Report on Social, Environmental and Climate Risks and Opportunities

GRSAC

2022

Index

Introduction

Sustainability is at the core of our policies and is expressed on the various voluntary commitments we make. Based on this premise, our organizational performance goes beyond economic indicators and covers variables that relate to social values, environmental preservation and the direct and indirect impacts of our activities on the air, water, land and biodiversity.

Our Report on Social, Environmental and Climate Risks and Opportunities – GRSAC Report –, is introduced within this context and in line with the recommendations of the *Task Force on Climate-related Financial Disclosures (TCFD),* the demands of the supervisor, mainly reflected through CMN Resolution No. 4,943/2021[1], BCB Resolution No. 139/2021 and BCB Normative Instruction No. 153/2021 and best market practices .

In this Report, we demonstrate our commitment to transitioning to a low-carbon and inclusive economy, demonstrating the incorporation of social, environmental and climate issues in the development of our strategy, as well as the improvement of Social, Environmental and Climate Risk Management (RSAC) processes and the strengthening of governance related to these issues.

The information disclosed here relates to our Prudential Conglomerate, as it is defined under CMN Resolution No. 4,950/2021, and the content addresses the aspects of Governance, Strategies, Risk Management Processes, Indicators and Opportunities associated with social, environmental and climate issues.

[1]Defining Social, Environmental and Climate Risks as relevant, proposing improvements to 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 risk, environmental risk and climate risk management governance.

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

Our governance structure enables us to set guidelines to build a more sustainable loan portfolio with 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 Risks.

In addition, we continuously review our governance structure, to improve our adherence to the aspects and standards issued by the National Monetary Council (CMN) and the Central Bank of Brazil (Bacen), as well as our alignment with the best management practices, observing the definition of compatible roles and responsibilities in the various bodies that are part of our governance structure.

The governance model for integrated risk and capital management adopted by BB includes the following aspects:

a) segregation of Duties: Business x Risk;

b) specific structure for risk and capital management;

c) defined management process;

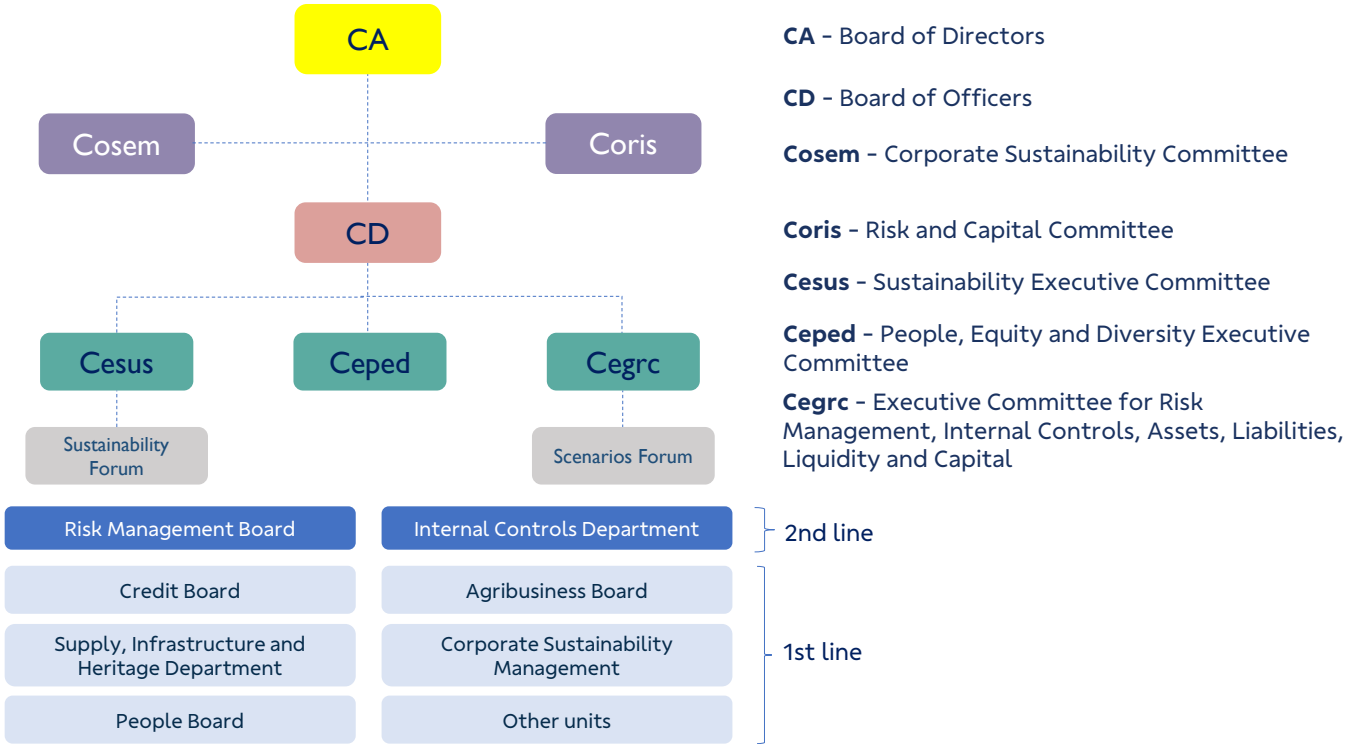
d) collegiate decisions at various hierarchical levels;

e) clear standards and structure of competence; and

f) reference in best management practices.

The Corporate Sustainability and Management Governance workflow of the RSAC is the following:

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



Instances, their responsibilities and relations

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

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

The CA and the CD serve to ensure that social, environmental and climate risk management processes are aligned with the definitions and directions established in our institutional policies and our Corporate Strategy.

Chief Risk Officer (CRO) – The executive responsible for the institution's risk management. At Banco do Brasil, this function is performed by the Vice President of Internal Controls and Risk Management.

Corporate Sustainability Committee (Cosem) – A collegiate body that reports to and advises the Board of Directors on issues relating to sustainability, considering the best market practices and the commitments assumed by BB.

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

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

People, Equity and Diversity Executive Committee (Ceped) – A body linked to the Board of Directors and comprising members of the Executive Board[2]. The 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 Board of Directors, 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 – Supports the incorporation, alignment and dissemination of sustainability precepts and practices, in addition to monitoring environmental and climate social initiatives and the implementation of initiatives under the Sustainability Plan – BB Agenda 30. The Forum reports to the Executive Sustainability Committee (Cesus) and is comprised of executive managers of the Bank and of the Banco do Brasil Foundation (FBB).

Scenario Forum – 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 is subordinated to the Risk and Capital Management Executive Committee (CEGRC).

Corporate Sustainability Autonomous Management (Gesem) – An area subordinated to the Vice-Presidency of Government and Corporate Sustainability (Vigov) - Responsible for Corporate Sustainability and for managing Social, Environmental and Climate Risks as a First Line of Defense, implementing strategic guidelines and acculturation relating to the issue.

Credit Board (Dicre) – An area subordinated to the Vice Presidency of Internal Controls and Risk Management (VICRI) - Responsible for managing Social, Environmental and Climate Risks as a First Line of Defense relating to the credit process.

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

Agribusiness Board (Dirag) – An area subordinated to the Vice Presidency of Agribusiness (Vipag) - Responsible for managing Social, Environmental and Climate Risks as a First Line of Defense related to the agribusiness credit process.

Risk Management Board (Diris) – An area subordinated 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.

2 Comprising the President, Vice-President and Directors of BB.

Internal Controls and Compliance (Dicoi) – An area subordinated to the Vice-Presidency of Internal Controls and Risk Management (Vicri). dicoi is responsible for the regulation and corporate supervision of risks, acting as a Second Line of Defense.

According to CMN Resolution No. 4,557/2017, the Vice President of Internal Controls and Risk Management, appointed by the Board of Directors, is responsible for BB's risk management.

Regarding the interaction between BB's Strategic, Tactical and Operational Units in the management and mitigation of social, environmental and climate risks, we adopted the Reference Model of Lines of Defense (MRLD), based on three lines of defense.

First Line of Defense: Functions that manage and have ownership over risks. Comprising: Specific Risk Managers and Risk Takers;

Second Line of Defense: Typical corporate functions relating to risk management, internal controls, and compliance. Comprising: Internal Controls and Risk Management Areas;

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

The MRLD helps in maintaining an effective and integrated Internal Control and Risk Management System, contributing to provide more security so that the strategic objectives are met.

The area responsible for the Social, Environmental and Climate Responsibility Policy, approved by the Board of Directors, is Gesem.

Social, Environmental and Climate Risk Information Reporting

We periodically prepare reports to governance bodies containing the necessary information to support the monitoring and decision-making of the collegiate bodies involved in the risk management process. Below, we detail the main reports developed, under the scope of the CA:

Table 1. CA Scope Reports

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

[1] Tool for reporting the consumption of specific and global limits established in Risk Management.

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

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

Decisions of governance actors help ensure that relevant risks, specifically social, environmental and climate risks, are taken into account in the approval and review of various processes.

