

CLIMATE FINANCE IN FULL
***THE CLIMATE
FINANCE ECOSYSTEM
IN BRAZIL***
2024



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EXECUTIVE SUMMARY

INTRODUCTION

As the host of COP 30 and the G20 president in 2024, Brazil has a unique opportunity to present a climate finance plan for the Climate Plan and Nationally Determined Contribution (NDC) under the Paris Agreement. To seize this opportunity, the government must enhance its institutional capacity to mobilize all available sources of public and private capital for transition and resilience.

Historically, however, Brazilian climate policies have had limited implementation and financing. Structuring a climate finance strategy is therefore a new exercise for the country, in a context of intense global competition for resources needed for the transition to a low-carbon economy.

By 2030, an estimated \$2.4 trillion annually will be needed in emerging markets and developing countries, excluding China, to implement the necessary mitigation and adaptation measures for a 1.5°C global warming scenario ([Independent High-Level Expert Group on Climate Finance, 2023](#)). For Brazil to achieve its greenhouse gas (GHG) emission reduction goals, it will be necessary until R\$1 trillion by 2030 ([Clima e Desenvolvimento; World Economic Forum, 2023](#)), depending on the priority pathways.

Economic modeling helps identify high-priority investment areas but does not indicate who would finance them. For urgent adaptation and resilience-building measures, there is also a lack of information on values and priorities, as well as data on potential capital sources and pathways.

Interviews conducted for this report in the first half of 2024 identified opportunities (and barriers) to generate clearer guidelines for aligning sources, managers, and financing channels with the Climate Plan and NDC. The objective of this publication is to present the ecosystem of climate finance actors in Brazil, encompassing key governance arrangements and existing structures, delineating roles, responsibilities, gaps, overlaps, and potential improvements.

DEMANDS AND SOURCES

Regardless of the technologies, climate actions, and sectors prioritized in the 2025-2035 Climate Plan, there are nine major demands for climate finance:

1. PUBLIC POLICIES
2. RESEARCH AND DEVELOPMENT
3. ENTREPRENEURSHIP AND INNOVATION
4. MARKET ACCESS
5. NEW INDUSTRIES*
6. LOCAL AND COMMUNITY ACTIONS
7. ESILIENT INFRASTRUCTURE
8. ADAPTATION MEASURES AND TECHNOLOGIES
9. EDUCATION AND TRAINING

The capital to meet these demands can come from public or private sources. Public sources can be mobilized in different ways, including:

- Revenues from taxpayer payments, fines or fees on polluting activities, or carbon pricing within the Federal Budget;
- Deposits of charges and contributions from workers;
- Issuance of debt securities directed to public vehicles;
- International cooperation;
- International sovereign funds;
- International taxes;
- Philanthropic resources from Brazil and abroad.

There is a need to expand public sources, both national and international, leveraging the opportunity to access non-repayable funds provided by development finance institutions.

* Such as offshore wind, green hydrogen, and forest restoration

Additionally, the opportunity to issue green debt—two issuances have been made since 2023—can offer concessional capital at scale and with immediate availability.

Private sources are ranked in descending order of risk aversion into at least six types:

- **Asset owners, including pension funds, insurance, and reinsurance companies, and others;**
- **Household income for investments in energy efficiency and other sustainable initiatives, including philanthropy;**
- **Corporate cash flow: Companies' own resources dedicated to climate projects;**
- **Capital markets: Resources obtained through the issuance of securities and other financial instruments;**
- **Venture capital.**

There is good coverage of private sources for actions in the more mature energy and transport sectors in Brazil. On the other hand, mobilizing private investments in climate adaptation and resilience sectors faces additional challenges due to the nascent nature of these opportunities and the lack of reliable revenue streams. Mobilizing private sources for climate finance in general is still at an early stage, presenting opportunities if these actors are exposed, informed, and coordinated to contribute to the implementation of the Climate Plan and NDC objectives and priorities.

The Sustainable Economic and Social Development Council (*Conselhão*) and the G20 Presidency have been discussing *blended finance*, focusing on creating “country platforms” to coordinate efforts among private financial institutions, companies, governments, and development financiers. This approach, aligned with NDC commitments, can boost climate finance flows.

BETWEEN SOURCES AND DEMANDS: THE INTERMEDIARIES

● **International Climate Funds (ICFs)**

These significant players in the ecosystem provide non-reimbursable resources and concessional financing, which help unlock much larger amounts needed for climate action. The four main funds accessed by Brazil are: Green Climate Fund (GCF), Global Environment Facility (GEF), Climate Investment Funds (CIF), and Adaptation Fund (AF).

● **Multilateral Development Banks (MDBs)**

These banks plan climate goals for the coming years with long-term strategies for low-carbon and climate-resilient development. Debt is the primary climate finance instrument used by MDBs, followed by policies, subsidies, and guarantees. Brazil mainly accesses the World Bank and the Inter-American Development Bank (IDB). Other significant banks include the Development Bank of Latin America and the Caribbean (CAF), Fonplata, and the New Development Bank.

● **National Development System (SNF)**

Comprising 34 institutions, including federal public banks, development banks controlled by federative units, cooperative banks, state commercial public banks with development portfolios, and development agencies, along with the Funding Authority for Studies and Projects (FINEP) and Sebrae. With a volume of R\$ 2.4 trillion in operations (April 2024 conjuncture letter), it accounts for 45.5% of credit in Brazil. Smaller institutions still lack taxonomy, a problem that can be addressed with the implementation of the Brazilian Sustainable Taxonomy, scheduled for 2026. Within this bloc, the National Bank for Economic and Social Development (BNDES) is a key player in climate finance in Brazil due to its own investment portfolio and its role as the manager of the Climate Fund and the Amazon Fund.

FINANCIAL INSTRUMENTS

The main instruments used in climate finance in Brazil are concessional financing loans, primarily in the public sector, such as the Climate Fund and Safra Plan. There is a limited concentration of grant resources available for projects through the Amazon Fund and others via access to the GCF and GEF, or through international cooperation. Instruments such as guarantees and equity still lack experimentation and scale, while *blended finance* structures are currently gaining momentum.

PUBLIC FINANCING CHANNELS

Among the instruments exclusively dedicated to climate and/or sustainable financing are: the Program for Mobilizing External Private Capital and Foreign Exchange Protection for Ecological Transformation (Eco Invest), Amazon Fund, Climate Fund, Green Grant Program, and Mover Program. Channels with a percentage of their resources dedicated to climate and/or sustainable financing generally have enormous potential if alignment criteria with the Climate Plan and Brazil's NDC are adopted. Currently, they have limited resources for actions that promote mitigation and adaptation, or they do not transparently specify criteria that allow for "labelling" or assessing climate finance in resource mobilization and disbursement. Highlighted in this group are the New Growth Acceleration Program (PAC), Safra Plan, and the National Fund for Scientific and Technological Development (FNDCT).

GOVERNANCE ARRANGEMENTS

The successful implementation of Brazil's climate policies and commitments requires an institutional framework that assigns roles and responsibilities concerning climate finance. We have identified seven key functions: **1 Articulation/coordination;** **2 Monitoring;** **3 Resource mobilization;** **4 Investment attraction;** **5 Management and implementation of programs and projects;** **6 Resource management;** **7 Regulation.** The latter has the potential to alter the behavior trajectory of all ecosystem actors. Distributed among different government agencies, these functions complement, overlap, and interact with each other. Since the beginning of last year, the federal government has taken significant measures to address climate change. The resumption of the Interministerial Committee on Climate Change (CIM), the development of the Climate Plan coordinated by the Ministry of Environment and Climate Change, the Ecological Transformation Plan by the Ministry of Finance, and the integration of various industry decarbonization actions into the New Industry Brazil policies by the Ministry of Development, Industry, and Trade are some examples of this ongoing effort across the government. Currently, one of the challenges

is precisely the coordination between government areas, with a transversal view of addressing climate change. While the Climate Plan is being developed and the sectoral transition of the Brazilian economy is being considered, instruments like the New PAC, led by the Civil Office of the Presidency with a forecast of R\$1.7 trillion in investments, are already underway. The mapping also includes the governance of private entities, their interfaces with public and regulatory entities, within the context of the National Financial System, with its normative, supervisory, and operational bodies.

RECOMMENDATIONS

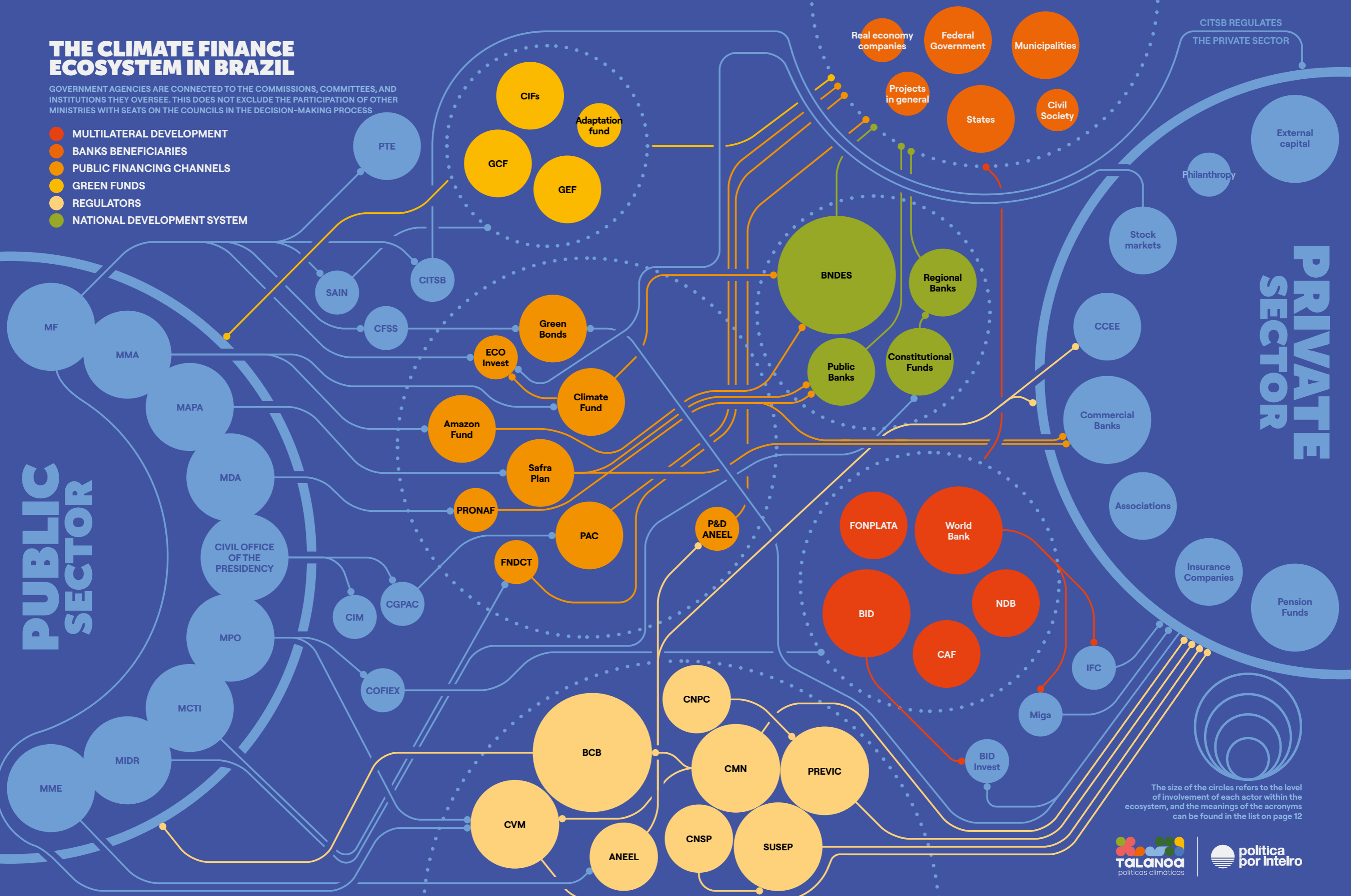
The mapping of Brazil's climate finance ecosystem led to a list of eight recommendations:

- **Inform and coordinate ecosystem actors to contribute to the implementation of the Climate Plan and NDC objectives and priorities;**
- **Provide the ecosystem with climate scenarios to build a portfolio of initiatives, projects, programs, and country platforms;**
- **Adopt and implement green taxonomy to green the ecosystem and build a visible portfolio of projects and programs;**
- **Guide financing flows towards adaptation through initiatives like the issuance of green bonds by the National Treasury and the Eco Invest Brazil program;**
- **Turn infrastructure investments into resilience investments;**
- **Immediately expand international public sources of climate finance, as these resources may become unavailable to Brazil in the medium term;**
- **Elevate system governance, taking advantage of the Climate Plan launch as a significant opportunity for coordination and enhancement of public policies;**
- **Improve coordination between different types of capital, such as venture capital and private equity, to consider and allocate these resources for climate solutions through risk financing structures (*blended finance*).**

THE CLIMATE FINANCE ECOSYSTEM IN BRAZIL

GOVERNMENT AGENCIES ARE CONNECTED TO THE COMMISSIONS, COMMITTEES, AND INSTITUTIONS THEY OVERSEE. THIS DOES NOT EXCLUDE THE PARTICIPATION OF OTHER MINISTRIES WITH SEATS ON THE COUNCILS IN THE DECISION-MAKING PROCESS

- MULTILATERAL DEVELOPMENT
- BANKS BENEFICIARIES
- PUBLIC FINANCING CHANNELS
- GREEN FUNDS
- REGULATORS
- NATIONAL DEVELOPMENT SYSTEM



PUBLIC SECTOR

PRIVATE SECTOR

The size of the circles refers to the level of involvement of each actor within the ecosystem, and the meanings of the acronyms can be found in the list on page 12

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LIST OF ACRONYMS

4GOOD BRAZIL Performance index of companies in the environmental, social, and governance areas – Brazil

4GOOD EMERGING LA Performance index of companies in the environmental, social, and governance areas – Latin America

ABDE Brazilian Development Association

ABRAPP Brazilian Association of Closed Complementary Pension Entities

ABVCAP Brazilian Private Equity and Venture Capital Association

AF Adaptation Fund

AFD French Development Agency

AMEC Association of Investors in the Capital Market

ANBIMA Brazilian Association of Financial and Capital Markets Entities

ANCORD National Association of Brokerage Firms

APIMEC Association of Investment Analysts and Professionals of the Brazilian Capital Market

AUM Assets Under Management

B3 Brazil, Stock Exchange, and OTC (Brasil, Bolsa e Balcão)

BANDES Development Bank of Espírito Santo

BASA Bank of the Amazon

BB Bank of Brazil

BCB Central Bank of Brazil

BDMG Development Bank of Minas Gerais

BDS Development Banks

BEI European Investment Bank

BIRD International Bank for Reconstruction and Development

BMDS Multilateral Development Banks

BNB Bank of the Northeast

BNDES National Bank for Economic and Social Development

BNDESPAR BNDES Participations S.A.

BRDE Far South Regional Development Bank

BRICS Brazil, Russia, India, China, and South Africa

CADUNICO Unified Registry for Federal Government Social Programs

CAF Development Bank of Latin America

CAR Rural Environmental Registry

CCAF Environmental Compensation Committee

CCOP Credit and Operations Committee

CDP Carbon Disclosure Project

CDS Credit Default Swaps

CEBDS Brazilian Business Council for Sustainable Development

CEF Federal Savings Bank

CFSS Sovereign Sustainable Finance Committee

CGPAC Management Committee of the Growth Acceleration Program

CI BRASIL Conservation International Brazil

CIFS Climate Investment Funds

CIM Interministerial Committee on Climate Change

CITSB Interinstitutional Committee on Brazilian Sustainable Taxonomy

CMN National Monetary Council

CNDI National Council for Industrial Development

CNPC National Council for Complementary Pensions
CNSEG National Confederation of General Insurance, Private Pension, Life, Health, and Capitalization Companies
CNSP National Council of Private Insurance
COFA Amazon Fund Steering Committee
COFIEX Commission on External Financing
CONAREDD+ National Commission for REDD+
COP Conference of the Parties
CQNUMC United Nations Framework Convention on Climate Change
CTFA Amazon Fund Technical Committee
CTFS Clean Technology Fund
CTS Sustainable Taxonomy Committee
CVM Securities and Exchange Commission
DLT Distributed Ledger Technologies
DREX Digital Real
EAPC Open Private Pension Entities
EFPC Closed Complementary Pension Entities
EMBRAPII Brazilian Company for Industrial Research and Innovation
EMDES Emerging Markets and Development Economies
ENIMPACTO National Strategy for Impact Investments and Businesses
ENREDD+ National Strategy for REDD+
ESG Environmental, Social and Governance
ETFS Exchange-Traded Funds
FBDS Brazilian Foundation for Sustainable Development
FCO Constitutional Financing Fund for the Center-West
FEBRABAN Brazilian Federation of Banks
FIDA International Fund for Agricultural Development
FINAME Special Industrial Financing Agency
FINEP Funding Authority for Studies and Projects
FIP Forest Investment Program
FMI International Monetary Fund
FNE Constitutional Financing Fund for the Northeast
FNMC National Climate Change Fund
FNO Constitutional Financing Fund for the North
FONFOPLATA Financial Fund for the Development of the La Plata Basin
FSB Financial Stability Board
FUNBIO Brazilian Biodiversity Fund
G20 Group of Twenty
GCF Green Climate Fund
GEE Greenhouse Gases
GEF Global Environment Facility
GFLAC Climate Finance Group of Latin America and the Caribbean
GRD Disaster Risk Management
GRI Global Reporting Initiative
GSIA Global Sustainable Investment Alliance
IBAM Brazilian Institute of Municipal Administration
IBAMA Brazilian Institute of Environment and Renewable Natural Resources
ICDPR70 CDP Brazil Index - Climate Resilience

ICFs International Climate Funds
ICMA International Capital Market Association
ICMBIO Chico Mendes Institute for Biodiversity Conservation
ICO2 Efficient Carbon Index
IDA International Development Association
IDB Inter-American Development Bank
IFC International Finance Corporation
IFDS Development Financial Institutions
INDC Intended Nationally Determined Contributions
IPCC Intergovernmental Panel on Climate Change
IPI Tax on Industrialized Products
IPLC Indigenous People and Local Communities
IR Income Tax
IFRS International Financial Reporting Standards
ISE Corporate Sustainability Index
ISO International Organization for Standardization
ISSB International Sustainability Standards Board
LCITS Low Carbon Investment Funds
MAPA Ministry of Agriculture and Livestock
MCTI Ministry of Science, Technology, and Innovation
MDA Ministry of Agrarian Development and Family Agriculture
MDBS Multilateral Development Banks
MDIC Ministry of Development, Industry, Trade, and Services
ME Ministry of Economy
MEC Ministry of Education
MF Ministry of Finance
MIGA Multilateral Investment Guarantee Agency
MJSP Ministry of Justice and Public Security
MMA Ministry of Environment and Climate Change
MPI Ministry of Indigenous Peoples
MPMEs Micro, Small, and Medium Enterprises
MPO Ministry of Planning and Budget
MRE Ministry of Foreign Affairs
MS Ministry of Health
MSCI ACWI LOW CARBON TARGET Morgan Stanley Capital International– Low Carbon Target Index
MSCI ACWI PAI Morgan Stanley Capital International – All Country Index
MSCI EM CLIMATE ACTION Morgan Stanley Capital International – Climate Action Index
MSCI EM CLIMATE CHANGE Morgan Stanley Capital International – Climate Change Index
MSCI EM EX FOSSIL FUELS Morgan Stanley Capital International – Ex Fossil Fuels Index
NDB New Development Bank
NDBs National Development Banks
NDC Nationally Determined Contribution
NGFS Network for Greening the Financial System
NIB New Industry Brazil
NZAOA Net-Zero Asset Owner Alliance
OCDE Organization for Economic Cooperation and Development
ODS Sustainable Development Goals

OMC World Trade Organization
ONGs Non-Governmental Organizations
PAAR Annual Resource Allocation Plan
PAC Growth Acceleration Program
PCAF Partnership for Carbon Accounting Financials
PE Private Equity
PIB Gross Domestic Product
PMEs Small and Medium Enterprises
PNUD United Nations Development Program
PPA Multi-Year Plan
PPCR Pilot Program for Climate Resilience
PPPS Public-Private Partnerships
PREVIC National Superintendence for Complementary Pensions
PRI Principles for Responsible Investment
PRONAF National Program for Strengthening Family Agriculture
PRONAMPE National Program for Supporting Micro and Small Enterprises
PSI Principles for Sustainable Insurance
PTE Ecological Transformation Plan
REDD+ Reducing Emissions from Deforestation and Forest Degradation
RENOVAGRO Sustainable Agricultural Production Systems Financing Program
RWA Real World Assets
SAIN Secretariat for International Economic Affairs
SASB Sustainability Accounting Standards Board
SBCE Brazilian Emissions Trading System
SBTi Science Based Targets Initiative
SCF Strategic Climate Fund
SEBRAE Brazilian Micro and Small Business Support Service
SFN National Financial System
SINCOR Union of Entrepreneurs and Independent Insurance Brokers and Distributors
SNF National Development System
SREP Scaling Up Renewable Energy Program in Low Income Countries
STN National Treasury Secretariat
SUDAM Amazon Development Superintendence
SUDECO Central-West Development Superintendence
SUDENE Northeast Development Superintendence
SUSEP Private Insurance Superintendence
TCFD Taskforce on Climate-related Financial Disclosures
TFFF Tropical Forest Finance Facility
TI Information Technology
TLP Long-Term Rate
TNFD Taskforce on Nature-related Financial Disclosures
TSB Interinstitutional Committee on Brazilian Sustainable Taxonomy
UNEP-FI United Nations Environment Program Finance Initiative
UNFCCC United Nations Framework Convention on Climate Change
VC Venture Capital
WISGI Dow Jones Sustainability World Index
WWF World Wildlife Fund

TERMS AND DEFINITIONS

FINANCING

It refers to the process of securing the money needed to cover an investment or project cost. Financing may depend on debt (e.g., through bond issuance or loan underwriting), equity issuances (listed or unlisted shares), equity (typically savings or self-financing through retained earnings), as well as subsidies and donations (IPCC, 2022).

CLIMATE FINANCE

Financial resources to tackle climate change, involving all public and private actors, from global to local scales, including international financial flows to developing countries to help them deal with climate change. Climate finance aims to reduce net greenhouse gas emissions and/or improve adaptation and increase resilience to the impacts of climate change, both present and future. This financing can originate from private and public sources, be channeled through various intermediaries, and be made available through various instruments, such as grants, concessional and non-concessional loans, and internal budget reallocations. (IPCC, 2023).

INVESTMENT

In an economic sense, it is the purchase of a physical (infrastructure or equipment) or intangible asset (e.g., patents, IT solutions) that is not consumed immediately but used over time. For financial investors, physical and intangible assets take the form of financial assets, such as bonds or stocks, which are expected to provide income or be sold at a higher price later. In practice, investment decisions are motivated by a calculation of risk-weighted expected returns, which considers all expected costs as well as different types of risks (IPCC, 2022a).

CLIMATE RISK

The possibility of losses to institutions, communities, or ecosystems due to events associated with environmental degradation and climate change. It is divided into:

- 1. Transition Risk:** Related to the transition to a low-carbon economy, which involves the reduction or compensation of GHG emissions and the preservation of natural mechanisms for capturing these gases;
- 2. Physical Risk:** Involves the direct impacts of climate change, such as extreme weather events, changes in precipitation and temperature patterns, and their effects on water resources, public health, and energy security.

NDC

Acronym for “Nationally Determined Contribution”, which is the commitment made by each country signatory to the Paris Agreement to reduce GHG emissions and adopt measures to adapt to climate change. Each NDC is developed according to national capabilities and must be updated periodically to reflect greater climate ambition.

INTRODUCTION

Knowing, articulating and mobilizing actors who can finance the full implementation of the Climate Plan and the Brazilian NDC

THE OFFER OF CLIMATE FINANCE COULD DRIVE THE SPEED AND DIRECTION OF THE TRANSITION TO AN EMISSION-FREE ECONOMY IN AN INCREASINGLY HOTTER WORLD. BY 2030, IT IS ESTIMATED THAT US\$2.4 TRILLION ANNUALLY WILL BE NEEDED IN EMERGING MARKETS AND DEVELOPING COUNTRIES - OUTSIDE OF CHINA, TO IMPLEMENT NECESSARY MITIGATION AND ADAPTATION FOR A 1.5°C GLOBAL WARMING SCENARIO (INDEPENDENT HIGH-LEVEL EXPERT GROUP ON CLIMATE FINANCE).

In the transition, there is competition for investment, and countries with the best plans and structures can attract more capital, even sooner. Brazil, as the host of COP 30 and holding the presidency of the G20, has a unique window of opportunity to signal to the world an ambitious climate financing plan, linked to the Climate Plan and the Nationally Determined Contribution (NDC) together with the Paris Agreement - currently under construction within the federal government.

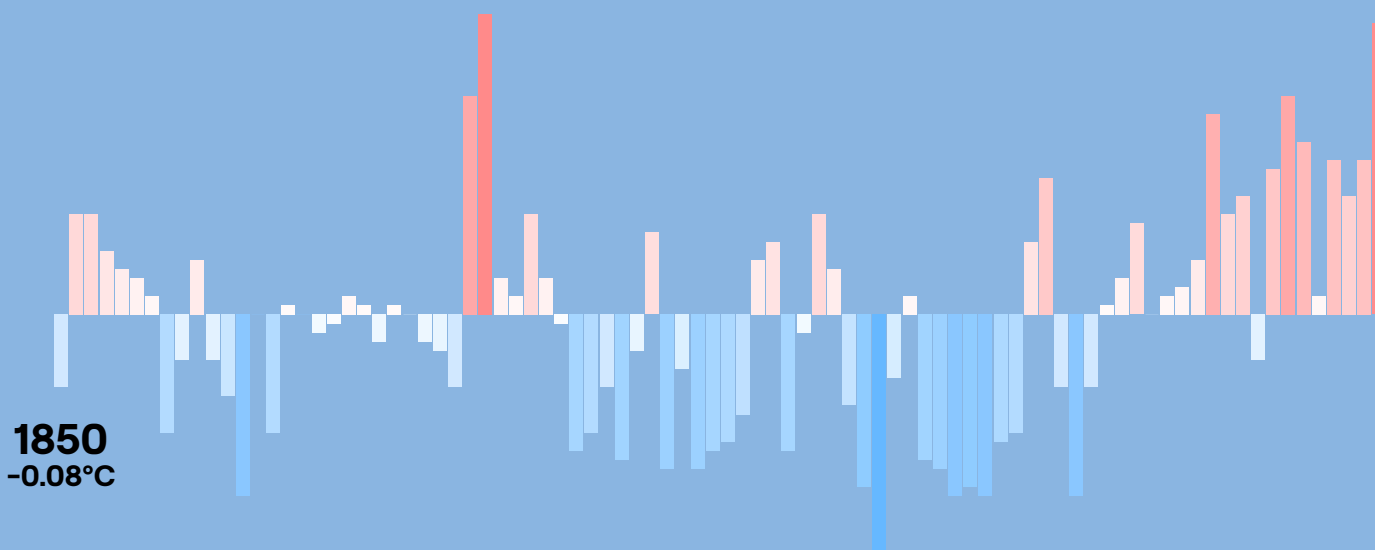
Historically, Brazilian climate policies - iNDC [Intended Nationally Determined Contributions], NDC [Nationally Determined Contributions] updates, Climate Plan [National Climate Change Plan], and/or sectoral plans - have had limited development in terms of implementation and financing strategies. In this sense, thinking about and structuring a climate financing strategy is a new exercise for Brazil. The Brazilian government has an opportunity here to increase its institutional capacity to mobilize all pools of capital, public and private, available for transition and resilience.

The country will need approximately R\$1 trillion by 2030 to achieve its GHG emissions reduction objectives, depending on the emissions trajectories selected as priorities ([World Economic Forum](#)). The World Bank highlights that to maximize its potential for economic growth and climate action, Brazil will need annual net invest-

ments equivalent to 0.8% of its annual GDP by 2030 ([World Bank](#)). In these modeled climate change scenarios, investments are designed to occur when and where they are most cost-effective, or least costly, to limit global warming. Model quantifications help identify high-priority areas for investment, but do not indicate who would fund them.

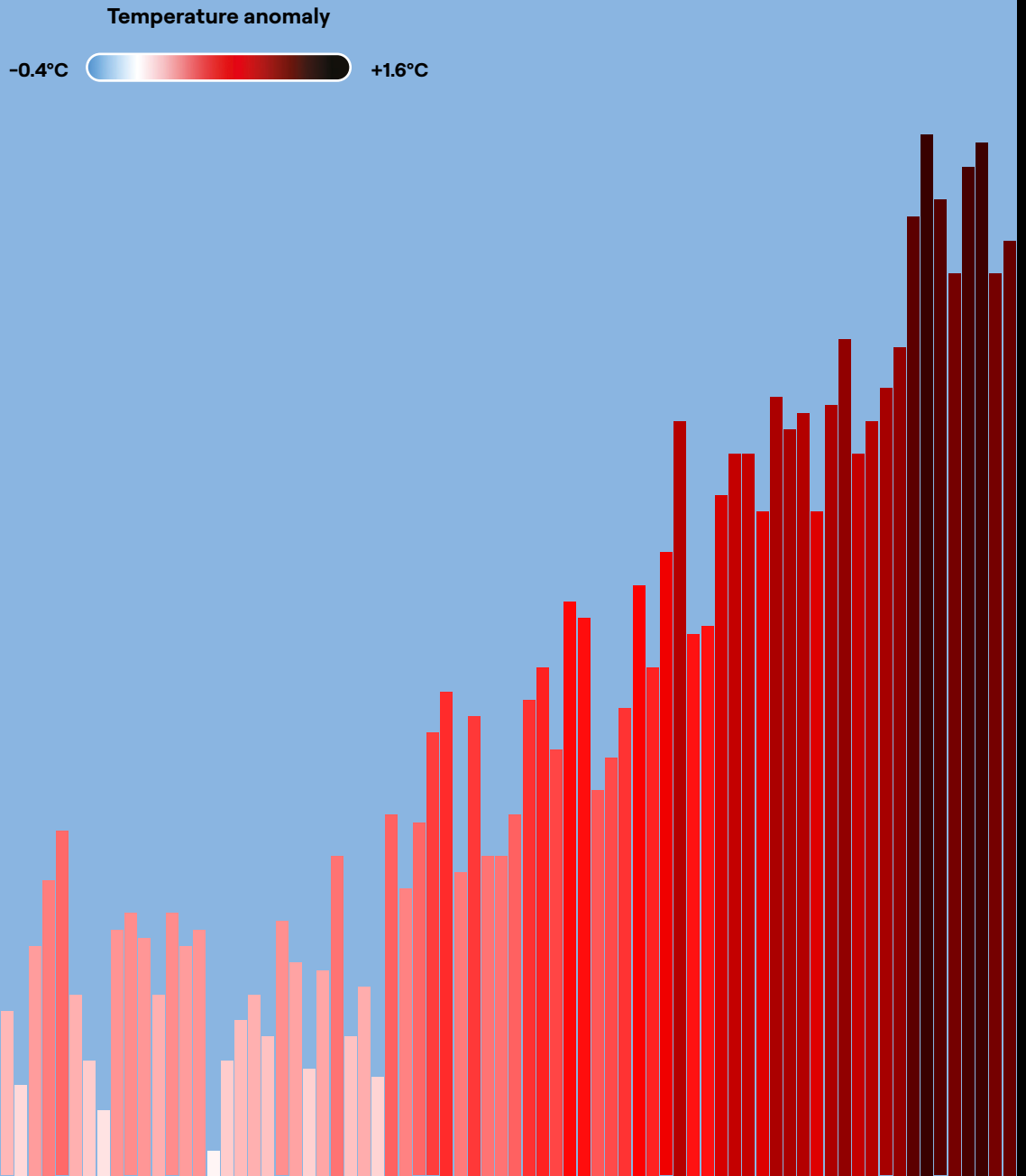
Far from suggesting that the government should exercise control over who should finance what, we intend to recognize the different opportunities and different actors to contribute to the planning of government entities and the production of clearer and more powerful signals in the mobilization of resources, in a way suitable for your purposes. In other words, recognizing that there are private actors, for example, who are not directly included in the arrangements for formulating the Climate Plan and the NDC and who can contribute immensely to their results and impacts. And, finally, mobilize these actors through public planners and regulators.

