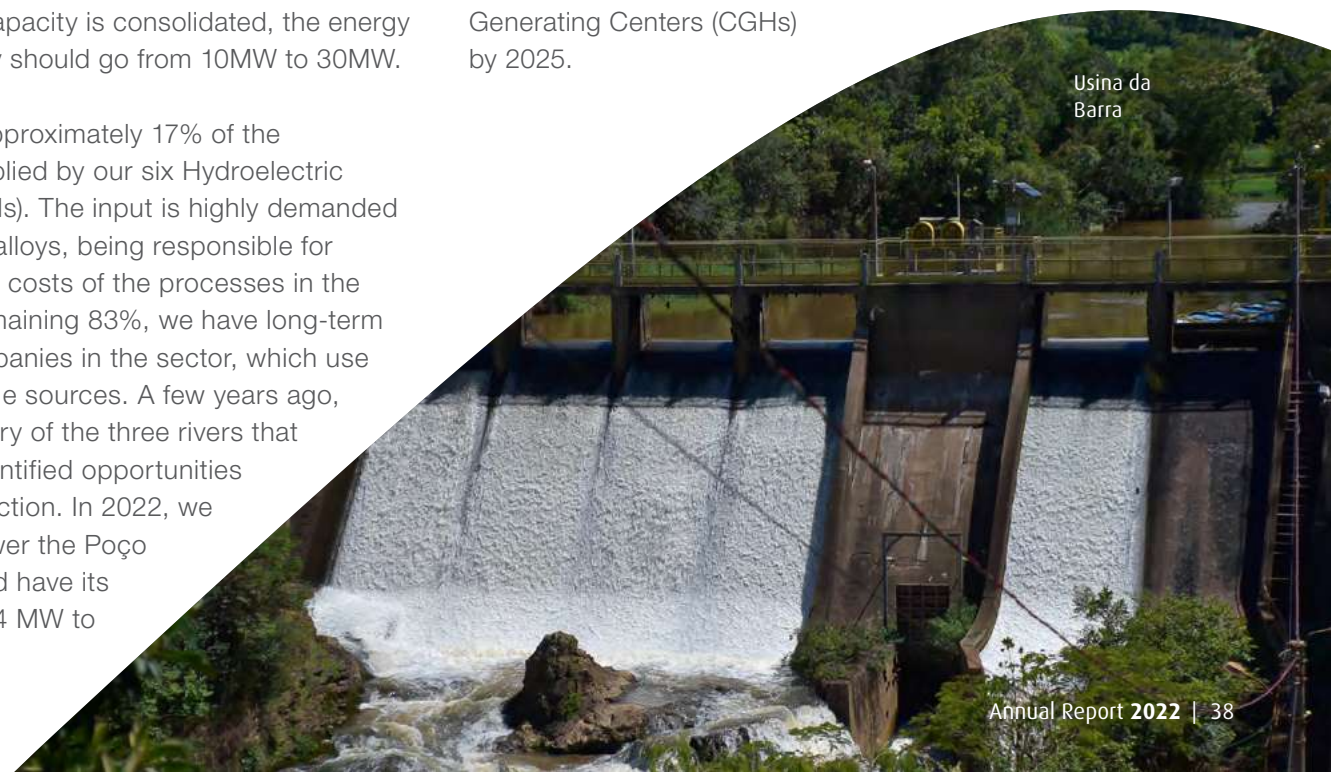
Another highlight is our increasing investment to expand self-generation, in order to supply the production units and sell the surplus. Currently, 100% of the energy

consumed in the business units in Jacarezinho comes from Maringá Energia, which uses sugarcane bagasse, a residue from the plant's production. Its current capacity of 25MW (of which 10 MW is destined for the free market and the remainder absorbed by the plant) will be doubled with the execution of the second stage of the planned investment. It is approximately R\$ 70 million, combining own resources and the National Bank for Economic and Social Development (BNDES). In 2022, Maringá Energia invested in the renovation of two boilers and acquired another 25 MW turbo generator, a condensation turbine and a powerhouse. When the expansion of capacity is consolidated, the energy commercialized externally should go from 10MW to 30MW.

At Maringá-Ferro Liga, approximately 17% of the electricity needs are supplied by our six Hydroelectric Generating Centers (CGHs). The input is highly demanded in the production of ferroalloys, being responsible for approximately 18% of the costs of the processes in the factory. To supply the remaining 83%, we have long-term contracts with large companies in the sector, which use generation from renewable sources. A few years ago, we carried out an inventory of the three rivers that supply our CGHs and identified opportunities to increase energy production. In 2022, we started activities to repower the Poço Preto 2 unit, which should have its capacity increased from 4 MW to

8 MW. The work will be completed by mid-2024, when own generation at Maringá Ferro-Liga should reach 27%.

Our goal is to achieve energy autonomy, keeping generation 100% clean. Furthermore, to the environmental benefits, this independence contributes to cost reduction and can be a source of income. Therefore, in addition to expansions in the units, we are studying investments in the installation of our own parks or in partnerships for wind and photovoltaic generation. Our forecast is to disburse R\$ 70 million in the renovation of one of our Hydroelectric Generating Centers (CGHs) by 2025.



Usina da Barra

## Sugar-energy

### Consumption of fuels from non-renewable sources (GJ) GRI 302-1

	2020	2021	2022
Mobile combustion diesel	278,619	272,921	310,321

Note – The 2020 and 2021 values have been updated based on Mobile Combustion Diesel data taken from the GHG Protocol (Scope 1) tool. The review resulted from the GHG Emissions Management project; work carried out with the support of a specialized consultancy.

### Consumption of fuels from renewable sources (GJ) GRI 302-1

	2020	2021	2022
Sugarcane bagasse	3,649,792	4,978,824	5,338,737

### Energy consumed (purchased) (GJ) GRI 302-1

	2020	2021	2022
Electricity	8,174	8,334	3,759

### Energy sold (GJ) GRI 302-1

	2020	2021	2022
Electricity	-	1,069,993	1,516,745

### Total energy consumed (GJ) GRI 302-1

	2020	2021	2022
Total	3,936,585	4,190,086	4,136,072

### Energy consumption outside the organization (GJ) GRI 302-2

	2020	2021	2022
	50,352	46,300	48,704

Note – The data in the table refer to Downstream and Upstream fuel consumption. 2021 figures have been updated. The review resulted from the GHG Emissions Management project; work carried out with the support of a specialized consultancy.

### Energy intensity rate for the organization GRI 302-3

	2020	2021	2022
Energy intensity (within the organization)	1.56	1.73	1.62

Note – The types of energy included in the energy intensity rate within the organization are electricity and fuels. The amount of ground sugarcane was used as a denominator. 2020 and 2021 figures have been updated.

Filter cake composting





## Steel Industry

### Consumption of fuels from non-renewable sources (GJ) GRI 302-1

	2020	2021	2022
Mobile combustion diesel	15,077	14,879	14,582

Note – The data in the table are from the consumption of Mobile Combustion Diesel taken from the GHG Protocol tool (Scope 1).

### Consumption of fuels from renewable sources (GJ) GRI 302-1

	2020	2021	2022
Water	184,899	180,429	196,013

### Energy consumed (purchased) (GJ) GRI 302-1

	2020	2021	2022
Electricity	1,422,112	1,223,024	1,470,289

### Energy sold (GJ) GRI 302-1

	2020	2021	2022
Electricity	444,866	165,355	481,543

### Total energy consumed (GJ) GRI 302-1

	2020	2021	2022
Total	1,177,222	1,252,977	1,201,373

### Energy consumption outside the organization (GJ) GRI 302-2

	2020	2021	2022
	-	127,205	179,304

Note – The data in the table refer to Downstream and Upstream fuel consumption. 2021 figures have been updated. The review resulted from the GHG Emissions Management project; work carried out with the support of a specialized consultancy.

### Energy intensity rate for the organization GRI 302-3

	2020	2021	2022
Energy intensity (within the organization)	12.4	12.7	13.5

Note – The types of energy included in the energy intensity rate within the organization are electricity and fuels. And as a denominator, the net amount of alloy produced was used. 2020 and 2021 figures have been updated.

### Reduction of energy consumption (GJ) GRI 302-4

Source of reduction	2021	2022
Lighting circuits	827	233
Engine circuits	366	412
Total	1,193	645



The 2022 inventory was assured by an independent accreditation body.



Eucalyptus seedlings

# Emissions

GRI 3-3 - Climate Changes | 305-1 | 305-2 | 305-3 | 305-4 | 305-5

Care for the environment is part of our strategic map, deployed internally through our Vision and Mission and Integrated Management System. Usina Jacarezinho is committed to controlling, monitoring and reducing its Greenhouse Gas (GHG) emissions in the production process, adopting the best agricultural practices, optimizing the use of industrial waste (filter cake and vinasse); decrease the application of chemical fertilizers; optimization of vehicle and machine operations, which reduces fossil fuel consumption; elimination of sugarcane straw burning for harvesting; availability of fire fighting vehicles; periodic training of the fire brigade; environmental inspections by the environmental area and territorial inspection; and implementation of an electric energy cogeneration system through a thermoelectric plant using biomass (sugarcane bagasse).

The areas are monitored through environmental inspections, which include checking the vegetation conditions in the legal reserves, permanent preservation regions, riverbanks and sugarcane plantations. There is also a motorized territorial inspection, which inspects and guides people who travel on the surrounding rural

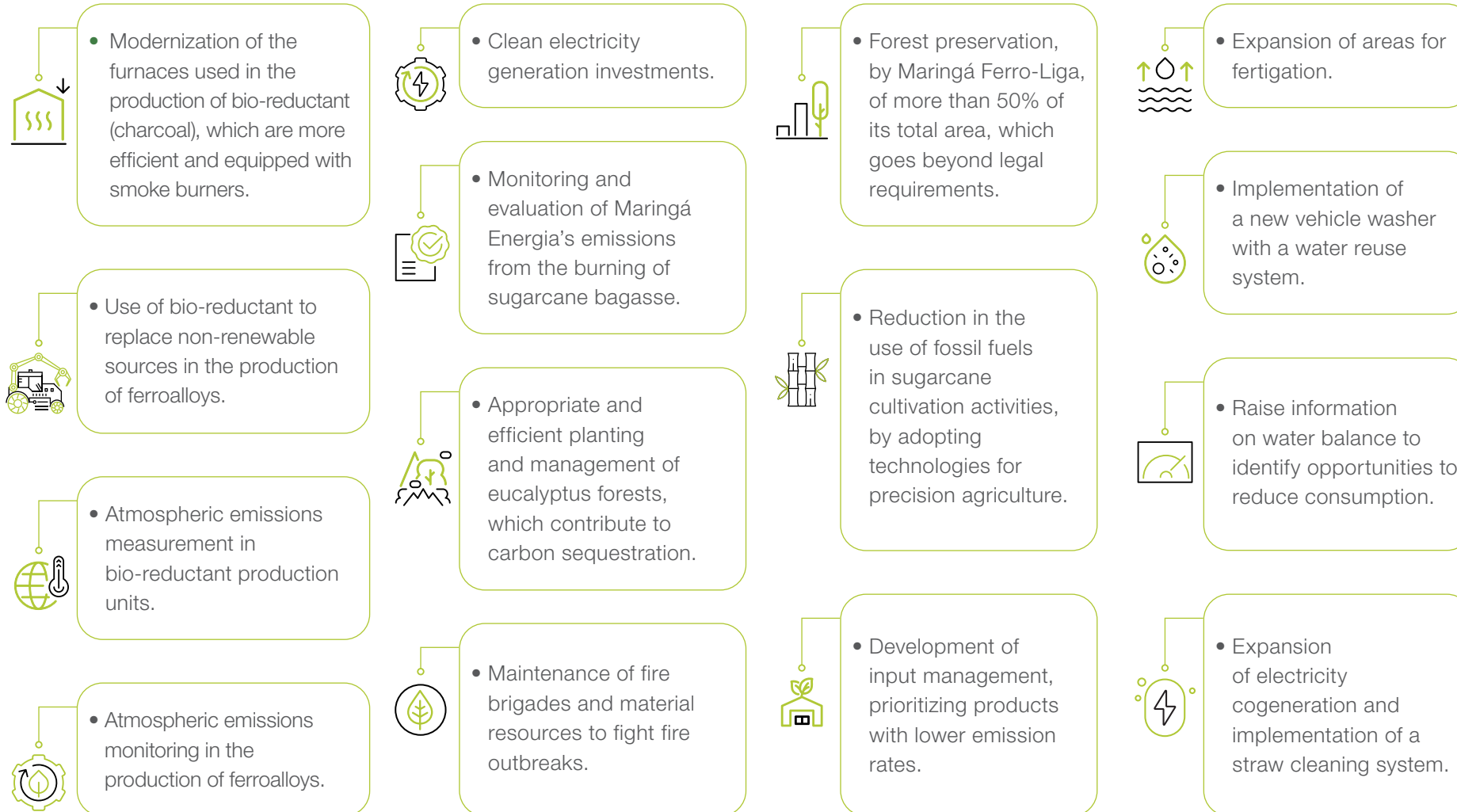
municipal roads, in addition to firefighting trucks positioned in strategic locations.

We maintain channels to handle reports and suggestions on our website and via WhatsApp. We communicate and account to society regarding the arsons that occurred through radio stations spots and billboards in the region. The licenses and grants necessary for our operations are monitored via a computerized system (fluig), which sends an alert e-mail about the expiry date so that renewal can be carried out in a timely manner. Our atmospheric emissions (boiler) are monitored annually in accordance with state legislation (Sema 16/2014 and Decree 9695/2018).

For the second consecutive year, we prepared our Greenhouse Gas Emissions Inventory, following the guidelines of the Brazilian GHG Protocol Program. We are in line with the commitment to reduce them in our processes and, thus, contribute to curbing the advance of climate change – topic priority for us. The 2022 inventory was assured by an independent verification body. Changes in temperatures and rainfall patterns have direct and negative consequences on the performance and longevity of our businesses and on the lives of communities.



Among the measures we have already adopted to monitor, reduce and/or offset our emissions are:



**In Steel Industry and Sugar-energy, we are structuring a technical study to better understand our scenario and propose a feasible Emissions Mitigation Plan. This plan is part of the Greenhouse Gas Emissions Management (GHG) project, which aims to build a more complete inventory of emissions and, based on it, prepare short, medium and long-term actions. For this work, we rely on the support of a specialized consultancy.**

## Sugar-energy

Scope 1 <small>GRI 305-1</small>	2020	2021	2022
<b>Direct greenhouse gas emissions (t CO<sub>2</sub> equivalent)</b>			
Mobile combustion	18,528	18,234	20,911
Stationary combustion	7,295	9,729	10,252
Industrial processes	66,770	-	-
Solid waste and liquid effluents	18	51	13,147
Fugitives	198	757	790
Agricultural activities	7,969	14,379	10,519
<b>Total Scope 1 emissions</b>	<b>100,777</b>	<b>43,151</b>	<b>55,620</b>
<b>Biogenic emissions (t CO<sub>2</sub> equivalent)</b>	<b>367,821</b>	<b>848,980</b>	<b>670,183</b>

Note - Data from the 2021 emissions inventory for Sugar-energy have been updated. The revision resulted from the GHG Emissions Management project, work carried out with the support of a specialized consultancy, for a complete and more cohesive inventory.

