



# Sustainable Taxonomy of Brazil

Action Plan

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Minister of Finance  
Fernando Haddad

Secretary of Economic Policy  
Guilherme Santos Mello

Undersecretary for Sustainable Economic Development  
Cristina Fróes de Borja Reis

## Team

Matias Rebello Cardomingo  
Edna Luiz Brandão  
José Pedro Bastos Neves  
Julia Soares Silva  
Thalita Ferreira de Oliveira

Graphic design and layout  
André Oliveira Nóbrega



## Ecological Transformation Plan

A new country model for a new world

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## Interagency Working Group

### Ministries:

- Office of the Chief of Staff
- Agrarian Development (MDA)
- Agriculture, Livestock and Supply (MAPA)
- Development, Industry, Trade and Services (MDIC)
- Environment and Climate Change (MMA)
- Finance (MF)
- Fishing and Aquaculture (MPA)
- Foreign Affairs (MRE)
- Indigenous Peoples (MPI)
- Labor and Employment (MTE)
- Management and Innovation in Public Services (MGI)
- Mines and Energy (MME)
- Planning and Budget (MPO)
- Ports and Airports (MPor)
- Racial Equality (MIR)
- Science, Technology and Innovation (MCTI)
- Tourism (MTur)
- Transportation (MT)
- Women (MMulheres)

### Other participating institutions:

- Central Bank of Brazil (BCB)
- Securities and Exchange Commission of Brazil (CVM)
- Superintendence of Private Insurance (Susep)
- Brazilian Development Bank (BNDES)

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# Feedback from the Public Consultation



**Queremos saber,  
queremos viver  
Confiantes no  
futuro  
Por isso, se faz  
necessário  
Prever qual o  
itinerário da ilusão  
Da ilusão do poder  
Pois se foi  
permitido ao  
homem  
Tantas coisas  
conhecer  
É melhor que  
todos saibam  
O que pode  
acontecer**

**Gilberto Gil,  
Queremos saber (1976)**



The interest in working towards a trajectory compatible with limiting global warming to the lowest level still achievable has stopped being exclusive to science and environmental groups some time ago. From the beginning of the Public Consultation on this Action Plan on 21 September 2023 until its launch at COP-28 in Dubai in early December, the country has experienced several extreme weather events that took the lives and homes of many people in Brazil's most southern state Rio Grande do Sul<sup>1</sup>, that broke heat records in Rio de Janeiro, with 59.3°C in felt temperature<sup>2</sup>, and continued the most severe drought in the Amazon in 120 years.<sup>3</sup> Those events already give us a taste of a warming planet – we now must build ways to trust in a livable future.

It is therefore no coincidence that the interest in advancing the sustainable finance agenda, which was shown during this consultation, was so substantial, counting with: more than 630 contributions on the Participa+Brasil (*Participate More Brazil*) platform; 41 documents submitted from companies, civil society organizations and individuals; participation of more than 50 representatives during ten public hearings, one for each of the prioritized sectoral and thematic areas; and seven external events. In particular, the Brazilian Association of Financial and Capital Market Entities (ANBIMA) held a workshop with more than 170 representatives from capital markets to share their impressions on the development of the sustainable finance agenda and taxonomy based on an online questionnaire. Among the positions, it stands out that 98% of respondents agreed on the importance of having a reporting standard on taxonomy alignment, with the majority in favor of creating a specific report or statement for this purpose.

It is worth highlighting and thanking the German Agency for International Cooperation (GIZ) and the United Nations Environment Programme Finance Initiative for their technical support, as well as the following organisations which participated in the public hearings:

ABGI, Association of Freight Railways, Brazilian Association of Financial and Capital Market Entities (ANBIMA), Brazilian Association of Independent Oil and Gas Producers (ABPIP), Brazilian Association of Federal Development Institutions, Brazilian Association of Highway Concessionaires, Brazilian Association of Mineral Research and Mining Companies (ABPM), Brazilian Association of State Sanitation Companies (AESBE), Brazilian Business Council for Sustainable Development (CEBDS), Brazilian Chamber of Industry and Construction, Brazilian Council for Sustainable Construction, Brazilian Federation of Banks (FEBRABAN), Brazilian Mining Institute (IBRAM), Brazilian Petroleum Institute (IBP), Brazilian Waste and Environment Association (Abrema),

<sup>1</sup> More information at the [link](#).

