



# **BNDES guidelines for climate change**

Commitments and challenges  
for a just transition

# INTRODUCTION

Climate change is a global emergency with economic and social impacts for current and future generations. To limit global warming to up to 1.5°C above pre-industrial levels — as established by the Paris Agreement — greenhouse gas (GHG) emissions must be significantly reduced, which demands global cooperation efforts.

The climate emergency does not impact everyone equally. The adverse effects of productivity losses in agriculture, for instance, will affect agro-intensive countries — such as Brazil — more intensely. Climate disasters will be more severe in countries with poor economic and social infrastructure. Therefore, domestic and foreign coordination is necessary to develop policies and new financial solutions.

The Conference of the Parties (COP) — the annual meeting of the United Nations Framework Convention on Climate Change (UNFCCC) — represents a significant progress for a global action to reduce GHG emissions, aiming to address climate change and its effects. Signed at the COP 21 in 2015, the Paris Agreement reached a landmark to establish countries' commitments to reducing GHG emissions and defining their nationally determined contributions (NDC).

With a longstanding socioenvironmental agenda, the Brazilian Development Bank (BNDES) holds a distinctive position in public-private coordination for the elaboration and implementation of public policies and relevant investments. Facing climate change urgency, BNDES — one of the largest development banks in the world — is an agent for promoting sustainable and inclusive development, encouraging the just transition, reduction of emissions, climate resilience, bioeconomy, biodiversity protection and ecological restoration.



We are the largest global financier of renewable energy,<sup>1</sup> playing a pioneering role in the expansion of renewable sources, such as wind and solar energy. This leading role places us in a prominent position in the national energy transition, resulting from a pathway marked by incentives to renewable energy solutions.

BNDES manages two of the most relevant funds related to climate and forests. The Climate Fund (Fundo Clima) was created in 2009 to promote the reduction of greenhouse gas emissions and the adaptation to climate change effects. The Amazon Fund, the largest REDD+ (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) fund in the world, was created in 2008 and plays an important role in tackling deforestation and encouraging sustainable production in the Legal Amazon. The year 2023 is a milestone in the history of the Amazon Fund, with the resumption of the approval of new projects.

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<sup>1</sup> According to *New Energy Outlook 2022*, a survey conducted by BloombergNEF (BNEF), a Bloomberg research service specialized in the renewable energy sector, covering the period from 2004 to 2022. Available at: <https://about.bnef.com/new-energy-outlook>.

With a commitment to achieve zero deforestation in the Amazon by 2030, Brazil has recently reinforced monitoring and control activities. In 2023, the result of the new environmental policy was a 45% drop in the Amazon Forest deforestation between January and August, compared to the same period in 2022.\*

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\* Data from the Real-Time Deforestation Detection System (DETER) collected by the National Institute for Space Research (INPE). Available at: <http://terrabrasilis.dpi.inpe.br/app/dashboard/alerts/legal/amazon/aggregated/>.

Throughout a 71-year history, BNDES has promoted Brazil's development by supporting a variety of sectors, always aiming at new development challenges. Currently, the climate agenda is a strategic and cross-sectional part of all our operations, including the financing renewable energy projects, energy efficiency, biogas, biomethane, forests, clean transport and several other initiatives that contribute to Brazilian NDCs and to a just transition.

We believe the climate agenda must be seen together with social challenges to promote a just transition in the Brazilian economy, with climate justice and the conservation and restoration of our biomes. The transition to a climate-neutral economy must benefit all, ensuring food security, reducing inequalities, and protecting the most vulnerable populations from the negative effects of climate disasters, as well as respecting and including indigenous peoples and traditional communities.

Our climate ambition is aligned with our mission of "improving the lives of generations, promoting economic, social and environmental development" and our future vision of "being a green, digital, inclusive, innovative, industrializing and high-tech bank." More than ever, we will contribute decisively to our country's sustainable development at the scale and speed required to achieve the Paris Agreement by 2050. We have already done a lot and can do much more in tackling climate change.



