JGP Asset Management

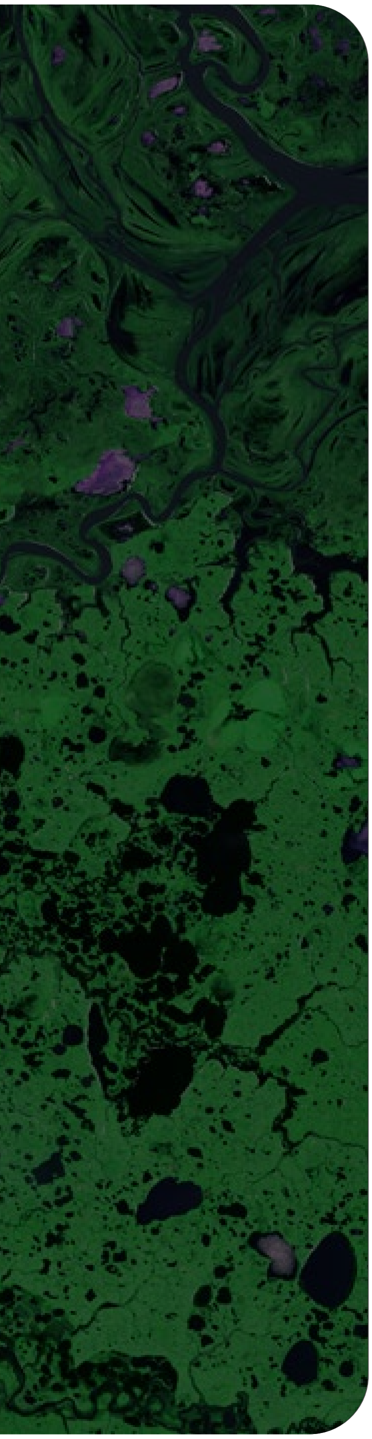
Climate Report
2022

Climate
Report 2022

Contents

TO HAVE A BETTER EXPERIENCE, NAVIGATE THROUGH THE MENU.
TO RETURN TO THE SUMMARY, **CLICK ON THE ICON.**

Message from the Head of ESG and Responsible Investments



Thinking about the climate impacts in Brazil is a very different exercise than in most other countries. We have one of the cleanest energy matrices in the world, our industrial sources are not the largest emitters of greenhouse gases, yet we still rank as one of the largest current and historical contributors to global warming. This uniquely Brazilian contradiction finds its breaking point in the use of land and the destructive conversion of our rich natural landscapes, between the intention of being the first major global economy to achieve climate neutrality and the reality of a sequence of historically record-breaking deforestation and wildfires indicators.

The Brazilian capital market has a clear responsibility for reversing this situation. For this to happen, however, we need to understand the peculiarities of the emissions dynamics of the Brazilian economy and create compatible solutions. In 2022, JGP dedicated itself to building a unique approach in which combating deforestation, both legal and illegal, and the restoration of biomes are our main lines of action in the fight against climate change.

Continuing our Decarbonization Plan published in 2021, in which the centrality of nature was described, in 2022 we made two important international commitments. We were—and still are—the only Brazilian signatories of the FSDA (Financial Sector Deforestation Action) Initiative, a global movement that brings together more than 30 signatories with a total of $8.9 trillion in AuM committed to no longer invest in commodities derived from deforestation from 2025 onwards. Since then, we have been integrated into the Strategic Investors Committee of the collective action and have led various collective engagement initiatives connecting companies from the Global South with international investors.

Simultaneously, understanding the complexity of natural landscapes, we had an active participation in the UN Biodiversity Conference in Montreal. At the meeting, we were the first Latin Americans to join

Finance for Biodiversity pledge, a movement with over 140 global investors committed to transparency and mitigation of our impacts on nature.

This complex of commitments has led to unique financial innovations, such as our first investments in carbon-efficient bioeconomy. Investing in assets such as Oakberry, in agroforestry production of açaí, and in Tobasa, in babassu production, both in the Amazon region and its transition corridors, confirmed our bet that nature is the best ally in the climate change fight.

The transparency of our climate performance also encountered a relevant turning point in 2022. That year, we launched our first JGP climate impact report based on the PCAF Standard and following the recommendations of the TCFD, a practice that will be replicated and refined every year, covering more and more details and representing our continuous improvement in the climate management of our investments.

We are optimistic about our methodological advances and the results obtained from financial management perspective that places climate at the center of the capital allocation debate. However, we are aware of the complexity of the challenge and our fiduciary duty responsibility. We have much to develop yet but we are committed to the adoption and improvement of the best practices for managing climate factors. With this awareness and vision, we will continue steadfast in building a financially, socially, and naturally positive climate ecosystem for communities in Brazil and around the world.

José Pugas
Head of ESG and Responsible Investments
JGP Asset Management

2. About this Report

All figures and scope of performance data are related to the full year ended December 30, 2022. All financial information is presented in Brazilian Reais (R$).

This report was built on following the recommendations of Task Force on Climate-related Financial Disclosures (TCFD) and the organizational boundaries for accounting and reporting GHG emissions are company-wide, and it covers direct emissions (Scope 1) and indirect emissions (Scope 2 and 3).

For accounting financed emissions, we follow the reporting guide to disclose GHG emissions associated with loans and investments under the Partnership for Carbon Accounting Financials (PCAF) Standard.

This report has not been externally verified, however for collecting activity data and calculate emissions, JGP uses the standards and guidelines of the GHG Protocol Program, e.g. Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

3. About JGP

JGP is an independent asset management firm with vast investment expertise in Brazil and abroad. The company was founded in 1998 by a group of professionals who have been working together since the early 90's. Since its inception the company has been striving for excellence in asset management, aiming at combining consistent returns with active risk management to preserve our clients' capital.

The senior multi-class investment team manages multi-strategy funds with different risk profiles, long biased and long only equity funds, credit funds that combine investments in both local and international corporate debt instruments, real estate funds and private pension funds. A full range of Funds that cater to different investment styles. JGP also offers wealth management services for high-net-worth individuals and pension funds.

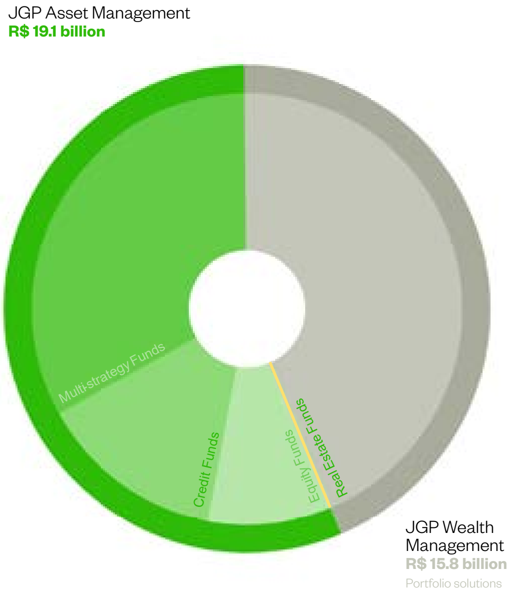
R$ 35 billion
in assets under management

Multi-strategy Funds
R$ 10.0 billion
— Macro Multi-strategy Funds
— Retirement Plans

Credit Funds
R$ 6.1 billion
— Liquid Brazil/International
— Infrastructure
— ESG/Agribusiness
— Special Situatior
— Retirement Plan

Equity Funds
R$ 3.1 billion
— Long Biased
— Long Only
— ESG
— Health Care
— Retirement Plans

Real Estate
R$ 14 million
— JGP Real Estate Multiestratégia FIC FIM



3. JGP's Climate Ambition

In April 2021, JGP joined the Net Zero Asset Managers Initiative (NZAM), an international group of asset managers committed to support the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with efforts to limit global warming to 1.5 degrees Celsius.

NZAM is a formal partner of the UNFCCC's Race to Zero Campaign and aims to galvanize the asset management industry to commit to a goal of net zero emissions on their investments.

JGP accepted this challenge and set the long-term target to be net zero by 2040, anticipating it by 10 years. We have also set an interim target to halve our emissions by 2030. This is in line with the identified requirement in the Intergovernmental Panel on Climate Change (IPCC) special report on Global Warming of 1.5 °C.