After the approval, on June 3, 2022, of the Social, Environmental and Climate Responsibility Policy - resulting from the revision of the previous Social and Environmental Responsibility Policy (whose first edition was published in 2015) to align it with the new resolutions -, other important policies were also revised - Bank's Specific Relationship Policy with Suppliers, Specific Risk and Capital Management Policy, Specific Privacy and Personal Data Protection Policy, Specific Management Compensation Policy, Specific Policy for Business Continuity Management, General Policy for Market Directions, General Policy for Operational Directions, Specific Policy for Compensation to Shareholders, among others - in order to add new concepts and precepts relating to the RSAC to all businesses, both of the bank and its prudential conglomerate,.

In addition, we revisit (and when necessary, review) whether periodically or when required, our commitments (BB Commitments to Human Rights, BB Commitment to Climate Change), guidelines (BB Sustainability Guideline for Credit, BB Socio-Environmental Guidelines – Restrictive List and Exclusion List, Private Social Investment Guidelines), Recovery Plan, Declaration of Risk Appetite and Tolerance (RAS) and our stress testing program, wherein the Integrated Stress Test (TEI) now incorporates an "unfavorable hydrological cycle", which tends to adversely affect agricultural production, economic activity and prices, resulting in possible fluctuations in the quality indicators of BB's credit portfolio, such as the PCLD.

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

We monitor strategic objectives and targets related to social, environmental and climate aspects in order to assess their level of compliance. 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 Board of Directors through presentations and Panels.

In addition to the Master Plan, we also monitor the Work Agreements of strategic units, that contain objectives and indicators proposed at the ECBB.

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 – BB Agenda 30, the 10 Sustainability Commitments and the RSAC Action Plans[3].

[3]Action Plans developed to align BB with TCFD and RSAC, published by regulators in 2021.

EST Table: Strategies for treating Social Risk, Environmental Risk and Climate Risk

Identification and description of the actual and potential impacts, when deemed relevant, of social risk, environmental risk and climate risk 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

Our Single Risk Taxonomy is based on the assumption of consolidating, in the same instrument, all factors (causes), events and impacts of the risks inherent to the activities performed by the Bank and constitutes a basis for defining the relevance of the risks incurred by the Prudential Conglomerate of Banco do Brasil.

Information from the review of the corporate strategy and processes mapped by the managers of the first line, as well as the analysis of scenarios and the alignment with the regulation in force, feed the update of the Taxonomy with detailed factors, events and related impacts.

This instrument allows for possible risk events to be identified – such as child labor, soil contamination, drought, excessive rainfall, among others – in a non-exhaustive way and without overlapping their characterization and classification, as well as factors (causes) and impacts of risks.

In addition, in order to include more information and mitigate biases, we added a locational 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 Risks, allowing us 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 comparable data.

The following assumptions are made considering the concept of proportionality under the RSAC method to define the time horizons we use to follow the Natural Persons, Rural Producer and Legal Entities segments:

Table 2. Definition of periods

Public	Short term	Medium term	Long term
Natural person	up to 1 year	from 1 to 4 years	from 4 years
Legal entity	up to 1 year	from 1 to 3 years	from 3 years
Rural Producer	up to 1 year	from 1 to 5 years	from 5 years

In addition, when evaluating customers and operations, in addition to the information generated internally, we use information from reliable external sources. The list of external sources used in Social, Environmental and Climate Risk Management includes, among others:

- List of Labor Analogous to Slavery, of the Ministry of Labor and Welfare;
- Penalties and Embargoes, from Ibama[4];
- Embargoes, from ICMBio[5];
- Climate Risk Assessment of Economic Sectors, from NGFS (Network for Greening the Financial System)[6];
- Public news relating to facts of a social and environmental nature, from various media sources.

Regarding losses related to Social, Environmental or Climate Risks, we carry out continuous monitoring, aiming at prevention and mitigation. The minimum criteria for identifying losses, in the context of SARB 14[7], are applied to the process of operational losses, in which there is a need to control the markdowns of actual losses resulting from social and environmental damages, relating to administrative and judicial proceedings to which the financial institution is a party.

Based on BB's institutional system of Operating Losses, we generated a database from the categorized loss events, whose causes relate to legal processes linked to Social and Environmental Risks. In the process of monitoring these losses, we observed that throughout 2022 no significant effective losses were identified resulting from social and environmental events.

Due to the regulations published by Bacen at the end of 2021 and throughout 2022, and the ongoing initiatives to review the SARB 14, the process of identifying the losses generated by social, environmental and climatic events is under review, to aggregate more data and information on the relationship between losses and their factors and events.

[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).

Identification of significant concentrations, linked to Social, Environmental and Climate Risks, in BB's credit exposures

We structure the credit process based on risk and limit calculation methodologies, in line with the best management practices and contemplating the processes of:

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

At all stages, specific aspects of Social, Environmental and Climate Risks that may impact the Institution are considered.

The identification and monitoring of risk exposures allows for improved management by supporting decisions on whether or not to carry out certain operations – given the degree of risk, the appetite of the institution and the current concentration.

The table below shows the sensitivity of the exposures to each of the risks for the macro-sectors, which make up BB's portfolio and their respective balances.

Table 3.- Economic Macrosectors and their degrees of risk (December 2022 basis)

Macrosectors	Social	Environmental	Climate	Exposure (%)
Public administration	Medium	Low	Low	11.97%
Agribusiness of animal origin	High	Medium	High	4.89%
Agribusiness of plant origin	High	Medium	High	10.29%
Construction-specific activities	Medium	Medium	High	3.34%
Automotive	Medium	Medium	High	4.40%
Beverages	Low	Medium	High	0.34%
Wholesale trade and ind. Variousl	Low	Low	Low	2.08%
Retail trade	High	Low	Low	6.03%
Heavy construction	Medium	Medium	High	0.89%
Leather and footwear	Low	High	Medium	0.59%
Electronics	Low	Medium	Medium	2.28%
Electrical energy	Low	Medium	High	7.47%
Real estate	High	Low	High	2.34%
Financial institutions and services	Low	Low	Medium	6.28%
Agricultural inputs	Low	High	High	2.71%
Lumber and furniture maker	Medium	High	High	1.55%
Mining and metallurgy	Medium	High	High	4.51%
Pulp and paper	Low	High	High	1.24%
Oil	Medium	High	High	5.90%
Chemicals	Medium	High	High	2.66%
Services	High	Medium	Low	9.88%
Telecommunications	Low	Medium	Low	1.53%
Textiles and clothing	Medium	Medium	Medium	1.87%
Transport	Medium	High	High	4.99%

In addition to the sectoral view, we conducted a regional assessment of the sensitivity of Social, Environmental and Climate Risks, considering all exposures of the Bank. The percentage of the balance of operations classified with high sensitivity to Social, Environmental and Climate Risks, is presented and monitored for each region, allowing the concentrations between the regions to be compared in addition to supporting the management of risks.

Below the distribution of concentrations of operations classified with high sensitivity to Social, Environmental and Climate Risks is shown (December 2022 basis).

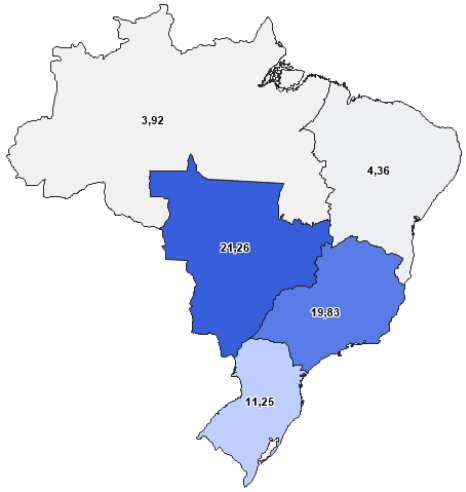
Figure 2. Percentage of the balance of operations classified as high sensitivity to social risk by geographic region

The highest concentration was measured in the Midwest region, with 27.27% of the balance of operations with high sensitivity to Social Risk, followed by the Southeast, with 19.35%. As a way to mitigate exposure, Social Risk management relies on a series of instruments used when granting credit, described in the next chapter, which include among others: public information, linked to RSAC, internalized in customer and operations management systems, Assessment Questionnaire for Levels of Environmental, Social and Climate Responsibility, applied to clients and relevant projects, Social Vulnerability Index and Register of Employers who have subjected workers to conditions analogous to slavery.

Figure3. Percentage of the balance of operations classified as high sensitivity to environmental risk by geographic region

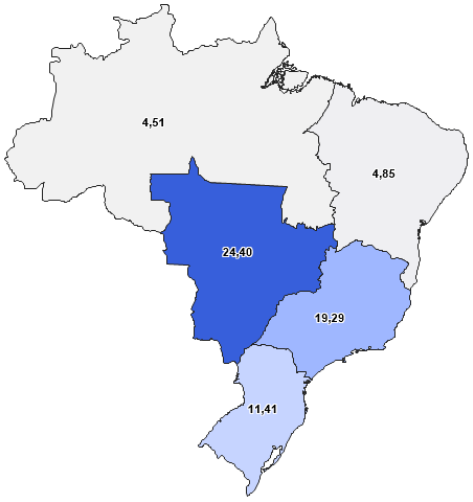
The Midwest region showed the highest concentration of balance of operations with high sensitivity to Environmental Risk, with 24.98%. Registration notes related to the issue, the Assessment Questionnaire for Levels of Environmental, Social and Climate Responsibility, applied to clients and relevant projects, media monitoring; list of embargoes and assessments by IBAMA, embargoes by ICMBio, list of contaminated areas and georeferencing of specific areas stand out as tools applied in the granting of credit to mitigate exposure to risk.