Scope 2 <small>GRI 305-2</small>	2020	2021	2022
<b>Indirect emissions from energy acquisition (t CO<sub>2</sub> equivalent)</b>			
Electricity	140	239	46

Note 1 - As of 2021, scope 2 of sugarcane energy includes 50% of the electricity purchased from the corporate headquarters of Maringá Group, located in the city of São Paulo.

Note 2 - Three-year emissions are based on location.

Scope 3 <small>GRI 305-3</small>	2020	2021	2022
<b>Other indirect emissions (t CO<sub>2</sub> equivalent)</b>	-	3,124	3,309
<b>Other indirect biogenic emissions (t CO<sub>2</sub> equivalent)</b>	-	382	349

Intensity of greenhouse gas emissions <small>GRI 305-4</small>	2020	2021	2022
<b>Total GHG emissions (tCO<sub>2</sub> equivalent)</b>	100,917	43,390	55,665
<b>Intensity of GHG emissions (tCO<sub>2eq</sub>/t<sub>cane grinding</sub>)</b>	0.040	0.018	0.022

Note 1 - There is no data available for 2020.

Note 2 - For the calculation of intensity, non-biogenic emissions from scope 1 and 2 were considered. The amount of ground sugarcane was used as a denominator.

## Mining

Scope 1	2020	2021	2022
<b>Direct GHG emissions (t CO<sub>2</sub> equivalent)</b>			
Mobile combustion	-	-	781
Stationary combustion	-	-	151
Solid waste and liquid effluents	-	-	3
Fugitives	-	-	97
<b>Total gross CO<sub>2</sub> emissions</b>	<b>-</b>	<b>-</b>	<b>250</b>
<b>Biogenic emissions (t CO<sub>2</sub> equivalent)</b>	<b>-</b>	<b>-</b>	<b>95</b>

Note - There is no data available for 2021, which was the first year of operation.

Scope 2	2020	2021	2022
<b>Indirect emissions from energy acquisition (t CO<sub>2</sub> equivalent)</b>			
Electricity	-	-	2

Note - Location based approach.

Scope 3	2020	2021	2022
<b>Other indirect emissions (t CO<sub>2</sub> equivalent)</b>	-	-	2,013
<b>Other indirect biogenic emissions (t CO<sub>2</sub> equivalent)</b>	-	-	205

GHG emissions intensity <small>GRI 305-4</small>	2020	2021	2022
<b>Total GHG emissions (tCO<sub>2</sub> equivalent)</b>	-	-	252
<b>Intensity of GHG emissions (tCO<sub>2eq</sub>/t<sub>manganese ore</sub>)</b>	-	-	0.004

Note - The quantity in tons of manganese ore was used as denominator.

## Steel Industry

Scope 1 <small>GRI 305-1</small>	2020	2021	2022
<b>Direct greenhouse gas emissions (t CO<sub>2</sub> equivalent)</b>			
Mobile combustion	871	1,024	1,155
Stationary combustion	87,515	99	103
Industrial Processes	-	89,817	67,964
Solid waste and liquid effluents	-	25	24
Fugitives	-	176	146
Agricultural activities	-	232	157
<b>Total Scope 1 emissions</b>	<b>88,386</b>	<b>91,373</b>	<b>69,550</b>
<b>Biogenic emissions (t CO<sub>2</sub> equivalent)</b>			
Eucalyptus Reforestation	-	222,110	222,197
Native forest	-	6,794	6,794
<b>Biogenic removals (t CO<sub>2</sub> equivalent)</b>	<b>-</b>	<b>228,904</b>	<b>228,991</b>

Note 1- Data from the emissions 2021 inventory for steelmaking have been updated. The revision resulted from the GHG Emissions Management project, work carried out with the support of a specialized consultancy, for a complete and more cohesive inventory.

Note 2 - As of 2021, most of the "Stationary Combustion" data will be considered in "Industrial Processes".

Note 3 - There is no data available for 2020 for the item "Biogenic removals".

Scope 2 <small>GRI 305-2</small>	2020	2021	2022
<b>Indirect emissions from energy acquisition (t CO<sub>2</sub> equivalent)</b>			
Electricity	16,331	37,355	8,066

Note 1 - As of 2021, Scope 2 of sugarcane energy includes 50% of the electricity purchased (based on location) from Maringá Group's corporate headquarters, located in the city of São Paulo.

Note 2 - The 2020 and 2021 issuance is based on location. The 2022 issuance is based on the purchase choice.

Scope 3 <small>GRI 305-3</small>	2020	2021	2022
<b>Other indirect emissions (t CO<sub>2</sub> equivalent)</b>	-	10,671	14,566
<b>Other indirect biogenic emissions (t CO<sub>2</sub> equivalent)</b>	-	4,511	35,293

Note - There is no data available for 2020.

Intensity of greenhouse gas emissions <small>GRI 305-4</small>	2020	2021	2022
<b>Total GHG emissions (tCO<sub>2</sub> equivalent)</b>	<b>104,717</b>	<b>128,728</b>	<b>77,616</b>
<b>Intensity of greenhouse gas emissions (tCO<sub>2eq</sub>/t<sub>liquid alloy</sub>)</b>	<b>1.07</b>	<b>1.27</b>	<b>0.85</b>

Note - For the calculation of intensity, non-biogenic emissions from scope 1 and 2 were considered. And the denominator used was the net amount of alloy produced.



Beneficiation of slag

# Solid waste

All our units adopt Solid Waste Management Plans, in order to ensure separation, collection, storage, transport and adequate final destination of materials. The volume is controlled in spreadsheets, and we sort the recycled material, destined to companies licensed to receive it. Industrial waste is properly stored for later collection by partners able to manage it. Waste from commercial establishments (office, cafeteria and bathroom) goes to the municipal landfill.

In Itapeva, in the Maringá-Ferro-Liga, we have an Ecopoint where plastic and cardboard waste, among others, are given to recycling cooperatives in the municipality. We also participate in the discussions and initiatives of the Municipal Council for the Defense of the Environment (Comdema) of the locality, which in 2022 deliberated the beginning of the selective collection service for 2023. Furthermore, we donate equipment, including personal protection equipment, and promote safety training for associates, helping to strengthen these professionals' organizations.

In the sugar-energy sector, waste resulting from industrial processes are returning to the market as new products or being used as inputs in the field. Sugarcane bagasse supplies Maringá Energia. The yeast, resulting from the manufacture of ethanol, began to be dried and sold to animal nutrition industries. Boiler ashes and filter cakes from sugar production, as well as vinasse, have been used to fertilize our sugarcane fields.



Fertirrigation

# Biodiversity

In the region of Itapeva (SP) we maintain 5,300 hectares of preserved forest and 5,000 hectares of forest area where eucalyptus trees are produced, used by Maringá Ferro-Liga – the estimate is that 9 million trees are in the area. From this reforestation wood, we produce about 50% of the bio-reductant (charcoal) necessary to transform ore into an alloy.

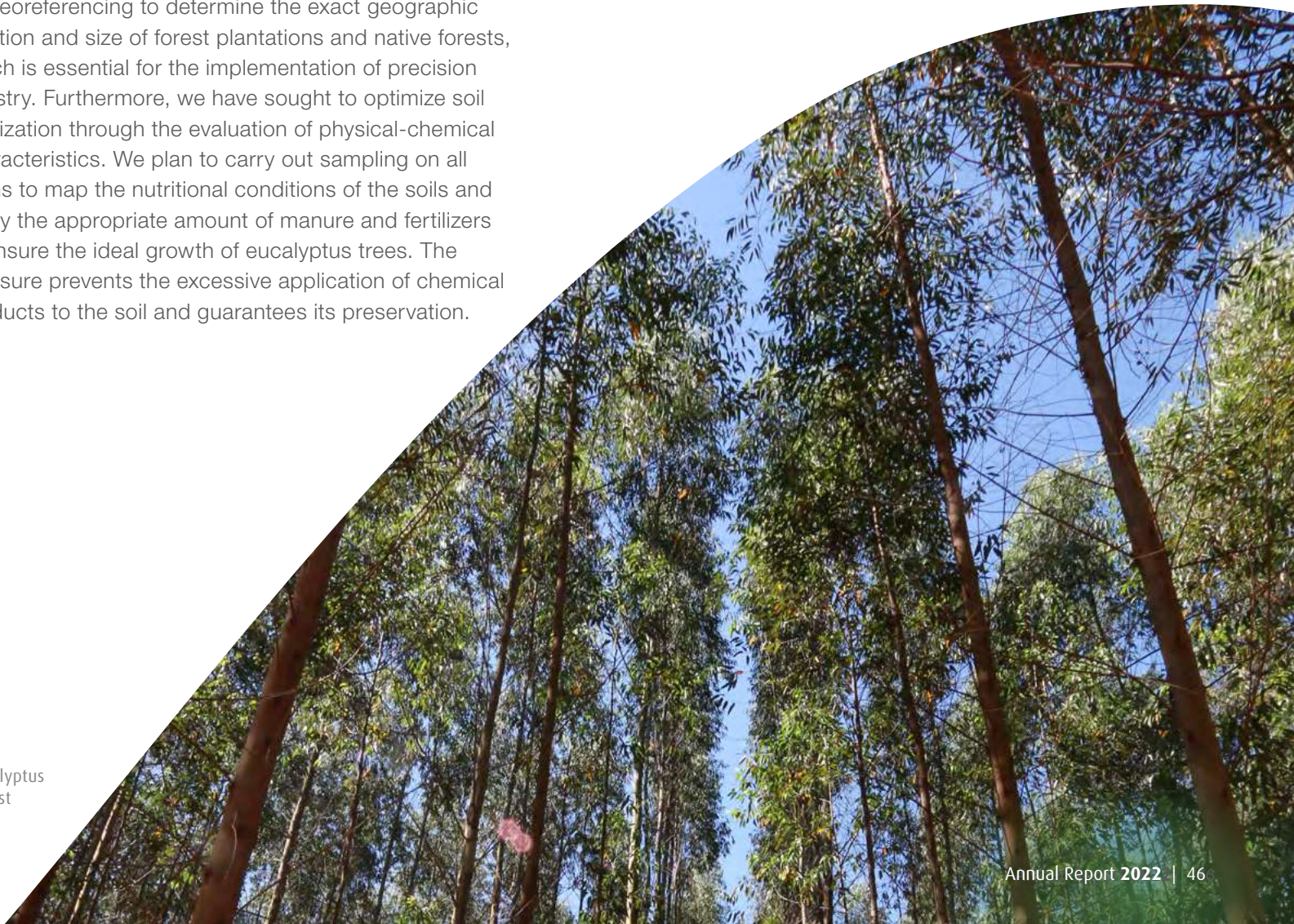
Through our silviculture area, we investigate ways to increase the productivity of the eucalyptus forest, for better use of the area. In partnership with the Brazilian Association of Ferroalloys and Silicon Metal Producers (Abrate) and the Federal University of Viçosa, we study varieties of species that grow faster or have wood of greater density.

In the sugarcane growing areas of the plant, approximately 99% of the harvest is mechanized, without burning the straw. In our sugarcane fields, biological control has been gaining ground, reducing the use of chemical products and contributing to the balance and improvement of the biological conditions in the cultivation areas.

Sustainable forestry practices encompass a series of techniques to use wood productively, ensuring soil conservation, maintaining biodiversity, without damaging the environment. The Forest Sector has sought policies, commitments, targets and initiatives to

ensure the sustainability of forest plantations, such as georeferencing to determine the exact geographic position and size of forest plantations and native forests, which is essential for the implementation of precision forestry. Furthermore, we have sought to optimize soil fertilization through the evaluation of physical-chemical characteristics. We plan to carry out sampling on all farms to map the nutritional conditions of the soils and apply the appropriate amount of manure and fertilizers to ensure the ideal growth of eucalyptus trees. The measure prevents the excessive application of chemical products to the soil and guarantees its preservation.

Eucalyptus Forest





Another technique along the same lines is the maintenance of forest harvest residues on the soil, enriching it and making it a means of preventing erosion. To preserve both the plantations and the native forests, firebreaks are made to prevent the spread of fire and a communication network is maintained with companies and producers in the region for alerts and firefighting actions.

The main initiative of the Forest Sector is to maximize the productivity of forest plantations through investment and acquisition of seedlings of denser, more productive and adapted genetic material for the production of bio-reductant in addition to controlling factors that can reduce the productive capacity of forests such as ants, erosion, weed competition and soil fertility. The focus is

the continuous improvement of silvicultural operations, seeking to implement precision silvicultural techniques and Integrated Management, and mechanization of activities. This is what has been planned for the coming years to ensure the sustainable and constant use of forest plantations.

### Owned, leased or managed operating units within or adjacent to environmental protection areas and areas of high biodiversity value located outside environmental protection areas GRI 304-1<sup>1,2</sup>

Area name	Geographic location	Surface and underground areas owned, leased or managed by the organization	Position in relation to the environmental protection area or the area of high biodiversity value located outside environmental protection areas	Type of operation	Operating unit size in km <sup>2</sup>	Biodiversity value characterized by the attribute of the environmental protection area or area of high biodiversity value located outside the environmental protection area	Biodiversity value characterized by presence on the protection list	Permanent	Total
Fazenda Jacarezinho	Jacarezinho – PR	Own areas and partnership	Adjacent	Office, manufacturing and agricultural operation	100.78	Medium	Low	1	1,638
Fazenda Santo Antonio da Platina	Santo Antonio da Platina – PR	Partnership	Adjacent	Agricultural	10.10	Medium	Low	3	235
Fazenda Cambará	Cambará – PR	Partnership	Adjacent	Agricultural	9.40	Medium	Low		
Fazenda Ourinhos	Ourinhos – SP	Partnership	Adjacent	Agricultural	16.10	Medium	Low		
Fazenda Andirá	Andirá – PR	Partnership	Adjacent	Agricultural	0.43	Medium	Low		
Fazenda Chavantes	Chavantes – SP	Partnership	Adjacent	Agricultural	0.97	Medium	Low		
Fazenda Salto Grande	Salto Grande – SP	Partnership	Adjacent	Agricultural	1.62	Medium	Low		
Fazenda Ibirarema	Ibirarema - SP	Partnership	Adjacent	Agricultural	8.23	Medium	Low		

<sup>1</sup> Considering all areas (own and partnerships) where the company manages operations.