Our decarbonization strategy is limited to credit and equity portfolios and it is related to scope 1, 2 and 3 emissions.

JGP's GHG reduction goals:

50%
BY 2030

100%
BY 2040

JGP Climate Report relies on our goals, and it follows the Taskforce on Climate-related Financial Disclosures recommendations to enable our stakeholders to understand our climate-related impacts.

We are considering the TCFD's seven principles for effective disclose and to it be comparable among other financial institutions we are disclosing our emissions following the Global GHG Accounting and Reporting Standard for the Financial Industry.

The Greenhouse gases (GHG) accounting for financial institutions are the annual accounting and disclosure of GHG emissions associated with loans and investments at a fixed point in time in line with financial accounting periods.

In November 2021, JGP joined the Partnership for Carbon Accounting Financials (PCAF). We believe that combating climate change is a complex challenge that can only be overcome collectively and transparently. Therefore, we adhere to the principle that "what gets measured gets managed".

The PCAF was launched globally in September 2019. Currently, more than 422 financial institutions in 70 countries are part of PCAF, representing more than $90 trillion in total assets. PCAF participants work together to jointly develop the Global GHG Accounting and Reporting Standard for the Financial Industry to measure and disclose the greenhouse gas emissions of their loans and investments. By doing so, PCAF participants take an important step to assess climate-related risks, set targets in line with the Paris Climate Agreement and develop effective strategies to decarbonize our society.

Following the GHG Protocol, PCAF enables financial institutions to measure and report Scope 3, category 15 – investment emissions. This is extremely material for financial institutions, because portfolio emissions are on average 700x larger than direct emissions.

We will disclose our financed emissions at least once a year following the PCAF Standard and it will encompass the TCFD framework as well.

5. Governance

Oversight of climate-related risks and opportunities

Our governance on climate-related issues is structured to manage the financial risks and opportunities of climate change, as well as implement measures methodologies, KPIs and internal policies.

Committee Level

JGP' Sustainability Committee has the participation of the main shareholder and founder of JGP, André Jakurski, and it has 5 working groups.

Among its duties, the Committee is responsible for approving the agendas related to sustainability that are brought by the Management Group (composed of partners and collaborators who perform functions in Portfolio Management, Analysis, Investor Relations, Compliance, etc.). The agendas are based on studies and evaluations carried out by the working groups.

The Committee is the ultimate responsible to decide the approach JGP will take to climate-related matters, and amongst the main topics managed by the Committee is regarding, when it is material, as whether an investee has public policies or guidelines related to climate change, such as goals to reduce its carbon footprint and discussions of risks and opportunities, in addition to properly disclosure of GHG emissions.

The Committee oversees climate-related regulations locally and abroad to assess how it will impact the market.

Executive and Management Level

Throughout our proprietary ESG Framework, with quantitative and qualitative indicators, we can assess how our portfolio's companies are performing on climate-related matters.

As part of our ESG integration, the management team is regularly informed about climate-related issues within the portfolio, including which companies are committed to or seeking to incorporate climate management into their business practices. This update process for every investee takes place at least once a year with the management team. For instance, this allows the portfolio manager to be aware of climate-related risks and opportunities associated with their investments.

Another assessment involves financed emissions. We utilize an internally developed system that calculates and generates insights for analysts and portfolio managers. With this tool, they can evaluate which companies are climate-positive and which ones have a heavier carbon footprint.

We also compare the intensity of carbon of our funds, with it we know which funds we need to impose a major change and which ones are leading the way for a net zero future.

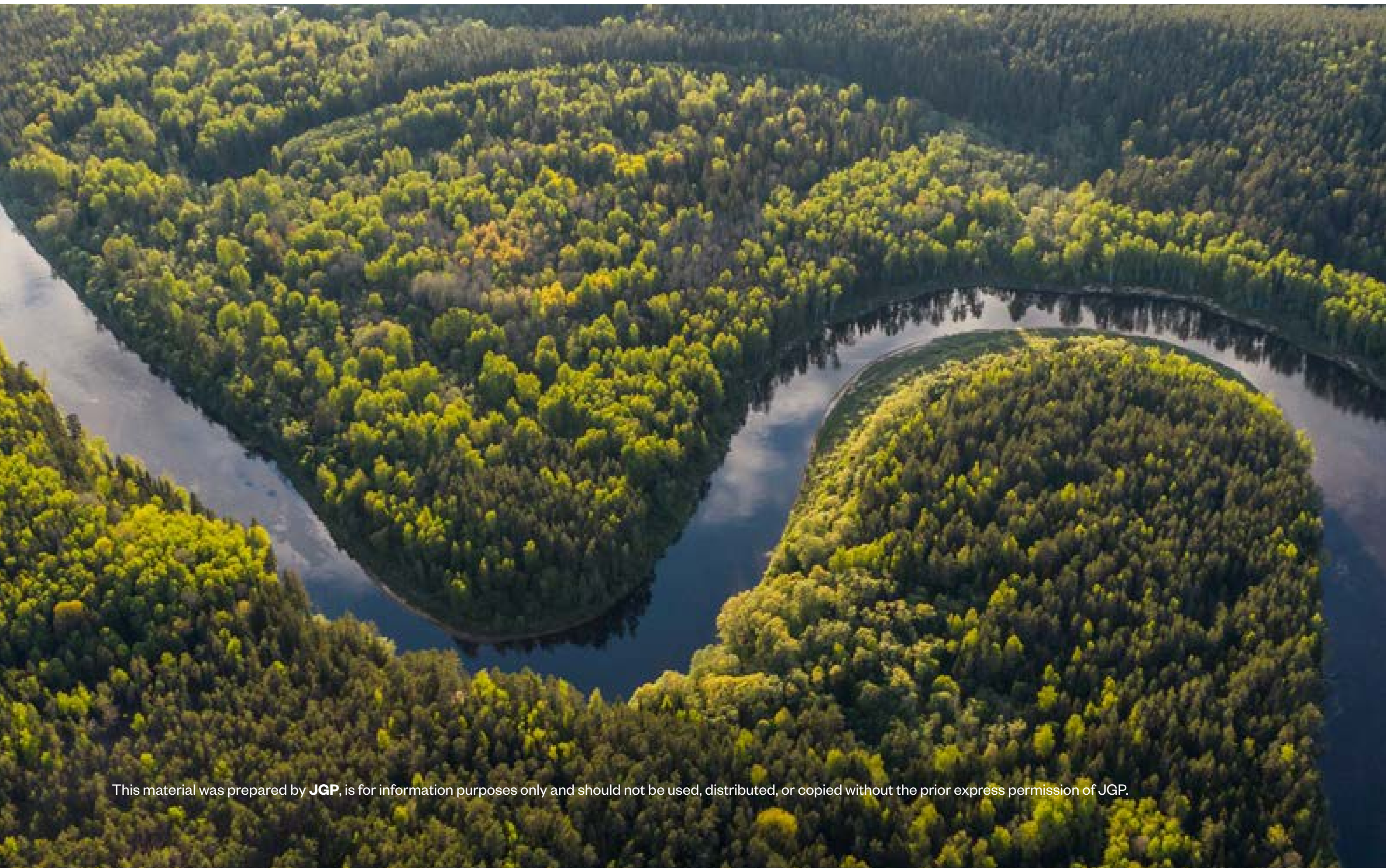
Building capability

We believe that the path to limiting global warming to 1.5°C is a one way that can only be achieved with collective action to create solutions that may accelerate the transition to a low-carbon economy.

One pillar on which we stand is education, building knowledge of climate and broader environmental risks associated with climate change is an important enabler of our strategy and approach to achieve this collective goal.

Weekly ESG reunions are held and opened to all employees to discuss ESG-related themes, and climate change is one of the most common topics of our discussions. These meetings are part of learning and training resources to enhance the knowledge of all areas and teams.

Members of our management team are frequent speakers at webinars and other important conferences that contribute to sharing knowledge on climate issues. We dedicate precious time to these events because we understand that learning is an ongoing development process that we must pursue and that we must also share what we have learned.