Figure 4. Percentage of the balance of operations classified as high sensitivity to Physical Climate Risk by geographic region



We verified that the Southeast and Midwest regions showed a higher concentration of operations with high sensitivity to Physical Climate Risk with, respectively, 19.83% and 21.26%. Agricultural insurance, the use of the 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 the green economy and the application of specific financing conditions to sectors more sensitive to Climate Risk are the main tools for risk mitigation.

Figure 5. Percentage of the balance of operations classified as high sensitivity to Transitional Climate Risk by geographic region



Finally, with regard to the Transition Climate Risk in the Midwest region, 24.40% of the portfolio balance is concentrated in operations classified as of high sensitivity. In the Southeast region this concentration corresponds to 19.29%. The system of monitoring political, regulatory and market changes for adaptation and improvement of the management process is an important instrument in managing this risk.

Incorporation of Social, Environmental and Climate Risks into BB's business, strategies and capital management

Committed to being a reference in sustainability, promoting ESG businesses, BB incorporates aspects related to Social, Environmental and Climate Risks into our own business, strategy and capital management. In the process of formulating BB's Corporate Strategy (ECBB) and the Master Plan, which is reviewed annually and has a five-year horizon, several areas take an active role in the execution of each stage – diagnosis, prioritization of uncertainties, preparation of a SWOT[8] matrix and scenarios, guidance to support senior management, defining strategic objectives and their respective indicators and goals.

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

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

In the relationship with our suppliers, we aim to improve working treatment and conditions. Our Supplier Relationship Policy serves as a demonstration of our culture and makes the values we defend explicit when relating with suppliers and their employees during purchasing, contracting and disposal of materials.

Accordingly, we include contractual clauses in which suppliers declare to know and respect our codes, norms and policies, among other guidelines.

In addition, we follow-up on our suppliers during the term of the contract and, if they are found to be in breach of any provisions or legislation relating to its execution, administrative proceedings are started that may result in administrative sanctions or, ultimately, in unilateral termination of the contract.

From the perspective of business opportunities, we highlight the Sustainability Plan – BB Agenda 30, that has the objective of improving 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.

Other businesses and products associated with agribusiness and the Harvest Plan are also aligned to this plan, which are included in BB's Sustainable Portfolio and drive initiatives and improvements to Brazil's agriculture and livestock sectors.

[8] Strategic planning technique used to assist in the identification of strengths, weaknesses, opportunities and threats of the object/subject analyzed.

Alinhado a isso, temos outros negócios e produtos, associados ao agronegócio e ao Plano Safra, que compõem a Carteira Sustentável do BB e impulsionam atividades e melhorias nos setores relacionados a agricultura e pecuária do país.

Changes to weather patterns and transitioning to a low-carbon economy serving as the basis for assessing various scenarios

We develop comprehensive climate change scenarios, applied over macro-economic sectors, based on scenarios provided by the IPCC for physical climate risks, and by the NGFS for transition climate risks.

We selected scenarios that were more compatible with the perceptions highlighted in the *IPCC Sixth Assessment Report*, , with the purpose of forecasting potential impacts of climate change on the country's agriculture and other economic sectors relevant to BB's business.

The selection of two scenarios linked to physical risks and two linked to transition risks resulted from the understanding that, together, they encompass a sufficient range of feasible possibilities for Brazil.

The scenarios used as reference are the following:

Physical Risk Scenarios

- RCP 4.5: an 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 temperatures of;
- 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.

Transition Risk Scenarios

- *Net Zero 2050*: a more ambitious scenario, where global warming is limited to 1.5°C, resulting from stricter climate policies and greater innovation, which make it possible to achieve net zero CO_2 emissions by 2050. In this scenario, physical risks are relatively low, while transition risks are high;
- *Current* Policies: this assumes that only the policies currently implemented will be carried out, resulting in high physical risks. Under the transition risk approach, this scenario has little impact, given the permanence in the state of dormancy on the part of governments and regulators.

In addition to the scenarios mentioned above, we have incorporated water scarcity to developing our scenarios– in which there are not enough water resources for all uses, within a given water system and period, either due to quantitative or qualitative deficiency of the sources of water–, since in Brazil, in just over 2 decades, the events of water scarcity – dry seasons and droughts – have been the most numerous and the main factors, among climate risks, leading to losses.

Thus, the hypotheses (scenarios) we developed are:

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

   In this scenario, policies are stricter, with the goal of zeroing net CO_2 emissions by 2050 and limiting the increase in average temperature to 2°C.

   To this end, there is a massive investment in technology and the engagement and demand for a more sustainable posture of all economic agents. The carbon pricing process intensifies, creating the need for greater adaptation in some sectors.

   As a result, physical risks tend to be mitigated and new sources of energy and raw materials will be developed, generating low damages to production and to the population;

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

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

   In the area of transition risk, there will be nothing very different from what we're currently witnessing. We will not have made progress in the pricing process. Demand for sustainable products and services will remain without incentives and will grow very slowly and gradually. The policies of inducing a low-carbon economy and regulations of GHG emissions will not require major adaptations and technological investments, causing almost irrelevant impacts on the sectors.

   The trend for physical risks is towards an increase in the frequency of extreme weather 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.

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

The following are the criteria used in assessing the risks and their impacts on the scenarios:

Table 4. Criteria for developing Climate Change Scenarios

Criteria for Assessing physical and transitional Climate Risk, for Brazil	
Physical Damages	Refers to the damages caused by extreme weather events and gradual climate change on the fixed assets of companies, as well as possible physical losses or decreases in productivity, or indirectly causing subsequent events, such as disruption of supply chains. The sectors most vulnerable to these risks are those intensive in capital goods, such as the agribusiness, industrial and energy sectors.
Water Scarcity	Refers to changes in the availability of water and rainfall in the country. 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 weather events directly affect 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 infrastructure and facilities for the exploitation, extraction and conversion of energy, such as, for example, offshore oil and gas rigs, refineries situated in coastal areas, etc. In addition, the climate can alter the efficiency of energy conversion devices (photovoltaic panels, internal combustion engines, thermal power plants, etc.).
Productivity	Refers to the relationship between the means, resources used and the final production with the damages caused by extreme weather events in the economic sectors.
Technology	Efforts to adopt or adapt technologies, products and services with lower GHG emissions. This usually implies higher cost and greater capital investments.
Regulatory	Regulatory changes that encourage the transition to a low-carbon economy. These represent the normative framework that underpins the transition to reducing or eliminating the use of fossil fuels in carbon-intensive production and consumption, requiring significant changes to processes, including migration to activities that promote neutral emissions in all, or most, economic sectors. The implementation of alternative technologies can generate significant cost increases while the adoption of regulatory policies can induce the transition by increasing the implicit value of emissions.

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

Upon the occurrence of extreme weather events (droughts and abundant rainfall), there is the possibility of damage to operating structures, logistical difficulties, increased costs and halting of customer activities, which can result in increased delinquency.

In addition, because of 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, since they are powered by fossil fuels, and entail higher costs for power generation –, which may result in an increase in the price of electricity, impacting the budget of families and companies, hampering industrial activity by reducing the supply of products and increasing prices.

As for transition risks, our analysis is based on the following factors: high contribution of the sector to GHG emissions and carbon pricing, need for technological adaptation, regulations on the use of water and electricity, and reputation.

Considering market and technology changes, we are witnessing an increasing demand for responsible conduct of companies, which tends to generate a change in the supply / demand of certain products / services, putting the continuity of some companies and segments at risk.

In the legal and regulatory field, certain changes may require companies to be more capable to adapt/frame for a low-carbon economy, which may

adversely affect their results and the maintenance of their business for some time.

In the reputational sphere, if market expectations for a better social, environmental and climatic conduct are not met by companies, it is possible that their revenues and credit lines will be affected, putting their continuity at risk.

The future of fossil fuel prices and volumes, along with the decarbonisation of the energy sector – by shifting to alternative energy sources and deploying carbon capture and storage (CCS) sources – are key factors in the transition to a zero-carbon economy.

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

It is essential that companies are able to face changes, be they climatic, legal, social or environmental. In this context, our initiatives are guided by our Sustainability Plan – BB Agenda 30, an instrument that fosters sustainable business and practices.

In addition, the narratives of scenarios allow us to evaluate various activities associated with strategic planning, previously identifying the need for improvements.

By analyzing how each criterion listed can impact our business, we are better able to 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. In addition, it is possible to timely align our risk appetite with mitigation actions, both for Physical and Transitional Climate Risks.

GER Table: Social Risk, Environmental Risk and Climate Risk Management Processes

Description of the social risk, environmental risk and climate risk management framework.