There is capital available in the trillions of reais for investments and finance in Brazil, not yet mobilized for climate financing. In interviews carried out for this report in the first half of 2024, we identified the opportunity to (and also barriers to) generate clearer guidelines to align this set of sources, managers, and financing channels with the Climate Plan and the NDC.



THE HOTTEST YEAR ON RECORD: IN 2023, THE GLOBAL AVERAGE TEMPERATURE WAS 1.45°C ABOVE THE PRE-INDUSTRIAL REFERENCE VALUE

2023
+1.45°C



Source: Met Office Hadley Centre observations datasets (HadCRUT5), Professor Ed Hawkins, University of Reading, www.showyourstripes.info

Additionally, there are international financing channels opened to Brazilian access but underutilized; and also, external actors interested in contributing to Brazilian projects, programs, and platforms.

We believe it is strategic to identify who can take on relevant roles in financing the Climate Plan and the Brazilian NDC. Therefore, we defined the objective of this publication to present the ecosystem of Brazilian

climate finance actors, covering the main governance arrangements and existing financing structures, identifying roles, responsibilities, gaps, overlaps, and potential improvements.

Our purpose is for this report to be used to mobilize strategic actors to implement Brazilian climate policy with more vigor and speed, in the context of the Climate Plan and the NDC.

TABLE 1 • NDC as an investment plan

- The ambitions of the Paris Agreement demand a radical transformation of the global economy, requiring vast amounts of capital to fund large-scale climate initiatives
- At the national level, the transition may give rise to strategic economic restructuring, due to climate risks, both physical and transitional
- If conceived as “investment plans”, NDCs can transcend the traditional role of signaling commitments to global mitigation ambition, becoming dynamic structures that specify emissions reduction targets and outline cooperation and investment attraction strategies to achieve them
- According to the IPCC, aligning climate actions with development strategies through economy-wide policy packages can accelerate the transition, channeling public and private financing towards these objectives



Policy packages that enable innovation and build capacity are better able to support a shift towards low-emission and equitable futures than individual (high-confidence) policies (IPCC, 2022b)



- In this sense, the content of NDCs as an investment plan requires clarity and transparency about what the country aims for its entire economy and what type of capital is needed to realize its future vision
- In theory, it should signal the pace of decarbonization desired by a country for its entire economy, the strategy to reach net zero as soon as possible, coordination mechanisms, priority sectors for adaptation and mitigation, as well as roles for international cooperation and financiers
- The clearer and more credible the content, the greater the confidence of actors in the future implementation and mobilization of capital, facilitating access to financing at reduced costs
- If broken down into strategies to identify and respond to common obstacles such as financing uncertainty and regulatory inconsistencies, NDCs can provide a credible framework for mobilizing capital and developing markets
- On the whole, if there is forward-looking climate action guided by robust NDCs, future risks can be reduced, contributing to national economic resilience and global financial stability

Source: NDC Investment Planning Guide and Checklist, NDC Navigator, Climate Investment Planning and Mobilization Framework.








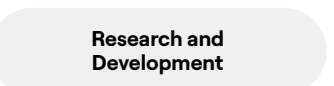




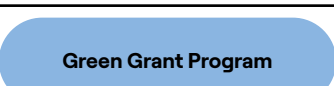


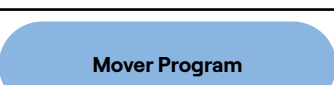

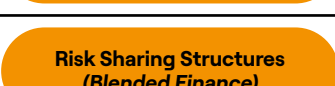







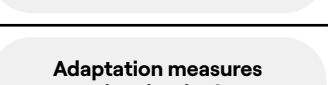



**HOW DOES
CLIMATE FINANCE OPERATE
IN BRAZIL?**

1. Summary table

TABLE 2 • Types of climate finance flows*

SOURCES OF PUBLIC CAPITAL	SOURCES OF PRIVATE CAPITAL	INTERMEDIARIES (CAPITAL MANAGERS)	
▼	▼	▼	▼
Income from tax payments by taxpayers	Owners of assets, including pension funds, insurance and reinsurance	INTERNATIONAL CLIMATE INSTITUTION	GCF
Payments of fines or fees for polluting activities	Family income		CIFs
Revenues from carbon pricing	Corporate cash flow		GEF
Issuance of debt securities	Capital markets funds (private equity)		AF
Foreign taxpayers	Venture Capital (Venture Capital)	MULTILATERAL BANKS OF DEVELOPMENT	World Bank
International sovereign wealth funds			IDB
International Fees			CAF
			Fonplata
			NDB
		NATIONAL DEVELOPMENT SYSTEM	BNDES
			Constitutional Funds
			Regional Public Banks

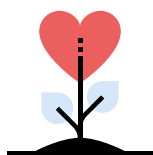
 In full use in the country
 Used to some extent
 Limited or no use

FINANCIAL INSTRUMENTS ▼	FUNDING CHANNELS		ALLOCATION OF CLIMATE FINANCE ▼
	▼		
 Grants	INSTRUMENTS AIMED EXCLUSIVELY AT CLIMATE AND/OR SUSTAINABLE FINANCING	 Climate Fund	 Public policy
 Concessional Financing		 Amazon Fund	 Research and Development
 Guarantees		 Eco Invest Brazil	 Entrepreneurship and innovation
 Equity Funds		 Green Grant Program	 Access to markets
 Low Carbon Investment Funds		 Mover Program	 New industries
 Risk Sharing Structures (Blended Finance)	CHANNELS WITH A PERCENTAGE OF THEIR RESOURCES DEDICATED TO CLIMATE FINANCE AND/OR SUSTAINABLE	 New PAC	 Local and community actions
 Insurance and Reinsurance Mechanism		 Safra Plan	 Resilient infrastructure
 Credit Swaps		 FNDCT	 Adaptation measures and technologies
 Loans/Obligations Linked to Results-Based Sustainability			 Education and training
 Energy auctions (conducted by CCEE)			

* Adapted from the IPCC Sixth Assessment Report, 2022.
 "Capital" includes all relevant financial flows. The size of the boxes is not related to the magnitude of the financial flow.

2. To whom is the financing intended?

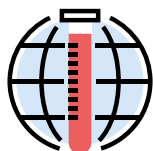
The 2025-2035 Climate Plan will define priorities in terms of technologies⁽¹⁾ and climate actions in the national territory, considering the best mitigation and adaptation options in terms of cost and benefit. However, it is still premature to point out specific climate financing needs before the results of emissions trajectory modeling conducted by MCTI and its partners. However, nine major demands were identified:



PUBLIC POLICY

Adequate resources are needed to develop and implement sustainability policies, such as combating

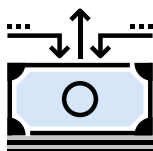
deforestation and ecosystem conservation. This includes payment mechanisms for environmental services and the bioeconomy.



RESEARCH AND DEVELOPMENT

Financing for research and development of proven and next-generation technologies, through *blended*

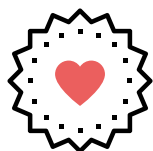
finance, grants, and calls for proposals.



ENTREPRENEURSHIP AND INNOVATION

Venture capital for investments in startups and small companies to develop technologies

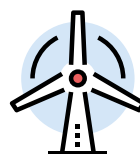
in renewable energy, energy efficiency, and sustainable agriculture. Green startup incubators and accelerators are essential.



ACCESS TO MARKETS

Facilitate access to markets for low-emission products and services, both domestically and for export,

including certifications and green seals.



NEW INDUSTRIES

Development of markets with great potential, such as offshore wind, green hydrogen, and forest restoration. New institutional

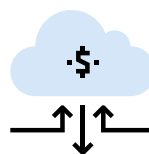
arrangements are essential for the transition of the Brazilian economy.



LOCAL AND COMMUNITY ACTIONS

Sustainable infrastructure projects in communities, such as solar energy systems and ecological

sanitation, which help reduce GHG emissions and improve quality of life.



RESILIENT INFRASTRUCTURE

Investments in infrastructure adapted to climate scenarios or adaptation of existing infrastructure.



ADAPTATION MEASURES AND TECHNOLOGIES

Projects and programs that increase resilience to climate change.



EDUCATION AND TRAINING

Training the workforce for new opportunities arising from the transition, including new technologies, sustainable agricultural

practices, and natural resource management.

(1) The Ministry of Science, Technology and Innovation (MCTI), with the support of the United Nations Environment Program (UNEP) and technical partners, identified 82 technologies to promote low-carbon and climate-resilient development in Brazil, according to the Technology Needs Assessment (TNA) report delivered in 2022 to the UNFCCC. This survey used mitigation costs as a prioritization criterion. (<https://www.ctc-n.org/news/new-publications-technology-needs-assessment-implementation-climate-action-plans-brazil>)

3. Sources of capital

SUPPLY-SIDE: PUBLIC AND PRIVATE CAPITAL POOLS

3.1 PUBLIC SOURCES

From the point of view of mobilizing public sources, we highlight the following:

- **Income from tax payments by taxpayers**
- **Deposits of employee charges and contributions, including FTGS, FAT and PIS-PASEP**
- **Payments of fines or fees for polluting activities**
- **Revenues from carbon pricing: carbon taxes and permit auctions**
- **Issuance of debt securities, targeted to public institutions**
- **International cooperation harnesses revenue from taxes or fees paid by foreign taxpayers, mobilized through bilateral and multilateral efforts**
- **International sovereign wealth funds, such as the Brazilian proposal to mobilize funds for tropical forests**
- **International Taxes, such as the proposal to tax the ultra-rich brought by Brazil to the G20**
- **Resources of philanthropic origin, originating in Brazil and abroad**

The Brazilian government began the issuance of debt securities for public climate financing in 2023, raising US\$2 billion with a seven-year maturity. It is worth mentioning that in this first round, there was 3 times more

demand than supply, indicating high market interest in this type of product. On June 20, 2024, the second issue of sustainable sovereign bonds was carried out, maturing in 2032, also issued in the amount of US\$2 billion. Demand for this title was high, reaching around US\$4.7 billion, which shows that even in the second round there was more interest than the amount made available. With 77% of investors coming from Europe and North America, there is also a strong appetite for sustainability projects in the country.

The framework for this issuance was outlined within the Committee on Sustainable Sovereign Finance (CFSS) (for more information, see section 7.2.1), which determines expenditure categories such as pollution prevention and control, renewable energy, and sustainable management of natural resources, and social benefits, such as socio-economic development, combating poverty, and universalization of basic sanitation

From the point of view of the sources that make up the public budget, Nicholas Stern proposed, in 2010, that countries allocate at least 2% of their GDP to face climate change. For Brazil, this would mean that the 2022 climate action budget should represent 4.20% of the total budget, equivalent to 38 billion dollars. However, the allocation was only 0.045% of the total budget, or \$428 million (GFLAC).

Talanoa Institute Study (Política Por Inteiro, 2024) identified a total of R\$13.6 billion in spending authorized in the 2024 Budget for the set of actions to combat the climate emergency, combating deforestation, bio-economy, biodiversity conservation, indigenous and quilombola territories, and risk and disaster management. In the Union Budget, there is still a considerable amount of spending allocated to sustainable agriculture.

There are R\$14 billion planned for this year, without much clarity about the portion that contributes to decarbonization in the sector of the economy that emits the most greenhouse gases. But most of this money finances conventional agriculture, through the equalization of interest on financing, and not investments in low-carbon technologies. A greater allocation of resources from the Safra Plan via Renovagro must be pursued with goals of universalization of public resources that optimize the reduction of emissions.

The allocation of public funds is a process that begins with planning by the Executive, consolidated by the Ministry of Planning and sent in the form of a Budget Law project to the National Congress, goes through analysis by deputies and senators, and becomes a spending authorization to be carried out during the year, under the management of ministries and control of the National Treasury.

Regarding the capture of external sources of financing, it is worth mentioning that the acquisition was made through the issuance of green bonds, mentioned above, money destined for the Climate Fund, under the management of BNDES.

Regarding sources such as payments of fines and taxes on polluting activities, it is estimated that the conversion of fines for environmental crimes into environmental services has the potential to direct hundreds of millions, and even billions, to forest restoration, since the value accumulated in fines only in 2023 it exceeded R\$2 billion⁽²⁾. As for tax reform, Constitutional Amendment No. 132 was approved in December 2023, which reformed our tax system. An important advance was the maintenance, in the final text, of a selective tax on goods harmful to health and the environment, in addition to guaranteeing the possibility of exemption for fuels such as green hydrogen, among others. Currently, a series of proposals are being processed in the National Congress for the regulation of Tax Reform.

It is expected that, with the establishment of the Brazilian Emissions Trading System, via federal legislation, revenues from it will be counted on. From the point of view of philanthropy and corporate donations, some estimates point to around US\$4 billion in terms of annual volume (Instituto Beja, 2023), but there is no conclusive data on its volume in the country today, even though there are records of actions via funds and foundations, and also of donations to official mechanisms (see Amazon Fund).

From the point of view of international cooperation, Brazil attracts public sources via bilateral and, to a limited extent, multilateral cooperation (see section 4.1). There is a window of opportunity here, given that these sources tend to focus on less developed countries and not emerging economies like ours. It is our understanding that these sources must be used “as soon as possible,” as they may, for various reasons, no longer be available to Brazil in the medium term. From an international fees perspective, there is currently no revenue.

As for sovereign wealth funds, the Tropical Forests Forever Fund (FFTS) proposal launched by the Brazilian government during COP-28 aims to mobilize such resources for a fund created for the conservation of tropical forests. According to the proposal, the fund could achieve a contribution of US\$250 billion from sovereign wealth funds for the maintenance of forests, with co-benefits of mitigation and adaptation. The proposal is the subject of debate in several international forums, defended by the Brazilian government. There have still been no operational advances since its announcement.

There is a clear need to expand public sources, both national and international, making use of the opportunity to access (perhaps temporary) non-reimbursable resources made available by a development financing institution. Furthermore, the green debt issuance opportunity can offer concessional capital at scale and with immediate availability.

(2) Some obstacles need to be overcome for the mechanism to actually work. Among them is the judgment of fines at the institution, which is currently extremely slow, the procedural design for conversion through selected institutions and other legal issues. Since the publication of IBAMA's Normative Instruction on June 21, 2023, the procedure has been detailed and is still being developed. It is not possible to predict when it will come into effect at full capacity. [IBAMA= Brazilian Institute of Environment and Renewable Natural Resources].

3.2 PRIVATE SOURCES

From a commercial capital perspective, there is today around US\$250 trillion available globally from at least six sources⁽³⁾, distributed along a descending risk spectrum, from most averse (like commercial banks) to least (like venture capital):

- **Asset owners, including pension funds, insurance and reinsurance funds, and others**
- **Family income for investments in energy efficiency and other sustainable initiatives, including Philanthropy**
- **Corporate cash flow: Companies' resources allocated to climate projects**
- **Capital markets: Resources obtained through the issuance of bonds and other financial instruments and securities**
- **Venture capital**

Generally speaking, these sources have different risk-return profiles and investment practices. They are also subject to different regulations and can perform different functions in terms of climate finance. Below, we point out what these functions may be. In Part 2, we explore who can activate them through public governance and regulation.

All of these private sources are currently used in Brazil, to a lesser or greater extent. The specific volumes of capital made available by each source in the country are not known, but it is safe to say that Pension Funds are the largest, followed by IFDs.

According to the interviews carried out to prepare this product, there is good coverage from private sources for actions in the more mature energy and transport sectors in Brazil. However, the mobilization of private sources for climate financing, in general, remains incipient, creating opportunities if these ac-

tors are exposed, informed, and articulated to contribute to the implementation of the objectives and priorities of the Climate Plan and the NDC.

A study by the Climate Policy Initiative reveals that, in developing countries, only 14% of green investments are financed by private capital, in contrast to 81% in developed countries. To reverse this discrepancy, it is necessary to create a pipeline of potentially profitable projects and new financial instruments that reduce investment risks.

To scale up climate investments, investors need:

- **Independent institutions, good governance and reliable macroeconomic management**
- **Commitment to low-carbon solutions**
- **Market access, viable commercial partners, and ability to scale**
- **Local banking markets offering financial services such as supporting a robust green bond market**
- **Tools to mitigate currency risk, such as offering currency swap contracts for protection (such as currency hedging)**
- **Accurate performance data and benchmarks for appropriate risk pricing**

To date, Brazil has not developed a formal policy to attract climate investments. As an emerging market, it has the opportunity to offer high returns compared to more developed markets, but the risk/return profile often does not meet investors' expectations. Mobilizing private investment in climate adaptation and resilience sectors faces additional challenges due to the nascent nature of these opportunities and the lack of reliable revenue streams.

(3) According to the Hewlett-Packard Foundation, In addition to these sources, there are also others such as technology-enabled non-deposit credit institutions—such as PayPal, etc

Despite this, recent initiatives, such as the issuance of bonds labeled as sustainable by the National Treasury and the Eco Invest Brazil program, show progress. The forecast of a mandatory sustainable taxonomy in 2026 should also favor the mobilization of resources for the transition. However, these actions are still not enough to achieve the necessary scale of climate financing in Brazil.

Access to concessional resources, offered on more favorable terms than market ones, can help mobilize private financing through mixed structures (*blended finance*), reducing risks and attracting investors. So far, initiatives to mobilize private climate finance have not been sufficient to meet the financial challenges of developing countries' climate plans.

The G20 Council and Presidency have discussed *blended finance*, focusing on the creation of "country platforms" to coordinate efforts between private financial institutions, companies, governments, and development financiers. This approach, aligned with Nationally Determined Contributions (NDCs) commitments, can boost climate finance flows.

Private entities have taken scattered and voluntary initiatives, often not aligned with public policies or scientific references. This lack of coordination and standardization makes it difficult to identify financial flows, account for investments, and measure the impact on mitigation and adaptation to climate change.

TABLE 3 • Sources of private capital for climate finance

ASSET OWNERS
FOCUS: ASSETS

DEFINITION	Holds legal ownership of assets and allocates them based on investment objectives. Includes pension funds, insurance companies, sovereign wealth funds, individual investors, mutual funds, endowments and foundations
SIZE	US\$136 trillion [mostly owned by mutual funds (approximately 36%), pension funds (approximately 32%), and insurance companies (approximately 24%)] (globally). In Brazil: insurance (amount raised in 2023 of approximately R\$388 billion), pension funds (R\$1.2 trillion - total assets in the system in 2023), and Capital Markets (R\$467 billion - volume offered in 2023, R\$268 billion - volume offered until May 2024)
RISK/RETURN PROFILE	Focus on the combination of capital preservation and moderate growth and therefore bias towards lower-risk investments

Due to the scale of this pool, there is a strong desire and often need for these sources of capital to be deployed through larger investments (\$50 million+) in singular activities or the aggregation of investment activities.

As a result, accessing capital from this pool for climate finance requires the deployment of the most mature technologies (e.g., solar, wind, hydropower, and energy efficiency) through large transactions using aggregation platforms, including storage vehicles, securitization, labeled debt, private equity, and others. Often, asset owners rely on intermediaries, particularly asset fund managers, to make investment decisions on their behalf. A relevant trend in asset management is the growth of passive investments. A key lever for climate finance will therefore be to drive the growth of passive investment funds with low-carbon screening and ensure that the latest algorithms, machine learning, and artificial intelligence tools incorporate climate risk and mitigation

FAMILIES (INCOME AND PHILANTHROPIES)

FOCUS: INCOME

DEFINITION	Investments or direct contributions in organized civil society projects that can produce innovation or collective benefits
SIZE	Estimated at US\$4 billion
RISK/RETURN PROFILE	Typically has medium risk tolerance and zero return expectations

CAPITAL MARKETS FUNDS: PRIVATE EQUITY

FOCUS: LIQUID ASSETS

DEFINITION	Private equity firms finance mature projects and new technologies with full or partial ownership of these companies/projects or participate in buyouts, acquisitions, and mergers
SIZE	US\$1.8 trillion (global net assets); R\$22.7 billion (investments in Brazil in 2023)
RISK/RETURN PROFILE	Given the emphasis on capital investments, it typically has a high tolerance for risk and an expectation of high returns

Funded by institutional capital and high-net-worth individuals, PE provides capital to the market to finance corporate acquisitions and asset portfolios.

Although it is not considered a source of long-term financing for infrastructure assets due to the investment term (4 to 7 years) and return requirements (10+%), it can act as a bridge to other pools of capital, namely asset owners. There is significant work around financing tools that can mobilize institutional capital for climate investments and technologies, while also encouraging collaboration from multiple sources of capital. Given the flexibility of this pool of capital, it can act as a catalyst for climate finance by “conditioning” project portfolios and lowering risk perceptions

VENTURE CAPITAL (VC)
FOCUS: LIQUID ASSETS

DEFINITION	Financing early-stage companies with partial participation
SIZE	US\$220 billion (net assets), globally; R\$7.4 billion (investments in Brazil in 2023)
RISK/RETURN PROFILE	Relatively high-risk tolerance and, as a result, high return targets

Although venture capital (VC) may represent the smallest pool available, it is designed to achieve a level of technological innovation that no other private capital pool can. However, when it comes to climate change, this form of capital to support high-potential but high-risk emerging technology solutions falls short of what is needed. The VC model favors capital-light innovation (e.g., software, data analytics, and connected devices) and is not structured to support transformative hardware-based innovations in power generation, transportation, manufacturing, and other infrastructure-intensive areas relevant to the massive reduction of greenhouse gas emissions. It is important to unlock high-risk capital to reduce the cost of technologies that will enable a transition to 100% renewable energy and removals

Sources: adapted from Packard's Climate Finance Strategy 2018-2023, with national data from the Central Bank of Brazil. Banking Economics Report 2023. SUSEP. SES - SUSEP Statistics System. ABVCAP, 2023. Private Equity and Venture Capital. ANBIMA, 2024. Capital market bulletin.

4. Intermediaries

SUPPLY-SIDE: CAPITAL MANAGERS, INTERNATIONALLY

4.1 INTERNATIONAL CLIMATE FUNDS (ICFs)

International Climate Funds (ICFs) play a crucial role in the climate finance architecture, providing non-refundable resources and concessional financing that contribute to unlocking much broader resources needed for climate action.

ICFs work with a wide range of partners and, through strategic investment, can catalyze domestic capital through national and regional development banks, and private sector financing by mitigating the risks of their investments and financing from multilateral development banks. Each Fund has its distinct mandate, policies, and operational modalities within the international climate finance architecture. Below are 4 of the main funds accessed by Brazil.

4.1.1 GREEN CLIMATE FUND (GCF)

The GCF's mandate is to promote a paradigm shift towards low-emission and climate-resilient development pathways in developing countries. The GCF operates through a partnership model, working directly with local, national, and regional organizations that are close to the reality of developing countries, as well as with international entities. In addition to working with the public and nonprofit sectors, the GCF collaborates with private sector partners (both international and domestic) to accelerate capital deployment.

The GCF has a portfolio of US\$13.9 billion (US\$53 billion, including co-financing) in more than 120 countries through a flexible range of financial instruments, including grants, concessional loans, equity, guar-

antees, and payments based on results. It also has a readiness support program that builds capacity and helps countries develop long-term climate plans. The GCF catalyzes private-sector investment through its Private Sector Unit, which provides concessional loans, lines of credit for banks, equity investments, guarantees, and first loss protection, among other financial instruments. The Fund works with a mandate to invest 50% of its resources in mitigation and 50% in adaptation to climate change, and approves projects, at the country level, within the Country Program developed with each country.

The financing process is done through accredited entities. The national entities that are currently accredited are BNDES, Brazilian Biodiversity Fund (FUNBIO), and CAIXA. Other international accredited institutions can access the fund's resources. Each program and project must be validated by the Designated National Authority which, in Brazil, is the Secretariat of International Affairs within the Ministry of Finance. According to the Fund's most up-to-date information, the projects being carried out in our country are:

- **“Marajó Resiliente [Resilient Marajó]: Improving the resilience of small farmers to climate impacts through adaptation and promotion of agroforestry systems in the Marajó Archipelago”**

In the amount of non-refundable US\$9.9 million, through the Avina Foundation

- **“Planting Climate Resilience in Rural Communities in the Brazilian Northeast”**
For US\$202.5 million, 50% coming from co-financing, and of which US\$65 million are repayable (loans) and 34.5 million, non-refundable, through the International Fund for Agricultural Development (IFAD)
- **“REDD+: Payments for results achieved by Brazil in the Amazonian Biome in 2014 and 2015”**
Worth US\$96.5 million, through the United Nations Development Program (UNDP)
- **Among other multi-country projects**

It is important to note the absence of projects with accredited Brazilian institutions which, when questioned, point to delays and a lack of transparency in approving projects as part of the reasons. It is also clear that the country needs to update the Country Program (GCF Country Program), which is expected to be drawn up by the federal government between 2024 and 2025, led by the Ministry of Finance.

4.1.2 GLOBAL ENVIRONMENT FACILITY (GEF)

The Global Environment Facility, known as GEF (Global Environment Facility), is a family of funds with 186 member countries dedicated to addressing biodiversity loss, climate change, and ocean protection. Its grants, blended financing, and policy support help countries develop approaches to their highest environmental priorities and the adherence to and implementation of international environmental conventions.

The GEF serves as an operating entity for the financial mechanism of the UNFCCC, the Paris Agreement, and several other multilateral environmental agreements. Over the past three decades, the GEF has provided more than US\$25 billion and mobilized

US\$138 billion in co-financing for more than 5,000 national, regional, and global projects.

The GEF finances projects in developing countries and economies in transition, generally related to biodiversity conservation, reduction of greenhouse gas emissions, protection of international waters, prevention of soil degradation, and safe management of chemicals, through several credit lines.

Operating through funding cycles, eligible countries submit project proposals that are evaluated and approved by the GEF board, with the distribution of funds for execution and ongoing monitoring to ensure the effectiveness of investments.

In Brazil, as well as in the GCF, the focal point of the GEF is SAIN in the MF, but the GEF has several projects with ministries such as the MMA, the MCTI, and others. Projects are proposed only via one of around 20 accredited organizations around the world, which act as executing and implementing agencies, such as the international WWF and the Brazilian Biodiversity Fund (FUNBIO).

The current values shown on the GEF page for Brazil are currently around US\$353 million in projects in the country alone and US\$170 million in regional projects. The fund has refundable and non-refundable installments, with different financing mechanisms.

4.1.3 CLIMATE INVESTMENT FUNDS (CIFs)

Created in 2008, they are managed by six multilateral development banks (World Bank, International Finance Corporation, Asian Development Bank, African Development Bank, Inter-American Development Bank, and European Bank for Reconstruction and Development) to pilot, scale up, and replicate investments that stimulate markets for innovative, low-carbon, and climate-resilient solutions in support of emerging markets and developing economies (EMDEs), including marginalized and vulnerable populations (women, young people, IPLC, etc.).

The CIFs are made up of two main funds: the Clean Technology Fund (CTF) and the Climate Strategy Fund (Strategic Climate Fund - SCF).

The CTF aims to support the implementation of low-carbon technologies with large-scale transformative potential. This fund finances projects that promote energy efficiency, renewable energy, and sustainable transport, such as the implementation of solar and wind energy and efficient public transport systems.

The SCF, in turn, complements the CTF and focuses on pilot programs to promote climate adaptation and mitigate the impacts of climate change. The SCF is subdivided into three specific programs: the Pilot Program for Climate Resilience (PPCR), which supports vulnerable countries in building climate resilience and integrating climate risks into their development strategies; the Forest Investment Program (FIP), which aims to reduce deforestation and forest degradation, promoting sustainable forest management; and the Scaling Up Renewable Energy Program in Low-Income Countries (SREP), which supports the expansion of the use of renewable energy in low-income countries.

In Brazil, the relationship with CIFs is coordinated by SAIN, from the Ministry of Finance. More information about the Secretariat can be found in Part 2. Brazil is part of the CIF's Nature, People, and Climate investment program and submitted a US\$70 million investment plan that was approved in 2023 as part of the CIF's Renewable Energy Integration investment program. CIF's previous investments in Brazil were made through the Forest Investment Program (FIP), focused on the Cerrado (CIF, 2012).

4.1.4 ADAPTATION FUND (AF)

Since 2010, it has committed more than US\$1.2 billion to 168 concrete climate change adaptation projects and programs in the most vulnerable communities in developing countries around the world, benefiting more than 43 million people. Brazil does not have entities accredited with the AF. An adaptation project involving Brazil, Argentina, and Paraguay has already been proposed by an international entity, but, so far, there has been no intentional effort by the Brazilian government

to promote access to AF. The focal point for the Adaptation Fund in Brazil is the National Secretariat for Climate Change, in the MMA.

4.2 MULTILATERAL DEVELOPMENT BANKS

MDBs plan climate targets for the coming years, developing long-term strategies for low-carbon and climate-resilient development, with a focus on partnerships, capacity building, and policy support.