6. Strategy

Climate-related risks and opportunities

We understand that financial flows are impacted and can also impact planet Earth. We also understand the fundamental role of investors in economy and society, and this involves the combination of financial return and positive impact. We need to work diligently to mitigate the effects of climate change and enable the transition to a greener future, and to do this it is important to fully understand the risks and opportunities to be ready to act.

Climate-related risks

Refers to the potential negative impacts of climate change and it can be divided into two major categories: transition risks and physical risks.

1. Transition risks:

Associated with a transition to a lower-carbon global economy.

i. Policy and legal risks

Related to upcoming regulations to promote mitigation and adaptation to climate change, as for example, at national level the Resolution CVM 175 and abroad the Sustainable Finance Disclosure Regulation (SFDR), and the EU Deforestation-free regulation.

ii. Technology risks

Related to the development of low-carbon technologies which will impact organizations on their competitiveness, cost of production and distribution.

iii. Market risks

Shifts in supply and demand for certain commodities, products, and services, as climate-related risks are increasingly considered.

iv. Reputation risks

Reputational risk tied to changing society's perception of an organization behavior and efforts to mitigate climate change.

2. Physical risks:

Result of event driven (acute risk) or long-term shifts (chronic risk) in climate patterns.

i. Acute risks

Increased severity of extreme weather events, such as cyclones, hurricanes, and floods.

ii. Chronic risks

For example, sustained higher temperatures that may cause sea level rise or chronic heat waves.

JGP developed an initial heatmap to identify physical and transitional risks that may affect high-intensive sectors. For this analysis we were based on IPCC's [Climate Change 2023 Synthesis Report, Summary for Policymakers](#) to help have a better understanding of the adverse impacts with more likelihood to occur in the next decades.

Risk	Type		Oil & Gas	*Utilities*	Cement	*Metals & Mining*	Aviation	Agribusiness	*Construction and buildings*
Floods	Physical	Acute	Low	High	Low	High	Low	High	Moderate
Droughts	Physical	Acute	Low	High	Low	Low	Low	High	Low
Storms	Physical	Acute	Low	High	Low	Moderate	High	High	High
Wildfires	Physical	Acute	Low	Moderate	Low	Low	Moderate	High	Moderate
Landslides	Physical	Acute	Low	Moderate	Low	High	Low	Moderate	High
Changes in precipitation patterns	Physical	Chronic	Low	High	Low	High	Low	High	Low
Ocean acidification	Physical	Chronic	Low	Low	Low	Low	Low	Moderate	Low
Sea level rise	Physical	Chronic	Low	Moderate	Low	Low	Low	Moderate	High
Heat waves	Physical	Chronic	Low	High	Moderate	Low	Low	High	Low
Sea temperature increase	Physical	Chronic	Low	Moderate	Low	Low	Low	High	Low
Carbon-pricing	Transitional	Policy & legal	High	Moderate	High	High	High	Low	Moderate
Litigation	Transitional	Policy & legal	High	Moderate	Low	Low	Low	High	Low
Technology disrupt	Transitional	Tech-nology	High	High	High	High	High	Moderate	Low
Insurance increase	Transitional	Market	Low	High	Low	Low	Low	High	High
Capital access	Transitional	Market	High	Moderate	High	High	Moderate	High	Low
Changes in clients preference	Transitional	Repu-tational	High	Moderate	Moderate	Moderate	High	High	Moderate

Source: JGP

Climate-related opportunities

Refers to the potential positive impacts as result of efforts to mitigate and adapt to climate change.

There are 5 types of climate-related opportunities that JGP has used for its analysis, through these opportunities the organizations can reduce operating costs, increase value of fixed assets, reduce exposure to GHG emissions, and increase revenue for example.

i. **Resource efficiency**
ii. **Energy source**
iii. **Products and services**
iv. **Markets**
v. **Resilience**

We assessed through these five types how the GHG-intensive sectors could benefit from a transition to a low-carbon economy.

Opportunities	Type	Oil & Gas	Utilities	*Cement*	Metals & Mining	*Aviation*	Agribusi-ness	*Construction and buildings*
Use of more efficient production and distribution processes	Resource efficiency	High	High	High	High	High	High	High
Participation in carbon market	Energy source	Low	High	High	Moderate	Moderate	High	Low
Shift in consumer preferences	Products and services	Low	Moderate	Moderate	Moderate	Low	High	Moderate
Access to new markets	Markets	Low	High	Low	Low	Moderate	High	High
Use of public-sector incentives	Markets	Low	High	Moderate	Moderate	High	High	Low
Participation in renewable energy programs and adoption of energy-effi-ciency measures	Resilience	High	High	High	High	Low	Moderate	High

Source: JGP

It is clear to us that the increasingly global perception of the need for a transition to a green and inclusive economy is seen by us as a catalytic factor in generating business opportunities. Guided by a theory of change, we have directed our efforts towards originating assets with the capacity for positive contribution, reversing the emissions scenario to one of greenhouse gas capture and storage.

This movement is driven not only by a shift in paradigms but also due to its necessity and urgency. This is one of the main strategic orientations of the ESG credit funds managed by JGP.

The search for contributors to reverse greenhouse gas emissions cannot, and should not, be restricted to large corporations. The broad geographical reach and diverse levels of maturity of Brazilian companies fit into a complex systemic context, embedded in one of the major bottlenecks of sustainable development: obtaining qualified credit.

Our role as financial agents of change is to provide conditions for new solutions to emerge and scale, not only addressing financing needs but also acting as agents for innovation and structuring projects and companies with significant potential for contribution in terms of financial externalities.

Securitization instruments, blended finance structures, Green Rural Product Notes (CPRs), and the potential to trade carbon credits are some of the mechanisms currently available for us to build the best solutions, efficiently directing capital to optimize returns on our funds and unlock positives externalities.

As part of our strategy to reduce our carbon footprint and as a result of our efforts, we highlight the financing in 2022 of the first CRA (Agribusiness Receivables Certificate) aimed at financing agroforestry of non-timber native products and sustainable extraction in Brazil, the Tobasa CRA, and the inaugural sustainable Oakberry CRA that promotes the bioeconomy in the Amazon region, along with two assets connected to critical technological innovation for the decarbonization of the fertilizer industry - Solubio, and the construction sector - Urbem.

Businesses, strategy, and financial planning

JGP considers climate-related risks and opportunities in decision-making, strategy, and financial planning. The equity and credit areas are provided with climate-related information about the companies in which they invest, allowing portfolio managers to mitigate risks and focus efforts on projects with the potential to generate a positive climate impact.

As an example, JGP's credit division has, as one of its growth strategies, the development of innovative financial instruments to promote nature-based solutions, aiming to regenerate natural ecosystems and remove carbon from the atmosphere.

Working together

Achieving net zero will require a transformation across every sector and we can only achieve this goal through a collaborative approach between all players, the governments, businesses, and society.

In our ESG journey, JGP has taken some serious commitments to help us address this challenge to limit global warming to a 1.5°C scenario.

Commitments

We are members of and support the following initiatives:

Signatory of: PRI Principles for Responsible Investment

Principles for Responsible Investment (PRI): In 2019 we became signatory of the Principles for Responsible Investment; the PRI aims to understand the implications of ESG investments and support its international network of signatory investors in incorporating these factors into their investment decisions.

Investidores pelo Clima (IPC): The IPC is an initiative of NINT, an ERM Company, with support from the Climate and Society Institute (iCS), through its Zero Emissions Economy Program. We joined the initiative in 2020, and its mission is to promote the decarbonization and resilience of Brazilian investors' portfolios, helping to align them with a scenario where global warming is limited to 1.5°C.

Carbon Disclosure Project (CDP): CDP is a non-profit organization that operates the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. We joined CDP in 2020 and have started evaluating companies' climate performance and participating in the engagement campaigns promoted by CDP.

Climate Action 100+ (CA100+): Climate Action 100+ is an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. Investor participants are signatories to the initiative and are responsible for direct engagements with focus companies, individually and/or collaboratively, we have joined this in 2020 and we are part of 3 engaging groups.

Task Force on Climate-related Financial Disclosures (TCFD): The Task Force on Climate-related Financial Disclosures (TCFD) was created to improve and increase reporting of climate-related financial information, in 2020 we started to support it because we believe the TCFD recommendations provide a useful framework to increase transparency on climate-related risks and opportunities within financial markets.

