

Additional Disclosures **Supplement**

to the 2022
CBA Annual Report

Daughters of Elielton Rodrigues
de Almeida, boiler worker at
the Sorocaba Facility (SP), and
Flavio Guilherme dos Santos,
Sustainability Analyst at the
Energy Business

The Legado das
Águas Reserve (SP),
Reservas Votorantim



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The Legado das
Águas Reserve (SP),
Reservas Votorantim



Report overview

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

The 2022 CBA Annual Report covers the following operations: Aluminum business (Mines; Alumínio plant; Itapissuma rolling mill; Metalex; Alux do Brasil), Nickel business (Niquelândia), Energy business (17 wholly-owned hydroelectric plants) and Corporate.

The following operations are not included in the scope of most disclosures: Barro Alto (operated by a third party); Rondon (under development); Ventos do Piauí (startup scheduled for 2023); and jointly owned hydroelectric plants over which the Company does not have operational control (Salto Pilão, Canoas I, Canoas II, Machadinho, Campos Novos and Barra Grande). Any exceptions are noted within each disclosure.

CBA also owns the Legado Verdes do Cerrado nature reserve and is a co-founder of the Legado das Águas reserve. Both reserves are managed by Reservas Votorantim. The disclosures including these operations are noted in footnotes.

CBA's financial statements cover the following operations: CBA S.A.; Alux do Brasil Indústria e Comércio Ltda; CBA Energia Participações S.A.; CBA Itapissuma Ltda.; CBA Machadinho Geração de Energia Ltda.; L.C.G.S.P.E Empreendimentos e Participações Ltda.; Metalex Ltda; and Santa Cruz Geração de Energia S.A. CBA subsidiaries Alunorte – Alumina do Norte S.A. Baesa – Energética Barra Grande S.A.; Campos Novos Energia S.A. and Mineração Rio do Norte S.A. are accounted for by the equity method of accounting. The financial statements are independently audited.

[Click here](#)

to read the financial
statements.



GRI 2-3
**REPORTING PERIOD, FREQUENCY
AND CONTACT POINT**

CBA’s most recent annual report, for fiscal year 2021, was published in April 2022.

GRI 2-5
EXTERNAL ASSURANCE

CBA engaged independent auditors to conduct a limited assurance audit of the Annual Report in accordance with ISAE 3000 standard, incorporated into internal protocols verification by Bureau Veritas.

The report has been reviewed by all governance bodies, including the Statutory Audit Committee.

The relationship between the CBA and the external audit service provider is professional in nature. CBA has a policy in place on audit engagements, and all auditors are required to be independent.

GRI 3-1
PROCESS TO DETERMINE MATERIAL TOPICS

GRI 3-2
LIST OF MATERIAL TOPICS

Our materiality review in 2022 resulted in a few changes from the previous materiality assessment in 2020. Minor changes were made to the descriptions of some topics, and three new material topics were added: risk and crisis management, transparency and stakeholder engagement, and sustainable supply chain. These changes are shown in the figure below:



About CBA – #OurCBA

GRI 2-1

ORGANIZATIONAL DETAILS

CBA is headquartered at Avenida Luis Carlos Berrini, nº 105, 14º Andar, conjunto 141, Cidade Monções, São Paulo City (SP), and has operations in Brazil only.

The aluminum cycle – #WeAreAllCBA

GRI 2-6

ACTIVITIES, VALUE CHAIN AND OTHER BUSINESS RELATIONSHIPS

In our procurement practices, the following are exempt from screening under our procurement policy: Votorantim S.A. portfolio companies, electric, water and gas utilities, mail services, telecommunication services, banks, notary offices, registries, power plants, tax consulting suppliers, CBA employees, experts, surface landowners, online data acquisition platforms, management systems and certification bodies. There were no significant changes to our supply chain compared to the previous reporting period.



Ana Regina da Silva.
Production Operator.
Alumínio Plant (SP)

GRI 308-1
NEW SUPPLIERS THAT WERE SCREENED USING ENVIRONMENTAL CRITERIA

GRI 414-1
NEW SUPPLIERS THAT WERE SCREENED USING SOCIAL CRITERIA

All 2,644* of our suppliers have been screened on social, environmental and other criteria. In the screening process, suppliers complete a questionnaire and provide supporting evidence on environmental and social issues, and accept CBA's Sustainable Procurement Policy. As part of our Sustainable Procurement Program, in 2022 we:

- Implemented the governance mechanisms established for our sustainable procurement program and developed a supplier code of conduct;
- Screened critical suppliers and scanned non-strategic suppliers on ESG aspects defined in 2021; implemented ESG prioritization and screening processes at recent acquisitions (Metalex, Alux do Brasil and Energy Business); reviewed our scorecard (general and ESG); and classified suppliers by size (small, medium and local);

- Developed a roadmap for reviewing technical requirements for priority categories, with a focus on ESG aspects; developed a strategy and implemented technical ESG requirements applicable in 2022; developed and implemented a recommendation rank for suppliers participating in a given bidding process, covering all material criteria (ESG, price, etc.) to support procurement decision-making;
- Developed a contract management model that includes ESG considerations and bid specifications, and developed a strategy to include ESG requirements/KPIS in supplier contracts in 2023;
- Designed an overall strategy for building partnerships with suppliers; this included identifying opportunities for and implementing joint sustainability projects with strategic suppliers, based on an assessment of effort x impact for 2023, and implementing quick wins;
- Developed, agreed on and monitored action plans for strategic suppliers failing to achieve the minimum score, and proposed a supplier development program;
- Strengthened engagement in procurement program governance (with a focus on project leaders and our Sustainable Procurement Committee); developed a medium-term strategy/plan and developed and implemented an annual culture plan (internal) and annual communication plan (internal and external).

* This is the number of new suppliers approved in 2022. CBA has 4,698 suppliers.

GRI 407-1
OPERATIONS AND SUPPLIERS IN WHICH THE RIGHT TO FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING MAY BE AT RISK

GRI 408-1
OPERATIONS AND SUPPLIERS AT SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOR

GRI 409-1
OPERATIONS AND SUPPLIERS AT SIGNIFICANT RISK FOR INCIDENTS OF FORCED OR COMPULSORY LABOR

Our supplier screening procedures identified no operations or suppliers in which workers' rights to exercise freedom of association or collective bargaining may be violated or at significant risk of violation, or that are considered to have significant risk for incidents of child labor and/or forced or slave labor.

CBA's supplier screening process is a way to mitigate risks, with all suppliers required to complete an Integrity Due Diligence (IDD) questionnaire and formally accept CBA's policies.

GRI 204-1
PROPORTION OF SPENDING ON LOCAL SUPPLIERS

In 2022, CBA began identifying its local suppliers, within the Sustainable Procurement Program. The survey of local expenses with suppliers is still in progress. Learn more in the [Annual Report](#).

Governance is key – #Trustworthy

GRI 2-9
GOVERNANCE STRUCTURE AND COMPOSITION

Board of Directors

Name	Number of other roles and duties	Term (years)	Gender	Age	Nationality	Independent (yes or no)	Executive or non-executive position	Board-specific position
Luis Ermirio de Moraes	4 Member of CBA's Remuneration & People Committee, the Board of Directors of Hejoassu S.A., the Board of Directors of Votorantim S.A., and the Board of Directors of Nexa Resources S.A.	2	Male	62	Brazilian	No	No	Chairman of the Board of Directors
Eduardo Borges de Andrade Filho	2 Member of the Remuneration & People Committee; member of the Board of Directors of Nexa Resources S.A.	2	Male	55	Brazilian	Yes	No	No
Franklin Lee Feder	9 Member of the Sustainability Committee; member of the boards of directors of Paccar Inc. Minerals Technologies Inc. Prumo Logística S.A., AES Brasil S.A., FS Bioenergia, Instituto Ethos, and WRI Brasil; member of the advisory boards of Sitawi Finanças para o Bem and the Forum on Business and LGBTI+ Rights	2	Male	71	American	Yes	No	No
Glaisy Peres Domingues	2 Director at Votorantim S.A. (VSA) and Citrosuco Agroindústria S.A.	2	Female	46	Brazilian	No	No	No
José Roberto Ermirio de Moraes Filho	4 Member of CBA's Sustainability Committee, the boards of directors of Hejoassu and Instituto Votorantim, and the Independent Appraisal Board of Insper	2	Male	37	Brazilian	No	No	No
Sergio Ricardo Romani	5 Member of CBA's Statutory Audit Committee; partner at SR Assessoria e Consultoria de Negócios; member of the Audit Committee at Vale; member of the Board of Directors and coordinator of the Audit Committee at CESP	2	Male	64	Brazilian	Yes	No	No



Sustainability Committee

Name	Term (years)	Gender	Age	Nationality	Independent member
Franklin Lee Feder	1	Male	71	American	Yes
José Roberto Ermirio de Moraes Filho	1	Male	36	Brazilian	No
Sonia Aparecida Consiglio	1	Female	55	Brazilian	Yes

Statutory Audit Committee

Name	Term (years)	Gender	Age	Nationality	Independent member
José Écio Pereira da Costa Júnior	6	Male	71	Brazilian	Yes
Sergio Citeroni	6	Male	64	Brazilian	Yes
Sergio Ricardo Romani	6	Male	62	Brazilian	Yes

Remuneration and People Committee

Name	Term (years)	Gender	Age	Nationality	Independent member
Luis Ermirio de Moraes	2	Male	62	Brazilian	No
Gilberto Lara Nogueira	2	Male	73	Brazilian	Yes
Eduardo Borges de Andrade Filho	2	Male	55	Brazilian	Yes

Finance Committee

Name	Term (years)	Gender	Age	Nationality	Independent member
Andrea Cristina Ruschmann	1	Female	37	Brazilian	Yes
Glaisy Peres Domingues	1	Female	46	Brazilian	No
João Zeferino Ferreira Velloso Filho	1	Male	35	Brazilian	Yes



Executive Board

Position	Name	Time in position	Holding position to	Gender	Age	Nationality
CEO	Ricardo Rodrigues de Carvalho	5/4/2015	2/28/2023	Male	65	Brazilian
CFO and Investor Relations Officer	Luciano Francisco Alves	9/1/2017 (CFO) and 5/14/2021 (Investor Relations Officer)	2/28/2023	Male	46	Brazilian
Primary Products VP	Alexandre Vianna da Silva	12/18/2020	2/28/2023	Male	58	Brazilian
Human and Organizational Development, Health and Safety, Environment and Sustainability VP	Andressa Rissato Brolacci Lamana	2/24/2021	2/28/2023	Female	45	Brazilian
Downstream Products, Innovation and Digital Transformation VP	Fernando Varella Guimarães	3/31/2016: Downstream Products VP 1/3/2022: Innovation and Digital Transformation VP	2/28/2023	Male	54	Brazilian
Legal, Governance and Compliance VP	Renato Maia Lopes	2/24/2021	2/28/2023	Male	47	Brazilian
Supply Chain and Procurement VP	Roseli Maria de Souza Milagres	9/21/2018	2/28/2023	Female	51	Brazilian
Energy business VP	Daniel Marrocos Camposilvan	1/17/2022	2/28/2023	Male	45	Brazilian
Engineering and Technology VP	Albino Mercado Júnior	4/20/2022	2/28/2023	Male	51	Brazilian



GRI 2-10
NOMINATION AND SELECTION OF THE HIGHEST GOVERNANCE BODY

GRI 2-17
COLLECTIVE KNOWLEDGE OF THE HIGHEST GOVERNANCE BODY

Our highest governance body and its committees are nominated and selected in accordance with our Nomination Policy. Members may be appointed to the Board of Directors by management or by any CBA shareholder, following nomination in a General Meeting. Where individual performance reviews are conducted, they are taken into account in reelecting members.

Any member of the Board of Directors or Executive Board may nominate candidates for a Board of Directors’ advisory committee at least 15 business days in advance of the meeting of the Board of Directors in which the new committee’s composition will be selected. Proposals for Board member reelection are based on individual performance assessments, if performed. Where a candidate for reelection meets the necessary requirements, their name is put to vote in a meeting of the Board of Directors.

Members of the Board of Directors and its advisory committees are nominated on the basis of:

- Alignment with and commitment to CBA’s values and culture, its Code of Conduct, and internal policies;

- Personal integrity and impeccable reputation, and no previous debarment by the Brazilian Securities Commission (CVM);
- Not having held elective Executive or Legislative office in the past three years;
- Education background consistent with the responsibilities of the Board of Directors;
- Professional experience and knowledge for the position to which they are being nominated, having held similar positions or having capabilities and experience of interest to CBA. Knowledge about sustainability and ESG practices are a plus;
- Familiarity with financial management and other areas of business administration;
- Having no conflict of interest with CBA;
- Time available to devote themselves to the relevant roles and responsibilities.

The Board of Directors meets, preferably at CBA headquarters, at least seven times per year on an ordinary bases, and extraordinarily at any time if necessary. Requests for extraordinary meetings must be submitted to the Chair, who takes the necessary steps to call the meeting. Board members may be reappointed. ESG considerations are discussed in all meetings to further enhance the understanding of Board members, who also attend related training, including compliance training.

GRI 2-11
CHAIRMAN OF THE HIGHEST GOVERNANCE BODY

The chair of the highest governance body is not an executive officer.

GRI 2-12
ROLE OF THE HIGHEST GOVERNANCE BODY IN OVERSEEING THE MANAGEMENT OF IMPACTS

The Board of Directors is responsible for setting out general business guidance for the Company and deciding on strategic matters. The Board’s roles and responsibilities additionally include: reconciling the interests of shareholders with those of other stakeholders; ensuring the long-term sustainability of the business through an approach that addresses the full spectrum of economic, social, environmental, compliance and governance issues; ensuring that strategies and guidelines established by the Board of Directors are effectively implemented by the Executive Board; preventing and managing conflict of interest situations; maintaining an up-to-date succession plan for the CEO or chief executive of the Company, and for all other key people.

[Click here](#)



to read the Rules of Procedure of the Board of Directors.

GRI 2-14
HIGHEST GOVERNANCE BODY'S ROLE IN SUSTAINABILITY REPORTING

The Annual Report is reviewed and approved by all governance bodies in an ordinary meeting. It is also approved by the Statutory Audit Committee, and key deliverables during the development of the report are approved by the Executive Sustainability Committee, the Executive Board and the Sustainability Committee. A dedicated working group is set up to develop each report. CBA's material topics are also approved by all governance bodies, including the Sustainability Committee and the Board of Directors.



The Legado Verdes do Cerrado reserve, a CBA-sponsored protected area in the state of Goiás

GRI 2-16
COMMUNICATING CRITICAL CONCERNS

The Sustainability Committee reviews and discusses matters involving our ESG practices, including climate management, our diversity agenda, equity and inclusion, and sustainable procurement. Every six months, it submits concerns and proposed solutions to the Board of Directors. Other committees equivalent in rank are also responsible for bringing critical concerns to the attention of the Board of Directors in ordinary and, if necessary, in extraordinary meetings. The Executive Board investigates concerns that are brought to its attention and refers them to the Board of Directors in ordinary or extraordinary meetings. Market and industry developments are a recurring subject in meetings of the Board of Directors, which seeks to stay abreast of issues affecting the industry as a whole.

In 2022, 15 critical concerns were reported to the Board of Directors, relating to dams, financial matters, risks, and sustainability issues.

Click here



to access the minutes of the Board of Directors meetings.

GRI 2-18
EVALUATION OF THE PERFORMANCE OF THE HIGHEST GOVERNANCE BODY

Members of the Board are evaluated every two years by an independent consultancy firm, and any opportunities for improvement are referred to the Board chairperson. The evaluation includes benchmarking on the composition and operation of the Board, online questionnaires about the Board's operation, peer-to-peer assessments, self-assessments, and assessments of effectiveness on the basis of questionnaires and in-person interviews. These evaluations also cover members' individual contributions, areas for development and personal traits.

The effectiveness assessment produces recommendations on improving aspects such as Board composition, structure and organization, dynamics, communication, strategy and results, risk management, succession and development, and the role of the chairperson and governance secretary.

In response to performance assessments, changes may be made to the Board's composition or to our organizational practices, as necessary.

GRI 2-19
REMUNERATION POLICIES

CBA provides the following remuneration components to employees and members of governance bodies:

- Fixed pay, consistent with the role and individual experience.
- Variable pay, including profit sharing, bonuses, and incentive programs.

In addition to the remuneration received by members of the Board of Directors and its committees, those that are also members of other governance bodies within the Company may, with approval, receive remuneration for multiple roles.

The remuneration criteria for members of the highest governance body and for senior executives are benchmarked against the market, and are designed to recognize individual contributions within each member’s role and the skills and experience each member brings to the Company to drive business growth.

In addition, members of the Executive Board are eligible to variable compensation, which rewards them for meeting annual financial, social and environmental targets and for their performance in managing the Company’s economic impacts. This helps to align executives’ interests with those of shareholders, supporting long-term value creation.

Learn more about CBA’s remuneration practices in our Compensation Policy. This policy was last revised in 2022 to include remuneration linked to social and environmental targets, reflecting a practice already in place of the company.

GRI 2-20
PROCESS FOR DETERMINING REMUNERATION

The aggregate annual remuneration received by governance body members is approved in a General Meeting. The individual remuneration received by each governance-body member is set and approved in a meeting of the Board of Directors, after setting the aggregate remuneration amount. The Remuneration and People Committee advises the Board of Directors on remuneration decisions to ensure they are well-informed and aligned with market practices and CBA’s Compensation Policy.

The votes of stakeholders, including shareholders, regarding remuneration policies and proposals are recorded in minutes of General Meetings and are governed by our Compensation Policy.



to access the
Compensation Policy.

GRI 2-24
EMBEDDING POLICY COMMITMENTS

Embedding policy commitments through internal procedures and policies

CBA’s Code of Conduct and Supplier Code of Conduct have been approved by the Board of Directors, our highest governance body. The Compliance team is responsible for implementing and raising awareness about the requirements in these policies. Policies and procedures have specific levels of approval, according to the board of directors of the subject addressed in the procedures.

The Business Conduct Committee, which supports CBA in upholding ethical standards, has a diverse team with the active involvement of the CEO. This team is responsible for ensuring best practices are followed in investigating whistleblower reports.

During the year, the Compliance team reports on the status of its activities and our Compliance Program to the Executive Board, the Statutory Audit Committee and, lastly, the Board of Directors.

The Compliance team is currently involved in screening suppliers via our Linkana system. To assess suppliers on criteria linked to our Compliance Program, suppliers are asked to complete a questionnaire about their integrity practices. Suppliers are also required to accept and agree to abide by the CBA Supplier Code of Conduct.

GRI 2-27
COMPLIANCE WITH LAWS AND REGULATIONS

The total number of significant instances of non-compliance with laws and regulations, and the monetary value of related fines, decreased between 2021 and 2022.

Labor-related fines are defined as any awards arising from unappealable decisions in Brazil’s labor courts, in non-statute-barred cases.

