

Report
GRSAC
2023



Introduction

Welcome to the Second Issue of our Report on Social, Environmental and Climate Risks and Opportunities – 2023 GRSAC Report.

In this Report, we seek to demonstrate our commitment to transitioning to a low-carbon economy, how social, environmental and climate matters have been incorporated into the development of our strategy, and the improvement of Social, Environmental and Climate Risk (RSAC) management processes and the governance related to these issues.

To prepare this Report, we followed the recommendations from the *Task Force on Climate-related Financial Disclosures (TCFD)*, and the instructions from the supervisor, mainly reflected through CMN Resolution [nº 4.943/2021](#)¹, BSB Resolution [nº 139/2021](#) and BCB Normative Instruction [nº 153/2021](#), as well as the best market practices.

We must highlight that the data disclosed herein relates to our Prudential Conglomerate, as defined under CMN Resolution [nº 4.950](#) of September 30, 2021, and the content addresses matters of Governance, Strategies, Risk Management Processes, Indicators and Opportunities along with social, environmental and climate issues.

¹ Defining Social, Environmental and Climate Risk as relevant, proposing improvements to the management of these risks by Financial Institutions and amending CMN Resolution [nº 4.557](#) of February 2017, on the risk management structure.



GVR Table: Social, Environmental and Climate Risk Management Governance

Description of the Social, Environmental and Climate Risk management governance.

BB's governance bodies responsible for managing Social, Environmental and Climate Risks (RSAC)

Our governance structure sets guidelines to build a more sustainable business portfolio with an improved balance between the risks to which the institution is subject and projected returns. In line with our [Social, Environmental and Climate Responsibility Policy \(PRSAC\)](#), we seek to cover the economic, social and environmental dimensions in business in an integrated way, establishing ethical and transparent relations with stakeholders, in compliance with CMN Resolution [nº 4.945/2021](#).

In this context, in line with CMN Resolution [nº 4.943/2021](#), we also revised the [Specific Risk and Capital Management Policy](#) to improve the rules for managing Social, Environmental and Climate Risk.

We have also continuously reviewed our governance structure to improve adhesion to the aspects and standards issued by the National Monetary Council (CMN) and the Central Bank of Brazil (Bacen), as well as the alignment with the best management practices, based on the definition of compatible roles and responsibilities in the various bodies comprising our governance structure.

As for the interaction between BB's Strategic, Tactical and Operational Units in the management and mitigation of Social, Environmental and Climate Risk, we adopted the Reference Model for Lines of Defense (MRLD) based on three lines of defense:

First Line of Defense: Functions that manage and own the risks. Comprising: Specific Risk Managers and Risk Takers;

Second Line of Defense: Usual corporate functions involved with risk management, internal controls, and compliance. Comprising: Internal Control and Risk Management Areas;

Third Line of Defense: Evaluates the effectiveness of the entire risk management and control cycle. Comprised of the Internal Audit.

The purpose of the MRLD is to maintain an effective and integrated Internal Control and Risk Management System, contributing to providing more security to ensure that the strategic objectives are met.

Given this state of affairs and the creation of the AGS Unit in 2023, we reviewed the RSAC management structure and set the said unit as a specific manager for Social, Environmental and Climate Risk.

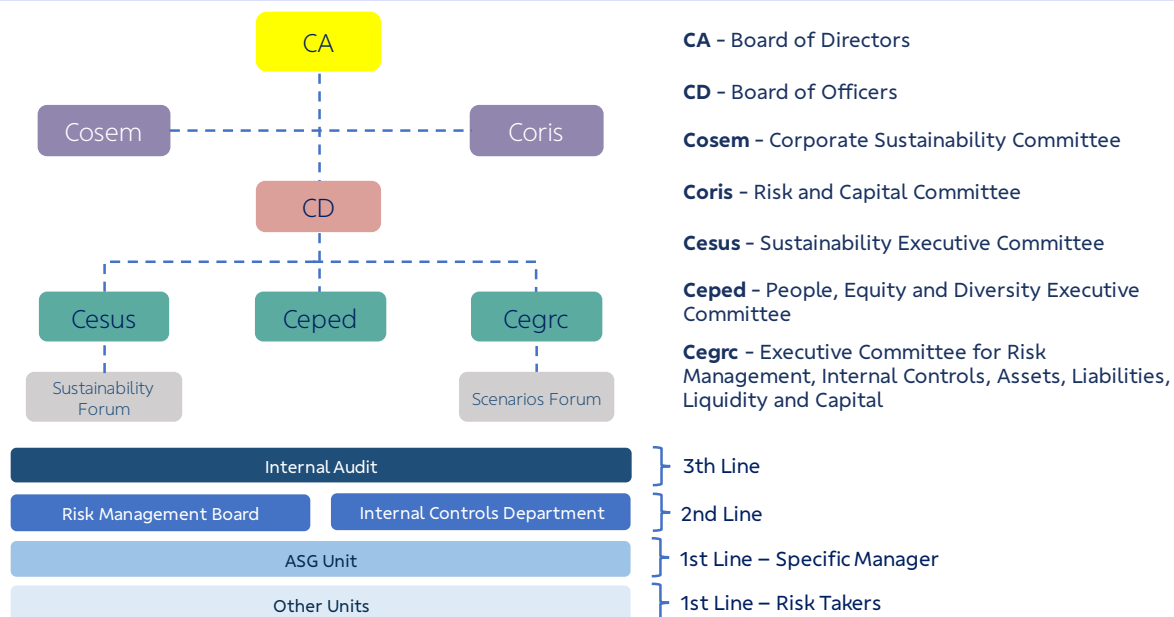
It is also important to highlight that the governance model for integrated risk and capital management adopted by BB covers the following aspects:

- a) segregation of duties: business x risk;
- b) specific structure for risk and capital management;
- c) a defined management process;
- d) collegiate decisions at various hierarchical levels;
- e) clear standards and structure of competence;
- f) use the best management practices as reference.



Here is the workflow for the Corporate Sustainability and Management Governance of the RSAC:

Figure 1. Social, Environmental and Climate Risk Management Governance and related Opportunities



The governance bodies and their responsibilities and relations

Board of Directors (CA) – A management body with strategic, advisory, election and supervisory duties. The CA monitors the social, environmental and climate performance of the institution, as well as ongoing initiatives.

Board of Officers (CD) – A collegiate body comprised of President and Vice-Presidents, responsible for proposing, approving and executing initiatives and instruments relating to Policies, the Corporate Strategy, the Plans, the General Budget, the Labor Agreement, and accrued profits, among others. The CD monitors the social, environmental and climate performance of the institution, in addition to ongoing related initiatives.

The CA and the CD ensure that the Social, Environmental and Climate Risk management processes are aligned with the definitions and directions established in our institutional policies and our Corporate Strategy.

Corporate Sustainability Committee (Cosem) – A collegiate body that reports to and advises the CA on sustainability and Social, Environmental and Climate Responsibility of Banco do Brasil issues, based on the best market practices and commitments assumed by BB.

Risk and Capital Committee (Coris) – A permanent collegiate and statutory body that advises the CA on risk management, including social, environmental and climate ones.

Executive Sustainability Committee (Cesus) – A body linked to the CD and comprised of Vice-Presidents and Officers. Cesus is responsible for approving and monitoring the implementation of the [Sustainability Plan – Agenda 30 BB](#), providing guidance for the implementation of sustainability initiatives with potential impact on its business and defining the guidelines for the area, in addition to bringing along a multidisciplinary view to the decision-making processes.



People, Equity and Diversity Executive Committee (Ceped) – A body linked to the CD and comprised of members from the Executive Board². Ceped is responsible for setting the objectives and guidelines relating to people management models and processes and the Diversity, Equity and Inclusion Program.

Risk and Capital Management Executive Committee (Cegrc) – A body linked to the CD, comprised exclusively of Vice-Presidents, with the purpose of approving strategies, guidelines and contingency plans, in addition to monitoring reports, results and progress made relating to Risk Management, Internal Controls, Capital Management, and Asset, Liabilities and Liquidity Management.

BB Sustainability Forum – It supports the incorporation, alignment and disclosure of sustainability principles and practices, in addition to monitoring environmental, climate and social initiatives and the implementation of initiatives under the [Sustainability Plan – Agenda 30 BB](#). The Forum reports to Cesus and is comprised of executive managers of the Bank and the Banco do Brasil Foundation (FBB).

Scenario Forum – It analyzes macroeconomic, idiosyncratic and climate change scenarios, focusing on their integration with corporate strategies and relevant risks and opportunities. The Forum is comprised of executive managers and reports to Cegrc.

Internal Audit (Audit) – Unit reporting to the CA. Responsible for conducting independent audits from time to time, focusing on the risks to which the Conglomerate is exposed, assessing risk management actions and the adequacy of internal controls based on their quality, sufficiency, performance, and effectiveness.

Risk Management Board (Diris) – Area reporting to the Vice-Presidency of Internal Controls and Risk Management (Vicri). Responsible for the corporate management of Social, Environmental and Climate Risk as a Second Line of Defense.

Board of Internal Controls and Compliance (Dicoi) – Area reporting to Vicri. Responsible for the regulation and corporate supervision of risks, acting as a Second Line of Defense.

ASG Unit – Area reporting to the Vice-Presidency of Government and Corporate Sustainability (Vigov). Responsible for Corporate Sustainability matters and for the specific management of Social, Environmental and Climate Risk as a First Line of Defense.

Other Units, with emphasis on the areas below:

Credit Board (Dicre) – Area reporting to VICRI. Responsible for managing Social, Environmental and Climate Risk as a First Line of Defense concerning the credit process.

Supply, Infrastructure and Heritage Department (Disec) – Area reporting to the Corporate Vice-Presidency (Vicor). Responsible for managing Social, Environmental and Climate Risk as a First Line of Defense concerning procurement, hiring, management of logistics resources and eco-efficiency.

Agribusiness Board (Dirag) – Area reporting to the Vice-Presidency of Agribusiness (Vipag). Responsible for managing Social, Environmental and Climate Risk as a First Line of Defense concerning the agribusiness process.

² Comprising BB's President, Vice-Presidents and Officers.



Culture and People Management Board (Dipes) – Area reporting to Vicor. Responsible for managing Social, Environmental and Climate Risk as a First Line of Defense concerning people.

Finally, it is important to highlight that the area responsible for the [Social, Environmental and Climate Responsibility Policy](#), as approved by CA, is the ASG Unit, and that according to CMN Resolution [nº 4.557/2017](#), the Vice-President of Internal Controls and Risk Management acts as the Chief Risk Officer (CRO), in charge of managing risks in BB and appointed by the CA.

Reporting information on Social, Environmental and Climate Risk

From time to time, we prepare reports for governance bodies with the necessary information to support the monitoring and decision-making process of collegiate bodies involved in the risk management process. The tables below provide details on the main reports we prepare and that are under the scope of CA:

Table 1. CA Scope Reports

Report	Addressee	Periodicity
Risk Panel ¹	Cegrc and CA	Monthly and Bimonthly (respectively)
Result of the Evaluation Cycle of Risk Management, Security and Internal Controls of the ELBBs	Coris, CD and CA	Annual
Internal Capital Adequacy Assessment Process (Icaap)	CA	Annual
Reports on topics related to sustainability	Cosem, CD and CA	Semiannual

(1) Tool used for reporting the consumption of specific and global limits established in the Risk Management.

Criteria used to ensure that Social, Environmental and Climate Risk, when relevant, are considered in the approval and review processes conducted over various instruments

According to the duties of each body, the governance in charge analyzes the minimum capital requirements, the directions of the corporate strategy, BB's risk profile, regulatory compliance, economic prospects and challenges for the financial industry, the views of market analysts, the desires of society, the behavior of main competitors, the dynamics of result formation, and the results from the BB stress test program.

The decisions from governance actors help ensure that relevant risks — specifically Social, Environmental and Climate ones — are taken into account in the approval and review of various processes.

In 2022, with the approval of the [Social, Environmental and Climate Responsibility Policy](#) – resulting from a revision of the previous Socioenvironmental Responsibility Policy (whose first issue was published in 2015) to align it with the new resolutions, other important policies were also revised – [Specific Policy on the Bank's Relationship with Suppliers](#), the [Specific Risk and Capital Management Policy](#), the [Privacy Policy](#), the [Specific Remuneration Policy for Directors](#), the Specific Policy for Business Continuity Management, the General Policy for Market Directions, the General Policy for Operational Directions, among others – in order to have new concepts and principles related to the RSAC applied over the activities conducted by the bank and its prudential conglomerate.

During the year of 2023, we checked again (and whenever required, reviewed) not only the policies but also our commitments ([BB Commitments to Human Rights BB](#) and [BB Commitment to Climate Change](#)), guidelines ([BB](#)



[Sustainability Guideline for Credit](#), [BB Socioenvironmental Guidelines – Restrictive List and Exclusion List](#) and [Private Social Investment Guidelines](#)), the [Recovery Plan](#), the Declaration of Risk Appetite and Tolerance (RAS) and our stress testing program as well.

The [BB Sustainability Guidelines for Credit](#) are the social, environmental and climate indicators to be considered in the analysis of loan and financing proposals. The drafting and annual reviews on these guidelines are conducted with the involvement of several stakeholders (shareholders, industry experts, NGOs, customers and employees), supported by the analysis of studies and reports that, in turn, consider projections based on global climate models.

The [Socioenvironmental Guidelines – Restrictive List and Exclusion List](#), provide several activities on which the Bank assumes credit risk under certain conditions, applying a differentiated rigor to the analysis, concession and monitoring of credit (Restrictive List). The Exclusion List, as its own name explains, informs the activities on which the Bank will not assume credit risk because of legal prohibitions or for lacking alignment with BB Guidelines.

As for the stress testing, in 2023, we improved the Integrated Stress Test (TEI) by adding the climate risk assumption through scenarios that consider severe climate events (international environment).