Science Based Targets Initiative (SBTi): The Science Based Targets initiative drives ambitious climate action in the private sector by enabling organizations to set science-based emissions reduction targets, in 2020 we started to support the initiative because it defines and promotes best practices in emissions reductions and net-zero targets in line with climate science and provides technical assistance.

Net Zero Asset Managers Initiative (NZAM): The Net Zero Asset Managers initiative is an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius; and to supporting investing aligned with net zero emissions by 2050 or sooner. JGP became a signatory in 2021 and has set interim targets toward a goal of net-zero assets under management by 2040.

Farm Animal Investment Risk and Return Initiative (FAIRR): The FAIRR Initiative is a collaborative investor network that raises awareness of the environmental, social and governance (ESG) risks and opportunities in the global food sector. JGP became a member of the initiative in 2021 and joined this global network of investors to be aware of the issues linked to intensive animal production and seek to minimize the risks within the broader food system.

Innovative Finance for the Amazon, Cerrado and Chaco (IFACC): Innovative Finance for the Amazon, Cerrado and Chaco is an initiative from the United Nations Environment Programme, the Nature Conservancy and the Tropical Forest Alliance. It serves as the "go-to" team for banks, companies and investors seeking to expand innovative finance for deforestation/conversion-free beef and soy in these regions. In 2021 JGP joined the initiative and with it we started a collective action to drive the world's transition to deforestation-free supply chains, ensuring a forest-positive future.

Partnership for Carbon Accounting Financials (PCAF): PCAF is an industry-led partnership to facilitate transparency and accountability of the financial industry to the Paris Agreement, it is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the greenhouse gas emissions associated with their loans and investments. JPG joined this community in 2021 and have begun to quantify and disclose our financed emissions in line with PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry.

Finance Sector Deforestation Action (FSDA): Launched at COP26, Finance Sector Deforestation Action brings together 36 financial institutions with more than (US) $8 trillion in assets under management who are working toward eliminating agricultural commodity-driven deforestation risks (from cattle, soy, palm oil, pulp, and paper) in their investment and lending portfolios by 2025. JGP was a founder signatory of the commitment and is using its best efforts to drive a sustainable transition of the agricultural sector.

Finance for Biodiversity (FfB): The Finance for Biodiversity Pledge is a collective commitment by the finance sector itself collectively committed to collaborating, engaging, assessing their own biodiversity impact, setting targets and reporting on biodiversity matters by 2024 at the latest. JGP joined this initiative in 2022, we need to protect biodiversity and reverse nature loss in this decade, we know that healthy societies, resilient economies and thriving businesses rely on nature.

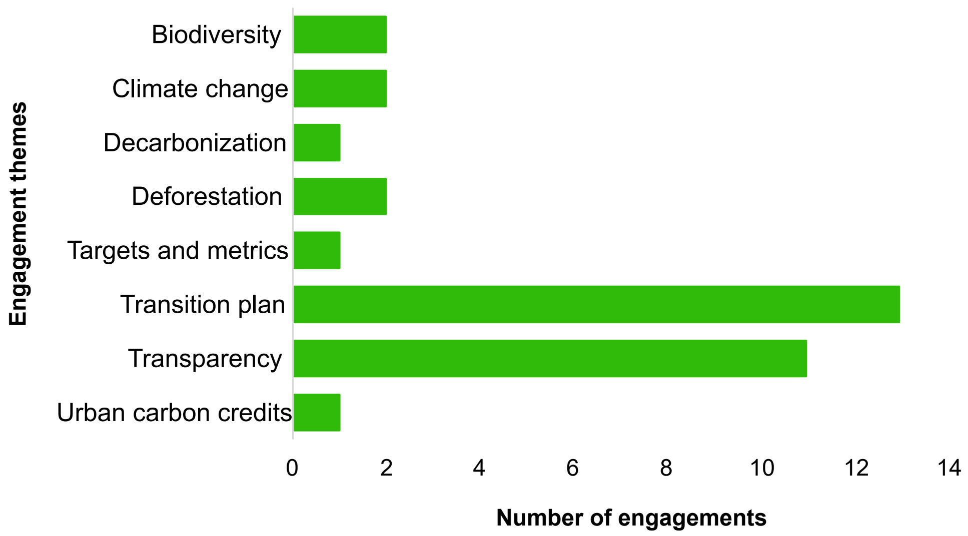
Engagements

As asset managers, we have a duty to act in the best long-term interests of our investors. We believe that driving companies towards best ESG practices, supporting them in addressing their most critical issues, is the most productive and effective way for their development, as opposed to simply excluding these companies from our investment portfolios.

Through active ownership we have engaged with Brazilian companies that have a key role in supporting this transition to a low-carbon economy and a nature positive future.

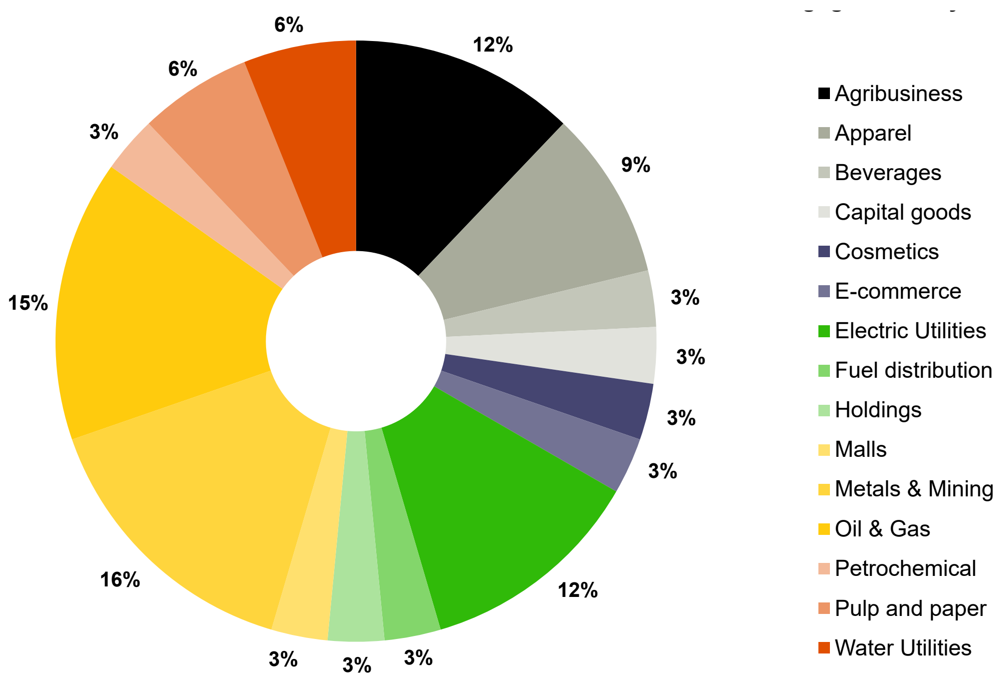
In 2022 we had at least 33 meetings with 28 Brazilian companies to specifically discuss climate-related themes, as showed below.

Climate-related engagements themes



Source: JGP

Climate-related engagements by sector



Engagement case I

Petrobras

In 2022, as part of the collaborative working group of Climate Action 100+ engaging with Petrobras, we discussed with the company's managers about reducing greenhouse gas emissions from gas flaring. Petrobras has already achieved its methane intensity reduction targets for 2025, and flaring emissions in Brazil are low compared to the rest of the world. However, the sector currently lacks standardized and reliable information regarding methane emissions, and the company's disclosure differs from its peers.

As suggestions for the company, one point was to join The Oil & Gas Methane Partnership 2.0 (OGMP), and in January 2023, the company joined this global initiative coordinated by the United Nations dedicated to quantifying and managing methane emissions.

Source: JGP

Engagement case II

Transition Plan Campaign

CDP's Climate Transition Plan disclosure was an engagement campaign which aimed to increase the development and disclosure of vital climate transition plans.

A climate transition plan is a time-bound, action plan that clearly outlines how an organization will pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations. i.e., halving emissions by 2030 and reaching net-zero by 2050 at the latest, thereby limiting global warming to 1.5°C.