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# Climate actions and positive impacts<sup>2</sup>

RENEWABLE ENERGY  
(from the year 2000)



US\$  
 **28.3 billion**  
APPROVED

**395**   
PROJECTS FINANCED

**68GW**   
OF CAPACITY




BIOFUEL  
(from the year 2000)

**150 million**   
tons of capacity in the  
BIOFUEL INDUSTRY

**120+**   
PROJECTS FINANCED

AMAZON FUND  
(from the year 2008)

US\$  
 **329.4 million**  
APPROVED

**75 million**   
hectares of forest area under  
SUSTAINABLE MANAGEMENT

**102**   
PROJECTS FINANCED



<sup>2</sup> Conversion to American dollar values considering the average BRL/USD exchange rate for 2022 (BRL 5.16).

## FORESTS

(from the year 2010)

US\$



**29.4** million

**APPROVED**

**21.6** thousand

hectares of

**FOREST RESTORATION**



## NON-SUPPORTABLE VENTURES AND CONDITIONAL SUPPORT

Our exclusion and conditional support list is under continuous improvement to reinforce our leadership in climate issues. We have guidelines for financial support to livestock, which include a tracking system for the socioenvironmental monitoring of the supply chain.

BNDES does not support, among other projects, coal or thermoelectric power generation, as well as the use of petroleum-derived oil, whether in hybrid projects within the scope of the National Integrated System (SIN) or in isolated systems.

Businesses relying on wood as the main raw material can only be financed if the wood is produced in planted forests with certifications. For native forest woods or the exploitation of native vegetation or species, our support depends on the existence of a sustainable forest management plan.





# **BNDES CLIMATE COMMITMENT**

Our commitment is the continuous alignment with the Paris Agreement to limit the increase in global temperature to 1.5°C, contributing to Brazil's neutrality in 2050, while strengthening investments for a just transition in the country.

# Action areas

## 1 – INCREASING CLIMATE FINANCE AND OUR CLIENTS’ ENGAGEMENT

Expanding financing and clients’ engagement (and their productive supply chains) for a just transition, contributing to avoiding and reducing emissions in our portfolio. To achieve that, we will act through our products, such as credit and financing, financial and project structuring, equity and fixed income assets, guarantees and non-refundable support.

## 2 – ALIGNMENT OF OUR ACTIVITIES WITH THE PARIS AGREEMENT

Implementing management improvements to comply with the best international practices and achieve a better portfolio management:

- \* classification of projects based on our green taxonomy;
- \* scope carbon inventory expansion;
- \* avoided emissions calculator improvements;
- \* climate risk management; and
- \* updated policies and strategies.

## 3 – COOPERATION WITH DIFFERENT STAKEHOLDERS AND TRAINING

Increasing coordination both nationally and abroad, through relationships with strategic stakeholders and participation in national and international events, such as those of the United Nations (UN) and the G20, consistent with Brazil’s leadership role regarding a just transition. Continuing the production of knowledge, taking into account the preparation of publications and the organization of seminars and events.

## 4 – LEVERAGING FINANCIAL RESOURCES

Attracting concessional and private resources for the public interest and diversifying our sources on the national and international markets, focusing on reducing the funding costs and interest rates to clients, through partnerships and by diversifying funding sources and instruments such as green and sustainable bonds.

# Investment opportunities for Paris alignment

## BIODIVERSITY

Promoting the conservation, sustainable use and restoration of biodiversity by supporting national and subnational policies and projects aligned with biodiversity for water preservation and supply, sewage treatment, industrial pollution control, waste management, conservation and sustainable use of natural resources and microfinance for sustainable rural producers.

## CLIMATE ADAPTATION

Addressing the current and expected effects of climate change by supporting the implementation of national or subnational policies and initiatives such as water conservation; adaptation in agriculture, natural resources and the ecosystem; coastal protection; and other forms of disaster risk reduction.