Debt is MDBs' main climate financing instrument, representing 68% of the total in 2020 (US\$26 billion), followed by policies, subsidies, and guarantees. Solar and onshore wind technologies received more than 90% of the funding, with low-carbon transport being the fastest-growing sector.

Of the five largest MDBs⁽⁴⁾, Brazil mainly accesses the World Bank and the IDB. In addition to these, we highlight CAF, Fonplata and the New Development Bank (BRICS Bank).

4.2.1 INTER-AMERICAN DEVELOPMENT BANK (IDB)

Focused on Latin America and the Caribbean, it offers loans, grants, guarantees, and technical assistance to governments, private companies, and non-profit organizations, in different arrangements. In terms of government loans, there is a need for a guarantee from the Union and approval by COFIEX, led by the Ministry of Planning.

The IDB has been extremely active in Brazil, with partnerships both in terms of financing and technical cooperation with the Brazilian government and subnational governments. In 2023, US\$2.36 billion in loans were approved in Brazil¹¹. It is also important to highlight that the bank has set an internal rule that 40% of its financing will go to climate financing, including analyzing project by project and descending to the operational level, to ensure that this percentage remains globally in the bank's portfolio.

(4) World Bank, European Investment Bank (EIB), Asian Development Bank (ADB), African Development Bank (ADB) and Inter-American Development Bank (IDB).

It is also the bank's rule to align with the Paris Agreement, and this directive applies to all projects – that is, no bank operation can act against the Agreement. The Bank, for example, does not invest in projects that contain fossil fuels. There is also the BID Climate line, which invests 60% of its portfolio in climate, and benefits those who follow certain guidelines, such as the establishment of a plan for climate actions in the project. In this case, if these directives have been complied with throughout the project, at the 90% mark of project compliance, 5% of its value will be non-refundable.

In the area of technical cooperation, it is interesting to mention some examples of IDB actions with the Brazilian government:

- **The structuring of Payment for Environmental Services with the MMA, which is in progress**
- **Definition, in the PPA, of the goals that would have a climate impact with the MPO**
- **Development of the Bioeconomy Strategy with the MMA**
- **Definition of what would be a “green budget” in the Union budget, with the MPO**
- **Sustainable taxonomy, with the Ministry of Finance**
- **Both technical cooperation and financing from Eco Invest with the Ministry of Finance, including US\$2 billion for exchange rate risk mitigation**

It is also important to mention the initiative for forest concessions, carried out in partnership with BNDES and the Brazilian Forest Service.

Finally, another “umbrella” program is “Amazônia Sempre” [Amazonia Forever], developed with the involvement of the MPO, which involves the creation of a Regional Amazonia Partner Platform to map resources and coordinate efforts, in addition to the development of a Project Preparation Office to support the development of investment plans for the region.

4.2.1.1 IDB Invest

IDB Invest is the arm of the IDB Group focused on the private sector, focused on leveraging decades of experience as an impact investor to promote the impact of the SDGs in Latin America and the Caribbean.

IDB Invest's mandate is to maximize development impact while maintaining financial sustainability. To attract private capital, the institution offers the ability to select and structure projects with greater impact potential, expertise in ESG risk management, and the construction of a pipeline of investment opportunities that include the SDGs in the region. As a member of the IDB Group, Brazil also has access to the IDB's public policy and regulatory expertise, as well as the IDB Laboratory's capacity to build innovation ecosystems and finance early-stage inclusive ventures.

The financial products offered by IDB Invest include non-refundable financing (ideation phase), equity and quasi-equity (co-investment with other partners), debt (loan for scaling), and support for projects with non-refundable resources (with counterpart) to promote innovation ecosystems.

To access financing from IDB Invest, a project must meet several criteria and must be carried out under market conditions. The following criteria are applied, and the project to be financed must meet at least one of them additional criteria may be applied, depending on the sector:

- **Being in a Latin American or Caribbean country that is a member of the IDB Group**
- **Being in the private sector or being part of a state-owned company that seeks financing without a sovereign guarantee**
- **Have a positive and scalable impact on the local economy**
- **Being in accordance with environmental, social, and governance standards defined by the IDB, as well as those of the country where the project will be implemented**

- **IDB Invest does not lend directly to micro, small, and medium-sized enterprises (MSMEs) or individual entrepreneurs. Those who access the resource are financial intermediaries that pass on loans to small businesses**
- **IDB Invest does not finance NGOs, start-ups, or mergers and acquisitions**
- **Companies must have at least 3 years of audited financial statements. Does not apply to project financing**
- **Present profitability aligned with the benchmarks of the sector and the country(ies) where the company operates**
- **IDB Invest focuses on financing projects that aim to increase the capacity of companies, improve productivity and/or quality, reduce the carbon footprint, and/or have a significant social impact**

Recently, IDB Invest contributed R\$170 million in the form of a loan to a business in the Manaus Free Trade Zone, to scale up the production of battery packs lithium (Capital Reset, 2024). In June 2024, IDB Invest signaled that it intends to move around US\$102 billion in investments in infrastructure and climate adaptation at Latin America by 2030.

In June 2024, IDB Invest issued the IDB Group's first five-year private sector bond, worth 50 million reais¹³, directed to projects aligned with the objectives of Amazonia Forever, the IDB Group's umbrella program, to increase financing for the sustainable development of the Amazonian region. According to IDB Invest CEO James Scriven, the successful placement of this private sector bond shows an emerging investor appetite to support sustainable development in Amazonia, which is essential to regulating the global climate. To attract more capital, they are in the process of developing a solid portfolio of bankable

projects in clean energy, water and sanitation, digital connectivity, bioeconomy, and financial inclusion.

Still in this context, the IDB Group and the World Bank are jointly developing investment guidelines for Amazonian Bonds, through innovative financial instruments, which may also include public sector projects.

4.2.2 WORLD BANK

The World Bank is an international financial institution made up of four main entities: the International Bank for Reconstruction and Development (IBRD) the International Development Association (IDA), the Multilateral Investment Guarantee Agency (MIGA) and the International Finance Corporation (IFC). IBRD provides loans to low- and middle-income countries (such as Brazil), while IDA provides loans and grants to low-income countries with favorable financial conditions. We will explain more details about MIGA and IFC below. In addition to financing, the World Bank also provides technical assistance and consultancy to support the implementation of development policies.

The World Bank's governance is structured to reflect the interests of its 189 member countries. Each country is a shareholder in the institution, and its voting power is proportional to the number of shares it owns. The leadership is made up of a president, appointed by the Board of Executive Directors, which in turn is made up of 25 executive directors representing the Bank's members. The main decision-making body is the Council of Governors, which meets annually and is made up of finance ministers or central bank governors of member countries (World Bank, 2010).

The World Bank's activities cover diverse areas, including infrastructure, education, health, agriculture, and the environment. In Brazil, specifically, 8 projects were approved in 2024 until the beginning of July, totaling a value of approximately US\$1.92 billion, of which 6 have climate change mitigation or adaptation components, totaling an approximate value of US\$1.77 billion (World Bank, 2024).

Among the main projects, the following stand out, for example: Sustainable Human Development in the state of Pará; Reducing the Risk of Floods and Improving Living Conditions in the Ribeirão Isidoro Basin, in Belo Horizonte; and Sustainable Development of Family Agriculture in Mato Grosso.



The complete list of projects can be consulted by accessing the data through the QRcode or by [clicking here](#)

4.2.2.1 Multilateral Investment Guarantee Agency (MIGA)

The Multilateral Investment Guarantee Agency (MIGA), a member of the World Bank Group, it offers support for private sector green investments leveraging the use of its guarantees. Among the four pillars of its operating strategy is the task of demonstrating leadership on applicable global issues, such as climate change, gender, and knowledge/advocacy on the power of guarantees. For example, in fiscal year 2021, the agency issued \$1.35 billion in guarantees, or 26% of its total new business volume, to support climate adaptation and mitigation projects in 22 countries.

These green investments include renewable energy, infrastructure, and agricultural projects, among other climate-friendly investments. The guarantees issued by MIGA facilitate cross-border green investment by providing political risk insurance and credit enhancement for investors and creditors. MIGA protects cross-border investments from sovereign risk, but not project risks. Access to MIGA coverage services and products occurs under the following conditions (MIGA, 2015):

- **MIGA insures cross-border investments made by investors from a member country**

into a developing member country and, in certain cases, an investment made by a citizen of the host country, as long as the funds are sourced from outside that country

- **Companies and financial institutions are eligible for coverage if they are incorporated and have their principal place of business in a member country or are majority-owned by nationals of member countries (state-owned companies and non-profit organizations may be eligible as long as they operate on a commercial)**
- **New and existing investments can be secured. In the latter case, the project must meet certain criteria**
- **The types of foreign investments that may be covered include equity, shareholder loans, shareholder loan guarantees, and non-shareholder loans**
- **Other forms of investment, such as technical and management assistance contracts, asset securitization, capital market bond issuances, leasing, services, and franchising and licensing agreements, may also be eligible for coverage**

4.2.2.2 International Finance Corporation (IFC)

IFC, a member of the World Bank Group, is the largest global development institution focused on the private sector in developing countries. IFC's financial products enable companies to manage risk and improve access to national and international capital markets.

Investment services product lines include loans, equity investments, commercial and commodity finance, derivatives and structured finance, and *blended finance*. They also play a catalytic role in mobilizing additional financing through shadow loans, loan participations, partial credit guarantees, securitization, loan sales, risk-sharing mechanisms, and fund investments.

To access IFC resources, a project must meet a series of criteria, such as:

- **Being located in a developing country that is a member of the IFC**
- **Being in the private sector**
- **Being technically sound**
- **Have good prospects of being profitable**
- **Benefit the local economy**
- **Meeting IFC's own environmental and social standards, as well as those of the host country**
- **IFC does not lend directly to micro, small, and medium-sized companies or individual entrepreneurs, the resource is offered through financial intermediaries that pass on loans to small businesses**

In the fiscal year ending June 2023, long-term investments in Latin America totaled about US\$9.5 billion, including US\$5.6 billion mobilized from other investors.

4.2.3 DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN (CAF)

CAF is a multilateral financial institution that promotes development and regional integration in Latin America. Created in 1970, CAF supports its member countries, both in the public and private sectors, with financing and technical services. The institution

works to strengthen integration between Latin American countries, supporting infrastructure, energy, transport, and connectivity projects that facilitate interconnection and regional cooperation. Additionally, it invests in housing, basic sanitation, and public transport to improve the quality of life in urban areas.

CAF's activities include offering loans, credits, and guarantees to governments, and public and private institutions to finance development projects in various sectors, such as infrastructure, energy, education, health, and environment. CAF also provides consultancy services and technical assistance to strengthen the institutional capacities of its member countries.

The bank's resources can be accessed by a wide range of entities, covering governments, public and private companies, as well as non-profit organizations and financial institutions, to expand access to credit. Federal, state and even municipal governments have access to develop projects that improve the quality of life of local populations, such as road construction, basic sanitation, and urban development projects.

Projects financed by CAF must demonstrate economic viability, environmental sustainability, and positive social impact. They need to be aligned with the bank's strategic priorities, which include sustainable development, regional integration, and improving basic and social infrastructure.

CAF is made up of 19 countries in Latin America and the Caribbean, in addition to Spain and Portugal. CAF's governance structure includes a Shareholders' Assembly, a Board of Directors, and an Executive Presidency. These entities are responsible for making strategic decisions, approving financing projects, and supervising the institution's operations.

The bank's portfolio, until 2023, is approximately US\$34.2 billion (including loan portfolios, equity investments, endorsements, and guarantees), of which 8.8%, or approximately US\$3 billion, in Brazil. CAF loans are approved at COFLEX, coordinated by the Ministry of Planning and Budget (CAF, 2024a).

Of the approved operations, the bank declares that 27% have a direct contribution to environmental sustainability and climate change and expresses its commitment to reaching 40% of approvals by 2026 (CAF, 2024b).

4.2.4 FINANCIAL FUND FOR THE DEVELOPMENT OF THE LA PLATA BASIN (FONPLATA)

FONPLATA (Financial Fund for the Development of the La Plata Basin) is a multilateral financial institution created to promote sustainable development and economic integration of the member countries that make up the La Plata Basin.

The institution's mission includes supporting initiatives that promote regional integration, improved infrastructure, social development, and environmental conservation. To achieve these objectives, FONPLATA offers loans and other financial mechanisms for infrastructure, transport, energy, sanitation, education, and health projects, aiming to improve the quality of life of local populations and strengthen regional integration.

FONPLATA's governance structure includes an Assembly of Governors, a Board of Directors, and an Executive Presidency. The Assembly of Governors is the highest decision-making body and is made up of representatives from each member country, which are Argentina, Bolivia, Brazil, Paraguay, and Uruguay. The Board of Directors oversees daily operations and the implementation of policies approved by the Board of Governors, while the Executive Presidency coordinates the execution of projects and the administration of the institution.

The institution's resources can be accessed by national and subnational governments, as well as other public and private entities, as well as non-governmental organizations in member countries. This includes companies from different sectors that present medium and small projects, to promote the complementation of efforts by other development agencies.

In the bank's latest annual report, for 2022, its project portfolio for Brazil was US\$194 million, totaling a total portfolio of US\$626

million. For the bank's green financing line, with more favorable interest rates, the value was US\$69 million (Fonfoplata, 2024).

4.2.5 NEW DEVELOPMENT BANK (BRICS BANK)

The New Development Bank (NDB), also known as the BRICS Bank, is an international financial institution created by the BRICS countries – Brazil, Russia, India, China and South Africa. The bank was established with the main objective of mobilizing resources for infrastructure and sustainable development projects in these countries and other emerging and developing economies.

The NDB seeks to finance projects that promote infrastructure and sustainable development, helping to address the significant infrastructure gaps in these countries. Furthermore, the bank aims to contribute to the economic and social development of its members and other developing countries, promoting international cooperation and partnership between BRICS countries and other emerging nations. This cooperation facilitates knowledge sharing and collaboration on projects of common interest.

National and subnational governments of member countries, and companies from different sectors that contribute to the sustainable development and integration of member countries can access the bank's resources, in addition to development banks financing projects that are aligned with the bank's objectives.

The NDB's governance structure includes a Board of Governors, made up of finance ministers or equivalents from member countries, which is the bank's highest decision-making body. There is also a Board of Directors, responsible for the operations and implementation of the bank's policies, and the bank's presidency, which rotates among member countries. Since its inception, the NDB has financed a variety of projects spanning sectors such as renewable energy, transport, water and sanitation, and urban infrastructure.

Recently, the bank announced US\$495 million for the reconstruction of the State of Rio Grande do Sul (CNN Brasil, 2024).

4.3 NATIONAL DEVELOPMENT SYSTEM

Brazil has a system of 34 development financial institutions, including federal public banks, development banks controlled by federative units, cooperative banks, state commercial public banks with a development portfolio, and development agencies, in addition to Finep and SEBRAE. This is the National Development System, with institutions affiliated with the Brazilian Development Association (ABDE). This block includes Bank of the Amazon (BASA), Bank of the Northeast (BNB), Bank of Brazil and Caixa Econômica Federal (CEF).

With a volume of R\$2.4 trillion in operations (statement letter from April 2024), the National Development System accounts for 45.5% of credit in Brazil and is the largest agribusiness financier in the country, responsible for 66 % of total resources. The System is a fundamental actor especially in long-term financing, with 73% of the total volume, and in investment in infrastructure, with 85% of the total volume. It also plays a central role in financing cities, accounting for approximately 99% of credit to Brazilian municipalities. These amounts are made up of our own resources and also from transfers from BNDES and Finep (with a non-refundable portion).

These institutions are committed to aligning with the Sustainable Development Goals of the UN agenda for 2030. A study conducted by ABDE and UNDP shows that the

volume of resources allocated to SDG 13 (action against global climate change) grew between 2020 and 2022, from R\$5 billion to R\$15.2 billion. However, these are smaller amounts than those allocated by the National Development System in five other SDGs. Important allocations were also recorded in clean energy and sustainable agriculture, also associated with the climate agenda.

Some institutions in this bloc advanced more than others in the classification of disbursements. Smaller institutions do not yet have a taxonomy, a problem that can be overcome with the validity of the Brazilian Sustainable Taxonomy, scheduled for 2026.

Currently, although the National Development System is a large transferor of rural credit resources and the values are accounted for as sustainable agriculture, it is not possible to identify which portion of this value goes to low-carbon emission activities.

The National Development System is also responsible for the majority of investments in cities, with a prominent role for Caixa Econômica Federal. But the largest portion of the money goes to traditional infrastructure and paving works, which earn votes for local politicians. There are difficulties in financing local adaptation and mitigation plans because municipalities lack technical capacity for this type of project and many transfers are conditioned on long-term payment capacity, which many municipalities do not have, especially considering the exchange rate risk.

IN 2024, PRESIDENT LULA ESTABLISHED THE INTERINSTITUTIONAL COMMITTEE OF THE BRAZILIAN SUSTAINABLE TAXONOMY (TSB), WHICH WILL COORDINATE ITS DEVELOPMENT AND IMPLEMENTATION.

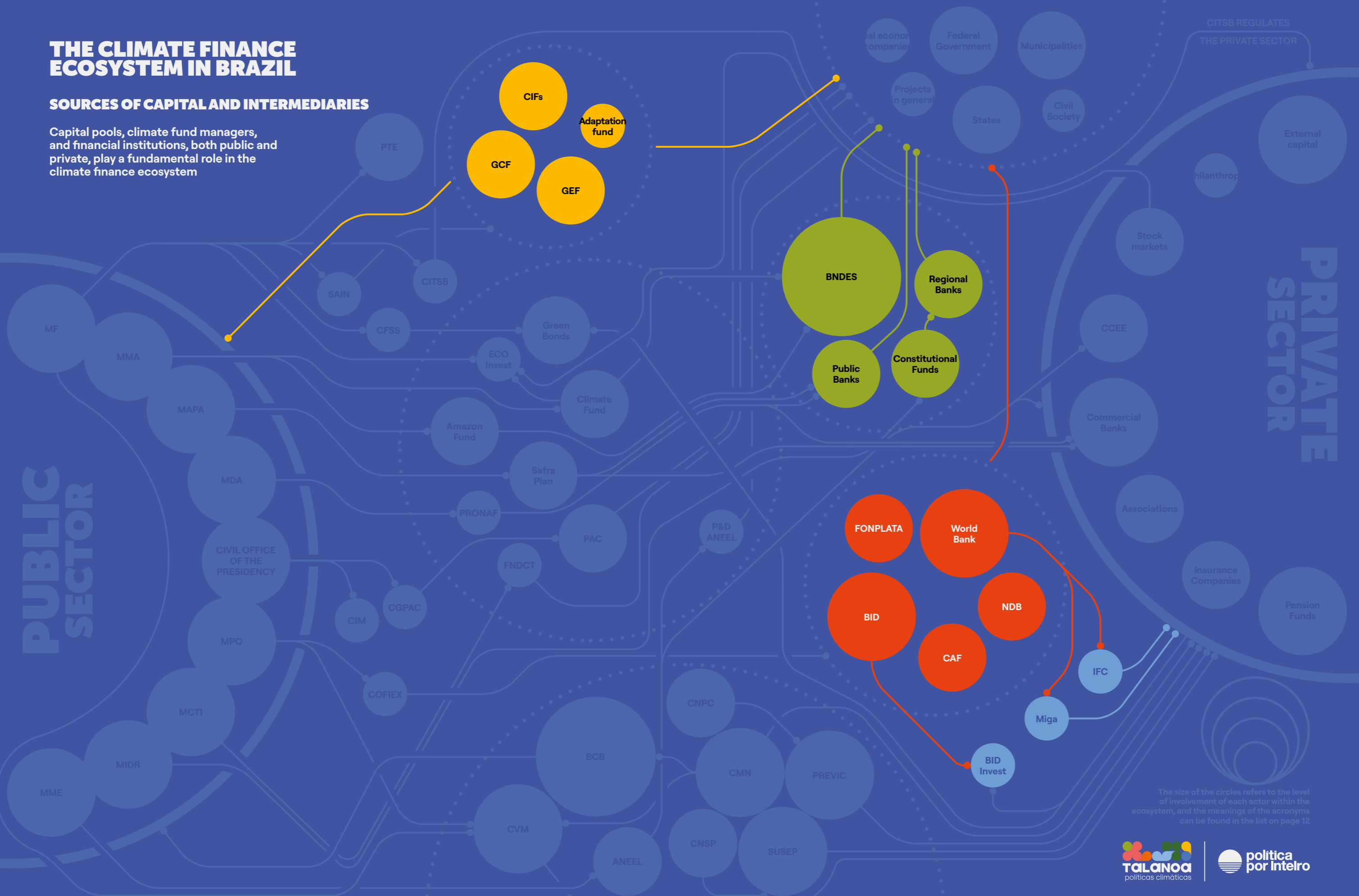
The Brazilian Sustainable Taxonomy is defined as a “system of classification of activities, assets or project categories that contribute to the achievement of climate, environmental and social objectives, through specific criteria”. The TSB will be instrumental in promoting transparency and trust in the sustainable capital market, facilitating the identification of investments that will truly contribute to environmental and social sustainability. Aligned with international standards, the taxonomy will facilitate Brazil’s integration into global sustainable finance markets. In addition, it will direct resources to climate change mitigation and environmental conservation projects.



THE CLIMATE FINANCE ECOSYSTEM IN BRAZIL

SOURCES OF CAPITAL AND INTERMEDIARIES

Capital pools, climate fund managers, and financial institutions, both public and private, play a fundamental role in the climate finance ecosystem



The size of the circles refers to the level of involvement of each actor within the ecosystem, and the meanings of the acronyms can be found in the list on page 12

4.3.1 BNDES

Climate finance in Brazil has BNDES as a protagonist due to its investment portfolio and its role as manager of the Climate Fund and the Amazon Fund. The BNDES' total credit portfolio in 2023 was R\$732.5 billion, with R\$218.5 billion approved credits and R\$114.4 billion disbursed throughout the year. The balance sheet, however, does not specify the annual amount aligned to the NDC. According to information obtained via the Access to Information Law, BNDES disbursed R\$43.9 billion in investments aimed at mitigating greenhouse gases between 2019 and 2023. These resources were invested in financing contracts in Energy, Forestry, Urban Mobility, Biofuels, Solid Waste, Public Lighting, and Transport.

BNDES, owned by the federal government and supervised by the Ministry of Finance, is one of the largest national development banks (NDBs) in the world, reflecting its relevance to the Brazilian economy. In 2018, its

assets totaled BRL 802.5 billion (USD 220 billion), corresponding to 12% of Brazil's GDP (BNDES, 2019; World Bank, 2019). Compared to multilateral development banks (MDBs), BNDES has more assets under management (AUM) than the IDB (USD 126 billion) and almost half of the World Bank's total assets (USD 413 billion) (Morris, 2018).

BNDES participates in the development of Brazil's Multi-Year Plan (PPA), providing advice in policy and budget discussions, and aligning its planning with the PPA (BNDES, 2019; BNDES, 2021). This role of influencing policies is a distinguishing feature of national development banks, highlighted even more by the composition of the bank's Board of Directors, which includes nominees from several ministers (BNDES, 2020). Furthermore, the BNDES system includes two subsidiaries: FINAME, to industrial financing, and BNDESPAR, which operates in the capital market (BNDES, 2024a).

BNDES FINAME IS A BNDES FINANCING LINE SPECIFICALLY INTENDED FOR THE ACQUISITION OF COMPUTER AND AUTOMATION EQUIPMENT AND GOODS, AND INDUSTRIALIZED GOODS OF NATIONAL MANUFACTURE, TO BE USED IN THE EXERCISE OF THE CLIENT'S ECONOMIC ACTIVITY, TO BE CARRIED OUT THROUGH ACCREDITED FINANCIAL INSTITUTIONS

The **BNDES FINAME - Low Carbon** line is specific for the acquisition and commercialization of solar and wind energy generation systems, solar heaters, electric buses and trucks, hybrids, and those powered exclusively by biofuel and other machines and equipment with higher levels of energy efficiency or that contribute to reducing greenhouse gas emissions. The interest rate is 0.95% per year, with a term of 10 years and a grace period of up to 2 years. Eligible proponents are public administration, individual entrepreneurs and micro-entrepreneurs, rural producers (individuals resident and domiciled in the country), independent cargo transporters, and individuals associated with the road freight transport cooperative and foundations, associations, and cooperatives based in the country. In addition to the specific low carbon line, FINAME stands out as an important factor in climate financing, as it is the largest source of financing for investment in capital goods in Brazil, playing a key role in the development of the Brazilian productive economy. Therefore, aligning FINAME financing criteria with Brazilian climate objectives has the potential to accelerate the transition to a low-carbon economy and favor Brazil's leadership in the climate race for green technologies. It is worth highlighting BNDES Finem, a financing line aimed mainly at large investments, generally above R\$20 million. Intended for investment projects, public or private, aimed at generating and increasing productive capacity in different sectors of the economy. The Environment category has 7 lines of credit for projects that reduce energy consumption in buildings, production processes, plants, electrical networks, and public lighting, and/or increase the efficiency of the national energy system (including the sugar-energy sector)

TABLE 4 • Financing for public or private investment projects

INVESTMENT	ABOUT	Participation	Remuneration
Energy Efficiency	Support for projects that reduce energy consumption in buildings, production processes, plants, electrical networks, public lighting, and/ or increase the efficiency of the national energy system (including the sugar-energy sector)	90%	1.1% per year
Planning and management	Support for projects aimed at management, training, systems implementation, studies, and certifications that increase companies' capacity to reduce and mitigate socio-environmental risks; optimize the use of resources used to mitigate waste disposal in line with the precepts of the circular economy; or even implement new business models based on the circular economy	90%	1.1% per year
Products and Processes	Financing for investment projects, public or private, aimed at generating and increasing production capacity in different sectors of the economy	90%	1.1% per year
Recovery of Environmental Liabilities	Financing for projects that recover degraded, mined, or contaminated areas	90%	1.1% per year
Reducing the use of Natural Resources	Financing for enterprises that promote eco-efficiency, use inputs from recycled or renewable sources (excluding sugar cane) or aimed at the production and/or use of Biogas, Biomethane, Low Carbon Hydrogen, energy storage, and national production of mineral and organic fertilizers	90%	1.1% per year
Buses and trucks*	Financing for acquisition and production of buses and trucks, electric, hybrid, and other models with electric traction or natural gas or biomethane; and other machines and equipment with highest rates of energy efficiency or that contributes to reducing the emission of greenhouse gases	90%	1.1% per year
Recovery and Conservation of Ecosystems and Biodiversity	Financing to ventures that recover degraded, mined, or contaminated areas	80%	1.1% per year

* With low-carbon traction technologies and equipment for greater energy efficiency and/or reduced carbon emissions

BNDES financing comes from 80% of government sources, including the result of contributions such as the Workers Support Fund, 10% from shareholder capital, and the remainder from international development financing and other responsibilities, such as loans from the national treasury and issuance of titles (BNDES, 2024b). The government has been striving to reduce the fiscal costs of subsidized credit, reform the financial sector, and mobilize commercial investors (OECD, 2018; OECD, 2019). BNDES' strategic and financial objectives reflect this new model, aiming to mobilize resources in the market, develop the capital market, and engage in mixed financing (BNDES, 2018).

BNDES has its structures for analyzing financing proposals from the Climate Fund and the Amazon Fund, with requests submitted to the Credit and Operations Committee (CCOp), made up of bank superintendents. Recently, the bank announced the Arco da Restauração project, in partnership with the Ministry of the Environment, aiming to restore deforested or degraded areas in the states of Mato Grosso, Acre, Amazonas, Pará, Maranhão, Rondônia, and Tocantins. The project foresees an investment of R\$1 billion, of which R\$450 million has already been approved by the Amazon Fund. Furthermore, R\$550 million from the Climate Fund will support restoration in private areas, with financing at reduced interest (BNDES, 2023; BNDES, 2024c).

A call for proposals was launched to select the three entities that will work with BNDES [National Bank for Economic and Social Development] in managing restoration projects, with the results announced in May this year. The chosen entities were: IBAM [Brazilian Institute of Municipal Administration] (Acre, Amazonas, and Rondônia), FBDS [Brazilian Foundation for Sustainable Development] (Tocantins and Mato Grosso), and CI Brazil [Conservation International Brazil] (Pará and Maranhão). The bank's goal is to restore 24 million hectares in the Amazonia by 2050, with investments of up to R\$51 billion in the first phase and up to R\$153 billion in the second phase. It is crucial to monitor the sources of financing for these resources and the progress of the project towards the goal.

4.3.2 CONSTITUTIONAL FUNDS

Created by the Federal Constitution, they aim to reduce regional inequalities, encourage productive activities, and improve the quality of life of the population in less developed areas. There are three main Constitutional Funds in Brazil:

- **NORTHERN CONSTITUTIONAL FINANCING FUND (FNO)**
Aimed at supporting the economic and social development of the Northern Region of Brazil. It offers financing for productive projects in various sectors, such as agriculture, industry, commerce, and services. In the FNO, of the R\$17.7 billion predicted, there is no classification of the amount allocated to climate financing, but there is a value detailed in the resource application plan of R\$1.6 billion (9.04%) for low-income agriculture carbon (BNDES, 2023a)
- **CONSTITUTIONAL FINANCING FUND FOR THE NORTHEAST (FNE)**
Created to promote the development of the Northeast Region. The FNE finances projects that generate employment and income, encourage production, and promote development. Currently, of the almost R\$40 billion allocated to the FNE for financing in 2024, approximately R\$5.5 billion (13.8%) is allocated to the FNE Verde (FNE, 2024)
- **CENTRAL-WEST CONSTITUTIONAL FINANCING FUND (FCO)**
Aimed at the development of the Central-West Region, the FCO offers resources for financing agricultural, industrial, and infrastructure activities, aiming at economic diversification and growth in the region. Of the R\$11 billion allocated to the FCO in 2024, around R\$0.5 billion (4.5%) is allocated to the FCO Green (for financing reforestation, and implementation of agroforestry, among other activities) (FCO, 2024)

These funds are managed by public banks: Bank of the Amazon (BASA) for FNO, Bank of the Northeast (BNB) for FNE and Bank of Brazil (BB) for FCO.

Constitutional Funds come from part of the Tax on Income and Earnings of Any Nature (IR) and the Tax on Industrialized Products (IPI), as established in the Constitution.