Approaches to the monitoring of strategic objectives and goals relating to social, environmental and climate aspects

We monitor strategic objectives and goals relating to social, environmental and climate aspects to assess the progress in their achievement. The indicators of the Master Plan — a document that defines and consolidates indicators and goals for each of the long-term strategic objectives of [Banco do Brasil's Corporate Strategy \(ECBB\)](#) — are reported to the CA through meetings, presentations and panels.

Besides the Master Plan, we also monitor the Work Agreements of strategic units that contain objectives and indicators proposed at the ECBBs.

Finally, the social, environmental and climate performance of Banco do Brasil is reported to Cosem, including, among other aspects, the initiatives developed under the [Sustainability Plan – Agenda 30 BB](#), the [BB 2030 Commitments for a More Sustainable World](#) e the RSAC Action Plans³.

³ Action Plans developed to align BB with TCFD and the Resolutions and Instructions relating to RSAC, published by regulatory bodies in 2021.



EST Table: Strategies used to address Social, Environmental and Climate Risks

Identification and description of the actual and potential impacts, when deemed relevant, of social, environmental and climate risks on the institution's business, strategies and risk and capital management.

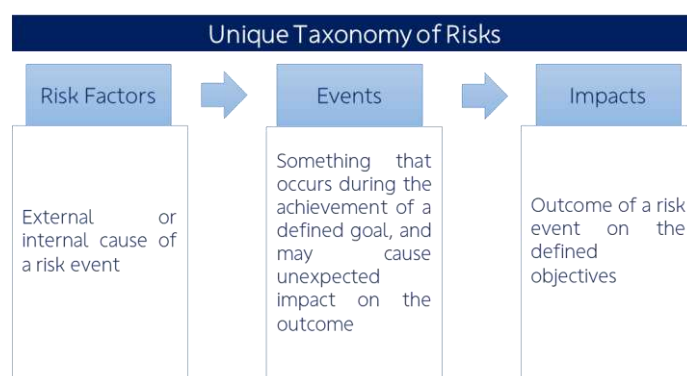
Identification of Social, Environmental and Climate Risk events that could result in relevant losses for BB

The identification of risks is part of a continuous process of risk and capital management, and it is essential to our institution. In this process, validated on an annual basis by internal and external audits and overseen by Regulation and Inspection Bodies, we use internal and external inputs, such as:

- Risks that could impact achieving the Corporate Strategy objectives;
- Risks inherent to the activities of Entities Related to Banco do Brasil (ELBB);
- Risk factors informed in the [BB Reference Form](#) that are deemed relevant and could impact the Bank's business and the results of our operations;
- Risks identified by the managers from the first line of defense in their processes;
- Brazilian and foreign regulatory guidelines;
- Specialized consulting and publications;
- Benchmark of Brazilian and foreign financial institutions.

We use these inputs to update our Single Risk Taxonomy, which consolidates in a single instrument all factors, events and impacts of risks inherent to the activities performed by the Bank and constitutes a basis to determine the relevance of the risks incurred by the Prudential Conglomerate of Banco do Brasil.

Figure 2. Components of the single risk taxonomy



Given the casual nature of the Social, Environmental and Climate Risk, it is classified as a factor in the Taxonomy that could lead to events potentially impacting other BB's relevant risks, requiring a preventive management process.



The Taxonomy allows for the identification of potential risk events – such as slave-like labor, soil contamination, drought, excessive rainfall, among others – in a non-exhaustive way and without overlapping their characterization and classification, as well as factors and impacts of risks.

In order to include more information and mitigate biases, we have added a location variable – fed by information from external sources, such as the Amazon Biome and the Social Vulnerability Index (SVI) – to the assessment of Social, Environmental and Climate Risk, providing us with a glimpse on how risks are distributed (or concentrated) over the national territory, with granularity down to the municipal level, comparable to the external sources providing the data.

Given the time horizons defined to monitor the exposure of the segments of Individuals, Rural Producers and Legal Entities and the concept of proportionality applied to the RSAC sensitivity method, we adopted the following assumptions:

Table 2. Definition of periods

Target public	Short term	Medium term	Long term
Individual	up to 1 year	from 1 to 4 years	from 4 years on
Legal Entity	up to 1 year	from 1 to 3 years	from 3 years on
Rural Producer	up to 1 year	from 1 to 5 years	from 5 years on

In addition to the information produced internally, we use information from reliable external sources to assess customers and operations regarding Social, Environmental and Climate Risk management, and that include:

- List of Labor Analogous to Slavery, issued by the Ministry of Labor and Welfare;
- Penalties and Embargoes, from Ibama⁴;
- Embargoes, from ICMBio⁵;
- Assessment on Climate Risk of Economic Sectors, from [NGFS \(Network for Greening the Financial System\)](#)⁶;
- Public news concerning social and environmental events, from various media sources.

In this context, in order to complement the set of inputs used for management, daily monitoring is carried out on the situation of municipalities affected by climate events related to rainfall and drought, through consultation of official public databases. This information is processed in the climate events monitoring dashboard, allowing us to assess the impacts on the credit portfolio and take necessary actions for proper credit management when needed.

Regarding losses related to Social, Environmental or Climate Risk, we carry out continuous monitoring, aiming at prevention and mitigation. In the definition of minimum criteria to identify losses, we have used the [SARB⁷ 14⁸](#) and other instruments evidencing the identification of elements related to the RSAC found in the administrative and judicial proceedings to which the financial institution is a party. Based on BB's institutional system of Operating Losses, we created a database with the categorized loss events, and which causes relate to legal proceedings concerning Social, Environmental and Climate Risk.

⁴ Brazilian Institute of the Environment and Renewable Natural Resources.

⁵ Chico Mendes Institute for Biodiversity Conservation.

⁶ Program that aims to mobilize the global financial system to support the transition to a low-carbon economy.

⁷ Banking Self-Regulation System developed for the Brazilian Federation of Banks (Febraban).

⁸ Guidelines and procedures created by Febraban to have the Signing Financial Institutions establish and implement the Social, Environmental and Climate Responsibility Policy (PRSAC).



While monitoring those losses in 2023, we reviewed the list of events relating to operating losses and social, environmental or climate risks. However, no material and actual losses were identified in 2023 concerning social and environmental events.

Identification of material concentrations in BB's credit exposures relating to Social, Environmental and Climate Risk

We developed the structure of the credit process based on risk and limit calculation methodologies, aligned with the best management practices, and undertook the processes of:

- registration;
- risk analysis and credit limit setting;
- analysis of investment projects;
- contracting and conducting operations;
- risk management, with the support of regulations and a specialized organizational structure.

Specific aspects of Social, Environmental and Climate Risk that may impact the Institution are considered at all stages.

The identification and monitoring of risk exposures allow for the improvement of the management process as they help the responsible bodies decide on whether or not to carry out certain operations given the degree of risk, the "appetite" of the institution and the current concentration.

Table 3 below provides an assessment of the sensitivity of the exposures to each of the risks for the macrosectors comprising BB's portfolio and their respective balances.



Table 3. Economic Macrosectors and their degrees of risk (December 2022 and December 2023 bases)

Macrosectors	Social	Environmental	Climate	2022 Exposure	2023 Exposure
Public administration	Medium	Low	Low	11.97%	13.84%
Agribusiness (animal origin)	High	Medium	High	4.89%	4.33%
Agribusiness (plant origin)	High	Medium	High	10.29%	10.60%
Construction-specific activities	Medium	Medium	High	3.34%	3.22%
Automotive	Medium	Medium	High	4.40%	4.54%
Beverages	Low	Medium	High	0.34%	0.29%
Wholesale trade and various industries	Low	Low	Low	2.08%	2.11%
Retail trade	High	Low	Low	6.03%	4.60%
Heavy construction	Medium	Medium	High	0.89%	1.20%
Leather and footwear	Low	High	Medium	0.59%	0.47%
Electronic Devices	Low	Medium	Medium	2.28%	3.45%
Electric energy	Low	Medium	High	7.47%	6.24%
Real Estate	High	Low	High	2.34%	2.16%
Financial institutions and services	Low	Low	Medium	6.28%	5.03%
Agricultural inputs	Low	High	High	2.71%	3.05%
Lumber and furniture makers	Medium	High	High	1.55%	1.40%
Mining and metallurgy	Medium	High	High	4.51%	4.79%
Paper and pulp	Low	High	High	1.24%	1.00%
Oil	Medium	High	High	5.90%	4.62%
Chemicals	Medium	High	High	2.66%	2.97%
Services	High	Medium	Low	9.88%	10.19%
Telecommunications	Low	Medium	Low	1.53%	3.00%
Textiles and clothing	Medium	Medium	Medium	1.87%	1.83%
Transportation	Medium	High	High	4.99%	5.03%

We also conduct sectoral market monitoring for credit portfolio management purposes and to support the credit analysis process for clients. We observe the Social, Environmental, and Climate Risks to which they are exposed.

In addition to the sectoral view, we conduct a regional assessment of the sensitivity of Social, Environmental and Climate Risk considering all exposures of the Bank. The percentage of the balance of operations classified with high sensitivity to Social, Environmental and Climate Risk is presented and monitored for each region, allowing comparison of concentrations between the regions and support to the risk management.

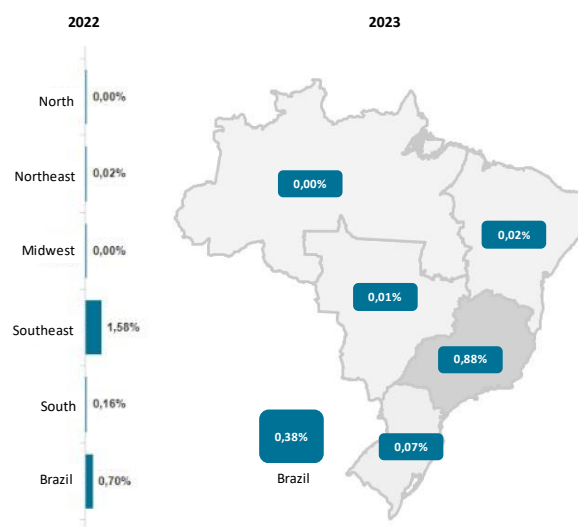
It is worth noting that throughout 2023, we made improvements to the methodology for assessing sensitivity to Social, Environmental, and Climate Risks, which contributed to a more suitable mechanism for managing RSAC in our portfolio. Among the most significant changes, we have:

- revision of the RSAC⁹ assessment system for operations;
- refinement of the process for identifying exposure locations.

In light of the methodology enhancements, the concentration indicators presented below have been reformulated for better understanding. These indicators represent the percentage of operations classified as 'high sensitivity' in relation to the credit portfolio balance of the analyzed region (comparison between December 2022 and December 2023).

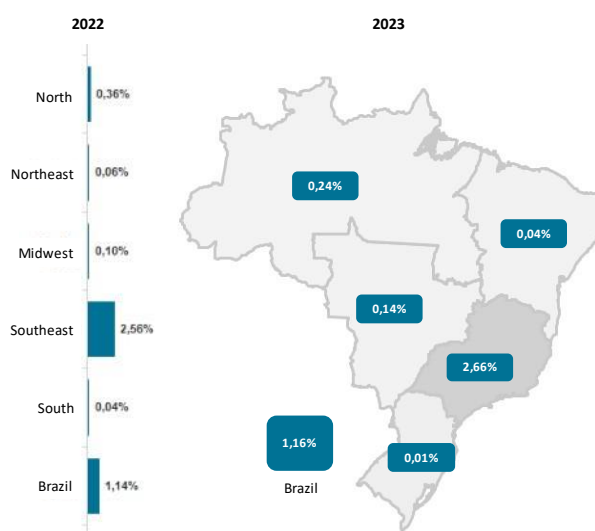
⁹ The measurement of the RSAC of operations in the previous RSAC methodology considered with greater weight the evaluation of the macrosector to which the exposures were linked. In the versioning of the RSAC methodology, we balanced the weighting of the aspects of the macrosector, the client, and the operation in the final evaluation of the exposure.

Figure 3. Percentage, in relation to the credit portfolio of the geographical region, of the balance of operations classified as high sensitivity to Social Risk



The percentage of balance of operations with high sensitivity to Social Risk in the national territory is low, 0.38% in 2023, being higher in the Southeast region, 0.88%, according to the more intense color shown in the Figure above. Concerning December 2022, it is possible to observe that there was a significant decrease in the national percentage, from 0.70% to 0.38%. As a way to mitigate exposure, the Social Risk management relies on a series of instruments used when granting credit, described in the next chapter, which include: public information, information concerning RSAC, internalized information in customer and operations management systems; Assessment Questionnaire on Levels of Environmental, Social and Climate Responsibility, applied to relevant customers and projects; Social Vulnerability Index and Register of Employers who have subjected workers to conditions analogous to slavery.