<sup>2</sup> More information at the [link](#).

<sup>3</sup> More information at the [link](#).

Caixa Econômica Federal, Carbon Disclosure Project (CDP), Ceert – Racial and Gender Equity, Centre for Research and Training in Race, Gender and Racial Justice of the Brazilian Centre for Analysis and Planning (Afro Cebrap), Climate Bonds Initiative, Climate Observatory (OC), Climate Policy Initiative (CPI), Ecododovias, Electric Sector Study of the Federal University of Rio de Janeiro (Grupo Grupo de Estudo do Setor Elétrico da Universidade Federal do Rio de Janeiro), Ellen MacArthur Foundation, Energy Research Corporation (Empresa de Pesquisa Energética, EPE), Geledés - Black Women's Institute, Imafloira, Infra SA, International Labour Organization (ILO), Intersindical Department of Statistics and Socio-Economic Studies (Dieese), Local Governments for Sustainability, Mov-Infra, National Agency of Electric Energy (Agência Nacional de Energia Elétrica, Aneel), National Association of Collectors of Recyclable Materials (Associação Nacional de Catadores e Catadoras de Materiais Recicláveis, ANCAT), National Association of Municipalities and the Environment (Associação Nacional de Municí-

pios e Meio Ambiente, ANAMMA), National Confederation of Industry (CNI), National Federation of Mayors (Federação Nacional de Prefeitos, FNP), National Land Transport Agency (ANTT), National Transport Confederation (CNT), Organisation of Brazilian Cooperatives (OCB), Pact for the Promotion of Racial Equity (Pacto), P&D Brasil, and the Support Service for Micro and Small Enterprises (Sebrae).

Confident in the future, this Action Plan of the Sustainable Brazilian Taxonomy sets out a promising and feasible path, built collectively by the country's society in favor of an environmentally sustainable and socially inclusive development. The document now presented, in both Portuguese and English, sought to incorporate most of the contributions made. In addition, the contributions and feedback submitted through and outside the Participa+Brasil Platform were published. It is important to be conscious about what a warming planet means for our future - and even more important for everyone to be able to build our future together.

Photo: Adobe Stock



# The Ecological Transformation in Brazil



We are facing the imperative challenge of tackling the climate crisis. In 2023, the planet experienced the highest average temperature rates (CCI, 2023), showing that global warming is a reality that threatens the lives of all beings. The range of possible adverse impacts of the climate crisis in the world have in Brazil, unequal impacts toward biomes, territories and people.

At the same time, new technologies of the 4.0 paradigm are increasing market competition between companies and states (UNCTAD, 2020, 2021). This situation is exacerbated by the dramatic consequences of the Covid-19 pandemic and the Russia-Ukraine war, which not only claimed lives, but also had a significant impact on inflation and, therefore, on monetary policy. This scenario led to a decline in the Sustainable Development Goals (SDGs) of the United Nations (UN) 2030 Agenda for Sustainable Development<sup>4</sup>, with a worsening of environmental, climate, economic and social indicators (UN DESA, 2023). On top of this, the assessment of the first global stocktake of the UN Framework Convention on Climate Change (UNFCCC) pointed to a significant gap in achieving the goals of the Paris Agreement (UNFCCC, 2023).

In Brazil, the years of the pandemic have aggravated an adverse economic dynamic toward inclusive and sustainable development, with Gross Domestic Product (GDP) and employment reduction, increase of hunger and poverty (World Bank, 2022), deforestation and degradation of socio-biodiversity (BRASIL, MMA, 2023), and other major socioeconomic, environmental and climate challenges. Millions of cases of Covid-19 with hundreds of thousands of deaths (BRASIL, MS, 2023), in addition to the various complications in people's health in the wake of these events, have led the country to strive to take greater care of our lives and of nature.

Along these lines, the federal administration is aiming for a new, updated and innovative growth and development path, for which the Ministry of Finance is presenting the Ecological Transformation Plan. Ecological transformation is defined as a society-wide organizational change of cultural, political and economic paradigms in terms of biome-based production, in favor of sustainable relations with the territory and nature, generating a better quality of life for the population.