Tax-related fines are any fines for noncompliance with tax regulations, such as alleged failure to meet tax obligations under the São Paulo State Tax Regulation (RICMS/SP). Fines are reported as the total case value.

Environmental-related cases are defined as any cases affecting our reputation and the environment. CBA is currently party to a single environmental-related case involving an administrative fine imposed against an old unit of the Company, in the State of Santa Catarina. CBA strives at all times to eliminate the risk of noncompliance with applicable laws and regulations.

In relation to **civil cases**, there were no significant fines paid in 2022 for noncompliance with laws and regulations.

The total monetary value of fines in 2021 was a total of R\$ 410.493.278.06, compared to R\$ 43.841.110.74 in 2022. The aggregate amount of tax fines, which decreased dramatically year on year, is dependent on the amount involved in each case. In any given year, CBA could be party to fewer cases with a higher aggregate case value, or vice versa.

Significant instances of non-compliance with laws and regulations	2021				2022			
	Environmental	Tax	Civil/labor	Total	Environmental	Tax	Civil/labor	Total
Instances for which fines were incurred	1	7	187	195	1	10	154	165
Instances for which non-monetary sanctions were incurred	0	0	0	0	0	0	0	0
Monetary value of fines for instances of noncompliance with laws and regulations	R\$ 57,120.31	R\$ 392,514,001.89	R\$ 17,922,155.86	R\$ 410,493,278.06	R\$ 15,000.00	R\$ 28,318,334.19	R\$ 15,507,776.55	R\$ 43,841,110.74

Note: Indicator started to be reported in 2022. no data is available from prior years.

GRI 2-28
MEMBERSHIP ASSOCIATIONS

CBA is an active member of a wide range of trade associations:

- São Paulo Environmental Agreement
- Aluminum Stewardship Initiative (ASI)
- American Chamber of Commerce (AmCham)
- Brazilian Association for Business Communications (ABERJE)
- Brazilian Association of Investors in Self-Production of Energy (ABIAPE)
- Brazilian Packaging Association
- Brazilian Association for Photovoltaic Solar Power
- Brazilian Aluminum Association (ABAL)
- Brazilian Association of Wholesale and Free-Market Power Consumers (ABRACE)
- Brazilian Association of Aluminum Window and Door Manufacturers
- Brazilian Association of Truck Body Manufacturers
- Poços de Caldas Association of Mining Companies (ASMPC)
- Poços de Caldas Association of Mining Companies (ASMPC)
- Committee on Tributaries of the Pomba and Muriaé in Minas Gerais (COMPE)
- Lower Paranaíba River Basin Committee
- Parapanema River Basin Committee
- Sorocaba and Middle Tietê River Basin Committee (CBH-SMT)
- Ribeira de Iguape and Southern Coast River Basin Committee (CBH-RB)
- Paraíba do Sul River Basin Committee
- Serra do Brigadeiro State Park Advisory Board

- Brazilian Business Council for Sustainable Development (CEBDS)
- Brazilian Association of Energy Self-Generators (ABIAPE)
- Brazilian Mining Institute (IBRAM)
- Global Aluminium Foil Roller Initiative (GLAFRI)
- International Aluminium Institute (IAI)
- Global Compact Network Brazil
- Mining Industry Association of Minas Gerais (SINDIEXTRA)
- Mining Industry Association of Goiás and the Federal District (SIEEG-DF)

In addition to our membership of organizations and associations, CBA regularly participates in international aluminum industry events, including LME Week, CRU World Aluminum and the Wood Mackenzie LME Forum, where we discuss the implementation of and developments in regulations, self-regulations or public policies pertaining to our industry. CBA makes public its position on policy matters through the Brazilian Business Council for Sustainable Development (CEBDS), such as in its Letter in Support of Net Zero and its Business Statement on Climate.

CBA is also a member of the São Paulo State environmental regulator's (CETESB) Technical Chamber on Energy and Climate Change and of the Working Group on Tooling, both linked to the São Paulo Agreement, where we support the development of documents and policies. At COP 27, CETESB launched a book of case studies on addressing the climate agenda, one featuring CBA, similar to a previous edition launched in 2021.

In 2022 CBA attended the Global Compact's "SDG in Brazil" event at the UN headquarters in New York, to discuss local progress in advancing the Sustainable Development Goals (SDGs). During the event's Climate panel, CEO Ricardo Carvalho discussed proposed strategies for reducing carbon emissions in the aluminum industry.

As part of our social agenda, CBA orchestrates structural social investments using a collaborative approach, mobilizing funds and organizing partnerships with communities, governments and other stakeholders to implement and improve government programs. Programs in partnership with the Votorantim Institute, such as the Votorantim Youth Fund (VIA), the Partnership for Education (PVE) and Public Management Support directly contribute to enhancing government programs in the locations where we operate.

GRI 205-1
OPERATIONS ASSESSED FOR RISKS RELATED TO CORRUPTION

In 2022, action plans were worked out that Risk Assessment pointed in 2021. The evaluation was carried out by an external consultancy.

As for the next work of integrity risk analysis, scheduled for 2024, the Energy Business and Alux will be covered.

GRI 205-2
COMMUNICATION AND TRAINING ON ANTI-CORRUPTION POLICIES AND PROCEDURES

In 2022, CBA trained 90% of its workforce on its Code of Conduct with live training, videocalls and e-learnings. It’s worth mentioning that all new employees must sign a term of acknowledgment and consent of the Code of Conduct.

Also, 253 employees, which is equivalent to 94% of the eligible public, were trained on the Anti-Corruption Policy. There is an annual communication plan with topics related to the CBA Code of Conduct, among others related to integrity, which aims to reinforce important topics for the Company, and reaches 100% of the internal public.

Communication and training about anticorruption policies and procedures	2021		2022	
	Total number	Percentage	Total number	Percentage
Total number and percentage of employees that the organization’s anticorruption policies and procedures have been communicated to	5,811	100%	6,991	100%
Total number and percentage of employees that have received training on the Code of Conduct	4,279	74%	6,296	90%
Total number and percentage of employees that have received training on anti-corruption			253	94%
Total number and percentage of members of governance bodies that have received training	N/D	N/D	11	92%

Note 1: This disclosure is inclusive of all CBA business units. It excludes Apprentices, Interns and Trainees. This disclosure is not reported by region or for business partners.

Note 2: Training on the Code of Conduct is eligible for all Company employees, while Anti-Corruption training is only eligible for Directors, General Managers, Managers, Coordinators, Consultants and Analysts, from the mapped areas with greater exposure.

Note 3: The indicator started to be reported in 2021, so there is no data for 2020.



Nathalia Pinese
and Andrey Jacob,
Alux do Brasil (SP)
employees

GRI 406-1
INCIDENTS OF DISCRIMINATION AND
CORRECTIVE ACTIONS TAKEN

In 2022 CBA received six reports on discrimination via our Ethics Hotline, of which only one was deemed substantiated. The number of incidents was similar to last year's (five cases, one deemed substantiated). The sustained low number of cases reflects consistent employee communication

(internal communication, lectures, affinity groups) and training on the guidelines outlined in our Diversity Guide. Our Business Conduct Committee is responsible for investigating and taking disciplinary action on reports received via our Ethics Hotline. The Committee is a multidisciplinary group of employees who discuss each case in detail to ensure their decisions are ethical and fair. Where a report is deemed substantiated, the employee involved is terminated.

Discrimination reports received via our Ethics Hotline in 2022	Unsubstantiated	Substantiated	Insufficient data	Under investigation	Grand Total
Instances of discrimination	5	1	0	0	6
Total complaints	222	136	34	43	435

Note 1: Refers to the total number of complaints received through the Ethics Hotline, including all types and not just cases related to discrimination. To learn more, visit [here](#).

Note 2: Indicator started to be reported in 2022, no data is available from prior years.

GRI 411-1
INCIDENTS OF VIOLATIONS INVOLVING RIGHTS OF
INDIGENOUS PEOPLES

SASB EM-MM-210A.3
DISCUSSION OF ENGAGEMENT PROCESSES AND
DUE DILIGENCE PRACTICES WITH RESPECT TO
HUMAN RIGHTS, INDIGENOUS RIGHTS, AND
OPERATION IN AREAS OF CONFLICT

There were no reported incidents of violations involving rights of indigenous peoples and/or traditional communities. CBA carries out preliminary risk assessments to inform the development of projects involving these risks. For example, in developing a greenfield project, a survey is carried out to identify any indigenous peoples living in the project area. In addition, social and social-planning

assessments identify the presence of any traditional/ indigenous peoples and other related stakeholders in the area surrounding the operation.

GRI 412-1
OPERATIONS THAT HAVE BEEN SUBJECT TO HUMAN
RIGHTS REVIEWS OR IMPACT ASSESSMENTS

In 2022, seven CBA operational units, or 63.6% of our Aluminum business operations, were subject to human rights reviews. With the recent takeover of previously separate Energy business operations, 24% of these operations were assessed during the year.

These assessments are carried out as a human rights due diligence process, which mainly follows the Guiding Principles of the United Nations (UN) on Business and Human Rights.

Among the topics evaluated are: the right to life, favorable working conditions, freedom from discrimination, freedom of expression and access to information, freedom of association and the right to join unions, the right to an adequate standard of living, including food, housing, water and sanitation, freedom from slave and forced labor, among others.

The first assessment was conducted in 2019 on our Corporate Office in São Paulo (SP), our Poços de Caldas (MG), Mirai (MG), Itamarati de Minas (MG) mine operations, and our Alumínio Plant (SP). Our Itapissuma (PE) rolling mill was included in the assessment in 2020, and Metalex (SP) was included in 2021.

Operations that have been subject to human rights reviews or impact assessments	2020		2021		2022		
	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Energy Business
Total number of operational units	11	2	11	2	11	1	17
Total number of operational units that have been subject to human rights reviews or human rights impact assessments	6		7		7	0	0
Percentage of operational units that have been subject to human rights reviews or human rights impact assessments	46.2%		53.8%		63.6%	0.0%	0.0%

Note 1: The data for 2020 and 2021 were restated following review (GRI 2-4). In 2022 CBA sold its São Miguel Paulista and it was not included in the indicator.

Note 2: For the indicator, in the Aluminum business the following operations are considered: Caxias Distribution Center, Caxias Solutions and Services Center, Itamarati de Minas, Mirai and Poços de Caldas Minings, Alumínio Plant, Sorocaba Facility, Metalex, Itapissuma, Alux do Brasil and Corporate Office.

GRI 412-2
EMPLOYEE TRAINING ON HUMAN RIGHTS
POLICIES OR PROCEDURES

Information on employee training is derived from a training report available on our e-CBA platform. Training is provided to both active employees and new hires.

GRI 412-3
SIGNIFICANT INVESTMENT AGREEMENTS AND
CONTRACTS THAT INCLUDE HUMAN RIGHTS
CLAUSES OR THAT UNDERWENT HUMAN RIGHTS
SCREENING

CBA and its subsidiaries signed 866 contracts with business partners in 2022. Of this total, 423 contracts included clauses on preventing slave labor, a human rights issue. CBA decides on whether to include human rights clauses in contracts with business partners based on an assessment carried out on those business partners by the relevant departments.

GRI 415-1
POLITICAL CONTRIBUTIONS

CBA made no contributions to political parties or candidates, as these are prohibited by Brazilian Law nº 13.165/2015.

Employee training on human rights policies or procedures	2021	2022
Total number of hours in the reporting period devoted to training on human rights policies or procedures concerning aspects of human rights that are relevant to operations	10,488	13,385
Total workforce	5,590	6,362
Total number of employees who have been trained	3,037	5,466
Percentage of employees trained during the reporting period in human rights policies or procedures concerning aspects of human rights that are relevant to operations	54%	86%

Note 1: The indicator includes training on the Code of Conduct and ESG Track Training.
Note 2: For this indicators, only active employees were considered.
Note 3: 2021 was the first year this indicator was monitored and therefore there are no data for 2020.

Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	2020	2021	2022
Total number of significant investment agreements and contracts	538	718	866
Total number of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	280	335	423
Percentage	52%	47%	49%

Note: Significant investment agreements and contracts are those with a term longer than six months and/or a value greater than R\$ 1 million.

Social value – #ValuablePartnerships

#AMoreDiverseCBA

GRI 2-7
EMPLOYEES

GRI 2-8
WORKERS WHO ARE NOT
EMPLOYEES

SASB EM-MM-000.B
TOTAL NUMBER OF EMPLOYEES,
PERCENTAGE CONTRACTORS

CBA had 6.639 employees in 2022, with around 90% of them based in the state of São Paulo. The increase from 2021 reflects the integration of Alux and the Energy business in the period. In 2022 the Company had 168 apprentices and 184 interns who are not included in the following tables.

Number of employees by gender		Number of employees
2020	Men	4,939
	Women	610
	Total	5,549
2021	Men	5,007
	Women	804
	Total	5,811
2022	Men	5,533
	Women	1,106
	Total	6,639

Note 1: Apprentices and Interns are not included in these data.
Note 2: All employees work full-time.
Note 3: This disclosure includes employees at the Legado Verdes do Cerrado reserve and Barro Alto.

Nayara Gabrielli Borges
de Alcantara, Process
Engineer, Alumínio
Plant (SP)



Number of employees by gender		Number of employees	Number of fixed-term contract employees	Number of indefinite-term contract employees
2020	Men	4,939	4,860	79
	Women	610	564	46
	Total	5,549	5,424	125
2021	Men	5,007	4,928	79
	Women	804	754	50
	Total	5,811	5,682	129
2022	Men	5,533	5,493	40
	Women	1,106	1,069	37
	Total	6,639	6,562	77

Note 1: Apprentices and Interns are not included in these data.
Note 2: All employees work full-time.
Note 3: This disclosure includes employees at the Legado Verdes do Cerrado reserve and Barro Alto.



Number of employees by region		Total number of employees	Number of fixed-term contract employees	Number of indefinite-term contract employees
2020	Northeast	516	516	0
	Midwest	176	174	2
	Southeast	4,843	4,720	123
	South	14	14	0
	Total	5,549	5,424	125
2021	Northeast	524	524	0
	Midwest	185	166	19
	Southeast	5,083	4,973	110
	South	19	19	0
	Total	5,811	5,682	129
2022	Northeast	562	562	0
	Midwest	112	111	1
	Southeast	5,946	5,870	76
	South	19	19	0
	Total	6,639	6,562	77

Note 1: Apprentices and Interns are not included in these data.

Note 2: CBA has no operations in the North of Brazil.

Note 3: All employees work full-time.

Note 4: This disclosure includes employees at the Legado Verdes do Cerrado reserve and Barro Alto.



Geraldo dos Santos Serra, Production Operator at the Alumínio Plant (SP)

Number of workers who are not employees and whose work is controlled by the organization	2020	2021	2022
Direct employees	5,549	5,811	6,639
Fixed third-party employees	819	1,134	1,673
Mobile third-party employees	954	1,240	1,641
Total third-party employees (fixed + mobile)	1,773	2,374	3,314
Total (employees + fixed third-party employees)	7,322	6,945	8,312
Percent of fixed third-party employees	11%	16%	20%

Note 1: Apprentices and Interns are not included in these data.
Note 2: This disclosure includes employees at the Legado Verdes do Cerrado reserve and Barro Alto.
Note 3: All employees work full-time.
Note 4: In 2022, outsourced workers performed services such as janitorial, security, shuttle bus, surveillance, and air conditioner and building maintenance services.
Note 5: The percentage of outsourced workers refers to fixed workers only.

GRI 2-30
COLLECTIVE BARGAINING AGREEMENTS

SASB EM-MM-310.A.1
PERCENTAGE OF ACTIVE WORKFORCE COVERED UNDER COLLECTIVE BARGAINING AGREEMENTS, BROKEN DOWN BY U.S. AND FOREIGN EMPLOYEES

In 2022, 100% of CBA employees were covered by collective bargaining agreements. However, 4% hold leadership positions, such as Coordinators, Managers, General Managers and Directors and others, and they are an exception, provided for in the agreement, for not applying only the salary adjustment clause.

SASB EM-MM-310.A.2
NUMBER AND DURATION OF STRIKES AND LOCKOUTS

There were no strikes or lockouts in the last three years.

GRI 405-1
DIVERSITY OF GOVERNANCE BODIES AND EMPLOYEES

Percentage of employees and members of the Board of Directors by employee category, gender and age group ¹			Apprentices	Interns	Operational	Technician/ analyst/ supervisor	Coordinator/ consultant	Manager/ general manager	Chief officer/ CEO	Total number of employees	Members of the Board of Directors
2020	Age group	<30	100%	99%	19%	16%	3%	0%	0%	12%	0%
		30-50	0%	1%	71%	74%	83%	84%	40%	69%	33%
		>50	0%	0%	10%	10%	14%	16%	60%	10%	67%
	Gender	Men	66%	35%	92%	73%	81%	85%	80%	88%	83%
		Women	34%	65%	8%	27%	19%	15%	20%	12%	17%
2021	Age group	<30	100%	98%	19%	16%	4%	0%	0%	20%	0%
		30-50	0%	2%	71%	76%	83%	86%	57%	70%	33%
		>50	0%	0%	11%	8%	14%	14%	43%	10%	67%
	Gender	Men	37%	46%	89%	69%	81%	84%	71%	85%	83%
		Women	63%	54%	11%	31%	19%	16%	29%	15%	17%
2022	Age group	<30	99%	94%	20%	17%	3%	1%	0%	22%	0%
		30-50	1%	6%	69%	74%	86%	84%	37%	67%	33%
		>50	0%	0%	11%	8%	12%	15%	63%	10%	67%
	Gender	Men	51%	57%	87%	64%	75%	82%	74%	82%	83%
		Women	49%	43%	13%	36%	25%	18%	26%	18%	17%

Note 1: Apprentices and Interns are included in these data.
Note 2: This disclosure includes employees at the Legado Verdes do Cerrado reserve and Barro Alto.

GRI 405-2
RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN

In relation to the ratio of basic salary and remuneration of women to men, the entry-level wage is the same for each position with no gender-based differences.

Any gender-based wage disparity is explained by a longer average length of service for men than for women. Thus, over time, there were more salary adjustments as a result of collective bargaining agreements.

Ratio of basic salary and remuneration of women to men	2021		2022	
	Basic salary	Remuneration	Basic salary	Remuneration
Interns	1.00	1.00	0.98	0.98
Apprentices	0.99	0.96	0.96	0.97
Operational	0.79	0.77	0.78	0.78
Professional	1.01	0.99	1.01	1.03
Leadership	1.03	1.05	0.97	0.94

Note: The leadership category includes consultant II positions, coordinators, managers, general managers, executive officers and the CEO.

GRI 202-1
RATIO OF STANDARD ENTRY LEVEL WAGE BY GENDER COMPARED TO LOCAL MINIMUM WAGE

All employees, regardless of gender, earn more than the minimum wage. The lowest entry-level wage is 10% higher than the current minimum wage. Employees are paid the entry-level wages established for their categories under collective bargaining agreements, with no gender-based differences.