<sup>2</sup> Steelmaking does not inform this data because its areas are not inside or adjacent to environmental protection areas.



# Social

- *Our people*
  - Attraction and retention
  - Training and development
  - Diversity and inclusion
  - Health, safety, and quality of life
- *Clients*
  - Satisfaction
- *Suppliers*
  - PIC (Integrated Cane Producers)
  - Manganese
- *Social responsibility*
  - Social projects

## Our people

### GRI 2-30

To the 1,904 professionals – 100% covered in collective bargaining agreements – and apprentices who work in our companies, we seek to provide work environments in which they feel motivated, safe, free to be who they are and fairly rewarded for their deliveries. Among the material topics that guide our strategy, at least three are directly related to this audience: guaranteeing people conditions for their personal and professional development and an environment marked by diversity. Ensure the health and safety of people; ethics, integrity and human rights.

We constantly seek to improve our practices, including resources for the efficient management of people and respect for the differences that characterize our business units and their professionals. In 2022, as part of a restructuring process in the Human Resources area, we advanced in the creation of Business Partners, who act as facilitators to carry out initiatives and capture and meet the demands of our leaders and employees. We also continue to structure teams with corporate action, composed of specialists in HR subsystems, to extend the best initiatives to all units and take advantage of synergy opportunities.

Guri Social Project (Ourinhos)



We also advanced, in partnership with the IT team, in the improvement of our computerized systems. We have been adding more resources to them, which qualify jobs related to payroll, performance management, data analysis, etc. In this context, the HR Portal was launched to decentralize information, providing autonomy through which managers can make adjustments in relation to working hours, vacation schedules, among other items. This year, we also started implementing the learning management system (LMS), to be completed in the next period. It allows us to create, manage, organize and record training, helping us to overcome another challenge set for 2023: the structuring of Academia Grupo Maringá. Widely discussed throughout 2022, this is a training program that will cover various topics, such as mental health, compliance and leadership training.

Another source of information to promote improvements is the Engagement Survey. Held at the end of 2021, it had the participation of 95% of our professionals and its results were made available to HR and employees from March 2022. Eight dimensions were evaluated, in addition to the Covid-19 theme. The favorability index regarding engagement was 93%, an increase of 7% compared to the previous study, carried out in 2016. Based on the results, together with representatives from the different areas of our companies, we began to prepare action plans, many of which are already in progress, with stipulated responsible persons, deadlines and objectives. We therefore want to provide an environment that favors and respects the manifestations and participation of everyone in matters related to the day-to-day activities of our companies.

### ENGAGEMENT SURVEY DIMENSIONS

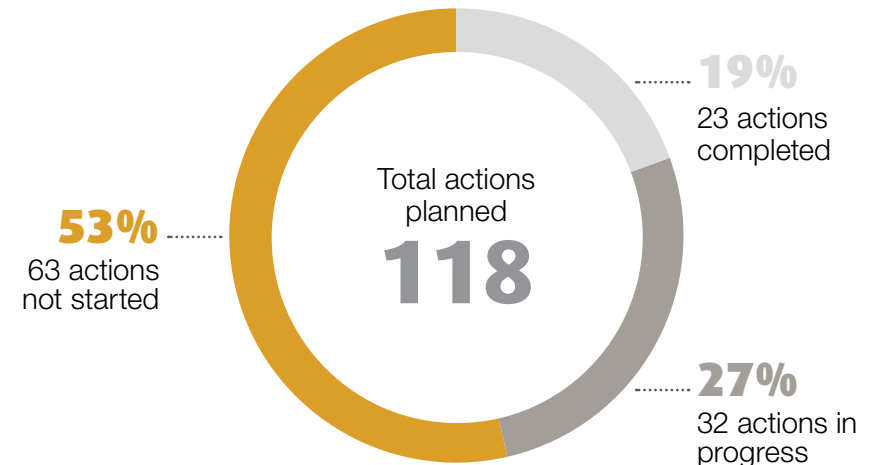
- Integrity Culture
- Organizational agility
- Responsible leadership
- Healthy work environment
- Fair reward
- Attractive careers
- Prosperous individuals
- Engagement
- Covid-19

#### Total number of employees per employment contract (permanent and temporary), by gender

GRI 2-7 | 2-8

	2020	2021	2022
Men	1,611	1,628	1,638
Women	196	237	235
<b>Total</b>	<b>1,807</b>	<b>1,865</b>	<b>1,873</b>

Note – The data for 2020, 2021 and 2022 refer to the total number of permanent employees, as the total number of temporary employees was 0 (zero) in the three years.



### Total number of employees per employment contract (permanent and temporary), by region GRI 2-7 | 2-8

	2020	2021	2022
Sugar-energy (Jacarezinho/PR) - South	1,182	1,219	1,201
Steelmaking (Itapeva/SP) - Southeast	612	588	606
Mining (Marabá/PA) - North	0	43	49
Corporate (São Paulo/SP) - Southeast	13	15	17
<b>Total</b>	<b>1,807</b>	<b>1,865</b>	<b>1,873</b>

Note – The data for 2020, 2021 and 2022 refer to the total number of permanent employees, as the total number of temporary employees was 0 (zero) in the three years.

### Total number of employees by type of employment (full-time or part-time), by gender GRI 2-7 | 2-8

	2020			2021			2022		
	Full	Partial	Total	Full	Partial	Total	Full	Partial	Total
Men	1,612	0	1,612	1,629	3	1,632	1,637	1	1,638
Women	189	7	196	230	9	239	232	3	235
<b>Total</b>	<b>1,801</b>	<b>7</b>	<b>1,808</b>	<b>1,859</b>	<b>12</b>	<b>1,871</b>	<b>1,869</b>	<b>4</b>	<b>1,873</b>

Note – The data for 2020, 2021 and 2022 refer to the total number of permanent employees, as the total number of temporary employees was 0 (zero) in the three years.

### Employees by age group GRI 2-7 | 2-8

	2020	2021	2022
Less than 30 years old		462	441
Between 30 and 50 years old		1,146	1,156
Over 50 years old		263	276
<b>Total</b>	<b>1,808</b>	<b>1,871</b>	<b>1,873</b>

Luciano Lopes  
(Raw Material  
Supervisor)



## Number of employees and workers by functional category GRI 2-7 | 2-8

### Employees by functional category GRI 2-7 | 2-8

	2020			2021			2022		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Management	13	1	14	14	1	15	14	2	16
Coordination	6	2	8	10	3	13	12	5	17
Supervision	33	11	44	32	12	44	33	11	44
In charge	81	8	89	89	10	99	90	7	97
Operational	1,363	108	1,471	1,361	125	1,486	1,346	113	1,459
Administration	115	66	181	122	86	208	143	97	240
<b>Subtotal</b>	<b>1,611</b>	<b>196</b>	<b>1,807</b>	<b>1,628</b>	<b>237</b>	<b>1,865</b>	<b>1,638</b>	<b>235</b>	<b>1,873</b>

Note – Board and Board of Directors do not fit into the categories employees and workers, therefore the data is not included in the table.

### Workers by functional category GRI 2-7 | 2-8

	2020			2021			2022		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Apprentices		0	1	3	2	5	19	11	30
Interns		0	0	1	0	1	1	0	1
<b>Subtotal</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>11</b>	<b>31</b>



Natalina Leme and  
Bruno Geraldo  
(Laboratory Analysts)

#### Total number and rate of employees (collaborators) hired, by age group GRI 401-1

	2020			2021			2022		
	N. Total	Hired	Rate	N. Total	Hired	Rate	N. Total	Hired	Rate
Less than 30 years old	409	180	0.44	462	212	0.46	441	161	0.37
Between 30 and 50 years old	1,114	154	0.14	1,146	169	0.15	1,156	154	0.13
Over 50 years old	285	35	0.12	263	16	0.06	276	15	0.05
<b>Total</b>	<b>1,808</b>	<b>369</b>	<b>0.20</b>	<b>1,871</b>	<b>397</b>	<b>0.21</b>	<b>1,873</b>	<b>330</b>	<b>0.18</b>

#### Total number and rate of employees (collaborators) hired, by gender GRI 401-1

	2020			2021			2022		
	N. Total	Hired	Rate	N. Total	Hired	Rate	N. Total	Hired	Rate
Men	1,612	332	0.21	1,632	328	0.20	1,638	284	0.17
Women	196	37	0.19	239	69	0.29	235	46	0.20
<b>Total</b>	<b>1,808</b>	<b>369</b>	<b>0.20</b>	<b>1,871</b>	<b>397</b>	<b>0.21</b>	<b>1,873</b>	<b>330</b>	<b>0.18</b>

#### Total number and rate of employees (collaborators) hired, by region GRI 401-1

	2020			2021			2022		
	N. Total	Hired	Rate	N. Total	Hired	Rate	N. Total	Hired	Rate
Sugar-energy (Jacarezinho/PR) - South	1,183	194	0.16	1,224	127	0.10	1,201	183	0.15
Steelmaking (Itapeva/SP) - Southeast	612	174	0.28	588	223	0.38	606	106	0.17
Mining (Marabá/PA) - North	0	0		44	46	1.05	49	38	0.78
Corporate (São Paulo/SP) - Southeast	13	1	0.08	15	1	0.07	17	3	0.18
<b>Total</b>	<b>1,808</b>	<b>369</b>	<b>0.20</b>	<b>1,871</b>	<b>397</b>	<b>0.21</b>	<b>1,873</b>	<b>330</b>	<b>0.18</b>

#### Número total e taxa de empregados (colaboradores) que deixaram a empresa, por faixa etária GRI 401-1

	2020			2021			2022		
	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa
Menos de 30 anos	409	24	0.06	462	56	0.12	441	41	0.09
Entre 30 e 50 anos	1,114	27	0.02	1,142	44	0.04	1,156	40	0.03
Mais de 50 anos	285	5	0.02	263	4	0.02	276	10	0.04
<b>Total</b>	<b>1,808</b>	<b>56</b>	<b>0.03</b>	<b>1,867</b>	<b>104</b>	<b>0.06</b>	<b>1,873</b>	<b>91</b>	<b>0.05</b>

#### Número total e taxa de empregados (colaboradores) que deixaram a empresa, por gênero GRI 401-1

	2020			2021			2022		
	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa
Homens	1,612	48	0.03	1,632	91	0.06	1,638	78	0.05
Mulheres	196	8	0.04	239	13	0.05	235	13	0.06
<b>Total</b>	<b>1,808</b>	<b>56</b>	<b>0.03</b>	<b>1,871</b>	<b>104</b>	<b>0.06</b>	<b>1,873</b>	<b>91</b>	<b>0.05</b>

#### Número total e taxa de empregados (colaboradores) que deixaram a empresa, por região GRI 401-1

	2020			2021			2022		
	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa	Nº total	Desligamentos	Taxa
Sugar-energy (Jacarezinho/PR) - Sul	1,183	32	0.03	1,224	64	0.05	1,201	58	0.05
Steel Industry (Itapeva/SP) - Sudeste	612	24	0.04	588	39	0.07	606	28	0.05
Mining (Marabá/PA) - Norte	0	0		44	0	0.00	49	5	0.10
Corporativo (São Paulo/SP) - Sudeste	13	0	0.00	15	1	0.07	17	0	0.00
<b>Total</b>	<b>1,808</b>	<b>56</b>	<b>0.03</b>	<b>1,871</b>	<b>104</b>	<b>0.06</b>	<b>1,873</b>	<b>91</b>	<b>0.05</b>

# Attraction and retention

GRI 2-9 | 2-19 | 2-20 | 401-2 | 405-2

The search for new talent and the retention of employees aligned with our culture involves providing a work environment aligned with our corporate values. That includes offering fair and adequate remuneration and a solid set of benefits, in addition to conditions for career development and evolution and to offer opportunities for young people.

Alex Camargo  
(Industrial Electrician)  
and Aparecido Eugênio  
(Boiler Operator)



We keep the *Aprendizes* (Apprentices) project in progress, which opens up opportunities for students aged 18 to 24 to join our team – a more structured initiative at Maringá Ferro-Liga that, in 2022, advanced to the sugar-energy sector. We also offer training opportunities to the communities surrounding our operations, with the possibility of subsequent hiring. In 2022, Usina Jacarezinho, for example, in partnership with the National Rural Learning Service (Senar), started a development program aimed at Agricultural Maintenance for young people between 18 and 24 years old. They receive a uniform, transportation, food and meal vouchers, with the prospect of hiring some of them in the next harvest (from April 2023). Maringá Ferro-Liga also provided residents of Itapeva and region with training in Operation and Maintenance of Forestry Machines – Basic level for those interested in handling equipment used in the harvesting of eucalyptus trees.

Internal use is an important instrument of recognition and encouragement to professionals. Open vacancies are usually offered firsthand to those who are already employees. That, in addition to opening up perspectives for career advancement, encourages them to participate in internal training actions. In 2022, 322 employees were promoted (17.2% of our workforce) within the Group.

In order to attract and retain people, we are also focused on increasing diversity – which is why we have adopted measures such as training in operational activities traditionally occupied by men in our business units, where, despite progress, the imbalance between genders persists. Thus, we publicize existing vacancies and training actions through means and in strategic locations to attract the female audience. In 2022, we recorded a 23.6% increase in the total number of women in our workforce compared to 2019, reaching a proportion of 12.6% of our workforce. In leadership positions (management, coordination, supervision and resource in charge), the female presence is already more expressive: 14.4%. Our purpose is to advance even more in the coming years.

With regard to salaries, we ensure equity among all professionals in similar positions, without any type of distinction. All positions have agreed remuneration, and we constantly analyze companies that operate in our sectors to keep positions, remuneration and benefits updated and in line with the market. The set of benefits includes health insurance extended to dependents, life insurance, extended maternity leave, food vouchers, transportation vouchers, uniform and dental assistance, educational training assistance, home office assistance, among others. There is no difference between the benefits offered to full-time and part-time workers.

Senior executives (statutory directors) are eligible to a compensation policy that provides short-term fixed and variable compensation (deliberated at the Ordinary General Meeting), according to the results of global indicators, and other benefits granted to employees. The members of the governance body earn fixed remuneration, deliberated at the Annual Shareholders' Meeting. The policy seeks equity and competitiveness in relation to the market, always based on data and information, with the support of consultants specialized in the subject and in line with our governance. The remuneration policies and proposals considered more strategic are submitted to the People Committee for consideration and, subsequently, forwarded or not to be approved by the Board of Directors.

Note – Salaries for the Board, Executive Board, Management, Coordination and Supervision levels are confidential information due to the number of people in each of them. As for interns, we do not have any on the payroll. In the "Operational" functional category, we highlight that women's salary is lower because they occupy entry-level positions, mainly in agricultural development. Information for 2020 and 2021 is not available.