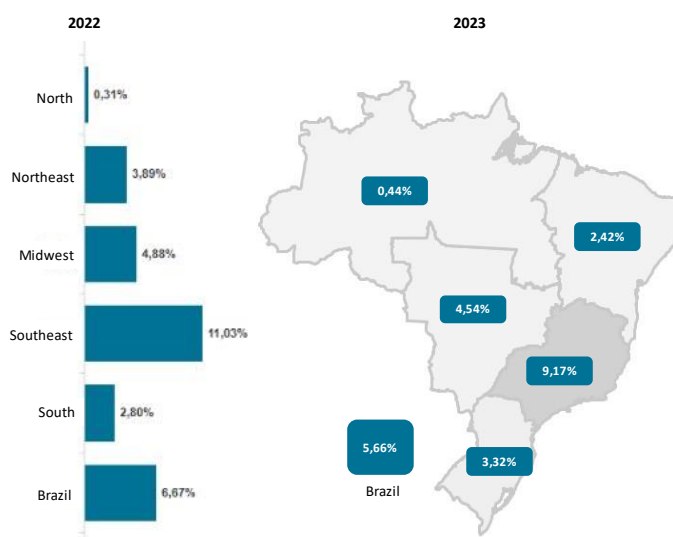
Figure 4. Percentage, in relation to the credit portfolio of the geographical region, of the balance of operations classified as high sensitivity to Environmental Risk



The geographical distribution of the percentage of operations classified as extremely sensitive to Environmental Risk, Brazil view, remained practically stable in December 2023 when compared to the same period in 2022, 1.16% and 1.14%, respectively. The Southeast region accounts for the largest part of this percentage (more intense color in the Figure), followed by the North region. Among the tools used to mitigate the Environmental Risk concerning

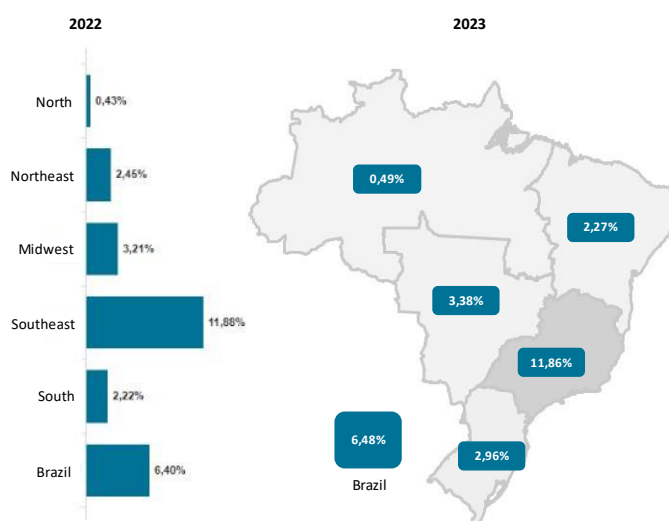
the credit concession process, we must highlight: registration notes related to the issue; Assessment Questionnaire on Levels of Environmental, Social and Climate Responsibility, applied to relevant customers and projects; media monitoring; list of embargoes and penalties applied by Ibama; list of embargoes applied by ICMBio; list of contaminated areas and georeferencing of specific areas.

Figure 5. Percentage, in relation to the credit portfolio of the geographical region, of the balance of operations classified as high sensitivity to Physical Climate Risk



Regarding Physical Climate Risk, the Southeast region has the highest concentration of high-sensitivity operations, 9.17%, followed by the Midwest region, with 4.54% in relation to the credit portfolio of the region analyzed. Among the tools used to mitigate the Physical Climate Risk, we use: agricultural insurance; [Agricultural Zoning of Climate Risk \(Zarc\)](#), published by the Ministry of Agriculture, Livestock and Supply; the Agricultural Technical Reference System (RTA); the financing of segments focused on green economy; and the application of specific financing conditions to sectors more sensitive to Climate Risk.

Figure 6. Percentage, in relation to the credit portfolio of the geographical region, of the balance of operations classified as high sensitivity to Transitional Climate Risk





Regarding the Transitional Climate Risk, the Southeastern region again shows the highest concentration of operations presenting high sensitivity. The system of monitoring political, regulatory and market changes for adaptation and improvement of the management process is a vital instrument to manage this risk.

Finally, it is observed that the Southeast region, due to concentrating relevant exposures linked to macrosectors classified with high sensitivity to Social, Environmental, and Climate Risk, presents the highest concentration among the regions.

How BB's business, strategies and capital management approach Social, Environmental and Climate Risk events

Committed to playing a leading role in sustainability and promoting business and ESG practices, BB approaches aspects related to Social, Environmental and Climate Risk in its business activities, strategy and capital management.

Our commitment is reflected in the initiatives and pacts we have signed, such as the Equator Principles, the TCFD, the Green Protocol, the Principles for Responsible Investment (PRI), and the Business Ambition. It is also reflected in the way we approach social, environmental and climate issues while performing and developing our business activities, strategy, financial planning and improving the risk management processes.

In the process of developing the [ECBB](#) and the Master Plan, which is reviewed annually for a five-year approach, several areas take an active role in the execution of each stage – diagnosis, prioritization of uncertainties, preparation of a SWOT¹⁰ matrix and scenarios, guidance from the senior management, defining strategic objectives and their respective indicators and goals.

In the diagnosis stage, we carry out competitive intelligence studies on the financial industry, macroeconomic analyses, identification of trends and critical uncertainties, which may impact the Bank's present and future performance, as well as assessment of any relevant risk factors, which include, among others, possible social, environmental and climate events.

In order to adopt mitigation measures and/or review the established strategies, we continuously assess the risks of changes to business environments, which include, among others, the possibility of social, cultural and environmental changes, such as demographic issues, changes in customer behavior, ESG factors and adverse climate or health conditions (e.g., catastrophes and pandemics).

In view of the foregoing and aligned to the ECBB, especially concerning the generation of sustainable results for the Bank, we reviewed our RAS¹¹ to inform the risks and respective degrees we are willing to assume. In 2023, to expand our sustainable business portfolio¹², new RSAC indicators were approved for the RAS, mainly focused on the management of sectors and segments with high sensitivity to social, environmental or climate factors.

Regarding business opportunities, we highlight the [Sustainability Plan – Agenda 30 BB](#), which objective is to improve business and administrative practices by consolidating social, environmental and governance initiatives and indicators. In addition to improving social and environmental development, the business lines provide for the mitigation of Social, Environmental and Climate Risks both for the bank and for other stakeholders.

¹⁰ Strategic planning technique used to assist in the identification of Strengths, Weaknesses, Opportunities and Threats of the object/subject analyzed.

¹¹ Abbreviation for Risk Appetite Statement.

¹² Resulting from survey conducted by the consulting firm SITAWI that, along with the ASG Unit, listed the operations with positive (mitigating) externalities in face of Social, Environmental or Climate Risk.



Aligned with this, we have businesses, products, and services for all our relationship audiences aimed at promoting a greener and more inclusive economy. Those associated with agribusiness, and the Harvest Plan, which predominate in BB's Sustainable Credit Portfolio (40.6% in 4Q23), drive activities and improvements in the sectors related to the country's agriculture and livestock.

We also reviewed the [BB Sustainability Guidelines for Credit](#) and the [BB Socioenvironmental Guidelines – Restrictive List and Exclusion List](#), which covered, in 2023, among other developments, the inclusion of coal extraction and thermoelectric power generation using coal, the most pollutant existing fossil fuel, in the list of activities with which the Bank does not assume any credit risk.

In the relationship with our suppliers, we aim to improve treatment and working conditions. Our [Supplier Relationship Policy](#) is a demonstration of our culture and values that we defend concerning the suppliers and their employees during the processes of procurement, contracting and disposal of materials.

Accordingly, we include contractual clauses in which suppliers represent to be aware of and respect our codes, rules and policies, among other guidelines.

Finally, we check on our suppliers during the contractual term, and if they are found to be in breach of any provisions or legislation relating to the execution of any signed agreements, then we file administrative proceedings that may result in administrative sanctions or, ultimately, in unilateral contractual termination.

Events of change to climate patterns and transition to a low-carbon economy that BB uses as the bases for assessing various scenarios

BB is aware that climate change is a relevant and urgent issue to be approached and that it is important for national governments, the private sector and society to join forces to reduce the emission of Greenhouse Effects (GHG) and promote the adaptation of communities living in areas under climate vulnerability, which is why the Bank is committed to transition to a low-carbon economy according to the [BB 2030 Commitments for a More Sustainable World](#).

Given this context, we developed comprehensive climate change scenarios applied to economic macro-sectors and based on scenarios provided by the IPCC for Physical Climate Risks, and by the NGFS for Transitional Climate Risks.

We selected scenarios more compatible with the perceptions highlighted in the [IPCC Sixth Assessment Report](#), with the purpose of forecasting potential impacts of climate change on Brazilian agriculture and livestock and other economic sectors relevant to BB's business.

The choice for two scenarios of Physical Risk and the other two of Transitional Risk resulted from the understanding that, together, they cover a sufficient range of feasible possibilities for Brazil.

Here are some of the scenarios used as reference:



Physical Risk Scenarios

- **RCP 4.5:** intermediate scenario, consistent with a future with relatively ambitious reductions in emissions, where by 2080 we will have reached a 50% reduction in global emissions. Despite the current efforts and bold goals, we would still have an approximate rise of 2°C in temperature;
- **RCP 8.5:** a severe scenario, where GHG emissions would not stop increasing until the end of the century and the average temperature of the planet's atmosphere would increase by about 4°C.

Transitional Risk Scenarios

- **Net Zero 2050:** the most ambitious scenario, with global warming limited to 1.5°C as a result of stricter climate policies and greater innovation, making it possible to achieve net zero CO₂ emissions by 2050. In this scenario, the physical risk is relatively low, while transitional risk is high;
- **Current Policies:** assuming that only the policies currently implemented will be carried out, resulting in high physical risk. Under the transitional risk approach, this scenario has little impact with governments and regulatory bodies refraining from acting.

Given the conjuncture, the scenarios developed are:

- Temperature increase below 2°C** (in line with the Representative Concentration Pathway (RCP) 4.5 and Net Zero 2050), assuming full compliance with the Paris Agreement¹³.

In this scenario, policies are stricter, with the goal of zeroing net CO₂ emissions by 2050 and limiting the increase of average temperature to 2°C.

There has been a massive investment in technology to achieve these goals. Institutions and society have demanded a more sustainable position from all economic agents. The carbon pricing process intensifies, with some sectors having to become more adaptive.

As a result, Physical Risks tend to be mitigated and new sources of energy and raw materials will be developed, resulting in low damage to production and to the population;

- Average increase of 4°C** in temperature at the end of the century (equivalent to RCP 8.5 and the Current Policies), assuming non-compliance with the Paris Agreement and following current trends in emissions.

In this scenario, little to no legal or regulatory changes in the climate field would lead to a significant increase in global GHG emissions, which tends to materially heighten physical risks.

Regarding Transitional Risk, we do not expect anything much different than what we have already seen in current times. No progress is expected for the pricing process. The demand for sustainable products and services will remain without incentives and will grow very slowly and gradually. The policies to induce a low-carbon economy and the regulations of GHG emissions will not require significant adaptations and technological investments and will not impact the sectors in any material way.

As for Physical Risk, it is expected that there will be an increase in the frequency of extreme climate events to the point of worsening water scarcity and decreasing the availability of resources and raw materials, thus threatening the maintenance of activities and the survival of the population.

¹³ In 2015, during the United Nations Framework Convention on Climate Change (COP 21) in France, 196 countries committed to adopt targets for reduction of Greenhouse Gas emissions, aiming to reduce emissions from their production processes, in an attempt to combine efforts for the benefit of a low-carbon future, in which global average warming does not exceed 2°C above the pre-industrial levels.



Between the two scenarios developed, the difference is in the trajectory of climate change, given the measures taken, and in the degree of severity of the impacts in the short, medium, and long terms.

We will now present the criteria used to assess the risks and their impacts in the mentioned scenarios:

Table 4. Criteria used in the development of Climate Change Scenarios

Criteria used for Assessment of Climate, Physical and Transitional Risk in Brazil	
Physical damages	Damages caused by extreme weather events and gradual climate change on the fixed assets of companies, as well as potential physical losses or productivity decrease or indirect subsequent events, such as disruption of supply chains. The sectors most vulnerable to these risks are those mainly operating with capital goods, such as the agribusiness, industrial and energy sectors.
Water Scarcity	Changes in the availability of water and rainfall regime in the country. Some consequences of water scarcity include a reduction in the supply of food by the agribusiness sector and a compromised supply of electricity to productive sectors.
Energy	Extreme climate events directly affecting the provision of energy services, via changes in the availability and reliability of renewable sources, such as water (rain) for hydroelectric plants. Climate change also threatens the infrastructure and facilities for the exploitation, extraction, and conversion of energy, such as offshore oil and gas rigs, refineries located in coastal areas, etc. Climate change can also impact the efficiency of energy conversion devices (solar panels, internal combustion engines, thermal power plants, etc.).
Productivity	The relationship between the means, the resources used, and the final production and the damages caused by extreme climate events to the economic sectors.
Technology	Efforts to adopt or adapt technologies, products and services to ensure lower GHG emissions. Usually implies higher costs and capital contribution.
Regulations	Regulatory changes to promote the transition to a low-carbon economy. They represent the normative framework supporting the transition for reduction or elimination of the use of fossil fuels in carbon-intensive production and consumption, requiring significant changes to processes, migrating to activities that promote neutral emissions in all, or most of, the economic sectors. The implementation of alternate technologies can result in significant cost increases, while the adoption of regulatory policies can encourage the transition by increasing the implicit value of the emissions.
Changes to consumption patterns	The sensitivity and resilience of the sectors concerning climate change will impact social consumption patterns, with society demanding new types of services and products. Sectors supplying energy-efficient and renewable energy generation equipment may enjoy these opportunities, just like the financial sector, by creating specific products to promote a low-carbon economy and becoming essential actors in the transition and intermediaries for the production sector. Some sectors will be more impacted than others in the attempt to supply the market demand and in terms of viability or difficulty in addressing those matters.
Carbon emission pricing	To encourage the reduction of carbon emissions, some parties have considered charging some costs from the sectors emitting more GHG, which could impact the cost structure of companies with more intensive carbon emissions, such as the ones from the oil and gas sectors, heavy industry and thermal power generation. On the other hand, the sectors with lower GHG emissions or net zero carbon emissions, such as forestry and renewable power generation ones, may sell credits and rights, receiving revenue for the carbon emission. It is possible that the carbon emission pricing will become a material risk in the medium term.

Regarding Physical Risk, we apply the following criteria to develop our narrative: dependence on electricity and water usage (water scarcity), agricultural inputs/products used in the production chain, and sensitivity to climate events (physical damages).



Extreme climate events (droughts and heavy rainfall) may damage the operating structures and result in logistical difficulties, increased costs and halting of customer activities, thus increasing the levels of default.