We have chosen a sample of 11 Brazilian companies that had responded CDP's 2021 Climate Change Questionnaire to assess if they fully disclosed key transition-focused metrics based on: Governance, Targets, Scenario analysis, Risks and Opportunities, Strategy to achieve net zero, Financial planning, Scope 1, 2 and 3 accounting with verification, Value chain engagement and Policy engagement.

You can find our sample results in the table below.

	Centrais Eletricas Brasileiras S/A (ELETROBRAS)	Eneva	Gerdau	*Vale SA*	Light SA	*Marfrig Global Foods S/A*	Minerva Foods	*JBS S.A*	*Petróleo Brasileiro S.A. - Petrobras*	SLC Agrícola SA	*Suzano Papel & Celulose*
Organizational disclosure to all indicators	95%	68%	59%	86%	73%	64%	59%	82%	82%	27%	73%

These cases were two examples of our engagements in 2022 related to climate, just to bring a bit more of color of our approach. However, as pointed above in opportunities, we also believe in a strategy to invest in nature-based solutions and in technologies that accelerates the energy transition.

Source: CDP

In December 2022 we have also published **JGP' Statement on Zero Deforestation**, which we detailed how we are going to be deforestation-free. The perception is clear that our ability to become net zero is entirely linked to our ability to address the risk of deforestation. However, we believe that this capability should not be limited solely to risk management but should also incorporate the promotion of innovative strategies, especially those that support the development of new technologies that combine sustainable management with financial returns.

7. Risk Management

JGP's Responsible Investment Policy considers the impact that invested companies have or may have on society and the environment. For funds with an IS mandate, we prohibit investment in segments considered particularly harmful to society and the environment, applying the concept of "do no significant harm." Additionally, these funds seek to support companies and industries that generate positive externalities that we consider transformative for the planet.

To identify and assess climate-related risks we apply a combination of screening associated with quantitative and qualitative ESG integration factors (Framework) to most of our investments. Screening involves the practice of creating filters applicable to investments, with its most common form being negative screening, which excludes sectors and/or companies from the investment universe that do not align with the values of the investor seeking an ESG investment.

ESG Framework

JGP's ESG Framework has a section on Climate Change for every sector; it is worth emphasizing that the weight varies according to the materiality of the issue for each sector.

Through the framework, we capture companies' greenhouse gas emissions (scopes 1, 2, and 3), their climate goals, controversies, and their governance. Based on the data collected, ESG research team assesses the company and generates reports that contribute to mitigate risks.

For our analyses of the climate impact on assets, we segregate our analyses by sectoral and geographic cuts.

In our sectoral sections, we identify the sectors that have (a) greater dependence on climatic factors for their efficiency, (b) greater exposure to carbon adjustment mechanisms, and (c) greater emissions intensity.

Based on these criteria, we can identify the following as the most critical sectors:

1. **Those related to land use, especially agribusiness.**
2. **Dependent on the use of natural water bodies, such as river logistics, hydroelectric power production, sanitation, and irrigated production.**
3. **Sectors that presented difficulties in significantly increasing their efficiency in emissions without compromising their financial competitiveness, where the businesses of the steel, meatpacking, aluminum, aviation, fertilizer, plastic, and cement production sectors stand out.**

In the geographic sections, we started to include in our analyses the location by climatic zones of the production units using the cut presented in the IPCC Assessment Reports (NSA - Northern South America, SAM - South American Monsoon, NES - North-Eastern South America and SES - South-Eastern South America), as well as their future scenarios defined by the IPCC and the impacts predicted by IPCC in their reports.

By cross-referencing the location of companies' physical assets and their downstream and upstream chains, we hope to be able to obtain information on physical risks, in particular:

i. Water availability and food production

a. Physical water availability

b. Agriculture/ crop production

c. Animal and livestock health and productivity

d. Fisheries yields and aquaculture production.

ii. Health and well-being

a. Infectious diseases

b. Heat, malnutrition, and harm from wildfire

c. Mental health

d. Displacement

iii. Cities, settlements, and infrastructure

a. Inland flooding and associated damages

b. Flood/storm induced damages in coastal areas

c. Damages to infrastructure

d. Damages to key economic sectors

iv. Biodiversity and ecosystems

a. Terrestrial ecosystems

b. Freshwater ecosystems

c. Ocean ecosystems

Deforestation risk

Managing risks related to natural capital plays an extremely important role in the fight against the conversion of native vegetation and biodiversity loss to achieve global climate goals.

To analyze companies that may have negative socio-environmental impacts on forests, we rely on the assessment conducted by the Forest 500 initiative, which seeks to identify and rank the strength and implementation of forest and human rights commitments of 350 companies and 150 financial institutions worldwide, related to forest-risk commodities – palm oil, soy, beef and leather, timber, pulp and paper.

We rely on the annual rankings of the Forest 500 with the goal of identifying which assets are most exposed to social and environmental risks associated with deforestation. We understand that the initiative is an important tool to bring comparability and transparency regarding asset practices.

Next, we share two examples of assessments conducted for the year 2022, filtering for some companies and financial institutions based in Brazil.

Company Rankings - 2022

Company Name	Total score	Overall approach	Associated Human Rights Abuses	Commodity Score	Commitment Strength	Reporting and implementation
Amaggi	69%	9 | 10	13 | 17	60 | 90	16 | 17	32 | 56
Suzano SA	59%	8 | 10	11 | 17	51 | 90	17 | 17	24 | 56
Marfrig Global Foods	39%	6 | 10	5 | 17	33 | 90	9 | 17	19 | 56
Minerva S.A.	33%	4 | 10	4 | 17	30 | 90	9 | 17	18 | 56
JBS	33%	4 | 10	5 | 17	29 | 90	8 | 17	16 | 56
Grupo SLC	25%	6 | 10	4 | 17	19 | 90	4 | 17	12 | 56
Natura&Co	24%	6 | 10	6 | 17	18 | 90	7 | 17	6 | 56
BRF Brasil Foods S.A.	22%	3 | 10	6 | 17	20 | 90	4 | 17	10 | 56
MRV Engenharia e Participacoes S.A.	13%	2 | 10	4 | 17	12 | 90	4 | 17	5 | 56
Cyrela Brazil Realty	5%	0 | 10	4 | 17	6 | 90	0 | 17	2 | 56

Source: Forest 500

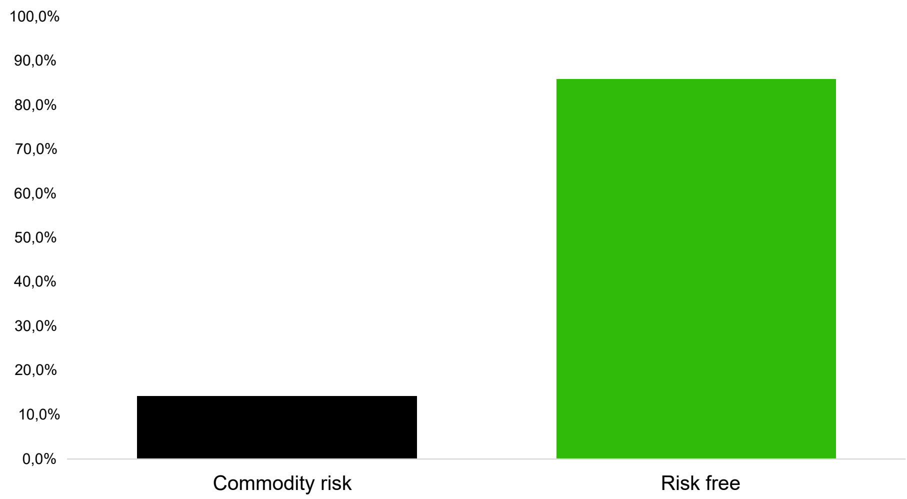
Financial Institutions Rankings - 2022

Financial Institution Name	Total score	Overall approach	Commodity Score	Policy Strength	Reporting and implementation
Banco do Brasil	28%	3 | 10	25 | 90	11 | 28	9 | 35
BTG Pactual	10%	3 | 10	8 | 90	4 | 28	3 | 35
BNDES	9%	1 | 10	8 | 90	3 | 28	4 | 35
Itaú Unibanco	8%	2 | 10	7 | 90	3 | 28	4 | 35
Safra Group	4%	2 | 10	3 | 90	2 | 28	1 | 35
Bradesco	1%	1 | 10	0 | 90	0 | 28	0 | 35
3G Capital	0%	0 | 10	0 | 90	0 | 28	0 | 35
Caixa Econômica Federal	0%	0 | 10	0 | 90	0 | 28	0 | 35
Grupo XP	0%	0 | 10	0 | 90	0 | 28	0 | 35