	2020		2021		2022	
	Men	Women	Men	Women	Men	Women
Entry-level wage	R\$ 1,207.80	R\$ 1,207.80	R\$ 1,207.80	R\$ 1,555.40	R\$ 1,342.00	R\$ 1,342.00
Minimum wage	R\$ 1,045.00		R\$ 1,100.00		R\$ 1,212.00	
Ratio	1.16	1.16	1.10	1.41	1.11	1.11



GRI 401-2
BENEFITS PROVIDED TO FULL-TIME EMPLOYEES THAT ARE NOT PROVIDED TO TEMPORARY OR PART-TIME EMPLOYEES

At CBA, employee benefits are consistent with applicable laws and regulations, collective bargaining agreements and employees’ local needs. The same benefits are offered to fixed-term and indefinite-term employees. CBA is an advocate of local hiring.

Benefits provided to employees include:

- Health and dental insurance | Life insurance | Pregnancy program
- *Ser Família* Parenting Program, which offers health care, extended parental leave (30 days for paternity and 180 days for maternity), in addition to other benefits for employees and their families.
- “For You” Quality of Life Program, including Gympass, nutritional advice, road running, and prevention campaigns
- Health Space (learn more in our [2022 Annual Report](#))
- Private pensions
- Meal vouchers or cafeteria service, depending on the site
- Grocery packages or vouchers, depending on the site
- Chartered buses or bus tickets, depending on the site
- College discounts
- *Plenamente* Program, offering confidential counseling on day-to-day or delicate matters, including psychological, legal, financial and social counseling
- Daycare allowance for women and breast-feeding lounges
- Christmas hampers, Christmas Gifts, and Christmas shopping vouchers
- Hybrid work

GRI 3-3
MANAGEMENT OF MATERIAL TOPICS – HEALTH, SAFETY AND QUALITY OF LIFE

Our key commitments on health, safety and quality of life are outlined in our 2030 ESG Strategy. In support of our commitment under this Strategy to achieve an incident frequency rate lower than 1 and eliminate fatalities and severe injuries in our operations, we undertook a set of initiatives that included the following:

- Safe Behavior Program Review. In 2021 we carried out a safety assessment and designed improvement plans that will inform investments over the coming years;
- Continued and enhanced campaigns on health prevention, safety and quality of life for CBA employees and dependents;
- A study in 2021 to identify where we can improve health promotion and quality of life for employees, using a methodology developed by the Brazilian Quality of Life Association (ABQV). The findings from the study informed the development of area-specific action plans;
- A new set of indicators based on a health and quality of life assessment, that we will track via our For You Quality-Of-Life Program.

At CBA we monitor the effectiveness of safety initiatives and safety tool statistics using the ObraSoft platform. Periodic process audits assess the implementation of these tools on the ground, with the perceptions of employees elicited in interviews. Initiatives are also tracked at the

operations level, ensuring that stakeholders are kept up to date with the status of each process and initiative.

Many of our initiatives in 2022 were designed to improve the workplace environment and enhance safe behaviors. Work continued on our program for rudimentary tasks (basic, poorly developed tasks), with investments in projects to reduce exposure to chemical, physical and mechanical hazards.

We implemented several initiatives in our operations during the year, including hand safety campaigns, safety workshops, a Zero Tolerance Program at our Smelters, and campaigns addressing critical risks, including risks related to vehicles and mobile equipment, overhead loads, falling from heights, molten materials, and poisonous animals. As part of these initiatives, our operations teams actively participated in toolbox talks and safety pointers were posted on bulletin boards and at cafeterias.

In 2023 we plan to implement improvements in our health and safety management system to support CBA’s continued growth. We will also build on our rudimentary task and fatality prevention programs by adding new safety tools to identify potential risks, and conduct a review of our critical risk, regulatory standard (NR), and other related safety processes.

GRI 403-1
OCCUPATIONAL HEALTH AND SAFETY
MANAGEMENT SYSTEM

CBA has an Integrated Management Policy that provides guidelines on managing employee health and safety. The policy draws on industry best practices and Brazilian safety regulations, in particular Regulatory Standard 1 on managing occupational risks. We require our entire workforce, including both employees and contractors, to comply with this policy. By implementing this policy, we aim to maximize safety in all our activities and operations, at all levels of the organization.

GRI 403-2
HAZARD IDENTIFICATION, RISK ASSESSMENT,
AND INCIDENT INVESTIGATION

GRI 403-4
WORKER PARTICIPATION, CONSULTATION, AND
COMMUNICATION ON OCCUPATIONAL HEALTH
AND SAFETY

GRI 403-7
PREVENTION AND MITIGATION OF OCCUPATIONAL
HEALTH AND SAFETY IMPACTS DIRECTLY LINKED
BY BUSINESS RELATIONSHIPS

CBA has a range of safety systems in place, including: a risk assessment matrix to identify hazards and assess risks in routine tasks; Preliminary Risk Analyses in which employees identify risks and implement individual or collective controls in the workplace; protocols addressing critical risks in our operations;

environmental and occupational risk management and controls, including Workplace Environment Reports (LTCAT) and Ergonomics Reports; and regularly tracking developments in Brazilian safety regulations.

Other safety tools include *Fale Fácil*, an easy-to-use channel for reporting and addressing unsafe conditions and behavior; and our Duty of Refusal policy, which encourages and empowers employees to refuse to perform a task if risk mitigation measures have not been adequately implemented or if they feel unfit to perform the task.

Monthly prizes are awarded to employees who have reported concerns and suggested controls, or who have protected their safety under their Duty of Refusal. The latter prize goes to the employee who successfully avoided the most serious risk.

Our operations are also supported by working groups organized by the Internal Accident Prevention Committee (CIPA) and/or the Mining Internal Accident Prevention Committee (CIPAMIN). These working groups conduct risk assessments; inspect workplace conditions; develop, participate in and monitor preventive programs and plans; follow accident investigations; and organize Internal Occupational Accident Prevention Week (SIPAT) events.

A Multidisciplinary Working Group meets on a monthly basis with site leaders, the management team and safety team representatives to discuss and act upon key safety performance indicators. Our occupational health department also has dedicated working groups

on People with Disabilities; Emotional Health; and the Covid-19 Pandemic.

Employees are protected against retaliation. Managers are responsible for encouraging employees to exercise their Duty of Refusal and for ensuring that action is taken to eliminate and/or mitigate identified risks. The relevant employee will only resume their task after action has been taken to ensure no further risks exist.

GRI 403-8
WORKERS COVERED BY AN OCCUPATIONAL
HEALTH AND SAFETY MANAGEMENT SYSTEM

All workers—including employees and contractors—are covered by an Occupational Health & Safety management system, as in the previous year. The system has been subject to both internal and external audits in accordance with ASI certification requirements, namely Principle 11 – Occupational Health & Safety.



Halana Kelly Rodrigues
Bueno. Management
System Assistant.
Aluminio Plant (SP)

GRI 403-9 **WORK-RELATED INJURIES**

SASB EM-MM-320A.1

(1) MSHA ALL-INCIDENCE RATE, (2) FATALITY RATE, (3) NEAR MISS FREQUENCY RATE (NMFR) AND (4) AVERAGE HOURS OF HEALTH, SAFETY, AND EMERGENCY RESPONSE TRAINING FOR (A) FULL-TIME EMPLOYEES AND (B) CONTRACT EMPLOYEES

SASB IF-EU-320A.1

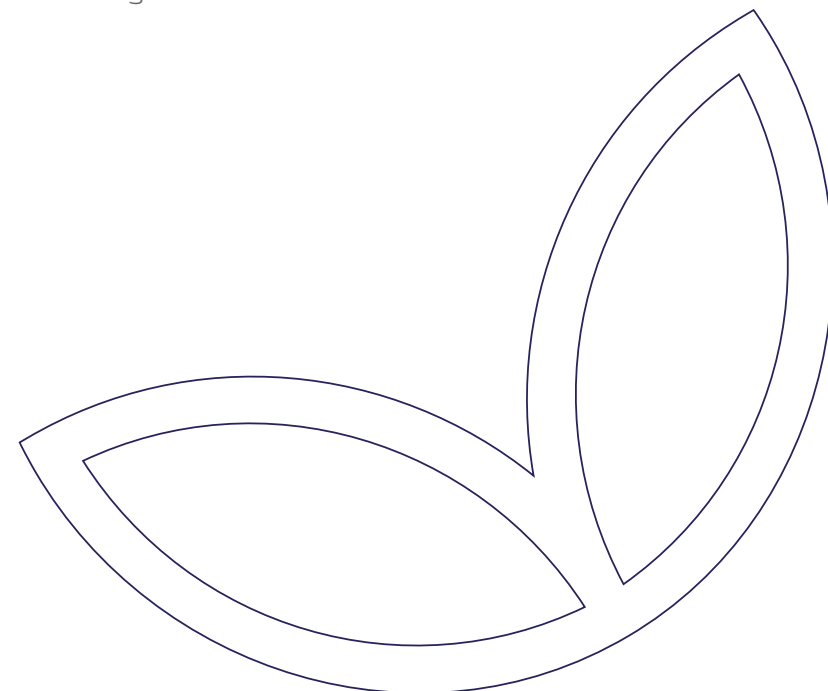
(1) TOTAL RECORDABLE INCIDENT RATE (TRIR), (2) FATALITY RATE, AND (3) NEAR MISS FREQUENCY RATE (NMFR)

CBA has a wide range of tools for identifying hazards and risks, and is constantly seeking ways to mitigate and eliminate them. All hazards, risks, and mitigation actions are carefully documented using appropriate procedures. Moreover, the company has implemented several programs to support these procedures.

The primary hazards reported in 2022 were related to work at heights, poor housekeeping, and trip hazards. The key actions taken in the year include improvements to working conditions, instructions on performing tasks, more frequent monitoring of tasks by leadership, routine safety campaigns and providing communications tools and channels to help employees identify and address unsafe situations at the workplace.

In 2022, the rate of lost-time and no-lost-time injuries were 2.26. All accidents were investigated and their causes determined, and action was taken to mitigate and eliminate the underlying risks. Despite our efforts to protect the safety of our employees, we regret to report that a fatal injury occurred in our operations during the period.

Our near miss rate fell from 3.08 in 2021 to 2.81 this year. A near miss is defined as any event that has all but caused, or could potentially have caused, an accident or injury. Incidents are classified based on the worst-case consequences for employees, the environment and property within a given scenario resulting from the incident.





Safety figures for direct employees	2020		2021		2022			
	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Energy Business	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	1	0	0	1
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.08
Number of high-consequence work-related injuries (excluding fatalities)	11	0	7	0	12	0	0	12
Rate of high-consequence work-related injuries (excluding fatalities)	1.06	0.00	0.64	0.00	1.04	0.00	0.00	0.99
Number of recordable work-related injuries	22	0	12	0	17	0	0	17
Rate of recordable work-related injuries	2.12	0.00	1.11	0.00	1.47	0.00	0.00	1.40
Number of hours worked	10,382,117	308,758	10,857,448	694,529	11,587,683	143,033	387,955	12,118,672
Lost days	209	0	127	0	209	0	0	209
Injury severity rate	20.13	0.00	11.70	0.00	18.04	0.00	0.00	17.25

Note 1: The main types of work-related injury in 2022 were pinch-point and hand injuries

Note 2: Basis for rate calculation (hours worked): 1.000.000.

Note 3: "Days lost" are counted in calendar days.

Note 4: Disclosures are compiled in accordance with NBR 14280. The injury frequency rate is based on reportable injuries, and "days lost" within the severity rate are measured in calendar days. This disclosure includes level IV and V injuries.

Note 5: The methodologies used are in accordance with Management Standard PG-CBA-AL-SSMA-SEG-014-Statistics.

Note 6: The fatality rate calculated based on 200.000 hours worked totaled 0.02 in 2022.

Safety figures for other workers	2020		2021		2022			
	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Aluminum Business	Nickel Business	Energy Business	Total
Number of fatalities as a result of work-related injuries	0	0	0	0	0	0	0	0
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of high-consequence work-related injuries (excluding fatalities)	4	0	0	1	3	0	2	5
Rate of high-consequence work-related injuries (excluding fatalities)	1.05	0.00	0.00	0.35	0.51	0.00	4.51	0.77
Number of recordable work-related injuries	13	0	7	2	8	0	0	8
Rate of recordable work-related injuries	3.42	0.00	1.54	0.69	1.36	0.00	0.00	1.22
Number of hours worked	3,802,486	1,207,106	4,545,817	2,896,024	5,879,442	152,820	503,481	6,535,742
Lost days	60	0	0	3	28	0	34	62
Injury severity rate	15.78	0.00	0.00	1.04	4.76	0.00	67.53	9.49

Note 1: The main types of work-related injuries in 2022 were hand and foot injuries.

Note 2: Basis for rate calculation (hours worked): 1.000.000.

Note 3: "Days lost" are counted in calendar days.

Note 4: Disclosures are compiled in accordance with NBR 14280. The injury frequency rate is based on reportable injuries, and "days lost" within the severity rate are measured in calendar days. This disclosure includes level IV and V injuries

Note 5: The methodologies used are in accordance with Management Standard PG-CBA-AL-SSMA-SEG-014-Statistics.

GRI 403-10
WORK-RELATED ILL HEALTH

In 2022 CBA recorded no fatalities as a result of work-related ill health or any cases of recordable work-related ill health, whether involving direct employees or contractors. The main hazards identified in connection with work-related ill health are occupational risks, which are managed through regular workplace assessments, occupational examinations and biological monitoring. Disclosures are compiled in accordance with Regulatory Standard 7 – Occupational Health Program and CBA’s Health Policy.

SASB IF-EU-550A.1
NUMBER OF INCIDENTS OF NON-COMPLIANCE WITH STANDARDS OR REGULATIONS ON PHYSICAL AND CYBER SECURITY

There were no instances of non-compliance with physical and/or cybersecurity standards or regulations applicable to electricity infrastructure that is owned and/or operated by the Company.



Leticia dos Santos Silva,
Supply Analyst,
Corporate Office (SP)

Social transformation

GRI 3-3
MANAGEMENT OF MATERIAL TOPICS –
LOCAL DEVELOPMENT

GRI 413-2
OPERATIONS WITH SIGNIFICANT ACTUAL
AND POTENTIAL NEGATIVE IMPACTS ON
LOCAL COMMUNITIES

SASB EM-MM-210B.1
DISCUSSION OF PROCESS TO MANAGE RISKS
AND OPPORTUNITIES ASSOCIATED WITH
COMMUNITY RIGHTS AND INTERESTS

We have identified no actual adverse impacts from our operations on local communities; potential impacts have been identified in the social dimension of our strategic risk matrix, and actions have been outlined to prevent these risks from materializing.

We also assess impacts from decommissioning our operations and the extent to which communities are economically dependent on CBA for their social welfare.

Our Corporate Social Responsibility and Human Rights policies contain guidelines on preserving the rights, customs, water and other resources, and livelihoods of traditional communities, including indigenous communities, *quilombolas*, and riverine communities.

We identify challenges and opportunities in our communities to inform the development of a social agenda and development plan, with projects and initiatives designed to build a positive social legacy for our communities. The Votorantim Institute supports CBA in identifying opportunities and solutions that are consistent with identified needs, our corporate strategy and existing government policies and programs.

In addition, CBA conducts regular human rights due diligence to identify potential risks and impacts from certain of our operations on neighboring communities. Based on the due diligence findings, we implement controls to detect, prevent and mitigate risks.

A significant potential impact identified is the risk of dams breaking, which could affect communities in their areas of influence. The dams are located in Alumínio (SP) (bauxite residue dam), Miraí (MG) (mine tailing dam), Itamarati (MG) (mine tailing dam) and Niquelândia (GO) (bauxite residue dam). All units have sufficient controls so that the risk does not materialize.

We use a set of program metrics to track, assess and report on our social initiatives. These metrics are outlined in our Social Responsibility Policy and Social Investment Management Standard. Targets for each cycle are agreed among program team members, and performance against those targets is regularly tracked and reported in order to identify/anticipate any deviations and risks, and mitigate negative impacts.

The results of our social programs are communicated to all our operations in monthly meetings, periodically in local community media, and in our quarterly earnings releases and Annual Report. Program stakeholders receive information about program results early in the subsequent year, after collected data has been validated. Milestones and lessons learned then inform project plans for the following year. This is done iteratively over the lifecycle of the program until the desired social transformation is achieved.

One of the goals under our 2030 ESG Strategy is implementing Service Level Agreements (SLA) to ensure deliverables are aligned with original program goals. Working with the Votorantim Institute, CBA has successfully met all milestones planned for each year.

In 2023 we will continue to implement our Social Action Strategy across the four pillars of quality education, income (economic development), public management support and protecting the rights of children and adolescents. We also plan to support and strengthen recycling cooperatives in Brazil, in line with the Social Legacy Goals under our 2030 ESG Strategy.

SASB EM-MM-210B.2
NUMBER AND DURATION OF NON-TECHNICAL DELAYS TO COMMUNITY RIGHTS AND INTERESTS

There were no non-technical delays in the period.

CBA-10
SOCIAL INVESTMENT

CBA social investments (R\$)	2020	2021	2022
Funded by CBA	1,093,438	4,018,727	5,752,091
Funded by the Votorantim Institute	1,263,000	0	0
Conditional funded	0	0	128,984
Funding raised from the Votorantim Institute	147,000	704,487	2,041,787
Funding raised externally	0	0	294,470
VSA Covid-19 Fund	5,200,000	450,000	0
CBA funding for Covid	2,100,000	636,892	0
Tax-deducted funds	600,000	0	516,590
Total investments	10,403,438	5,810,105	8,733,922

Note 1: The projects that are a continuation of the fronts initiated during the pandemic were reallocated to other lines.
Note 2: This indicator also considers the investments made in Barro Alto and in the HPP Barra Grande and HPP Salto Pilão (joint ventures)



GRI 203-2
SIGNIFICANT INDIRECT ECONOMIC IMPACTS

Although we have not carried out assessments of economic impacts as they relate to corporate social responsibility, CBA has programs in place that indirectly contribute to the local economy, such as *Empreende Alumínio*, a free training course for aspiring business owners in the city of Alumínio (SP), and ReDes, which helps to set up inclusive businesses and organize value chains in Brazilian towns (learn more about these initiatives in our [2022 Annual Report](#)).

GRI 413-1
OPERATIONS WITH LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS, AND DEVELOPMENT PROGRAMS

At CBA we assess risks and impacts across all our operations. This disclosure reports on social programs implemented under CBA's Social Action Plan. The higher investment in 2022 compared to 2021 is partly explained by CBA's takeover of the Energy business.

Aligned with the commitment to dialogue with communities proactively, through respect and transparency, in 2022 CBA engaged with communities in 90% of the projects implemented, totaling 53 initiatives. In addition to the direct participation of community groups or representatives in the projects, CBA periodically publicizes its initiatives through local press releases for the communities in general.



A PVE (Partnership for Education) mobilization initiative

Percentage of operations with local community engagement programs	2020	2021	2022
Total number of operational units	13	13	32
Total operational units with programs implemented	8	8	15
% of operational units with programs implemented	62%	62%	47%

Note 1: CBA's 59 programs in 2022 were local development programs based on local community needs; one project was a stakeholder engagement plan based on a stakeholder mapping assessment.