### Proportion between base salary and remuneration received by women and those received by men for each employee category GRI 405-2

	2022		
	Base salary (R\$)	Compensation (R\$)	Mathematical Ratio
<b>In charge</b>			
Women	5,516	6,410	0.16
Men	5,724	7,231	0.26
Ratio women x men	0.96	0.89	0.62
<b>Operational</b>			
Women	1,703	2,470	0.45
Men	2,287	3,359	0.47
Ratio women x men	0.74	0.74	0.96
<b>Administration</b>			
Women	3,414	4,087	0.20
Men	4,081	4,868	0.19
Ratio women x men	0.84	0.84	1.02
<b>Apprentices</b>			
Women	1,102	1,571	0.43
Men	1,102	1,621	0.47
Ratio women x men	1	0.97	0.90
<b>TOTAL</b>			
Women	11,734	14,539	1.24
Men	13,194	17,079	1.40
Ratio women x men	0.89	0.85	0.89

### Maternity/paternity leave GRI 401-3

#### Total number of employees

	2020	2021	2022
Men	1,612	1,632	1,638
Women	196	239	235

#### Total employees who went on maternity/paternity leave, and whose leave ends in the current year GRI 401-3

	2020	2021	2022
Men (beginning of the current year, end of the current year)	53	34	31
Women (beginning of the current year, end of the current year)	3	0	5
Men (beginning of the previous year, end of the current year)	0	0	0
Women (beginning previous year, ending current year)	1	4	3

#### Total employees who went on maternity/paternity leave in the current year, and whose leave ends in the following year GRI 401-3

	2020	2021	2022
Men	0	0	1
Women	1	4	2

### Total number of employees who were on maternity/paternity leave in the current year GRI 401-3

	2020	2021	2022
Men	53	34	32
Women	4	4	7

#### Total employees expected to return in the current year GRI 401-3

	2020	2021	2022
Men	53	34	31
Women	4	4	8

#### Total employees who returned to work, in the reporting period, after the end of maternity/paternity leave GRI 401-3

	2020	2021	2022
Men	53	34	31
Women	4	4	8

#### Total employees who returned to work after maternity/paternity leave and who were still employed 12 months after returning to work GRI 401-3

	2020	2021	2022
Men	43	53	34
Women	5	4	3



# Training and development

GRI 3-3 - People Development, Diversity and Inclusion | 404-1 | 404-3

We value the development of our people and for that we have a set of actions to promote and improve the skills of each person. We have a Talent Management Policy, focusing on people development and alignment with our business strategy. This Policy includes a series of tools, such as compensation policies; 180° and 360° performance management; recruitment and selection; 9box evaluation; mandatory internal and external training and qualification; and Leadership Development Programs (PDL). All are aimed at qualifying employees for transformation based on organizational, technical and behavioral skills, feeding the virtuous circle of team development with results measured by strategic indicators.

We understand that investing in offering training to employees is essential for us to put our strategy into practice and achieve the defined objectives and goals, in addition to being an important development tool. In 2022, considering all our companies, we provided 59,898 hours of training, which represented an average of 32 hours of training per professional, an increase of 74% compared to the previous year. The period was marked by the gradual resumption of face-to-face actions.

Throughout each year, opportunities for personal and professional development include not only those related to the improvement of specific activities required in each of our companies, but also those defined based on the evaluations of professionals expressed in the Individual

Development Plans (PDIs). This set of information defines the Annual Training Plan (PAT).

The individual performance assessment – carried out by eligible professionals at least once every two years – follows the 180° methodology for most. The employee performs the self-assessment and, subsequently, there is a feedback/consensus meeting with the area manager, who also makes a formal assessment of the professional's work, resulting in the Performance Assessment (ADL) and the Individual Development Plan (PDI). For senior leaders, the 360° model is already in place: conducted by an external consultant, it involves filling out self-assessment forms, but also includes assessment by peers, subordinates and clients. Afterwards, feedback meetings take place and the ADLs and PDIs are defined.

All of these processes are part of a computerized performance management system that supports the management of analyses and generation of forms. It also streamlines the control of evaluations and the construction of development plans.

Transparent communication with employees is another valued attribute. To strengthen it, during the year we



Leadership Training (Class 4)

launched the quarterly magazine Entre Nós (Between Us) which adds to the corporate TV and the bulletin boards adopted for the dissemination of local content. We also use emails, WhatsApp groups and forums and meetings to exchange ideas between teams.

Another communication channel that was reactivated with the cooling of the pandemic is Café com Prosa (Coffee and Chat), an event that brings together employees and senior leaders to encourage integration and dialogue and to answer questions about ongoing topics and activities.

#### Average hours of training carried out by the organization's employees during the period covered by the report by gender GRI 404-1

	2020			2021			2022		
	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training
Men									
Women	196	3,748	19.1	239	4,612	19.3	239	6,596	27.6
<b>Total</b>	<b>1,808</b>	<b>30,228</b>	<b>16.7</b>	<b>1,871</b>	<b>33,622</b>	<b>178.0</b>	<b>1,873</b>	<b>59,898</b>	<b>32.0</b>

#### Average hours of training carried out by the organization's employees during the period covered by the report by functional category GRI 404-1

	2020			2021			2022		
	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training
Management									
Coordination	8	136	17.0	13	356	27.4	17	794	46.8
Supervision	44	2,157	49.0	44	2,934	66.7	44	2,992	68.0
In charge	89	2,899	32.6	99	2,507	25.3	97	3,993	41.2
Operational	1,471	22,305	15.2	1,486	24,611	16.6	1,459	46,216	31.7
Administration	181	2,372	13.1	208	2,984	14.4	240	5,143	21.4
<b>Total</b>	<b>1,807</b>	<b>30,218</b>	<b>16.7</b>	<b>1,865</b>	<b>33,612</b>	<b>18.0</b>	<b>1,873</b>	<b>59,811</b>	<b>31.9</b>

Note - Information not available for the Board of Directors and Board.

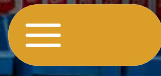
#### Average hours of training carried out by the organization's employees during the period covered by the report by functional category GRI 404-1

	2020			2021			2022		
	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training	Total number of employees	Hours of training	Average hours of training
Apprentice									
Interns	0	0	0	1	4	4,0	0	0	0
<b>Total</b>	<b>1</b>	<b>8</b>	<b>8,0</b>	<b>6</b>	<b>13</b>	<b>2,2</b>	<b>30</b>	<b>86</b>	<b>2,9</b>

### Percentage of employees receiving regular performance and career development evaluations GRI 404-3

	2020			2021			2022		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>Management</b>									
Total number of employees	13	1	14	14	1	15	14	2	16
Total number of employees assessed	10	1	11	0	0	0	2	0	2
Percentage	76.9%	100.0%	78.6%	0.0%	0.0%	0.0%	14.3%	0.0%	12.5%
<b>Coordination</b>									
Total number of employees	6	2	8	10	3	13	12	5	17
Total number of employees assessed	3	2	5	2	0	2	7	2	9
Percentage	50.0%	100.0%	62.5%	20.0%	0.0%	15.4%	58.3%	40.0%	52.9%
<b>Supervision</b>									
Total number of employees	33	11	44	32	12	44	33	11	44
Total number of employees assessed	11	3	14	8	3	11	18	5	23
Percentage	33.3%	27.3%	31.8%	25.0%	25.0%	25.0%	54.6%	45.5%	52.3%
<b>In charge</b>									
Total number of employees	81	8	89	89	10	99	90	7	97
Total number of employees assessed	4	3	7	19	1	20	41	3	44
Percentage	4.9%	37.5%	7.9%	21.4%	10.0%	20.2%	45.6%	42.9%	45.4%
<b>Operational</b>									
Total number of employees	1363	108	1471	1361	125	1486	1346	113	1459
Total number of employees assessed	21	3	24	263	23	286	468	18	486
Percentage	1.5%	2.8%	1.6%	19.3%	18.4%	19.3%	34.8%	15.9%	33.3%
<b>Administration</b>									
Total number of employees	115	66	181	122	86	208	143	97	240
Total number of employees assessed	33	18	51	30	19	49	4	5	9
Percentage	28.7%	27.3%	28.2%	24.6%	22.1%	23.6%	2.8%	5.2%	3.8%
<b>TOTAL</b>									
Total number of employees	1611	196	1807	1628	237	1865	1638	235	1873
Total number of employees assessed	82	30	112	322	46	368	540	33	573
Percentage	5.1%	15.3%	6.2%	19.8%	19.4%	19.7%	33.0%	14.0%	30.6%

Note - Information not available for the Board of Directors and Board.



# Diversity and inclusion

GRI 3-3 - People Development, Diversity, and Inclusion | 406-1

The topic diversity and inclusion is a focus of attention because we value plurality and believe that it enables social gains in the evolution and innovation of our businesses. In 2021, we set up a Working Group for this topic, which aims to structure a short and medium-term action plan. In the same year, we advanced with the Diversity Census among employees, training for leaders and promoting conversation circles, lectures and campaigns. In 2022, we matured the consolidation and dissemination of a culture that values respect and learning by strengthening the pillars of education, inclusion and representativeness.

With regard to training, we continued to apply training, lectures and campaigns alluding, among other topics, to People with Disabilities (PwD) and Black Awareness Day. Another outstanding initiative was the dissemination of information on diversity to the Recruitment and Selection team, in order to increase diversity and inclusion in hiring processes. Furthermore, we conducted training with a specific approach for the Board of Directors.

We also started defining diversity indicators – work that has not yet been completed, but which has seen important advances. One of the next steps will be the re-registration of all professionals based on self-declaration of color/ethnicity. In 2022, the People Analytics and Diversity and Inclusion teams built a dashboard that allows viewing the diversity data

already collected – such as those associated with gender and age issues at different hierarchical levels.

To intensify practices dedicated to inclusion, we formed four Affinity Groups (GAs) to work on issues of gender equity, color/ethnicity, PwD and the LGBTQIA+ community. In the first three meetings, with the support of an external consultant, we worked on discussing ideas, prioritizing themes and expanding knowledge. As of January 2023, each GA will walk autonomously, to put learning into practice, proposing actions that encourage the protagonism of minority groups. The entire diversity and inclusion work plan is regularly monitored by the Board of Directors and the People Committee.



Robison Aparecido  
(Warehouse Manager)

## Cases of discrimination and corrective measures taken GRI 406-1<sup>1</sup>

	2022
<b>Total number of cases received</b>	4
<b>Number of cases analyzed</b>	4
<b>Number of cases for which a remediation plan is being implemented</b>	0
<b>Number of cases for which the remedial plan has been implemented and its results have been analyzed through routine procedures of internal management analysis</b>	4
<b>Number of resolved cases (which are no longer subject to corrective action)</b>	4

<sup>1</sup> First record made categorized as discrimination was in 2022. The channel has been active since Jan/19.

# Health, safety, and quality of life

GRI 3-3 – Health and safety | 403-1 | 403-2 | 403-3 | 403-4 | 403-5 | 403-6 | 403-7

Care for the well-being of our most important asset, people, is a priority issue within the scope of our strategy. The Integrated Quality, Health, Occupational Safety and Environment Policy formalizes commitments such as providing safety and protecting the health of professionals and all those involved in the workplace, preventing injuries and occupational illnesses; meet applicable legal and internal requirements; and ensure the continuous process of consultation and participation of employees in relation to health and safety. We monitor and measure the Occupational Health and Safety Management System – which covers all professionals and is guided by ISO 45001 certification.

Exposures identified internally are of physical, chemical, biological, ergonomic characteristics and the possibility of injuries of different characteristics. The mapping of these risks, qualitative and quantitative assessments, as well as mitigation measures are included in the Risk Management Program (PGR), which supports the Occupational Health area in monitoring the health of workers. They are consulted daily about the conditions of the work environment during interventions in the preparation of the Work Permit, delivery of Personal Protective Equipment (PPE), training and emergency drills. We reinforced the theme in our Golden Rules and Consequences Policy, both for the steel and sugar-energy sectors. They establish, define and standardize criteria, responsibilities, competencies and disciplinary measures that drive commitment to safety in the development of daily activities.

The first training on the subject takes place in the integration phase, with training carried out by an internal multidisciplinary team. Next, professionals are trained in Operating Procedures customized according to their function and attributions, taught by their respective leaders. For the training of our own workers in the Legal Requirements, we maintain the Training Needs Survey (LNT), applied according to the risk and/or exposure.

## Canaveira celebrated the milestone of 2,000 days without lost-time injuries, and Maringá reached its best historical frequency rate.

Constant improvements and efforts to remedy any flaws identified through investigations and/or dialogue with our teams are reflected in the indicators recorded throughout 2022. Canaveira celebrated the milestone of 2,000 days without lost-time injuries. Maringá Ferro-Liga reached its best historical frequency rate, furthermore to having been re-certified by ISO 45001 in an external audit process that maintained a non-compliance that is being treated, referring to compliance with NR 12.

Accident prevention is an obsession in our companies, which are working to eliminate accidents in the coming years. The main tool for this is the Hazard Survey and Risk Assessment (LPAR), which, in addition to identifying threats, contributes to adopting mitigation measures, guiding the definition of critical standards related to health and safety, selection of new behavioral techniques and investments.

SIPAT 2022





Also noteworthy were the incentives for safety reports and participation in the Internal Commissions for Accident Prevention (Cipa), Internal Commissions for the Prevention of Accidents in Rural Work (Cipatr) and fire brigades, as well as the organization of Internal Occupational Accident Prevention Weeks (Sipat) and Daily Safety Dialogues (DDS). Our employees are free and encouraged to report criticisms, deviations and suggestions related to health and safety in the workplace. For this, they have physical boxes and reporting applications, in addition to the Ombudsman channel.

At the units linked to the sugar-energy sector, we dedicated special attention to the main activities that cause accidents in the off-season, with non-routine tasks and maintenance of the industrial park, prioritizing training and work permits, which resulted in significant advances: 0% frequency and severity rate in this period (off-season).

Another initiative regarding Sugar-energy was the training of all occupational safety technicians on Occupational Hygienist, which deepened knowledge regarding internal risk management and the adoption of agile proactive measures. We also conduct training in partnership with the National Rural Learning Service (Senar) on the application of agrochemicals, defensive driving, safe operation and emergency assistance, among others. Added to this is on-site and weekly training for the firefighting brigade team.

At Maringá Ferro-Liga, the refurbishment of one of the furnaces resulted in improvements in terms of safety. The work involved more than 250 external professionals, who received guidance to act in accordance with our guidelines. Outsourced workers underwent training that included the Golden Rules adopted at the unit. All the activities planned for the work underwent a Preliminary Risk Analysis, and a macro safety plan was drawn up: we produced a special booklet on the subject, assigned more technicians to monitor the work and added professionals to the preventive medical care team.