The funds can be accessed by companies and individuals, as long as the resources are allocated to productive activities that promote economic and social development in the benefiting region. Small, medium, and large rural producers can access resources to finance agricultural, livestock, agro-industrial activities, and the processing and marketing of agricultural products. Microentrepreneurs and small businesses also benefit from constitutional funds, receiving financial support for working capital, investments in infrastructure, and acquisition of equipment, among others; in addition to cooperatives and associations of rural producers also having access. Finally, research and innovation institutions can also access resources to finance innovation and technological development projects, especially those that aim to improve the competitiveness of productive sectors.

Financing priorities may vary according to the guidelines established by the Deliberative Councils of the Regional Development Superintendencies (SUDAM, SUDENE, and SUDECO) and the specific needs of each region.

Currently, there would be an opportunity to channel more considerable amounts of resources from these funds, and with greater transparency, towards low-carbon and adaptation activities. Furthermore, it is important to ensure that investments contributed by constitutional funds do not finance highly emitting activities.

4.3.3 REGIONAL DEVELOPMENT BANKS

Regional Development Banks play a key role in Brazilian financing as a whole, operationalizing flows so that they reach the end. Here, we list just some of the main banks among the 34 development financial institutions, as an example, to better understand their role and potential in the climate finance ecosystem.

4.3.3.1 Bank of the Amazon (BASA)

Bank of the Amazon (BASA), with R\$5.9 billion in net assets in 2023, aims to promote the economic and social development of the Amazonian region. It offers specific credit lines for renewable energy, energy efficiency, sustainable forest management, and family and low-carbon agriculture projects. These resources can be accessed by rural and non-rural, formal and informal entrepreneurs, and micro-entrepreneurs, who contribute to the maintenance and/or generation of local employment and income.

BASA manages the Northern Constitutional Financing Fund (FNO), with the main challenges being reducing deforestation rates, stimulating sustainable activities, and supporting green enterprises. It is worth highlighting the main application programs:

- **GREEN ENERGY**
Line of credit for industrial entrepreneurs to reduce energy costs. In this segment, they select micro and mini energy generation projects, production of renewable energy for their business consumption, and green transport
- **GREEN BUSINESS AMAZONIA**
Financing for service companies to implement sustainable practices, such as the adoption of eco-efficient technologies, the responsible management of natural resources, and the promotion of conscious supply chains
- **RURAL AMAZONIA**
Supports the agricultural segment and applies to enterprises of different sizes. Its objective is to support businesses with the potential to generate employment and income for the region, boosting the production chain and prioritizing renewable energy sources and green machinery

4.3.3.2 Development Bank of Espírito Santo (BANDES)

The BANDES, with R\$76 million in net assets in 2023, aims to promote the economic and social development of that state. It offers financing to companies that want to invest in energy efficiency and renewable energy. The following stand out among its credit lines:

- **ENERGY INFRASTRUCTURE PROGRAM (BANDES SOLAR)**
Finances companies that seek to invest in renewable energy mechanisms, such as the installation of photovoltaic panels and mini solar plants. BANDES Solar is part of the Support Program for Infrastructure Energy Projects, strengthens and stimulates investments by the private sector through credit and the provision of services
- **FINAME [FINANCING OF MACHINERY AND EQUIPMENT]**
Low Carbon: with resources from BNDES, it is aimed at companies that wish to invest in energy-efficient equipment and machines or that contribute to reducing GHG emissions, such as photovoltaic systems and electric vehicles or those powered by biodiesel

4.3.3.3 Regional Development Bank of the Far South (BRDE)

The Regional Development Bank of the Far South (BRDE), with R\$4.1 billion in net assets in 2023, aims to promote the economic and social development of the southern region of Brazil, which comprises the states of Paraná, Santa Catarina and Rio Grande do Sul. It also operates in Mato Grosso do Sul, according to Resolution 5,047, of November 25, 2022, of the National Monetary Council (CMN), which allows development banks to operate in states bordering the Federation unit or region where they are located installed.

In its 2023 Administration and Socio-Environmental Report, BRDE indicates that credit contracts totaled R\$5.8 billion in 2023, with R\$4.7 billion (80.9%) aligned with at least one SDG. The following stand out among its credit lines:

- **GREEN BANK**
Set of actions to promote social, environmental, and climate impact in the Southern Region, including the organization's internal climate and environmental performance, to assist in attracting international resources. It operates on three axes: 1. Mitigation of the environmental impact generated by operational activities; 2. Promotion of socio-environmental and climate projects; 3. Promotion of socio-environmental and climate projects through credit operations
- **MORE SUSTAINABLE ENERGY PROGRAM**
Supports innovation projects by large companies and strengthens PPPs for scientific, technological, and educational development
- **MORE INNOVATION PROGRAM**
Supports scientific, technological, and educational innovation projects
- **BRDE LABS PROGRAM**
Startup accelerator to promote technological solutions to anchor companies
- **RESILIENT SOUTH PROGRAM**
According to the official website (BRDE, 2024), the program has resources from the World Bank for infrastructure works to prevent and/or mitigate the impacts of natural disasters and climate risks, with a focus on floods, flooding, landslides, and other erosion processes. Eligible investments include urban and linear parks; macro and micro drainage systems and integrated urban water management solutions to enable storage, retention, and infiltration; dredging; slope stabilization; protection of river banks; solutions for mitigating and preventing coastal erosion; construction and/or rehabilitation of urban and rural roads (in association with other structural disaster risk mitigation solutions); general urban requalification (associated with other structural disaster risk prevention solutions); collection and treatment of solid waste (associated with drainage system solutions); and housing solutions for the resettlement of families removed from disaster-prone or Project-impacted areas

- **OTHER FINANCEABLE ITEMS**
Technical and environmental studies of the sector; detailed executive projects of the subproject; mapping of risk, susceptibility, and/or vulnerability to disasters; drainage plans; solid waste management plans; municipal GRD and/or contingency plans; training for municipal employees; and acquisition of systems and/or equipment for monitoring natural risks, early warning systems, emergency response, civil defense, and protective equipment

4.3.3.4 Bank of the Northeast (BNB)

The BNB, with R\$13 billion in net equity in 2023, has the mission of promoting the economic and social development of the Northeast region of Brazil. Linked to the Ministry of Finance, it works to finance projects aimed at sustainable development and reducing inequalities.

Developed a sustainable financing framework to direct resources to the low-carbon transition, reduce inequalities, and meet financing demands through the issuance of green bonds. BNB manages the Northeast Constitutional Financing Fund (FNE). It is worth highlighting the main application programs:

- **FNE GREEN**
Credit to finance the implementation, expansion, modernization, and renovation of sustainable enterprises
- **FNE SOL**
Line of credit developed to finance energy systems using renewable sources for own consumption
- **FNE INNOVATION**
Line of credit for innovations in your company's products, services, processes, and organizational methods

4.3.3.5 Development Bank of Minas Gerais (BDMG)

The Development Bank of Minas Gerais (BDMG), with R\$2.13 billion in net assets in 2023, aims to promote the economic and so-

cial development of the state. It has sought to intensify its climate financing actions through partnerships in the national and multilateral market, offering credit lines for renewable energy, energy efficiency, basic sanitation, and waste management projects.

It signed a partnership with the European Investment Bank (EIB) worth 100 million euros to develop energy efficiency and renewable energy projects. It also raised R\$500 million from the Inter-American Development Bank (IDB) to decarbonize the credit portfolio.

To date, BDMG has issued approximately R\$400 million in green bonds. The bank also invests in startups and technological innovation companies focused on sustainability. The following stand out among its credit lines:

- **BDMG SUSTENTABI CLIMATE**
Line of credit for companies with annual revenues starting at R\$16 million to enable long-term projects, focused on renewable energy generation
- **FINAME [FINANCING OF MACHINERY AND EQUIPMENT] CLIMATE FUND**
It is aimed at companies with annual revenues of R\$16 million or more to purchase machinery and equipment related to reducing greenhouse gas emissions and adapting to climate change and its effects
- **BDMG PRONAMPE**
Credit line operated by BDMG within the scope of the National Support Program for Micro and Small Businesses (PRONAMPE). Recommended for the acquisition of photovoltaic equipment, with a focus on self-consumption. Aimed at companies that earn up to R\$4.8 million per year

In its 2023 Annual Report, BDMG states that 40% of the R\$2.98 billion disbursed was allocated to initiatives linked to the UN SDGs. The energy efficiency and renewable energy projects covered 113 municipalities, with R\$376 million in credit, an increase of 59% compared to 2022. They also invested R\$328.5 millions in urbanization, sanitation, sustainability, and improvement of public services projects.

5. Financial instruments

The main instruments used in climate financing in Brazil today are concessional financing type loans, mainly in the public

sphere, see Climate Fund and Safra Plan. There is a limited concentration of grant resources available for Amazon Fund projects

TABLE 5 • Types of financial instruments



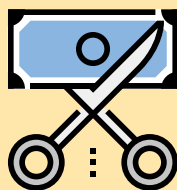
GRANTS

They do not impose a financial burden on recipients and are granted for activities aligned with government priorities. Developed countries also provide

subsidies through international cooperation

CONCESSIONAL FINANCING

Offered at below-market rates by developed countries and institutions such as development banks, it aims to accelerate development objectives, including climate action. It attracts private-sector funds by leveraging limited public resources. Examples include loans with interest rates below conventional ones, subsidies and investments in shares, such as the Climate Investment Fund (CIF)



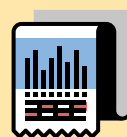
GUARANTEES

Governments and MDBs can act as guarantors, covering losses in the event of default, which reduces risk for private investors and allows for lower interest rates.

Guarantees can be partial credit, risk, political risk, or project-based, increasing the value of guaranteed projects beyond the provision maintained. One example is the Multilateral Investment Guarantee Agency (MIGA)

EQUITY FUNDS

Investments in companies that benefit from the transition to a low-carbon environment or that improve climate resilience provide direct capital to these companies

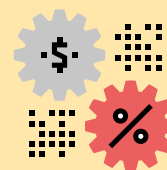


SECURITIZATION

MDBs can finance climate action by selling their green loan portfolio to a special vehicle (SPV), creating tranches and issuing bonds asset backed. Securitization reduces costs and risks for the initial originator, enabling low-cost climate financing

LOW CARBON INVESTMENT FUNDS (LCITs)

LCITs, sponsored by MDBs, raise equity capital from investors by selling units in IPOs, allowing MDBs to recover capital for new projects. These funds are traded on exchanges, with regular dividends, helping to finance green infrastructure



GREEN BONDS

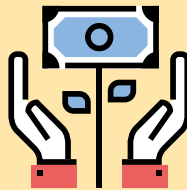
Green bonds finance environmental and climate projects, offering regular payments to investors. They help attract investors focused on low-carbon and sustainable infrastructure, taking advantage of the “greenium”

and others via access to the GCF and GEF, or via international cooperation. Instruments such as guarantees and equity still lack ex-

perimentation and scale, while *blended finance* structures are currently gaining momentum.

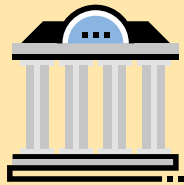
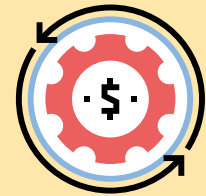
GREEN LOANS

Green loans allow borrowers to finance climate projects in accordance with green loan principles. They are an alternative for potential issuers in emerging markets with small green portfolios, avoiding higher transaction costs of issuing bonds



CREDIT SWAPS

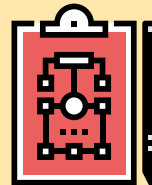
Credit swaps can mobilize resources for climate action. MDBs purchase Credit Swaps (CDS) for private investors, protecting them from default risks and encouraging debt-based climate finance at lower rates



RISK SHARING STRUCTURES (BLENDED FINANCE)

MDBs support local financial institutions by mitigating the risks of their investments

in green projects by providing irrevocable and unconditional support obligations. This increases lending capacity and finances local projects, especially for small and medium-sized enterprises (SMEs)



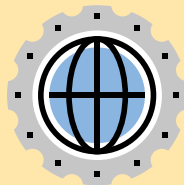
RESULTS-BASED SUSTAINABILITY-LINKED LOANS/BONDS

These loans have interest rates tied to meeting measurable intermediate goals.

Upon achieving results, borrowers receive discounts on interest rates, reducing the cost of financing. MDBs can offer these loans to encourage green and sustainable projects

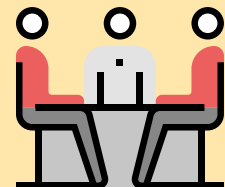
INSURANCE AND REINSURANCE MECHANISM

MDBs can design insurance products with local agencies, offering reinsurance to cover climate risks. This diversifies risk and provides low-cost financing over longer periods, especially useful for countries with high vulnerability to climate shocks



ENERGY AUCTIONS

Organized processes to contract the purchase and sale of electricity in a competitive manner, in addition to concessions for new generation projects



Sources consulted: IMF STAFF CLIMATE NOTE 2022/007, UN Financing for Sustainable Development Report 2021, GIZ 2023, GIZ 2020, GIZ 2017, Sustainalytics, World Resources Institute 2021, Network for Greening the Financial System (NGFS), Convergence.

6. Public financing channels

6.1 INSTRUMENTS AIMED EXCLUSIVELY AT CLIMATE AND/OR SUSTAINABLE FINANCING

6.1.1 ECO INVEST

In February 2024, the government announced Eco Invest, a Program for Mobilizing External Private Capital and Exchange Protection for Ecological Transformation, the subject of a provisional measure issued in April, but which still depends on other bureaucratic measures to start operating. The program was based on a diagnosis carried out with the support of the Inter-American Development Bank (IDB) and which identified exchange rate risk as the main obstacle to long-term private foreign investment in Brazil. Formally, it is linked to the Climate Fund, but it has its own governance, linked to the Ministry of Finance.

Eco Invest involves a partnership between the Central Bank and the IDB in long-term exchange rate protection, through cooperative action to acquire derivatives in the foreign market and transfer them to the Central Bank for distribution to local institutions. The program also foresees that the BNDES, through authorization granted by the National Monetary Council (CMN), will also offer financing lines aimed at liquidity and project structuring.

The program also aims to raise an estimated US\$2 billion from the IDB, both through direct support and by leveraging additional sources and donor mobilization. The World Bank (IBRD) is also expected to contribute US\$1 billion, allocated primarily to the development of projects to accelerate the decarbonization of the Brazilian economy and reduce the impacts of climate change in Brazil.

The Central Bank will be authorized to carry out exchange protection operations. Next, the CMN will define standards for the effective implementation of the Program.

The Ministry of Finance, through the National Treasury, will regulate credit lines and define the allocation of resources, which will

follow a model similar to that of the Safra Plan, for financing agriculture, to encourage the participation of private capital in ecological transformation. Also, according to the ministry, there will be reinforced governance criteria, with allocation and policy impact reports.

On June 11, 2024, Ordinance 964 of the Ministry of Finance was issued to regulate Eco Invest. The Ordinance details eligible economic activities, such as energy transition, circular economy, climate infrastructure, bioeconomy, and technological densification.

The Ordinance also establishes the governance of the program, with the creation of an Executive Committee coordinated by the Ministry of Finance, responsible for proposing competition mechanisms, monitoring the performance of operations, and approving the accountability of financial agents, with the participation of the Secretariat. Executive of the Ministry of Finance and the Ministry of the Environment.

The Executive Committee will be responsible for defining the sectors for the program's auction rounds. The program's *blended finance* line will observe financial leverage criteria, impact index, and prioritization criteria, which consider the economic effect, job creation, reduction of greenhouse gas emissions, and reduction of inequalities.

The resource allocation process will be carried out through auctions organized by the National Treasury Secretariat, with the participation of financial institutions recognized by the Central Bank. These institutions must submit pre-allocation and accountability reports, which will be evaluated by the Executive Committee of the Eco Invest Brasil Program.

Finally, the National Treasury Secretariat will be responsible for preparing an operational manual, which must be published within 60 days after the publication of the Ordinance. This one manual will guide the maximization of the environmental and social impacts of financed projects, in line with best national and international practices.

6.1.2 AMAZON FUND

Created in 2008, the Amazon Fund was resumed in 2023 as an important financing mechanism for combating deforestation and keeping the forest standing. It grants 100% non-refundable resources for efforts to prevent, monitor, and combat deforestation, as well as for projects to preserve and sustainably use the forest. Up to 20% of its resources can be granted to projects in other Brazilian biomes outside the Amazonia and in tropical biomes outside Brazil. BNDES is responsible for contracting and implementing financing for approved projects.

The Fund is supervised by a steering committee (COFA) responsible for defining the overall strategy and monitoring results. Its members come from the federal government, BNDES, and, notably, federal states with territory in the Amazonian biome, as well as civil society. The Committee is tripartite and chaired by the Minister of the Environment. There is also a technical committee (CTFA), responsible for verifying emissions from deforestation.

Until 2025, the use of money will follow established guidelines in the mid-last year, based on the commitments made with zero deforestation by 2030, especially at Amazonia (BNDES, 2023b).

The most recent balance informs that the Amazon Fund has already received donations of R\$3.5 billion (Fundo Amazônia, 2024), to which are added income of R\$2.6 billion obtained over the 15 years of the fund's operation. Of this total, R\$1.7 billion had been contracted until 2022, another R\$1.3 billion was the subject of notices launched and projects approved and contracted in 2023 and another R\$3 billion was in the backlog.

One of the most important notices launched in 2023 allocates R\$450 million to "Restaura Amazônia" [Restore Amazonia]. This amount represents the first contribution of resources towards a goal of restoring 6 million hectares in the Amazonia by 2030, mainly in protected areas, non-designated public forests, settlements, and family farming properties.

6.1.3 CLIMATE FUND

Brazil's National Climate Change Fund (FNMC) was established in 2010 to finance

mitigation and adaptation projects. It offers both non-refundable loans and loans and is structured into six programmatic areas: transport, renewable energy, desertification, energy efficiency, energy from waste, and charcoal. Fiduciary management is carried out by BNDES. Project management is divided between the Ministry of the Environment (for non-refundable loans) and BNDES (for loans).

The Climate Fund is currently the main instrument for financing decarbonization in Brazil, in the form of loans managed by BNDES. There is a smaller portion of Climate Fund resources allocated to adaptation. Under the management of the Ministry of Environment and Climate Change, this non-refundable portion of the Climate Fund foresees only R\$3.9 million in expenses in 2024, a volume that is not very significant given the challenges of adaptation in the country.

Through BNDES, the Climate Fund finances projects of up to R\$80 million, with interest rates lower than those practiced in the market. Financing is granted by the bank based on an Annual Resource Application Plan (PAAR). Between 2011 and 2023, this portion of the fund mobilized R\$3.07 billion, of which R\$1.62 billion was disbursed, according to the balance released in March.

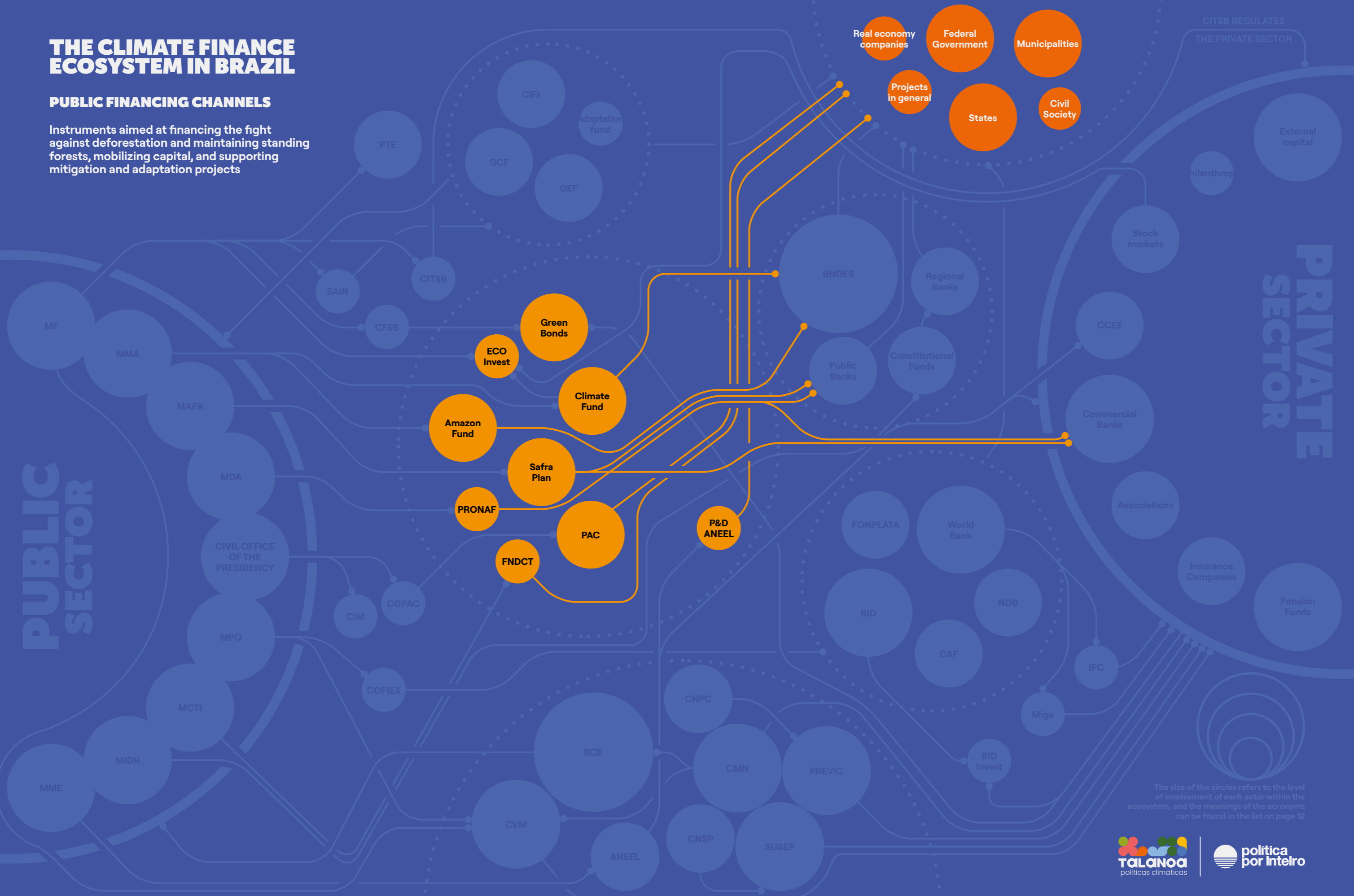
The Climate Fund can receive its financing from three sources: the federal public budget, international sources, and up to 60% of the revenue from a special tax on profits obtained in the oil production chain. In 2024, the Climate Fund gained a new scale with the contribution of R\$10.4 billion already authorized in the 2024 Union Budget. Most of this amount will come from the launch of green bonds on the international market made by the National Treasury in November 2023. The issuance of R\$10 billion in bonds was the first in a series, according to information from the Ministry of Finance.

The Fund's strategy is decided by a management committee, made up of 28 members, including representatives from the Brazilian government, BNDES, federal states, municipalities, NGOs, industry, agriculture, urban workers, rural workers, the scientific community, and the Brazilian Climate Change Forum. The committee is chaired by the current executive secretary of the Ministry of the Environment.

THE CLIMATE FINANCE ECOSYSTEM IN BRAZIL

PUBLIC FINANCING CHANNELS

Instruments aimed at financing the fight against deforestation and maintaining standing forests, mobilizing capital, and supporting mitigation and adaptation projects

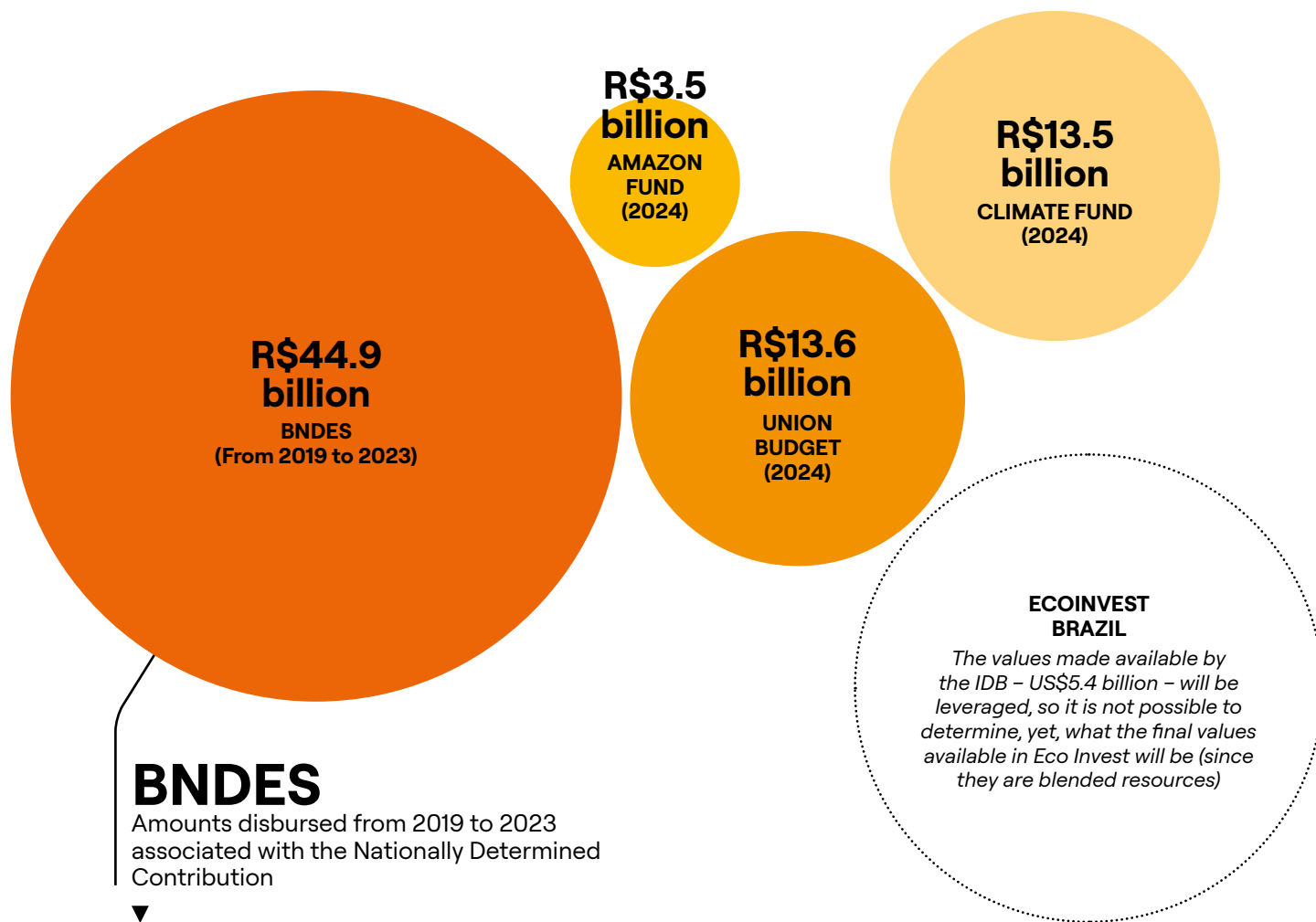


PUBLIC SECTOR

PRIVATE SECTOR

The size of the circles refers to the level of involvement of each actor within the ecosystem, and the meanings of the acronyms can be found in the list on page 12

FIGURE 1 • Where is the money available for climate finance



SECTORS	DISBURSEMENTS		
	TOTALS	CLIMATE FUND	AMAZON FUND
● ENERGY	R\$22.49 billion	R\$0.88 billion	--
● FORESTS	R\$0.62 billion	R\$0.06 billion	R\$0.49 billion
● URBAN MOBILITY	R\$12.41 billion	R\$0.07 billion	--
● BIOFUELS	R\$4.90 billion	R\$0.14 billion	--
● SOLID WASTE	R\$0.72 billion	--	--
● PUBLIC LIGHTING	R\$0.03 billion	R\$0.01 billion	--
● TRANSPORT	R\$4.40 billion	--	--

6.1.4 GREEN GRANT PROGRAM

The Bolsa Verde Program was resumed by the Brazilian government last year to encourage ecological conservation and improve the quality of life of vulnerable families living in priority areas for conservation. This program offers financial incentives to families who commit to conserving natural resources on their properties or territories.

The beneficiaries are families registered in the Federal Government's Single Registry for Social Programs (CadÚnico), in priority areas for environmental conservation, such as sustainable use conservation units, forestry settlements, and territories of traditional peoples and communities. Families receive a quarterly payment of R\$600.00 as an incentive for sustainable practices and to preserve natural resources on their properties.

6.1.5 MOVER PROGRAM

Presented by the Executive Branch on March 21, 2024, the Mover Program was approved by the National Congress on June 11, 2024, and aims to stimulate the transformation of the national automobile industry and the rules for importing vehicles into Brazil. The program seeks to promote innovation and sustainability in the automotive sector through incentives and regulation. It is considered, by government economic agents, as a key piece in the country's industrial transformation and is connected with the Ecological Transformation Plan (PTE) and the Nova Indústria Brasil Program (NIB). The descriptive core of MOVER includes the allocation of resources for investments in energy efficiency, the establishment of minimum recycling limits in the manufacture of vehicles, to develop national capabilities about the circular economy, and the negative application of taxes for less polluting manufacturers, thus creating the "Green IPI."

The applicability of tax incentives, in the form of financial credits, for companies to invest in decarbonization and meet the program's mandatory requirements will be in the order of R\$3.5 billion in 2024, R\$3.8 billion in 2025, R\$3.9 billion in 2026, R\$4 billion in 2027 and R\$4.1 billion in 2028. At the end of

the program, the total credit amount granted will reach more than R\$19 billion. For comparison purposes, the extinct "Rota 2030" Program offered an average annual incentive of R\$1.7 billion until 2022.

6.2 CHANNELS WITH A PERCENTAGE OF THEIR RESOURCES FOCUSED ON CLIMATE AND/OR SUSTAINABLE FINANCING

In general, these are channels where there is enormous potential for climate financing if alignment criteria with the Climate Plan and the Brazilian NDC are adopted. Currently, they have limited resources for actions that promote mitigation and adaptation, or there are no specific criteria that allow "marking" or measuring climate financing in the mobilization and disbursement of resources.

6.2.1 NEW PAC (GROWTH ACCELERATION PROGRAM)

Launched in August 2023, the new Growth Acceleration Program foresees investments of R\$1.7 trillion by 2026, involving resources from the Union Budget, state-owned companies, financing, and the private sector. It is coordinated by the Civil Office of the Presidency.