Note 2: All operations with ongoing social investment are included in this disclosure, including Salto Pilão HPP, Barra Grande HPP and Barro Alto HPP, which report projects executed.

GRI 202-2
PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY

In 2022, CBA had 47% of its senior management and 38% of managers and above hired from local communities.

Percentage of senior management at significant locations of operation that are hired from the local community	2022
Total members of senior management	15
Members of senior management hired from the local community	7
Proportion of senior management hired from the local community	47%

Note 1: Members of senior management include executive officers, the CEO and Board members.

Note 2: This disclosure covers our production and mining operations, and the geographic definition of local community is the area where our production operations are located (Alumínio (SP), Itapissuma (PE), Mirai (MG) and Poços de Caldas (MG)).

Percentage of Managers and above hired in the local community, by operational units	2022
Alumínio	16%
Corporate Office	49%
Itapissuma	86%
Sorocaba Facility	100%
Mining Operations	100%
Total	38%

Note 1: The indicator includes the highest positions (Manager and above) in the operating units, Alux and Metalex are considered within Alumínio.

Note 2: 2022 was the first year the indicator was monitored and therefore does not have a historical series.

Environmental protection – #ESGInOurBlood

SASB EM-MM-160A.1
DESCRIPTION OF ENVIRONMENTAL MANAGEMENT
POLICIES AND PRACTICES FOR ACTIVE SITES

CBA has a robust environmental management system and certification to the ISO 14.001 and ASI environmental standards. Each of CBA’s operations has an Environmental Education Program (PEA), as well as detailed procedures covering topics such as biodiversity, waste, water and effluents, emissions and more. These procedures are all based on applicable laws, regulations, standards and best practices. Throughout the Annual Report and in the Disclosures Supplement, we provide detailed information on the environmental policies and practices in our operations.

CBA’s policies and procedures are also aligned with the International Finance Corporation (IFC) Performance Standards listed below:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 8: Cultural Heritage.

LIFE CYCLE ANALYSIS

Life Cycle Analysis (LCA) is internationally recognized as a technique for assessing the potential environmental impact of a product or service. It can also support decisions and help compare two or more materials, products or services. In 2022, CBA acquired a software called SimaPro® that has the most used database worldwide (EcolInvent) to carry out its LCA studies internally. All products produced at Alumínio (SP) Plant are being updated and will undergo an external verification in 2023, as well as the study carried out in 2021 at Metalex (SP) by an external consultancy. The LCA at the Itapissuma (PE) Plant, carried out in 2021, underwent external verification in 2022 and can now be shared with customers and disclosed externally.

GRI 201-2
FINANCIAL IMPLICATIONS AND OTHER RISKS AND OPPORTUNITIES
DUE TO CLIMATE CHANGE

CBA has regularly carried out assessments of risks and opportunities due to climate change in previous years; in 2022, we engaged consultants to assess the extent to which our assessments are consistent with the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD), in order to continuously improve our processes.

Risks due to climate change

The primary risks and impact we have identified include physical and transition risks that can generate additional costs for the Company. Details on each risk are documented in a worksheet, including financial impacts, which are classified as either minor (<R\$ 45 million), moderate (R\$ 45 million < R\$ 90 million), major (R\$ 90 million ≤ R\$ 180 million) or extreme (> R\$ 180 million).

José Marcio Marques,
Industrial Services Manager,
Alumínio Plant (SP)



We manage identified risks using tools such as the GHG Protocol for emissions inventories; SimaPro for lifecycle analysis with the Ecoinvent database; and risk management tools. CBA takes a conservative approach to risk management, supported by a Risk Management Policy and a methodology based on ISO 31.000 and COSO ERM good practices.

Physical risks:

- Reduced electric power output (hydroelectric plants). Impacts: low rainfall and drought – water shortages;
- Impact on facilities. Causes: extreme weather events;
- Shortages of critical inputs. Causes: extreme weather events; low rainfall and drought – water shortages;
- Blackouts due to reduced streamflow. Causes: low rainfall and drought – water shortages;
- Landslides (mine sites). Causes: extreme weather events;
- Loss of saplings (rehabilitation of mined land). Causes: low or seasonally varying rainfall and drought – water shortages;
- More frequent wildfires. Causes: drought risk;
- Pollutant dispersion. Causes: extreme weather events;
- Higher incidence of heat-related and transmissible diseases. Causes: warming;
- Power system overloads. Causes: higher temperatures.

Transition risks:

- New taxes. Causes: climate change in general;
- New competitors. Causes: climate change in general;
- New entrants in the downstream market. Causes: climate change in general;
- Market-driven price fluctuation. Causes: climate change;
- The aluminum industry being stigmatized as carbon-intensive, affecting our reputation. Causes: climate change.

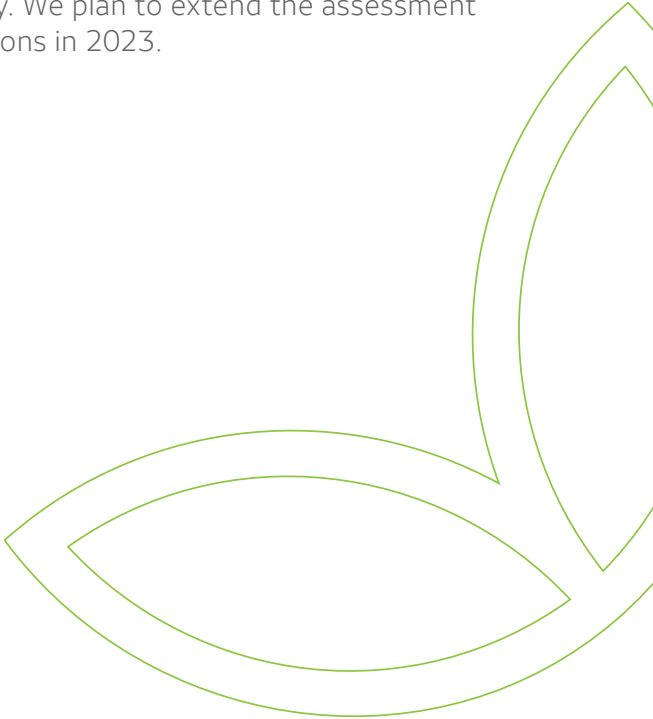
Climate-Driven Opportunities

Significant climate-related opportunities include:

- Eligibility to issue carbon credits as we progress on our Reflora CBA and REDD+ programs;
- ESG-linked loans;
- Climate mitigation projects such as our potline upgrade and recycling expansion;
- Access to new markets with our new low-carbon or carbon-neutral products, or new products co-developed with customers that have a low lifecycle carbon footprint;
- Energy diversification through investments in solar and wind to minimize impacts from droughts;
- Identifying new suppliers that are more resilient to climate change;
- Competitive advantage from better emissions performance, reducing the cost of carbon border adjustment taxes;

- Competitive advantage in new, carbon-conscious markets;
- A stronger reputation as a sustainable company that is responsible for nature and society;
- Emissions reduction projects supporting our climate agenda.

Climate projections have been estimated based on models run on the Aque Duct, INPE and WorldClim platforms. Climate risks were mapped in collaboration with the risk teams and representatives from our mining and Itapissuma operations. Our climate adaptation assessment excludes Alux; our Energy business; Corporate Office, the Caxias do Sul distribution center and our Sorocaba facility. We plan to extend the assessment to other operations in 2023.



- GRI 305-1

DIRECT (SCOPE 1) GHG EMISSIONS
- GRI 305-2

ENERGY INDIRECT (SCOPE 2) GHG EMISSIONS
- GRI 305-3

OTHER INDIRECT (SCOPE 3) GHG EMISSIONS
- GRI 305-4

GHG EMISSIONS INTENSITY
- GRI 305-5

REDUCTION OF GHG EMISSIONS
- SASB EM-MM-110A.1 | IF-EU-110A.1

(1) GROSS GLOBAL SCOPE 1 EMISSIONS, PERCENTAGE COVERED UNDER (2) EMISSIONS-LIMITING REGULATIONS, AND (3) EMISSIONS-REPORTING REGULATIONS (EXCLUDING VOLUNTARY REGULATIONS)
- SASB IF-EU-110A.2

GREENHOUSE GAS (GHG) EMISSIONS ASSOCIATED WITH POWER DELIVERIES

Direct (Scope 1) GHG emissions (thousands tCO ₂ e)	2020	% of scope	2021	% of scope	2022	% of scope
Stationary combustion	284.7	27%	258.4	22%	283.7	21%
Mobile combustion	15.3	1%	17.3	2%	20.4	2%
Fugitive emissions	4.2	0%	4.7	0%	5.5	0%
Industrial processes	759.6	71%	872.1	76%	1,046.2	77%
Agricultural activities	0.1	0%	0.1	0%	0.1	0%
Land-use change	-	-	-	-	1.4	0%
Waste (solid waste + effluents)	0.0	0%	0.0	0%	0.0	0%
Total Scope 1 emissions	1,063.9	99%	1,152.6	100%	1,357.3	100%
Biogenic CO ₂ e emissions (Scope 1)	2.3	-	2.7	-	2.9	-
Biogenic CO ₂ e removals (Scope 1)	11.9	-	4.2	-	1.5	-

Indirect (Scope 2) GHG emissions (location-based) (thousands tCO ₂ e)	2020	% of scope	2021	% of scope	2022	% of scope
Electric energy (thousands tCO ₂ e)	333.4	96%	774.4	97%	264.2	95%
Transmission and distribution losses	7.1	2%	18.2	2%	6.9	2%
Purchased heating	5.2	1%	7.0	1%	6.8	2%
Total Scope 2 emissions (location-based)	345.6	99%	799.5	100%	277.9	100%



The Legado das Águas Reserve (SP), Reservas Votorantim

Indirect (Scope 2) GHG Emissions (market-based) (thousands tCO ₂ e)	2020	% of scope	2021	% of scope	2022	% of scope
Electric energy	66.0	91%	-	0%	0.0	0%
Transmission and distribution losses	1.3	2%	-	0%	0.0	0%
Purchased heating	5.1	7%	7.0	100%	6.8	100%
Total Scope 2 emissions (market-based)	72.4	100%	7.0	100%	6.8	100%
Biogenic CO ₂ e emissions (Scope 2)	266.2	-	369.5	-	397.8	-

Other indirect (Scope 3) GHG emissions (thousands tCO ₂ e)	2020	% of scope	2021	% of scope	2022	% of scope
Category 1 – Goods and services purchased	1,400.2	94%	2,052.2	85%	971.3	70%
Category 3 – Fuel- and energy-related activities not included in Scope 1 or Scope 2	67.6	5%	36.9	2%	51.1	4%
Category 4 – Transportation and distribution (upstream)	22.2	1%	79.7	3%	93.7	9%
Category 6 – Business travel	-	-	0.1	0%	0.4	0%
Category 9 – Transportation and distribution (downstream)	-	-	31.6	1%	42.0	3%
Category 10 – Reprocessing of sold products	-	-	208.2	9%	191.1	14%
Total Scope 3 emissions	1,490.0	100%	2,408.7	100%	1,349.6	100%
Biogenic CO ₂ emissions	2.6	-	11.5	-	12.8	-

Emissions intensity (tCO ₂ e/ton of production)	2020	2021	2022
Mines (beneficiated bauxite)	0.01	0.01	0.01
Smelters (molten aluminum)	2.66	2.64	3.03
Alumínio plant (finished products)	3.50	3.03	3.35
Metalex (billets)	0.27	0.26	0.25
Itapissuma (dowstream products)	1.01	0.96	0.91
Alux (cast aluminum)	n/a	n/a	0.31

GRI 305-7
NOx, SOx, AND OTHER SIGNIFICANT AIR EMISSIONS

SASB EM-MM 120A.1 / IF-EU IF-EU-120A.1
AIR EMISSIONS FOR THE FOLLOWING POLLUTANTS: NOx (EXCLUDING N₂O),
SOx, PARTICULATE MATTER (PM 10), LEAD (PB) AND MERCURY (HG)

Particulate and total fluoride emissions at our Alumínio (SP) Plant increased in 2022 as a result of higher aluminum production rates.

Significant air emissions (metric tons)	2020	2021	2022
	Aluminum Business	Aluminum Business	Aluminum Business
NOx	325	133	429
SOx	36	34	42
Persistent Organic Pollutants (POP)	0	0	0
Volatile Organic Compounds (VOCs)	8	0	13
Particulate Matter (PM)	938	995	1,119
Total Fluoride	172	170	188

Note 1: This disclosure includes our Alumínio, Alux, Itapissuma and Metalex operations. In the Energy business, the only input used to produce energy in our hydroelectric dams is water. These operations therefore produce no significant amounts of NOx, SOx, or other air emissions reported within this disclosure.

Note 2: Most information was compiled from sampling reports generated for each operation's emissions sources and equipment.

Note 3: Our operations are not monitored for hazardous air pollutants (HAP), mercury or lead.

GRI 305-6
EMISSIONS OF OZONE-DEPLETING SUBSTANCES (ODS)

CBA does not emit CFC-11 in its processes, only PFC-14, which totaled 28.6 tons in 2019, 24.1 tons in 2020, 32.8 tons in 2021, and 53.1 tons in 2022. The emissions of PFC-116 were 1.9 tons in 2019, 1.6 tons in 2020, 2.2 tons in 2021, and 3.5 tons in 2022.

GRI 301-3
RECLAIMED PRODUCTS AND THEIR PACKAGING MATERIALS

The main materials used for packaging are: wood, plastic and PET tape. In the next cycle, the quantitative data referring to the consumption of these materials will be structured.



The Legado das Águas Reserve (SP), Reservas Votorantim



GRI 3-3
MANAGEMENT OF MATERIAL TOPICS –
BIODIVERSITY AND ECOSYSTEM SERVICES

GRI 304-2
SIGNIFICANT IMPACTS OF ACTIVITIES, PRODUCTS,
AND SERVICES ON BIODIVERSITY

CBA's flora preservation practices include retrieving and storing seedlings and seeds for subsequent planting, planting threatened species in offset areas, and posting instructional signs on environmental preservation. Wildlife protection practices include monitoring and provision of roadkill warning signs.

In our **Mining** operations, creating a new mine face requires clearing vegetation and stripping overburden to access the underlying ore; however, our mining operations also have positive impacts, with CBA rehabilitating mined land into the same or better condition than before it was mined.

All areas that we have mined were previously disturbed, i.e. the vegetation had already been replaced by pastureland, coffee crops or planted eucalyptus forests.

All land is rehabilitated with the same vegetation found at the site before it was mined. Ore bodies are localized and geographically confined, and are mined in short cycles. After the ore body is exhausted, mined land is promptly reclaimed to its original use. The life of a mine and the time taken to reclaim a decommissioned mine will vary depending on the site. Any individual trees that need to be felled are offset by reforestation.

Our biodiversity management practices at CBA aim to provide optimal conditions for increasing species diversity. Research in collaboration with the Federal University of Viçosa in Zona da Mata (MG), has demonstrated the biodiversity benefits from attracting wildlife and increasing species diversity at reforestation sites.

The most significant impact on biodiversity from the **Energy business** is on ichthyofauna. To mitigate impacts, we retrieve trapped fish for preservation during maintenance operations; some dams have fishways while others engage specialized companies to manually transfer fish during the reproduction season. Impacts from clearing vegetation for reservoirs occur only at the time the hydroelectric dams are being developed.

The Legado das Águas Reserve (SP),
Reservas Votorantim

GRI 304-1
OPERATIONAL SITES OWNED, LEASED OR
MANAGED IN OR ADJACENT TO PROTECTED
AREAS AND AREAS OF HIGH BIODIVERSITY VALUE
OUTSIDE PROTECTED AREAS

CBA’s Energy business and Alumínio business have operational sites owned, leased or managed in or adjacent to protected areas and areas of high biodiversity value. These sites have a total of 52 km² of land in these areas.

Our **Corporate and Mining** operations are located in the vicinity of protected areas and legal reserves in Minas Gerais. In 2002 CBA established the Boa Esperança and São Lourenço Private Natural Heritage Reserves (PNHR) in the municipalities of Descoberto and Itamarati de Minas, respectively, both in the region of Minas Gerais, with a combined area of 304 hectares.

Our **Alumínio Plant (SP)** is located near a protected area and a legal reserve in the municipality of Alumínio (SP).

Our **Itapissuma Plant (PE)** is located near a protected area called Santa Cruz. The east side of the area is bounded by the Santa Cruz River, which traverses Itamaracá Island. The Santa Cruz estuary is one of the most important coastal ecosystems in the state of Pernambuco, with its abundant biodiversity and primary and secondary productivity giving it high environmental, social and economic significance.

In our **Energy Business**, we operate hydroelectric power plants within the buffer areas of state parks, such as Jurupará State Park, Carlos Botelho State Park, and the Serra do Mar Protected Area. Our Itupararanga Dam is located within the Itupararanga protected area.

Alux (SP), Metalex (SP), Niquelândia (GO) and other operations are located near protected areas and areas of high biodiversity value.

GRI 304-3
HABITATS PROTECTED OR RESTORED

The amount of area protected and restored increased significantly from 2021 to 2022. This is explained by CBA’s takeover of the Energy business. In total, we have 685 km² of habitats protected or restored.

Habitats protected or restored, by biome (em km²)	2020	2021	2022
Cerrado	275	275	276
Atlantic Forest	361	364	409
Total	636	639	685

Note 1: This disclosure is inclusive of Alux, Alumínio, our mines, the Energy business, and the Legado das Águas and Legado Verdes do Cerrado nature reserves.
Note 2: Out of the total, 675 km were protected areas while 6 km² were restored areas.

GRI 304-4
IUCN RED LIST SPECIES AND NATIONAL
CONSERVATION LIST SPECIES WITH
HABITATS IN AREAS AFFECTED BY THE
ORGANIZATION’S OPERATIONS

CBA-owned land is home to 4 threatened species, according to the Brazilian Environmental Agency (IBAMA) Threatened Species List and the International Union for Conservation of Nature (IUCN) Red List), 37 vulnerable species and 13 near-threatened species.

Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk	2022
Critically endangered	0
Endangered	4
Vulnerable	37
Near threatened	13
Least concern	247

Note 1: This disclosure includes Alumínio Plant (SP), Itapissuma Plant (PE), Mining Operations and Energy Business operations.
Note 2: Data for Alumínio Plant (SP) are from the last survey carried out in 2020.
Note 3: Mining data refer to compensatory plantations in different locations in the region, referring to the mining processes at the Miraf Mine (MG). The “endangered” species were considered within the “endangered” category.
Note 4: Energy data refer to the Salto do Rio Verdinho Plant (GO), obtained from studies of fauna reports carried out. The Sobragi Power Plant (MG) and the Paranapanema Complex (SP) do not have species included in the lists.