Some improvements and controls adopted during the renovation of the furnace became permanent, such as the incorporation of criteria to isolate areas, block energy, release scaffolding and lift loads.

In Steelmaking, we reached the best Frequency Rate in our history, although we recorded three events, all with causes duly determined and managed. In case of accidents, we adopt an investigation form and consolidated assessment methodology, and involve a multidisciplinary team that works to identify the root causes and propose educational, corrective and coverage actions in other areas.

Another movement related to safety was carried out by Ferro-Liga: the expansion of the mechanization of eucalyptus harvesting, already adopted in 70% of our plantations, which minimizes risks and provides better operational performance. We also maintain an Emergency Response Plan at the unit, covering the factory, forestry area and power plants, which specifies risk scenarios. Often one of them is selected to be the subject of the exercise – in 2022 it was the “electrical installations” scenario.

As we operate Hydroelectric Generating Centers (CGHs), in line with the National Dam Safety Policy, we carried out drills, with the support of a specialized company, the Civil Defense and municipal departments, which involved the riverside population in the self-rescue zone, marked with escape route and meeting point signs. We also acquired a vehicle dedicated to mass communication with this audience and carried out tests to send information and alerts via cell phone, in addition to distributing folders.

At the Jacarezinho unit, the level of safety in industrial operations was raised due to investments in projects that mitigated risks, such as high level of automation in steam production, sugar factory and distillery, thermal insulation (sugar factory, milling and distillery), new sugar bagging, helical stairs in ethanol storage tanks, new lime preparation and sprinkler system on the ethanol loading platform. Furthermore, the Hazop Records, FMEA, Installation Classification and Risk Analysis – NR10 and NR20 of classified areas and crane records were prepared. In agricultural activities, operational procedures were revised to include precautions with increased mechanization.

Another highlight was the gradual replacement of furnaces at our Bio-reductant Production Units, which increase the safety and well-being of the workers who operate them, in addition to intensifying respect for the environment.



With regard to health, our employees are supported by teams of occupational physicians and nurses. Two ambulances are available at the Usina Jacarezinho. These professionals are responsible for emergency care, admission exams, change of risk, periodic and dismissal exams, and for monitoring workers who work in critical risk activities, performing, for example, regular blood pressure measurement and providing them with psychosocial assessment. Doctors and nurses are also involved in preventive campaigns and guidance on good habits and practices, including vaccination against diseases such as tetanus, hepatitis, yellow fever and flu, also extended to employees' families.

We keep the anti-smoking program in the Sugar-energy, which, since its launch in 2020, has helped 30 professionals to quit smoking. The initiative follows recommendations from the World Health Organization (WHO) and the Ministry of Health. Furthermore to guidance, those interested in quitting smoking have free medication and psychological support available.

Another action developed in Jacarezinho is the Viva Mais project, which emphasizes nutritional education and encourages the adoption of healthy habits. It establishes that for involved will be accompanied by a nutritionist for three months and receive information to increase their well-being and spread the tips in their homes. Also in businesses in northern Paraná, workers can access the Health Bus, a mobile unit of the Social Service for the Industry (Sesi). It visits our facilities and is equipped with resources for various exams, including some related to the

diagnosis of different types of cancer, carrying out medical visits in a joint effort system for those who work in the industrial park or in agricultural areas.

In relation to the periodic exams within the scope of the Occupational Health Medical Control Program (PCMSO), the depth of the analyses is highlighted. If recurring problems are detected, the data subsidize the creation of projects and programs.

At Maringá Ferro-Liga, actions related to ergonomics and workplace gymnastics stand out, in the administrative areas and at the factory. We attribute to such actions an important contribution to the drop in the absenteeism rate for the oven workers activity, which was 76% in 2022.

The mental health of our employees has always been the subject of attention, but it has reached a higher level since the advent of the Covid-19 pandemic in 2020. One of the measures introduced – which became permanent – to cope with the stress caused by the new disease and its consequences was the provision of psychological care, online or in person, in the Brief Psychotherapy modality, that covers employees and their families.

A meditation program was also implemented in the administrative areas. A group session is held weekly and routine practice is encouraged, in an effort to combat stress and generate well-being for employees. Systemic and auricular acupuncture sections were also started to treat physical and emotional complaints.

The greater knowledge about Covid-19 and the advance in the application of immunizers have cooled the number of registered cases and their severity. However, in our units we continue to monitor confirmed and suspected infections and monitor the progress of each case. Our health teams fulfill the role of assisting people and helping them to cope with the disease, providing guidance on prevention and treatments. Campaigns related to Covid-19 prevention care were maintained throughout 2022.

Furthermore, in all units, we observe the Annual Calendar of the Ministry of Health referring to awareness campaigns, promoting special actions in Yellow September, Pink October and Blue November, among other dates, including the promotion of lectures, dissemination of videos and distribution of thematic folders.

At Maringá Ferro-liga, we also have *Sempre Alerta*, a publication that provides information on health, safety and the environment to all employees, which is replicated through the Daily Safety Dialogues and made available on the Management boards in the areas. Another resource used is the emotiongram (in physical or computerized format) to assess the emotional state of employees before starting their activity – information that is immediately passed on to supervisors because, in case of variation, it may impact safety in the execution of activities.

## Sugar-energy

### Individuals covered by a health and safety management system GRI 403-8

	2020	2021	2022
Total number of individuals	1,184	1,225	1,201
Number of individuals who are covered by this system	1,184	1,225	1,201
Percentage of individuals who are covered by this system	100%	100%	100%
Number of individuals who are covered by this system, which has been internally audited	1,184	1,225	1,201
Percentage of individuals covered by an occupational health and safety management system based on legal requirements and/or recognized standards/guidelines, which has been internally audited	100%	100%	100%
Number of individuals who are covered by this system that have been internally audited or certified by an external party	1,184	1,225	1,201
Percentage of individuals who are covered by this system that have been internally audited or certified by an external party	100%	100%	100%

Note - We are ISO 9001:2015 certified and, consequently, all procedures are audited. The data for 2020, 2021 and 2022 refer to the total number of employees, as the total number of workers (non-employed) was 0 (zero) in the three years.

### Occupational accidents GRI 403-9

	2020	2021	2022
Number of hours worked	2,479,259	2,571,846	2,303,754
Base number of hours worked (200,000 or 1,000,000)	1,000,000	1,000,000	1,000,000
Number of fatalities as a result of a work accident;	0	0	0
Rate of fatalities as a result of a work accident	0	0	0
Number of work accidents with no serious consequences (except fatalities)	2	7	4
Rate of work accidents with no serious consequences (except fatalities)	0.8	2.7	1.7
Number of work accidents with mandatory communication (include fatalities)	2	7	4
Number of work accidents with mandatory communication (include fatalities)	0.8	2.7	1.7

Note - The data for 2020, 2021 and 2022 refer to the total number of employees, as the total number of workers (non-employees) was 0 (zero) in the three years.



## Steel Industry

### Individuals covered by a health and safety management system GRI 403-8

	2020	2021	2022
Total number of individuals	613	589	606
Number of individuals who are covered by this system	613	589	606
Percentage of individuals who are covered by this system	100%	100%	100%
Number of individuals who are covered by this system, which has been internally audited	571	546	590
Percentage of individuals covered by an occupational health and safety management system based on legal requirements and/or recognized standards/guidelines, which has been internally audited	93%	93%	97%
Number of individuals who are covered by this system that have been internally audited or certified by an external party	571	546	590
Percentage of individuals who are covered by this system that have been internally audited or certified by an external party	93%	93%	97%

Note - The data for 2020, 2021 and 2022 refer to the total number of employees, as the total number of workers (non-employees) was 0 (zero) in the three years.

### Occupational accidents GRI 403-9

	2020	2021	2022
Number of hours worked	1,483,130	1,507,775	1,491,474
Base number of hours worked (200,000 or 1,000,000)	1,000,000	1,000,000	1,000,000
Number of fatalities as a result of a work accident;	0	0	0
Rate of fatalities as a result of a work accident	0	0	0
Number of work accidents with no serious consequences (except fatalities)	1	2	1
Rate of work accidents with no serious consequences (except fatalities)	0.7	1.3	0.7
Number of work accidents with mandatory communication (include fatalities)	1	2	4
Number of work accidents with mandatory communication (include fatalities)	0.67	1.33	2.68

Note - The data for 2020, 2021 and 2022 refer to the total number of employees, as the total number of workers (non-employees) was 0 (zero) in the three years.



# Clients

## GRI 3-3 – Customer Relationship and Satisfaction

Relying on the recognition and trust of our customers in terms of meeting deadlines and agreed volumes, the quality of products and their socio-environmental differentials is a purpose that motivates us to continually improve practices and processes. We seek ways to better understand and meet their needs and seek their loyalty – a journey in which we have been successful, maintaining strong and beneficial ties for both parties.

In the steel industry, we serve the major national players producing steel, in addition to companies in the sector from seven other countries, to whom we direct 15% of total sales in 2022. We keep constant interaction with our commercial partners, with whom we align not only day-to-day operations and discuss contracts and opportunities for improvement, but also talk about market scenarios and their projections. We are attentive to face fluctuations in prices and demand, such as those that occurred in 2022, so that they impact as little as possible on our commercial relationships, deliveries, inventories and results. In order to face potential variations, we seek to maintain contracts of varying terms with customers and study the opportunity of signing agreements with new partners, especially in other countries, since in Brazil we are suppliers of large steel manufacturers.

In the sugar-energy segment, we have an exclusive contract with Copersucar, the cooperative to which we are

associated, for the supply of sugar and ethanol, which ensures financial, logistical and marketing benefits and advantages. Copersucar sells our products globally, in addition to playing an important role in constantly improving our quality and making decisions about prioritizing the goods to be manufactured. Furthermore, to commercial and logistical intelligence, Copersucar provides other competitive advantages, such as cost optimization with scale gains and fundraising. We also participate in the cooperative's Working Groups that discuss possibilities to improve activities, and we sit on bodies such as the Advisory and Fiscal Councils.

With the expansion of our portfolio of sugar-energy products, which in 2021 will include electricity, and in 2022 the commercialization of yeast, we have also developed new commercial partnerships. Maringá Energia's main client is Companhia Paranaense de Energia (Copel). As for yeast, we already have a contract with Aleris, a global reference company in the animal nutrition market.

In common in both sectors, we have competitive advantages. One is the flexibility in our factories. In the production of ferroalloys, we deliver the product with specifications that meet the unique needs of customers,

We expanded our product portfolio in Sugar-energy by electrical energy cogeneration in 2021, and yeast production in 2022.

including for the production of more sophisticated steels, which require differentiated raw materials with greater added value. At Usina Jacarezinho, in turn, we can make the production mix more flexible, in a 60/40 ratio between products, to fully meet market demands and better use of prices and premiums paid.

Another of our differentiators is the investment in technologies and inputs that make our business increasingly “green” – a factor that gains relevance in national and international markets and tends to provide more advantages in future negotiations. The internal process of verticalization is also a differential. Own production of raw materials and other resources vital to production, such as self-generation of electricity, and the option for ever more efficient and ecologically correct alternatives make customers feel safer, as it reinforces our ability to face market fluctuations with keeping production and costs under control.



# Satisfaction

Any customer complaints are registered by the Commercial department, responsible for the topic, in the RQ-Customer Complaint Service, classified in relation to product, logistics, commercial or other factors. Those involved are notified and the return of the product is requested for the assessment of the divergence, according to the PSQ-Control of Nonconforming Product. The customer is informed about the origin of the complaint and the RQ-Report of Non-Conformity and Corrective Action is completed. At the end, the actions are evaluated for effectiveness, so that the complaint is closed. Monitoring and evaluation of complaints occurs through KPIs.

We carry out satisfaction surveys to investigate customer perceptions and criticisms regarding our commercial performance and the quality of our products. In the steel industry, the survey encompasses aspects such as proper packaging, meeting deadlines and delivering the correct volumes and specifications of the ferroalloys sold. Since we started measuring, the satisfaction rate has always exceeded 90%. In 2022, it was 92%, which represented an increase of 2 percentage points compared to 2021, when the grade was affected by high market demand, which put pressure on our inventories and ability to meet orders, and due to the difficulties in contracting

freight. Furthermore, to promoting the recovery of our reserves, we invested in resources during the year to improve our logistics programming. As a way of qualifying our performance in the coming periods, we hired a specialist to reinforce the market analysis team.

The sugar-energy area satisfaction survey is applied to Copersucar, which fully absorbs our sugar and ethanol production. We annually send a questionnaire to the cooperative dedicated to the areas of planning, sustainability, quality and partnership billing. In the year, Copersucar's satisfaction index was 95.6%.



Mauro Sérgio  
(Hillo Operator)

## Measuring customer satisfaction - Note

### Steel Industry

2020	2021	2022
93%	90%	92%

### Sugar-energy

2020	2021	2022
93%	97%	96%

# Suppliers

## GRI 3-3 – Sustainable supply chain

Suppliers are strategic partners with whom we want to maintain close ties and share values and best practices. Establishing close and trustworthy relationships with them is important to ensure the supply of essential inputs to our business, with quality and within the desired deadlines. We seek to maintain a portfolio of diverse partners and a mix of contracts with variable terms, in addition to monitoring changes in the supply chain and dialoguing with companies about market behavior and factors capable of affecting it.

When establishing contracts with partners, we observe and demand compliance with legal, social, environmental and economic requirements – an essential criterion to start and maintain partnerships. Furthermore, to specific clauses on these topics, the documents include our internal policies and the Code of Conduct, with which companies must commit, as well as questions about competition practices and slave labor. The supplier approval process also involves the presentation of documentation that is periodically evaluated and reevaluated. We use our Supplier Portal to help us manage these processes.

We are committed to this phase, with analyses and evaluations of the documentation presented, proving the payment of taxes and compliance with labor rights, which can be complemented by an on-site visit. In specific

supplies, periodic revalidation of documentation is required – a task that is the responsibility of the specific support area.

Furthermore to these practices, in 2022 in Itapeva we began the approval of criticality A suppliers and service providers by a third-party company, applying an approval level score. They monitor the mobilization of service providers, requiring documentation proving regularity in relation to the care of their professionals, through a computerized platform and periodic verification. We also monitor monthly the regularity of payments to registered professionals, as well as mandatory payments in relation to CLT (Consolidated Labor Laws), through a computerized platform and periodic verification.

In Jacarezinho, all suppliers go through an approval process, in which the risks relating to the services and products to be provided are assessed, thus ensuring that all our requirements are met. Upon receipt of material, a conformity assessment is carried out, considering the established standards and the product checklist, if applicable. Every two months, all suppliers of highly critical products are reassessed, in order to maintain the effectiveness of approval and evaluation. For the supplier to remain active, it must comply with at least 70% of the requirements listed in our standards.