Given our dependence on hydroelectric plants for power generation, in periods of water scarcity, it may be necessary to activate thermoelectric plants – which are less sustainable for being powered by fossil fuels, entailing higher costs with power generation –, potentially increasing the price of electric energy supply, impacting the budget of families and companies, hampering industrial activity by reducing the supply of products and increasing prices.

As for the Transitional Risk, our analysis is based on the following criteria: GHG emission prices, the need for technological adaptation, regulations to encourage embracing the low-carbon economy and changes to consumption patterns (reputation).

Considering the market and technology changes, we may witness an increasing demand for a responsible conduct of companies, which tends to lead to a change in the supply/demand of certain products/services, risking the continuous operation of some companies and segments.

In the legal and regulatory fields, certain changes may require that the companies improve their capacity for adaptation/preparation to embrace a low-carbon economy, which may adversely affect their results and the maintenance of their business for some time.

In terms of reputation, should the market expectations for a better social, environmental and climate conduct not be met by the companies, it is possible that their revenues and credit lines will be affected, risking the continuous operation of those companies.

The future of fossil fuel prices and volumes, along with the decarbonization of the energy sector by shifting to alternate energy sources and deployment of carbon capture and storage (CCS) sources are critical factors in the transition to a zero-carbon economy.

From time to time, Banco do Brasil conducts stress tests that consider climate change variables. The results from those tests allow for the identification of attention points or weaknesses and capital adequacy and liquidity.

During the 2022 cycle, we developed our scenarios by conducting stress tests considering the "unfavorable hydrological cycle" — when there are no sufficient water resources to supply the demand for a certain water system and period, either through quantitative or qualitative deficiency of springs —, as Brazil has experienced, for little more than two decades, more water scarcity events — drought —, becoming the main climate risk responsible for the losses experienced.

During the 2023 cycle, a stress test was developed in response to a super El Niño. The effects of the climate phenomenon were assessed both in the Individual Rural portfolio (for selected crops and regions) and the Legal Entity portfolio (economic sectors). Upon the occurrence of a super El Niño scenario, the simulations conducted over the impact on BB's business structure showed the Bank would be resilient, absorbing the resulting effects.

We developed a sensitivity analysis applied to BB's credit portfolio based on the selection of transitional climate risk scenarios from the NGFS. Among the reference scenarios available, the Bank adopts the ones considering features from models and criteria applicable to Brazil under the "Divergent," "Net Zero," and "Delayed" approaches. The projections from BB's Macroeconomic scenario were also compared to the indicators of the NGFS reference scenarios.



Conducting a sensitivity analysis provides a clearer view of the impacts of the Transitional Climate Risks on BB's credit portfolio, providing material to assist other processes, such as capital management and stress tests.

BB's ability to adapt to potential changes in climate patterns and to the transition to a low-carbon economy

The companies must be able to face the changes, whether they are of climate, legal, social or environmental nature. In this context, our initiatives are guided by the [Sustainability Plan – Agenda 30 BB](#), instrument fostering sustainable business and practices.

The narratives developed for the scenarios also allow us to evaluate various activities associated with strategic planning, identifying the need for improvements in advance.

By analyzing how each criterion listed can impact our business, we can better offer new financial instruments to the market, such as credit for new technologies, issuance trading platforms and green loans, taking advantage of shared value opportunities. It is also possible for BB to timely align its risk appetite with mitigation actions, both for Physical and Transitional Climate Risks.

We are paying attention to the international scenario and the Brazilian needs, as well as events concerning the financial sector, and we seek to proactively and innovatively develop and improve financial solutions to encourage and assist governments, companies and people to implement measures to reduce GHG emissions and adapt to both the current effects and expected ones from climate change, assisting in the transition to a low-carbon economy.

To achieve these goals, we have endeavored efforts to increase the financings and/or investments in:

- projects for the generation, distribution and consumption of renewable energy, including decentralized microgeneration;
- energy efficiency projects for industries, aiming at replacing them with more efficient machinery and equipment and for commercial and residential real estate ventures;
- low-carbon agriculture projects and for the adoption of sustainable agricultural practices;
- sustainable timber and non-timber forest management projects and the reforestation of native and commercial forests;
- urban mobility, energy efficiency and mitigation and adaptation of cities and their citizens to the effects of climate change;
- access by investors and companies to capital directed to the low-carbon economy via capital market instruments;
- economic and financial projects and instruments that support the implementation of the Brazilian Climate Change Policy and the Brazilian Policy for Reduction of Emissions;
- engagement with governments, universities, companies and the third sector to jointly promote actions that contribute to the transition to a low-carbon economy.



- These measures, along with the [BB 2030 Commitments](#)¹⁴ to promote a more sustainable world, are the grounds for our support to employees, customers, investors, suppliers and society to transition to a more sustainable portfolio of products and services and practices that generate value for people and the environment.

¹⁴ All the commitments are aligned to global objectives, such as the Paris Agreement and the SDGs (Sustainable Development Goals).



GER Table: Social, Environmental and Climate Risk management processes

Description of the Social, Environmental and Climate Risk management structure.

Social, Environmental and Climate Risk identification, measurement and assessment process

According to the definition of express responsibilities under the adopted MRLD, the RSAC management is developed in several areas of the company, always according to the scope of activities assigned. We use tools to assist the RSAC identification, including:

- a) Registration notes related to the issue in an automated way;
- b) Assessment Questionnaire on Levels of Environmental, Social and Climate Responsibility, applied in the risk and credit analysis concerning customers and relevant projects;
- c) Media monitoring;
- d) Social vulnerability index;
- e) Register of employers who have subjected workers to conditions analogous to slavery;
- f) List of embargoes and penalties applied by Ibama;
- g) List of embargoes applied by ICMBio;
- h) Customer visit report;
- i) List of contaminated areas;
- j) Monitoring system of political, regulatory and marketing changes allowing for the adaptation and improvement of the management process;
- k) Due Diligence of suppliers.

It is worth mentioning that the last version of the Assessment Questionnaire on Levels of Environmental, Social and Climate Responsibility applied in 2023 has incorporated the new regulation issued by the CMN and the Central Bank of Brazil on Social, Environmental and Climate Risk, with groups of questions defined by the type of risk (social, environmental and climate), the size of the customer under analysis and the sector.

In 2023, 5599 questionnaires were applied, out of which 49 concerned investment project analysis.

In the measurements conducted, in addition to the processes of identification and evaluation of risks already provided for in the [State Law](#) (Law No. 13303/2016), in the Complementary Legislation, in the [Regulation of Bids and Contracts of Banco do Brasil S.A. \(RLBB\)](#) and those inherent to procurement and contracts, we use complementary and specialized Due Diligence instruments, including structured questionnaires, research



conducted in open sources and internal databases of information of the companies evaluated and their respective administrators, KRI¹⁵ indicators, analytical solutions and on-site visits.

Regarding the identification and classification of risks in the creation or revitalization of products and services, we adopted the Product Creation Flow, covering new guidelines and including the Social, Environmental and Climate Risk FAQ, to assist the Bank's product managers in identifying those risks.

As for the measurement of Social, Environmental and Climate Risk, we adopted indicators and a methodology of sensitivity to the RSAC based on three viewpoints – Economic Sector, customer and Operation –, as well as an analysis on the geographic region where the operations are conducted, allowing us to classify, evaluate and monitor customers according to the degree of risk inherent to their activities.

We established a set of indicators to measure and monitor risks. With the new resolutions adopted in 2022 and 2023, we revised the nomenclature and the calculation formulas of the Social, Environmental and Climate Risk Sensitivity Assessment indicators and methodology.

With regard to the effective risk measurement through the RSAC sensitivity assessment methodology, we use information related to social, environmental and climate aspects, among which we highlight the following:

- List of labor analogous to slavery;
- Child labor;
- Largest labor debtors;
- Disqualified and suspended companies;
- Sustainable portfolio;
- Rural insurance;
- Proportionality¹⁶;
- Amazon Biome¹⁷.

In terms of Sectoral Climate Risk, we evaluated our exposure using [Febraban's Climate Sensitivity Assessment Tool](#) (Climate Sensitivity Scale) adapted to our macro-sectors. We evaluated scenarios demonstrating the potential impacts of climate change on BB's credit portfolio, applying a sensitivity analysis and verifying the resilience of our corporate strategy.

At this stage, we analyzed the economic sector associated with customer activities, checking the possibility of exposure to Climate Risk as classified by the TCFD.

Using the Climate Monitoring Report as our basis, we also performed a climate diagnosis and analyzed the condition of the crops from the main agricultural commodities affected during the quarter, in addition to the climate prognosis for the next period. The Geo-Social and Environmental Diagnosis provided us with data on the overlapping of financed plots from various sources: Brazilian States (IBGE), Biomes (IBGE), Embargoed Areas

¹⁵The operational risk management framework, third-party risk category, supplier theme, establishes through Social and Environmental Due Diligence applied to suppliers, a risk score for the supplier in each evaluation. In addition, the framework also establishes the Bank of Brazil's exposure score to operational risk, third-party risk category, supplier theme in the evaluated themes.

¹⁶Takes into account the term of the operation and the balance amount.

¹⁷The IBGE provides the list of municipalities comprising the Amazon Biome, enabling the identification of customers residing in these places. We understand that customers located in these areas are more likely to incur in environmental risk events.



(IBAMA/ICMBio/SEMAs), Conservation Units (ICMBio/MMA), Vegetation (IBGE), Climate (IBGE), Relief (IBGE), Watersheds (IBGE), Soils (IBGE) and Agricultural Potential (IBGE), among others.

Given our concern with maintaining our operational activities in the face of the adverse impacts of climate change, we conducted a sensitivity analysis on BB's portfolio, focused on the economic macro-sectors, considering physical climate and transitional events.

We also conducted stress tests with climate variables to assess how Physical Risks (e.g., the El Niño or La Niña phenomenon) impact the credit portfolio. Concerning the Transitional Risk, we conducted a sensitivity analysis considering NGFS scenarios to assess the impacts of macroeconomic variables from Net Zero, Divergent and Delayed scenarios on our business operations.

Within the scope of the Third-Party Social, Environmental and Climate Risk Assessment of suppliers, we carried out a multidimensional approach to address risk factors and events and the possibility of financial losses arising from the process of supply of goods and/or provision of services by suppliers and damages to the reputation of the institution.

We used scenarios developed internally and our methodology with defined, controlled and monitored risk ranges to determine the level of exposure of the suppliers to Social, Environmental and Climate Risk.

In 2023, given the need to assess the sensitivity to the Physical Climate Risk of BB's relevant own physical premises under operation, we developed a methodology to assess the said risk according to the orientations from the TCFD and the Regulatory Body. The purpose of the said Methodology is the mapping of the premises with more exposure to Physical Climate Risk events per municipality, considering the degree of relevance and impact to BB based on their history and other listed factors.

The assessment of the level of exposure in BB's premises allows us to analyze the impacts and vulnerabilities, ensuring we can remain operational and provide services to the customers and adopt mitigating measures according to the geographic region, develop an ability to adapt in the face of climate changes, find new opportunities and improve our risk management.

Criteria used for the classification of exposures to Social, Environmental and Climate Risk

For the Social, Environmental and Climate Risk assessment of Third Parties, focused on the Supplier subcategory, we have developed indicators to measure the exposure of the bank that take into account the results of individual assessments of target suppliers and assigned specific weights to the assessments with higher risks.

Regarding the classification of exposures in our credit portfolio, we adopted a specific methodology based on the RSAC approach in which the exposures are evaluated according to three viewpoints – Economic Sector, Customer and Operation – and we also consider, in the analyses, the geographic region where the operations are conducted.

Economic Sector Viewpoint

Within the scope of Social Risk, we assessed the impact on each macro-sector as "Relevant" for higher balances and "Low" for minor ones, considering occurrences of risk events relating to:

- Slave-like labor;



- Largest labor debtors;
- Child labor;
- News relating to Social Risk and verified through the media monitoring process.

We have also weighted Social Risk for certain economic sectors, referenced in the [Guide for Social Risk Management](#).

In the Environmental area, besides the classification provided by the [Brazilian Environmental Policy](#) (Law nº 10.165/2000), which ranks potentially polluting activities and users of environmental resources, we count the number of violations according to Ibama data (embargoes and penalties applied), ICMBio embargoes, and news related to Environmental Risk events from the media.

As for Climate, we use the [Climate Sensitivity Scale](#) proposed by Febraban, which describes the various economic activities/sectors with high and medium exposure to Climate Risk, and that is adapted to our macro-sectors.

Customer Viewpoint

In the customer dimension, for exposures of Social and Environmental Risks, in addition to the classification within the macro-sector, we take into account customer registration information, including any discrediting data and notes (of a social and environmental nature), and other information relating to locational and proportional risks.

For Climate Risk, we consider the macro-sector, the total exposure of the institution to the customer, and the region of economic activity of the customer — we call this last criterion Locational Risk, which is determined by the [Index of Vulnerability to Natural Drought Disasters \(IVS\)](#) of the municipality where the respective activity is performed.

Operation Viewpoint

We assess our credit operations regarding exposure to Social, Environmental and Climate Risk considering the weighted average term of the operation and the exposure balance, as well as information from the economic sector and the variable 'Sustainable Business Portfolio'¹⁸ – which lists the operations with positive (mitigating) externalities to the said risk, according to the features of the credit lines and borrowing customers and sectors.

Under the assessment of Climate Risk, specifically concerning the operations of rural producers, we also verify the existence or not of agricultural insurance. The table below shows the mitigating values to the agricultural funding for the rural operations with the Bank.