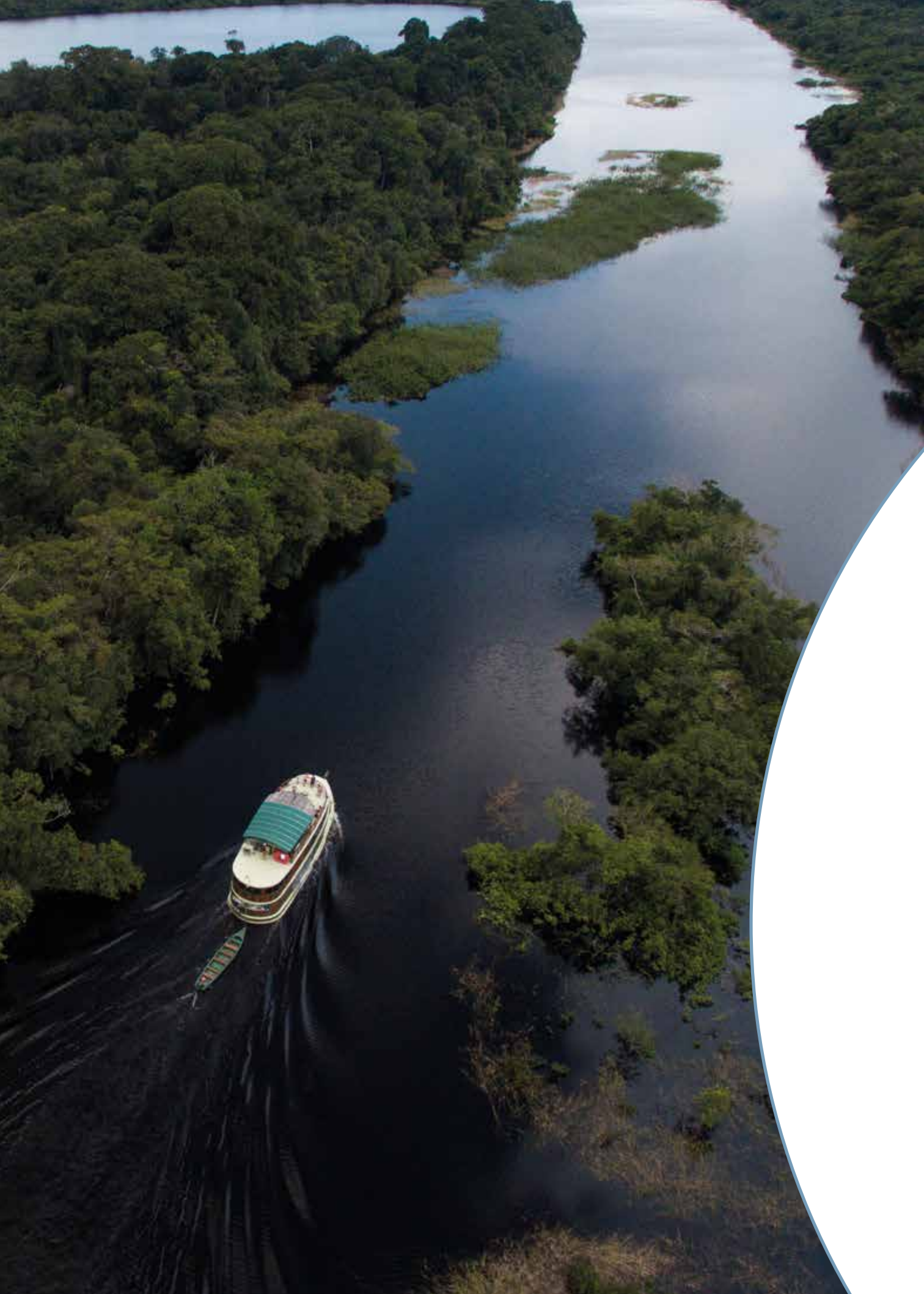
## CLIMATE MITIGATION

Reducing or avoiding GHG emissions and increasing GHG sequestration, contributing to the stabilization of GHG levels in the atmosphere to be consistent with the long-term temperature goal of the Paris Agreement. This involves:

- activities fully consistent with the long-term decarbonization pathway, such as forest restoration and conservation and the use of renewable energy sources;
- transition activities, temporary technologies consistent with the medium-term decarbonization pathway, such as improving energy efficiency in industries using fossil fuels directly or indirectly; and
- enabling activities, which are instruments to allow mitigation in others, such as production and development of low-emission technologies.

## LOSSES AND DAMAGES

Addressing the negative economic and non-economic impacts of climate change, such as rising sea levels, prolonged heat waves, desertification, ocean acidification, and extreme events. With the climate crisis, these episodes are happening more frequently and the consequences have become more severe.





# PATHWAYS FOR A JUST CLIMATE TRANSITION

## National and global context

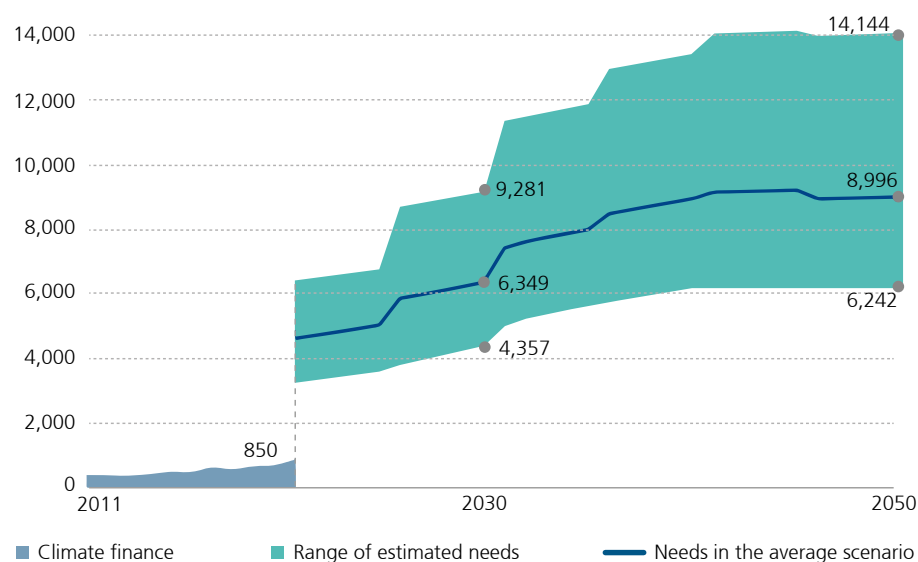
### OUR FEDERAL COMMITMENT TO THE CLIMATE AGENDA AND COORDINATION WITH INTERNATIONAL EFFORTS

- \* Current scenarios indicate that the existing NDCs and global on-going policies are not sufficient to limit the increase in global temperature to 1.5°C.
- \* Brazilian NDCs differentiate themselves by defining broad economy goals. The Brazilian government demonstrates a commitment to accelerating neutrality by 2050.
- \* Brazil announced a review for more aggressive NDC targets at the UN Climate Ambition Summit (9.20.2023): reducing emissions, compared to 2005, by 48% by 2025 and by 53% by 2030.
- \* BNDES plays a central role in accelerating investment and reducing risks for a just transition, leveraging public and private capital flows to meet the Paris Agreement.

## FUNDING AVAILABILITY IN NATIONAL AND INTERNATIONAL MARKETS

- ✿ The climate investment needs in developing countries (excluding China) is estimated at more than US\$ 1 trillion yearly from 2025 onwards and more than US\$ 2 trillion from 2030 onwards.<sup>3</sup> In Brazil, this need is around 0.5% of the gross domestic product (GDP).<sup>4</sup>
- ✿ There is a gap in resources for mitigation and adaptation investments, which requires rechanneling financial flows. According to the Climate Policy Initiative (CPI), global climate finance flows are expected to increase at least fivefold by 2030.
- ✿ The supply of international and national climate financial resources is expected to keep increasing, with the mobilization of governments, multilateral organizations, pension funds and philanthropies, among others.