Oseias Belemer  
(Warehouse  
keeper)

In 2022, at Maringá Ferro-Liga, we continued to rely on the services of a company specialized in the certification and monitoring of third-party documentation – a practice that should be extended to the other companies of the Group.

Regarding manganese ore, the main raw material for the manufacture of manganese ferroalloys, the fact that many of our suppliers face problems with the regularization of mining activities requires even more careful monitoring on our part. For this, we keep a team able to analyze all documentation related to the supply and which, in addition to the initial compliance audit, visits the mining areas to verify that extraction is being carried out precisely in the licensed locations.

In line with the FSSC 22000 certification, renewed in 2022 by Usina Jacarezinho, all partners related to the production of white sugar classified as highly critical are constantly monitored and undergo two comprehensive annual assessments because their solutions come into contact with the final product – intended for human consumption.

## Integrated Sugarcane Producer

Of the annual volume of sugarcane processed by Usina Jacarezinho, approximately 65% comes from Integrated Sugarcane Producers (PICs). They are farmers in our region of operation with whom we establish partnerships to supply the raw material used in the manufacture of sugar and ethanol. In order to manage this relationship in a close, transparent and advantageous way for both parties, we have a specially constituted department where four agronomists and four assistants work. In 2022, 350 farmers delivered 1.626 million tons of sugarcane to the Usina Jacarezinho, an increase of 8.4% compared to the previous year. The increase was partly due to a small increase in the area dedicated to plantations, which went from 17,013 hectares to 17,664 hectares, but mainly due to productivity per hectare, which went from 88 TCH to 92 TCH.

We provide support and technical advice to the PICs throughout all stages of cultivation, and monitor the performance of their crops. We encourage among them the adoption of good agricultural practices and technologies capable of providing relevant financial and environmental gains. We recommend, for example, the Simultaneous Inter Occupational Method (Meiosi), which includes interspersing sugarcane cultivation with other crops, or the use of global satellite navigation systems and organic fertilization.

We provide incentives to producers, which consist of granting loans with discounts, which are paid after the sugarcane is delivered. We also made it possible to donate crop seedlings

to PICs during the period. Previously we lent them, with the return in sugarcane. The donation was part of what we call Projeto Muda Zero (Zero Seedling Project) which, in addition to benefiting partners, aims to strengthen our ties with them. The benefits were directed to producers who plant cane in the consecana modality, who expanded their planted areas from 289 ha in 2021 to 618 ha in 2022.

Actions such as promotion and Muda Zero are also relevant to retain farmers. But there are additional similar factors, such as our reputation, both due to timely payments and the provision of technical advice, which contribute to being successful in the activity.

Another relevant aspect related to PICs concerns socio-environmental responsibility. In order to establish contracts with them and avoid planting in legal reserve areas, we require the presentation of the Rural Environmental Registry (CAR). Furthermore, the agreements provide for the adoption of the best agricultural practices, which also have positive impact due to the reduction of erosion, eliminating the need for new areas for planting and increasing the income of rural workers. We thus contribute to form a sustainable supply chain. Because we promote meetings and chats with producers so that, just like at Canavieira Jacarezinho, they reduce the use of chemical products, both in fertilization and pest control, replacing them with biological alternatives, such as poultry litter.

## Manganese

Furthermore, to not having a large number of manganese ore suppliers in Brazil, the quality of the product may be insufficient. To mitigate these difficulties, we invested in mining – with the creation of Moema, in Pará, and with studies and prospecting for the acquisition of other extraction areas. We seek to maintain the widest portfolio of partners possible and continuously monitor the characteristics of the ore supplied. We visited suppliers' facilities and invited them to learn about our processes and the impact of manganese quality on them and our yield. Dialogue with partners is constant, in order to help them improve their performance. When we detect non-conformities or opportunities for progress, we suggest measures or, depending on the level of criticality, we prepare an action plan with a future demand for evidence regarding the resolution of the problems.

In 2022, with the partners who serve us in the logistics area – transporters who take raw materials to the factory and products to customers – we began to share a quality assessment carried out by our team. This assessment indicates points for improvement based on the analysis of indicators that relate combined and delivery times and combined and delivery prices, assigning an overall score to the contractors.

# Social responsibility

GRI 3-3 - Local Development and Impact on the Community | 203-1

We are among the main companies in some of the regions in which we operate, especially in Jacarezinho (PR) and Itapeva (SP). We generate socioeconomic and environmental impacts through direct and indirect employment opportunities, promotion of entrepreneurship, and also social projects aimed at health, education and the environment.

In 2022, we established a Working Group (WG) to integrate and strengthen our social responsibility efforts and thus manage the impacts on the communities in which we participate. That matures our social role, which is one of our strategic pillars. Furthermore, we consolidated our presence in the Marabá region (PA), seeking to contribute to local development collaboratively, with community representatives.

In the other regions, where we have been operating for a longer time, we seek to keep doors and communication channels available for dialogue with communities and government representatives. In Paraná, we also developed awareness campaigns to avoid fires, which are harmful to the surrounding populations.

Both in Jacarezinho (PR) and Itapeva (SP) we have been carrying out campaigns and donations for the benefit of the communities for years. In 2022 we offer courses with the possibility of future hiring; we promote actions on commemorative dates, such as Tree Day – in Jacarezinho we deliver seedlings and informational material to municipal school students, and in Itapeva we adopt Jardim Pôr do Sol Square, a green area in the homonymous neighborhood, with 2.5 thousand m<sup>2</sup>. We also replicated our traditional warm clothing campaign, which collected 200 kilos of clothes and blankets, donated to charitable entities.



Adoption of Jardim Pôr do Sol square in Itapeva-SP



## Social projects GRI 203-1

In 2022, we continued to support selected projects due to their alignment with our corporate values and the demands of local communities. Through incentive laws and our own resources, we allocated R\$1.5 million to social projects and institutions, which enabled sponsoring the following initiatives:

**Guri Project** – Largest Brazilian sociocultural program, serves children and adolescents aged 6 to 18 years after school, offering courses in musical initiation, luthier, choral singing, music technology, plucked string instruments, bowed strings, woodwind, keyboards and percussion. We contributed to the initiative in the municipalities of Ourinhos (SP) and Itapeva (SP).

**Start year:** 2018

**Beneficiaries:** 588

**Contribution:** R\$ 100 thousand

**Registros do Amanhã (Records of Tomorrow)** –

Initiative that favors young people between 13 and 17 years old through audiovisual workshops over 11 months to train them to work in the sector, also covering topics such as emotion, cognition and creativity. Participants attend primary and secondary schools, and have these activities after classes. It is a partnership with Goal Projetos and the municipalities of Itapeva and Jacarezinho, cities where the projects are carried out.

**Start year:** 2021

**Beneficiaries:** 185

**Contribution:** R\$ 397 thousand

**Bom de Nota, Bom de Dança** –

The action provides ballet and urban dance classes to young students from Jacarezinho, in order to stimulate their personal development and overcome challenges through artistic and cultural expression and cooperation, respect and solidarity.

**Start year:** 2019

**Beneficiaries:** 140

**Contribution:** R\$ 190 thousand

**Musidou** – Conducted by Sustenidos Social Organization of Culture, a pioneering non-profit institution in carrying out projects that promote musical education and the collective practice of music with excellence, it focuses on the human development of generations in formation. It takes place in Jacarezinho, and, in 2022, our contribution made a new center of the initiative possible.

**Start year:** 2021

**Beneficiaries:** 49

**Contribution:** R\$ 300 thousand

**Overcoming** – The project encourages the inclusion of people with disabilities through sport. Held in collaboration with Apae from Jacarezinho, it includes swimming and badminton classes for young people.

**Start year:** 2022

**Beneficiaries:** 50

**Contribution:** 142 thousand



*Bom de Nota, Bom de Bola Project in Itapeva-SP*

**Bom de nota, bom de bola (Good grades, good at ball)** –

Sports incentive project that provides tennis classes for young people aged 7 to 14 in the municipality of Itapeva. The project is carried out by Goal Projetos, in partnership with the city hall. The investment was made in 2021 and the activities carried out during 2022.

**Start year:** 2022

**Beneficiaries:** 75

**Contribution:** R\$ 239.86 thousand

**Usina da Dança** – The project provides jazz and hip-hop classes for young people between 7 and 14 years old in the municipality of Itapeva, an initiative also supported by the city hall.

**Start year:** 2022

**Beneficiaries:** 104

**Contribution:** R\$ 200 thousand

# Our Performance

- *Maringá Group*
- *Sugar-energy*
- *Steel Industry*
- *Mining*

Jeane Teixeira  
(Physiotherapist)







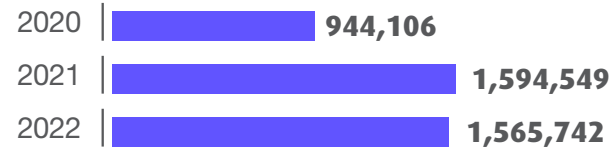
# Maringá Group

We closed 2022 with results that attest to the maturity of our business and governance, the relevance of our strategy and the technical and human capabilities of our operations – despite the already expected negative variation in indicators that make up our financial statement compared to the previous year. In 2021, high demands converged for all our products inside and outside the country, favorable exchange rates and good prices in the national and international markets, a scenario that we were able to take advantage of because we were strategically and operationally prepared. The level of results was a record, which would hardly be maintained or surpassed. In 2022, factors such as presidential elections, government interference in the fuel market, war between Russia and Ukraine, inflationary pressure, high interest rates in most nations and the timid growth of global economies affected our results.

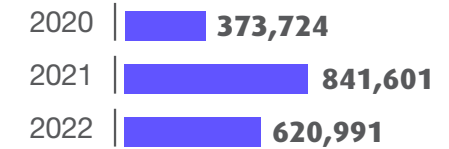
Despite this change in scenarios, in 2022 we recorded adjusted EBITDA of R\$621.0 million. Furthermore, cash remains strong and represents a protection mechanism, an element of security for our business, especially when facing unstable or adverse circumstances. In relation to debt, despite the high cost of capital imposed by the reference interest rate, our leverage is low in the different businesses and its profile is diversified, distributed among partner banks, opportunity banks and market operations - such as issuing Certificates of Agribusiness Receivables (CRAs) –, among others. In 2022, with partner banks, we reprofiled our debt, which was extended, and preserved a high level of minimum cash, giving considerable strength to our liquidity. With the support of an external consultancy, we made progress in defining sugar and exchange rate pricing policies, an important tool that provides, in addition to protection, greater predictability in our economic results.

## Economic-financial performance Maringá Group

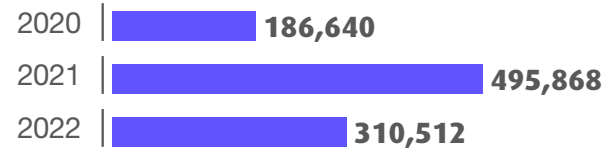
### Net revenue (R\$ thousand)



### Adjusted Ebitda<sup>1</sup> (R\$ thousand)



### Net income (R\$ million)



<sup>1</sup> Ebitda, from the English Earnings, before Interest, Taxes, Depreciation and Amortization, is an indicator that seeks to point out the potential generation of operating cash of the business. Adjusted EBITDA considers other variables in addition to those that make up the acronym itself, such as: equity pick-up, other non-operating results and variation in the fair value of biological assets.

	2020	2021	2022
Net debt (R\$ thousand)	240,621	49,521	56,992
Net debt/adjusted EBITDA	0.64	0.06	0.09
Net debt minus inventories (R\$ thousand)	70,792	-181,295	-285,573
Net margin	19.8	31.1	19.8
Cash and cash equivalents (R\$ thousand)	181,846	430,904	414,021
Cash Generation (R\$ thousand)	341,393	687,169	530,387



Products from  
Usina Jacarezinho



**DVA** GRI 201-1

	2020	2021	2022
Revenues	1,150,589	1,899,524	1,803,330
Inputs purchased from third parties	(620,895)	(856,756)	(1,065,290)
<b>Gross added value</b>	<b>529,694</b>	<b>1,042,768</b>	<b>738,040</b>
Depreciation, amortization and depletion	(74,980)	(98,218)	(116,885)
<b>Net added value produced by the Company</b>	<b>454,714</b>	<b>944,550</b>	<b>621,155</b>
Added value received in transfer	34,382	66,648	122,574
<b>Total added value to be distributed</b>	<b>489,096</b>	<b>(1,011,198)</b>	<b>743,729</b>
<b>Added value distribution</b>	<b>(489,096)</b>	<b>(1,011,198)</b>	<b>(743,729)</b>
Personnel	(108,201)	(125,051)	(140,136)
Taxes, fees and contributions	(95,638)	(282,655)	(140,194)
Third-party capital remuneration	(98,618)	(107,624)	(152,887)
Equity remuneration	(186,640)	(495,868)	(310,512)

# Sugar-energy

We ended 2022 with the second largest sugarcane processed volume in our history: 2.56 million tons. The indicator exceeds that recorded in 2021 by 5%. The harvest was extended until the last days of December, due to the heavy rainfall in the last quarter, delaying the harvest. Of the total amount of sugarcane, we processed in 2022, 37% (or 934 thousand tons) came from our own plantations and leased land and the other 63% (1.62 million tons) came from Integrated Producers.

One of our differentials is the flexibility to adapt the industry to prioritize the production of sugar or ethanol at Usina Jacarezinho, in line with market demands and projections. We can reach the mix of sugar and ethanol in the ratio of up to 60%/40%, privileging one commodity or another.

In accordance with our commitment to Copersucar, responsible for marketing our products in Brazil and abroad, we focused on increasing our deliveries of white sugar and anhydrous ethanol, closing the period with, respectively, 77.4 thousand tons (23% growth compared to the previous year) and 90,000 m<sup>3</sup> (an increase of 49% in the same comparison).

As for sugar production, we also delivered 80.2 thousand tons of raw sugar. Thus, considering the two manufactured varieties, we reached 157.6 thousand tons. In the production of anhydrous and hydrated ethanol, at the end of 2022 we recorded 101.6 thousand m<sup>3</sup> (94.7 thousand m<sup>3</sup> in 2021).

Maringá Energia, in turn, generated 115.3 thousand MWh of energy in 2022 from sugarcane bagasse, 62.3 MWh of which was sold externally. In 2022, we started the necessary activities to double the unit's generation capacity, which should be completed in 2024.