Table 5. Distribution of mitigators in agricultural funding – R\$ million¹⁹

	Crop 21/22	Share %	Crop 22/23	Share %	Crop 23/24	Share %
Agricultural Funding	27,935	100.0	51,728	100.0	47,921	100.0
Total with Mitigator	16,736	59.9	29,959	57.9	25,581	53.4
Agricultural Insurance	13,137	47.0	23,784	46.0	20,559	42.9
Proagro	3,482	12.5	6,092	11.8	4,933	10.3
Price Protection	116	0.4	82	0.2	88	0.2
No Mitigator	11,199	40.1	21,769	42.1	22,340	46.6

¹⁸ It has independent external verification by Nint (former Sitawi), in line with major global taxonomies.

¹⁹ Source: [4Q23 Performance Analysis Report](#), p. 95.



Mechanisms used for timely identification of political, legal or regulatory changes that may impact the climate transition risk incurred by BB

In the current Information Age, it is essential to monitor and timely identify political, legal or regulatory changes that may impact the climate transition risk incurred by the institution. We use mechanisms to identify and monitor these changes to ensure constant and timely update.

Political Changes

Given the relevance of the matter, BB instituted an Institutional Relations Management to be responsible for coordinating the institution's relationship with the Brazilian Executive and Legislative Branches regarding legislative matters being drafted and under deliberation by the Brazilian Congress.

It is a way to enhance opportunities and mitigate risks by identifying issues in advance that may impact the Bank. We also monitor, via open data, the matters submitted and all the bills under deliberation by the Brazilian Congress.

We have a tool of our own that allows for a large-scale monitoring of activities (parliamentary pronouncements, pleas, public hearings and legislative matters) and instruments (bills, provisional measures, information requests, indications, draft resolutions, among others) under consideration by the Brazilian Congress or its Houses (Chamber of Deputies and Senate) and Commissions.

Legal or Regulatory Changes

For monitoring regulatory requirements and legal changes, we use analytical methods that allow for an automated capture and analysis of information from the websites of major regulators.

In possession of the information obtained, the areas responsible for internalizing the rules assess their impact and propose any timely necessary actions to ensure that BB's products, services, processes and channels always remain in compliance with the requirements of regulatory bodies.

State Water Permit/Grant Regulations

In addition to the processes already mentioned, we also monitor the Brazilian federal, state and municipal regulations, such as issues of water grants²⁰ and other environmental licenses²¹.

We monitor changes in the Brazilian federal, state and municipal legislations using the media available – Official State Gazette, environmental agency website and so on.

²⁰ The Grant is a legal instrument that assures the user the right to use water resources; however, this authorization does not grant the user ownership of water, only the right to use it.

²¹ The Environmental License is the administrative act by which the competent environmental agency establishes the conditions, restrictions and environmental control measures that must be followed by the entrepreneur to place, install, expand and operate enterprises and activities that use environmental resources deemed actually or potentially polluting or those that, in any form, may cause environmental degradation, according to Art. 1 of [Conama Resolution nº 237/1997](#).



Mechanisms used to assess interactions between the Social, Environmental and Climate Risk and other risks

Within the integrated risk management, description of mechanism used to assess interactions between Social Risk, Environmental Risk and Climate Risk, and then among those risks and others incurred by the institution, according to the provisions of Article 38-E of Resolution [nº 4.557](#) of 2017.

BB's risk management structures allows for an assessment of the level of exposure to financial and non-financial risks, as well as their interactions. Given its transversal and causal nature, the social, environmental and climate risk can impact other pertaining risks of the institution.

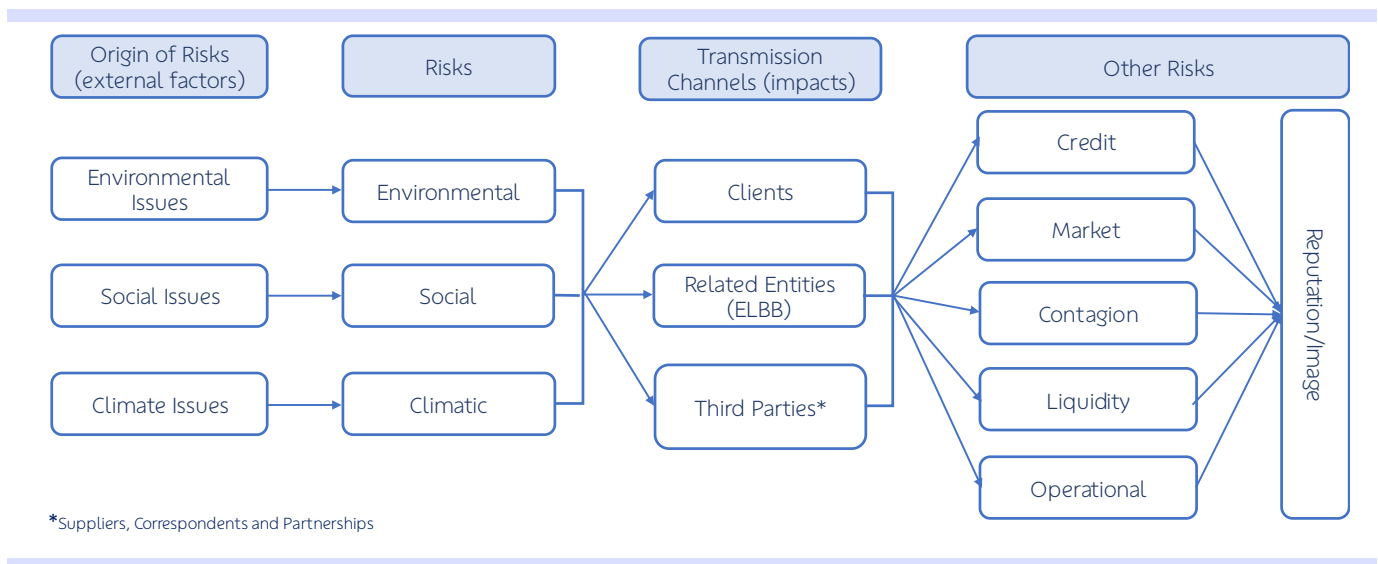
With the enactment of CMN Resolution [nº 4.943/21](#), we reviewed the Corporate Risk Taxonomy, relating the Credit, Market, Operational and Liquidity Risk Events to the Environmental, Social and Climate Factors.

Understanding that events related to relevant risks may expose BB to reputational risk, we monitor mentions to the Bank and the ELBBs in posts and notes published in the digital media and social networks regarding sensitive themes, including those of social, environmental and climate nature.

The integrated risk management makes it feasible for BB to monitor its exposure, identifying overlaps between various categories, obtaining a better assessment of the impacts on the interactions between risks, leading to improved management and the adoption of more assertive strategies and mitigators, such as:

- identification of losses relating to other risks and related to the RSAC factors for understanding of BB's exposure;
- preventive management process to minimize further risks.

Figure 7. Integration between RSAC and other risks



Climate Risk can occur in several ways. The table below presents a non-exhaustive list with examples of several types of physical and transition risks and how they result in direct or indirect risks to the institution, split into four types of risks managed by BB.

Direct impacts are easily identified because it is a simple matter of cause and effect. On the other hand, indirect impacts result from a secondary reaction or as part of a chain of reactions in the financial market, in local economies or in other companies.



Table 6. Materialization of the impacts of climate risk into other risks

Risk	Definition	Physical Risk		Transition Risk	
		Direct	Indirect	Direct	Indirect
Credit Risk	Possibility of losses resulting from the borrower or counterparty failing to comply with its respective financial obligations under the terms agreed upon, the devaluation of the credit facility loan agreement with the deterioration in the borrower's risk rating, decreased gains or remuneration, advantages granted in renegotiations, and recovery costs.	Increased frequency and severity of climate events results in damages to the customers and/or to their property, which may increase the probability of default and the devaluation of assets given as guarantee.	A high number of direct damages resulting from severe climate events will raise the costs with insurance and/or the prices of inputs, making it difficult for the customers to pay.	Changes in consumer behavior impact the profits of companies taking longer to transition to a low-carbon economy.	Low profitability of carbon-intensive industries reduces the output of local economies and increases unemployment rates and default risk (decrease of regional GDP).
Market Risk	Possibility of losses due to fluctuations in the market values of instruments held by the Bank.	Heat and drought will cause variability in the agricultural production or severe climate events will disturb the commodity supply chain, resulting in volatile prices.	Increased frequency and severity of climate events results in a high-risk region will lead to a systemic change in the types of crops produced in the impacted regions.	Reduction in consumer demand for less sustainable products/services and that are produced/rendered with a high emission of carbon will adversely impact the book value of companies undergoing a slow transition to a low-carbon economy.	Demand sustained by "green" assets and restrictions to the production chain result in volatile prices for those assets.
Operational Risk	Possibility of losses due to failure, deficiencies or inadequacy in internal processes, people and systems, or external events.	Severe climate events may impact the Bank's structures, temporarily interrupting the rendering of services and business activities. Those events may cause devaluation of assets not for own use (BNDU), implying in operational risk.	More frequent and destructive climate events in regions with high physical risk lead to the migration of companies and people from those regions, resulting in the challenges to hire and retain employees in those areas.	The implementation of new business models, the drafting of reports concerning climate goals and different expectations on new regulations to address climate matters on a global level increase the operational risk due to inadequate implementation.	Ambiguous and fast-evolving regulatory and legal scenario on climate matters resulting in more lawsuits filed against the financial sector, leading to more legal costs and compliance.
Strategy Risk	Possibility of results obtained different from those initially expected because of changes in the business environment or the use of inadequate assumptions for the decision-making process.	Maintenance of the business strategy with customers/sectors gradually more susceptible to severe climate events, reducing the profitability.	Decision to maintain premises of the Bank in places with high exposure to the physical climate risk.	The Bank cannot attract "green" business as society changes to a low-carbon economy, impacting BB's fulfillment of its climate goals and, consequently, its reputation.	The customer failing to achieve climate goals may result in a misalignment with BB's strategy.



Social, Environmental and Climate Risk monitoring, control and mitigation processes

For the Social and Environmental Risk assessment of Third Parties, focused on the Supplier subcategory, we have established indicators and exposure limits, allowing actions to be taken to reframe any exposures in case of deviations.

In order to mitigate any risks verified in this process, we contact and interact with our suppliers to raise awareness, guide and induce the adoption of more sustainable practices. Our agreements also include clauses providing for responsibility towards good social and environmental practices, establishing penalties in case of non-compliance and even with the possibility of unilateral termination, without excluding other penalties and fines.

Compliance with labor and social security obligations is a contractual and legal duty. For this reason, prior to payment, we verify if the supplier has complied with those obligations and assess any indications or complaints of breaches or non-compliance.

All agreements include clauses and contractual obligations relating to Human Rights, which the supplier represents and undertakes to comply.

A contract supervisor, a service inspector and the Internal Ombudsman will remain at the disposal of workers from the contracted companies who intend to file complaints related to their employment agreements.

To improve the Supplier Due Diligence processes in the social, environmental and climate spheres, we implemented initiatives through the [Sustainability Plan – Agenda 30 BB](#).

No que tange à nossa carteira de clientes, monitoramos nossa exposição aos Riscos Social e Ambiental por meio de indicadores e limites estabelecidos, possibilitando adoção de ações para enquadramento das exposições, em caso de desvios.

In view of [SARB 26](#)²², we have implemented RSAC mitigation initiatives to prevent illegal deforestation and assist promoting the good practices within the value chain, as well as made some changes to our guidelines and procedures concerning credit facility operations with slaughterhouses for bovines and cold stores in Brazil's Legal Amazon²³ and Maranhão.

Within the scope of Climate Risk, we have developed the Crop Monitoring Panel, that assists us in monitoring the climate impacts on crops, mapping situations of excessive heat, disease, drought, excessive rainfall, frost, hail, fire, pest, strong winds or multiple occurrences.

In a measure to improve the management, we reviewed the Climate Risk methodology taking into account the NGFS²⁴, scenarios, which decouple Physical Risk (climate change) from Transition Risk (climate policies and technological trends), and which may evolve into different futures, reflecting new commitments at national level²⁵ to achieve net-zero emissions.

²² Ruling for Management of Illegal Deforestation Risk in the Beef Chain, established by Febraban.

²³ Established through Law 1806/1953, it covers eight whole states (Acre, Amapá, Amazonas, Mato Grosso, Pará, Rondônia, Roraima and Tocantins) and some areas of the state of Maranhão.

²⁴ The climate scenarios developed by the NGFS are based on scientific assessments, such as those carried out by the Intergovernmental Panel on Climate Change (IPCC).

²⁵ According to definitions of COP26, which took place in November 2021.



Given their relevance for the Bank, BB controls the exposure to Social, Environmental and Climate Risk by establishing limits, as provided in our RAS, and monitoring indicators that help us control the exposure of the credit portfolio.

In 2023, we enhanced the extent of the RSAC indicators to better capture the concentration of the portfolio exposed to risk and achieve a global monitoring of the exposure. Besides tracking the limits under the RAS level, we monitor the indicators using the Management Panel, reporting to the CEGRC.

As for the management of Physical Climate Risks in the Agribusiness portfolio, there is a set of tools, reports and follow-up panels comprising a network of assessment and monitoring of the rural credit portfolio, encompassing from customer registration to the stages of contracting and conducting rural credit operations, through different approaches, whether in view of the extent of assessment or strategic guidance for portfolio management.

We will explain more about this monitoring network below.

Strategic management

Macro-Sector Monitoring

It covers, among others, agribusiness macro-sectors operating with farming and livestock, on several production chains (corn, soybean, wheat, rice, coffee, orange, sugarcane, tobacco, beef cattle, dairy cattle, poultry and swine). Besides monitoring the credit portfolio performance on a sectoral approach rather than using panels, this process encompasses the definition of market prospects for the monitored macro-sectors and segments, as well as the publication of a set of contents focused on sectorial analysis (Sector Scenarios, Macro-Sector Overview, Macro-Sector Alert, Macro-Sector Reporting, Special Studies, Briefings etc.). In the case of Agribusiness macro-sectors and their production chains, we have also drafted reports of specific monitoring to assess the impacts from natural phenomena such as “El Niño” and “La Niña”.