To achieve a feasible plan, in 2023 the Ministry of Finance began prioritizing the proposal and approval of the Sustainable Fiscal Regime and the Tax Reform, which will reorganize spending and tax collection, combining fiscal and social responsibility, guaran-

<sup>4</sup> Section 5 presents the 2030 Agenda among Brazil's international commitments.

## Box 1 – Sustainable Development Goals (SDGs) of the 2030 Agenda

- SDG 1** No poverty: End poverty in all its forms everywhere.
- SDG 2** Zero hunger and sustainable agriculture: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- SDG 3** Good health and well-being: ensure healthy lives and promote well-being for all at all ages.
- SDG 4** Quality education: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- SDG 5** Gender equality: achieve gender equality and empower all women and girls.
- SDG 6** Clean water and sanitation: ensure availability and sustainable management of water and sanitation for all.
- SDG 7** Affordable and clean energy: ensure access to affordable, reliable, sustainable and modern energy for all.
- SDG 8** Decent work and economic growth: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- SDG 9** Industry, innovation and infrastructure: build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- SDG 10** Reduced inequalities: reduce inequalities within and among countries.
- SDG 11** Sustainable cities and communities: make cities and human settlements inclusive, safe, resilient and sustainable.
- SDG 12** Responsible consumption and production: ensure sustainable consumption and production patterns.
- SDG 13** Climate action: take urgent action to combat climate change and its impacts.
- SDG 14** Life below water: conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- SDG 15** Life on land: protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- SDG 16** Peace, justice and strong institutions: promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- SDG 17** Partnerships for the goals: strengthen the means of implementation and revitalize the Global Partnership For Sustainable Development.



**In 2023, the planet experienced the highest average temperature rates (CCI, 2023), showing that global warming is a reality that threatens the lives of all beings.**



teeing a transparent and more democratic definition of public finances (LC 200/2023).<sup>5</sup>

These reforms will also enable a dynamic of growth and development based on the predictability and sustainability of fiscal variables to improve the quality of government spending and anchor the expectations of economic agents in favor of productive investment (LC 200/2023).<sup>6</sup> However, the fiscal capacity for investment, even with guaranteed new investment floor, is limited compared to the nation's substantial requirements.

According to the estimates in the report "Neutralidade de carbono até 2050: cenários para uma transição eficiente no Brasil," issued under a technical cooperation between the Energy Research Company (EPE), the Brazilian Center for International Relations (CEBRI), the Center for Energy and Environmental Economics (Cenergia - Coppe/UFRJ) and the Inter-American Development Bank (IDB), the annual investment needed for Brazil to become climate neutral and resilient to the changes already contracted would be between 3.5 and 4% of the GDP from 2020 to 2050.<sup>7</sup> Similarly, the World Bank's "Brazil Country Climate and Development Report" predicts the need for investments in the order of 4.3% of the GDP between 2022 and 2030, with this percentage being even higher for the period up to 2050.<sup>8</sup>

Taking into account the Fiscal Outlook Report of July 2023<sup>9</sup> issued by the Brazilian National Treasury, the availability of public investment is significantly below what the above mentioned two studies indicated as necessary. Even in the scenario of higher discretionary spending, it would reach an average of 2.2% of the GDP from 2023 to 2032, whereas more than 60% of such spending would be in health, education or parliamentary amendments - the so-called "rigid discretionary expenses" (BRASIL, MF, 2023).

Since public investment is insufficient to meet needs, these estimates lead to the conclusion that more private finance from domestic and international sources will be needed to tackle the climate crisis. It is important to note that Brazil is not alone in this situation: during the 2010s, it is estimated that public investment accounted for just over half of total climate investment.<sup>10</sup>

Therefore, reconciling the pursuit of a sustainable public debt trajectory with the investment needed to tackle the climate crisis requires aligning the compass of future public and private investments, both national and international, based on the robust Ecological Transformation Plan already included in the Ministry of Finance's programs in the Multi-Year Plan (PPA) 2024-2027.

The Ecological Transformation Plan is based on three principles:

<sup>5</sup> The Sustainable Fiscal Regime is currently being discussed in the Brazilian Chamber of Deputies.