The process of identifying, measuring and evaluating Social, Environmental and Climate Risks

We identify risks according to the Corporate Risk Taxonomy, which, within the same instrument, consolidates all the factors (causes), events and impacts relating to risks inherent to the activities performed by the Bank.

In the Taxonomy, Social, Environmental and Climate Risk is defined as a factor that can result in risk events and subsequent impacts related to other relevant BB risks.

In addition, we use tools that help in identifying these risks, of which we highlight the following:

a) Registration notes related to the issue, in an automated way;

b) Questionnaire for the Assessment of Levels of Environmental, Social and Climate Responsibility, applied to clients and relevant projects;

c) Media monitoring;

d) Social vulnerability index;

e) Listing of employers who have subjected workers to slave-like conditions;

f) Listing of embargoes and assessments by IBAMA;

g) ICMBio embargoes;

h) Customer visit reports;

i) Listing 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.

Within the scope of assessing Social, Environmental and Climate Risks of Third Parties, in the supplier subcategory, we carry out a multidimensional approach to treat risk factors and events under the possibility of financial losses arising from the process of supply of goods and / or provision of services by suppliers and damage to the image and reputation of the institution.

In these measurements, in addition to the processes of identification and evaluation of risks already provided for in the State Law (Law No. 13,303/2016), in Complementary Legislation, in the Regulation of Bids and Contracts of Banco do Brasil S.A. (RLBB) and those inherent to purchasing and contracts, we use complementary and specialized *Due Diligence* instruments, including structured questionnaires, research in open sources and internal databases of information of the companies evaluated and their respective administrators, KRI indicators, analytical solutions and *on-site* visits.

Specifically in the climate context, a Supplier Due Diligence process is carried out within the Supply Chain cycle of the CDP (Carbon Disclosure Project[9]), where we aim to improve our mapping of impacts from the economic activities throughout the value chain of BB's suppliers on the environment and natural resources.

Regarding the identification and classification of Risks in the Creation or Revitalization of Products and Services, we revised the Product Creation Flow in 2022, covering new guidelines and including the Social, Environmental and Climate Risk FAQ, to assist with the identification of these risks by product managers in the Bank.

Regarding the measurement of Social, Environmental and Climate Risks, we adopted indicators and a methodology of sensitivity to risks, according to three viewpoints – Economic Sector, Client and Operation – and, in addition, an analysis linked to the geographic region of operation, which allows us to classify, evaluate and monitor clients according to the degree of risk inherent to their activities.

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

In addition, we developed scenarios considering climate change with sensitivity analysis, and applied them to BB's portfolio, from the standpoint of macro-sectors of the economy, considering physical and transition climate events.

With regard to the effective measurement of risks, in the RSAC sensitivity methodology we use information related to social, environmental and climatic aspects, among which we highlight the following:

- List of work analogous to slavery;
- Child labour;
- Largest labor debtors;
- Disqualified and suspended companies;
- Sustainable portfolio;
- Rural insurance;
- Proportionality[10];
- Amazon Biome[11].

In the context of Social and Environmental Risk assessment, we analyze parameters to select risk responses based on the sensitivity of our portfolio's exposure to risks, where we consider the concentration of high and medium risk portfolios in macro-sectors to assess potential exposures to risk at the corporate level.

From the perspective of Sectoral Climate Risk, we evaluated our exposure using Febraban's Climate Sensitivity Ruler, adapted to our macro-sectors. We evaluated scenarios that show a potential for materializing climate change in BB's credit portfolio, applying sensitivity analysis and integrating it with a measure of the resilience of the corporate strategy.

At this stage, we performed an analysis of the economic sector associated with customer activities, observing the possibility of exposure to climate risk, as classified by the Task Force on Climate-Related Financial Disclosures (TCFD).

[9] CDP is an international non-profit organization, formed by large investors interested in evaluating the performance of companies in relation to the environmental challenges of climate change, water resources and forests

[10] It takes into account the term of the operation and the amount of balance.
[11] The IBGE provides the list of municipalities that make up the Amazon Biome, enabling the identification of customers who reside in these places. We understand that customers who are located in these areas are more likely to incur environmental risk events.

In addition, through the Climate Monitoring Report, we performed a climate diagnosis and analysis of the condition of the crops of the main agricultural *commodities* affected during the quarter, in addition to the climate prognosis for the next period, and through the Geo Socio-Environmental Diagnosis, we generated data on the overlapping of financed plots defined according to various systems: Federative Units (IBGE), Biomes (IBGE), Embargoed Areas (IBAMA/ICMBio/SEMAs), Conservation Units (ICMBio/MMA), Vegetation (IBGE), Climate (IBGE), Relief (IBGE), Watersheds (IBGE), Soils (IBGE) and Agricultural Potential (IBGE), among others.

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

Within the scope of the Social, Environmental and Climate Risk assessment of Third Parties, supplier subcategory, we have developed indicators to measure the exposure of the bank, that take into account the result of individual assessment of target audience suppliers and assign specific weights to the assessments with higher risks.

To define the limit of exposure to Social, Environmental and Climate risk of suppliers, we use internally developed scenarios and our own methodology with defined risk ranges.

Regarding the classification of exposures in our credit portfolio, we employ a specific methodology under the RSAC bias in which exposures are evaluated according to three viewpoints – Economic Sector, Client and Operation – and we also consider, in the analyses, the geographic region of operation.

Economic Sector Viewpoint

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

- work analog to slavery;
- Largest labour debtors;
- Incidence of child labour;
- ICMBio embargoes; and
- News of a social risk nature gathered from media monitoring.

In addition, we use Social Risk weighting for certain economic sectors, referenced in the Guide for Social Risk Management.

In the Environmental spectrum, in addition to the classification from the National 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 (embargoes and assessments), ICMBio embargoes and news related to environmental risk events from the media.

From a Climate perspective, we use the Climate Risk Sensitivity Ruler proposed by Febraban as a basis – which describes the various economic activities/sectors with high and medium exposure to climate risk – adapted to our macro-sectors.

Customer Viewpoint

In the Client dimension, for exposures of Social and Environmental Risks, in addition to the classification within the macro-sector, we consider customer registration information, as determined by any discrediting notes (of a social and environmental nature).

For Climate Risk, we consider the macro-sector, the total exposure of the institution to the client and the region of economic activity of the client. We call this last criterion Locational Risk, which is given by the Vulnerability Index to Natural Drought Disasters (IVS) of the municipality where the related activity is performed.

Operation Viewpoint

We assess our credit operations regarding exposure to Social, Environmental and Climate Risks, 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'[12].

Specifically for rural producer Climate Risks, we also verify the existence or not of agricultural insurance. The table below shows the values of agricultural insurance as a mitigating factor in agricultural funding, in rural operations at BB.

Table 5. Distribution of mitigators in agricultural costing – R$ million[13]

	Crop 20/21	Part. %	Crop 21/22	Part. %	Crop 22/23	Part. %
Agricultural Costing	22,668	100.0	27,935	100.0	51,728	100.0
Total with Mitigator	13,408	59.1	16,736	59.9	29,959	57.9
Agricultural Insurance	10,584	46.7	13,137	47.0	23,784	46.0
Proagro	2,821	12.4	3,482	12.5	6,092	11.8
Price Protection	3	0.0	116	0.4	82	0.2
No Mitigator	9,260	40.9	11,199	40.1	21,769	42.1

[12] The Sustainable Loan Portfolio lists the operations that have positive externalities for Social, Environmental and/or Climate Risk, according to the characteristics of the credit lines and the clients and borrowing sectors. It has independent external verification by Nint (formerly Sitawi), in line with major global taxonomies.

[13] Source: 4Q22 Performance Analysis Report, p. 156.

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

Given the volume of information that is available daily, it is essential to monitor and timely identify political, legal or regulatory changes that may impact the climate transition risk incurred by the institution. To provide continued and timely updating, we use mechanisms to identify and monitor these changes.

Political Changes

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

In this context, we act preventively to enhance opportunities and mitigate risks by identifying issues that may impact the Bank. In addition, we monitor, via open data, the matters submitted and all the bills under deliberation by the National Congress.

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

Legal or Regulatory Changes

In 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.

With this information at hand, the areas responsible for internalizing standards assess their impact and propose any necessary actions in a timely manner, in order 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 state and municipal regulations, such as issues of water grants[14] and other environmental licenses[15].

We monitor changes in state environmental legislation from the available media – Official State Gazette, environmental agency website and others.

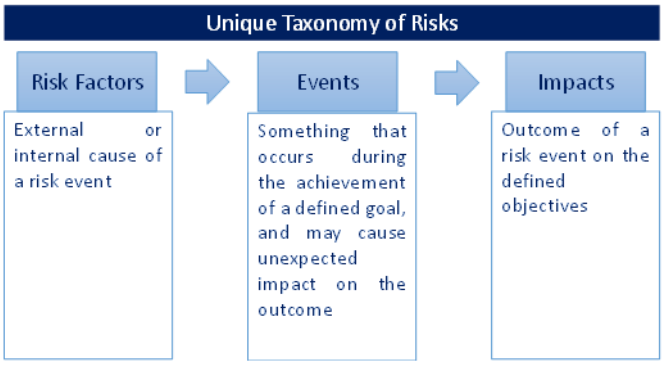
[14] A Grant is a legal instrument that assures the user the right to use water resources, however, this authorization does not grant the user ownership of water, but rather the right to use it.