SASB EM-MM-160A.3
PERCENTAGE OF (1) PROVED AND (2) PROBABLE RESERVES IN OR NEAR SITES WITH PROTECTED CONSERVATION STATUS OR ENDANGERED SPECIES HABITAT

SASB EM-MM-210A.1
PERCENTAGE OF (1) PROVED AND (2) PROBABLE RESERVES IN OR NEAR AREAS OF CONFLICT

SASB EM-MM-210A.2
PERCENTAGE OF (1) PROVED AND (2) PROBABLE RESERVES IN OR NEAR INDIGENOUS LAND

No proved or probable reserves are in or near sites with protected conservation status, endangered species habitat and indigenous area. Information on proved or probable reserves has been compiled from an independent report developed in accordance with the JORC Code in 2012. The report, prepared by SRK Consultores do Brasil Ltda., provided estimates of mineral and ore reserves in our bauxite deposits in Miraf and Barro Alto. Measured and indicated resources were converted into proven and probable resources by applying modifying factors related to the economic feasibility of the deposit, the mining methods and environmental factors, such as excluding reserves in areas containing native vegetation and protected areas. Reserves are considered close when they are within five kilometers of the boundary of an area of protected conservation status or endangered species habitat.

Note: According to SASB, reserves are that part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination. Proved reserves are the reserves for which (a) quantity

is computed from dimensions revealed in outcrops, trenches, workings, or drill holes; grade and/or quality are computed from the results of detailed sampling, and (b) the sites for inspection, sampling, and measurement are spaced so closely and the geographic character is so well-defined that size, shape, depth, and mineral content of reserves are well-established. Probable reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.

GRI 3-3
MANAGEMENT OF MATERIAL TOPICS – RISK AND EMERGENCY MANAGEMENT/MANAGEMENT OF MATERIAL TOPICS – DAM SAFETY MANAGEMENT

SASB EM-MM-540A.2
SUMMARY OF TAILINGS MANAGEMENT SYSTEMS AND GOVERNANCE STRUCTURE USED TO MONITOR AND MAINTAIN THE STABILITY OF TAILINGS STORAGE FACILITIES

SASB EM-MM-540A.3
APPROACH TO DEVELOPMENT OF EMERGENCY PREPAREDNESS AND RESPONSE PLANS (EPRPS) FOR TAILINGS STORAGE FACILITIES

The Miraf (MG) and Itamarati de Minas (MG) mines operate mine tailings dams, and Alumínio Plant (SP) and Niquelândia Plant (GO) have bauxite residue dams, both managed in accordance with the same standards.

CBA's dam safety procedures are as stringent or more so than applicable dam safety regulations. Our dams undergo quarterly field inspections

that are documented in inspection checklists. Instrument readings are taken strictly at the frequency established by independent experts as part of routine management activities. Dam safety assessment reports are issued on a monthly basis.

A series of procedures are performed to monitor dam safety and stability, consistent with applicable regulations and the nature of the structures. These procedures apply both to our tailings dams and to our hydroelectric dams:

- Periodic Safety Reviews are performed by independent third parties at a frequency that depends on the type of dams. These reviews analyze information from regular inspections, performed either every six months or annually depending on the type of dam;
- A Dam Safety Plan is prepared for each dam and is periodically reviewed as necessary to update information;
- Emergency Response Plans have also been developed for all dams and are periodically updated. These plans outline procedures for identifying and classifying situations that could threaten the integrity of a dam and, for each such situation, establishing emergency response actions and workflows for communications with the different stakeholders involved, in order to minimize loss of human and animal life, preserve the environment, and protect natural heritage;
- Mine tailings and bauxite residue dams are monitored 24/7 by a closed-circuit TV system (currently being implemented at our Niquelândia Plant-GO);

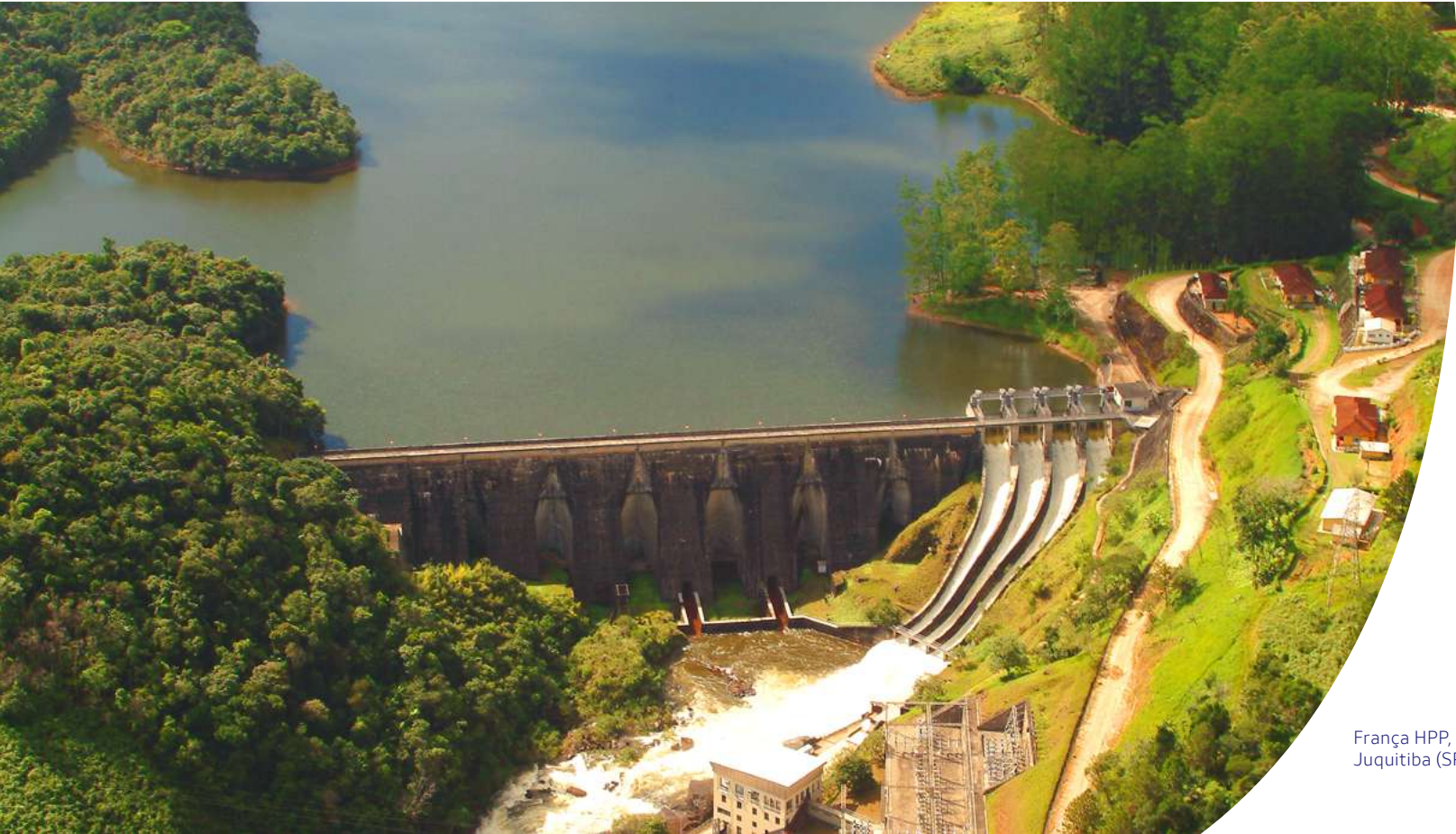
- Mass communication systems (sirens) and joint drills with local governments have been implemented for most dams. External drills are performed annually in the self-rescue zones of our tailings and residue dams. Brazil's dam safety regulations do not establish a required drill frequency for hydroelectric dams. At all dams, sirens are tested on a monthly basis.

Our dam safety practices for hydroelectric facilities are based on three pillars: routine instrument readings and inspections; operation procedures for hydrological safety; and structural safety assessments. Hydroelectric dams are classified into hazard classes using Dam Safety Forms.

CBA has set internal targets relating to dam safety management.

SASB EM-MM-540A.1
TAILINGS STORAGE FACILITY INVENTORY

CBA's dams safety teams work in synergy with and a focus on our dam safety management system, and CBA treats dam safety as a priority. Our commitment to and investments in dam measures have supported good outcomes for dam safety, our communities and the environment.



França HPP,
Juquitiba (SP)





Tailings storage facility inventory	2022			
1. Facility name	Palmital	Miraí	Itamarati de Minas	Jacuba
2. Location	Alumínio (SP), Brazil	Miraí (MG), Brazil	Itamarati de Minas (MG), Brazil	Niquelândia (GO), Brazil
3. Ownership status	Operated by CBA	Operated by CBA	Operated by CBA	Operated by CBA
4. Operational status	Active	Active	Active	Active
5. Construction method	Downstream	Downstream	Downstream	Centerline
6. Maximum permitted storage capacity (t)	~27.6 MM m ³	~27.5 MM m ³	~11.4 MM m ³	~79 MM m ³
7. Current amount of tailings stored (t)	~23.7 MM m ³	~14.1 MM m ³	~11.1 MM m ³	~63.8 MM m ³
8. Consequence classification	Extreme	Extreme	Extreme	Extreme
9. Date of most recent independent technical review	December 2022	May 2021	May 2021	November 2022
10. Has the most recent independent technical review resulted in material findings?	Yes	Yes	Yes	Yes
If the answer to 10 is yes, provide a summary of material findings	Dam safety has been certified, with only a recommendation to continue routine inspection and preventive maintenance activities	Dam safety has been certified, with only a recommendation to continue routine inspection and preventive maintenance activities	Dam safety has been certified, with only a recommendation to continue routine inspection and preventive maintenance activities	Dam safety has been certified, with only a recommendation to continue routine inspection and preventive maintenance activities
11. If the answer to 10 is yes, indicate whether mitigation measures have been implemented	Yes	Yes	Yes	Yes
If the answer to 11 is yes, provide a summary of the relevant mitigation measures	Routine dam safety activities are managed via a Dam Management System and include fortnightly inspections, maintenance in good condition, monitoring, beach width control, and water removal	Routine dam safety activities are managed via a Dam Management System and include fortnightly inspections, monitoring, clearing and pest control	Routine dam safety activities are managed via a Dam Management System and include fortnightly inspections, monitoring, clearing and pest control	Routine dam safety and maintenance activities are managed via a Data Management System and include fortnightly inspections, monitoring, clearing, pest control, and special measures, such as beach erosion control, restaking and cleaning hydraulic structures
12. Is a site-specific Emergency Preparedness and Response Plan in place?	Yes	Yes	Yes	Yes

Note: SASB EM-MM disclosures are for the Aluminum and Nickel business only.

CBA-4
TAILINGS DAM MANAGEMENT

CBA has worked to keep reservoir levels even lower, creating an optimally safe freeboard. In 2022, freeboard control was not applied at Itamarati de Minas (MG). At the Palmital dam in Alumínio (SP), water withdrawal volumes increased from 317,994 m³ to 499,268 m³. Water is pumped out of the dam via pipes with flowmeters that provide flow data to a monitoring and control system at the Alumina Refinery.

At Mirai (MG), water is pumped out of the dam and returned to the environment in accordance with environmental requirements.

We seek to pump out as much impounded water as possible to reduce water storage and increase the freeboard.

Volume of impounded water removed, by site (m³)	2020	2021	2022
Alumínio (Palmital dam – residue)	541,273	317,994	499,268
Mirai (tailings)	2,527,140	2,231,427	5,126,843
Itamarati de Minas (tailings)	4,482,981	3,542,595	n/a
Niquelândia (Jacuba dam, residue)	1,307,543	1,267,000	1,267,000
Total	8,858,937	7,359,016	6,893,111

Palmital dam,
Alumínio (SP)



GRI 3-3
MANAGEMENT OF MATERIAL TOPICS – WATER
AND EFFLUENT MANAGEMENT

GRI 303-1
INTERACTIONS WITH WATER AS A SHARED
RESOURCE

GRI 303-2
MANAGEMENT OF WATER DISCHARGE-RELATED
IMPACTS

SASB IF-EU-140A.3
DISCUSSION OF WATER MANAGEMENT RISKS
AND DESCRIPTION OF STRATEGIES AND
PRACTICES TO MITIGATE THOSE RISKS

Environmental impacts from water and effluent management are primarily related to water withdrawals, water and soil alterations, and effluent production. Based on identified impacts, mitigation measures are implemented and monitored to ensure they are effective. CBA has procedures on managing water and effluents at all operations, as well as standards on reporting incidents to inform continuous process improvements.

In addition, a Water and Effluent Management Program conforming to legal requirements is in place in all our Aluminum, Nickel and Energy operations, including both existing operations and greenfield developments. This program establishes a framework for dealing with water-related risks. It also defines employee responsibilities depending on their organizational level, role and/or function. We provide appropriate training to

all personnel involved in water withdrawal and treatment activities, and work to raise awareness among our employees and contractors about avoiding waste.

We are currently developing a range of water-related CAPEX projects designed to achieve water savings and improve water efficiency. CBA's ESG Strategy establishes several water-related targets to be met by 2030, including a target to reduce water withdrawals by 20% at our Alumínio Plant (SP), our most water-intensive operation. All levels of the organization are engaged around this target.

CBA uses WRI's Aqueduct tool to model climate scenarios compared to a baseline. The model is populated by information spanning from 1960 to 2014, and was used to model water-stress scenarios in 2030 and 2040 based on the ratio of water withdrawals to groundwater recharge. The modeling exercise included the Aluminum business only in 2022; in 2023 we plan to include our Energy and Alux operations. In the water stress assessment, our Metalex (SP) and Itapissuma (PE) operations were shown to have the highest water-stress risk in their respective regions. A risk assessment was carried out for these operations, and appropriate mitigation actions were identified.

In our **Miraí (MG)** mine operations, groundwater is withdrawn as drinking water and for administrative facilities, and surface water is withdrawn for bauxite beneficiation. This water then returns to the tailings dam. Part of the water from the dam is returned to the beneficiation process. The effluent is treated at an on-site wastewater treatment plant before it is discharged into a watercourse.

At the **Poços de Caldas (MG)** site, water for office and industrial use is supplied by the local utility; water for road spraying, the crushing plant and the tree nursery is withdrawn at three locations. Wastewater is discharged into the local utility's sewage system, and workshop effluents are treated in water and oil separators and then discharged into a local reservoir.

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

Metalex (SP) takes water supply from two different sources: the local utility (for human consumption only) and a deep well, for the melting process. To limit our groundwater withdrawals, we have installed three cooling towers that recycle water back into the process. This facility produces two different effluents: sewage from office facilities and water from an oil-water separator at a car wash station. Discharged car-wash wastewater is periodically tested to ensure it meets legal requirements. At Metalex, water intensity decreased by 0.17m³/t aluminum in 2022, increasing water availability for the surrounding region.

Alux do Brasil (SP) is located within an industrial park where a third-party company is responsible for water withdrawals and water supply facilities. Alux currently uses water in its office facilities and as cooling water for its production processes (a closed-loop system). Wastewater is discharged into the industrial park’s wastewater treatment plant.

At our **Itapissuma rolling mill (PE)**, groundwater is withdrawn from deep wells for use in the production process, in cooling towers, at the stacker, and for human consumption and general utilities. All water supplied to the facility is treated before use. This facility produces four different types of wastewater: sewage, wastewater from the free phase oil remediation process, wastewater from the cooling towers, and other wastewater from the production process, which is treated off-site. In 2022, we installed water meters at the cooling towers to improve our management of water consumption.

In our **Energy business**, water is a primary input used in generating electric power; river water flowing across a dam is used to drive turbines to generate electricity. Downstream from the dam, the water is fully returned to the river. Pre- and post-turbine water quality is continuously monitored.

The primary potential negative impact is the inherent risk of environmental license restrictions on the use of water in our hydroelectric dams. In 2022 we created a working group on Water Resilience to mitigate these risks. This working group also discusses short-and long-term strategies to mitigate water management risks and potential scenarios that could threaten

and/or impact our operations, such as physical conditions, rainfall, streamflow, wind, and solar radiation. In addition, an Executive Board-level forum discusses market issues such as demand trends and regulatory aspects. Our Energy business is also an active member of river basin committees as part of the Brazilian Water Resource Management System, where it discusses matters related to the river basins hosting its hydroelectric dams.

Water withdrawals are used only to supply water for office use, cleaning, bathrooms, and grounds irrigation. Water may be withdrawn from either surface or groundwater sources (wells). Following treatment, industrial and sanitary wastewater is returned to the watercourse.

Some facilities have water/oil separators, on-site treatment plants or septic sewers. Water treated by these systems is discharged into watercourses or into septic drain fields in the ground. Discharged water is tested for compliance with applicable regulations. The Energy business does not produce significant amounts of effluents.

An extended drought in 2022 affected Brazil’s largest hydroelectric dams. This caused several reservoirs in the country’s southeast to deplete. The drought prompted us to accelerate our efforts to diversify sources. In response to the impacts from the drought on our Sorocaba System (SP), we engaged specialized consultants to conduct a qualitative and quantitative assessment of the river basin hosting the Itupararanga Dam. Following the assessment, additional measures may be implemented.

GRI 303-3
WATER WITHDRAWAL

SASB EM-MM-140A.1 / IF-EU-140A.1
(1) TOTAL WATER WITHDRAWN AND (2) TOTAL WATER CONSUMED, PERCENTAGE OF EACH IN REGIONS WITH HIGH OR EXTREMELY HIGH BASELINE WATER STRESS

In 2022, CBA withdrew a total of 2,641 megaliters of water, with only two operations located in areas with water stress (Metalex – SP e Itapissuma – PE).





Water withdrawal. by source (in megaliters)		2020			2021			2022								
		Aluminum Business	Nickel Business	Total CBA	Aluminum Business	Nickel Business	Total CBA	Aluminum Business		Nickel Business		Energy Business		Total CBA		
								Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Total
Surface water	Freshwater	2,130.5	117.3	2,247.8	1,931.7	111.9	2,043.6	1,837.7	0.0	109.0	0.0	7.1	0.0	1,953.9	0.0	1,953.9
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	2,130.5	117.3	2,247.8	1,931.7	111.9	2,043.6	1,837.7	0.0	109.0	0.0	7.1	0.0	1,953.9	0.0	1,953.9
Groundwater	Freshwater	578.6	0.0	578.6	753.6	0.0	753.6	410.2	273.1	0.0	0.0	2.5	0.0	412.6	273.1	685.7
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1	0.0	9.1
	Total	578.6	0.0	578.6	753.6	0.0	753.6	419.3	273.1	0.0	0.0	2.5	0.0	421.7	273.1	694.8
Utility- supplied water	Freshwater	7.0	1.5	8.5	5.9	1.0	7.0	6.0	2.3	0.0	0.0	0.1	0.0	6.1	2.3	8.5
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	7.0	1.5	8.5	5.9	1.0	7.0	6.0	2.3	0.0	0.0	0.1	0.0	6.1	2.3	8.5
Rainwater	Freshwater	0.0	18.7	18.7	0.0	10.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.0	18.7	18.7	0.0	10.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Freshwater	2,716.2	137.5	2,853.6	2,691.2	123.1	2,814.3	2,253.9	275.4	109.0	0.0	9.7	0.0	2,372.6	275.4	2,648.0
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1	0.0	9.1
	Total	2,716.2	137.5	2,853.6	2,691.2	123.1	2,814.3	2,263.0	275.4	109.0	0.0	9.7	0.0	2,381.7	275.4	2,657.2

Note 1: Freshwater is defined as water with total dissolved solids ≤1,000 mg/L, while other water is defined as water with total dissolved solids >1,000 mg/L. CBA does not withdraw seawater or produced water.