<sup>6</sup> As per Art. 6 of LC 200/2023.

<sup>7</sup> Available at the [link](#).

<sup>8</sup> Available at the [link](#).

<sup>9</sup> Available at the [link](#).

<sup>10</sup> Global Landscape of Climate Finance: A Decade of Data, by The Climate Policy Initiative. Available at the [link](#).

1. Provide decent work<sup>11</sup> and increase productivity by expanding the number and quality of job and income opportunities, seeking to transform the profile of the Brazilian production matrix, increasing its technological and knowledge intensity;
2. Promote environmental and climate justice, as the path to decarbonizing the economy will involve implementing adaptation and mitigation policies committed to leaving no one behind; and
3. Reduce inequalities, including personal and occupational income and wealth disparities, among regions of the country, racial, and gender differences.



The Plan is structured around six axes, namely:

1. Sustainable finance
2. Technological densification
3. Bioeconomy
4. Energy transition
5. Circular economy
6. New infrastructure

Most of the specific plans and programs will be developed under the leadership of the respective competent government ministries, supported by the Ministry of Finance through a set of financial, fiscal, regulatory, and other instruments.

In the axis of sustainable finance - defined as the set of instruments for finance that contribute to investments in sustainable and inclusive economic activities, reducing environmental and climate risks - significant deliverables are planned, such as the regulation of the carbon market, sovereign sustainability bonds and the sustainable taxonomy itself, the foundations for which are presented in this Action Plan. These initiatives are linked to the labeling of spending carried out by the Ministry of Planning and Budget to better identify and monitor public resources allocated to reducing gender and racial inequalities, environmental preservation and tackling climate change.

Addressing the need to converge efforts to define a taxonomy, the federal administration began the process of jointly building this Action Plan within the Office of the Chief of Staff, the Ministries of Agriculture and Livestock (MAPA), Science, Technology, and Innovation (MCTI), Agrarian Development (MDA), De-

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<sup>11</sup> "Decent work", as defined by the International Labor Organization (ILO) in 1999, refers to the establishment of labor practices that promote productive, high-quality jobs that value freedom, equity, security and human dignity in the context of the labor market. This approach not only aims to mitigate poverty and reduce social inequalities but is also seen as a pillar for consolidating democratic governance and fostering sustainable development. Within the framework of the SDGs, decent work emerges as a key element, particularly concerning SDG 8 (promote sustained, inclusive and sustainable economic growth, anchored in the promotion of full and productive employment and decent work for all). Decent work is consolidated through four strategic goals established by the ILO: the guarantee of labor rights, with special attention to those recognized as fundamental (chapter 5); full productive employment with a high standard of quality; the expansion and consolidation of social protection; and the reinforcement of social dialogue within labor relations.



**Since public investment is insufficient to meet needs, these estimates lead to the conclusion that more private finance from domestic and international sources will be needed to tackle the climate crisis.**



velopment, Industry, Trade, and Services (MDIC), Management and Innovation in Public Services (MGI), Racial Equality (MIR), Environment and Climate Change (MMA), Mines and Energy (MME), Women (MMulheres), Fishing and Aquaculture (MPA), Indigenous Peoples (MPI), Planning and Budget (MPO), Ports and Airports (MPor), Foreign Affairs (MRE), Labor (MET), Transportation (MT), Tourism (MTur); in conjunction with the regulatory agencies of the financial system, the Central Bank of Brazil (BCB), the Securities and Exchange Commission (CVM) and the Superintendence of Private Insurance (SUSEP); the Brazilian Development Bank (BNDES) also participated. The joint effort was coordinated by the Sustainable Economic Development Division of the Ministry of Finance's Secretariat of Economic Policy. The Interagency Working Group has the support of the German International Cooperation Agency, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), through the Sustainable Finance Project (FiBraS II), implemented with the support from the German Federal Ministry for Economic Cooperation and Development (known by its German acronym, BMZ), to provide technical support.