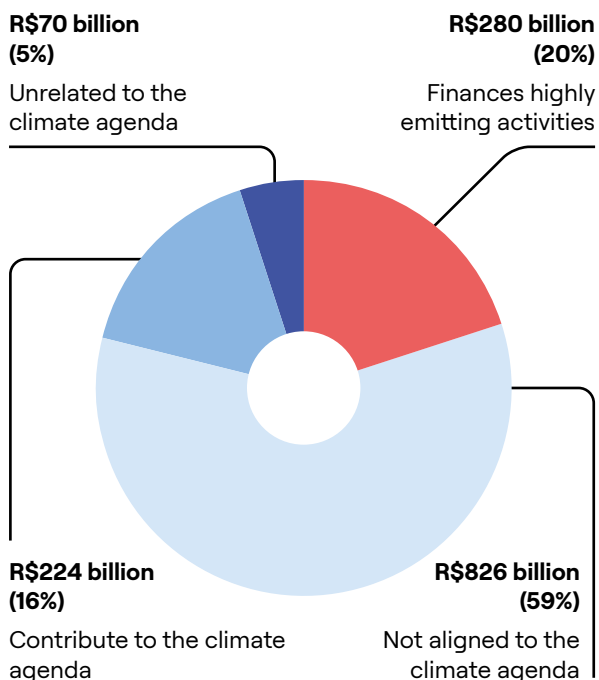
Unlike previous editions, the new PAC foresees investments in energy transition and increasing the resilience of cities to climate change. Of the R\$439.4 billion in investments planned in transition and energy security until 2026, almost 60% (R\$255.8 billion) are for the oil and gas area. Most of the resources foreseen in the resilient cities axis go to the construction of housing under the Minha Casa Minha Vida Program (MCMV); climate disaster prevention would cost R\$10.9 billion by 2026, which means less than 2% of investments in resilient cities.

In the first half of 2024, there were regulatory movements that dialogue with climate policy in the MCMV. The inclusion of minimum targets for the construction and renovation of housing in rural areas of family farmers allocates the public budget to climate adaptation for this vulnerable segment.

An ordinance made it mandatory for construction companies to obtain declarations from competent bodies ensuring that construction areas are not susceptible to flooding, floods, or landslides, a measure that can improve climate adaptation policies, but requires investment in technical capacity, cooperation with experts, and an approach based on future data, avoiding greenwashing and ineffective bureaucratic practices. A decree established the Resilient Green Cities Program (PCVR), aiming to increase resilience and environmental quality of cities, integrating urban, environmental, and climate policies. However, the decree requires greater structuring to be effective. Another decree created the Clean Energy Program in Minha Casa Minha Vida, improving housing and benefiting low-income families with reduced energy costs. The program also reduces per capita emissions, alleviates energy demand on hydroelectric and thermoelectric plants, and allows cost compensation for excess energy generated.

FIGURE 2 • Investments in the new PAC

The new PAC totals R\$1.4 trillion in investments until 2026, but not all of the amount will be allocated to the climate agenda



6.2.2. SAFRA PLAN

The country's main financing mechanism for agriculture, the Safra Plan is not aligned with encouraging low-carbon agriculture. Of the R\$400.59 billion in the current plan, from July 2024 to June 2025, around R\$7.68 billion was allocated to investments in the RENOVA-GRO line, which replaced the old ABC+ line (same name as the sectoral decarbonization policy). In other words, although it represents an increase of 12% compared to the previous period, from July 2023 to June 2024, the value still corresponds to 15.7% of investments with interest subsidized by the government and less than 2% of the total credit for rural producers.

Already in force since the beginning of the year, the rules to restrict rural credit to properties with environmental embargoes and problems in the Rural Environmental Registry (CAR) or when the CAR appears to overlap public forests were innovative. Rural credit data can be followed on the Central Bank website (BCB, 2024).

Other interesting innovations are also interest rate incentives for producers who have an analyzed Rural Environmental Registry (CAR) and those who adopt practices such as organic production (0.5% discount on the interest rate). Initiated in the last one, these innovations were reinforced in the 2024/2025 cycle, ensuring the cumulative validation of the CAR with sustainable agricultural practices for discounting interest rates.

Finally, MAPA highlighted, in the current cycle, that Renovagro Ambiental will finance environmental repairs in areas embargoed due to illegal deforestation so that they can become legal. There will also be the possibility of financing the implementation, improvement and maintenance of oil palm forests, aimed at energy production.

Among the reasons alleged by the government for the lack of interest in mechanisms such as Renovagro and other benefits for agricultural sustainability are lack of knowledge, the business-as-usual culture, and the lack of monitoring capacity, that is, Renovagro would have a more robust monitoring policy, which would make the practice of sustainable agriculture more expensive and make borrowing unfeasible, even at lower interest rates.

FIGURE 3 • How much you have in your wallet
Rural credit lines aligned with the climate agenda (Values in R\$)

CORPORATE AGRICULTURE			
PERIOD	TOTAL INVESTMENTS		RENOVAGRO LINE
	Safra Plan Corporate	With equalized interest rates	Percentage of the Renovagro line of total investments with equalized interest
2023/2024	92.10 billion	48.95 billion	6.88 billion 14.0%
2024/2025	107.30 billion	48.80 billion	7.68 billion 15.7%

FAMILY FARMING						
	LOAN		FEES		LACK	
	2023 2024	2024 2025	2023 2024	2024 2025	2023 2024	2024 2025
Pronaf Forest	20,000 a 80,000	25,000 to 100,000	4%	3%	8 to 12 years	12 to 13 years
Pronaf Bioeconomy	210,000	250,000	4%	3%	5 to 8 years	5 to 8 years
Pronaf Agroecology	210,000	250,000 to 450,000	4%	4%	14 mounths to 3 years	14 mounths to 3 years
Pronaf Costing	250,000	250,000	3% to 6%	2% to 6%	--	--

Sources: Ministry of Agrarian Development and Family Farming (MDA) and Ministry of Agriculture and Livestock (MAPA)

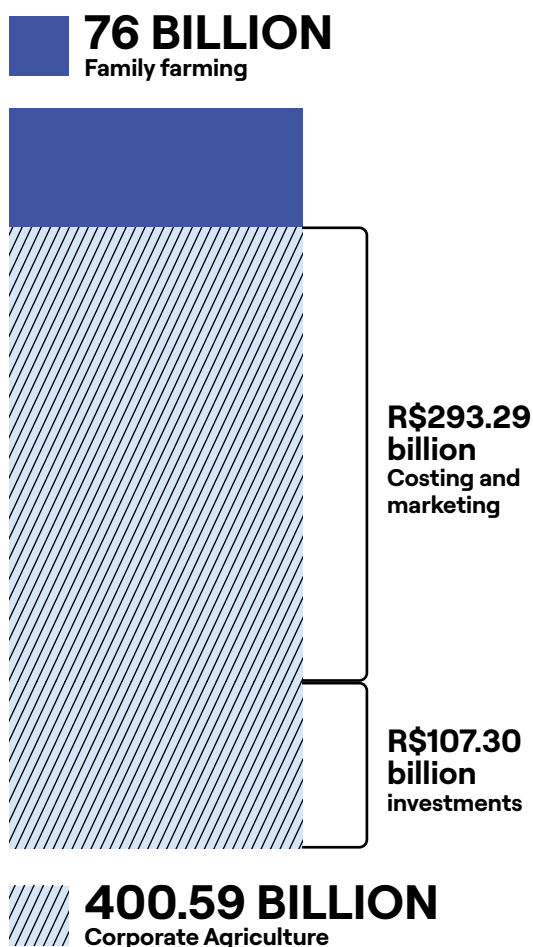
That said, it is worth highlighting that almost all of the R\$6 billion allocated to Renovagro were used in the last cycle, as previously stated, they represented an extremely small portion of the more than R\$360 billion made available in the program last year.

Pronaf [National Program for the Strengthening of Family Farming] is also part of the Safra Plan, aimed at family farmers and managed by the Ministry of Agrarian Development. With

lines such as Pronaf Forest, Pronaf Bioeconomy, and Pronaf Agroecology, the program for the 2024/2025 cycle had an allocation of R\$76 billion, an increase of 6.2% compared to the previous cycle. However, specific allocations for each of these modalities were not disclosed.

FIGURE 4 • The new Safra Plan

Value of the new Safra Plan (2024-2025) amounts R\$476.59 billion, of which R\$76 billion will be allocated to family farming, the remainder for corporate farming (Values in R\$)



6.2.3 NATIONAL FUND FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (FNDCT)

Managed by the Ministry of Science, Technology, and Innovation, the National Fund for Scientific and Technological Development (FNDCT) is intended to finance research, development, and innovation activities, with beneficiaries being both public and private institutions.

The Executive Secretariat of the fund is carried out by the public company Financiadora de Estudos e Projetos [Funding Authority for Studies and Projects] (FINEP), which finances projects through calls, often in partnership with BNDES.

The volume of FNDCT resources varies annually, depending on the federal budget and specific contributions from different sectors of the economy. In recent years, the fund has managed billions of reais, with a significant change in legislation that made the use of resources viable. In 2023, the amount available on the fund's balance sheet is approximately R\$5 billion, with approximately R\$4 billion non-refundable (FINEP, 2024a).

Of these values, there are specific lines for sustainability, such as the "Inova Sustentabilidade" [Innovate Sustainability] Program (FINEP, 2024b), a joint initiative between Finep and the MMA and BNDES. The initiative aims to research and development in the areas of biome recovery, sustainable production, environmental monitoring, and disaster prevention, among others. There is also the Finep sustainability line (FINEP, 2024c), for profit-making companies in activities such as circular economy, reducing losses in the urban and rural water system. Lastly, there are calls for topics such as renewable energy, among other topics that have an impact on the country's transition to a low carbon economy (FINEP, 2024d).

Sources: Ministry of Agrarian Development and Family Farming (MDA) and Ministry of Agriculture and Livestock (MAPA)



**HOW IS CLIMATE
FINANCING GOVERNED AT
THE FEDERAL LEVEL IN
BRAZIL TODAY?**

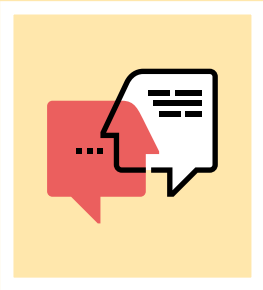
7. Governance arrangements

The successful implementation of Brazilian climate policies and commitments, including the NDC, requires an institutional arrangement that assigns roles and responsibilities about climate finance. To this end, we identified seven key functions. Distributed among different government agents, these functions complement, overlap, and articulate each other. Each entity can perform these functions, as well as the articulation between these roles, which can catalyze or seriously harm certain financing opportunities.

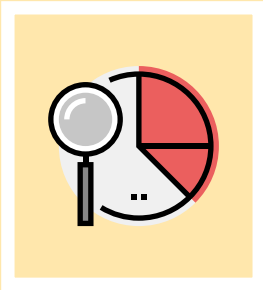
With this in mind, it is important to highlight that since the beginning of last year, the

government has been adopting significant measures to combat climate change. The resumption of the Interministerial Committee on Climate Change, the construction of the Climate Plan coordinated by the Ministry of the Environment and Climate Change, which should point out the paths through which the country will make its transition, the Ecological Transformation Plan, from the Ministry of Finance, and the integration of several industrial decarbonization actions into the Nova Indústria Brasil policies, a plan of the Ministry of Development, Industry and Commerce are some of the examples of this effort that occurs concomitantly in the government.

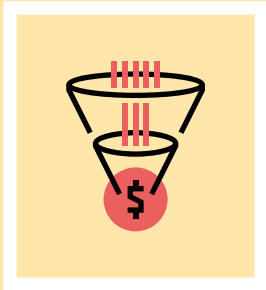
TABLE 6 •
The key functions
identified in the
Governance
arrangements



**ARTICULATION/
 COORDINATION**
 Decision-making, coordination between actors, and centralization of information on financing and investment arrangements to implement the country's climate policies and commitments



MONITORING
 Identification and monitoring of investment needs, barriers to investment, project prioritization, preparation and costing of projects, and financing gap analysis

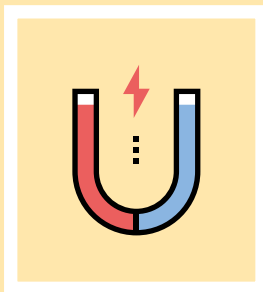


**RESOURCE
 MOBILIZATION**
 Strategy for combining financing sources, favorable environment for mobilizing resources in addition to responsibility for identifying the pipeline and mapping projects

Currently, one of the challenges presented is precisely this coordination between areas of government, with a transversal vision of combating climate change. While the Climate Plan is being created and the transition of the Brazilian economy is being considered by sector, instruments such as the Growth Acceleration Program (PAC), led by the Civil Office with a forecast of R\$1.7 trillion in investments, are already underway. Other mechanisms, such as the raising of more than R\$10 billion in green bonds, foresee the advancement of climate financing to some of the highest amounts ever seen in the country. How to coordinate actions, guarantee transversality, and work

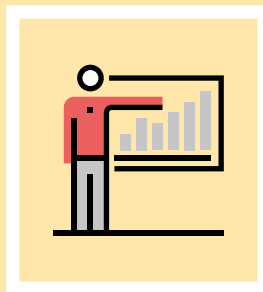
towards the effectiveness of Brazilian climate financing?

At the moment, we are witnessing not only the development of the Brazilian climate plan but also of its implementation. Therefore, we must be able to understand the context of the federal government's decision-making in its different ways and the control of resources that already exist today for the necessary climate financing for the country. Therefore, in the next sections, we will detail the different committees, commissions, working groups and government plans that directly impact the mobilization and application of resources to face the climate crisis.



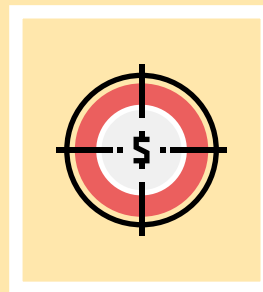
INVESTMENT ATTRACTION

Development and implementation of mechanisms to attract external investment through a series of tools, including risk mitigation and promotion of opportunities



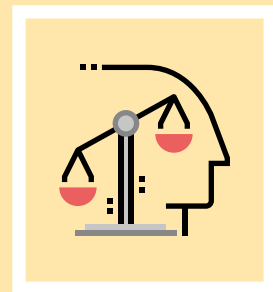
MANAGEMENT AND IMPLEMENTATION OF PROGRAMS AND PROJECTS

Design, implementation, and monitoring of government programs, the vast majority of which are transversal and require a high level of coordination, with the need and potential for capital mobilization



RESOURCE MANAGEMENT

Management of existing funds, decision-making capacity on loans, and guarantees, among other decision-making categories regarding financing flows for various projects



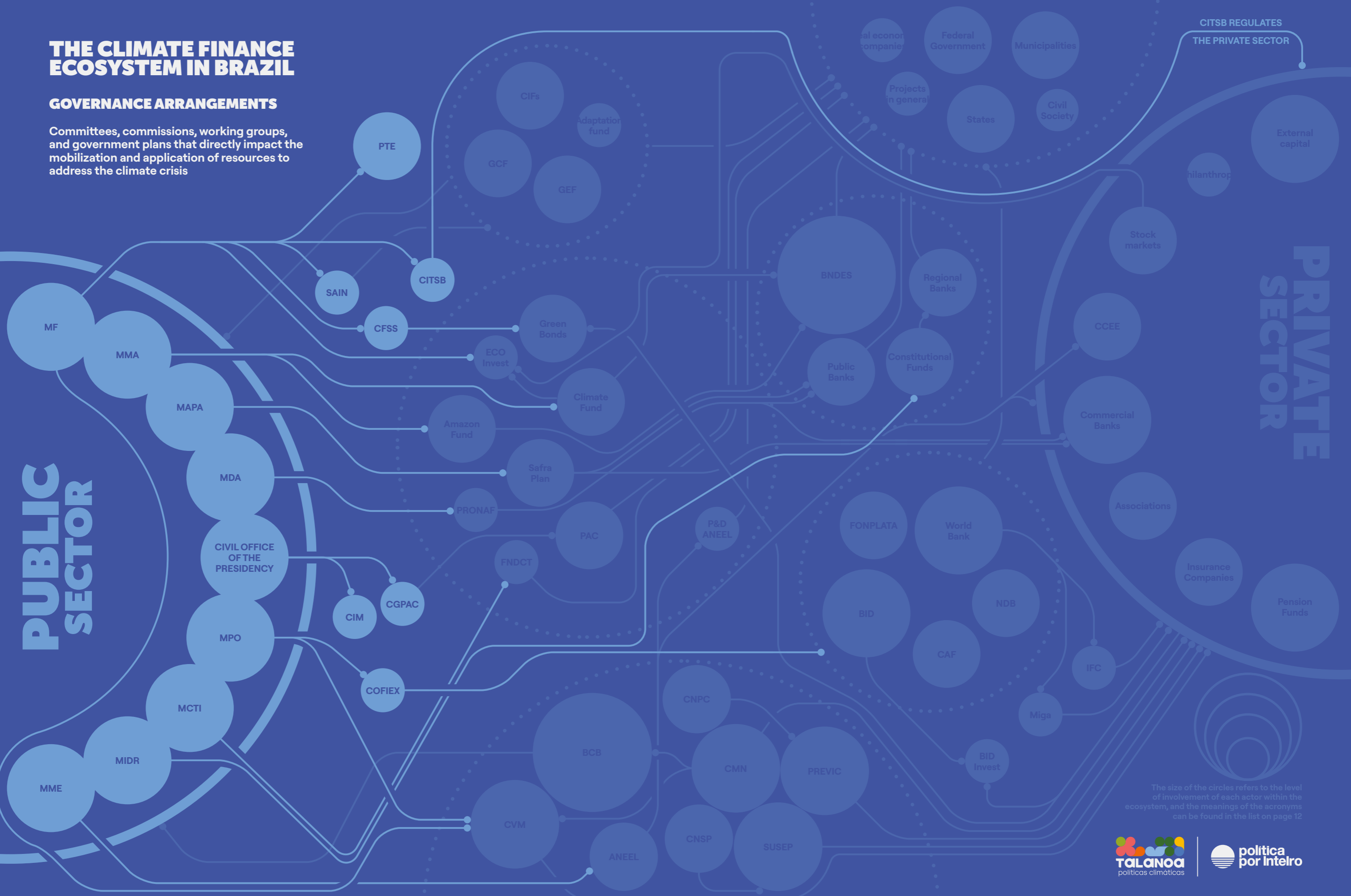
REGULATION

Development of rules of the game for public and private agents, to restrict or direct resources to necessary activities. It plays an essential role in the transition to a low-carbon economy and, if done consistently, it changes the behavior trajectory of all other actors

THE CLIMATE FINANCE ECOSYSTEM IN BRAZIL

GOVERNANCE ARRANGEMENTS

Committees, commissions, working groups, and government plans that directly impact the mobilization and application of resources to address the climate crisis



The size of the circles refers to the level of involvement of each actor within the ecosystem, and the meanings of the acronyms can be found in the list on page 12

7.1 CIVIL OFFICE OF THE PRESIDENCY

It is widely known that the Civil Office has a coordinating role in the Brazilian government as a whole. Responsible for monitoring, political articulation, and organization of initiatives from different ministries. They are also responsible for coordinating positions in the National Congress and play an important role in ensuring that necessary changes in Brazilian legislation to combat climate change are carried out.

It is no different when it comes to combating climate change. It is through the Interministerial Committee on Climate Change, whose information appears below, that this coordination role is expected from the Civil Office. It is in this context, also, in conjunction with the Ministry of the Environment, that preparations on the way to COP 30 must be led. It is also through the leadership of broad government programs, such as the New PAC, that the Civil Office has the possibility of making climate actions truly transversal in the Brazilian government. But still: with a considerable number of initiatives, financing flows, resolutions, and budgetary actions, it will be through a relevant role expected from the Civil Office that we will have the possibility of guaranteeing effectiveness and efficiency in the governance of Brazilian climate financing.

7.1.1 STEERING COMMITTEE OF THE NEW GROWTH ACCELERATION PROGRAM (PAC)

The Growth Acceleration Program Management Committee (CGPAC) is a deliberative body established by Decree No. 11,632 of August 11, 2023. It is coordinated by the Civil Office and has a mandate to implement programs, defining guidelines, criteria, actions, and measures for the implementation and execution of the New PAC. The CGPAC is made up of the highest authorities of the Civil Office, Ministry of Finance, Ministry of Management and Innovation in Public Services, and Ministry of Planning and Budget. He coordinates, monitors, and evaluates PAC projects, ensuring integration and efficiency in the execution of actions. More information about the New PAC can be found in the financing instruments section, with information about the division of the Program's investments by area.

7.1.2 INTERMINISTERIAL COMMITTEE ON CLIMATE CHANGE (CIM)

The CIM is, according to Decree No. 12,040 of June 5, 2024, "an institutional instrument of the federal Executive Branch to articulate government actions related to the United Nations Framework Convention on Climate Change – UNFCCC (...), including the objective of climate neutrality (...)". The CIM must ensure that the initiatives of the various ministries and public bodies are articulated effectively and aligned with the international commitments assumed by Brazil. The committee is responsible for monitoring the implementation of the National Plan on Climate Change and will be responsible for approving the new Climate Plan, currently under construction, in addition to its means of implementation. It is not a body that makes decisions necessarily focused on financing mechanisms, however, in the face of various government initiatives, it is from this coordination body – through the Climate Plan – that coordination between them is expected, mainly guaranteeing their effectiveness. In June this year, the CIM structure was reformed again through Decree 12,040/2024, which established an executive structure called the Executive Subcommittee, coordinated by the Ministry of Environment and Climate Change – which will be responsible, among other points, for drafting Brazil's Nationally Determined Contribution (NDC) in addition to other changes. However, it is worth highlighting that the CIM continues to face the challenge of operating at the pace required by the climate emergency and deliberating on essential issues.

7.2 MINISTRY OF FINANCE

The Ministry of Finance plays a central role in providing resources for the federal government's various initiatives, attracting external resources, and organizing financing flows, among many other fundamental facets of climate financing. Both through its Secretariat for International Affairs, and through the National Treasury Secretariat, through the Federal Revenue, among many other bodies and decision-making processes that can define the present and future of Brazilian climate financing, this is the potential for protagonism and leadership in the Finance ecosystem.

7.2.1 SOVEREIGN SUSTAINABLE FINANCE COMMITTEE (CFSS)

The Committee's mission is to develop the framework for the issuance of sustainable sovereign public bonds, with the role of mobilizing resources and attracting investments. Created in May 2023 by Decree 11,532, the committee is responsible for identifying eligible budget schedules, monitoring the implementation of the framework, and preparing allocation and impact reports, ensuring that the bonds issued are aligned with the established sustainability criteria.

It is chaired by the Secretary of the National Treasury of the Ministry of Finance and has representatives from several ministries, including Agriculture and Livestock, Science, Technology and Innovation, Agrarian Development and Family Farming, Development and Social Assistance, Family and Fight against Hunger, Development, Industry, Commerce and Services, Regional Integration and Development, Environment and Climate Change, Mines and Energy, in addition to the Secretariat of Economic Policy and the Federal Budget Secretariat of the Ministry of Planning and Budget.

The Executive Secretariat of the committee is exercised by the Sub secretariat for Public Debt of the National Treasury Secretariat. Representatives of other bodies and entities, both public and private, may also participate, as well as experts on the topics discussed, to participate in meetings without the right to vote. The first issuance of sovereign green bonds took place at the end of 2023, with a raising of US\$2 billion. More information about titles can be found in the tools section of this report.

7.2.2 INTERINSTITUTIONAL COMMITTEE ON BRAZILIAN SUSTAINABLE TAXONOMY (CITSB)

Established by Decree No. 11,961 in March 2024, the CITSB is responsible for developing and monitoring the implementation of a system for classifying activities, assets, and projects aligned with Brazil's sustainability strategy. Chaired by the Ministry of Finance, the committee brings together 27 govern-

ment entities, including the Central Bank of Brazil, the Securities and Exchange Commission, the National Superintendency of Supplementary Pensions, the Superintendence of Private Insurance, and several ministries. The objective is to create a common methodology to assess the social, environmental, and climate impact of economic activities.

The first meeting took place on April 26, and a public selection notice was approved for 18 representatives of civil society entities to be part of the CITSB advisory committee.

The country should gain a sustainable taxonomy by the end of this year. A proposal for an Action Plan underwent public consultation in 2023 and predicts that the sustainable taxonomy should become mandatory from 2026.

7.2.3 SECRETARIAT FOR INTERNATIONAL ECONOMIC AFFAIRS (SAIN)

The Secretariat for International Economic Affairs (SAIN) plays a central role in the Ministry of Finance, formulating strategies for raising resources for climate financing. This secretariat acts as the Designated National Authority for the Green Climate Fund (CGF) and, in this role, develops the update of the Country Program. This update, scheduled for the second half of 2024, aligned with Brazil's Climate Plan, still under construction by the federal government. The Global Environment Facility (GEF) and the Climate Investment Funds (CIFs) are also under the responsibility of this secretariat.

Several ministries have projects within the scope of the green funds, especially within the scope of the GEF. However, the Secretariat has the power to coordinate these resources, support the processes, and endorse cooperation.

Currently, SAIN is working on the formulation of the new Country of Brazil Program with the GCF, a strategic document that defines a country's priorities and strategies about climate finance provided by the GCF. The Secretariat will concentrate efforts on this from the second semester onwards, and the expectation is that a new Country Program will be filed in 2025.

SAIN is also responsible for the coordination of International Economic Policies: The secretariat coordinates Brazil's participation in international economic forums and organizations, such as the International Monetary Fund (IMF), the World Bank, and the World Trade Organization (WTO), among others. It ensures that the Brazilian position is coherent and well-represented in these spaces.

For this reason, SAIN has coordinated the Brazilian position on the G20 Sustainable Finance track. Along this path, one of the main priorities listed by the Brazilian government is precisely to increase the transparency of decision-making processes in funds such as the GCF and GEF for project approval, in addition to making the procedures less onerous and time-consuming, to expand access to these resources.

7.2.4 EXECUTIVE SECRETARIAT: ECOLOGICAL TRANSFORMATION PLAN

The Ecological Transformation Plan was launched at the end of 2023, at COP 28, and is coordinated by the Executive Secretariat of the Ministry of Finance. The PTE is made up of three objectives, namely social justice, sustainability, and productivity and employment, and is divided into six axes:

- **FINANCE SUSTAINABLE**
Creation of financial mechanisms, such as a regulated carbon market and the issuance of sustainable sovereign bonds, to mobilize investments in green initiatives
- **TECHNOLOGICAL DENSITY OF THE PRODUCTION SECTOR**
Encouraging the development of low-carbon technologies and sustainable innovations, aiming to modernize industrial infrastructure and increase Brazil's global competitiveness
- **BIOECONOMY AND AGROFOOD SYSTEMS**
Promotion of sustainable agricultural practices and responsible use of biodiversity, with a focus on valuing socio-biodiversity products and generating income for local communities

- **ENERGY TRANSITION**
Investments in renewable energy sources, such as solar and wind, and the development of green hydrogen and biofuel technologies, aiming to reduce dependence on fossil fuels.
- **CIRCULAR ECONOMY**
Implementation of practices that promote reuse, recycling, and waste reduction, transforming the linear economic model into a more sustainable circular model
- **INFRASTRUCTURE AND ADAPTATION TO CLIMATE CHANGE**
Development of resilient infrastructure and adaptation to climate change, including the construction of works that minimize the impacts of extreme weather events and improve the quality of life of the most vulnerable populations.

Some of the actions already underway by the Ministry of Finance that are part of the PTE are: the issuance of Sovereign Green Bonds, the creation of a Committee to prepare the Sustainable Taxonomy, among other initiatives. However, it is worth highlighting that the full details of the plan have not yet been released. Furthermore, it is important to highlight that there is still no regulation that institutionalizes the plan – be it a decree, ordinance, or other instrument – which makes it more complex and poses challenges to the scope of the plan in coordination with other ministries and government bodies.

7.2.5 EXECUTIVE COMMITTEE OF THE ECO INVEST BRASIL PROGRAM

Established by Provisional Measure 1213 of 2024, the Program's Executive Committee will be responsible for managing the credit line and attracting external investments, Eco Invest – a mechanism created within the Climate Fund operation, but with its governance. The Committee will be coordinated by the Ministry of Finance, and its competencies and committee composition will be established by the Ministry.

Financial institutions, whether public or private, may be qualified as financial agents, as long as they assume the risks of operations. The committee will also approve the qualification of institutions and submit annual reports to the FNMC Management Committee.

The Minister of Finance will establish rules to regulate the Eco Invest Brasil Program, including selection and qualification criteria for financial institutions, resource allocation volumes and limits, form and frequency of reporting, and publication of information. The committee will also be responsible for analyzing reports from financial agents regarding operations carried out with the program's resources.

The National Monetary Council (CMN) will establish standards for the External Private Capital Mobilization and Exchange Protection Line, including financial charges, deadlines, administration and risk commissions, costs, discounts, remunerations, and penalties for irregular use of resources.

It is worth highlighting that the creation of the Eco Invest line creates a considerable change in the governance of the Climate Fund. This is because, today, there is a Climate Fund Management Committee coordinated by the MMA that approves projects and governs the governance of the fund, based on the operationalization carried out by BNDES. Therefore, with the creation of the Eco Invest Management Committee, this governance becomes dual, depending on the type of resource and credit line used within the Fund. The Provisional Measure was filed at the end of April this year. Therefore, it is still being processed in the National Congress and must change by parliamentarians before its approval.

7.2.6 UNDERSECRETARY OF AGRICULTURAL POLICY AND AGRI-ENVIRONMENTAL BUSINESS

The Sub-Secretariat for Agricultural Policy and Agri-environmental Business is part of the Secretariat for Economic Policy and has the function of formulating and coordinating policies aimed at the agricultural and agri-environmental sectors.

Responsible for analyzing and proposing policies to promote sustainability in agribusi-

ness, the development of businesses related to the environment, and the articulation of initiatives that contribute to the advancement of national agricultural policy, it is an integral part of the design and planning of the Safra Plan, within the scope of the Ministry of Agriculture and Livestock (MAPA).

7.3 MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE

7.3.1 CLIMATE FUND MANAGEMENT COMMITTEE

The Management Committee of the National Climate Change Fund (Climate Fund) is the body responsible for defining the guidelines, strategies, and application of the fund's resources, aiming to promote the mitigation of climate change and adaptation to its effects in Brazil. This committee plays a key role in coordinating and overseeing the fund's activities, ensuring that resources are used effectively and efficiently to achieve the country's climate objectives.

The Steering Committee is coordinated by the MMA and is made up of representatives from various ministries and government bodies, as well as civil society. The other ministries included are the Ministries of Finance, Science and Technology, Foreign Affairs, in addition to representatives of civil society.