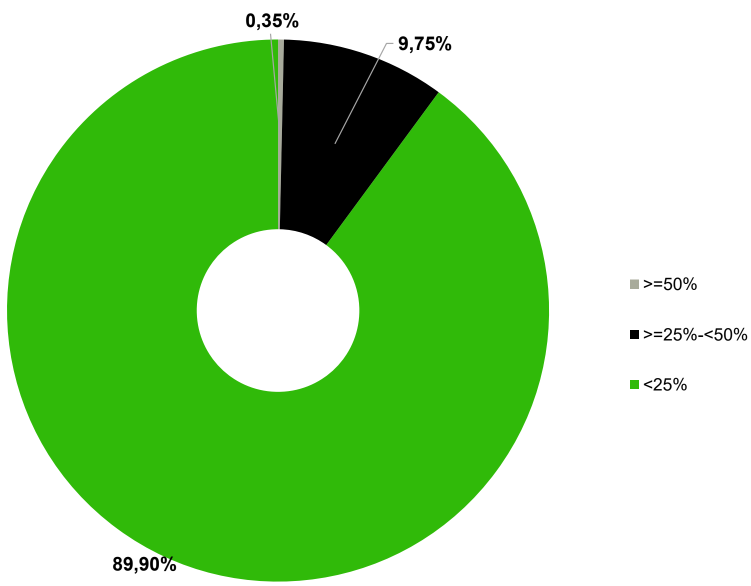
Source: Forest 500

As an initial result of this analysis, we find that 85.8% of our investment portfolio is not exposed to commodities with forest risk. Meanwhile, 0.05% of the exposed portfolio has a total score (overall approach plus commodity score) above 50, 1.4% falls between 25 and 50, and 12.8% falls within the range of 0 to 24.

Portfolio assessment of commodity risk



Commodity risk total overall score



Source: JGP

Exclusion policy

JGP has an asset exclusion policy, and concerning climate, we can mention that for all funds managed by JGP, none will invest in companies deriving more than 10% of their revenue from coal mining and that do not have a perspective of source diversification.

For funds labeled as ESG, IS (Sustainable Investment, as ANBIMA taxonomy) funds, we can mention that no fund will invest in:

> **(i)** Companies deriving more than 20% of their revenue from the generation or commercialization of coal-fired thermal power and that do not have a perspective of source diversification;
>
> **(ii)** Unconventional oil and gas exploration, such as shale, shale oil, oil sands, and heavy oil; exploration through alternative methods such as hydraulic fracturing (fracking) and sand separation.

These are some of the exclusion criteria in our exclusion policy that we believe contribute to the management of risks associated with climate change.

8. Metrics and Targets

In 2023, JGP has improved its database and our internal processes to have a better measurement of our carbon footprint. Based on Greenhouse Gas Protocol, JGP has completely evaluated 2022 Scope 1, 2 and Scope 3 emissions, and under the category 15 – Investments, we have measured what is possible through the best methodology available. Following the PCAF Standard, we were able to calculate our financed emissions for listed equities, corporate bonds, business loans, and private equities.

There are 4 business pillars that can be achieved through the measurement of financed emissions:

1. Create transparency for stakeholders:

By disclosing our carbon footprint, along with a properly breakdown of emissions, we hope to provide the best possible transparency for all of our stakeholders.

2. Manage climate-related transition risks:

By measuring and assessing our financed emissions, we can identify GHG-intensive hotspots that could be subject to higher transition risks.

3. Manage climate-related transition risks:

By measuring the financed emissions, we can also understand whether a product is having a climate positive impact on our portfolio and for society.

4. Align financial flows with the Paris Agreement:

We believe that measuring our finance emissions is a necessary step to align financial flows with the Paris Agreement, by doing that we can establish a baseline to reduce emissions in line with the best available science.

Overview

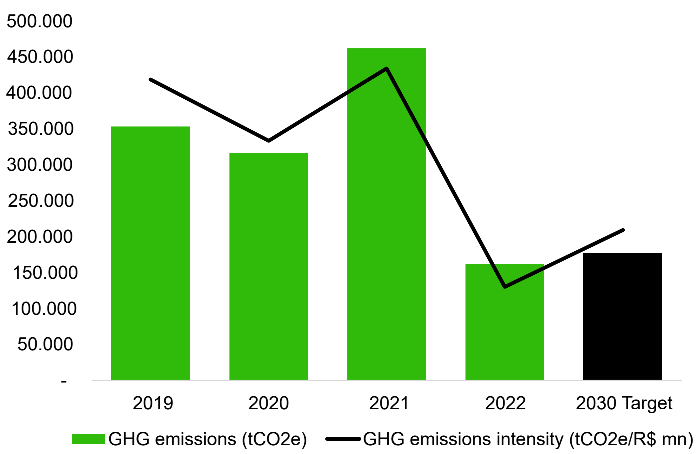
In this journey, we understand the importance of reliable and the transparency of data. As part of our commitment, we will public disclose our carbon footprint annually following the requirements and recommendations of PCAF.

The impact of our greenhouse gas emissions is important to our pathway to net zero. We are committed to measure, monitor and control our performance, using well-understood metrics to demonstrate our progress.

Overall GHG Emissions Metrics

Scopes	2019 (Base year)	2020	2021	2022
Total emissions all scopes (tCO_2e)				
Scope 1 total emissions	1,12	1,13	29,97	32,33
Scope 2 total emissions	22,85	15,18	34,37	116,04
Scope 3 total emissions	352.911,58	316.270,91	462.136,94	162.301,73
Overall total emissions	**352.935,55**	**316.287,22**	**462.201,28**	**162.450,10**

Our pathway to zero



In our journey toward net zero, we have set an interim target to halve our emissions by 2030, using 2019 as the base year.

Our results indicate that in 2022, we have already achieved this goal, demonstrating its feasibility. However, our challenge lies in further reducing these emissions and ensuring they do not increase in the next few years.

Source: JGP

Operational greenhouse gas emissions

When we look at our operational greenhouse gas emissions, excluding the GHG emissions associated with our loans and investments, we have a small portion of our overall carbon footprint.

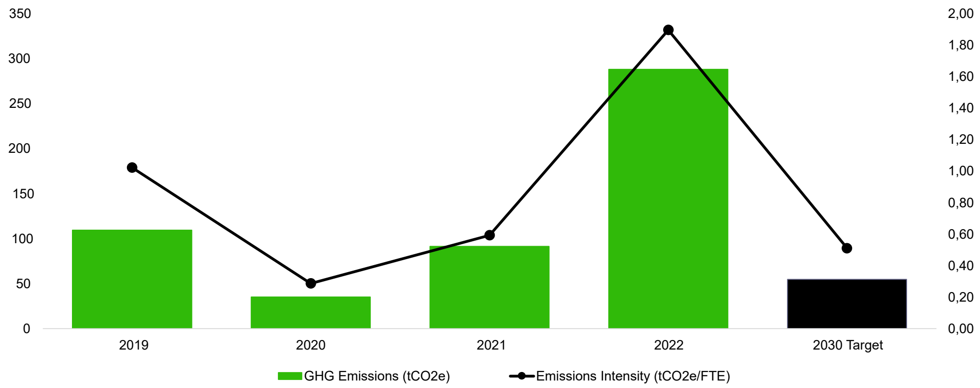
Scope 1 emissions are mainly associated with stationary combustion and fugitive emissions from refrigeration and air conditioning, Scope 2 with the purchase of electricity, and Scope 3 with business travel and employee commuting.