[15] An Environmental License is the administrative act by which the competent environmental agency establishes the conditions, restrictions and environmental control measures that must be obeyed by the entrepreneur to locate, install, expand and operate enterprises and activities that use environmental resources considered effective 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 Social, Environmental and Climate Risks and other risks

Our risk management framework allows us to assess the level of exposure to financial and non-financial risks, as well as their interactions. One of the instruments for dealing with these interactions is BB's Corporate Risk Taxonomy, which is based on the consolidation of all factors (causes), events and impacts of the risks inherent to the Bank's activities.

Figure 6. Components of the Unique Taxonomy of Risks

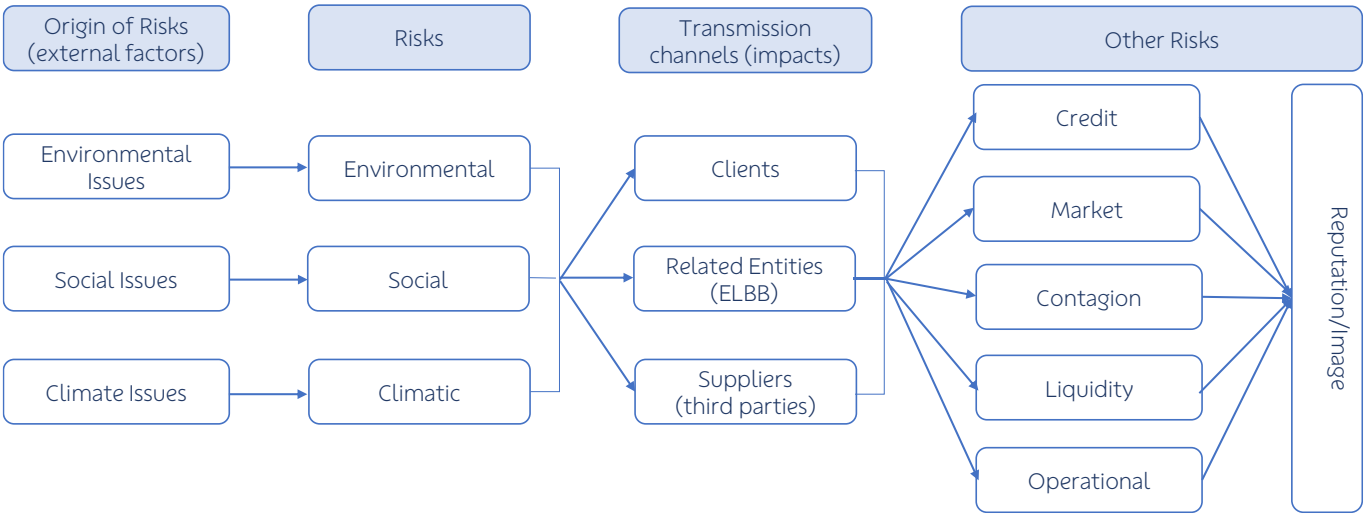


In view of the causal nature of the Social, Environmental and Climate Risks, they are classified during evaluations as factors which may originate events in BB's other corporate risks, thus requiring a preventive management process.

The amendments to CMN Resolution Nº. 4,557/17, through CMN Resolution Nº. 4,943/21, prompted a revision of the Corporate Risk Taxonomy, specifying Credit, Market, Operational and Liquidity Risk Events, which would relate to Environmental, Social and Climate Factors.

In this perspective, integrated risk management enables our exposure to be monitored, identifying overlaps between the various categories, which allows for a better assessment of the impacts on the interactions between risks, leading to improved management and the adoption of more assertive strategies and mitigators.

Figure 7. Integration between RSAC and other risks



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

We monitor the exposure to Social and Environmental Risks of Third Parties, supplier subcategory, by means of established indicators and limits, allowing actions to be taken to reframe these exposures in case deviations are found.

In order to mitigate any risks found in this process, we carry out contacts and interactions with our suppliers, in order to raise awareness, guide and induce the adoption of more sustainable practices. Nevertheless, all our contracts include clauses specifying the responsibilities towards good social and environmental practices, and establishing penalties in case of non-compliance and even with the possibility of unilateral termination of a contract, without excluding other penalties and fines.

Compliance with labor and social security obligations is a contractual and legal duty. Thus, prior to payment, we verify the supplier compliance to these devices, in addition to analyzing indications or complaints of possible violations and nonconformities.

In addition, all contracts include clauses and contractual obligations relating to Human Rights, which the supplier declares and undertakes to comply.

In addition, a contract supervisor, a service inspector and the Internal Ombudsman are made available to workers of contracted companies, allowing them to file complaints related to their employment contract.

To improve *Supplier Due Diligence* processes in the social, environmental and climate spheres, we implemented initiatives through the Sustainability Plan - BB Agenda 30.

Regarding our client portfolio, we monitor our exposure to Social and Environmental Risks through established indicators and limits, enabling initiatives to restore the exposures in case of deviations.

Within the scope of Climate Risk, we have developed the Loss Alert 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.

As a management improvement measure, we revised the Climate Risk methodology, taking into account the NGFS[16] 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 the country level[17] to achieve net-zero emissions.

We control exposure to Social and Environmental Risks by establishing limits in our Declaration of Appetite and Risk Tolerance (RAS) and monitoring indicators that help us control the exposure of our credit portfolio.

In 2022, we developed indicators aligned with the new RSAC sensitivity methodology. To control Climate Risk, we created a management indicator based on the Climate Sensitivity Ruler developed by Febraban, to monitor exposures subject to credit risk. These indicators are being monitored and will be evaluated regarding the possibility of their

[16] 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).

[17] According to definitions of COP26, which took place in November 2021.

complementary adoption in risk management and control processes.

As for the management of Physical Risks in the Agribusiness portfolio, based on the information from the Loss Alerts Panel tool, we control possible losses, since it allows for the timely activation of rural insurance and other risk mitigation actions.

To mitigate Social, Environmental and Climate Risks, we institute and review policies, management standards, procedures and contractual clauses, as well as recommend corrective measures and procedures in case any deficiencies are found.

In addition, we also mitigate the Physical Climate Risk by using tools such as the Agricultural Climate Risk Zoning (Zarc)[18], published by the Ministry of Agriculture, Livestock and Supply, and the Agricultural Technical Reference System (RTA)[19], as well as financing to segments focused on the green economy, application of specific conditions for financing to sectors more sensitive to Climate Risk, guidance to stakeholders on climate risk management and adequacy of the Bank's structures and processes.

In addition, we provide our customers with a specific product portfolio, which includes Agricultural Insurance[20], to mitigate the risk of loss of production resulting from extreme weather events. Aware of the impacts of the risk of non-transitioning to a low-carbon economy by our clients and potential clients 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.

These best practices help us in mitigating risks to the environment and to society by reducing the impacts of our financing and investments, as well as by identifying new opportunities to act in the value chain of sustainable businesses, based on relevant social and environmental issues and strategic sustainable development issues.

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

[19] A system, developed internally, that maintains information on production costs, price history and productivity by crop and producing municipality.

[20] Agricultural Activity Guarantee Program.

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

We monitor concentrations in economic sectors and the effectiveness of mitigating or risk transfer instruments used in exposures by analyzing the balance of credit portfolio operations, in the macro-sectors of "High" or "Medium" social, environmental and climate impact, and by geographic region of the client's operations. We also analyze BB's sustainable business portfolio, comprising operations/lines of credit intended to finance activities and segments that positively impact social, environmental and climate issues.

The selection of credit lines eligible to be part of BB's Sustainable Business 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 Risks, 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 organization's capital.

MEM Table: Indicators used in managing social risk, environmental risk and climate risk

Description of the quantitative indicators used in managing social risk, environmental risk and climate risk.

Quantitative indicators used in managing social risk, environmental risk and climate risk

As part of the improvements to the management of Social, Environmental and Climate Risks, we are developing 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.

We use the evaluation of Social, Environmental and Climate Risk as the basis of these indicators, whereby the calculation 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 time frames.

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, given internal criteria. In this view, the weighted risk is associated with the macro-sector and can be classified as High, Medium or Low.

In the client dimension, the Bank's exposure to clients with high levels (according to internal criteria) of Social, Environmental and Climate Risk is measured by assessing the concentration of the credit portfolio against these clients as a group.

Also at the client level, there is a concentrated exposure of BB's credit portfolio with clients who have had assessments (Ibama) and/or 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 in 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 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, and we are making improvements to these processes.

Additionally, we already have indicators in place relating to estimated emissions of greenhouse gases

(GHG)[21] from our activities, both direct and indirect (Scopes 1, 2 and 3)[22]. Our expectation is that, after measuring the 2021 and 2022 emissions under Scope 3, Category 15, scheduled for this semester, we will be ready to prepare the indicators and targets relating to these emissions.