Conjunctural Analysis

Every quarter or whenever emergency matters require, we hold Conjunctural Analysis meetings to monitor the portfolio, identifying climate or behavior conditions that could result in risks, as well as to decide on mitigating measures. Examples of those measures include adjustments to indicators, such as the Trend Factor, the strategy to implement mitigators, adjustments to contracting rules, among other measures also approached in this document.

Every week BB conducts an analysis of the Macro and Agribusiness Commodities Scenarios to address any potential events that could require a review of the conjuncture analysis. In those meetings, we discuss prices, flow, estimated and expected productivity, behavior of commodities, among other topics.

Specific Monitoring

Technical Agricultural and Livestock Reference (RTA)

RTA has been used as the main device for integration of mechanisms to monitor contracting and follow-up of operations.

Banco do Brasil's Technical Advice at Portfolio Level (ATNC) department, comprised of more than 200 agricultural science graduates and distributed throughout the national territory, known as Agribusiness Advisors, is the main department in charge of providing content to the RTA System.



Based on the information collected and entered by those professionals and using its own methodology, RTA assesses the attractiveness of agricultural and livestock enterprises in different microregions of Brazil, allowing for collection and registration of information on the agricultural and livestock production and assisting the determination of credit facility limits for rural producers. The system also provides parameters for the automated contracting of agricultural and livestock funding operations, agricultural insurance, etc.

RTA establishes different levels of attractiveness for funding activities based on climate and market conditions as verified in previous harvests. The historical series of prices, along with the performance in past harvests, are used to determine the level of attractiveness on a continuous monitoring of the funded crops.

Intelligence Network and sector analysis documentation

The Agribusiness Intelligence Network, comprised of agribusiness advisors, supported by the strategic meetings on Conjuncture and Macro Scenarios mentioned earlier, also prepares materials with studies that impact strategic decisions to use resources depending on the target public, region and crops, according to an analysis of loss risks. We highlight the Conjuncture Analysis, the Price Trend Factor, the Weekly Field Analysis, [BB CastAgro](#) and the Quarterly Climate Report.

The Conjuncture Analysis is a gazette providing the main information for the production chains of cotton, rice, poultry, coffee, sugarcane, beans, orange, corn, beef and dairy cattle, soybean and wheat, reporting the price trend necessary for adjustments in the RTA System.

Using the Weekly Field Analysis and the [Agribusiness-Market Connection](#) we monitor both internal and external markets, developing scenarios and their impacts in the short-, medium- and long-terms, as well as strategic rationale for positioning in the commodity markets of soybean, corn, coffee and cattle.

Quarterly, a climate analysis is carried out with a climate diagnosis and condition of the crops of the main agricultural commodities in the period. This quarterly analysis addresses seasonal events, such as El Niño and La Niña and their influences on crops and presents a climate prognosis for the next period, allowing to predict areas with greater triggers of claims in rural insurance in the following quarter.

Geo-Social and Environmental Monitoring

Using georeferencing technologies available on public databases, Banco do Brasil developed the Geo-Social and Environmental Monitoring and the Geo-Social and Environmental Diagnosis.

The Diagnosis determines, upon verification of proposals for rural credit facilities, if there is overlapping between public cartographic bases and real estate property areas and plots to benefit with the credit facility, as a way to ensure that the financed real estate properties are located outside areas with legal and environmental restrictions or any internal regulatory prohibitions. All proposals requiring Rural and Environmental Registration (CAR) are submitted to the Diagnosis and subject to interruption of the credit facility contracting should any overlapping with restrictions be identified.

Indicators of Behavior Alerts

To mitigate potential frauds and irregularities in granting rural credit facilities verified during the inspections on financed enterprises, Banco do Brasil conducted studies to map situations to be used as warning parameters.



The AGROnline Warning Indicators resulted from those studies. There are currently 27 indicators for information or restriction, depending on the target public, the credit facility and the combination of indicators involved.

The inspections conducts provide data to the creation of AGROnline Warning Indicators as they identify a pattern of events related to frauds or irregularities in the grant of credit facilities.

We control potential losses using the information obtained with the Crop Monitoring Panel because it enables the timely adoption of rural insurance contracting and further risk mitigation measures.

To mitigate the Social, Environmental and Climate Risk, we have established and reviewed policies, management rules, proceedings and contractual clauses, besides recommending corrective measures and procedures whenever deficiencies are identified.

The routines and tools comprising the Social, Environmental and Climate Risk Due Diligence process, reflecting compliance with the applicable legislation, regulations, policies, guidelines and rules, initiatives and commitments assumed by the Bank, adopted in all stages of the credit facility granting process, were organized and internally disclosed in a single environment using the new Dicre's RSAC Portal.

Through the monitoring tool, we have implemented the daily monitoring of levels of alert or emergency in the dams, according to information provided by the Brazilian Mining Agency, and developing a customized analysis should the situation become more severe.

Another tool we use to mitigate the Physical Climate Risk is the [Zarc](#)²⁶ published by the Ministry of Agriculture, Livestock and Supply. We have also funded segments focused on green economy, applied specific financing conditions to sectors more sensitive to Climate Risk, provided guidance to stakeholders on how to manage climate risks and ensure the adequacy of the Bank's structures and processes.

BB has also provided its customers with a portfolio of products that includes Agricultural Insurances²⁷ to mitigate risks of loss in case of extreme climate events.

Aware of the impacts our current and potential customers may endure given the risk of non-transitioning to a low-carbon economy and the subsequent adverse impact on the results of our business, we seek to mitigate it by developing and offering financial solutions with social and environmental aspects aligned with our [Sustainability Guidelines for Credit](#), which are in synergy with international commitments assumed by the Federal Government, including those related to mitigation and adaptation to the effects of climate change.

Macrosectors Portal

The sectoral market monitoring at BB, carried out for credit portfolio management purposes and to support the customer credit analysis process, observes the Social, Environmental and Climate Risks to which the sectors are exposed, being materialized through panels with credit information in sectoral cuts, as well as by a portfolio of analyses and internal reports with emphasis on sectoral content.

Thus, for the dissemination of content, the Macrosectors Portal was developed, which hosts in a single environment the set of corresponding reports, in order to optimize internal access by different areas and users of the Bank.

²⁶ It indicates the municipalities with climatic and soil aptitude for certain crops and the most adapted cultivars.

²⁷ Agricultural Activity Guarantee Program.



In the same vein, in order to contribute to the Bank's credit portfolio management and its proper compliance, BB proactively prepares analyses of climatic events, which may affect the economic-financial sustainability of customers and sectors of activity, carrying out the opening of extraordinary thematic sensing.

Guarantee Management

Collateral Management for the monitoring of the credit portfolio with guarantees that may have their values affected due to the occurrence of Social, Environmental or Climate Risk events, the Panel for Monitoring the Impact of Social, Environmental and Climate Events on Guarantees was developed.

For the monitoring and evaluation of possible impacts arising from climatic events, information related to the occurrence of Drought and Intense Rains obtained weekly on the official website of the Ministry of Integration and Regional Development is used, which is fed based on the decrees of calamity and emergency by the municipalities affected by these events.

The information on occurrences of Drought and Rains are crossed with the guarantees registered in the Bank's system, for identification of urban and rural properties located in municipalities with a decree of calamity or emergency due to climatic events.

In monitoring the impact of climatic events on guarantees, it is possible to identify, in the 27 Units of the Federation, which municipalities were affected by climatic events of the types "intense rains" and "drought", with detailing of the debtor balance of operations with guarantees of urban and rural properties, total value of the goods linked in guarantee and quantity of customers and operations that have one of those guarantees.

Regarding Social and Environmental Risk, the location of guarantees constituted by urban and rural properties, whose owners present registration restrictions related to environmental and social infractions, are identified.

The incorporation of these panels in the guarantee management process constitutes an important tool for monitoring the guarantees of the Bank's credit operations portfolio and evaluating possible impacts in the face of the occurrence of RSAC events, for the definition of actions to be adopted for the mitigation of these risks.

Physical Facilities Assessment

Regarding the monitoring, control and mitigation processes resulting from the Assessment of sensitivity to Physical Climate Risk of BB's facilities, the main objective is to preserve the environment and reduce the impacts caused by changes in climate patterns, ensuring the sustainability of the Bank's business. For this, the Bank adopts measures to mitigate climate risks, including monitoring the probability of extreme climate events and long-term changes in the climate patterns of the regions where there are BB dependencies. The Bank's responsibility includes the availability, operation and maintenance of physical facilities, both of its own properties and of non-own use, as well as the building infrastructure. This monitoring identifies unexpected external events, such as climatic phenomena, which represent risks and which, associated with the building characteristics of BB's physical facilities, as well as the strategies for risk mitigation, elaborated by the internal team of engineers, have been minimizing occurrences and possible losses. Thus, the Bank demonstrates adaptive capacity in the face of climate change in the country.

Disaster Management

From the perspective of social responsibility and in the face of calamity situations, BB promotes actions to lessen the drama suffered by employees, customers, and communities affected by catastrophes, through initiatives that involve its entire relationship chain.



In this way, it reinforces its public role and its socio-environmental responsibility, added to the role of raising awareness and promoting a wave of volunteering for all civil society.

In the face of an emergency or public calamity, the Bank proactively establishes various actions:

- Humanitarian Aid Program, which consists of the contribution of the Banco do Brasil Foundation for purchases of basic needs items, such as water, hygiene materials, clothes, etc.;
- Campaigns for fundraising donations, involving functional staff, customers, and society, which are actions to raise financial resources donated through an exclusive checking account, with wide dissemination in the bank's communication channels and social networks;
- Debt renegotiation with differentiated rates and conditions, to the public legal entity, individual and rural producer;
- Credit: Extension of loan installments (Legal Entity, Individual and Rural Producer);
- Offer of credit operations with a differentiated conveyor, to the impacted municipalities (if there is available limit);
- BB Insurance: initiatives such as, flexibility of assistance from residential and business insurance, monitoring of claims notices from affected areas, prioritized service line for customers;
- Guidance to municipal managers on how to request resources and the Civil Defense Payment card;
- Availability of BB Mobile agency, when necessary, with the aim of assisting customers located in the affected area.

Through these good practices, we seek to mitigate risks to the environment and society, by reducing the impacts of our financing and investments, as well as identifying new opportunities for action in the value chain of sustainable businesses, based on relevant social and environmental issues and strategic themes for sustainable development.

Mechanisms used to monitor concentrations in economic sectors, geographic regions or segments of products and services most likely to endure or cause social, environmental and climate impacts

Every month we monitor the concentrations of high-sensitive exposures to Social, Environmental and Climate Risk relating to the total credit portfolio. Regarding economic sectors, we monitor the exposure of sectors with higher susceptibility to RSAC relating to the Legal Entity credit portfolio.

We also monitor the balance of operations with customers presenting a high sensitivity to RSAC, with a global view of the credit portfolio, based on the management limits set and aligned with our guidelines and the RAS. We periodically report the exposures determined to BB's Strategic Committees.

We assess the effectiveness of mitigating or risk transfer instruments used in exposures by analyzing the balance of credit portfolio operations, covering the geographic regions of the customer's operations. We also analyze BB's sustainable credit portfolio, comprising credit operations/facilities intended to finance activities and segments that positively impact social, environmental and climate issues.

The selection of credit facilities eligible to become part of BB's Sustainable Credit Portfolio is based on the methodology developed by Febraban published in the study "[Measuring Financial Resources Allocated in the Green Economy](#)", and is aligned with the main international taxonomies, such as the Green Bond Principles (GBP) and the Social Bond Principles (SBP), as attested by the independent opinion issued by Sitawi – Finanças do Bem.



Finally, it should also be noted that BB, in order to strengthen the mitigation of Social, Environmental and Climate Risk, uses mechanisms based on risk diversification, the elimination of unwanted concentrations, the control of exposures and the adequacy of the risk profile, always focusing on achieving a balanced business and in preserving the Bank's capital.



MEM Table: Indicators used in the management of Social, Environmental and Climate Risk

Description of the quantitative indicators used in the management of Social, Environmental and Climate Risk.

Quantitative indicators used in the management of Social, Environmental and Climate Risk

As part of the improvements to the management of Social, Environmental and Climate Risk, we have developed indicators to assist in the measurement, control and monitoring of these risks, in addition to providing a framework for the corporate strategy, signaling the need to channel, or not, resources to certain businesses, weighing the risk, the appetite of the Conglomerate and the current concentration of exposures.

Based on the indicators, we use the Methodology of Assessment of Sensitivity to Social, Environmental and Climate Risk, whereby the determination of exposures is carried out at the sector, customer and operation levels, and certain variables allow us to classify the concentrations under the bias of economic sectors, geographic regions or average terms.

At the sectoral level, the exposure of the Bank's credit portfolio is measured by weighing the Social, Environmental or Climate Risk of the respective macro-sector, thus resulting in the concentration of this portfolio in each of the risks according to internal criteria. In this view, the weighted risk is associated with the macro-sector and can be classified as High, Medium or Low.

As for customers, the Bank's exposure to those with high levels (according to internal criteria) of Social, Environmental and Climate Risk is measured by assessing the concentration of the credit portfolio against other customers as a group.

Still at the customer level, there is a concentrated exposure of BB's credit portfolio with customers who have had been fined (Ibama) and/or are under embargoes (Ibama/ICMBio), including exposures specific to areas of the Amazon Biome.

Regarding the operations, given the relevance of BB's rural portfolio, we assessed the exposure in this portfolio for real properties located in the Amazon Biome, and compared it with our total credit portfolio. Here we also monitor the concentration of our credit portfolio in operations with high susceptibility to Social, Environmental and Climate Risk (according to internal criteria).

In addition to assessing concentrations according to the amount of exposure, we believe it is important to analyze the volume of mitigators and guarantees linked to operations.