GRAPH 1 • Global climate finance flows and annual needs for climate investments until 2050 (US\$ billion)



Source: Adapted from Climate Policy Initiative. Available at: <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data>.

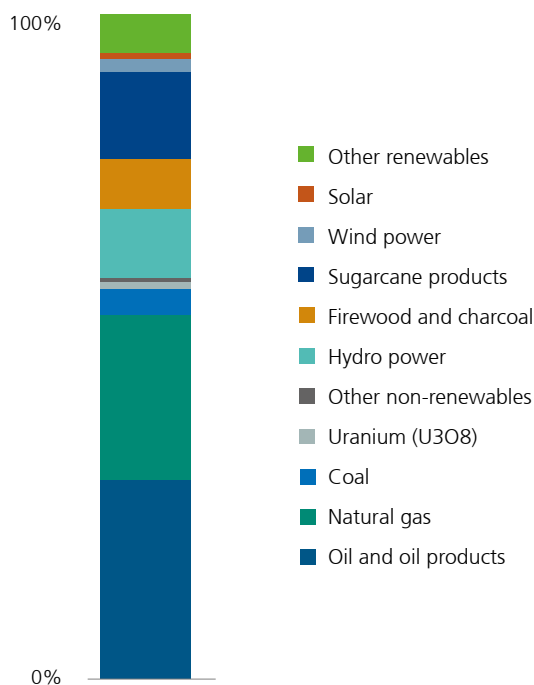
<sup>3</sup> Songwe, Stern and Bhattacharya — *Finance for climate action: scaling up investment for climate and development*. Available at: <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/HLEG-Finance-for-Climate-Action-1.pdf>.

<sup>4</sup> World Bank Group — *Brazil country climate and development report*. Available at: <https://openknowledge.worldbank.org/entities/publication/a713713d-0b47-4eb3-a162-be9a383c341b>.

## TECHNOLOGICAL SOLUTIONS DEVELOPED AND AVAILABLE IN BRAZIL

- ✿ Brazil maintains and expands competitiveness based on its renewable energy matrix — 47.4% of the energy matrix and 88% of the electrical matrix — and its competitiveness in offering biofuel and solutions such as biogas and biomethane.
- ✿ Brazil has immense forestry and biodiversity assets. This requires us to make efforts aimed at their conservation and sustainable use, in addition to generating great opportunities to raise funds for the country.
- ✿ Tackling deforestation is key for Brazil to meet the Paris Agreement, but other sectors demand efforts as well, especially industry and transport.
- ✿ Transition solutions, such as natural gas and investments in energy efficiency, are essential for short-term decarbonization.
- ✿ Some technologies are already available to accelerate climate transition by 2030, but R&D is also needed to enable long-term solutions, such as low-carbon hydrogen, agroforestry systems, green diesel, green methanol, offshore wind energy and carbon capture.

GRAPH 2 • Brazilian energy matrix (2022)



Source: Adapted from Energy Research Company — *BEN: Summary Report 2023, reference year 2022*. Available at: [https://www.epe.gov.br/sites-pt/publicacoes-dados-abertos/publicacoes/PublicacoesArquivos/publicacao-748/topico-681/BEN\\_S%C3%ADntese\\_2023\\_EN.pdf](https://www.epe.gov.br/sites-pt/publicacoes-dados-abertos/publicacoes/PublicacoesArquivos/publicacao-748/topico-681/BEN_S%C3%ADntese_2023_EN.pdf).