Currently, both in the BB Agenda 30 and in the 10 commitments assumed by the Bank, we incorporate actions linked to GHG emissions and the promotion of a low-carbon economy. Specifically, in Commitment 7 we commit ourselves to:

> *Offset 100% of BB's direct Greenhouse Gas (GHG) emissions from 2021. Acquire 90% renewable energy by 2024. Reduce direct GHG emissions by 30% by 2030.*

In order to monitor and adapt the progression towards meeting these challenges, we established the following indicators:

a) Reduction of direct GHG emissions (Scopes 1 and 2) by 3% p.a., based on 2018;

b) Proposed Scope 3 emissions target (except Category 15), by 06/30/2023;

c) 100% offsetting of direct GHG emissions (Scopes 1 and 2) annually.

The target-setting process was based on the methodology issued by the SBTi (*Science-Based Targets*) initiative, using the *well-below 2 degrees temperature scenario* (WB2C) metric. The 30% reduction target by 2030 is based on the emissions reported in the 2018 BB GHG *Protocol* and includes Scopes 1 and 2.

In 2022, BB's Scopes 1 and 2 emissions, included in the target, decreased by 61% compared to the base year, from 66,069 tCO 2 e (Scope 1: 22,348 tCO 2 e, Scope 2: 43,722 tCO 2 e), to 25,651 tCO 2 and in 2022 (Scope 1 emissions: 25,651 tCO 2 and, Scope$_2$: 0.000 tCO_2e).

Table 6. Reduction of GHG emissions from Banco do Brasil

Reduction of GHG emissions BB			
Scopes	2018	2022	
Scopes 1	22,347.62	25,650.97	reduction observed
Scopes 2[1]	43,721.79	0.00	
Total	66,069.41	25,650.97	-61%

[1] This scenario considers the effective implementation of BB's strategy to reduce 100% of Scope 2 emissions through the migration of electricity consumption on a sustainable (and traceable) basis, with the use of electricity from its photovoltaic plants and the acquisition of Renewable Energy Certificates (RECs), which make it possible to report Scope 2 emissions as zero, so as not to be influenced by variations in the emission factor of the SIN – The National Integrated Grid.

[21] Developed with the help of specialized external consulting and with references to the PCAF (*Partnership for Carbon Accounting Financials*) methodology.

[22] According to the parameters of the GHG (*Greenhouse Gas*) *Protocol*, Scope 1 encompasses the emissions released into the atmosphere that come directly from the company's production process, in Scope 2 the emissions associated with the generation of electricity that the company consumes and Scope 3 the indirect emissions, which occur along the production chain of those who are preparing the inventory.

Table 7. Banco do Brasil GHG Emissions Inventory

Scope	Emission Source	2018	2019	2020	2021	2022
1	**TOTAL (tCO_2e)**	**22,347.62**	**24,382.32**	**27,611.27**	**20,517.73**	**25,650.97**
	Mobile Combustion (fleet vehicles)	3,296.27	3,091.99	1,353.59	1,042.40	959.87
	Stationary Combustion (electric power generator)	674.46	912.24	458.58	515.25	374.28
	Fugitive Emissions (refrigerant gases and fire extinguishers)[1]	18,376.90	20,378.08	25,799.11	18,960.08	24,316.81
2	**TOTAL (tCO_2e)** (location-based approach)	**43,721.79**	**42,848.79**	**32,889.49**	**63,829.92**	**21,827.44**
2	**TOTAL (tCO 2 e)** (purchase choice-based approach)[2]	**-**	**-**	**0.00**	**0.00**	**0.00**
3	**TOTAL (tCO_2e)**	**66,313.93**	**54,539.41**	**42,937.05**	**42,210.97**	**41,168.66**
	Category 1 - Goods and Services Purchased[3]	-	-	-	1,599.75	1,804.77
	Category 3 - Fuel and Energy Activities[3]	-	-	-	745.19	947.61
	Category 4 - *Upstream* Transportation and Distribution	31,943.12	27,903.16	29,266.82	17,311.60	14,163.93
	Category 5 - Waste Generated in Operations	20,932.80	13,101.85	7,434.00	10,545.08	12,172.69
	Category 6 - Business Travel	5,618.23	6,421.18	1,632.60	1,153.26	3,208.57
	Category 7 - Employee Commuting (home-work)	7,463.58	6,853.99	4,524.06	10,856.09	8,871.07
	Category 9 - Downstream Transportation and Distribution [4]	356.19	259.23	79.57	-	-

[1] As of 2021, data on fugitive emissions of refrigerant gases are no longer estimated and are now measured, reflecting the amount of gas effectively replenished in air conditioning equipment during maintenance.
[2] As of 2021, BB began to report its GHG emissions from energy consumption based on the voluntary Purchase Choice report, where it zeroes its Scope 2 emissions by consuming photovoltaic energy from its plants and by acquiring Renewable Energy Certificates (i-RECs).
[3] As of this 2021 Inventory, BB identified the possibility of also accounting for emissions from Scope 3 Categories: Category 1 - Purchased Goods and Services and Category 3 - Fuel and Energy Activities.
[4] As of this 2021 Inventory, there has been a change in understanding regarding the accounting of this category, following consultation with WWF. Thus, the emissions previously listed in this category are now accounted for in Category 4 – *Upstream* Transportation and Distribution. Calculation Methodology – *GHG Protocol* – Data available in https://registropublicodeemissoes.fgv.br/#metodos.

A decision was made to maintain the migration strategy of the energy matrix towards renewable sources with the acquisition of energy from a Free Contracting Environment (ACL) and with operational photovoltaic plants in Distributed Generation (DG), in addition to the acquisition of REC Renewable Energy Certificates, so that we can offset 100% of emissions.

Another way of approaching BB's commitment to reducing emissions is the Carbon Intensity Indicator, expressed as the quotient of total GHG emissions (Scopes 1 and 2) by the number of employees, as shown in the following table.

Table 8. BB's Carbon Intensity

BB's Carbon Intensity – Employees	2018	2019	2020	2021	2022
GHG emissions (Scopes 1 and 2)[1] (tCO_2e)	66,069	67,231	60,501	20,518	25,651
Total employees:[2]	96,889	93,190	91,673	84,597	85,953
Carbon Intensity ($tCO_2$and//employee)	0.682	0.721	0.660	0.243	0.298

[1] BB's emissions were considered within the Energy Purchase Choice - Scope 2 approach. for the years 2021 and 2022.
[2] The number of employees per CLT employment contract – *Annual Report* 2022 was considered. P.13.

It should be noted that in January 2021, BB ratified the commitment already made in 2019 regarding Climate Change by signing the *Business Ambition* for 1.5°C Commitment Letter in which we committed to develop GHG reduction targets in line with the level of decarbonisation needed to achieve zero emissions in the value chain by 2050, following the guidelines of the SBTi - Science Based Targets initiative.

Thus, resuming the requirements set out by the SBTi, the emissions targets for Scopes 1 and 2 are being set within a 5- to 15-year window, with an average annual reduction of 4.2% over the base year 2018.

The definition of the long-term goals in Scope 3 Category 15, will also be supported by renowned consultants. Our next steps include the measurement of emissions for the years 2021 and 2022, which is nearing completion, in addition to the full disclosure of SBTi's criteria and parameters for preparing goals for the global financial industry, scheduled to take place in May. Our estimate is that the goals for Scope 3, Category 15, will be released in 2023.

Lastly, it should be noted that we seek to continuously improve the tools and instruments related to Social, Environmental and Climatic Risk Management, sine this is a continuous process of evaluation and development. In this context, and considering the improvement of the indicators, we are building historical databases and assessing the necessity and usefulness of each indicator.

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

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

Instances of governance within the institution with attributions to identify business opportunities associated with social, environmental and climate issues, considering the instances at their various levels

Considering the current demands, financial institutions have become some of the main drivers of the transition to a low-carbon economy.

Even against a backdrop of uncertainty, we can envision an extensive list of opportunities tied to social, environmental and climate issues. And, in order to map and seize such opportunities, we set up an organizational structure focused on fostering sustainability.

In this context, our Corporate Social and Environmental Responsibility (RSAE) provides us with our guidelines, which are then expressed in policies and in the various voluntary agreements and commitments undertaken.

The main objective of governance in CSR is to manage social, environmental and climate performance based on the Social Responsibility, Environmental and Climate Policy (PRSAC), that Integrates the economic, social, environmental, and climate dimensions in business and in the ethical and transparent relationship with our stakeholders.

Seeking to improve levels of governance, the BB Executive Sustainability Committee (Cesus) was created. in early 2021., reporting to the Board of Directors. The Vice Presidents and Directors take part in this Committee which, among other objectives, decides on the Sustainability Plan - BB Agenda 30, steers the implementation of sustainability initiatives with potential impact on business and defines guidelines for initiatives on the matter.

At the end of 2021. the Corporate Sustainability Committee (Cosem) was created with the objective of strengthening BB's corporate sustainability governance. This Committee evaluates and monitors BB's sustainable performance and the effectiveness of the initiatives established in our Sustainability Plan, in addition to following the progress of the issue to identify opportunities and risks, in order to generate value for Banco do Brasil and our stakeholders.