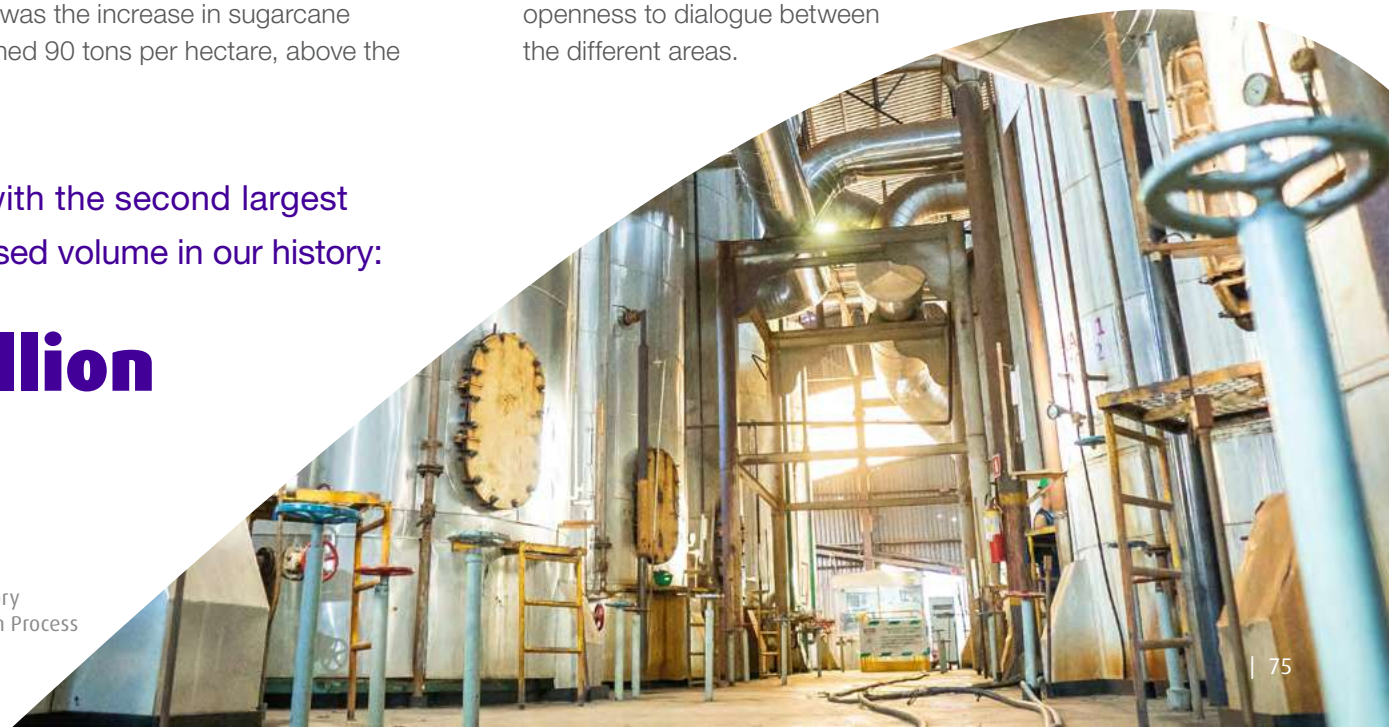
A highlight in the period was the increase in sugarcane productivity, which reached 90 tons per hectare, above the

average recorded in Brazil (72 tons/ha) and in the Center-South region specifically (73 tons/ha), according to data from the National Supply Company (Conab). Our expectation is to make this number grow even more in the next harvests, through prospecting and adopting new technologies and agricultural techniques. We carry out benchmarks with other mills and visits to renowned companies in their sectors, and we maintain close relationships with universities and research bodies, in order to learn about the available solutions and seek those that add value to the business. We also maintain a robust and qualified technical staff, who make decisions quickly, being favored by the proximity and openness to dialogue between the different areas.

We ended 2022 with the second largest sugarcane processed volume in our history:

## 2.5 million tons

Sugar Factory  
Evaporation Process





In 2022, carried on investing in the insourcing of cutting, transshipment and transportation, gaining efficiency in our operations.

#### Energy generation in MWh



#### Tons of sugarcane per hectare in tons/ha



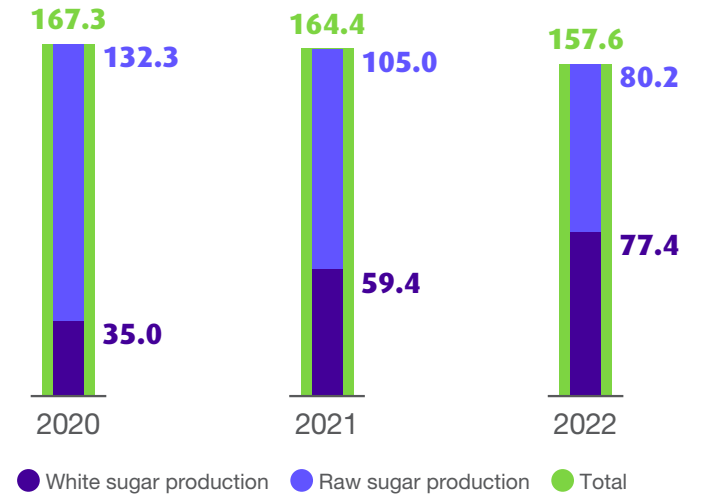
The changes promoted to increase production involved planting systems – we started to adopt the “half-year cane”. This involves adopting the Interrotational Method Occurring Simultaneously (Meiosi) for crop rotation and the improvement of care for sugarcane fields, including soil correction and pest control and the use of precision technology. We are also committed to increasing the insourcing of cutting, transshipment and transport (CTT) of sugarcane, as we carry out activities with great efficiency. This directly impacts the quality gains of operations and plantations.

Another important action in 2022 was the start of unloading operations with road trains, providing improved transportation from the crop to the industry, with reduction in fuel consumption and the number of trucks used, in addition to making better use of long-distance trips. The satisfactory results motivated us to expand this type of discharge gradually in the coming years.

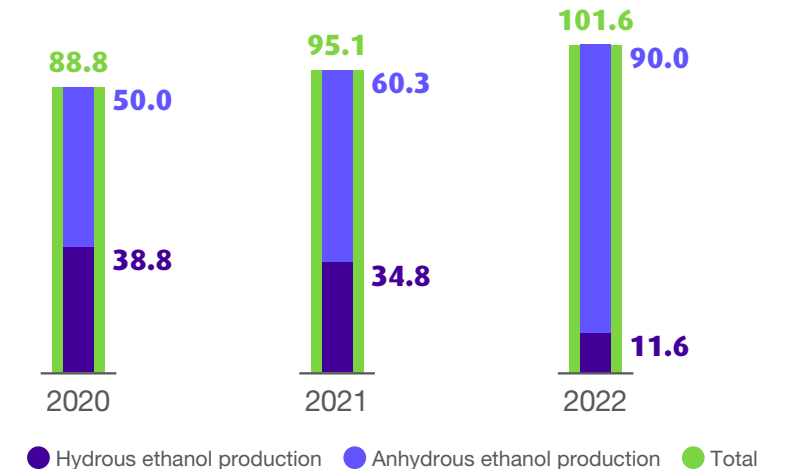
One of our objectives in relation to the sugar-energy sector is to increasingly expand our product portfolio to open up other markets and fully exploit the potential of sugarcane and waste from the production of sugar and ethanol. Thus, in November, we inaugurated our yeast production/drying unit – a microorganism that ferments sugarcane juice in the manufacture of ethanol and can later be recovered and sold for use in animal feed. We expect to process approximately 5,000 tons of yeast in 2023, of the inactive, autolyzed and cell wall types.

### Sugar-energy operating performance

#### Sugar production in thousand tons



#### Ethanol production in thousand m³





Josele de Oliveira  
(Cleaning Assistant)



We recorded adjusted EBITDA of R\$314.4 million, which includes Maringá Energia, a decrease of 12.3%, due to the drop in ethanol prices, after the tax relief movement in the second half of the year, removing the competitiveness of the product compared to gasoline. The price of electricity, despite being remunerative, was lower when compared to 2021, which was a very positive year. Another factor was pressure from operating costs, due to high inflation that impacted labor, materials, diesel and agricultural inputs.

Regarding sugar and ethanol production, we overcame the challenge of rains that delayed harvesting and milling by at least three weeks, with negative impacts on fixed costs and on Total Recoverable Sugar (ATR), which measures quality and capacity to be converted into sugar or ethanol through the transformation coefficients of each production unit. Even so, we processed a volume in line with plan. We made the right decisions about the production mix to obtain maximum profitability in the period. The results recorded also express the increase in productivity in the field and the sale of CBIOS. We more effectively aggregate other relevant components in our result, such as the proceeds from the sale of CBIOS and the revenue from the sale of bagasse, which was preserved even with the export of electrical energy.

#### Consolidated economic-financial performance of Sugar-energy

	2020	2021	2022
Net revenue (R\$ thousand)	447,169	643,766	666,577
Adjusted Ebitda (R\$ thousand)	209,556	353,357	309,885



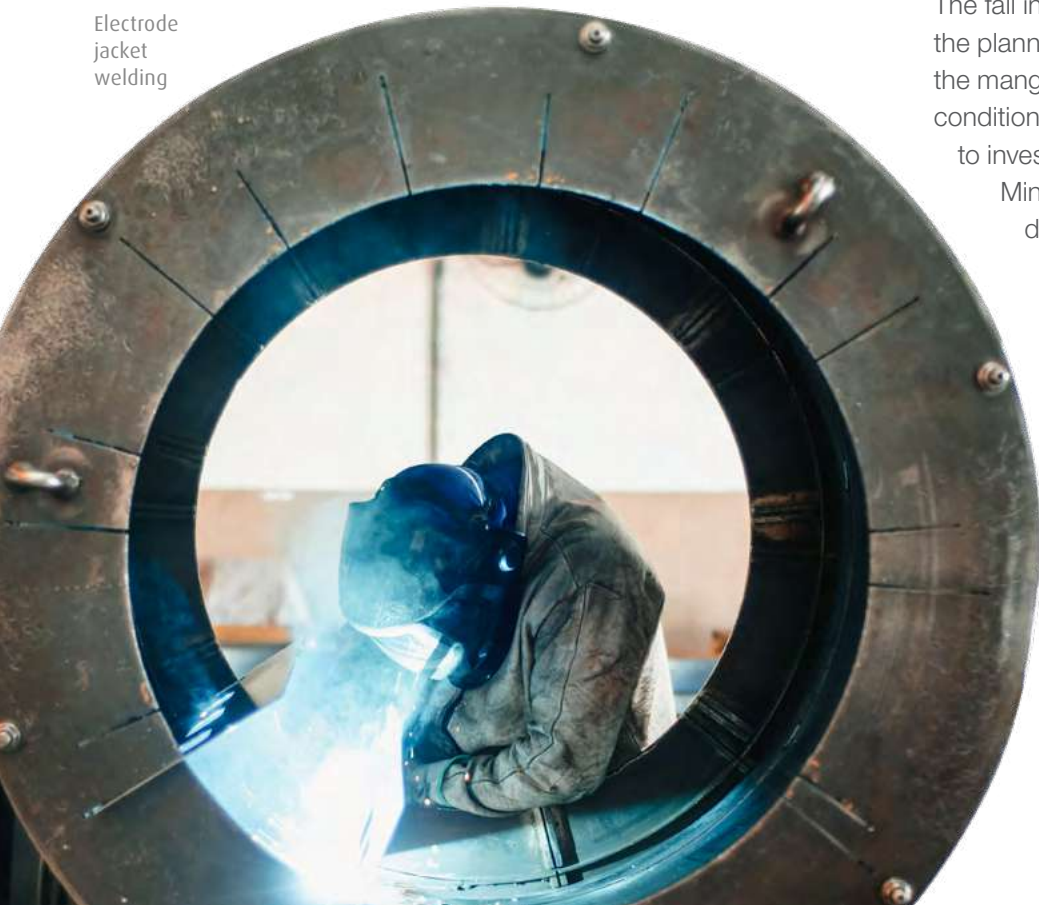
# Steel Industry

Endowed with the capacity to produce up to 100,000 tons of ferro silicon-manganese and high-carbon ferromanganese per year, through five electric reduction furnaces – which makes us the largest producer of this input in South America and leader in the domestic market. In 2022, we produced 89,000 tons, a volume destined especially to

our customers in Brazil (15% were exported). The total was 9.8% lower than that registered in 2021, an expected result due to the extremely favorable behavior of the market in the previous period and the fluctuations registered throughout 2022. Total sales stood at 96.7 thousand tons – a result 13.4% lower in the same comparison.

In 2022, Furnace 4 was repowered, which resulted in a power gain of close to 10%, in addition to other benefits related to efficiency and safety. Another action was the continuation of the installation of sintering equipment, acquired in 2021, which will allow the use of fine granulometries of manganese ore in the furnaces, with better use of the ore.

Electrode jacket welding



The fall in production, which ended the year around 5% below the planned level, is justified by the oscillation in the quality of the manganese ore supplied by partners to Ferro-Liga. This condition reinforces the importance of our strategic move to invest in mining to supply the factory, whether through Mineração Moema, or via investment in other smaller deposits – assets in this sense already total more than 30, in different stages of development.

Regarding energy self-generation, our Hydroelectric Generating Centers (CGHs) performed well, 8.6% above the previous year. One of the reasons was the intense rainfall, reaching 54,448 MWh, which met approximately 17% of our industrial needs. The perspective is to increase the self-production of energy in the new periods, increasing the capacity of the existing CGHs or taking advantage of other opportunities, including wind or photovoltaic generation.

With regard to sales, the first half was marked by high global demand for ferroalloys, which was linked to the beginning of the conflict between Russia and Ukraine, as the second country stands out in the production of the raw material. The second half of the year was marked by the retraction of demand with the gradual settlement of the market, a slowdown in the global economy and the energy crisis in Europe and the consequent impact on the steel industry.

Results were in line with expectations in the production of bio-reductant to supply our furnaces. We reached the end of the period with a production of 33.4 thousand tons of bio-reductant, a volume similar to that of 2021. The next few years should be marked by an increase in production, due both to efficiency gains with the replacement of round furnaces by rectangular furnaces and the adaptation/reactivation of Bio-reductant Production Units (UPRs).

We reached adjusted Ebitda of R\$317.6 million – a decrease of 35.5%, in a year marked by two very different semesters in terms of prices and demand/sales. In the first half of the year there was a significant increase in the value of the commodity with the advent of the conflict between Russia and Ukraine and fears of a shortage of raw materials. In the second half of the year, values and sales began to fall significantly, due to the weak global economic performance and the lower intensity of steel production. The conflict in Eastern Europe also caused pressure on production costs, resulting from the imbalance in international trade flows.

The financial performance was positively affected by gains from foreign exchange derivatives, which added R\$19 million to EBITDA. It was also affected by the second largest operational cash generation, R\$225 million, increasing the cash balance to R\$343 million at the end of December. Another important aspect was the deliberate action to increase stocks of raw materials, aiming to protect activity during the rainy season in the North of Brazil, which is responsible for supplying high-grade ore, thus increasing the stock of finished products. That preserved adequate production pace, loading the inventory that is being sold in the first quarter of 2023 and providing more adequate margins for the second half of 2022.