The Management Committee is responsible for defining guidelines, approving fund projects, monitoring and evaluating projects, and ensuring transparency and accountability.

The Management Committee of the National Climate Change Fund (Climate Fund) meets on an ordinary basis every six months. In addition to these regular meetings, the committee may meet at any time on an extraordinary basis, upon call by its president or an absolute majority of its members.

It is operated by BNDES, which manages the repayable resources of the Climate Fund, which are used to finance sustainable projects in various areas. The bank acts as a financial agent, managing the granting of credits and supervising financed projects.

For more information on the Climate Fund, see Public Financing Channels (Chapter 6).

7.3.2 AMAZON FUND STEERING COMMITTEE

The Amazon Fund Guidance Committee (COFA) is the body responsible for defining guidelines and criteria for the application of Amazon Fund resources, whose objective is to finance projects to prevent, monitor, and combat deforestation, in addition to promoting conservation and the sustainable use of forests in the Amazon. This committee is made up of representatives from different spheres of government and civil society, ensuring a broad and inclusive approach to resource management. It was reformulated by Decree 11,368 of 2023.

COFA members include representatives of the federal government: Ministry of Environment and Climate Change, which presides over it, the Ministry of Development, Industry, Commerce and Services; Ministry of Foreign Affairs; Ministry of Agriculture and Livestock; Ministry of Agrarian Development and Family Farming; Ministry of Science, Technology and Innovation; Civil Office of the Presidency of the Republic; Ministry of Indigenous Peoples; Ministry of Justice and Public Security; and National Bank for Economic and Social Development - BNDES. In addition, representatives from state governments in the Legal Amazonia participate, as well as NGOs and social movements that work in the environmental area and defend the rights of the people of the Amazonia. The private sector is also represented on the committee, with members from companies and business associations operating in the Amazonian region or who are interested in the sustainability of the Amazonia.

COFA meetings occur regularly, generally at quarterly intervals, totaling four meetings per year. However, extraordinary meetings may be called as necessary to discuss urgent or relevant issues related to the management of the fund.

Among the main functions of COFA are the definition of guidelines and criteria for the application of Amazon Fund resources, the approval of work plans and projects to be financed, and the monitoring and evaluation of the execution of projects and the effectiveness of actions financed by the Amazon Fund. bottom. The committee also promotes

coordination between different levels of government and civil society to ensure the effectiveness of conservation actions and sustainable use of forests. In summary, COFA plays a crucial role in the strategic management of the Amazon Fund, ensuring that resources are applied efficiently and transparently in initiatives that promote the sustainability and conservation of the Amazonian forest.

7.3.3 NATIONAL COMMISSION FOR REDD+ (CONAREDD+)

The National Commission for REDD+ (CONAREDD+) was recreated by Decree No. 11,548, of June 5, 2023. This commission is responsible for coordinating, monitoring, monitoring, and reviewing the National Strategy for REDD+ in Brazil. It is made up of representatives from several ministries, including the Ministry of the Environment, which chairs the commission; MAPA, MCTI, and MRE, in addition to many other government bodies.

The commission's ordinary meetings occur every six months, and it can establish up to three simultaneous Technical Working Groups to support its activities.

With the creation of the Commission and this new governance instance, the Amazonia Fund was designated eligible for access to payment for REDD+ results. The National REDD+ Strategy is defined by CONAREDD+, which defines criteria for the capture and use of these resources.

7.3.4 ENVIRONMENTAL COMPENSATION COMMITTEE (CCAF)

A collegiate body established by the Brazilian government to manage and coordinate the application of resources from environmental compensations, following current environmental legislation. Environmental compensation is a legal mechanism by which entrepreneurs who cause unmitigated environmental impacts during the implementation of infrastructure or development projects must compensate for these impacts, generally through investments in protected areas or other environmental conservation actions.

The Committee is composed of the Ministry of the Environment and Climate Change (presidency), the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA), and the Chico Mendes Institute for Biodiversity Conservation (ICMBio) and allocates resources for environmental conservation after approval at a meeting of these members. In 2023, just over R\$370 million was approved from the fund for Conservation Units.

7.4 MINISTRY OF AGRICULTURE AND LIVESTOCK

7.4.1. SAFRA PLAN MANAGEMENT

The management of the Safra Plan involves several stages and is mainly coordinated by the Ministry of Agriculture and Livestock (MAPA), with the support of the Ministry of Finance, the Central Bank of Brazil, and public and private banks.

MAPA is the main coordinator of the Safra Plan, it is responsible for defining policies, establishing general guidelines and specific policies for rural credit, marketing support, rural insurance, and sustainability programs, in addition to monitoring the execution of the plan and evaluating the results.

In conversations with agents, the gap in climate risk assessment became clear: the existing projections for designing the plan do not consider future climate scenarios or expectations of an increase in temperature, or a change in the rainfall regime, for example.

The Ministry of Finance participates in the plan by defining credit policies and allocating budgetary resources for the Safra Plan. He also collaborates in formulating financial conditions, such as interest rates and payment terms. The Central Bank of Brazil has an important role in regulating and supervising the financial system, including monitoring rural credit operations carried out under the Safra Plan, recently promoting the prohibition of credit to areas embargoed due to illegal deforestation. Public banks, such as Bank of Brazil, the National

Bank for Economic and Social Development (BNDES), and Caixa Econômica Federal, are the main operators of rural credit in the Safra Plan. They are responsible for granting loans, financing, and other financial support to farmers. Private banks also participate.

The Safra Plan is prepared annually, based on consultations with representatives of the agricultural sector, including unions, producer associations, cooperatives, and agribusiness entities

7.5 MINISTRY OF AGRARIAN DEVELOPMENT

7.5.1. PRONAF MANAGEMENT

The National Program for Strengthening Family Agriculture (PRONAF), part of the Safra Plan, but aimed at small producers and, therefore, with different interest rates and conditions, is managed by the Ministry of Agrarian Development.

7.6 MINISTRY OF PLANNING AND BUDGET

7.6.1 EXTERNAL FINANCING COMMITTEE (COFIE)

COFIE, or External Financing Commission, is a collegiate body of the Brazilian government linked to the Ministry of Planning and Budget. Its main function is to evaluate and approve requests for external financing for economic and social development projects proposed by Brazilian public entities, such as states, municipalities, and federal agencies. These loans are generally obtained from international financial organizations, such as the World Bank and the Inter-American Development Bank (IDB), FONPLATA (which provides concessional rates for sustainable projects). The commission is responsible for several essential activities to ensure the effectiveness and sustainability of funded projects. First, COFIE analyzes the proposed projects, evaluating their technical, economic, and financial feasibility.

This analysis is crucial to ensure that projects are sustainable and bring significant benefits to the country's development. After this evaluation, the committee decides on the approval of financing requests, approving only those that meet the established criteria and are considered viable.

In addition to evaluating and approving projects, COFIEIX also participates in negotiating financing conditions with international organizations, ensuring that the terms are favorable to Brazil. The committee monitors the implementation of funded projects, monitoring the use of resources to ensure that objectives are achieved effectively.

COFIEIX is made up of representatives from various ministries and bodies of the federal government, including the Ministry of Planning and Budget, which chairs the commission, the Ministry of Foreign Affairs, the Ministry of Management and Innovation in Public Services, the Ministry of Agriculture and Livestock, the Ministry of Health, the Ministry of Education, among other relevant bodies. These representatives work together to evaluate project proposals, discuss their feasibility, and make informed decisions about financing.

The COFIEIX operating process begins with the submission of project proposals by states, municipalities, and federal agencies. These proposals detail the objectives, justifications, feasibility, and expected impacts of the projects. After submission, COFIEIX carries out a technical analysis of the proposals, considering aspects such as sustainability, socioeconomic impact, and compliance with the federal government's public policies. After analysis, the commission deliberates on the approval of the proposals, and the approved projects proceed to the phase of negotiating conditions with international financial organizations.

During and after project implementation, COFIEIX monitors execution to ensure that resources are well used and that the expected results are achieved. This ensures that projects are aligned with the government's strategic priorities and bring concrete benefits to the population.

It is worth mentioning that the demand for

projects is always four to five times greater than the amount approved for loans, this is because there is a limitation on the amount that the federal government can guarantee, but the amount is still considerable: around US\$9 billion per year, or R\$45 billion reais. The recent resolution also placed a sub-limit for the climate in this value, to be established annually by COFIEIX – but the ministry claims that a third of approved projects are already for climate and/or sustainable financing.

An important gap is that smaller municipalities are unable to access the resources, as they cannot pay due to exchange rate risk, as these are long-term projects (normally 20 years, with a 5-year grace period). Furthermore, the process is time-consuming and can take around 2 years for approval – the Ministry is working on reducing the timeline.

An important update is the fact that, at its most recent meeting, held on June 11, 2024, the External Financing Committee (COFIEIX) approved the preparation of 18 projects financed with external resources, totaling approximately US\$4.7 billion. Among these, 13 projects are from subnational entities (States, municipalities, and their public companies, autarchies, or foundations) and 5 are from the Union and federal public companies.

In the South region, two projects in Porto Alegre were approved, both related to climate change: the Urban Drainage Program Resilient to Climate Change, financed by the German bank KfW, and the Reconstruction and Adaptation to Climate Change Program, financed by Novo Banco de Development (NDB). These projects total US\$268 million.

At the federal level, the Ministry of Finance's US\$1 billion project for Eco Invest Brasil stands out, which aims to attract external private investment for the country's ecological transformation. Other federal projects focus on industrial decarbonization, expanding access to environmental sanitation, and climate resilience in the Northeast.

COFIEIX is made up of members from the Ministries of Planning and Budget, Finance, and Foreign Affairs, and its approval is the first step in obtaining loans from international banks. The next COFIEIX meeting is scheduled for September 13, 2024.

The Commission analyzed a demand of more than US\$4.3 billion for approximately US\$1 billion of the limit available in Union guarantees, with projects coming from different regions of the country. In addition to the World Bank, the approved resources come from institutions such as IDB, CAF, NDB, KfW, EIB, IFAD, and AFD, focusing on areas such as public security, urban development, mobility, digital transformation, and social assistance.

7.6.2 PUBLIC BUDGET: “GREEN MARKERS”

Currently, the Ministry is in the process of defining actions to mitigate and adapt to climate change in the Brazilian government's budget, in partnership with the Inter-American Development Bank (IDB). Classification is difficult, especially about adaptation, but it is essential to work so that other policies can be defined, and the context of public financing can be better understood. The initiative is still in its early stages.

7.7 MINISTRY OF DEVELOPMENT, INDUSTRY AND COMMERCE

7.7.1 NATIONAL INDUSTRIAL DEVELOPMENT COUNCIL

The National Council for Industrial Development (CNDI) is a collegiate body of the Brazilian government, established to promote and coordinate the country's industrial policy. The CNDI's mission is to formulate strategies and guidelines for industrial development, seeking to increase the competitiveness, innovation, and sustainability of the Brazilian industrial sector.

The National Industrial Development Council (CNDI) is made up of a wide range of government and civil society representatives, ensuring an integrated approach to the formulation of public policies aimed at strengthening national industry.

Among the members of the council are the Ministers of State for Development, In-

dustry, Commerce and Services (who presides over the CNDI), Civil Office of the Presidency of the Republic, General Secretariat of the Presidency of the Republic, Science, Technology and Innovation, Finance, Relations Foreign Affairs, Planning and Budget, Regional Integration and Development, Environment and Climate Change, Mines and Energy, Agriculture and Livestock, Agrarian Development and Family Farming, Work and Employment, Transport, Health, Defense, Ports and Airports, Education, Communications, and Management and Innovation in Public Services. In addition to the ministers, the president of the National Bank for Economic and Social Development (BNDES) is also part of the CNDI.

The council also includes 21 entities representing civil society, the productive sector, and workers. These entities play a crucial role in formulating policies that promote technological innovation, sustainability, and competitiveness of the Brazilian industry.

The CNDI was responsible for approving the New Industry Brazil Plan, a new Brazilian industrial policy plan that also contains sustainability and decarbonization targets for the industry in one of its missions, created during the last year and approved at the beginning of this year.

The plan foresees significant investments and is managed in partnership with institutions such as BNDES, FINEP, and EMBRAPPII [Brazilian Company for Industrial Research and Innovation], which provide credit lines and resources from the capital market. capital, through the “Mais Produção” [More Production] Plan: a set of initiatives designed to ensure, on an ongoing basis, financing for Nova Indústria Brasil.

The Plan foresees the mobilization of around R\$300 billion to support neo-industrialization projects between 2024 and 2026, with R\$250 billion of these resources coming from BNDES and can be consulted on the program's platform (BNDES, 2024d). However, the resources indicated as available for green financing do not reach R\$1 billion, demonstrating the need for more climate investments in financing the plan.

7.8 MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

MANAGEMENT OF THE NATIONAL FUND FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (FNDCT)

The FNDCT is intended to finance research, development, and innovation activities in the country. The fund finances both public and private institutions, covering different areas of knowledge and sectors of the economy. FNDCT governance is carried out through a board of directors, made up of representatives from different ministries, government agencies, and entities from the productive and academic sectors. The Executive Secretariat of the fund is exercised by the public company Funding Authority for Studies and Projects (FINEP), which finances projects through calls, often in partnership with BNDES. Finep is linked to MCTI, which supervises the fund's activities and allocations.

7.9 MINISTRY OF MINES AND ENERGY

The Ministry of Mines and Energy is the main decision-making body regarding the country's energy future. It is also a key player in the mining industry, essential for investment in critical minerals. It is here, therefore, that fundamental elements of the country's energy transition to a fossil fuel-free matrix are decided.

7.9.1 ENERGY RESEARCH COMPANY (EPE)

Linked to the Ministry of Mines and Energy (MME), EPE functions as its technical and research arm. The company is responsible for developing studies and research to support energy planning in Brazil. Its functions include preparing the Ten-Year Energy Expansion Plan (PDE), which projects the need to expand the supply of electrical energy for the next ten years, and the National Energy Plan (PNE), which offers a long-term strategic vision for the energy sector. In addition, EPE carries out technical and economic feasibility assessments for new energy genera-

tion and transmission projects, supports the holding of energy auctions, and conducts environmental and social impact studies. The company is managed by a Board of Directors and an Executive Board. The Board of Directors is made up of members appointed by the Ministry of Mines and Energy (MME) and other government entities and is responsible for defining the company's strategic guidelines.

7.9.2 NATIONAL ENERGY POLICY COUNCIL (CNPE)

The National Energy Policy Council (CNPE) is an inter-ministerial council, whose members include the Minister of Mines and Energy, who presides over the CNPE, and ministers from other strategic sectors such as the Civil Office, the Ministry of Finance, Transport, Agriculture, and Livestock, Science, Technology and Innovation, Environment and Climate Change, and Regional Integration and Development. In addition to these, the council also has representatives from civil society and experts from the energy sector. The main function of the CNPE is to formulate general policies and guidelines for the Brazilian energy sector. The council is responsible for defining strategies for expanding the energy matrix, promoting the diversification of energy sources, and ensuring environmental sustainability. The CNPE also advises the President of the Republic on issues relating to energy policy. The CNPE, as a strategic body for national energy policy, plays a fundamental role in financing and investment decisions in the Brazilian matrix.

7.9.3 ELECTRICITY TRADING CHAMBER (CCEE)

The Electricity Trading Chamber (CCEE) is a non-profit organization founded in 1999 to develop more efficient, innovative, and sustainable energy markets. It acts as a facilitator in the energy market, integrating generators, distributors, traders, and consumers of electrical energy. CCEE works in collaboration with public authorities and sector associations to ensure that electrical energy is negotiated and accessible to all productive sectors and the population in general.

Regulated by the National Electric Energy Agency (Aneel), CCEE is an integral part of the governance of the Brazilian electricity sector, coordinated by the Ministry of Mines and Energy (MME). The organization actively participates in the Electricity Sector Monitoring Committee (CMSE) and maintains partnerships with the National Electrical System Operator (ONS) and the Energy Research Company (EPE). Its operations include market security, market opening, price formation, and energy certification, both in the free and regulated contracting environment, with annual settlements of approximately R\$150 billion.

CCEE played a crucial role in the full opening of the free contracting environment (ACL), which represents almost 40% of total electricity consumption in Brazil. To accompany this change, CCEE conducts studies to support the regulation of contracts and the contracting management of companies in the Regulated Contracting Environment (ACR), ensuring that adaptation occurs without harm to end consumers. This effort includes the centralization of settlement and the creation of new mechanisms for managing energy contracting.

CCEE is extremely relevant in the Brazilian climate finance ecosystem, as it sells electricity through auctions. These auctions seek to increase the efficiency of energy contracting, ensuring supply at the lowest possible cost and maintaining the diversity of the energy matrix. Distributors of the National Interconnected System (SIN) hire resources for the Regulated Contracting Environment, including homes and small and medium-sized companies. Auctions help to define the amount of energy available on the Brazilian grid annually, providing a medium to long-term vision of national electrical planning.

In 2022, CCEE held five auctions, transacting R\$56 billion in electricity contracts and guaranteeing R\$14 billion in investments. 161 contracts were signed with validity between 2023 and 2046. In addition, CCEE launched the first Brazilian energy certification for the hydrogen market, attesting to the origin of production from low carbon emission sources. It also introduced the Export of

Turbinable Spillway (ETS), which allows the commercialization of surplus hydroelectric energy, potentially reducing operating costs and consumer tariffs.

7.9.4 NATIONAL ELECTRIC ENERGY AGENCY (ANEEL)

ANEEL is a federal agency linked to the Ministry of Mines and Energy (MME), created by Law No. 9,427, of December 26, 1996, whose main objective is to regulate and oversee the production, transmission, distribution, and commercialization of electrical energy in Brazil.

ANEEL's role involves regulating electricity tariffs, monitoring the services provided by concessionaires, and promoting investments in the electricity sector. The agency is also responsible for holding concession auctions for new energy generation and transmission projects, ensuring competitiveness and transparency in these processes.

ANEEL is managed by a Collegiate Board of Directors, made up of a general director and four directors, all appointed by the President of the Republic and approved by the Federal Senate. This governance structure seeks to ensure independence and impartiality in regulatory decisions. The Collegiate Board is responsible for defining the agency's policies and guidelines, as well as making decisions on regulatory and inspection issues.

It is important to highlight that ANEEL manages several funds that are extremely relevant to the operation of the Brazilian electrical system, including the Research and Development (R&D) and Energy Efficiency Program, which are financed by electricity concessionaires and aim to foster technological innovation and the efficiency of the sector; the Fuel Consumption Account (CCC), intended to cover the costs of fuel used in the generation of electrical energy in isolated systems, mainly in the Northern Region of Brazil; and the Energy Development Account (CDE), which aims to guarantee the universalization of electrical energy service and reasonable tariffs, in addition to financing renewable energy sources. Together, these funds move amounts in the order of tens of billions of reais.

8. Regulation on management and attraction of private capital

8.1 GOVERNANCE AND REGULATORY SYSTEM

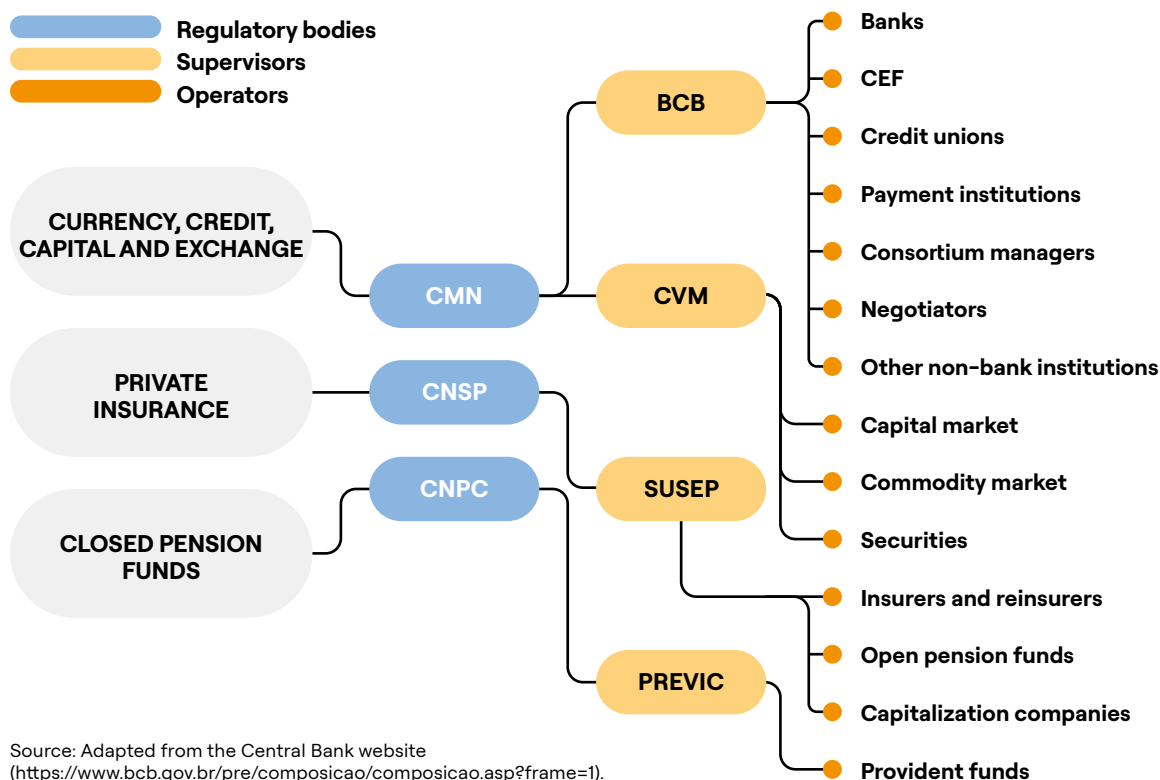
The National Financial System (SFN) is made up of regulatory bodies, supervisors, and operators. Regulatory bodies determine the general rules, supervisory entities ensure that the rules are followed, while operators are institutions that deal directly with the public, in the role of financial intermediary.

The Currency, Credit, Capital, and Exchange segment is the main branch of the SFN. Deals with the money market (provides the economy with paper money and scriptural currency), credit market (provides resources for the consumption of people in general and the operation of companies), capital

market (allows companies, in general, to raise funds from third parties, sharing gains and risks) and foreign exchange market (buying and selling foreign currency).

The Private Insurance segment comprises the private insurance market (offers risk protection services), open supplementary pensions (retirement, savings, or pension plan), and capitalization contracts (agreements in which the contractor deposits amounts and can receive them back with interest and compete for prizes). The Closed Pension Funds segment deals with retirement, savings, or pension plans for company employees, public servants, and members of associations or professional entities.

FIGURE 5 • Composition and segments of the National Financial System



Source: Adapted from the Central Bank website (<https://www.bcb.gov.br/pre/composicao/composicao.asp?frame=1>).

8.1.1 NATIONAL MONETARY COUNCIL (CMN)

The National Monetary Council (CMN) is the highest body of the SFN and is responsible for formulating currency, credit, and exchange policy, aiming at currency stability and the country's economic and social development. The council has adopted resolutions on climate risk management and disclosure, and approved changes to standards that aim to improve monitoring of the granting of rural credit, further increasing the environmental compliance of agricultural activities. Some of these rules have already come into force in the second half of 2023, restricting credit at risk of deforestation, while others will come into force in the first half of 2024.

8.1.2 CENTRAL BANK OF BRAZIL (BCB)

The BCB is the guardian of Brazil's values. It is an authority of a special nature, created by 1964 and with autonomy established by Complementary Law nº 179/2021. The BCB regulates and supervises the financial system, ensuring the solidity and efficiency of financial institutions. It has the power to significantly influence financial flows towards a low-carbon economy through disclosure requirements, establishing risk criteria, financial incentives, and creating green lines of credit. It can also facilitate the issuance of green bonds and create and encourage sustainable investment funds. The Bank has been active in international discussions, such as in the working groups of the Network for Greening the Financial System (NGFS) and incorporating sustainability issues into its guidelines. Published standards to ensure that financial institutions consider climate, social, and environmental risks in their operations and adopt international TCFD standards in their disclosures.

8.1.3 SECURITIES AND EXCHANGE COMMISSION (CVM)

The Securities and Exchange Commission (CVM) was created on 12/07/1976 by Law 6,385/76, with the objective of monitoring, regulating, disciplining, and developing the securities market in Brazil. It has a page dedicated to the topic of sustainable finance, where the main

CVM information regarding the topic is compiled. Resolution 193: establishes new rules for the disclosure of financial information related to sustainability. The CVM requires publicly held companies, investment funds, and securitization companies to publish annual reports with financial and sustainability information, following standards standardized by the International Sustainability Standards Board (ISSB). In the context of the Brazilian Emissions Trading System (SBCE), the CVM can determine that carbon credits are considered securities and regulate their trading in the financial and capital markets.

8.1.4 NATIONAL COUNCIL OF PRIVATE INSURANCE (CNSP)

For the insurance sector, the regulatory entity is the CNSP, which in addition to regulating insurance activities, also defines characteristics of open private pension contracts (EAPC). The CNSP brings together representatives from the Ministry of Finance, the Private Insurance Superintendency (SUSEP), the Central Bank, and the Securities and Exchange Commission (CVM).

8.1.5 PRIVATE INSURANCE SUPERINTENDENCE (SUSEP)

SUSEP is a body subordinate to the CNSP and is the supervisory entity for insurance and reinsurance companies, open pension funds (EAPC), and capitalization companies, being an agency linked to the Ministry of Finance (CNSEG, 2024).

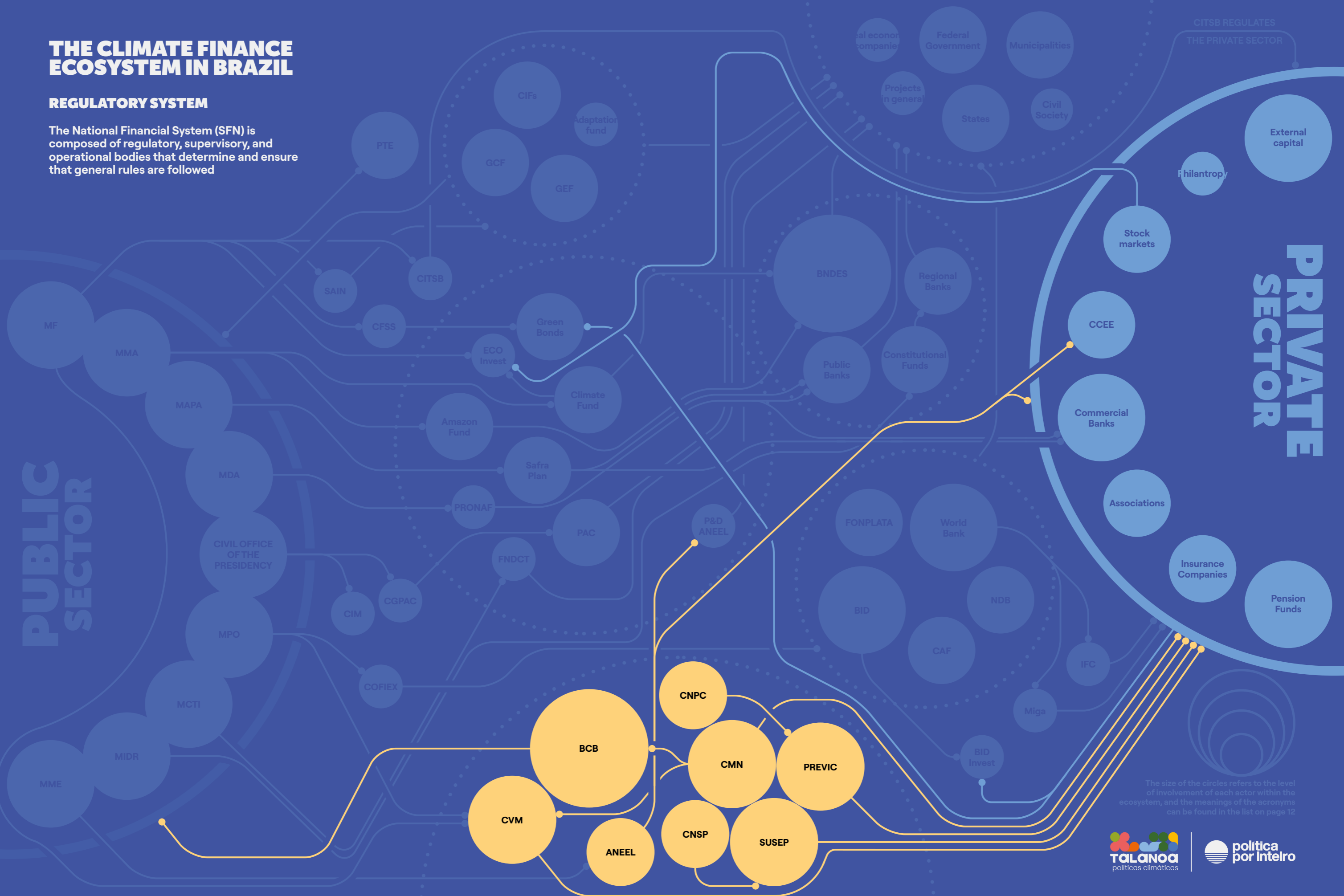
8.1.6 NATIONAL COUNCIL FOR COMPLEMENTARY PENSIONS (CNPC)

The CNPC is the regulatory body for the Pension sector. The CNPC regulates the activities of closed supplementary pension entities (EFPC) and is part of the structure of the Ministry of Social Security with representatives from the National Superintendence of Complementary Pensions (PREVIC), the Civil Office, the Ministry of Finance, the Ministry of Management and Innovation in Public Services, the EFPC, the sponsors and creators of EFPC benefit plans and the participants and beneficiaries of benefit plans (CDP, 2023).

THE CLIMATE FINANCE ECOSYSTEM IN BRAZIL

REGULATORY SYSTEM

The National Financial System (SFN) is composed of regulatory, supervisory, and operational bodies that determine and ensure that general rules are followed



The size of the circles refers to the level of involvement of each actor within the ecosystem, and the meanings of the acronyms can be found in the list on page 12

8.1.7 NATIONAL SUPERINTENDENCE FOR COMPLEMENTARY PENSIONS (PREVIC)

PREVIC is the supervisor of closed Pension Funds, linked to the Ministry of Finance. Open supplementary pension entities (EAPC) follow the rules issued by the National Private Insurance Council (CNSP) and are supervised by the Private Insurance Superintendency (SUSEP), a body subordinate to the CNSP. The Council brings together representatives from the Ministry of Finance, SUSEP, the Central Bank, and the Securities and Exchange Commission (CVM).