Its members are also responsible for proposing and monitoring the implementation of initiatives to improve the Bank's social, environmental and climate performance and advise the Board of Directors on the incorporation and monitoring of sustainability

initiatives in the company's business strategy and administrative practices.

Still in 2022, we established the People, Equity and Diversity Executive Committee (Ceped), responsible for the Diversity, Equity and Inclusion Program and for the objectives and guidelines related to people management models and processes at BB.

Strategically, the RSAE issue is managed by the Corporate Sustainability Autonomous Executive Management (Gesem), linked to the Vice-Presidency of Government and Corporate Sustainability (Vigov). The issues related to the matter are discussed at the BB Sustainability Forum, which includes some executives from BB and from the Banco do Brasil Foundation to support the process of incorporating, aligning and disseminating BB's sustainability principles and practices and monitoring initiatives related to sustainability and the implementation of the actions provided for in BB's Agenda 30. The Sustainability Forum holds quarterly meetings and is subordinated to Cesus.

Furthermore, reports are issued semiannually to the Board of Directors, on BB's advances in social, environmental, and climate issues.

Identification of business opportunities associated with social, environmental and climate issues that may lead to relevant gains for the institution at various time horizons

BB is committed to " be a reference in sustainability, promoting ESG business"[23], and incorporates this commitment into our business strategy and to capital management aspects relating to Social, Environmental and Climate Risks.

The process of formulating BB's Corporate Strategy (ECBB) and the Master Plan (PD), which have an annual frequency and a five-year horizon, include the participation of several areas contributing in various stages – diagnosis, prioritization of uncertainties, preparation of SWOT matrix and scenarios, directions from senior management, definition of the Strategic Objectives and their respective indicators and targets.

In the diagnostic stage, we carry out competitive intelligence studies of the financial industry, macroeconomic analyses, identification of critical trends and uncertainties that may impact the Bank's present and future operations, in addition to assessing relevant risk factors that Include, among others, possible social, environmental or climate events.

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

From the perspective of ESG business opportunities, we developed the Sustainability Plan – BB Agenda 30 and BB's 10 Commitments to Sustainability as instruments of guidance.

We adopt the following support pillars for both:

- **Sustainable Business**, helping BB's clients in the transition to a more sustainable portfolio;

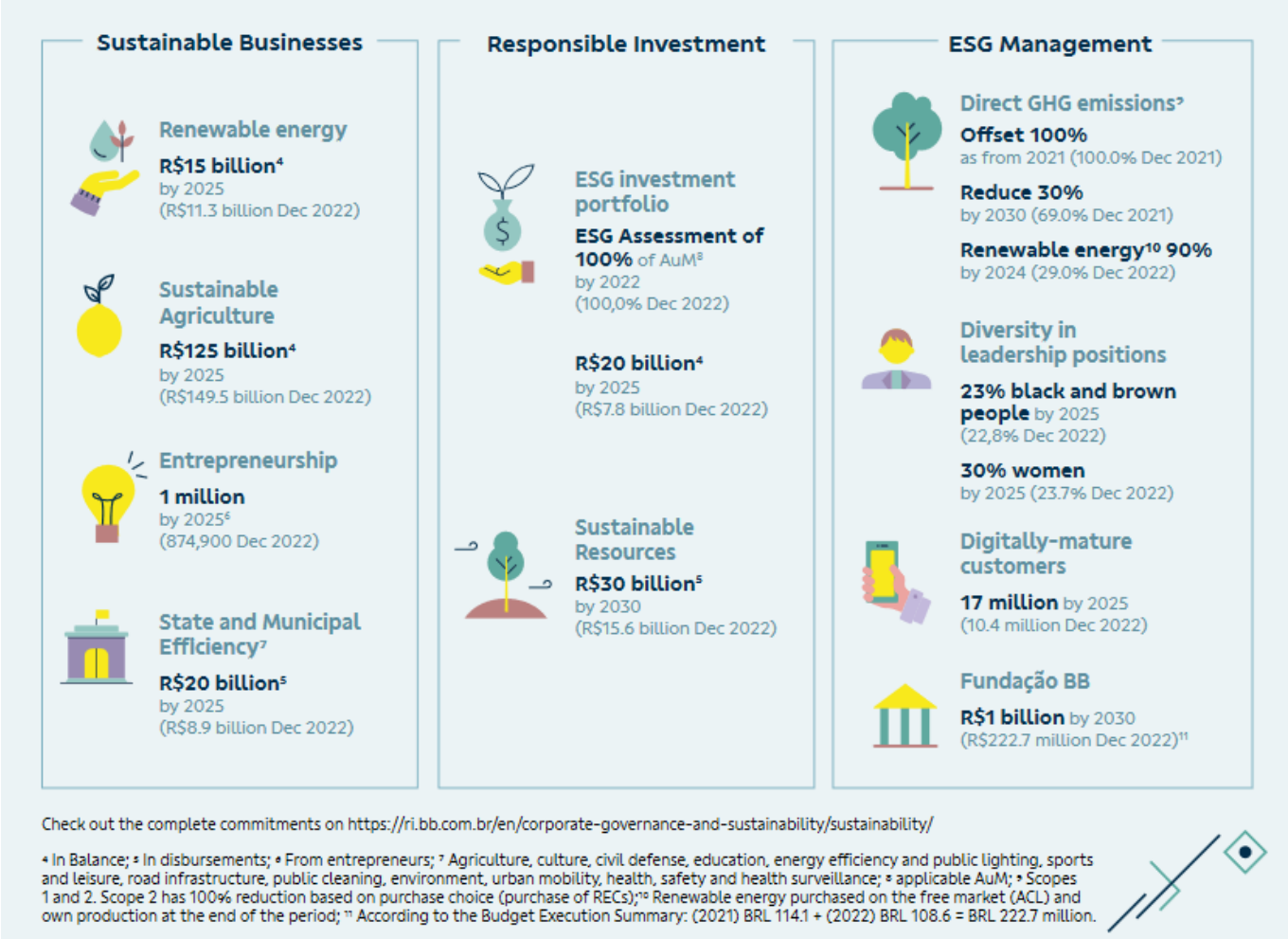
[23] Commitment declared by BB in its Strategic Map 2023 – 2027.

- **Responsible Investment**, helping BB investors direct resources to companies that deliver positive social and environmental externalities;
- **ESG management**, to increase ESG practices within the bank's internal activities.

With Agenda 30 BB, our aim is to improve business and processes, consolidating actions with social, environmental or climatic biases. Review is carried out every two years in order to list the sustainability challenges prioritized by Senior Management, including actions to be carried out over a period of up to three years.

Our 10 commitments to sustainability are listed below:

Figure 8. 10 Commitments to Sustainability



Specifically regarding climate change, Banco do Brasil is aware not only of the relevance and urgency of this topic, but also of the key role it plays in engaging with governments, the private sector and society. And, through Banco do Brasil's Commitment to Climate Change, we seek to strengthen our commitment and promote low-carbon agriculture, renewable energies in the country and social projects focusing on productive development, entrepreneurship and social and financial inclusion.

In that sense, Banco do Brasil has been making efforts and developing products and services related to the following opportunities:

Carbon Market (Climate Aspect)

With a robust and complete performance strategy, BB proposes to play a transformative role in society, showing clients that investing in sustainable projects in the Carbon Market is an excellent option for those who want to stimulate a business environment that considers financial results and a positive impact on society and the environment.

To support companies that have been voluntarily making a commitment to neutralize emissions in their decarbonization journey, we identified opportunities for BB to act considering three pillars:

a) Climate Strategy: financing the adoption of mitigation practices;

b) Emissions Reduction: advising on the preparation of emission inventories, financing the transition to a carbon-neutral economy, mediating the offsetting with carbon credits and insure productive projects that minimize the greenhouse gas footprint;

c) Carbon Offseting: developing carbon projects and markets.

In partnership with Petrobras and with the institutional support of the Central Bank and the Ministry of the Environment (MMA), in May 2022 BB met some of the top business leaders, politiccians and environmentalists from Brazil and around the world in Rio de Janeiro to discuss the topic at the Global Carbon Market Congress – Decarbonization & Green Investments. On this opportunity, we had the opportunity to present our corporate strategies, projects and *cases* to boost green business with a focus on innovations and models that promote the carbon market in Brazil.

During the event, BB announced a set of initiatives to support our customers in the origination, development and trading of carbon credits.

On the origination front, support to rural producers will range from identifying the potential of the area to the final completion of the project and the generation of credits, following internationally recognized and validated methodologies. This will be realized through partnerships between the Bank and companies and startups specializing in carbon credit generation projects.

On the negotiation front, BB aims to mediate the negotiation of carbon credits, enabling the viability of business and the development of this market, benefiting both the credit-buying side, represented by companies and institutions that wish to neutralize their emissions, and the credit-offering side, that can even have the chance of adding customers who participate in the origination program.

In addition, to make this market more accessible to small producers who need more support to enter this market, Banco do Brasil has committed to developing new automation technologies for existing carbon credit methodologies.