Scopes and categories	2019 (Base year)	2020	2021	2022
Scope 1 emissions (tCO_2e)				
Total Scope 1	1,12	1,13	29,97	32,33
Scope 2 emissions (tCO_2e)				
Total Scope 2	22,85	15,18	34,37	116,04
Upstream scope 3 emissions (tCO_2e)				
Category 5: Waste generated in operations	8,19	9,34	11,69	11,54
Category 6: Business travel	57,45	0,73	12,51	40,6
Category 7: Employee commuting	19,59	8,87	2,61	87,27
Total emissions all scopes (tCO_2e)				
Scope 1 total emissions	1,12	1,13	29,97	32,33
Scope 2 total emissions	22,85	15,18	34,37	116,04
Scope 3 total emissions	85,23	18,94	26,81	139,41
Overall total emissions	**109,2**	**35,25**	**91,15**	**287,78**

Our absolute emissions have increased since 2019 for several reasons. With the end of COVID-19 restrictions, our employees are back to our offices in Rio de Janeiro and São Paulo, respectively. Consequently, we have experienced more business travels and commuting from home to work. Another significant contributing factor to the increase is the 42% growth in our number of full-time employees. This growth caused the expansion of our office, which, in turn, explains the increase in electricity consumption.

Source: JGP

Scope 1, 2 and 3 emissions excl. category 15 - Investments



When we look at the emissions intensity per number of full-time employees, we can see that 2020 and 2021 were atypical years due to pandemic. However, in 2020, we have already managed to surpass our interim reduction goal, demonstrating that achieving such a reduction is possible and tangible with some effort.

Even though operational emissions represent only 0,19% of our carbon footprint, at JGP we have a plan to reduce these emissions through some actions.

As an example, to incentive our employees to choose sustainable commuting options such as walking, biking, or using public transport to get to work. Additionally, in the context of business travel, we can encourage prioritizing electric vehicles whenever feasible. Furthermore, when renting cars, we can recommend opting for ethanol instead of gasoline as a more environmentally friendly alternative fuel.

Nevertheless, our focus remains on reducing the financed emissions of our portfolios, which represents 99,8% of our carbon footprint.

Financed greenhouse gas emissions

Financed emissions, scope 3 under category 15 of Investments, are those associated with investments and loans, when we invest or finance a specific activity it indirectly contributes to the release of GHG emissions.

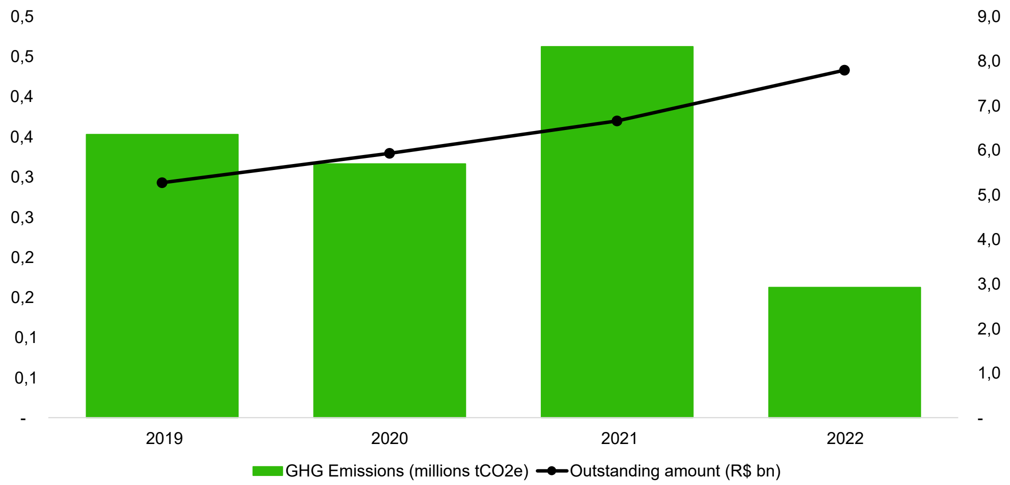
Source: JGP

JGP joined the Partnership for Carbon Accounting Financials in 2021 and with this commitment we began to evaluate the methodology for calculations and disclosures requirements.

Emissions data are from 31 December 2019, 31 December 2020, 30 December 2021 and 30 December 2022. It accounts for the seven gases under the Kyoto Protocol converted to CO_2 equivalents and expressed in metric tonnes CO_2e (tCO_2e).

Our results are based on emissions factors extracted from the PCAF Database in December 2022, which were derived from EXIOBASE V.3.9. Emissions factors were converted from EUR to BRL using a conversion factor for December 2022.

Total financed emissions and AuM

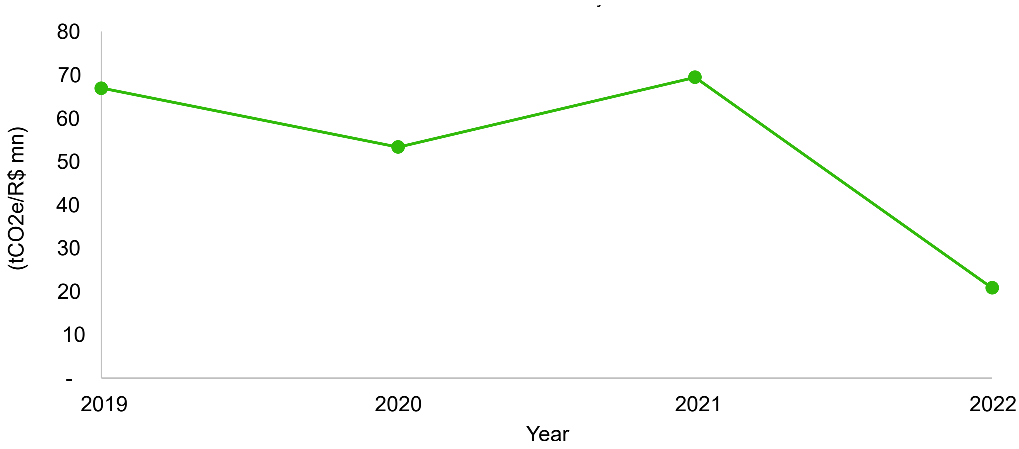


Since we began measuring in 2019, our financed emissions peaked in 2021, with a decline in 2022. Despite the nearly linear growth of assets under management (AUM), we have successfully managed the greenhouse gas emissions from our portfolios.

Source: JGP

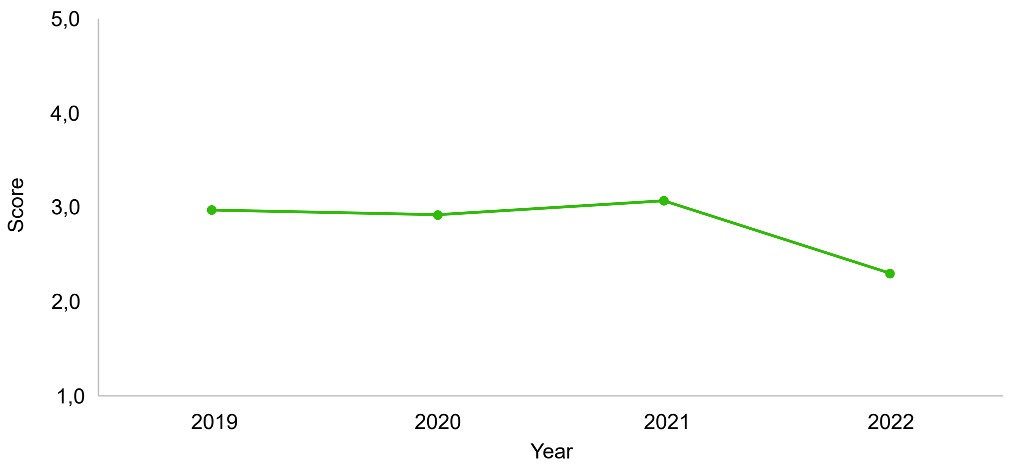
To each of these years, we were able to calculate the following percentage of the total portfolio: 83% for 2019, 88% for 2020, 81% for 2021, and 83% for 2022.

Financed emissions intensity over time



When we look at the intensity of emissions, emissions per million of reais invested, we can observe the same downward trend for 2022. This progression can be attributed to various factors, with one of them being the increased availability of high-quality data for measurement.

Data Quality Score (DQS)



Source: JGP

The efforts throughout 2023 to improve our internal GHG measurement processes was rewarded, because we managed to have an overall score of 2.3 for the quality of the data used, with emphasis on the inventory associated with listed equity and corporate bonds, which we achieved a score of 1.6, with almost all data used being self-reported by the invested companies and verified.