8.2 ORGANIZATIONS, ROLE AND RELEVANCE

Within the private sector, there are different categories of organizations, with different roles (origin, flow, destination) and relevance in aspects of regulation, training, direct contribution of financial resources, and direct impact on the real economy.

In a preliminary analysis, it is observed that the vast majority of Brazilian entities and international entities operating locally in the private sector are headquartered in the Rio-São Paulo axis, concentrating financial flow in this region.

It was identified that entities categorized as associations of private companies do not provide resources directly but are important in educational and regulatory terms as they offer informative content and guidance on adapting standards, applied rules, and representativeness of the sector.

Entities focused on financial management and direct contribution of resources, such as investment funds and private banks, play a role in the flow of financing. At the same time as they seek to meet their compliance needs with corporate responsibilities, from an ESG perspective, they also end up being catalysts and potential amplifiers of solutions oriented to environmental and social issues linked to climate mitigation and adaptation. It is noted that there may be greater technical ease and return about investments contributed to initiatives with a greater impact on mitigation, to the detriment of adaptation initiatives, the

latter being a more tangible opportunity for insurance entities. In this regard, there may be potential for Brazil to apply resources that are destined for water and food security.

Still within the scope of the private sector, another large category plays a role in allocating financing: private companies that are investing and advancing on the business development front. They are directly related to the real impacts resulting from productive activities related to land use change and more efficient industrial and logistics activities in terms of natural and energy resource use, as well as waste disposal and circularity. Adequacy of processes and development and application of new technologies become crucial for this category. This mapping does not intend to detail this category of organizations.

8.3 ASSOCIATIONS

Associations represent institutions such as banks, asset and wealth managers, stock-brokers, distributors, and administrators. The operating model is based on commitments such as: representing, self-regulating, informing, and educating. This category of organization is relevant in the climate finance ecosystem as it brings together different types of institutions in the financial sector and capital markets, with different levels of maturity and niches of activity, having a broad view of the market and understanding of advances, demands, main challenges and opportunities inherent to the sector. It is worth listing the associations below, not only because of their relevance but also because of their potential role in driving the climate financing agenda within their respective sectors:

- **ABRAPP • Brazilian Association of Closed Supplementary Pension Entities**

It has promoted training on how EFPCs (Closed Complementary Pension Entities) can integrate climate risks

- **ABVCAP • Brazilian Association of Private Equity and Venture Capital**

- **AMEC • Association of Capital Market Investors**

Carbon market and its impact on the market in the short and medium term, with emphasis on the lack of tools for measuring and monitoring GHG emissions

- **ANBIMA • Brazilian Association of Financial and Capital Market Entities**

It plays a strong role in the self-regulation of these markets. In this sense, it defined and published rules for identifying sustainable funds. It also supports initiatives such as GoBlended, to train members on *Blended Finance*

Innovation and sustainability agenda, respective market size, risks and opportunities

- **ANCORD • National Association of Stockbrokers**

Provides training on the impact of climate change on investments, recommending climate strategies for assets, and guiding how to avoid greenwashing

Financial mechanisms and instruments, where the “blended finance” model stands out

- **APIMEC • Association of Analysts and Investment Professionals in the Brazilian Capital Market**

- **Market supervision and respective self-regulation mechanisms. There are movements in the market that generate asymmetry, mainly led by pioneers in the topic of climate finance. In this case, associations play the role of defining a reference in which the group of members understands the maturity of the moment, and which demonstrates commitment across the sector**

- **FEBRABAN • Brazilian Federation of Banks**

It has a strong influence on the Brazilian banking sector. Developed a roadmap for banks to implement standardized reporting following TCFD recommendations. They have also built their own Green Taxonomy with suggestions for application to bank credit in Brazil: it proposed three classification methods:

1. “Green Economy”;
2. “Exposure to climate change”
3. “Exposure to environmental risk”

It also qualified federal financing lines for sustainable agriculture and renewable energy.

In terms of regulation and public policies, the associations' view is that the market reacts better to self-regulation mechanisms. However, there is a clear need for guidance from the government, which will come from a sustainable taxonomy. The importance of defining and framing sustainable investments is highlighted, given that there is largely an incipient view of the topic on the part of the market and the associated climate risks. Currently, the classification and reporting of sustainable investments are self-declaratory and based on a series of unofficial references.

According to ANBIMA, the main demands of members about climate and sustainability, currently revolve around:

It is worth mentioning the role of the collaborative forum of the Brazilian Association of Financial and Capital Markets Entities, the ANBIMA Sustainability Network, as a multi-stakeholder space dedicated to promoting the ESG agenda in the capital markets. The network is open for members, academics, and representatives of civil society to discuss the key trends and develop practical solutions together.

- **Global and local trends, opinions, and consensus for action on certain emerging themes such as:**

Along these lines, even though it focuses on companies in the real economy, and not necessarily on financial institutions, we can highlight the role of the Brazilian Business Council for Sustainable Development (CEBDS), which works to train private sector companies, in addition to acting with political influence, among other duties.

Organizations like these have the power to combine global trends with national signals and demands, supporting their affiliates in the low-carbon transition. It is also in these meeting and dialogue spaces that innovative solutions such as new *Blended Finance* arrangements flourish.

8.4 COMMERCIAL BANKS

The main directions and positioning about ESG strategies and specifically climate financing by commercial banks are based on the premise that the climate agenda is of paramount importance and the identified risks and opportunities must be incorporated into their operating strategy. In this sense, the main actors in this segment are adopting actions for the climate transition through the engagement of stakeholders and solutions to reduce the impacts of climate change on their businesses and own operations from the perspective of the commitment to becoming emissions-neutral by 2050.

The large banks, which hold the majority of this market, are already in the process of evaluating their exposure to different sectors and opportunities through risk management processes and climate metrics. There is a recognition that not only will they be potentially affected by climate change, but they also have a responsibility to act on the decarbonization of their customers.

As part of their operations, analyzing the potential impact, risk management, and opportunities for the sector is definitely something banks are looking at. About risk management, there is generally the involvement of senior management, committees, and a specific department that deals with the topic and that participates in spaces where discussions are evolving, which stand out: the Council for Sustainable Development

(CEBDS), United Nations Global Compact, B3, LAB for Financial Innovation, Brazilian Association of Financial and Capital Market Entities (ANBIMA) and Brazilian Federation of Banks (FEBRABAN).

For the purpose of credit availability, in the form of specific products to customers, what will directly impact the banks' portfolio profile will be the carrying out of analyses related to financial performance in addition to analyzes of socio-environmental criteria and associated climate risks. The risk management tools used by these actors are intended for use by financial management professionals, with the consideration of macroeconomic scenarios, stress tests, and simulations of shocks arising from climate change, which potentially impact the credit and investment portfolio, being crucial. However, there is a gap about the adoption of official climate scenarios prepared by Brazil, which can support, among other aspects, this decision-making.

As the issue of climate change has gained strategic importance and the main goal is to achieve GHG emissions neutrality by 2050, it is necessary to establish intermediate goals that are achievable and verifiable over time. For this to be possible, one of the sector's needs is to develop an internal data infrastructure and indexed information that allows results to be monitored, which will allow the portfolio density to be identified and classified in terms of GHG emissions. Obviously, this infrastructure must be organized in a manner appropriate to the definitions established by the Brazilian Sustainable Taxonomy and, therefore, the urgency of defining it is identified, which will also enable the comparison of the different actors in this market. Failing this, banks end up internally defining their classification of what constitutes a sustainable investment, considering the limitations and specificities of the Brazilian context.

There is agreement that both regulations and official regulations can foster competitiveness among banks, as well as facilitate the monitoring and reporting of investments aimed at mitigating and adapting to climate change.

The rhetoric is that banks themselves do not have access to cheaper resources to finance their clients' climate transition and cannot sacrifice their returns to do so on their own. In this case, the expectation is that public policies and targeted incentives can support and influence the actions of banks in this agenda, and this will directly impact the speed at which the decarbonization of their portfolios will occur. At this specific point, the discussion opens up about what would be more efficient when considering regulatory actions or incentives and to which point in the value chains related to the banking sector this should be directed, if in productive activities that are sources of GHG emissions or are at the end of the spectrum for final consumers of products from the most emission-intensive sectors.

On the other hand, the understanding currently held by some of the players in this market is that it would be easier for companies in carbon-intensive sectors to make the transition via the capital market, rather than waiting for bank credit for "green" projects. The percentage of some banks' portfolios at this point rarely exceeds single digits.

The above discussion becomes even more relevant because most of the actions and efforts towards customer decarbonization are concentrated in the wholesale segment, and more specifically in the agricultural sector, with a majority focus on mitigation and a minority on adapting climate change and that emissions related to changes in land use are known to be especially relevant in the Brazilian context.

Among the points already mentioned above, the discussion around the existence of a regulated carbon market and its relationship with Brazilian NDCs is also something that can unlock and leverage investments for the climate transition by this market. Definitions in this sense can encourage the adaptation of sectors and companies to clear emissions limits and bring greater predictability and legal certainty to the provision of financial resources. Some banks operating in Brazil have already made acquisitions of companies specialized in the origination and commercialization of carbon credits, which

demonstrates a movement of interest not only in the voluntary carbon market, as currently occurs, but also a strategy of being more prepared in a scenario where the regulated market becomes a reality.

Some points highlighted by the interviewees also mention that the main challenges faced by the market towards the climate transition involve the asymmetry of maturity and knowledge about the importance of the topic on the part of their customers, who demand educational efforts and some assistance in the more technical aspect (e.g.: emissions inventory).

Currently, the sector has been offering products and services related to climate challenges. These are some of the services identified in interviews:

8.4.1 SANTANDER

- **DEDICATED GREEN PRODUCTS**

Dedicated products that, due to their purpose, are considered sustainable, such as financing for retail solar panels (residential and commercial), financing the purchase of an electric or hybrid car

- **SPECIAL PURPOSE TRANSACTIONS**

Aimed at corporate clients, rural credit, from capital market instruments that may or may not be green depending on what they finance (e.g., wind farms, renewable energy generation), electrification of vehicle fleets, sanitation, biogas plants). In this case, there is governance, in which a committee evaluates these projects

- **OPERATIONS LINKED TO SUSTAINABILITY GOALS**

Based on KPIs, they are more complex and depend on greater customer maturity. It is more advanced in the international capital market, through the issuance of green bonds

8.4.2 ITAÚ

- **ESG DEBT SECURITIES IN THE CAPITAL MARKET**

Structuring of ESG debt securities issues in the local and international markets following the guidelines of the International Capital Market Association (ICMA), including Green, Social, Sustainable, and Sustainability-linked Bonds operations linked to goals of sustainability, which can contribute to climate objectives

- **GREEN FINANCIAL LETTERS**

Green financial letter operation, whose resources are used to support the financing of electric, hybrid and multi-fuel vehicles

- **BIOINPUTS**

Line available in two modalities – use and commercialization – to expand the supply of products on the market and encourage the adoption of low-carbon technologies in the agricultural sector

- **FLATGREEN ENTREPRENEUR**

Encourages the financing of more sustainable real estate, commercial, or residential projects through different conditions, which may include better financing rates

- **SPECIFIC CREDIT LINES**

Solar energy projects, production certified by sustainable production protocols, land cover and regenerative agricultural practices, agricultural insurance against extreme weather events in partnership with insurance companies

- **INVESTMENTS**

Through Itaú Asset Management, funds are structured with a thematic ESG bias, associated with water, clean energy, and the green economy. Fixed income operations with a green seal

8.5 CAPITAL MARKET

Society is constantly changing and the way they interact with each other, in the environment in which they live, is updated with the availability of new knowledge, technologies, and global trends. In this context, the financial industry is also undergoing restructuring in its modus operandi and may open the possibility of redirecting financial resources to other formats, potentially presented by the investment funds industry.

A type of capital that is especially relevant in climate finance is entrepreneurial capital (ABVCAP, 2024), fundamental in the development of capital markets and emerging economies, which circulates through Venture Capital funds (related to early-stage ventures) and Private Equity (linked to larger companies). mature, in the process of restructuring, consolidating, and/or expanding their business) and which has stood out significantly in Brazil. This is a type of investment that involves participation in companies with high potential for growth and profitability, through the acquisition of shares or other securities (convertible debentures, subscription bonuses, among others), to obtain gains significant amounts of capital in the medium and long term, according to the investment focus defined by investors or funds. Investment managers more prone to risk-return contribute financial resources, sharing business risks. Investments can be directed to any sector that has the prospect of great growth and long-term profitability, according to the investment focus defined by investors or funds and can obviously offer capital for climate financing.

The challenges most commonly cited by this type of actor are being able to attract funds on a large scale that can be remunerated with a longer return period and with acceptance of the possibility of not presenting the highest financial performance, or in more extreme cases failing in this last aspect. Investments that involve the generation of significant impact, applicable to cases of climate mitigation and adaptation, involve a certain degree of innovation, which in turn, have risks and require managers of this category to have a significant adaptive management capacity.

This is because in addition to having to be skilled in making decisions in the composition of the portfolio, it is necessary to have the insight and definition of a divestment strategy when the impact generated is not sufficiently justifiable or even negative.

Risk is an intrinsic aspect of the capital market and undeniably, the risks associated with climate change can enhance the market. However, little has been used as a reference in more refined climate scenarios that help decision-making by managers, beyond the associated financial risks. In this sense, the tool stands out Aladdin, a risk assessment software developed by [BlackRock](#) (BlackRock, 2024). This platform grants a “climate/ESG score” for each product in the portfolio, with the capacity to monitor more than two thousand risk factors daily and subject approximately five thousand portfolios to stress tests, considering more than a thousand different scenarios. According to Forbes, this tool performs 250 thousand operations per day, has 25 thousand users, and monitors US\$18 trillion (Forbes, 2018).

In the capital market, as in any other type of market, there must be a clear demand

at the same time as there is adequate supply. Regarding this point specifically, there is a need for projects and companies to be aligned with investor demands and international standards. At the same time, the analysis of potential investment opportunities aligned with the climate transition can be quite challenging, as additional new aspects related to intrinsic risks and positive impacts to be generated (both environmental and social) must be considered in the decision-making process. This turns out to be one of the biggest bottlenecks in making investments, especially when we analyze that even before the investment phase in venture capital and private equity, there is a whole effort to encourage and structure projects, businesses, and technologies that can be invested in, and that this involves an even greater degree of risk and uncertainty. In this sense, the “*blended-finance*” format has become popular and of interest to the capital market, as it brings a reduction in risks in more innovative projects and more incipient businesses, ensuring that there will be no greater losses to the repayable capital, as a “*first-loss*” will be ensured by philanthropic capital.

ETFs (EXCHANGE-TRADED FUNDS), ALSO KNOWN AS PASSIVE INVESTMENTS OR INDEX FUNDS, ARE AN INVESTMENT STRATEGY THAT AIMS TO REPLICATE THE PERFORMANCE OF A SPECIFIC MARKET INDEX. THESE INVESTMENTS GENERALLY HAVE LOWER COSTS, THEY ARE MORE DIVERSE AND ALSO SIMPLER TO MONITOR WHEN COMPARED TO ACTIVE INVESTMENTS. CURRENTLY, MOST MANAGERS USE ETFs TO GUIDE THEIR INVESTMENTS

There are a large number of sustainability indexes, however, it is climate indexes that play a crucial role in directing capital specifically towards climate finance. These indexes focus on companies and projects that contribute to mitigating climate change and adapting to its effects. Currently, in Brazil, the only index that deals exclusively with climate issues is the Carbon Efficient Index (ICO2). This index aims to encourage publicly traded companies to disclose data on their emissions. Other indexes that incorporate climate criteria are:

- ICDPR70
- MSCI ACWI PAI
- MSCI ACWI Low Carbon Target
- MSCI EM Climate Action
- MSCI EM Climate Change
- MSCI EM ex Fossil Fuels
- ISE
- WISGI
- 4Good Emerging LA
- 4Good Brazil

The main sustainability-related indices that guide investments that can be applied by investors and potentially directed to climate finance are:

- **S&P 500 ESG INDEX**

S&P represents the 500 largest publicly listed companies in the US. It a performance indicator and is often used to analyze long-term trends in the stock market. The S&P 500 ESG Index, specifically, is an index projected to evaluate the performance of stocks that follow sustainability criteria, while maintaining a industry sector distribution similar to the one of S&P 500

- **CARBON EFFICIENT INDEX (ICO2 B3)**

The companies' adherence to ICO2 demonstrates their commitment to the transparency of their emissions and anticipates the vision of how they are preparing for a low-carbon economy

- **CORPORATE SUSTAINABILITY INDEX (ISE B3)**

The objective of ISE B3 is to be an indicator of the average performance of the asset prices of companies selected for their recognized commitment to corporate sustainability

Currently, there is still a greater focus on investment by asset managers in more structured companies, mainly those listed on the stock exchange, which are related to the indices described above, or large family-owned companies. This is explained by the fact that such companies have more established governance and favor strategic and operational decision-making that is somewhat more independent and decentralized, offering greater security to managers and easier investment exit when necessary. This is a general behavior of investors, which also ends up being replicated by investments made on climate issues.

Given this fact, a gap in public policies aimed at facilitating and enabling access to resources from the capital market for small and medium-sized companies, which have limited resources and structure, is identified. In this sense, B3 created an entry listing segment, "BOVESPA Mais" idealized for small and

medium-sized companies, to prepare them adequately, implementing high standards of corporate governance and transparency with the market, and at the same time having good visibility and accessing resources via the capital market. However, the initiative has not yet demonstrated widespread adoption by the capital market. What has occurred most commonly in the capital market is for companies to access resources through thematic debts, which are often linked to the achievement of targets established to reduce GHG emissions.

[BOVESPA Mais – Literally, São Paulo Stock Exchange (BOVESPA) Plus is a listing segment of B3, the main stock exchange in Brazil, designed to provide alternative access to capital markets for smaller companies aiming for growth and development, with more flexible listing requirements and a focus on long-term growth and corporate governance – note of the translator].

Something that stands out in the fund industry is that reputation is one of the crucial criteria for choosing a manager allocators and capital owners. Among other criteria such as preference, and investment profile, detailed attention is paid to the resource manager's history. In addition to this aspect, the existence of definitions and classifications of what constitutes a sustainable investment is fundamental to the evolution of the fund industry as a factor for attracting capital, leveraging and accelerating climate transition financing, and the importance of a Brazilian Sustainable Taxonomy. What has already been noticed in this market is the movement to do so 'voluntarily', in spaces that develop the market through self-regulatory measures (Anbima, 2024a).

In this sense, efforts are focused on enabling adequate identification of sustainable products among investment funds, such as the Anbima initiative, on rules and procedures for classifying IS (Sustainable Investment) funds, which have specific risks and opportunities, to ensure consistency between the name and the objective of the bottom; differentiate them and establish requirements for them to demonstrate their commitment and information on action in this regard.

It is noted that the capital market is currently going through a learning curve, constantly reviewing and evolving about the topic of sustainability.

Based on interviews with capital market actors, it was identified that some investment funds and actors related to this ecosystem are already starting their operations

with this focus, operating in the impact investment segment, while others are trying to adapt to new trends and adapt their portfolios to the new reality. In both cases, the fiduciary duty prevails to continue providing investors with expected returns and applying 'stewardship' codes by 'risk-return' profiles and preferences.

TABLE 7 • The main references currently used by the market to guide investments and report financial information linked to climate are

PRINCIPLES FOR RESPONSIBLE INVESTMENT (PRI)

UN-supported network that provides a framework for incorporating ESG factors by investors. The PRI assists signatories in including ESG issues in their decisions and practices. The annual report made by signatories must provide specific climate information, and net zero emissions

GLOBAL SUSTAINABLE INVESTMENT ALLIANCE (GSIA)

An alliance that promotes sustainable investment globally to increase collaboration and promote investment practices that incorporate ESG factors

GLOBAL ESG DISCLOSURE STANDARDS FOR INVESTMENT PRODUCTS

A set of standards published by the CFA Institute, provides a standardized framework for disclosing information about investment products that consider ESG factors

BS ISO DIS 32210: 2022 SUSTAINABLE FINANCE

First global standard dedicated to sustainable finance. Created by ISO (International Organization for Standardization), its objective is to provide the financial sector with practical guidance on how to integrate sustainability principles into its operations

THE NET ZERO ASSET MANAGERS INITIATIVE/NET ZERO ALLIANCE

Commitment to zero institutional emissions by 2050 and support investments towards this objective, limiting global warming to 1.5 °C

GLOBAL REPORTING INITIATIVE (GRI)

An initiative that develops and disseminates guidelines for preparing sustainability reports

SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB)

A group that develops and disseminates sustainability accounting standards to help public companies disclose relevant information about sustainability to investors

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

Task force created by the Financial Stability Board (FSB) that developed recommendations on climate-related financial information disclosures. It aims to support companies to provide clear, consistent, and comparable information on financial risks and opportunities related to climate change. The TCFD work was completed in 2023 with ISSB standards and IFRS currently assumes the role of monitoring the TCFD climate-related information disclosure

TASK FORCE ON NATURE FINANCIAL DISCLOSURES

Related Financial Disclosures (TNFD) - an initiative that aims to develop and promote recommendations for financial disclosures related to nature. Similar to the TCFD, the TNFD focuses on supporting companies and financial institutions to understand and disclose the financial risks and opportunities associated with biodiversity and ecosystems

IFRS S1 AND IFRS S2

Standards from the International Sustainability Standards Board (ISSB) that support the dissemination of information about initiatives linked to ESG

CVM RESOLUTION NO. 193

Deals with the preparation and dissemination, by publicly held companies, securitization companies, and investment funds, of financial information reports related to sustainability

NATIONAL INVESTMENT AND IMPACT BUSINESS STRATEGY (ENIMPACTO)

Is an articulation of bodies and entities from the federal public administration, the private sector, and civil society to promote an environment favorable to the development of impact investments and businesses

Yet another aspect that can be considered a challenge in this market is the vast diversity of managers, the size and focus of action of funds, and the strong asymmetry of maturity and information about the risks and opportunities of climate change in their strategies. Therefore, in addition to a classification reference, there is a demand for educational aspects and market awareness. Furthermore, it is noteworthy that the actors in this market who have already demonstrated steps in this direction, count on the engagement of their leaders, as agents of change.

According to a study on Brazilian investors and the climate agenda (IPC, 2023), More than twenty Brazilian investors, who together have more than R\$2.3 trillion in assets under man-

agement, joined the commitment, pledging to disclose information about the management of risks and climate opportunities in their portfolios and to engage at least one company invested in this schedule. In an interview with managers who already have this mentality and who have been working in a pioneering way in climate finance, mention that there is difficulty in creating more attractiveness for investments of this type, not only with regulatory measures, improvement of favorable macroeconomic conditioning measures but also in a maturing demonstration of the impact generated, whether through econometrics metrics or the format of deliverable products, in addition to the satisfactory financial return, which is mandatory in all cases.

TECHNOLOGY

AS MENTIONED PREVIOUSLY, THE FINANCIAL INDUSTRY IS GOING THROUGH CHANGES AND CURRENT TECHNOLOGIES OFFER COUNTLESS POSSIBILITIES FOR INNOVATION FOR THE SECTOR. THE CRYPTO ACTIVE MARKET, BASED ON DECENTRALIZED REGISTRATION TECHNOLOGIES (DISTRIBUTED LEDGER TECHNOLOGIES - DLT) IS STILL IN ITS INFANCY BUT HAS GAINED RELEVANCE IN RECENT YEARS, INCLUDING FOSTERING DISCUSSIONS AROUND REGULATIONS AND NEW BRAZILIAN LEGISLATION. THE BILL (PL 4401/21) DEFINES RULES AND GUIDELINES FOR “VIRTUAL ASSET SERVICE PROVIDERS” AND INCLUDES ALL COMPANIES THAT OPERATE IN THE TOKENIZATION, CUSTODY, AND TRANSFER OF DIGITAL ASSETS

There is still no consensus on what types of operations are permitted in this field. But the fact is that there is interest from certain types of investors and, some pilot initiatives have emerged to value, track, and commercialize sustainable assets (Real World Assets - RWA), through tokenization, in an even more niche market within the cryptocurrency market, called Refi, or Regenerative Finance. In this sense, actors in the financial industry have also mobilized and positioned themselves. The CVM, for example, has already stated that cryptocurrencies do not present a threat to capital market which may represent investment opportunities. The CVM has an experimental environment (Regulatory Sandbox), in which admitted proponents receive temporary and conditioned authorization to develop monitored, guided, and regulated activities in the capital market, including the tokenization of assets. The sandbox is a new regulatory approach aimed at fostering innovation in regulated activities. Therefore, it can be applied to innovative approaches to climate finance by enabling the tokenization of related assets, as well as digital financial mechanisms or instruments, such as tokenized funds and crypto assets based on sustainable assets such as carbon, biodiversity, real estate assets, and beyond. , and can also converge with other technologies that enable the development of digital twins of physically existing assets. As this is a very innovative field, approaches such as regulatory sandbox can enable the execution of tests of the innovative business model, as the authorizations granted by the CVM, in this case, will be accompanied by exemptions from regulatory requirements, ordinarily applicable to regulated activities, such as those practiced by the capital market. In fact, the Central Bank itself has just developed its digital currency, Drex (Real Digital). With Drex, the operations of new financial service providers and new business models at lower costs are expanded. There is still no clear connection between Drex and climate finance, but in the future, it could be something that could make it possible in some way. Some types of investments for this purpose are in the capital market. The fact is that asset tokenization refers to the digital representation of non-financial assets and the issuance of digital assets on decentralized networks (DLT - Decentralized Ledger Technology) and this is a growing trend in financial markets(BCB, 2023b). Given the relevance, GT Fintech, from the Financial Innovation Laboratory (LAB), has been dedicating itself in recent years to understanding advances in discussions of DLT technologies and their possible applications³⁵ (LAB de Inovação Financeira, 2024). DLT promises cost reduction through automation (programmability), standardization and interoperability, reuse of protocols, and composition (composability) of financial services with the accessible use of smart contracts, which are executed automatically when terms and Predetermined conditions are met, with greater security, transparency, and traceability. This may be particularly interesting for Sustainable Bonds and more broadly in the monitoring and reporting of financial activities focused on climate issues, as well as the operationalization of international resources to comply with the Paris Agreement.

8.6 INSURANCE AND PENSIONS

The insurance and pension sector develops a crucial role in financing mitigation and management of climate risks, serving as a last line of defense for capital markets in the face of this new paradigm. It not only protects against financial losses, but also ensures continuity of businesses in the market.

In 2023, according to Aon, a data analysis multinational company, natural disasters have impacted negatively the global economy in US\$380 billion, an increase of approximately 21% in relation to the previous year.

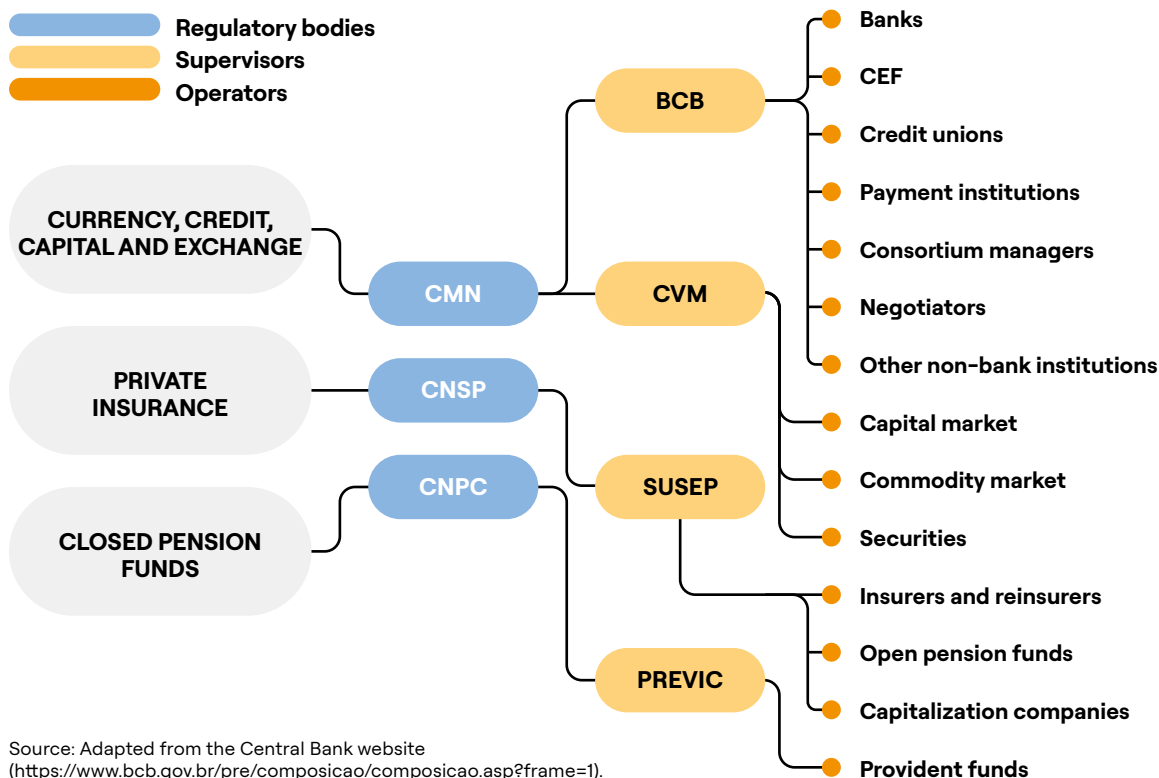
However, the relevance of this sector is often only recognized by the population and institutions after the occurrence of tragedies. This shows the urgent need for climate risk measuring, and for incorporating climate change in the development of product and service innovation.

8.6.1 INSURANCE SECTOR

The insurance market is based on three pillars: understanding, managing, and assuming risks (UNEP-FI, 2012), so that other activities can be carried out with greater security and guarantees against accidents. Insured assets are exposed to the new reality of the climate crisis and its impacts, given that significant risks arise from uncertainties related to climate change and its consequences, testing the resilience of the insurance market in the face of such issues.

The sector is exposed to different climate risks such as physical risks (material damage from extreme weather events or changes in weather patterns), transition risks (possible negative consequences of changes intrinsic to the climate transition process that affect regulations, laws, technology change, marketing and reputational) and litigation risks (lawsuits) (UNEP-FI, 2021).

FIGURE 6 • Composition and segments of the National Financial System



Source: Adapted from the Central Bank website (<https://www.bcb.gov.br/pre/composicao/composicao.asp?frame=1>).