For this reason, in 2023 we increased the number of RSAC management indicators aligned with the strategy to expand the sustainable portfolio and focused on the group of high sensitivity to RSAC, concerning both the rural portfolio and the total credit portfolio of the Bank.



In addition, we annually carry out the [GHG inventory](#)²⁸ of our activities, direct and indirect (Scope 1, 2 and 3)²⁹. In this context, emissions management is carried out in line with our General Policy and the Social, Environmental, and Climate Responsibility Policy (PRSAC), through which we reinforce our actions, considering the interests of the relationship public in promoting initiatives aimed at reducing risks and taking advantage of opportunities related to socio-environmental issues, including climate change.

The Inventory follows the principle of continuous improvement of our Environmental Management System (SGA); to ensure its reliability, we have contracted a company specialized in environmental audits to perform the external verification of the Inventory, according to the specifications of NBR ISO 14064:3 and the GHG Protocol methodology. The basic data for the BB's GHG emissions calculations are obtained primarily from our systems, especially from the applications for controlling administrative expenses and human resources management and requested directly from the responsible areas. Every year, since 2008, we have carried out and published our [GHG Inventory](#) on the Public Emissions Register website (www.registropublicodeemissoes.com.br), which is under the responsibility of the Brazilian GHG Protocol Program (FGV-GVces).

As for the methodology used, we calculate and report GHG emissions within three scopes, according to specifications of the Brazilian GHG Protocol Program, in tons of CO₂ equivalent (tCO₂e). The report is drafted under the Operational Control approach and represents more than 4 thousand facilities all over the country, including retail, wholesale and government branches, regional units and strategic units, for their direct activities in Scope 1 and indirect activities in Scopes 2 and 3, with their emission sources defined as follows:

Scope 1 – Direct emissions from fuel consumption activities (mobile combustion – fleet vehicles, stationary combustion – fuel electricity generators) and fugitive emissions (refrigerant and fire extinguishers gases);

Scope 2 – Indirect emissions of Scope 2 are calculated based on the Bank's estimated electric energy consumption (MWh) and, as of 2021, the report has been drafted according to the approaches accepted by the Brazilian GHG Protocol Program (PBGHGP), being:

- o Location-based approach (mandatory): considers electric energy consumption according to the Brazilian energy matrix, where the emission factor of the Brazilian Interconnected System (SIN) must be used. The SIN supplies electric energy through different sources, from hydroelectric to thermoelectric (non-renewable), a situation that, every year, significantly interferes in the conversion of energy consumption to carbon equivalent (SIN emission factor);
- o Purchase Choice-based approach (optional): where we report the consumption of photovoltaic solar energy from BB's plants, complemented by the purchase of Renewable Energy Certificates (RECs), which guarantee, for the same amount of electricity consumed, the traceability and origin of the renewable energy.

Scope 3 – Indirect emissions (others) from the activities that BB influences³⁰:

- o Category 1 – Purchased Goods and Services (emissions that occur in the life cycle – extraction, production and transportation of paper purchased by BB);

²⁸ It consists of the measurement and publication of Banco do Brasil's (BB) GHG emissions and is based on the GHG Protocol Program methodology, adapted to the Brazilian context by the Center for Sustainability Studies (GVces) of the Business Administration School of São Paulo of Fundação Getúlio Vargas (FGV-EAESP), with support from the Brazilian Business Council for Sustainable Development (CEBDS), the Ministry of the Environment (MMA), the World Resources Institute (WRI), the World Business Council for Sustainable Development (WBCSD) and 27 founding companies, including BB.

²⁹ According to the parameters of the GHG Protocol, the Scope 1 encompasses the emissions released into the atmosphere directly resulting from the company's production process; in Scope 2, the emissions associated with the generation of electric power that the company consumes; and in Scope 3, we have the indirect emissions, which occur along the production chain of those preparing the inventory.

³⁰ Categories applicable to the Bank's performance, with the exception of Category 15 – Investments (financed emissions).



- o Category 3 – Fuel and Energy Activities (emissions related to the extraction, production and transportation of fuels purchased and consumed by BB, reported in Scope 1);
- o Category 4 – Transportation and Distribution – Upstream (emissions from the transportation of Febraban's shared mailbags, cash transportation and other transportation contracted by BB);
- o Category 5 – Waste Generated in Operations (emissions from the generation of effluents, based on water consumption, and from paper consumption, performed by BB);
- o Category 6 – Business Trips (emissions from air and land travels performed by BB employees);
- o Category 7 – Employees Commuting (home to work).

According to the GHG Protocol, for the calculations of emissions, we consider the gases controlled by the Kyoto Protocol, according to the following table:

Table 7. Warming potential of gases

Gases considered in the calculations of GHG emissions	Global Warming Potential (GWP) ¹
CO ₂	1
CH ₄	28
N ₂ O	265
HFCs	4 – 12,400
PFCs	6,630 – 17,400
SF ₆	23,5
NF ₃	16,1
compounds	0 – 11.698

(1) Source: IPCC 2013/ASHRAE 2019

Therefore, understanding both our role and the financial market as main players to foster the economic growth of Brazil with a sustainable approach in 2023, we updated our operational goals in face of climate change with the new [Agenda 30 BB](#) and the [BB 2030 Commitments for a More Sustainable World](#). We decided then to set goals to reduce GHG emissions in the long term — reduction of 42% in the Scope 1 until 2030. The definition of goals was based on the guidelines and criteria disclosed by the Science-Based Targets initiative (SBTi), using the metrics from the well-below 2 degrees temperature scenario (WB2C).

We will also maintain the offsetting of 100% of Scope 1 emissions through the purchase of carbon credits and the neutralization of 100% of Scope 2 emissions through RECs and consumption of renewable energy from our 13 photovoltaic solar plants.

The Brazilian energy matrix also provides for the acquisition of electric energy from a Free Contracting Environment (ACL), through which we seek energy supplied by renewable sources with a more sustainable cost.

It is worth mentioning that the amounts from our 2023 inventory were not consolidated yet as of the date this document was published but they may be checked in the future by accessing the [GHG Inventory](#).

Furthermore, it is worth noting that all these initiatives come to reinforce the commitment regarding Climate Change, signed via the Business Ambition for 1.5°C Commitment Letter, where we commit to strive to develop GHG



reduction targets according to the level of decarbonization necessary to achieve zero emissions in the value chain by 2050, following the guidelines of the SBTi.

In alignment with our adherence to Business Ambition for 1.5°C and supported by the sectoral guidelines of the SBTi, BB commits to carbon neutrality by 2050 and to the goal of reducing the intensity of emissions³¹ from the corporate loan portfolio³² by 25% in 10 years, considering the base year of 2021.

The calculation of financed emissions follows the PCAF (Partnership of Carbon Accounting Financials) methodology. In 2021, financed emissions reached 11,190,000 tCO₂e in a corporate loan portfolio of R\$ 108.32 billion, which is equivalent to an emission intensity of 0.1033 million tCO₂e for each R\$ 1 billion in loans granted.

In 2022, our financed emissions reached 13,410,000 tCO₂e in a corporate loan portfolio of R\$ 133.41 billion, which is equivalent to an emission intensity of 0.1005 million tCO₂e per R\$ 1 billion in loans granted. This represented a reduction of 2.7% in emission intensity in 2022, exceeding the established target of 2.5% reduction for the year.

Finally, we highlight our constant search for the improvement of tools and instruments related to Social, Environmental, and Climate Risk Management, being a continuous process of evaluation and development. In this context, aiming at the improvement of indicators, we are building historical bases and evaluating the need and usefulness of each indicator.

³¹ The emissions of Category 15 are determined by the PCAF methodology.

³² Loans aimed at companies with a turnover above R\$ 200 million.



OPO Table: Business opportunities associated with social, environmental and climate issues

Description of business opportunities associated with social, environmental and climate issues.

The institution's governance bodies responsible for identifying business opportunities associated with social, environmental and climate issues, considering the bodies at several levels

In view of current demands, financial institutions became the main agents promoting the transition to a low-carbon economy.

Even in a scenario of uncertainty, we can envisage an extensive list of opportunities linked to social, environmental and climate issues. In addition, to map and take advantage of such opportunities, we implemented an organizational structure aimed at promoting sustainability.

In this regard, we are guided by sustainability, which is expressed in our strategy, policies and several agreements and voluntary commitments assumed.

The main purpose of sustainability governance is to manage social, environmental and climate performance based on the [Social, Environmental and Climate Responsibility Policy \(PRSAC\)](#), which considers, in an integrated way, the economic, social, environmental and climate issues in business and in ethical and transparent relationships with interested parties.

Seeking to improve governance levels, the BB Executive Sustainability Committee (Cesus) was created at the beginning of 2021, which reports to the Board of Directors, composed of Vice-Presidents and Directors and is responsible for, among other purposes, resolving on the [Sustainability Plan - Agenda 30 BB](#), directing the implementation of sustainability initiatives with potential impact on business and defining action guidelines for the topic.

In addition, in 2021, the Corporate Sustainability Committee (Cosem) was created to strengthen BB's corporate sustainability governance. The purpose of its activities is to evaluate and monitor BB's sustainable performance and the effectiveness of the actions provided for in our Sustainability Plan, in addition to monitoring the evolution of the matter, seeking to identify opportunities and risks to generate value for Banco do Brasil and its stakeholders.

Its members must also propose and monitor the execution of initiatives that improve the Bank's social, environmental and climate performance and advise the Board of Directors on the implementation and monitoring of sustainability in the company's business strategy and administrative practices.

In 2022, we had the creation of the Executive Committee for People, Equity and Diversity (Ceped), responsible for the Diversity, Equity and Inclusion Program and the purposes and guidelines relating to people management models and processes at BB.

Strategically, the sustainability issue is led by the ASG Unit, which reports to the Vice-Presidency of Government and Corporate Sustainability (Vigov), and issues related to the topic are discussed in the BB Sustainability Forum, which



brings together some executives from BB and Fundação Banco do Brasil, to support the implementation, alignment and disclosure of BB's sustainability principles and practices, and monitor initiatives related to sustainability and implementation of the actions defined in [Agenda 30 BB](#). The Sustainability Forum holds quarterly meetings and reports to Cesus.

Furthermore, every six months, a report is prepared and submitted to the Executive Board of Officers and the Board of Directors, which presents BB's progress in the social, environmental and climate levels.

Identification of business opportunities associated with social, environmental and climate issues that represent possible relevant gains for the institution over different periods

Committed to “Being a protagonist in sustainability and promoting business and ESG practices³³”, BB incorporates aspects related to Social, Environmental and Climate Risk into its business, strategy and capital management.

In the process of developing the [BB Corporate Strategy \(ECBB\)](#) and the Master Plan (PD), which has an annual periodicity and is effective for five years, several areas contribute for the execution of its stages – diagnosis, priority of uncertainties, preparation of SWOT matrix and scenarios, senior management guidelines, definition of Strategic Purposes and respective indicators and goals.

In the diagnosis stage, we carry out competitive intelligence studies of the financial industry, macroeconomic analyses, identification of trends and critical uncertainties, which may impact the Bank's current and future performance, in addition to the assessment of relevant risk factors, which incorporates, among others, possible social, environmental or climatic events.

In order to adopt mitigation measures and/or review established strategies, we continually evaluate the risks and opportunities for changes in business environments, such as possible social, cultural and environmental changes, including demographic issues, changes in client's behavior, ESG factors and adverse weather or health conditions (such as, catastrophes and pandemics).

Considering the ESG business opportunities, as supporting instruments, we developed the [Sustainability Plan – Agenda 30 BB](#) and the [BB 2030 Commitments for a More Sustainable World](#).

For both, we adopted the following supporting approaches:

- **Sustainable Credit**, aims to help BB's clients in the transition to a more sustainable portfolio;
- **Responsible Investment**, aims to help BB's investors in the allocation of funds to companies that deliver positive social and environmental returns;
- **ESG and Climate Management**, aims to increase ESG practices within the bank's internal activities and stakeholders, including issues of diversity and digital maturity;
- **Positive Impacts on the Value Chain**, aims to disseminate financial inclusion, stimulate private social investment and provide reforestation and forest conservation.

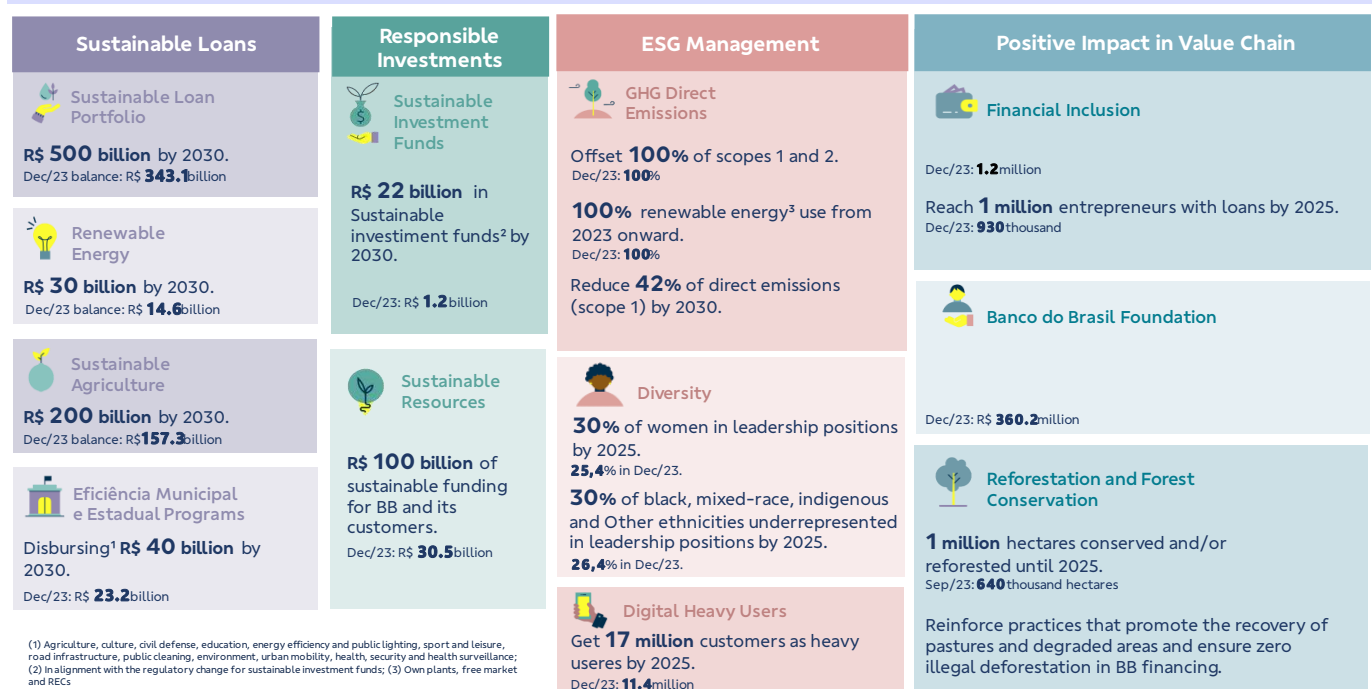
³³ Compromisso declarado pelo BB no seu Mapa Estratégico 2024 – 2028.