# Cross-sectional guidelines for our pathway to a just transition

The following contributions from BNDES should be highlighted, in line with the Paris Agreement:

## Climate mitigation

We work to mitigate climate change in a variety of sectors — energy, logistics and urban mobility, changes in land use and forests, agriculture, industry and sanitation. Our efforts contribute to the expansion of renewable energy supply, increase in energy efficiency, decarbonization of industry and transport, among others. This decarbonization agenda includes the development of more efficient equipment to boost the energy transition process.

## Biodiversity

We support the conservation, sustainable use and restoration of biodiversity. It is part of our strategy to support the restoration of national biomes and the protection of biodiversity, rivers, lakes, and oceans.

## Climate adaptation

Climate change is already causing different socioeconomic impacts, and efforts to mitigate it may require time to generate results. This turns adaptation and resilience to climate change into relevant topics. Our actions are aligned with national public policies, such as the National Adaptation Plan, with capital allocation to priority adaptation sectors and technologies. We will support adaptation actions by Brazilian municipalities and states in the preparation and implementation of infrastructure plans, especially in the most vulnerable urban areas, and in the incentives for a resilient urban development, focused on nature-based solutions. We will include climate risk mitigation in infrastructure modelling, especially for physical risks related to floods and landslides.

## CLIMATE AND BIODIVERSITY ARE PART OF THE BRAZILIAN DEVELOPMENT AGENDA, INCLUDING:

- GHG emissions reduction and increase in avoided emissions.
- Increased investments for adaptation and greater climate resilience.
- Conservation and restoration of the Amazon and other Brazilian biomes and their biodiversity.
- Income generation and the creation of more and better green jobs.
- Increased competitiveness by expanding the supply of renewable energy and green products and services, including bioeconomy.
- Development of new green technologies and technological densification.
- Urban transport decarbonization.
- Increased financial resource flows to Brazil.
- Promoting actions to recover and compensate social and economic losses and damages resulting from extreme weather events or other effects of climate change.

At BNDES, we structure and financially support projects focused on climate issues, pursuing the:

- Economy decarbonization.
- Development and implementation of low-carbon technologies, with technological development and energy efficiency.
- Income generation and green jobs creation.
- Restoration of national biomes and protection of biodiversity, including rivers, lakes and oceans.
- Forest bioeconomy and adoption of bioinputs.
- Development of financial solutions to support adaptation and emergency situations related to climate events.







## Land use changes and forests



### REDUCING AND TACKLING DEFORESTATION

1. Supporting actions to prevent, monitor and tackle illegal deforestation.
2. Supporting actions to reduce illegality rates in the forestry supply chain.
3. Promoting land and environmental regularization of rural estates and properties.
4. Developing and promoting actions for conservation, preservation and restoration of all biomes.



### FOREST RESTORATION

1. Supporting the recovery of native forests, water sources and river basins.
2. Enabling and scaling up initiatives to recover degraded areas, in partnership with the government and other stakeholders.



### BIODIVERSITY

1. Contributing to the expansion of biodiversity conservation and sustainable exploration agenda, including forestry bioeconomy and its various related activities.



### TRADITIONAL AND INDIGENOUS COMMUNITIES, SETTLEMENTS AND FAMILY FARMING

1. Mobilizing resources to finance sustainable productive activities, generating income for economic and social inclusion.
2. Promoting regenerative and low-carbon agriculture.
3. Promoting the implementation of agroforestry systems.



## Energy

1. Modernizing and decentralizing the energy matrix and contributing to the neutrality of carbon emissions.
2. Supporting digitalization, energy efficiency, diffusion of renewable sources, modernization of assets and the resilience to natural resources availability.
3. Developing new solutions to support distributed generation and energy efficiency.
4. Promoting renewable energy generation and low-carbon hydrogen projects, leveraging clean energy matrixes potential.
5. Encouraging innovation for clean energy technologies.
6. Fostering distributed generation to decarbonize isolated and remote systems.
7. Contributing to the feasibility of pilot projects for energy storage systems.
8. Not supporting new energy generation projects based exclusively on coal or oil derived from petroleum as well as the production of coal intended for thermoelectric plants, without prejudice to other prohibitions set out by the exclusion list.
9. Encouraging the decarbonization of production systems (carbon capture, use and storage — CCUS —, platform electrification, flare closure, energy efficiency).