Data Quality Scorecard

Having access to data and high-quality data is an intrinsic challenge associated with financed emissions. We hope year after year to have more and better data available to enhance the scores of our inventories, aiming for a more sophisticated measurement.

Recalculation base year emissions policy

In line with the **GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard** requirement and following the best practices, we have established a baseline for the recalculation policy to ensure consistency, comparability, and relevance while maintaining efficiency. We have determined that a significant change resulting in a 5% difference in the total emissions for the base year would trigger a base year emissions recalculation.

This change may be related to structural changes, such as mergers and acquisitions, changes in calculation methodologies, such as improvements in data accuracy or discovery of significant errors or changes in the categories or activities included in scope 3 inventory.

2022 financed emissions

For this report, we are disclosing absolute Scope 1 & 2 emissions and Scope 3 emissions separately, categorized by asset class and specific sectors. Within the asset class, emissions from agriculture and oil & gas are disclosed only in relation to business loans and unlisted equity, providing a more detailed breakdown of these specific sectors.

Activity	Total outstanding loan and investments covered (R$ mn)	Scope 1 & Scope 2 emissions (tCO_2e)	Scope 3 emissions (tCO_2e)	Emission intensity (tCO_2e/R$ mn)	Weighted data quality score (High Quality = 1, Low Quality = 5)
Absolute financed emissions per asset class					
Listed Equity & Bonds	5.147,51	14.422,41	26.820,10	8,01	1,6
Business Loans and Unlisted Equity	2.645,00	39.897,91	81.021,90	45,72	3,6
- Agriculture	150,61	779,06	3.867,70	30,85	3,0
- Oil & Gas	136,53	2.516,25	3.323,65	42,77	4,1
Total	**7.792,51**	**54.320,32**	**107.842,00**	**20,81**	**2,3**
Absolute financed emissions per sector					
Agriculture	262,36	5.753,57	9.896,89	59,65	2,9
Energy	1.099,63	3.758,85	4.324,06	7,35	1,6
Materials	201,81	5.635,56	3.432,83	44,94	2,5
Oil & Gas	443,64	2.970,37	3.485,80	14,55	2,0
Utilities	533,86	378,13	4.829,91	9,76	2,7

For sector-specific financed absolute emissions, we have separated sectors that we consider relevant: Agriculture, Energy, Materials, Oil & Gas, and Utilities.

It can be observed that the lowest intensity is in the energy sector. Most of our investments are located in Brazil, which boasts one of the cleanest energy matrices on the planet. We invest in companies engaged in renewable energy generation, such as solar, wind, and hydropower.

Source: JGP

The highest climate intensity is found in agribusiness companies, which also perfectly reflects the national climate inventory. Despite emitting more greenhouse gases, it is a sector we see as presenting many opportunities to drive change.

For 2022 financed emissions, we were able to calculate 100% of listed equities and corporate bonds and 100% of business loans and unlisted equity.

ESG Credit Fund Case

We chose the ESG credit fund as a case because it was the first to adopt active management of greenhouse gas emissions, leveraging innovation and active ownership for the improvement of assets in its socio-environmental criteria, notably climate-related ones. This proactive stance has resulted in historic gains in emission management efficiency without compromising the intended profitability of the financial product.

Absolute financed emissions

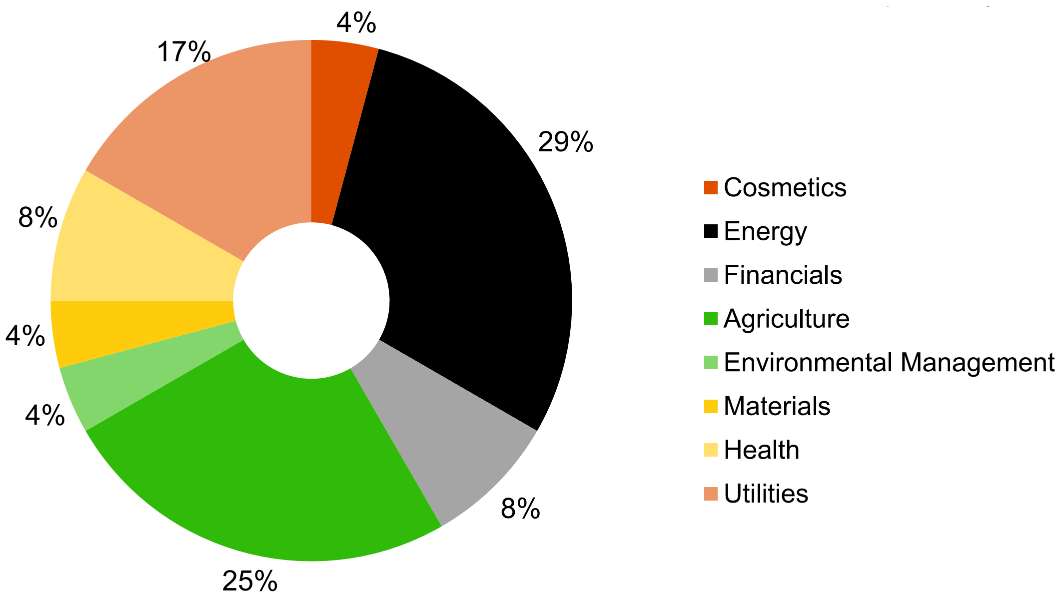
Activity	Total outstanding loan and investments covered (R$ mn)	Scope 1 & Scope 2 emissions (tCO_2e)	Scope 3 emissions (tCO_2e)	Emission intensity (tCO_2e/R$ mn)	Weighted data quality score (High Quality = 1, Low Quality = 5)
Absolute financed emissions per asset class					
Listed Equity & Bonds	39,82	0,01	0,00	0,00	1,0
Business Loans and Unlisted Equity	31,90	608,96	467,31	33,73	4,0
Total	**71,73**	**608,97**	**467,31**	**15,01**	**2,6**
Absolute financed emissions per sector					
Agriculture	7,97	470,71	287,26	95,07	3,9
Energy	15,02	28,03	68,25	6,41	2,1
Materials	6,45	0,00	0,00	0,00	1,0
Utilities	12,25	100,71	107,00	16,95	4,0

Source: JGP

The ESG Credit fund has an intensity of 15.01 tCO_2e/R$ MN, which is a low intensity achieved through active management. The overall data quality score is 2.6, indicating a good rating that signifies most inventories used are self-declared by invested companies.

For this fund, we were able to calculate 93% of the total portfolio.

Companies by sector



Source: JGP

9. Next Steps

We consider ESG integration into analysis and investment processes as a journey of continuous evolution. We are in the process of improving existing policies and developing new ones, as part of the maturing process on the subject.

The seek to enhance and develop new climate analyses is constant. We understand that the Brazilian capital markets are still in an early stage of maturity regarding climate-related actions, and we must work together to achieve this common global goal to limit global warming to 1.5°C.

We aim to make progress in the short, medium, and long term toward our goals by developing more internal competencies to address climate change. We will improve our disclosures and include greenhouse gas emissions related to sovereign bonds, even though they represent only a small portion of our portfolio.

We will continue to invest in technology and nature-based solutions to help reverse the climate crisis and enhance the quality of our data scores to make them more accurate.

JGP's 2023 Climate Report will be released in the middle of 2024, hope to see you again as a reader next time.

Glossary

Avoided emissions: Refers to GHG emissions that are prevented or reduced because of a project or an initiative.

Direct emissions: Refers to the release of GHGs from sources that are owned or controlled by an entity.

GHG: Greenhouse gases, a group of several gases that contributes to the greenhouse effect and global warming, it includes carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

Indirect emissions: Refers to emissions that occur because of the activities of an entity but are produced at sources that are not owned or controlled by the entity.

Paris Agreement: International treaty that was adopted in December 2015 to address climate change and its impacts. Its primary goal is to strengthen the global response to the threat of climate change by keeping the global temperature rise well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

tCO_2e: Tonnes of CO_2 equivalent, it includes carbon dioxide, but also other greenhouse gases converted to CO_2.

UNFCCC: United Nations Framework Convention on Climate Change, is the United Nations entity tasked with supporting the global response to threat of climate change.

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