Through the [Agenda 30 BB](#), we aim to improve business and processes, consolidating actions with a social, environmental or climate purpose. Its review is carried out every two years to list the sustainability challenges prioritized by the Senior Management through actions to be carried out over a period of up to three years.

We present below our [BB 2030 Commitments for a More Sustainable World](#):

Figure 8. BB 2030 Commitments for a More Sustainable World



Specifically, with regard to climate change, Banco do Brasil is aware not only of the relevance and urgency of the matter, but also of the fundamental role it plays in engaging with governments, the private sector and society. In addition, through [Banco do Brasil's Commitment to Climate Change](#), we seek to strengthen our commitment and promotion of low-carbon agriculture, promotion of renewable energy in Brazil and social projects, focused on productive development, entrepreneurship and social and financial inclusion.

In this regard, Banco do Brasil has undertaken efforts and developed products and services related to the following opportunities:

Carbon Market (Climate Aspect)

Through a robust and complete action strategy, BB proposes to transform the society, offering its clients alternatives to encourage practices to mitigate climate change and encourage the transition to a low-carbon economy, showing that investing in sustainable projects in the Carbon Market are an excellent option for those who want to stimulate a business environment that considers financial results and the positive impact on society and the environment.

To support companies that have voluntarily assumed a commitment to measure and neutralize their emissions in their decarbonization proposal, we have identified opportunities for action for BB considering three approaches:

- **Climate Strategy:** finance the adoption of climate mitigation and adaptation practices;



- **Emissions Reduction:** advise on the preparation of emissions inventories, finance practices for the transition to a low-carbon economy, mediate the acquisition of carbon credits from projects and develop plans to decarbonize the production process, clients and suppliers from goals based on SBTi – Science Based Targets;
- **Origination of Carbon projects:** support clients in identifying and preparing projects that generate carbon credits, based on standards and methodologies recognized in the market, stimulating forest conservation and restoration practices, low-carbon agriculture, energy efficiency and renewable energy.

All of this happens through partnerships established by the Bank with companies specialized in carbon credit generation projects.

So far, the Bank has more than 640 thousand hectares in areas of preserved native forest from customer carbon projects. We have a public commitment to reach, by 2025, 1 million hectares preserved and/or reforested.

Sustainable Finance (Social, Environmental and Climate Aspects)

In October 2020, BB approved its Sustainable Finance model, which establishes parameters and management for raising funds for projects classified as sustainable in the global market. Funding resources of this type can be used to finance projects to offer financial returns linked to social, environmental, climate and governance benefits.

The process began with the Technical and Financial Cooperation Agreement entered into between Banco do Brasil and the Inter-American Development Bank (IDB), and had the technical support of the consulting company Sitawi Finanças do Bem, resulting in the preparation of the [Sustainable Finance Framework](#), whose Green and Social categories are covered. The possible leverage of projects related to low-carbon agriculture differentiates it among those available in the market.

In February 2024, the model was updated. The new [Framework](#) defines eligibility criteria for the following green categories:

- Environmentally Sustainable Management of Living Natural Resources and Land Use;
- Renewable Energy;
- Energy Efficiency;
- Green Buildings;
- Clean Transportation;
- Sustainable Water and Wastewater Management.

It also defines the eligibility criteria for the following social categories:

- Affordable Housing;
- Financing of Micro and Small Enterprises and Microfinance;
- Advancement and Socioeconomic Empowerment;
- Access to Essential Services.

In this update, the questions raised discussions and negotiations on material themes, such as limits for socio-environmental standards of pollutant and waste emissions, influencing the eligibility of assets that can make up the financed portfolio, in addition to non-material adjustments related to performance and evolution of BB's ESG practices and governance.

Sustainable Fundraising (Social, Environmental and Climate Issues)



As a result of the new version of the [Sustainable Finance Framework](#), BB concluded, in January 2022, the issuance of its first Social Bond in the international debt market. With a value of US\$500 million, the funding aims to promote projects with a positive social impact and, mainly, support micro and small companies to overcome the challenges imposed by the pandemic.

In April 2023, the first Social Bond³⁴ Resource Allocation and Socio-Environmental Impact Report was released. The document meets the assumptions of [BB's Sustainable Finance Framework](#) and received the limited assurance opinion of the independent auditor.

Also in April, BB issued the second international bond within the scope of the [Sustainable Finance Framework](#). The international raising of senior debt, in the form of sustainability bond, in the amount of US\$750 million, matures on April 18, 2030 and has a coupon of 6.250% p.a. The funds raised will be allocated to renewable energy projects and financing of micro and small businesses, mainly those led by women.

In August 2023, BB joined the Green Coalition – an alliance of Development Banks (DB) from the Amazon Region – and signed the “Green Coalition of Development Banks Declaration”. The Brazilian signatory banks are BB, Caixa Econômica Federal, Banco da Amazônia, and Banco do Nordeste.

The Green Coalition’s letter of intent covers efforts to realize the purposes of the Amazon Summit, held in Belém. In it, BNDES (National Development Bank), BID (Inter-American Development Bank), BM (World Bank), and 19 other financial institutions from Amazonian countries articulated the initiative to create financing lines aimed at the sustainable development of the region. So far, the amount of R\$ 4.5 billion has been announced for credit operations with individual microentrepreneurs and micro, small, and medium enterprises in the region.

In the following month, in September 2023, Banco do Brasil and BID signed a letter of intent to enable a financing partnership that is part of a Conditional Credit Line for Investment Projects (CCLIP). The operation should promote bioeconomy and sustainable infrastructure initiatives, with an emphasis on connectivity and renewable energy sources for the Legal Amazon.

In addition, BB advances in cooperation with the World Bank aimed at transitioning to a low-carbon economy and promoting projects to recover degraded areas in the Legal Amazon region.

This front of action seeks the identification of sustainable solutions for forest restoration and the promotion of low-carbon sustainable agriculture, with a special geographical focus on the Legal Amazon region in support of the National Plan to Combat Deforestation in the Amazon (PPCDAM).

Seeking to expand the sources of resource raising, the BB LCA Verde was offered during the year 2022, through which the funds raised are directed exclusively to credit lines that meet environmental, social, climatic, and governance criteria, focusing on reducing the greenhouse effect, recovery of pastures, renewable energy, and operations aimed at family farming. In December/23, the balance raised with the instrument reached R\$ 7.75 billion. Its impact report was published in August 2023³⁵.

Sustainable Business (Social, Environmental and Climate Issues)

During 2021, the Bank analyzed credit facilities that had some type of social and environmental contribution and proposed the creation of the Sustainable Business Portfolio.

³⁴ [BB LCA Verde – Impact Report](#) with indicators of the contract portfolio of operations under the scope of [Sustainable Finance Framework](#).

³⁵ [BB LCA Verde – Impact Report](#) with indicators of the contract portfolio of operations under the scope of RenovAgro (former ABC Plan).



The result of the work was submitted to independent evaluation by Sitawi Finanças do Bem, an important and recognized Brazilian organization, which classified the operations according to their contribution to sustainability and reinforced in its opinion the portfolio's relevant contribution in transformation.

The identification of credit facilities eligible to compose the BB's Sustainable Business Portfolio is based on the methodology developed by the Brazilian Federation of Banks (Febraban) and published in the study [“Measuring Financial Resources Allocated in a Green Economy”](#), and also in the [Sustainable Finance Framework](#) of Banco do Brasil, prepared in accordance with the main international standards, such as the Principles for Green Bonds (GBP) and the Principles for Social Bonds (SBP), among others.

To guarantee even greater reliability and robustness to the portfolio, we review, at least annually, the credit facilities and related operations, including new credit facilities based on national and international methodologies.

The 2023 review, carried out in the last quarter of the year, covered changes such as regulatory changes, inclusions or exclusions of products with ESG characteristics, inclusion of new credit facilities, such as loans with resources from the NDB (New Development Bank) that are directed to sustainable irrigation systems, green storage and renewable energy, BB Crédito Mobilidade, including electric and hybrid vehicles, and BB Crédito Tecnologia, with investments in innovation and improvements to technology systems and Real Estate Financing aimed at low-income consumers. In this regard, the portfolio has the analysis of up to 38 credit facilities with ESG, compared to 31 in the previous version. This new version also includes systems and criteria for monitoring and excluding operations that present signs of socio-environmental non-compliance.

In December 2023, BB's Sustainable Business Portfolio presented a balance of R\$343.1 billion. It consists of credit operations related to investments and loans for renewable energy, energy efficiency, sustainable construction, sustainable transport, sustainable tourism, water, fishing, forestry, sustainable agriculture and waste management sectors. Companies receiving credits that are inserted in segments whose operations generate effective social and environmental transformation are also considered.

We present below the types of financing considered in the portfolio:



Figure 9. Sustainable Business Portfolio



Low Carbon Agriculture (Environmental and Climate Issues)

The Bank supports initiatives aimed at mitigation, such as the [Program for Financing Sustainable Agricultural Production Systems](#) (RenovAgro, former ABC Program), which represents an opportunity for both BB and rural producers.

RenovAgro has the potential to contribute to the achievement of the environmental goals of the Paris Agreement (NDCs). Its role is especially relevant, since Brazil presented goals not conditioned to the receipt of international resources, which further justifies the need for its strengthening and alignment with the objectives of mitigating greenhouse gas emissions.

Since its launch in 2010, BB has been leading the initiative, which finances sustainable agricultural production systems, with a recognized capacity to reduce GHG emissions and promote the production of vegetation/biomass and food, as well as the preservation of the environment.

In December 2023, Banco do Brasil's RenovAgro portfolio reached R\$ 8.76 billion, consolidating its growth over the years.

It should be noted that in the following table, the denominations of the old ABC Program modalities were maintained for comparison purposes. From the 2023/2024 Harvest Plan, the RenovAgro modalities were reduced to three: RenovAgro Environmental; RenovAgro Pasture Recovery; and RenovAgro – Others.

**Table 8.** Evolution of the Low Carbon Agriculture Program (ABC) portfolio – R\$ billion

Credit Facilities	dec/21	mar/22	jun/22	sep/22	dec/22	mar/23	jun/23	sep/23	dec/23
ABC Recuperação	3.58	3.50	3.35	3.85	3.87	3.82	3.76	3.91	3.94
ABC Orgânico	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
ABC Plantio Direto	2.52	2.50	2.44	3.17	3.36	3.37	3.32	3.72	3.77
ABC Integração	0.30	0.29	0.28	0.32	0.36	0.35	0.35	0.40	0.40
ABC Florestas	0.78	0.74	0.70	0.73	0.70	0.68	0.64	0.68	0.65
ABC Ambiental	0.18	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20
ABC Tratamento de Dejetos	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06
ABC Dendê	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABC Fixação	0.02	0.02	0.02	0.09	0.13	0.13	0.13	0.28	0.32
ABC Cultivos Permanentes	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Subtotal	7.43	7.30	7.03	8.42	8.69	8.39	8.21	8.67	8.76

Bioeconomy Program (Performance in Bioeconomy)

During 2023, several actions were carried out in the context of the BB Bioeconomy program for the Amazon.

In August 2023, BB joined the Green Coalition – an alliance of Development Banks in the Amazon Region – in the Amazon previous meeting, in Belém (PA), which aims to promote financial solutions and encourage inclusive productive activities that enable sustainable enterprises, without disregarding regional characteristics.

In September 2023, representatives of the Board of Directors of Banco do Brasil were in New York (USA), where BB signed a letter of intent with the World Bank for US\$400 million to assist clients in the recovery of damaged areas in the Amazon and Cerrado, with the Inter-American Development Bank (IDB) of US\$250 million to promote bioeconomy and sustainable infrastructure initiatives, and with the BMO Financial Group of US\$200 million to support exports of sustainable agricultural products. Added together, the funding amounts to more than US\$1 billion.

At the United Nations Conference on Climate Change – COP 28, which took place in December 2023, in Dubai, Banco do Brasil and the Ministry of Environment and Climate Change (MMA) signed a letter of intent, in which they commit to invest in financing solutions and financial support for productive chains, bioeconomy, and climate resilience, including national and international fundraising and partnerships.

Still during the conference, BB and Natura signed a letter of intent, with the aim of promoting development, promotion, and support to the productive chain of Amazonian products in Natura's value chain. Also during the event, a letter of intent was celebrated between BB and the State of Pará, with the aim of structuring an ESG loan with the Secretary of Environment and Sustainability (SEMAS) of the state of Pará. The State of Pará, opened a public call notice for financial institutions to make proposals for financing resources to be employed in the preservation of the State's rivers.