A survey on the financial impacts of climate events in the world during the year 2023 calculated total losses of US\$380 billion, of the losses covered by insurance the value was US\$118 billion, among the occurrences there were 37 billion-dollar loss events.[3] In Brazil, the major impacts were felt in the south of the country, with the drought that led to a loss of agricultural production worth an estimated US\$1.3 billion,[4] and a historic drought on the Amazonas River that harmed commerce, services, navigation and subsistence activities. The average of significant weather events in the country during 2023 was three per day, however, there is a gap in insurance coverage in Brazil, with only 5% of economic losses arising out of natural disasters is covered by insurance, with a concentration on agricultural products (Valor, 2024).

Furthermore, the insurance sector has an important role in combating climate change. Insurance products can enable businesses that support the decarbonization of the economy, such as clean energy generation plants; parametric insurance offers more efficient protection against extreme weather events, which are increasingly frequent and severe; and promote a pillar of social protection through the management and mitigation of risks associated with the transition to a net-zero economy, such as through its life and health insurance products.

Despite the significant risks and opportunities associated with climate change, the sector still analyzes its exposure to risks mainly through historical databases, when they should already consider future scenarios to reflect the effects of climate change. Even when there is risk analysis based on scenarios and historical data, the process does not involve the consideration of climatic factors and updated scientific data, this is due to the profile of the professionals who make up the risk areas, the majority of which are formed by economists and financiers, lacking scientists (Carbon Tracker, 2023).

For the insurance sector, the regulatory entity is the National Council of Private Insurance (CNSP), which in addition to regulating insurance activities, also defines characteristics of open private pension contracts (EAPC). The CNSP brings together representatives from the

Ministry of Finance, the Private Insurance Superintendency (SUSEP), the Central Bank, and the Securities and Exchange Commission (CVM). SUSEP is a body subordinate to the CNSP and is the supervisory entity for insurance and reinsurance companies, open pension funds (EAPC), and capitalization companies, being an agency linked to the Ministry of Finance (CNSeg, 2024).

SUSEP Circular No. 666/2022 deals with sustainability requirements to be observed by insurance companies, open supplementary pension entities (EAPCs), capitalization companies, and local reinsurers. Inspired by recommendations from the Task Force on climate-related financial disclosure (TCFD), it determined the incorporation of exposure analysis and sustainability risk management, which includes physical climate, transition, and litigation risks, in addition to environmental and social risks. It directly addresses the management of the aforementioned risks, considering their materiality for the company, with disclosure and transparency of such information (SUSEP, 2022).

In June 2024, SUSEP launched a public consultation on a new regulation for the insurance and open pension sector, regarding the classification of its products as sustainable, to be aligned with the Federal Government's Ecological Transformation Plan. The text of the proposed new standard mentions that insurance can only be classified as such if its physical and transition climate benefits, environmental benefits and social benefits are capable of generating benefits for beneficiaries or civil society. Insurance classification must follow widely recognized principles and guidelines (SUSEP, 2024).

Through this regulatory innovation, significant progress was made in the integration and management of climate risks among companies in the sector. However, there are still challenges and a need for progress. It is important to highlight that there is no mention of a change in the model used by insurance companies to analyze risks and base their decisions. The traditional historical forecast model, which analyzes patterns of past events to price future claims, is not applicable in a scenario of changes in weather patterns, which requires a predictive approach (EEIST, 2023).

This outdated valuation model, coupled with outdated climate data, could put the entire insurance and reinsurance market at risk. The National Confederation of General Insurance, Private Pension and Life, Supplementary Health and Capitalization Companies (CNSeg), representing private insurance companies in Brazil, is co-founder and supporter of the Principles for Sustainable Insurance (PSI), a UNEP-FI initiative that is based on the insurance companies' business tripod to help the sector address ESG risks and opportunities (UNEP-FI, 2012), and represents an important role in promoting training and encouraging the sector to consider the climate agenda. In 2023, CNSeg carried out a training cycle on climate risks and oppor-

tunities in insurance and provided tools based on methodologies from the UNEP-FI "Insuring the Climate Transition" project to support sector institutions in complying with Circular 666.

CNSeg also annually publishes sustainable performance data for the sector in the country. The 2022 report presents information in three different methodological formats: PSI; Sustainable Development Goals and TCFD. We bring here the data presented for the TCFD methodology, as they refer to climate issues. In 2022, in a survey carried out with insurers in the sector on climate change, 93.3% of participating insurers responded that they assume that this theme impacts business strategy, especially products, and services;

FIGURE 7 • Top 10 insurance companies in 2022 in premiums written

ORGANIZATION	SHARE	PREMIUMS ISSUED (R\$)
Bradesco	20.75%	48,282,135
SulAmérica	9.72%	22,611,759
Porto Seguro	9.45%	21,994,621
Bank of Brazil	6.78%	15,768,839
Zurich-Santander	5.21%	12,110,781
Tokio Marine	4.55%	10,593,489
Mapfre	4.34%	10,094,132
Allianz	3.75%	8,730,319
Caixa Seguridade	3.70%	8,612,272
Itaú	2.85%	6,625,520

Source: SINCOR (2022). Ranking of insurance companies 2022 (https://www.sincor.org.br/wp-content/uploads/2023/06/ranking_das_seguradoras_2022_web.pdf).

80% consider climate change in the corporate risk monitoring process; 66.7% consider climate change in the development of products and services, in risk acceptance policies, and in the exposure assessment of subscription portfolios; and 36.7% consider climate change when evaluating assets for investments of own resources, technical reserves, pension funds and other company financial resources (CNSeg, 2022). Another relevant survey carried out by CNSeg in 2022 on climate change and companies in the sector mentions that 74.2% of insurers predict that within 5 years they will fully integrate climate change into governance, strategy, risk management, goals, and indicators, while 22.6% forecast between 5 and 10 years (SUSEP, 2024).

According to a survey by the Union of Entrepreneurs and Self-Employed Brokerage and Insurance Distribution Professionals of the State of São Paulo (SINCOR-SP) on the insurance market in 2023, its composition was 84 insurance companies. There is a concentration of 71% of the market in the ten largest, which accounted for R\$165.4 million in premiums issued (SINCOR, 2022).

Communication and participation of Brazilian insurance companies in collective initiatives and voluntary climate commitments have grown, although in a fragmented way. In Brazil, 93% of insurers participate in at least one commitment or initiative on sustainability, however, few of the initiatives and commitments mentioned address issues of exposure to climate risks. Of the ten largest insurance companies in Brazil, five are members of the Principles for Sustainable Insurance (Bradesco, SulAmérica, Caixa, Porto Seguro, and Itaú). In May 2024, eleven Brazilian insurance companies were members of the initiative (UNEP-FI, 2024). In addition to this initiative, MAPFRE and Allianz are signatories to the Net-zero Asset Owner Alliance (NZAOA) of UNEP-FI (NZAOA, 2024) and no Brazilian insurer participates in the Forum for Insurance Transition to Net-Zero also of UNEP-FI.

Below, information is presented on the management of climate issues by insurance companies in Brazil. The largest insurance companies were selected according to the ranking presented previously.

8.6.1.1 Bradesco Seguros

Bradesco Seguros is a Brazilian company, currently the largest on the market, which has products for life, health, dental, property, travel, home, automobile, private pension insurance, and others (Bradesco, 2024a). Among its sustainability initiatives, it is a signatory to the *Principles for Sustainable Insurance (PSI)* and the UN Global Compact, in addition to having supported the *Task Force on Climate-Related Financial Disclosure (TCFD)* (Bradesco, 2022). The company Banco Bradesco responded to CDP's climate and supply chain questionnaires between 2010 and 2023.

Its Sustainability Policy was updated in 2022 to align with SUSEP Circular No. 666, mentioning a formal sustainability risk management process (UNEP-FI, 2012). The financial institution's Social and Environmental Responsibility Standard also mentions climate change risks and opportunities being observed in its business practices and their activities and operations, adoption of climate responsibility criteria in their products and services, identify business opportunities that consider such issues, and guidelines for socio-environmental and climate risk management (Bradesco, 2023a). Its website states that the company identifies and manages physical climate risks, mainly with its operations in the automobile and home insurance sectors (Bradesco, 2023b).

In its Socio-Environmental Risk Standard, Bradesco Seguros mentions ensuring the existence of a formal environmental and climate risk management process, monitoring and mitigating climate impacts that may occur as a result of the company's operations and activities, and paying attention to social, environmental, corporate governance and climate in Investment Management. In the same document, within the risk management processes, including analyses, tools, and metrics, socio-environmental and climate issues must be considered (Bradesco, 2024b). In its latest report sent to CDP, referring to the year 2023, the company reports that it identifies in its accounting expenses and revenues aligned with the organization's climate transition, as well as applying to banking activities the use of policies and requirements related to climate and policies climate exclusion for its customers or investee companies.(CDP, 2023a).

8.6.1.2 SulAmérica

SulAmérica is a company that offers health, dental, life, and personal accident insurance services in the Brazilian market, as well as pension and asset management products for more than 7 million customers. Among its sustainability initiatives, it is a signatory to the UN Global Compact, the Geneva Association Climate Risk Declaration, and the Principles for Sustainable Insurance (PSI) (Sulamerica, 2024a). Between 2017 and 2023, it responded to the CDP climate questionnaire.

The company has an Environmental Policy and Environmental Management Program, environmental goals (which on the institutional website have deadlines of up to 2023), and an inventory of greenhouse gases. Contracts with business partners contain a Sustainability and Socio-Environmental Responsibility clause, their partners must sign an acknowledgment of the Sustainability Policy and declare that they are not part of sectors listed in the Socio-Environmental Risk Policy (NZAOA, 2024).

In its Sustainability Policy, it mentions that the company seeks to understand and manage climate risks and opportunities, to lead the sector towards an adapted, resilient and low-carbon economy (Sulamerica, 2024b). In the Socio-Environmental Risk Policy, the company mentions that the responsible areas must consider climate change risks in an integrated manner into the risk management process, considering the following risk categories:

- **Underwriting**
- **Credit**
- **Operational**
- **Market/Liquidity**

The same policy says that insurance and pension services must consider alignment with policies and voluntary commitments assumed, and the decision on application and investments must consider the most current view on fiduciary duty, including the risks of climate change. to the asset portfolio (Sulamerica, 2024c).

In its latest report sent to CDP and available for download, referring to the year 2021,

it was reported that there is an assessment of the exposure to climate risks and opportunities of the investment portfolio, through quantitative assessment, however, the portfolio was not evaluated in its entirety. Another statement in the report states that climate risks and opportunities did not influence the organization's strategy and/or financial planning as they were not yet able to define the consequences of such risks in their insurance services (life and health), but that the materialized risks were included in the pricing for the following year. Regarding the selection process of external asset managers, it was stated that no climate criteria are used, however, a qualitative analysis is made on principles of responsibility in investments (CDP, 2023b).

8.6.2 PRIVATE PENSION SECTOR

Private pensions are made up of two types of products, closed or open. Supplementary pension entities, also called open (EAPC) or closed supplementary pension entities (EFPC), can be defined as owners of assets, with their services, in a simplified way, categorized between open pension funds or closed pension funds. Open funds are available for any client of a supplementary pension financial institution to deposit their resources, closed-end funds commonly belong to a specific company, which opened the pension fund with a supplementary pension financial institution only for contributions from its employees.

The estimated value of pension fund assets in the world by the end of 2023 was around US\$55.7 trillion, a value made up of the 22 largest pension markets in the world. Of this group, the ranking of the 7 largest markets combined (of which Brazil is not part) is responsible for the value of US\$50.8 trillion. The Brazilian market, only for closed-end funds, corresponds to US\$272 billion, ranking 14th (Thinking ahead institute, 2024).

As previously mentioned, there is a need for private financing for the global economic transition to reduce greenhouse gas emissions, whether through the reallocation of resources or new resources, given the low capacity of public financing for this purpose.

In this way, supplementary pension entities can be of great importance for the development of climate actions (OCDE, 2011). Their position as asset owners gives these actors a key role in climate action, having highly available resources and the ability to make decisions about investments.

Innovative instruments that enable green investments, such as thematic bonds, infrastructure projects, clean technologies, and energy transition, may be of interest for financing through resources coming from supplementary pension funds due to their lower risk characteristics aligned with good returns, thus contributing to increasing climate finance and accelerating the transition to a less carbon-intensive economy (EEIST, 2023).

Pension institutions are expected to give great importance to climate factors as the sector has great exposure to its risks, due to the long-term nature of its products. Therefore, the fiduciary role of these companies with their clients is not guaranteed when there is no integration, in the asset management process, of climate factors in an appropriate manner and in line with science.

In addition to the limitation of considering climate change in investment strategies in a robust manner, among the financial institutions that are using climate scenarios in their investment decision-making (including pension funds), the majority are using climate forecasts that minimize the impacts of a climate with a global temperature increase of 2°C, putting at risk financial guarantees for millions of people and the world economy itself. Another factor that goes unnoticed in the investment decision process is the points of no return (or tipping points), which are environmental, climatic, and ecological limits of important ecosystems or balanced interactions of environmental factors (Carbon Tracker, 2023).

Since 2018, we have had regulatory innovations that determine ESG incorporation among private pension institutions, promoted by CMN Resolution No. 4,661, which establishes that closed supplementary pension entities must integrate ESG risks into their

decision-making processes. This regulation expanded and replaced CMN Resolution No. 3,792/2009, which required closed supplementary pension entities to disclose whether their investment policy included socio-environmental principles (SITAWI Finanças do Bem e Frankfurt School of Finance & Management, 2021).

PREVIC Instruction 35/2020 determines that closed supplementary pension entities must have specific guidelines in their investment policy for compliance with ESG (environmental, social, and governance) responsibility principles. The CMN states in its Resolution 4,994/2022 that the assessment and monitoring of risks of investments in closed supplementary pension entities must, whenever possible, consider aspects related to economic, environmental, social, and governance sustainability.

More recently, CVM Regulation 175 details that if the fund's regulations refer to environmental, social, and governance factors, it must establish what benefits are expected; and what methodologies, principles, or guidelines are followed to qualify the fund according to its name; which entity is responsible for certifying or issuing an opinion on the qualification of the fund and its independence about the fund; contain specifications on the disclosure of reports on environmental, social and governance results achieved as well as the agent responsible for preparing the report; and if the investment policy integrates ESG factors in the management of its portfolio, but does not have the objective of generating benefits, the use of terms that refer to such factors is prohibited.

SUSEP Circular No. 666/2022 is also valid for open supplementary pension entities and determines the incorporation of exposure analysis and management of sustainability risks, including physical climate, transition, and litigation risks, as well as environmental and social risks. The recommendations are based on the TCFD and consider the materiality of such risks for the company, reinforcing the disclosure and transparency of information (SUSEP, 2022).

More recently, in June 2024, SUSEP launched a public consultation on a new regulation for the insurance and open pension sector, regarding the classification of its products as sustainable, to be aligned with the Federal Government's Ecological Transformation Plan. The text of the proposal for the new standard mentions that a pension fund can only be classified as sustainable if all funds in which resources from the Mathematical Provision for Benefits to Grant (PMBAC) are invested follow regulation No. 175 of the CVM (SUSEP, 2024).

However, there is still no specific focus on

climate change as has already been demanded of banking institutions by the Central Bank and insurance companies by SUSEP. In addition to there being no specific regulatory demands on climate for the sector, its institutions also demonstrate low participation in voluntary climate initiatives. Among the seven largest closed supplementary pension entities, in 2023 none participated in a voluntary climate commitment (NZAOA, SBTi, PCAF) and only PREVI and VIVEST participated in the *Principles for Responsible Investment (PRI)* (NINT, 2023).

FIGURE 8 • Top 7 EFPCs (Closed Supplementary Pension Entity) in value of Assets Under Management (AuM)

ORGANIZATION	CATEGORY	SUBCATEGORY	(R\$ MILLION)
PREVI	Pension fund	EFPC	248,177
CAIXA VIDA E PREVIDÊNCIA	Pension fund	--	138,188
PETROS	Pension fund	EFPC	109,367
FUNCEF	Pension fund	EFPC	93,658
INSS	Public Pension Fund	--	8,524
VIVEST	Pension fund	EFPC	36,046
SAFRA VIDA E PREVIDÊNCIA	Pension fund	--	21,091

Sources: NINT, Climate Finance in Brazil: an overview of challenges and opportunities, 2023; Value 1000, Financial area ranking - The largest pension and life companies 2023 (<https://infograficos.valor.globo.com/valor1000/rankings/as-maiores-de-previdencia-e-vida/2023>).

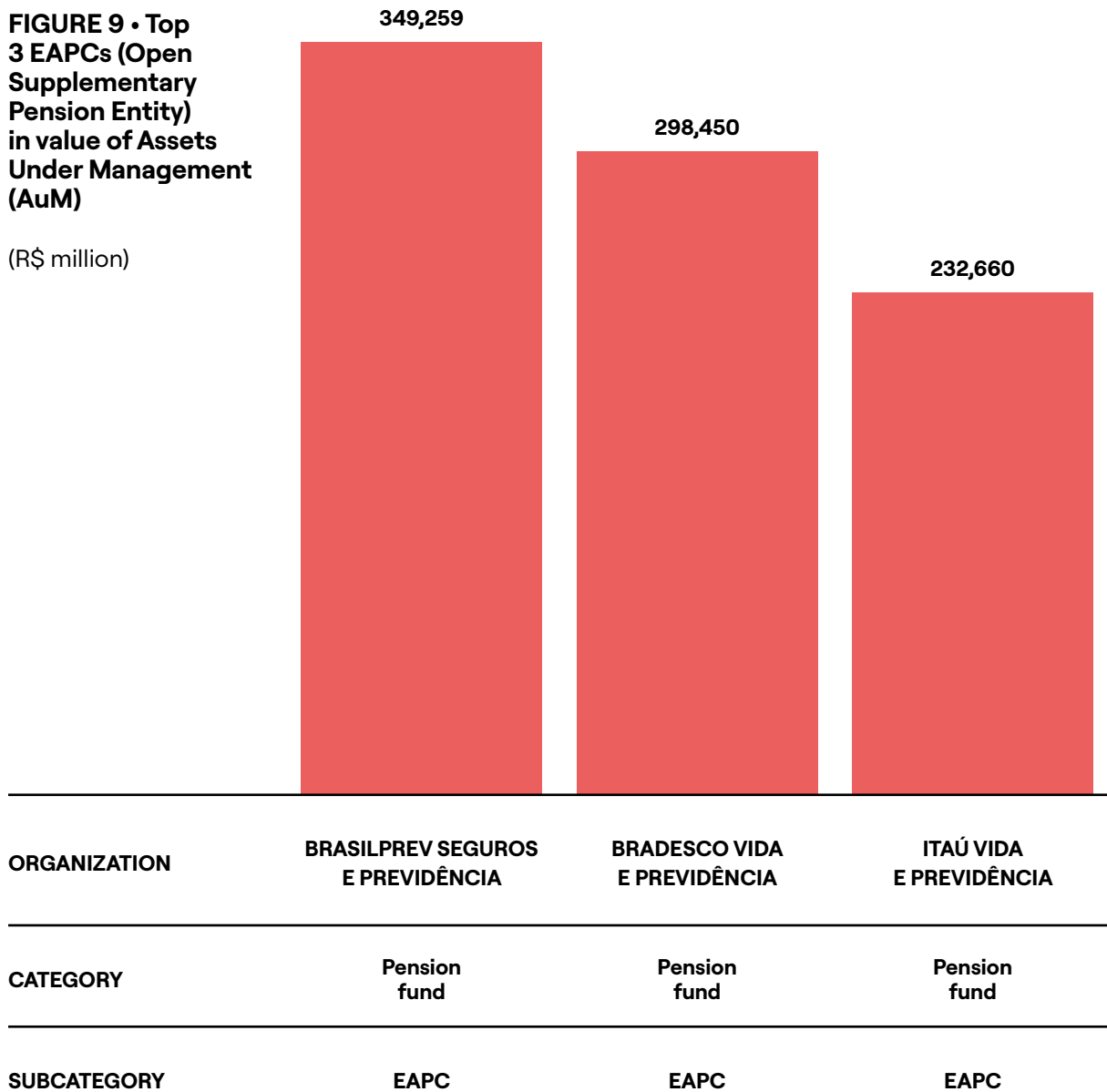
It is no different with the EAPC, among the 3 largest open supplementary pension entities, in 2023 none participated in a voluntary climate commitment (NZAOA, SBTi, PCAF) and only BrasilPrev participated in the Principles for Responsible Investment (PRI) (NINT, 2023). With this, it is possible to see that the ten largest supplementary private pension

institutions in the country are not engaged in voluntary climate initiatives.

Below, information is presented on how some of the supplementary private pension institutions carry out governance and management of climate issues. The largest organizations on the market were chosen, as it can be seen in the tables presented previously.

FIGURE 9 • Top 3 EAPCs (Open Supplementary Pension Entity) in value of Assets Under Management (AuM)

(R\$ million)



Sources: NINT, Climate Finance in Brazil: an overview of challenges and opportunities, 2023; Value 1000, Financial area ranking - The largest pension and life companies 2023 (<https://infograficos.valor.globo.com/valor1000/rankings/as-maiores-de-previdencia-e-vida/2023>).

8.6.2.1 Brasilprev Seguros e Previdência

Brasilprev is the financial pension institution of the Bank of Brazil group, with 2.6 million customers (BrasilPrev, 2024a). The 2022 Sustainability Report mentions that the company is seeking compliance with SUSEP Circular No. 666 (Previ, 2024). There is no mention in its Sustainability Report, Sustainability Guidelines, or Sustainability Policy about the integration of climate issues into its risk management, investments, or products (BrasilPrev, 2022a; BrasilPrev 2024b). The Financial Committee analyzes risks and opportunities arising from climate change (BrasilPrev, 2022b). BrasilPrev is a signatory or member of some environmental and/or climate initiatives and commitments, such as PRI, Global Compact, Declaration on Green Bonds – Brazil, Brazilian Green Finance Initiative, and CDP, however, only one questionnaire, from the year of 2018, was found on the CDP initiative website, without visualization or rating.

8.6.2.2 Previ

PREVI is a closed pension company, aimed at active and retired employees of Bank of Brazil and their families, one of the oldest pension institutions in the country (Previ, 2024a). PREVI is a signatory to the Brazilian GHG Protocol Program, the Carbon Disclosure Project, the Global Reporting Initiative, and Principles for Responsible Investment. The company measures climate change risks, which make up a corporate risk matrix. This measurement is used to assess the exposure of the investment portfolio with the addition of a climate key risk indicator (KRI) (Previ, 2023a).

The company has incorporated ASGI (Environmental, Social, Governance, and Integrity) guidelines into its 2024–2028 strategic plan, and the ASGI Best Practices, Sustainability Plans, and 2020–2023 Sustainability Master Plan documents guide ASGI issues.

The Investment Policies were updated in 2023, remodeling the ASGI Principles and incorporating a new chapter on climate change. These policies define the risk, return, and allocation parameters, covering analysis, allocation, and management of resources, based on integrity practices, per-

formance indicators, and participation in national initiatives, which must be observed for investments in line with the premises of each investment plan. PREVI benefits. They also mention the exposure of the institution's investments to physical climate and transition risks, including mentioning tipping points and greenhouse gas emissions by companies invested in its portfolios. PREVI sees engagement with investees as its main tool for managing the portfolio's climate risk exposure (Previ, 2024b).

The Investment Governance Policy (PGI) determines the guidelines that must be observed in the analysis, advisory, monitoring, control, and decision-making processes regarding the application of resources from PREVI plans. In its 2023 version, there is no mention of climate issues (Previ, 2023b).

Its Sustainability Policy defines that the institution's initiatives, practices, and partnerships must be aligned with the principles of the Global Compact and Sustainable Development Goals, encouraging ASGI practices in business and strategy, improving risk management tools, and identifying opportunities, selection, and asset allocation. This policy includes guidelines for observing the impacts of climate change on its investments, encouraging the same in the companies it invests in and their supply chains (Previ, 2023c).

The Investment Department is in charge of ESG governance, executes policies, monitors the market, and evaluates various aspects, including ASGI, and uses the ASGI Rating (prepared by the Participation Department (DIPAR)) as a basis for its investment/disinvestment decisions. The ASGI Sustainability and Best Practices Committee, composed of representatives appointed by the Executive Board, discusses, evaluates, and proposes sustainability actions and ASGI best practices, from the perspective of risks or opportunities, based on the ASGI Sustainability and Best Practices Policy and PREVI's Sustainability Master Plan. The Sustainability Committee, composed of representatives appointed by the Executive Board, plays a fundamental role in evaluating and proposing actions and strategies related to responsible investment and ASGI risk management.

RECOMMENDATIONS

1 Soon, Brazil will learn about the government's proposals to structure its climate policy packages for the entire economy (*economy-wide packages*), as recommended by the IPCC. To actually channel public and private financing toward the priorities of the Climate Plan and the NDC, it is necessary to recognize the investment profiles of each system within the ecosystem, to enhance the contribution of actors to the Climate Plan and the NDC. As shown beforehand, there is clarity about the risk-return profile in the case of private companies. According to interviews carried out, there is, for example, good coverage from private sources for actions in the energy and transport sectors, but the mobilization of private capital for climate financing, in general, remains incipient. In this sense, there is an important opportunity if these actors are exposed, informed, and articulated to contribute to the implementation of the objectives and priorities of the Climate Plan and the NDC. And, as abovementioned, Brazil has a mature regulatory framework.

2 The ecosystem needs to be based on climate scenarios to build a portfolio of initiatives, projects, programs, and country platforms: Brazilian society has climate scenarios available based on the best possible science to assist in the formulation of adaptation and mitigation strategies. It is clear that private sector entities, in general, still do not define their goals in light of climate scenarios like these. Thus, in this context, the opportunity to build a portfolio considering specific risks and recommendations is lost. More coordination is needed between ecosystem actors so that decision-makers can use these scenarios in their action planning.

3 Adopting and implementing the green taxonomy is crucial to greening the ecosystem and building a visible portfolio of projects and programs: in interviews, the need for a transparent and universal taxonomy is mentioned by the most diverse actors – whether from the public or private sector. This standardization is essential for the development of several other financing, facilitation, exemption policies, etc. In addition to including exclusion criteria for unsustainable activities, the taxonomy will help mitigate environmental and social risks, ensuring that investments are directed toward beneficial projects. Finally, it will strengthen governance by creating committees and technical groups responsible for the supervision and continuous monitoring of sustainable activities, ensuring the efficient use of resources.

4 Funding for adaptation needs to be intentional: Mobilizing private finance in climate adaptation and resilience sectors faces challenges due to the nascent nature of these opportunities and the lack of reliable revenue streams.

However, initiatives such as the issuance of green bonds by the National Treasury and the Eco Invest Brasil program are important steps that can guide flows toward this matter. Access to concessional resources and the adoption of *blended finance* can reduce risks and attract private investors.

5 Making sure that so that investments in infrastructure become investments in resilience: in Brazil, the public sector plays a preponderant role in infrastructure investment. This can foster the integration of new technologies, including adaptation and mitigation actions, according to the scenarios prioritized in the Climate Plan and the NDC goals.

6 There is a need – and opportunity – to expand international public sources of climate finance. Brazil has been attracting, via public sources of bilateral and, to a more limited extent, multilateral cooperation, relevant flows of financing. There is an important window of opportunity here since such sources tend to focus more on less developed countries, and not emerging economies like ours. It is important that we can take advantage of such sources “as soon as possible”, making use of the opportunity to access non-refundable resources made available by development financial institutions, as they may no longer be available to Brazil in the medium term.

7 The launch of the Climate Plan presents a great opportunity for the coordination and enhancement of public policies in terms of system governance. The governance of climate finance by the federal government is complex, with a multitude of initiatives under development at the same time. If on one hand the CIM has the role of coordination between policies, it is also true that a great opportunity is presented with the construction of the Climate Plan: that of a backbone for the construction of actions and directing financial flows towards a clear and enhanced.

8 There is a need for better coordination between different types of capital, such as venture capital and private equity, to consider and allocate these resources to climate solutions through risk financing structures (*blended finance*). This type of financing combines public and private resources, enabling investments in high-impact and higher-risk projects. The government plays a crucial role in this process, by pointing out major national directions and priorities, and ensuring transparency regarding the investments made. This includes defining clear policies, creating a supportive regulatory environment, and providing detailed information on capital flows, resource allocation criteria, and results achieved.

ATTACHMENTS

METHODOLOGY

This report is based on desk research that considers official sources and various publications, in addition to qualitative interviews with government agents, representatives of the private sector, representatives of investment banks, and members of organizations and trade associations. The complete list of professionals consulted can be found in the annex at the end of this publication. The methodology included identifying and mapping the main national and international stakeholders of the public and private financial sector: regulators, supervisors, government institutions, commercial banks, insurance companies, banking associations, and other financial sector associations. Furthermore, it included the identification and assessment of existing institutional coordination mechanisms, the identification of the financial landscape (specifically taxonomy and financial risks related to climate change), and interactions between stakeholders. During the mapping and identification exercise, gender equality issues will be considered.

INTERVIEWS

The analyses and recommendations expressed in this study are exclusively those of the authors and do not necessarily reflect the views or positions of those consulted.

PUBLIC SECTOR

FEDERAL GOVERNMENT: Ministry of Science, Technology and Innovation (MCTI), Ministry of Development, Industry, Commerce and Services (MDIC): Secretariat of Green Economy, Executive Secretariat of the National Council for Industry Development, Ministry of Finance (MF): Secretariat for International Affairs, Ministry of Environment and Climate Change (MMA): National Secretariat for Climate Change; Ministry of Planning and Budget: Secretariat of Planning and Secretariat of International Affairs and Development; Ministry of Agriculture and Livestock: Secretariat of Agricultural Policy; Central Bank of Brazil (BCB)

DEVELOPMENT BANKS: National Bank for Economic and Social Development (BNDES); Inter-American Development Bank (IDB)

PRIVATE SECTOR

COMMERCIAL BANKS: Itaú Unibanco, Santander, BTG Pactual

FUND MANAGERS: BlackRock, BraInvest, Fama re.capital, Vox Capital, VP Asset, YvY Capital

ASSOCIATIONS AND COUNCILS: Brazilian Association of Financial and Capital Market Entities (ANBIMA), Brazilian Business Council for Sustainable Development (CEBDS), Sustainable Inclusive Solutions (SIS)

REGULATORY BODY: Securities and Exchange Commission (CVM)

PRIVATE NON-PROFIT

Brazilian Biodiversity Fund (FUNBIO), Land Innovation Fund (LIF)

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Climate finance aims to decrease net greenhouse gas emissions and/or improve adaptation and increase resilience to the impacts of climate change, both present and future