#### Economic and financial performance Steel Industry (Thousand R\$)

	2020	2021	2022
Adjusted net income	473,434	935,700	899,165
Adjusted Ebitda	164,327	492,588	317,596

### Steelmaking operating performance

#### Production of ferroalloys in tons



#### Total sales in tons



#### Self-production of renewable energy in MWh



#### Bio-reductant production in tons



Self-generation of energy increased 8.6% in 2022, compared to 2021.



Joel Barbosa  
(Mechanical Maintenance Supervisor)



# Mining

Established in 2021, Mineração Moema is located in Marabá (PA), which, according to the Brazilian Mineral Summary, has the second largest manganese reserves in the country, with 69.6 million tons. Our objective in this new business is to reinforce our source of high-grade manganese ore, an essential raw material for the Group.

In 2022, we had a production forecast at Moema of 45 thousand tons of ore, which was exceeded, reaching the end of the period with around 63 thousand tons. Of this total, 30 thousand tons have already been sold and delivered in the second half of 2022 to

## Operational performance Mining

	2021	2022
Tons of manganese ore mined	11,930	63,063
Manganese ore quality (average content, in %)	38.6%	40.4%
Total sales (thousand tons)	0	30

## Economic-financial performance Mining

	2021	2022
Adjusted Ebitda (R\$ thousand)	-4,087	-3,777

Maringá-Ferro-Liga via cabotage through the Port of Barcarena. The remaining production is being billed to Maringá Ferro-Liga by road transport via Marabá Warehouse.

Another highlight of Moema's operations is the fact that the content of the manganese ore extracted was, on a weighted average, above 40%, meeting the intended specifications.

In 2023, we expect the first area licensed for extraction to be exhausted and we plan to migrate our activity to a new polygon very close to the current area. At the same time, we will maintain prospecting and research work to identify and consolidate new mineral opportunities in the region, aiming to perpetuate the activity and become a reference manganese mining company in Pará.



Raquel Coelho  
(Mining Operations  
Coordinator)



# GRI Content Index



Cláudio Sakaguchi  
(Laboratory and Water  
Treatment Supervisor)



# GRI Content Index

GRI 102-55

Statement of use	Maringá Group reported in accordance with the GRI Standards for the period from January 1 <sup>st</sup> to December 31 <sup>st</sup> , 2022.
GRI 1 used	GRI 1: Foundation 2021

## General Disclosures

GRI Standards	Disclosure	Location	Omission
GRI 2: General Disclosures 2021	2-1 Organizational details	<a href="#">13</a>	-
	2-2 Entities included in the organization's sustainability reporting	<a href="#">4</a>	-
	2-3 Reporting period, frequency and contact point	<a href="#">4</a>	-
	2-4 Restatements of information	<a href="#">4</a> Reformulations are indicated in the footnotes of each GRI table.	-
	2-5 External assurance	None.	-
	2-6 Activities, value chain and other business relationships	<a href="#">13</a>	-
	2-7 Employees	<a href="#">13</a> , <a href="#">49</a> , <a href="#">50</a> , <a href="#">51</a>	-
	2-8 Workers who are not employees	<a href="#">49</a> , <a href="#">50</a> , <a href="#">51</a>	-
	2-9 Governance structure and composition	<a href="#">28</a> , <a href="#">54</a>	-
	2-10 Nomination and selection of the highest governance body	<a href="#">28</a>	-
	2-11 President of the highest governance body	<a href="#">28</a>	-
	2-12 Role of the highest governance body in overseeing the management of impacts	<a href="#">28</a>	-
	2-13 Delegation of responsibility for managing impacts	<a href="#">24</a>	-
	2-14 Role of the highest governance body in sustainability reporting	<a href="#">4</a>	-



GRI Standards	Disclosure	Location	Omission
<b>GRI 2: General Disclosures 2021</b>	<b>2-15</b> Conflicts of interest	We have a set of procedures and measures to identify and manage conflicts of interest. We maintain a Code of Conduct that establishes principles and behavioral guidelines for our employees, highlighting the importance of reporting and avoiding situations of conflict of interest. We carry out regular assessments to identify and analyze risks, including analyses of conflicts of interest in our operations, and when necessary we submit them to the Audit, Risks and Compliance Committee (CoAud).	-
	<b>2-16</b> Communication of critical concerns	<a href="#">30</a> , <a href="#">31</a>	-
	<b>2-17</b> Collective knowledge of the highest governance body		Information not available
	<b>2-18</b> Evaluation of the performance of the highest governance body		Information not available
	<b>2-19</b> Remuneration policies	<a href="#">54</a>	
	<b>2-20</b> Process to determine remuneration	<a href="#">54</a>	-
	<b>2-21</b> Annual total compensation ratio		Confidential information
	<b>2-22</b> Statement on sustainable development strategy	<a href="#">8</a> , <a href="#">11</a>	-
	<b>2-23</b> Policy commitments	<a href="#">16</a> , <a href="#">30</a> , <a href="#">31</a>	-
	<b>2-24</b> Embedding policy commitments		Information not available
	<b>2-25</b> Processes to remediate negative impacts		Information not available
	<b>2-26</b> Mechanisms for seeking advice and raising concerns	<a href="#">30</a> , <a href="#">31</a>	-
	<b>2-27</b> Compliance with laws and regulations	During the year, we did not suffer any significant environmental violations due to non-compliance with environmental laws and/or regulations.	-
	<b>2-28</b> Membership associations	<a href="#">22</a>	-
	<b>2-29</b> Approach to stakeholder engagement		Information not available
<b>2-30</b> Collective bargaining agreements	<a href="#">48</a>	-	

GRI Standards	Disclosure	Location	Omission
<b>GRI 3: Material Topics 2021</b>	<b>3-1</b> Process to determine material topics	<u>5</u>	-
	<b>3-2</b> List of material topics	<u>6</u>	-
	<b>3-3</b> Management of material topics	<u>26, 30, 32, 34, 36, 38, 41, 57, 60, 61, 66, 68, 70</u>	-
<b>GRI 201: Economic performance 2016</b>	<b>201-1</b> Direct economic value generated and distributed	<u>74</u>	-
<b>GRI 203: Indirect economic impacts 2016</b>	<b>203-1</b> Infrastructure investments and services supported	<u>70, 71</u>	-
<b>GRI 205: Anti-corruption 2016</b>	<b>205-1</b> Operations assessed for risks related to corruption	None of the operations were subject to corruption-related risk assessment. Our controls are for internal process risks.	-
	<b>205-2</b> Communication and training about anti-corruption policies and procedures	There are no established anti-corruption policies and procedures	-
	<b>205-3</b> Confirmed incidents of corruption and actions taken	There were no reported cases of corruption.	-
<b>GRI 206: Anti-Competitive behavior 2016</b>	<b>206-1</b> Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	We were not subject to legal action for unfair competition, trust and monopoly practices. We value compliance with legislation and good market practices in all commercial operations.	-
<b>GRI 302: Energy 2016</b>	<b>302-1</b> Energy consumption within the organization	<u>39, 40</u>	-
	<b>302-2</b> Energy consumption outside of the organization	<u>39, 40</u>	-
	<b>302-3</b> Energy intensity	<u>39, 40</u>	-
	<b>302-4</b> Reduction of energy consumption	<u>38, 40</u>	-



GRI Standards	Disclosure	Location	Omission
	<b>304-1</b> Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<a href="#">47</a>	-
	<b>304-2</b> Significant impacts of activities, products, and services on biodiversity	<p>The nature of significant direct and indirect impacts on biodiversity is related to the construction or use of factories, mines and transport infrastructure and pollution (introduction of substances that do not occur naturally in the habitat, originating from occasional and non-occasional sources). In electric furnaces there are air pollution control systems with sampling points monitored annually, with reporting to supervisory bodies. In the production of bioreductors, there is investment in technologies for emission control and reporting to regulatory bodies.</p>	-
<b>GRI 304: Biodiversity 2016</b>	<b>304-3</b> Habitats protected or restored	<p>During the year, there was no area restoration. In November, seedlings were planted in celebration of River Day. We have legal reserve areas and Permanent Preservation Areas (APP), duly preserved in accordance with current environmental legislation.</p>	-
	<b>304-4</b> IUCN Red List species and national conservation list species with habitats in areas affected by operations	<p>During the year, there was initial monitoring of fauna in the CGH'S belonging to MFL. At CGH São José, two threatened species of mammal fauna were recorded. The capuchin monkey (<i>Sapajus nigritus</i>) is classified as "near threatened", in national (MMA, 2018; 2022) and international (IUCN, 2022) parameters, due to the gradual loss of habitat. The ocelot (<i>Leopardus pardalis</i>) is considered "least concern" on both the national (MMA, 2018) and international (IUCN, 2022) lists, justified by its enormous distribution throughout the national territory." In the flora survey carried out at PCH Poço Preto 2, no species at risk of extinction were found.</p>	-

GRI Standards	Disclosure	Location	Omission
<b>GRI 305: Emissions 2016</b>	<b>305-1</b> Direct (Scope 1) GHG emissions	<a href="#">41</a> , <a href="#">43</a> , <a href="#">44</a>	-
	<b>305-2</b> Energy indirect (Scope 2) GHG emissions	<a href="#">41</a> , <a href="#">43</a> , <a href="#">44</a>	-
	<b>305-3</b> Other indirect (Scope 3) GHG emissions	<a href="#">41</a> , <a href="#">43</a> , <a href="#">44</a>	-
	<b>305-4</b> GHG emissions intensity	<a href="#">41</a> , <a href="#">43</a> , <a href="#">44</a>	-
<b>GRI 308: Supplier environmental assessment 2016</b>	<b>308-1</b> New suppliers that were screened using environmental criteria	The percentage of new integrated sugarcane producers contracted based on environmental criteria was 100% (19) in 2022. Data unavailable for other suppliers and units.	Information not available for suppliers (excluding integrated sugar cane producers) in the Sugar-energy and Steel industry.
	<b>308-2</b> Negative environmental impacts in the supply chain and actions taken	None of the 250 integrated sugarcane producers were identified as causing actual and potential negative environmental impacts. Data unavailable for other suppliers and units.	Information not available for suppliers (excluding integrated sugar cane producers) in the Sugar-energy and Steel industry.
<b>GRI 401: Employment 2016</b>	<b>401-1</b> New employee hires and employee turnover	<a href="#">52</a> , <a href="#">53</a>	-
	<b>401-2</b> Benefits provided to full-time employees that are not provided to temporary or part-time employees	<a href="#">54</a>	-
	<b>401-3</b> Parental leave	<a href="#">56</a>	-



GRI Standards	Disclosure	Location	Omission
<b>GRI 403: Occupational health and safety 2018</b>	403-1 Occupational health and safety management system	<a href="#">61</a>	-
	403-2 Hazard identification, risk assessment, and incident investigation	<a href="#">61</a>	-
	403-3 Occupational health services	<a href="#">61</a>	-
	403-4 Worker participation, consultation, and communication on occupational health and safety	<a href="#">61</a>	-
	403-5 Worker training on occupational health and safety	<a href="#">61</a>	-
	403-6 Promotion of worker health	<a href="#">61</a>	-
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<a href="#">61</a>	-
	403-8 Workers covered by an occupational health and safety management system	<a href="#">64</a> , <a href="#">65</a>	-
	403-9 Work-related injuries	<a href="#">64</a> , <a href="#">65</a>	-
	403-10 Work-related ill health	There is no record of occupational illnesses internally.	-
<b>GRI 404: Training and education 2016</b>	404-1 Average hours of training per year per employee	<a href="#">57</a> , <a href="#">58</a>	-
	404-2 Programs for upgrading employee skills and transition assistance programs	From PDI, we offer scholarships, internal and external training courses, coaching and mentoring. There is also leadership development (Academia Grupo Maringá), regulatory standards (NR) and ISO standards. For some hierarchical levels, we offer a professional outplacement program and financial recognition.	-
	404-3 Percentage of employees receiving regular performance and career development reviews	<a href="#">57</a> , <a href="#">59</a>	-

GRI Standards	Disclosure	Location	Omission
<b>GRI 405: Diversity and equal opportunity 2016</b>	<b>405-2</b> Ratio of basic salary and remuneration of women to men	<u>54</u> , <u>55</u>	-
<b>GRI 406: Non-Discrimination 2016</b>	<b>406-1</b> Incidents of discrimination and corrective actions taken	<u>60</u>	-
<b>GRI 413: Local communities 2016</b>	<b>413-1</b> Operations with local community engagement, impact assessments, and development programs	Both in Steelmaking and in Sugar-energy, engagement takes place through formal processes of complaints and claims by local communities, and in 2022 no complaints were registered in both units. Although we do not have programs based on mapping real and potential impacts on local communities, we maintain a social project management plan for each operational unit, prioritizing the most vulnerable communities, children and adolescents.	-
	<b>414-1</b> New suppliers that were screened using social criteria		Information not available
<b>GRI 414: Supplier social assessment 2016</b>	<b>414-2</b> Negative social impacts in the supply chain and actions taken	We did not identify a negative impact on the social area of suppliers in the supply chain. We did not demonstrate and did not receive any reports of negative social impact from suppliers, nor of contract termination due to social issues. The Maringá Group does not monitor the social impact of new suppliers and does not yet have a plan for when this monitoring will begin.	-
	<b>416-1</b> Assessment of the health and safety impacts of product and service categories	For 100% of significant categories of products or services, impacts on health and safety are assessed in search of improvements. Achieving the goal is the result of understanding the importance of certification for all organizational levels; the provision of resources by senior management; the interrelated work between the different areas; understanding the importance of maintaining and improving the activities that make up the indicators by all employees; and the preparation and implementation of action plans.	-
<b>GRI 416: Customer health and safety 2016</b>	<b>416-2</b> Incidents of non-compliance concerning the health and safety impacts of products and services	There were no complaints that resulted in fines or warnings.	-





GRI Standards	Disclosure	Location	Omission
<b>GRI 417: Marketing and labeling 2016</b>	<b>417-1</b> Requirements for product and service information and labeling	In Steelmaking, the label shows content mainly related to the substances contained in the products and that may generate environmental or social impact. It also includes guidance on safe use of the product or service. In sugar-energy, 100% of our white crystal sugar complies with labeling requirements.	-
	<b>417-2</b> Incidents of non-compliance concerning product and service information and labeling	There was no case of non-compliance.	-
	<b>417-3</b> Incidents of non-compliance concerning marketing communications	We act preventively through publicity actions and never receive complaints on our official channels due to false news or advertising.	-
<b>GRI 418: Customer privacy 2016</b>	<b>418-1</b> Substantiated complaints concerning breaches of customer privacy and losses of customer data	There were no complaints regarding violations of privacy and loss of customer data.	-

# Credits

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