10. Encouraging the complementary use and supply of natural gas, biogas/biomethane, hydrogen and other fuels.
11. Promoting CCUS technologies in biogas/biomethane activities, which foster negative emissions.
12. Promoting innovation and production of sustainable fuels: green diesel or renewable hydrogenated diesel (HVO); e-fuels; biokerosene or sustainable aviation fuel (SAF); synthetic fuels; green methanol; low-carbon hydrogen production.
13. Implementing biorefineries and expanding/requalifying existing refineries.
14. Promoting synergy and know-how transfer from the offshore oil and gas (O&G) sector for offshore wind and solar energy generation, using the naval industry and navigation to support platforms.
15. Supporting the depleted O&G fields conversion into natural gas or CO<sub>2</sub> storage sites.
16. Supporting circular economy actions, such as reducing environmental impacts in the decommissioning phase of production fields, disposal and dismantling of platforms and their effluents.



# Industry, agriculture and livestock



## INDUSTRY

1. Promoting industrial decarbonization through energy efficiency in production processes, exchange of energy sources for renewable sources, replacement of raw materials for less carbon-intensive and/or biological alternatives, electrification and digitalization, carbon capture and circular economy.
2. Encouraging green economy technological pathways and structuring the related supply chains.
3. Promoting the development and expansion of supply chains of essential minerals and metals for green economy technologies, such as copper, lithium, nickel, etc.
4. Supporting the supply chain for bioelectric vehicles.
5. Supporting the formulation and dissemination of public policies for vehicle decarbonization, with special emphasis on bioelectrification.
6. Boosting the sustainability and competitiveness of biofuel production.



## AGRICULTURE AND LIVESTOCK

1. Promoting the sustainability and competitiveness of biomass-originated food and goods production, such as low-carbon and precision farming, and the production and use of bio-inputs and bio-fertilisers, stimulating gains in energy and production efficiency, in addition to positive climate impacts.
2. Supporting carbon and methane emissions reduction associated with livestock, through initiatives such as greater herd traceability and reduction of gas production in cattle digestion; reuse of associated methane for biogas production; and creation of measurement and certification tools for emissions in beef and milk production.
3. Promoting agroforestry systems, especially in the Amazon.
4. Restoring degraded areas.



## Logistics and urban mobility and sanitation

### LOGISTICS AND URBAN MOBILITY



1. Promoting the use of sustainable fuels, integration between types of transport and resilience.
2. Promoting and supporting cycling infrastructure projects and the implementation of low emission systems with medium or high capacity and low emission systems that ensure the increase of the quality of services (decarbonization, increased energy efficiency, reduction of travel time and accident costs).
3. Encouraging the decarbonization of urban mobility, including the electrification and/or hybridization of fleets.
4. Promoting and supporting structuring investments in logistics that contribute to reducing emissions.
5. Stimulating electrification and increasing the railway and waterway logistics network.
6. Promoting a more balanced transport matrix, encouraging rail, cabotage, pipeline and waterway transportation systems.

### SANITATION



1. Fostering and supporting projects for biogas and energy generation — capture and use of methane.
2. Promoting circular economy actions and zero waste generation and composting initiatives.
3. Encouraging the elimination of landfills and the sustainable management of solid waste.

# GOVERNANCE

The BNDES's Social, Environmental and Climate Responsibility Policy is a standard norm with programmatic and strategic content of cross-sectional and comprehensive nature, and its execution strategy is consolidated in triennial implementation plans. BNDES was a pioneer, having implemented its first policy in 2010.

The Policy establishes the foundations, principles and directions for our sustainability actions. Our commitments are summarized there, guiding our daily practices and our ability to respond to stakeholder demands, including the National Monetary Council in its regulatory role.