Sustainable Finance (Social, Environmental and Climatic Aspects)

As of October 2020, BB approved our Sustainable Finance model, establishing the parameters and management for the raising of funds for projects classified as sustainable in the global market. These funding resources can be used to finance projects capable of offering financial returns and linked to Social, Environmental. Climate and Governance benefits.

The process was started with the Technical and Financial Cooperation Agreement established between Banco do Brasil and the Inter-American Development Bank (IDB), with technical support provided by consultancy firm Sitawi Finanças do Bem. This resulted in the "*Sustainable Finance Framework*", which includes Green and Social categories. The possibility of leveraging projects related

to low-carbon agriculture differentiates this model from those available in the market.

As of November 2021, the model was updated to include, among other advancements, the following loan-based funding categories: Energy Efficiency; Green Buildings; Clean Transport and Sustainable Management of Waste and Effluents; in addition to the social modality.

Sustainable Funding (Social, Environmental and Climate Aspects)

As a result of the new version of the *Sustainable Finance Framework*, in January 2022 BB issued our first Social Bond in the international debt market. Valued at US$ 500 million, the funding aims to foster projects with positive social impacts, mainly to support micro and small businesses to overcome the challenges posed by the pandemic.

Seeking to expand the sources of fundraising, the BB Green LCA was offered, during the year 2022. Funds raised through this instrument are directed exclusively to credit lines that meet Environmental, Social, Climate and Governance criteria, with a focus on reducing the greenhouse effect, pasture recovery, renewable energy, and on operations focused on family farming.

With the *New Development Bank* (NDB) - the BRICS bank - US$ 300 million were raised for financing projects focused on renewable energy, storage, transportation, irrigation, among other projects that may be aligned with BB's sustainable agenda or that fulfill eligibility criteria agreed between BB and the NDB.

An agreement providing the loan of EUR 100 million was signed, in June 2022, with the French Development Agency (AFD), to finance renewable energy projects, in support of the commitments of the 2030 Agenda.

In addition to contributing to reducing GHG emissions, the renewable energies are an important instrument for creating jobs and income throughout its productive chain. As a result of the €100 million invested, about 3,100 jobs will be created and approximately 113,000 tons of CO_2 will no longer be generated per year.

Sustainable Business (Social, Environmental and Climate Aspects)

During the year 2021, the Bank carried out an analysis of credit lines that had some kind of social and environmental additionality and proposed the creation of a Sustainable Business Portfolio.

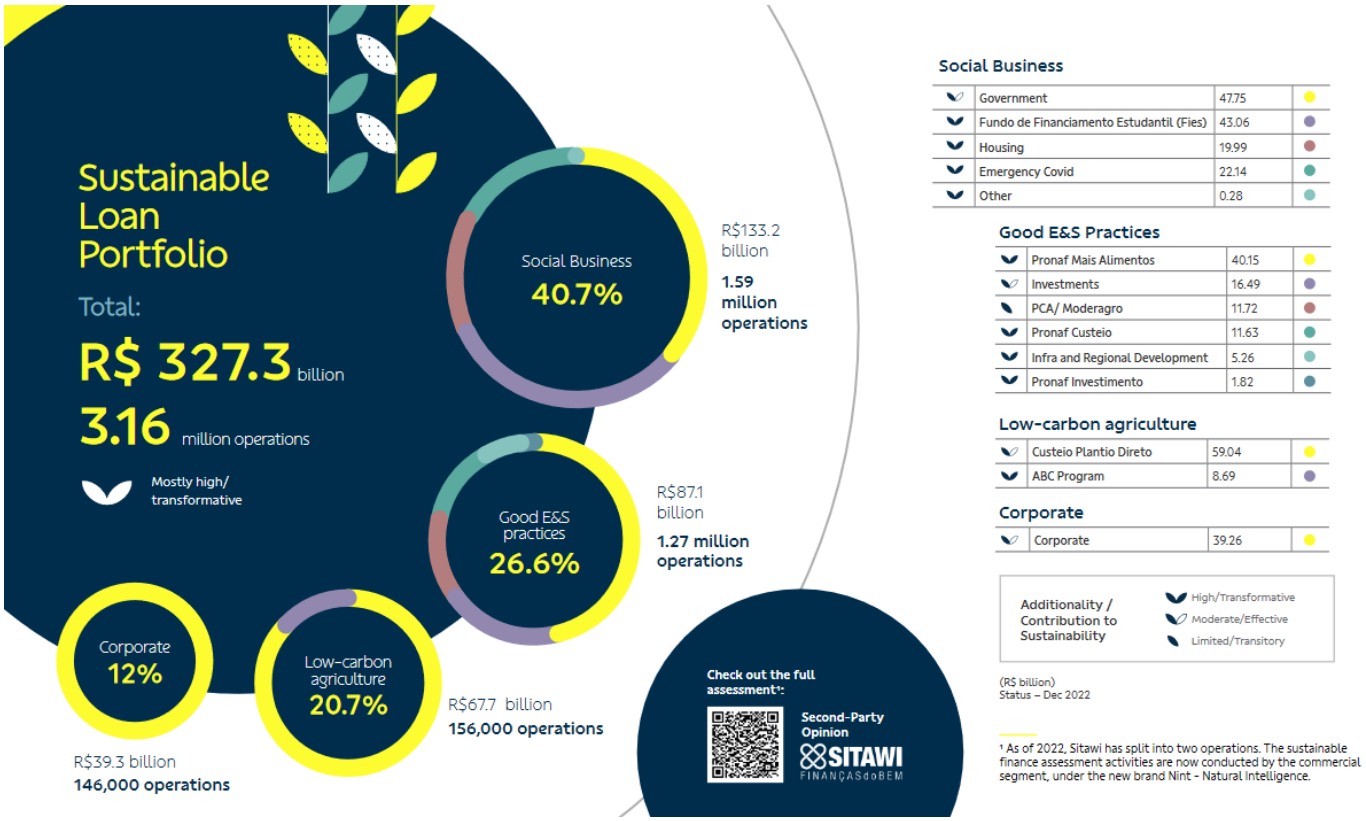
This proposal was submitted to the independent evaluation of Sitawi Finanças do Bem, an important and recognized Brazilian organization, which classifies operations according to their contribution to sustainability and issued an opinion stating reaffirmed that the portfolio offered the most transformational contribution.

Credit lines eligible to BB's Sustainable Loan Portfolio are identified based on the methodology developed by the Brazilian Federation of Banks (Febraban) and published in the study "Measuring Financial Resources Allocated in the Green Economy", and also in the Sustainable Finance Framework of Banco do Brasil, prepared according to leading international standards, such as the *Green* Bond Principles (GBP) and Social *Bond Principles* (SBP), among others.

As of December2022, BB's Sustainable Loan Portfolio had a balance of R$32.7.3 billion. The portfolio includes credit operations related to investments and loans for the renewable energy sectors, energy efficiency, sustainable construction, sustainable transport, sustainable tourism, water, fishing, forestry, sustainable agriculture and waste management. Also considered for inclusion were companies receiving credits from segments whose performance leads to effective transformational social and environmental impacts.

The details of the financing modalities considered in the portfolio are shown below:

Figure 9. Sustainable Loan Portfolio



Low Carbon Agriculture (Environmental and Climate Aspects)

The Bank supports mitigation initiatives such as the Low Carbon Agriculture Program (ABC Program), which constitutes an opportunity for both BB and rural producers.

The ABC Program 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 inflow of international resources. This further justifies the need for strengthening and alignment with the objectives of mitigating greenhouse gas emissions.

Since its release in 2010, BB has been leading the initiative, which finances sustainable agricultural production systems with a recognized ability to reduce or sequester GHG emissions and produce vegetation/biomass and food, as well as result in the preservation of the environment.

As of December 2022, the portfolio of Banco do Brasil's Low-Carbon Agriculture Program consolidated its growth over the years and reached R$ 8.69 billion.

Table 9. Evolution of the Low Carbon Agriculture Program (ABC) portfolio – R$ billion

	Financing Lines	Dec/20	Mar/21	Jun/21	Sep/21	Dec/21	Mar/22	Jun/22	Sep/22	Dec/22
1	ABC Recovery	3.40	3.26	3.04	3.56	3.58	3.50	3.35	3.85	3.87
2	ABC Organic	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01
3	ABC Direct Planting	2.16	2.12	2.02	2.42	2.52	2.50	2.44	3.17	3.36
4	ABC Integration	0.29	0.27	0.26	0.25	0.30	0.29	0.28	0.32	0.36
5	ABC Forests	0.85	0.83	0.78	0.80	0.78	0.74	0.70	0.73	0.70
6	ABC Ambiental	0.10	0.10	0.09	0.13	0.18	0.19	0.19	0.20	0.20
7	ABC Waste Treatment	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05
8	ABC Palm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	ABC Fixation	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.09	0.13
10	ABC Permanent Crops	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01
	Subtotal	**6.86**	**6.64**	**6.30**	**7.23**	**7.43**	**7.30**	**7.03**	**8.42**	**8.69**