Note 2: Areas with water stress were identified in a climate protection assessment using the Aqueduct tool. No water stress assessment has been carried out for Alux or our Energy business units, and their host areas have therefore been reported as regular areas.

Total water withdrawn percentage in regions with high or extremely high baseline water stress	2020	2021	2022			
			Aluminum Business	Nickel Business	Energy Business	Total
Surface water	0%	0%	0%	0%	0%	0%
Groundwater	0%	0%	40%	0%	0%	40%
Utility-supplied water	0%	0%	52%	0%	0%	51%
Rainwater	0%	0%	0%	0%	0%	0%
Total water withdrawn	0%	0%	11%	0%	0%	10%

Note: Areas with water stress were identified in a climate protection assessment using the Aqueduct tool. No water stress assessment has been carried out for Alux or our Energy business units, and their host areas have therefore been reported as regular areas.

Water intensity by product (m³/t)	2020	2021	2022
Mines (beneficiated bauxite)	0.06	0.06	0.05
Alumínio plant (finished products*)	7.91	6.33	5.72
Metalex (billets)	0.79	0.84	0.63
Itapissuma (rolled products)	4.71	5.44	5.97
Alux	n/a	n/a	0.36

Note 1: This disclosure includes only our Alumínio plant, our Poços de Calda and Miraí mines, Metalex and Alux. Alux was acquired in 2022 and therefore no data is available from prior years.

Note 2: The water intensity calculation is water withdrawn (in m³) per unit of production (in metric tons).

GRI 303-4
WATER DISCHARGE

In 2022 our operations discharged 7,278.5 megaliters of water, with 98% being discharged into surface water. It’s worth mentioning that all wastewater is treated before being discharged.



Water discharge by source (in megaliters)		2020			2021			2022								
		Aluminum Business	Nickel Business	Total CBA	Aluminum Business	Nickel Business	Total CBA	Aluminum Business		Nickel Business		Energy Business		Total CBA		
								Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Total
Surface water	Freshwater	6,913.3	173.4	7,086.7	5,774.1	212.3	5,986.4	7,062.6	0.0	33.0	0.0	6.3	0.0	7,101.9	0.0	7,101.9
	Other water	0.0	0.0	0.0	147.0	0.0	147.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	6,913.3	173.4	7,086.7	5,921.1	212.3	6,133.5	7,062.6	0.0	33.0	0.0	6.3	0.0	7,101.9	0.0	7,101.9
Groundwater	Freshwater	0.0	0.0	0.0	0.0	0.0	0.0	0.0	167.7	0.0	0.0	2.6	0.0	2.6	167.7	170.3
	Other water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	167.7	0.0	0.0	2.6	0.0	2.6	167.7	170.3
Utility-supplied water	Freshwater	5.5	46.9	52.4	4.6	32.6	37.2	6.3	0.1	0.0	0.0	0.0	0.0	6.3	0.1	6.4
	Other water	2.3	0.0	2.3	4.4	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	7.8	46.9	54.7	9.1	32.6	41.6	6.3	0.1	0.0	0.0	0.0	0.0	6.3	0.1	6.4
Total	Freshwater	6,918.8	220.3	7,139.1	778.7	244.9	6,023.6	7,068.8	167.8	33.0	0.0	9.0	0.0	110.8	167.8	7,278.5
	Other water	2.3	0.0	2.3	151.5	0.0	151.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	6,921.1	220.3	7,141.4	5,930.2	244.9	6,175.1	7,068.8	167.8	33.0	0.0	9.0	0.0	7,110.8	167.8	7,278.5

Note 1: Fresh water considers total dissolved solids ≤1.000 mg/L. while other water considers total dissolved solids >1.000 mg/L. CBA does not discharge water into the sea.

Note 2: The identification of areas under water stress was made by a study of climate projections using the Aqueduct tool. For Alux and the Energy units. a study on water stress has not yet been carried out. and. therefore. they were considered like normal areas.

GRI 303-5
WATER CONSUMPTION

SASB EM-MM-140A.1./ IF-EU-140A.1
(1) TOTAL WATER WITHDRAWN AND (2) TOTAL WATER CONSUMED.
PERCENTAGE OF EACH IN REGIONS WITH HIGH OR EXTREMELY HIGH
BASELINE WATER STRESS

Water consumption (in megaliters)	2020			2021		
	Aluminum Business	Nickel Business	Total	Aluminum Business	Nickel Business	Total
Water withdrawal	2,716.2	137.5	2,853.6	2,691.2	123.1	2,814.3
Water discharge	6,921.1	220.3	7,141.4	5,930.2	244.9	6,175.1
Water consumption	-4,204.9	-82.8	-4,287.8	-3,239.0	-121.8	-3,360.8

Water consumption (in megaliters)	2022								
	Aluminum Business		Nickel Business		Energy Business		Total		
	Water withdrawal	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Area with no water stress	Area with water stress	Total
Water withdrawal	2,247.4	275.4	109.0	0.0	9.7	0.0	2,381.7	275.4	2,657.2
Water discharge	7,068.8	167.8	33.0	0.0	9.0	0.0	7,110.8	167.8	7,278.5
Water consumption	-4,821.4	107.6	76.0	0.0	0.7	0.0	-4,729.1	107.6	-4,621.4

Note 1: The calculation of water consumption is withdrawal minus discharge. CBA has more processes returning water due to rainwater than withdrawal, which justifies the negative value of some operations and in total.

Note 2: The identification of areas under water stress was made through a study of climate projections using the Aqueduct tool. For Alux and the Energy operations, a study on water stress has not yet been carried out, and, therefore, they were considered as regular areas.

SASB EM-MM-140A.2 / IF-EU-140A.2
NUMBER OF INCIDENTS OF NON-COMPLIANCE
WITH WATER QUALITY PERMITS, STANDARDS,
AND REGULATIONS

At the Alumínio Plant (SP), we are required to report daily volume readings measured outside permit hours. In 2021 there were five instances of noncompliance with reporting requirements. In 2022 there was one instance of noncompliance with these requirements. In other operations, there were no instances of noncompliance.

GRI 3-3
MANAGEMENT OF MATERIAL TOPICS:
WASTE MANAGEMENT

GRI 306-1
WASTE GENERATION AND SIGNIFICANT
WASTE-RELATED IMPACTS

GRI 306-2
MANAGEMENT OF SIGNIFICANT WASTE-RELATED
IMPACTS

SASB EM-MM-150A.9
DESCRIPTION OF WASTE AND HAZARDOUS
MATERIALS MANAGEMENT POLICIES AND
PROCEDURES FOR ACTIVE AND INACTIVE
OPERATIONS

SASB EM-MM-150A.10
NUMBER OF SIGNIFICANT INCIDENTS
ASSOCIATED WITH HAZARDOUS MATERIALS
AND WASTE MANAGEMENT

CBA's operations have actual and potential impacts from waste materials, including changes in soil and water resource quality, and air and visual pollution. Internally, improper segregation can alter the composition of waste materials and prevent compliant disposal. To mitigate this risk, we have controls in place such as regularly raising employee awareness about proper waste segregation and storage, and operational procedures providing detailed instructions on these activities.

In waste transportation, to ensure transportation companies are compliant with applicable requirements, we inspect vehicles when loading materials at our sites, and manage required regulatory documentation. Disposal contractors are screened and periodically audited to mitigate compliance risks.

The Legado das
Águas Reserve (SP),
Reservas Votorantim





Josué Camargo Barbosa,
Production Operator,
Alumínio Plant (SP)

The waste disposal method is defined by CBA and implemented by specialized partner companies. Waste materials classified as nonhazardous (class II) are sent for recycling or are reused on-site. Hazardous waste materials (class I) and materials of environmental concern, such as lubricants and insulating oils, are sent for re-refining; general and process-specific hazardous materials are sent for co-processing, incinerated or disposed of in licensed landfills. This is monitored against related documentation, licenses and waste volumes. The waste we produce essentially consists of nonhazardous waste, as classified under Brazilian standard NBR 10.004/2004.

Waste monitoring is performed using appropriate forms, a waste management system, waste inventories, Annual Reports on Potentially Polluting and Natural Resource-Consuming Activities, and Waste Waybills.

Certain projects during the year resulted in a substantial increase in waste volumes. These included the installation of a sidewall melting furnace at Metalex, and a pilot project to make pavers, bricks and aggregates from the red mud produced at our Refinery. Learn more in the [2022 CBA Annual Report](#).

Our Itapissuma rolling mill has an on-site class 2 landfill, but has set a target to reduce or minimize landfilling and optimize recycling. The facility met its target in 2022 by sending refractory linings for co-processing.

In the Energy business, the largest source of waste is construction. In 2022, temporary construction site facilities were demolished at the Alecrim (SP), Porto Raso (SP) and Serraria (SP) power plants sites, generating a wide range of waste materials, including timber, scrap metal and other construction waste. To minimize landfilling, CBA ensured these materials were appropriately segregated and reused as raw materials. Salvageable scrap metal and wood materials were sent for recycling, and concrete construction waste was crushed and stored on site for use in maintaining the roads between the dam sites.

In 2022 there were no significant incidents involving hazardous materials or waste management, but only minor incidents that were promptly responded to and did not require remediation measures.

SASB EM-MM 150A.4
TOTAL WEIGHT OF NON-MINERAL WASTE GENE

SASB EM-MM 150A.5
TOTAL WEIGHT OF TAILINGS PRODUCED

SASB EM-MM 150A.6
TOTAL WEIGHT OF WASTE ROCK GENERATED

Tailings, waste rock and non-mineral waste generated (in thousands of metric tons)	2020			2021			2022		
	Alumínio plant	Mines	Total	Alumínio plant	Mines	Total	Alumínio plant	Mines	Total
Tailings generated	110	0	110	106	0	106	106	0	106
Non-mineral waste generated (includes mud)	457	610	1,067	525	727	1,252	511	941	1,452
Waste rock generated	0	0	0	0	0	0	0	0	0
Total	567	610	1,177	631	727	1,358	617	941	1,558

GRI 306-4
WASTE DIVERTED FROM DISPOSAL

Waste diverted from disposal (in thousands of metric tons)	2020						2021					
	Aluminum Business		Nickel Business		Total CBA		Aluminum Business		Nickel Business		Total CBA	
	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite
Hazardous waste (Class I)												
Preparation for reuse	330.6	2,507.0	0.0	947.6	330.6	3,454.6	1,607.3	2,758.6	0.0	561.2	1,607.3	3,319.8
Recycling	0.0	1,473.3	0.0	11.5	0.0	1,484.9	0.0	1,533.1	0.0	12.8	0.0	1,546.0
Other recovery operations	0.0	548.5	0.0	1,800.5	0.0	2,349.0	0.0	594.3	0.0	0.3	0.0	594.5
Subtotal	330.6	4,528.9	0.0	2,759.6	330.6	7,288.5	1,607.3	4,886.0	0.0	574.3	1,607.3	5,460.3
Nonhazardous waste (Class II)												
Preparation for reuse	17,196.0	30.0	0.0	0.0	17,196.0	30.0	15,550.8	73.4	0.0	0.0	15,550.8	73.4
Recycling	0.0	34,741.9	0.0	169.6	0.0	34,911.5	0.0	41,714.6	0.0	139.9	0.0	41,854.5
Other recovery operations	0.0	2,045.6	0.0	0.0	0.0	2,045.6	0.0	4,189.1	0.0	0.0	0.0	4,189.1
Subtotal	17,196.0	36,817.4	0.0	169.6	17,196.0	36,987.0	15,550.8	45,977.1	0.0	139.9	15,550.8	46,117.0
Total	61,802.0						68,735.3					

Waste diverted from disposal (in thousands of metric tons)	2022							
	Aluminum Business		Nickel Business		Energy Business		Total CBA	
	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite
Hazardous waste (Class I)								
Preparation for reuse	1,636.0	2,895.0	0.0	0.0	0.0	2.0	1,636.0	2,897.0
Recycling	0.0	1,546.1	0.0	0.0	0.0	0.0	0.0	1,546.1
Other recovery operations	0.0	548.5	0.0	0.3	0.0	2.8	0.0	551.5
Subtotal	1,636.0	4,989.6	0.0	0.3	0.0	4.8	1,636.0	4,994.6
Nonhazardous waste (Class II)								
Preparation for reuse	29,624.2	73.4	0.0	0.0	0.0	0.0	29,624.2	73.4
Recycling	0.0	40,457.7	0.0	0.0	0.3	0.0	0.3	40,457.7
Other recovery operations	0.7	2,964.3	0.0	0.0	0.0	0.0	0.7	2,964.3
Subtotal	29,625.0	43,495.4	0.0	0.0	0.3	0.0	29,625.3	43,495.4
Total	79,751.3							



GRI 306-5
WASTE DIRECTED TO DISPOSAL

Alternative methods of waste disposal are considered based on waste volumes, the performance of waste-related projects, and opportunities to create value from selling waste materials. The higher waste volumes in the Aluminum Business reflect higher production rates in the year.

Waste diverted from disposal. broken down by composition and recovery operation (in metric tons)	2020						2021					
	Aluminum Business		Nickel Business		Total		Aluminum Business		Nickel Business		Total	
	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite
Hazardous waste (Class I)												
Incineration (with energy recovery)	0.0	874.0	0.0	0.0	0.0	874.0	0.0	1,090.4	0.0	561.5	0.0	1,651.9
Incineration (without energy recovery)	0.0	1.7	0.0	0.0	0.0	1.7	0.0	1.3	0.0	0.0	0.0	1.4
Landfilling	0.0	1.1	0.0	1.7	0.0	2.8	0.0	1.5	0.0	0.0	0.0	1.5
Other disposal operations	0.0	1,085.3	0.0	0.0	0.0	1,085.3	0.0	1,318.8	0.0	0.3	0.0	1,319.0
Subtotal	0.0	1,962.1	0.0	1.7	0.0	1,963.8	0.0	2,412.0	0.0	561.8	0.0	2,973.7
Nonhazardous waste (Class II)												
Incineration (with energy recovery)	0.0	5,454.3	0.0	10.3	0.0	5,464.6	0.0	7,196.9	0.0	7.2	0.0	7,204.1
Incineration (without energy recovery)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Landfilling	26.0	309.5	28.0	190.5	54.0	499.9	19.4	382.2	15.8	23.7	35.3	405.9
Other disposal operations	1,192,485.3	0.0	0.0	0.0	1,192,485.3	0.0	1,367,223.7	22,396.8	0.0	0.0	1,367,223.7	22,396.8
Subtotal	1,192,511.3	5,763.8	28.0	200.8	1,192,539.3	5,964.5	1,367,243.1	29,975.9	15.8	31.0	1,367,258.9	30,006.8
Grand total	1,200,467.6						1,400,239.5					



Waste diverted from disposal. broken down by composition and recovery operation (in metric tons)	2022							
	Aluminum Business		Nickel Business		Energy Business		Total	
	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite	Onsite	Offsite
Hazardous waste (Class I)								
Incineration (with energy recovery)	0.0	1,432.4	0.0	6.9	0.0	2.0	0.0	1,441.3
Incineration (with-out energy recovery)	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
Landfilling	0.0	13.6	0.0	0.0	0.0	0.0	0.0	13.6
Other disposal operations	0.0	2,238.5	0.0	3.2	0.0	23.7	0.0	2,265.4
Subtotal	0.0	3,685.9	0.0	10.1	0.0	25.7	0.0	3,721.6
Nonhazardous waste (Class II)								
Incineration (with energy recovery)	0.0	15,475.8	0.0	0.0	0.0	0.0	0.0	15,475.8
Incineration (without energy recovery)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Landfilling	16.1	6,619.7	28.8	0.0	0.0	594.2	44.9	7,213.8
Other disposal operations	941,030.0	676,666.6	0.0	0.0	0.0	797.9	941,030.0	677,464.5
Subtotal	941,046.1	698,762.1	28.8	0.0	0.0	1,392.0	941,074.9	700,154.1
Grand total	1,644,950.5							

Note: Our Niquelândia operation has been curtailed since 2016, which explains the reduction in waste generation.

SASB EM-MM-150A.8
TOTAL WEIGHT OF HAZARDOUS WASTE RECYCLED

Hazardous waste recycled	2020	2021	2022
Total weight in metric tons	1,485	1,546	2,304

Note: This disclosure includes our Alumínio, Metalex, Niquelândia, Mining, Itapissuma and Alux operations.

CBA-7
SIGNIFICANT SPILLS

No significant spills occurred in 2022.

CBA-9
CONTAMINATED SITE REMEDIATION

CBA implements the most restrictive regulations applicable to each site, and works transparently with environmental agencies in remediating environmental liabilities in its operations. Contaminated site management at CBA is designed so that all operations achieve the highest level of maturity, ensuring that any risks are promptly mitigated and any deviations are adequately addressed.

In 2022, approximately R\$ 2 million was spent on analyses, investigations and risk assessments.

Jorge Marcos
do Nascimento,
Production Operator,
Alumínio Plant (SP)



GRI 302-1
ENERGY CONSUMPTION WITHIN THE ORGANIZATION

SASB EM-MM-130A.1
TOTAL ENERGY CONSUMED, (2) PERCENTAGE GRID
ELECTRICITY, (3) PERCENTAGE RENEWABLE

Energy consumption within the organization, by source (GWh)	2020			2021			2022			
	Aluminum	Nickel	Total	Aluminum	Nickel	Total	Aluminum	Nickel	Energy	Total
Energy consumption from renewable fuels	753	0	753	887	0	887	844	0	0	845
Energy consumption from non renewable fuels	1,399	2	1,401	1,429	3	1,433	1,623	4	1	1,628
Total electricity consumption (100% renewable)	5,391	9	5,401	6,118	8	6,127	6,318	6	40	6,365
Total energy consumption within the organization	7,543	12	7,554	8,435	12	8,446	8,786	10	42	8,838

Note 1: The inputs are the same as used for calculating CO₂e emissions using the GHG Protocol tool.
Note 2: The conversion factors published in the Brazilian Energy Balance (Balanço Energético Nacional) 2022 were used.
Note 3: Total energy sales amounted to 2,040 GWh and were not included in energy consumption.

GRI 302-2
ENERGY CONSUMPTION OUTSIDE OF THE ORGANIZATION

Energy consumption outside the Company relates to electricity consumed by suppliers and business partners supporting our operations. Related emissions are described in scope 3 of our emissions inventory.

Energy consumption outside the organization (in thousands of GJ)	2022
	23,251

Note: The data were estimated based on the distance traveled by the products sold by CBA on the way to its customers.