Among its guidelines is the encouragement of the adoption of the best social, environmental and climate responsibility practices by our suppliers, customers, accredited financial institutions and other partners, contributing to the advancement of sustainable development.

To comply with the guidelines established by the Policy, our teams work with the support of teams specialized in socio-environmental and climate issues. In 2023, structures dedicated to dealing with these issues were strengthened, with emphasis on the creation of the Climate Department (DCLIMA) within the Energy and Climate Transition Division. With cross-sectional operation across all BNDES divisions, DCLIMA is a specific governance structure to deal with the climate change agenda, a pioneering action among Brazilian companies and unprecedented in BNDES's history.

Monitoring the Policy, among other aspects, involves the Social, Environmental and Climate Responsibility Committee, responsible for advising the Board of Directors. The Sustainability Committee aims to promote the integration of social, environmental, climate, governance and territorial dimensions into the policies, processes, practices and procedures of the BNDES System, with its actions guided by the Executive Board.

# BNDES sustainability governance



## **SOCIAL, ENVIRONMENTAL AND CLIMATE RESPONSIBILITY COMMITTEE**

Monitors the Social, Environmental and Climate Responsibility Policy



## **SUSTAINABILITY COMMITTEE**

Promotes the social, environmental, climate, governance and local development dimensions in all BNDES policies, processes, practices and procedures



## **CLIMATE DEPARTMENT (DCLIMA)**

Promotes the climate change agenda at BNDES cross-sectionally in all divisions of the Bank


## **SOCIAL, ENVIRONMENTAL AND CLIMATE RESPONSIBILITY POLICY**

Establishes the foundations, principles and directions for BNDES activities in sustainability

# BNDES AGENDA UNDER IMPLEMENTATION



## INCREASE CLIMATE FINANCE AND OUR CLIENT'S ENGAGEMENT

- » Increasing support for projects with an environmental and climate focus
  - 20% INCREASE  in the number of green economy projects approved in 2023, compared to the 2019 to 2022 average
- » Increasing client engagement
  - DECARBONIZATION SEMINARS with representatives from industry and academia

## ALIGNMENT OF OUR ACTIVITIES WITH THE PARIS AGREEMENT

- » Continuous implementation of BNDES's Social, Environmental and Climate Responsibility Policy (Plan 2022-2024)
  - GHG INVENTORY for BNDES's portfolio
  - METHODOLOGY for climate risk assessment of direct operations
- » Executing the 2023-2024 Corporate Project "Strengthening BNDES's Social, Environmental and Climate Management"
  - USE OF MAPBIOMAS within the BNDES's operational systems to monitor deforestation in financed projects

## COOPERATION WITH STAKEHOLDERS AND TRAINING

» Expanding BNDES's contributions to public policies and climate change events

CONTRIBUTION TO:  
Climate Transition Plan, Industrial Policy, Carbon Market, Brazilian National Taxonomy

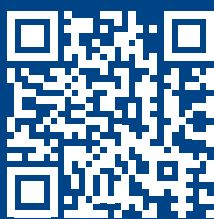
BNDES'S PARTICIPATION  
in COP 28, in the G20  
and in the Amazon Summit

## LEVERAGING FINANCIAL RESOURCES

» Expanding concessional resources fundraising, in Brazil or abroad

NEW FUNDRAISING  
for the Amazon Fund and  
the Climate Fund





GET TO KNOW OUR INITIATIVES  
AND PROJECTS AT:

[www.bndes.gov.br/climate](http://www.bndes.gov.br/climate)

**EDITED BY**

Communication Department  
President's Office

**COORDINATION AND TEXTS**

Climate Department (dclima@bndes.gov.br)  
Energy Transition and Climate Change Division

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MINISTÉRIO DO  
DESENVOLVIMENTO,  
INDÚSTRIA, COMÉRCIO  
E SERVIÇOS