Financial management – #Transparency

CBA-6 PAYMENT OF MINING TAXES

Payment of mining taxes (R\$ million)	2020	2021	2022
Total mining taxes paid to the Brazilian Mining Agency	3.06	3.63	4.33

Miraf mine (MG)



CBA-1
INVESTMENT IN TECHNOLOGY AND INNOVATION

Innovation projects	2020	2021	2022
Total number of innovation projects per year	127 (26 in billing)	84 (22 in billing)	59 (31 in billing)
Number of innovation projects with clients (fostering)	45	30	20
Number of innovation projects from the market (demand)	82	54	39

Note: The total number of active projects has diminished as the Company focused on expediting the roll-out and completion of already identified opportunities. CBA has a higher percentage of market demand projects, 66%, as a result of the work carried out with clients. However, the Company continued to foster new markets and synergies, keeping 34% of the projects as development/R&D.

Investments in technology and innovation	2020	2021	2022
Investment in co-creation with customers (R\$ MM)	3.6	4.2	6.2
Percentage of co-created products out of total Downstream Business revenue	9.4%	9.8%	10.8%

Note: The scope of this disclosure includes the Downstream Business only, i.e. our Alumínio and Itapissuma operations.

Investments made, by area (in Reais)	2020				2021				2022			
	CAPEX	Costing	DT	Total	CAPEX	Costing	DT	Total	CAPEX	Costing	DT	Total
Innovation and Technology	50,529,949	9,558,246	1,140,883	61,229,078	44,902,459	14,292,513	2,505,912	61,700,884	233,660,557	30,642,883	3,007,462	267,310,902
Environment	19,852,070	5,670,232	0	25,522,302	12,826,450	4,079,735	0	16,906,185	15,862,473	6,031,529	0	21,894,002
Safety and security	11,194,430	0	0	11,194,430	18,363,137	149,994	0	18,513,132	27,754,746	0	0	27,754,746

Note: In 2022 there was a leverage in investments, mainly due to strategic projects (waste disposal, ReAI, Pot Room upgrade and Liquor Purification). Investments associated with digitization and technological development programs are ongoing.

Indicators by net sales

Water withdrawal intensity (m³/R\$ million in sales)	2020		2021		2022	
	Amount	Intensity	Amount	Intensity	Amount	Intensity
Freshwater withdrawals in areas without water stress (m³)	2,854	0.53	2,814	0.33	2,373	0.27
Freshwater withdrawals in areas with water stress (m³)	0	0.00	0	0.00	275	0.03
Total sales (R\$ million)	5,411		8,423		8,825	

Water consumption intensity (m³/R\$ million in sales)	2020		2021		2022	
	Amount	Intensity	Amount	Intensity	Amount	Intensity
Freshwater consumption in areas without water stress (m³)	2,854	0.53	2,814	0.33	2,366	0.27
Total water consumption in areas with water stress (m³)	0	0.00	0	0.00	275	0.03
Total sales (R\$ million)	5,411		8,423		8,825	

Note: Water intensity calculations consider water consumption to be equivalent to water withdrawals

GHG emissions intensity (t CO ₂ e/R\$ million in sales)	2020		2021		2022	
	Amount	Intensity	Amount	Intensity	Amount	Intensity
Total scope 1 and 2 GHG emissions (t CO ₂ e)	1,136,497	210.03	1,165,596	138.38	1,349,598	152.93
Total scope 1 GHG emissions (t CO ₂ e)	N/D	N/D	1,158,607	137.55	1,356,949	153.76
Total scope 2 GHG emissions (t CO ₂ e)	N/D	N/D	6,989	0.83	6,759	0.77
Total scope 3 GHG emissions (t CO ₂ e)	N/D	N/D	2,200,378	261.23	1,378,513	156.21
Total sales (R\$ million)	5,411		8,423		8,825	

Air emissions intensity (t/R\$ million in sales)	2020		2021		2022	
	Amount	Intensity	Amount	Intensity	Amount	Intensity
Total emissions (t)	1,307	0.24	1,446	0.17	1,604	0.18
Air emissions – NOx (t)	325	0.06	133	0.02	429	0.05
Air emissions – SOx (t)	36	0.01	34	0.00	42	0.00
Air emissions – VOC (t)	8	0.00	0	0.00	13	0.00
Air emissions – MP (t)	938	0.17	995	0.12	1,119	0.13
Total sales (R\$ million)	5,411		8,423		8,825	

Note 1: Includes NOx, SOx, Particulate Matter (PM) and Volatile Organic Compound (VOC) emissions.
Note 2: At the Metalex and Itapissuma sites, data is collected every two years and therefore the data for 2021 are the same as for 2020.

Waste intensity (t/R\$ million in sales)	2020		2021		2022	
	Amount	Intensity	Amount	Intensity	Amount	Intensity
Total waste generated (t)	1,266,277	234	1,390,418	165.1	1,670,347	189.3
Hazardous waste generated (t)	9,679	1.8	9,540	1.1	10,342	1.2
Nonhazardous waste generated (t)	1,256,599	232.2	1,443,218	171.3	1,660,006	188.1
Total sales (R\$ million)	5,411		8,423		8,825	

Brazilian Power Sector Regulator (ANEEL) Disclosures

With the integration of energy assets by CBA in 2022, the Company starts to report the indicators of ANEEL’s socio-environmental manual. The information includes the 17 Energy Power Plants that CBA has operational control. If there are any exceptions, they are indicated in the explanatory notes. CBA maintained the history of data reported in recent years by Votorantim Energia (currently Auren), responsible for operational control in previous years. Complete information on the CBA can be consulted in the [2022 Annual Report](#).

3.2.3. Responsibility to stakeholders

Stakeholders	Communication channels
Shareholders	CBA shares are 67.9% owned by its controlling shareholders and 32.1% free float. CBA engages with shareholders through its Investor Relations (IR) department in periodic meetings with investors; events/webinars for individual (retail) investors; national and international conferences organized by JP Morgan. Goldman Sachs and Itaú BBA; site visits; earnings calls; and the company’s Investor Relations website.
Customers	The Energy business had a total of 18 customers throughout 2022. All are energy trading companies. CBA engages with these stakeholders via email exchanges and telephone calls.
Social, environmental and community organizations	The primary social, environmental and community organizations the Energy business engages with are state education departments; civil defense departments; city halls; fire department; state environmental regulators; state environmental police departments; state military police departments; river basin committees (e.g. Baixo Paranaíba, Paranapanema, Middle Paranapanema and Upper Paranapanema); and social organizations (such as the Association of Parents and Friends of Children with Special Needs (APAE), the Youth Guard, waste picker associations, resident associations, local radio stations and other social organizations). We engage with these stakeholders through campaigns and meetings. As needed, stakeholders receive communications either by letter or through local media.
Public organizations and programs	The main public organizations and programs the Energy business engages with are the National Power Sector Agency (ANEEL); the National Grid Operator (ONS); the Electric Power Trading Chamber (CCEE); the Ministry of Mining and Energy (MME); and the São Paulo State Public Utility Regulator (ARSESP). We engage with these stakeholders through letters, emails, telephone calls and in-person meetings.
Partners and suppliers	We engage with suppliers through email communications and in-person and/or virtual meetings. Transactions with suppliers are processed exclusively via the SAP Ariba platform, and supplier onboarding is managed via the Linkana platform. We also run initiatives to communicate our Sustainable Procurement Program, including videos, stories and podcasts. Episode 7 of the Conecta CBA podcast discussed sustainable procurement and CBA’s efforts to work with the supply chain to develop responsible operations and implement environmental, social and governance programs. CBA also posted a video on its LinkedIn page featuring AMG Brasil, an #OurCBA partner, discussing the Program. Our Sustainable Procurement program encourages suppliers to support CBA’s ESG commitments, positively influencing the end-to-end aluminum value chain. In 2022 the Energy business had 315 business partners.

CBA’s approach to engagement with other stakeholders is described throughout the 2022 CBA Annual Report, and especially in the chapters “[The aluminum lifecycle](#)” and “[Governance is key](#)”.

3.2.4. Operational and productivity disclosures

Technical Data (inputs, production capacity, sales, losses)	2022						2021						2020					
	Gener- ation output (GWh)	Elec- tric- ity pur- chased (GWh)	Overall elec- tri- cal losses (GWh)	Substa- tions (in units)	Installed capacity (MW)	Transmis- sion lines (in Km)	Gener- ation output (GWh)	Elec- tric- ity pur- chased (GWh)	Overall electrical losses (GWh)	Substa- tions (in units)	Installed capacity (MW)	Transmis- sion lines (in Km)	Gener- ation output (GWh)	Elec- tric- ity pur- chased (GWh)	Overall elec- tri- cal losses (GWh)	Substa- tions (in units)	Installed capacity (MW)	Transmis- sion lines (in Km)
Sobragi HPP	334	NA	NA	1	60	37	289	NA	NA	1	60	37	314	NA	NA	1	60	37
Salto do Rio Verdinho HPP	401	NA	NA	1	93	26	404	NA	NA	1	93	26	413	NA	NA	1	93	26
Ourinhos HPP	126	NA	NA	1	44	0	97	NA	NA	1	44	0	126	NA	NA	1	44	0
Piraju HPP	94	NA	NA	1	80	0	150	NA	NA	1	80	0	240	NA	NA	1	80	0
Rio Novo SHP	0	NA	NA	1	1	0	1	NA	NA	1	1	0	1	NA	NA	1	1	0
Boa Vista SHP	0	NA	NA	1	1	0	0	NA	NA	1	1	0	0	NA	NA	1	1	0
Alecrim HPP	336	NA	NA	1	72	68	295	NA	NA	1	72	68	364	NA	NA	1	72	68
França HPP	120	NA	NA	1	30	46	90	NA	NA	1	30	46	132	NA	NA	1	30	46
Fumaça HPP	166	NA	NA	1	36	12	128	NA	NA	1	36	12	194	NA	NA	1	36	12
Barra HPP	170	NA	NA	1	40	10	134	NA	NA	1	40	10	198	NA	NA	1	40	10
Porto Raso HPP	130	NA	NA	1	28	10	107	NA	NA	1	28	10	154	NA	NA	1	28	10
Serraria HPP	114	NA	NA	1	24	7	100	NA	NA	1	24	7	143	NA	NA	1	24	7
Salto do Iporanga HPP	235	NA	NA	1	37	18	209	NA	NA	1	37	18	230	NA	NA	1	37	18
Itupararanga HPP	16	NA	NA	1	55	16	62	NA	NA	1	55	16	109	NA	NA	1	55	16
Santa Helena SHP	0	NA	NA	1	2	7	4	NA	NA	1	2	7	5	NA	NA	1	2	7
Votorantim SHP	0	NA	NA	1	3	3	5	NA	NA	1	3	3	8	NA	NA	1	3	3
Jurupará HPP	0	NA	NA	1	7	45	0	NA	NA	1	7	45	18	NA	NA	1	7	45
Total	2,242	NA	NA	17	614	305	2,073	NA	NA	17	614	305	2,649	NA	NA	17	614	305

Note: Beyond those listed in the table, the disclosures on purchased electricity, overall electrical losses, distribution systems, distribution transformers, Equivalent Outage Duration per Consumer (EOF), Equivalent Outage Frequency per Consumer, electricity sales per unit of installed capacity, electricity sold per employee, number of consumers per employee, and added value/GWh sold do not apply to the Energy business.

3.3. CORPORATE GOVERNANCE DIMENSION

Top management	2022				2021				2020			
	BoD	EB	OB	Total	BoD	EB	OB	Total	BoD	EB	OB	Total
No. of members	5.83	7.00	NA	12.83	3.25	6.67	NA	9.92	2.25	5.00	NA	7.25
Annual fixed compensation (R\$ thousand)	2,790,000	7,222,036	NA	10,012,036	1,385,000	5,889,532	NA	7,274,532	735,000	5,392,961	NA	6,127,961
Salary or management fees (R\$ thousand)	2,500,000	6,646,339	NA	9,146,339	1,300,000	5,889,532	NA	7,189,532	735,000	4,959,136	NA	5,694,136
Direct and indirect benefits (R\$ thousand)	0	575,697	NA	575,697	0	0	NA	0	0	433,825	NA	433,825
Participation in committees (R\$ thousand)	290,000	0	NA	290,000	85,000	0	NA	85,000	0	0	NA	0
Other (R\$ thousand)	0	0	NA	0	0	0	NA	0	0	0	NA	0
Variable compensation (R\$ thousand)	0	13,701,168	NA	13,701,168	0	10,843,473	NA	10,843,473	0	6,480,353	NA	6,480,353
Bonus (R\$ thousand)	0	0	NA	0	0	1,240,000	NA	1,240,000	0	0	NA	0
Profit sharing (R\$ thousand)	0	7,423,455	NA	7,423,455	0	6,048,605	NA	6,048,605	0	4,827,960	NA	4,827,960
Participation in meetings (R\$ thousand)	0	0	NA	0	0	0	NA	0	0	0	NA	0
Commission (R\$ thousand)	0	0	NA	0	0	0	NA	0	0	0	NA	0
Other (R\$ thousand)	0	6,277,713	NA	6,277,713	0	3,554,868	NA	3,554,868	0	1,652,393	NA	1,652,393

Note 1: BoD stands for Board of Directors; EB stands for Executive Board; and OB stands for Oversight Board; none apply to the Energy business. Variable compensation refers to long-term incentives paid.

Note 2: The data for 2022 are projections, as stated in the Reference Form base year 2021.

3.4. ECONOMIC AND FINANCIAL DIMENSION

3.4.1. Economic and financial disclosures

Economic and financial data are reported on a consolidated basis in the “Financial management” chapter of the 2022 CBA Annual Report.

3.5. SOCIAL AND SECTORAL DIMENSION

3.5.1. Internal social disclosures

Employees/employability/ management	2022																
a) General Information	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
Total workforce	17	20	12	22	0	0	33	11	9	5	5	2	5	43	0	0	0
Number of contractors (contractors, sub- contractors and self-employed workers) by employment type, employment contract and region	21	22	20	0	0	0	0	0	0	0	60	0	0	41	0	0	0
Employees aged 30 or under (%)	6%	30%	8%	14%	0%	0%	15%	9%	11%	0%	20%	0%	20%	26%	0%	0%	0%
Employees aged 31 to 40 (%)	41%	40%	25%	27%	0%	0%	30%	27%	44%	40%	40%	50%	40%	30%	0%	0%	0%
Employees aged 41 to 50 (%)	29%	25%	50%	32%	0%	0%	27%	27%	33%	40%	20%	50%	0%	16%	0%	0%	0%
Employees over 50 (%)	24%	5%	17%	27%	0%	0%	27%	36%	11%	20%	20%	0%	40%	28%	0%	0%	0%
Percentage of female employees (%)	12%	45%	0%	9%	0%	0%	6%	0%	0%	20%	0%	0%	0%	16%	0%	0%	0%
Women in managerial positions out of total managerial positions (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Black female employees (black and mixed race) out of total employees (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Black male employees (black and mixed race) out of total employees (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Black employees (black and mixed race) in managerial positions out of total managerial positions (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percentage of interns out of total employees (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Apprentice program employees (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Number of employees with disabilities	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0

Employees/employability/ management	2021																
	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
a) General Information																	
Total workforce	25	21	13	22	0	0	43	15	14	7	5	3	8	31	0	0	0
Number of contractors (contractors, sub- contractors and self-employed workers) by employment type, employment contract and region	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Employees aged 30 or under (%)	8%	29%	0%	9%	0%	0%	12%	13%	7%	0%	20%	0%	25%	13%	0%	0%	0%
Employees aged 31 to 40 (%)	36%	43%	31%	27%	0%	0%	30%	33%	36%	29%	40%	33%	38%	32%	0%	0%	0%
Employees aged 41 to 50 (%)	32%	24%	46%	41%	0%	0%	30%	27%	43%	43%	20%	67%	0%	29%	0%	0%	0%
Employees over 50 (%)	24%	5%	23%	23%	0%	0%	28%	27%	14%	29%	20%	0%	38%	26%	0%	0%	0%
Percentage of female employees (%)	4%	29%	0%	9%	0%	0%	7%	7%	0%	14%	0%	0%	0%	23%	0%	0%	0%
Women in managerial positions out of total managerial positions (%)	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%
Black female employees (black and mixed race) out of total employees (%)	0%	14%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%
Black male employees (black and mixed race) out of total employees (%)	36%	48%	8%	14%	0%	0%	40%	7%	21%	71%	20%	100%	63%	23%	0%	0%	0%
Black employees (black and mixed race) in managerial positions out of total managerial positions (%)	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%
Percentage of interns out of total employees (%)	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
Apprentice program employees (%)	4%	0%	0%	5%	0%	0%	5%	0%	0%	0%	0%	33%	13%	0%	0%	0%	0%
Number of employees with disabilities	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Note: Data was not available for 2020.

e) Occupational health and safety	2022																
	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
Average overtime per employee per year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total frequency rate for the period – employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Severity rate for the period – contractors	0	0	0	0	0	0	317	0	0	0	0	0	0	2,809	0	0	0
Total frequency rate for the period – contractors	0	0	0	0	0	0	29	0	0	0	0	0	0	14	0	0	0
Severity rate for the period – employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total frequency rate for the period – workforce (employees + contractors)	0	0	0	0	0	0	12	0	0	0	0	0	0	10	0	0	0
Severity rate for the period – workforce (employees + contractors)	0	0	0	0	0	0	128	0	0	0	0	0	0	2,017	0	0	0
Number of fatalities – employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of fatalities – contractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

e) Occupational health and safety	2021																
	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
Average overtime per employee per year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total frequency rate for the period – employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Severity rate for the period – contractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total frequency rate for the period – contractors	0	0	0	0	0	0	39	0	0	0	0	0	0	0	0	0	38
Severity rate for the period – employees	0	0	0	0	0	0	491	0	0	0	0	0	0	0	0	0	419
Total frequency rate for the period – workforce (employees + contractors)	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	38
Severity rate for the period – workforce (employees + contractors)	0	0	0	0	0	0	156	0	0	0	0	0	0	0	0	0	419
Number of fatalities – employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of fatalities – contractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Data was not available for 2020.

f) Professional development	2022																
Education levels (percentage of total employees)	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
Primary education (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Secondary education (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Trade school (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Undergraduate (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Graduate (specialist. master's degree. PhD) (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Amount invested in professional development and education (%)	8%	8%	5%	9%	0%	0%	19%	6%	5%	3%	2%	1%	3%	11%	0%	0%	0%
Average hours of training per year per employee	3.00	4.00	5.00	4.00	0.00	0.00	5.00	5.00	6.00	5.00	2.00	5.00	3.00	4.00	0.00	0.00	0.00

f) Professional development	2021																
Education levels (percentage of total employees)	Sobragi HPP	Salto do Rio Verdinho HPP	Ourinhos HPP	Piraju HPP	Rio Vermelho SHP	Boa Vista SHP	Alecrim HPP	França HPP	Fumaça HPP	Barra HPP	Porto Raso HPP	Serraria HPP	Salto do Iporanga HPP	Itupararanga HPP	Santa Helena SHP	Votorantim SHP	Jurupará HPP
Primary education (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Secondary education (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Trade school (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Undergraduate (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Graduate (specialist. master's degree. PhD) (%)	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Amount invested in professional development and education (%)	8%	8%	5%	9%	0%	0%	19%	6%	5%	3%	2%	1%	3%	11%	0%	0%	0%
Average hours of training per year per employee	3.00	4.00	5.00	4.00	0.00	0.00	5.00	5.00	6.00	5.00	2.00	5.00	3.00	4.00	0.00	0.00	0.00

Note 1: Data was not available for 2020.
Note 2: Data are not available on employees' education profiles.

3.5.2. External social disclosures

Consumers

Consumer-related disclosures are not applicable to the Energy business as its operations are limited to generation facilities.

Suppliers

Information about supplier management can be found in the chapter on “The aluminum lifecycle” in the 2022 CBA Annual Report.

Communities

The main indicators related to the community can be seen in the table below.

Impacts on health and safety	2022	2021	2020
Total number of nonfatal injuries involving consumers	0	0	0
Total number of fatal injuries involving consumers	0	0	0
Legal proceedings resulting from accidents involving consumers – Overall Legal Proceedings	0	0	0
c) Low-income rate	2022	2021	2020
Number of customers/consumers paying low-income rates	NA	NA	NA
Ratio of total customers/consumers paying low-income rates to total residential customers/consumers (%)	NA	NA	NA
Revenue from sales to low-income residential sub-sector (R\$ thousand)	NA	NA	NA
Total revenue from sales to low-income residential sub-sector out of total residential revenue (%)	NA	NA	NA
Subsidy received (Eletrobrás) for low-income consumers (R\$ thousand)	NA	NA	NA
d) Company engagement in social initiatives	2022	2021	2020
Funds allocated to education (R\$ thousand)	1,030,000	551,250	2,621
Funds allocated to health care and sanitation (R\$ thousand)	228,998	140,000	2,694
Funds allocated to culture (R\$ thousand)	0	0	100
Funds allocated to sports (R\$ thousand)	0	0	100
Other funds allocated to social initiatives (R\$ thousand)	128,984	115,000	10,397
Employees carrying out voluntary work in the community outside the Company/total employees (%)	0	14%	37%
Number of hours donated per month (employees released from normal working hours) by the Company for employee volunteer work	0	0	2
e) Company involvement in cultural, sports and other projects, etc. (Rouanet Act)	2022	2021	2020
Amount of funding allocated to the projects (R\$ thousand)	80,000	0	200
Amount of funding allocated to the largest project (R\$ thousand)	80,000	0	100

Note: Historical data refer to Votorantim Energia’s Volunteer Program and had the scope of the entire company and not just the plants owned by CBA. Considering only the Plants within the scope of the CBA, in 2021 and 2020, 14% and 37% of employees carried out voluntary work.

Government and society

Information about dealings with governments and society can be found on [page 14](#) of this supplement.

3.5.3. Power-sector disclosures

Universalization

Energy Efficiency Program (PEE)

Disclosures on universalization and access to energy and about the company’s Energy Efficiency Program do not apply to the Energy business as its operations are limited to generation facilities.

Research and technological and scientific development

Generation concessionaires in the self-production modality are excluded from the obligation to invest in R&D projects and energy efficiency – EE, except in relation to revenues from commercialized energy, as established in ANEEL’s Research and Development Program Procedures – PROP&D.



The Legado Verdes do Cerrado reserve, a CBA-sponsored protected area in the state of Goiás

3.6. ENVIRONMENTAL DIMENSION

3.6.1. Environmental disclosures

Disclosures on rehabilitation of disturbed land in urban areas are not applicable as the Energy business has no operations in urban areas.

Effluents and waste	2022			2021			2020		
	Total water discharge by quality and destination (m³)	Annual quantity of solid waste generated (refuse, waste, rubble etc.) (metric tons)	Quantity of contaminated PCB waste (Ascarel) disposed of (metric tons)	Total water discharge by quality and destination (m³)	Annual quantity of solid waste generated (refuse, waste, rubble etc.) (metric tons)	Quantity of contaminated PCB waste (Ascarel) disposed of (metric tons)	Total water discharge by quality and destination (m³)	Annual quantity of solid waste generated (refuse, waste, rubble etc.) (metric tons)	Quantity of contaminated PCB waste (Ascarel) disposed of (metric tons)
Sobragi HPP	0.00	70.15	0.00	0.00	60.70	0.00	0.00	0.41	0.00
Salto do Rio Verdinho HPP	0.00	16.64	0.00	0.00	142.00	0.00	0.00	0.68	0.00
Ourinhos HPP	0.00	53.61	0.00	0.00	303.58	0.00	20.62	18.87	0.00
Piraju HPP	0.00	8.66	0.00	0.00	14.24	0.00	0.00	0.65	0.00
Rio Novo SHP	0.00	1.37	0.00	0.00	0.15	0.00	0.00	0.08	0.00
Boa Vista SHP	0.00	0.10	0.00	0.00	0.15	0.00	0.00	0.07	0.00
Alecrim HPP	0.00	134.19	0.00	0.00	2.40	0.00	0.00	8.45	0.00
França HPP	0.00	0.00	0.00	0.00	29.80	0.00	0.00	3.14	0.00
Fumaça HPP	0.00	0.18	0.00	0.00	4.10	0.00	0.00	4.28	0.00
Barra HPP	0.00	0.00	0.00	0.00	50.87	0.00	0.00	4.70	0.00
Porto Raso HPP	0.00	77.43	0.00	0.00	6.51	0.00	1.98	3.30	0.00
Serraria HPP	0.00	173.98	0.00	0.00	0.79	0.00	0.00	2.93	0.00
Salto do Iporanga HPP	0.00	0.00	0.00	0.00	0.68	0.00	0.00	4.23	0.00
Itupararanga HPP	0.00	14.62	0.00	0.00	1,494.57	0.00	0.00	0.57	0.00
Santa Helena SHP	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.07	0.00
Votorantim SHP	0.00	132.68	0.00	0.00	1.62	0.00	0.00	0.07	0.00
Jurupará HPP	0.00	487.20	0.00	0.00	25.89	0.00	0.00	0.09	0.00
Total	0.00	1,170.81	0.00	0.00	2,138.74	0.00	22.60	52.59	0.00

Emissions	2022		2021		2020	
	Annual volume of greenhouse gas emissions (CO ₂ , CH ₄ , N ₂ O, HFC, PFC, SF ₆) (in t CO ₂ e)	Annual volume of ozone-depleting emissions (in metric tons of CFC equivalent)	Annual volume of greenhouse gas emissions (CO ₂ , CH ₄ , N ₂ O, HFC, PFC, SF ₆) (in t CO ₂ e)	Annual volume of ozone-depleting emissions (in metric tons of CFC equivalent)	Annual volume of greenhouse gas emissions (CO ₂ , CH ₄ , N ₂ O, HFC, PFC, SF ₆) (in t CO ₂ e)	Annual volume of ozone-depleting emissions (in metric tons of CFC equivalent)
Sobragi HPP	1,041.18	ND	926.39	ND	9,220.39	ND
Salto do Rio Verdinho HPP	68.20	ND	296.68	ND	59,465.60	ND
Ourinhos HPP	8.10	ND	1,464.75	ND	7,051.04	ND
Piraju HPP	376.31	ND	487.68	ND	2,374.18	ND
Rio Novo SHP	0.00	ND	26.81	ND	1.20	ND
Boa Vista SHP	0.00	ND	2.58	ND	0.92	ND
Alecrim HPP	34.00	ND	98.05	ND	83.56	ND
França HPP	12.20	ND	23.59	ND	21.41	ND
Fumaça HPP	7.40	ND	29.54	ND	44.94	ND
Barra HPP	6.70	ND	40.99	ND	32.35	ND
Porto Raso HPP	7.50	ND	23.80	ND	52.01	ND
Serraria HPP	2.60	ND	18.45	ND	14.15	ND
Salto do Iporanga HPP	10.80	ND	30.80	ND	119.57	ND
Itupararanga HPP	36.00	ND	283.37	ND	84,246.76	ND
Santa Helena SHP	2.10	ND	15.73	ND	0.10	ND
Votorantim SHP	1.40	ND	10.49	ND	1,653.66	ND
Jurupará HPP	34.00	ND	34.77	ND	1.49	ND
Total	1,648.60	ND	3,814.47	ND	164,383.33	ND

Note: For the indicator, in 2022, only Scope 1 emissions were considered. Scope 2 emissions are zero, as CBA had REC purchases in the year that zeroed out the contribution of this scope in the inventory. For Scope 3 emissions, the Company does not have traceability by Plant.

Total electricity consumption by source (in kWh)	2022					2021					2020				
	Hydro	Fossil fuels	Alternative sources (gas, wind, solar, etc.)	Total electricity consumption	Electricity consumption per kWh distributed (sold)	Hydro	Fossil fuels	Alternative sources (gas, wind, solar, etc.)	Total electricity consumption	Electricity consumption per kWh distributed (sold)	Hydro	Fossil fuels	Alternative sources (gas, wind, solar, etc.)	Total electricity consumption	Electricity consumption per kWh distributed (sold)
Sobragi HPP	0	0	0	1,255,094	0	0	0	0	1,192,384	0	0	0	0	1,161,990	0
Salto do Rio Verdinho HPP	0	798	0	1,790,366	0	0	505	0	2,595,276	0	0	0	0	2,846,725	0
Ourininhos HPP	0	0	0	1,084,327	0	0	0	0	943,711	0	0	0	0	2,063,977	0
Piraju HPP	0	598	0	1,537,672	0	0	3,978	0	2,505,322	0	0	0	0	1,816,516	0
Rio Novo SHP	0	0	0	0	0	0	0	0	2,280	0	0	0	0	9,030	0
Boa Vista SHP	0	0	0	10,119	0	0	0	0	12,451	0	0	0	0	16,041	0
Alecrim HPP	0	285	0	2,505,645	0	0	0	0	566,200	0	0	0	0	664,608	0
França HPP	0	1,138	0	266,603	0	0	140	0	288,321	0	0	260	0	359,480	0
Fumaça HPP	0	1,093	0	87,193	0	0	276	0	112,156	0	0	426	0	138,810	0
Barra HPP	0	696	0	1,014,856	0	0	589	0	656,247	0	0	128	0	735,074	0
Porto Raso HPP	0	280	0	691,225	0	0	180	0	780,595	0	0	168	0	784,358	0
Serraria HPP	0	300	0	891,995	0	0	250	0	1,041,040	0	0	305	0	1,059,085	0
Salto do Iporanga HPP	0	400	0	729,804	0	0	430	0	769,245	0	0	450	0	847,989	0
Itupararanga HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Helena SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Votorantim SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jurupará HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5,588	0	11,864,899	0	0	6,348	0	11,465,228	0	0	1,737	0	12,503,683	0

Note: The Energy business does not report disclosures on fuel energy consumption in gigajoules, as consumption is tracked using a different metric.

Total water withdrawal by source (in m³)	2022					2021					2020				
	Utility	Groundwater (well)	Surface water	Total water consumption	Water withdrawal per employee	Utility	Groundwater (well)	Surface water	Total water consumption	Water withdrawal per employee	Utility	Groundwater (well)	Surface water	Total water consumption	Water withdrawal per employee
Sobragi HPP	0.00	0.00	0.00	87.60	NA	0.00	0.00	0.00	9.00	NA	0.00	0.00	0.00	9.00	NA
Salto do Rio Verdinho HPP	0.00	0.00	2,361.00	0.00	NA	0.00	1,887.00	0.00	31,087.00	NA	0.00	0.00	0.00	29,200.00	NA
Ourinhos HPP	0.00	0.00	0.00	559.08	NA	0.00	0.00	0.00	6.00	NA	0.00	0.00	0.00	5.00	NA
Piraju HPP	0.00	0.00	0.00	815.39	NA	0.00	0.00	0.00	9.00	NA	0.00	0.00	0.00	9.00	NA
Rio Novo SHP	0.00	0.00	305.00	0.00	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	2.00	NA
Boa Vista SHP	0.00	0.00	0.00	50.52	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	2.00	NA
Alecrim HPP	0.00	0.00	0.00	1,404.00	NA	0.00	0.00	0.00	15.00	NA	0.00	0.00	0.00	10.00	NA
França HPP	0.00	0.00	0.00	810.00	NA	0.00	0.00	0.00	6.00	NA	0.00	0.00	0.00	8.00	NA
Fumaça HPP	0.00	0.00	0.00	108.00	NA	0.00	0.00	0.00	4.00	NA	0.00	0.00	0.00	6.00	NA
Barra HPP	0.00	0.00	0.00	216.00	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	4.00	NA
Porto Raso HPP	0.00	0.00	0.00	162.00	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	4.00	NA
Serraria HPP	0.00	0.00	0.00	108.00	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	4.00	NA
Salto do Iporanga HPP	0.00	0.00	0.00	216.00	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	4.00	NA
Itupararanga HPP	0.00	0.00	0.00	1,992.17	NA	0.00	0.00	0.00	5.00	NA	0.00	0.00	0.00	23.00	NA
Santa Helena SHP	0.00	0.00	0.00	134.14	NA	0.00	0.00	0.00	1.00	NA	0.00	0.00	0.00	30.00	NA
Votorantim SHP	0.00	89.42	0.00	0.00	NA	569.00	0.00	0.00	570.00	NA	0.00	0.00	352.00	352.00	NA
Jurupará HPP	0.00	0.00	0.00	268.27	NA	0.00	0.00	0.00	2.00	NA	0.00	0.00	0.00	0.00	NA
Total	0.00	89.42	2,666.00	6,931.16	NA	569.00	1,887.00	0.00	31,726.00	NA	0.00	0.00	352.00	29,672.00	NA

Note 1: For 2022, the reporting scope changed. The energy consumption calculation also considers the general excitation consumption of the generating unit.

Note 2: The Energy business does not report on water consumption by source or by employee. as this data is not tracked at all sites..

Electricity consumption (kWh)	2022		2021		2020	
	Electricity consumption of generating units and auxiliaries	Water consumption by kWh generated (m³/s)	Electricity consumption of generating units and auxiliaries	Water consumption by kWh generated (m³/s)	Electricity consumption of generating units and auxiliaries	Water consumption by kWh generated (m³/s)
Sobragi HPP	439,402	0.00	506,120	0.00	449,099	0.00
Salto do Rio Verdinho HPP	932,461	0.00	1,776,045	0.00	1,889,517	0.00
Ourinhos HPP	507,341	0.00	498,411	0.01	88,630	0.01
Piraju HPP	332,086	0.00	879,082	0.00	9,966	0.00
Rio Novo SHP	0	0.00	2,280	0.06	9,030	0.06
Boa Vista SHP	0	0.00	12,451	0.00	16,041	0.00
Alecrim HPP	1,531,905	0.00	566,200	0.00	664,608	0.00
França HPP	265,105	0.00	288,181	0.00	359,220	0.00
Fumaça HPP	86,100	0.00	111,880	0.00	138,384	0.00
Barra HPP	768,294	0.00	409,792	0.00	489,080	0.00
Porto Raso HPP	208,780	0.00	298,250	0.00	302,025	0.00
Serraria HPP	236,155	0.00	385,250	0.00	403,240	0.00
Salto do Iporanga HPP	158,045	0.00	198,320	0.00	277,044	0.00
Itupararanga HPP	0	0.00	0	0.00	0	0.00
Santa Helena SHP	0	0.00	0	0.01	0	0.01
Votorantim SHP	0	0.00	0	0.00	0	0.00
Jurupará HPP	0	0.00	0	0.00	0	0.00
Total	5,465,674	0.01	5,932,262	0.10	5,095,884	0.10

Note 1: For 2022, the reporting scope changed. The energy consumption calculation also considers the general excitation consumption of the generating unit..

Environmental education – communities	2022					2021					2020				
	Number of primary and secondary education schools benefited	Number of students benefited	Number of teachers trained	Number of trade and higher education schools benefited	Number of students benefited	Number of primary and secondary education schools benefited	Number of students benefited	Number of teachers trained	Number of trade and higher education schools benefited	Number of students benefited	Number of primary and secondary education schools benefited	Number of students benefited	Number of teachers trained	Number of trade and higher education schools benefited	Number of students benefited
Sobragi HPP	0	0	0	0	0	1	400	0	0	0	2	500	0	0	0
Salto do Rio Verdinho HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ourinhos HPP	16	1,210	0	0	0	3	389	0	0	0	0	0	0	0	0
Piraju HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rio Novo SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Boa Vista SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alecrim HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
França HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fumaça HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barra HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porto Raso HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Serraria HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salto do Iporanga HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Itupararanga HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Helena SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Votorantim SHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jurupará HPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	16	1,210	0	0	0	4	789	0	0	0	2	500	0	0	0

ENVIRONMENTAL DISCLOSURES – GENERATION, TRANSMISSION AND DISTRIBUTION

Rehabilitation of disturbed land	2022				2021				2020			
	Restoration of riparian vegetation - number of saplings or planted/ rehabilitated area per year (ha)	Fish salvaged in turbines - kg of fish per shutdown	Fish restocking - number of fry released into reservoirs per year	Leakage of lubricating and hydraulic oil from turbines – metric tons per year (m³/year)	Restoration of riparian vegetation - number of saplings or planted/ rehabilitated area per year (ha)	Fish salvaged in turbines - kg of fish per shutdown	Fish restocking - number of fry released into reservoirs per year	Leakage of lubricating and hydraulic oil from turbines – metric tons per year (m³/year)	Restoration of riparian vegetation - number of saplings or planted/ rehabilitated area per year (ha)	Fish salvaged in turbines - kg of fish per shutdown	Fish restocking - number of fry released into reservoirs per year	Leakage of lubricating and hydraulic oil from turbines – metric tons per year (m³/year)
Sobragi HPP	0.00	5.06	0.00	0.00	0.00	8.00	0.00	1.00	0.00	3.53	0.00	0.00
Salto do Rio Verdinho HPP	72.55	1,046.23	0.00	0.00	36.00	158.00	0.00	0.00	7.09	66.84	0.00	0.00
Ourinhos HPP	0.00	12.60	0.00	0.00	0.00	0.32	0.00	0.00	0.00	10.91	0.00	0.00
Piraju HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.56	0.00	0.00
Rio Novo SHP	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
Boa Vista SHP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alecrim HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	NA	0.00	NA	0.00
França HPP	0.00	0.00	0.00	0.00	5.22	0.00	0.00	0.00	NA	0.00	NA	0.13
Fumaça HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Barra HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Porto Raso HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.20
Serraria HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Salto do Iporanga HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Itupararanga HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Santa Helena SHP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.05
Votorantim SHP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Jurupará HPP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA	0.00
Total	72.55	1,063.89	0.00	0.00	41.22	170.32	0.00	1.04	7.09	111.84	0.00	0.39