The Action Plan's next section presents an overview of sustainable finance in the world, focusing on international commitments. The third section showcases examples of national and international taxonomies. The fourth section presents the strategic, environmental and social objectives of the Brazilian Sustainable Taxonomy. The fifth section discusses the international commitments and national legislation relevant to the taxonomy, while the sixth section shows which sectors will be covered by the sustainable taxonomy. The seventh section details the design process of the taxonomy, explaining how its objectives are articulated and what principles and definitions will be used to develop it. The eighth section presents the two thematic technical groups, which will work on the social objectives and the development of a monitoring, reporting, and verification (MRV) system. The ninth section presents the governance for developing the taxonomy, and the tenth section presents the planned timetable for the taxonomy's development and implementation. The last section includes final remarks on participating in the development of the taxonomy.

# International commitments on sustainable finance

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At the international level, the history of international mechanisms to finance sustainability projects began in 1992 with the Global Environment Facility (GEF) at the UN Conference on Environment and Development held in Rio de Janeiro. Following that, other funds with similar goals were created,<sup>1</sup> in addition to various initiatives by other multilateral organizations.<sup>2</sup> Finally, at the 15<sup>th</sup> Conference of the Parties (COP-15) of the UN Framework Convention on Climate Change in Copenhagen, developed countries collectively pledged to allocate USD 100 billion a year from 2020 to finance climate action in developing countries. This goal has probably only been achieved in 2022, according to preliminary data by the Organization for Economic Cooperation and Development (OECD, 2023).

At the COP-21 in Paris, an extension of the annual goal until 2025 was agreed to, and the definition of a new global goal for climate financing that developed countries will provide to developing countries, at a minimum of USD 100 billion.<sup>3</sup> The Paris Agreement emphasized the need to control the rise in global temperatures and align financial flows with sustainable development and combating climate change, coordinating the promotion of sustainable activities with the reduction of resources allocated toward activities that are harmful to the climate and the environment.<sup>4</sup> Finally, quantifiable targets were also established in Paris, such as limiting the rise in temperature to below 2°C above pre-industrial levels, with efforts to limit it to 1.5°C. This is an effort to reduce greenhouse gas (GHG) emissions by 45% by 2030, compared to current policy projections, and to achieve net zero emissions by 2050.<sup>5</sup>

Funding commitments were also agreed to within the framework of the Convention on Biological Diversity (CBD). The Kunming-Montreal Global Biodiversity Framework, adopted at the COP-15 of the CBD, foresees that international funding for biodiversity from developed countries to developing countries should reach USD 20 billion a year by 2025 and USD 30 billion by 2030. The goals outlined in Paris and in Kunming and Montreal require significant investment from both the public and private sectors to drive the ecological transformation process.

Studies, such as that of the International Energy Agency (IEA, 2023), indicate that modernizing the energy sector will require global investments of USD 900 billion by 2030, and another USD



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1 Climate Investment Funds (2008) and Green Climate Fund (2010).

2 See, for example, the [Principles for Responsible Investment \(PRI\)](#), an initiative of investors launched in 2005, and the initiative [Billions to Trillions](#) from the set of multilateral development banks in 2015.

3 More information is available at the [link](#).

4 Full agreement available at the [link](#).

5 UNEP, 2022, The Closing Window - Climate crisis calls for rapid transformation of societies. [Link](#)



Photo: Adobe Stock

1.7 trillion annually for low-carbon technologies in the final consumption sector.<sup>6</sup> The Intergovernmental Panel on Climate Change (IPCC, 2022) estimates that agriculture and other land uses will require USD 400 billion to limit emissions, and by 2050 the transition to carbon neutrality, globally, will require between USD 1.6 trillion and USD 3.8 trillion a year.<sup>7</sup>

The mobilization of these funds, however, could be complemented by redirecting funds currently spent on so-called stranded assets, or fossil fuels subsidies. For reference, in 2015, it was estimated that 80% of coal reserves, half of gas reserves and a third of oil reserves would need to be kept unused to maintain a 50% chance of achieving the Paris Agreement's 1.5°C target (McGlade and Ekins, 2015). Nevertheless, fossil fuel subsidies amounted to USD 7 trillion in 2022, equivalent to 7.1% of the global GDP, as estimated by the International Monetary Fund (IMF, 2023).

<sup>6</sup> Available [here](#).

<sup>7</sup> Available [here](#).

At the same time, the COP-26, held in Glasgow in 2021, reinforced the importance of sustainable finance with the establishment of the Glasgow Financial Alliance for Net Zero. This alliance gathers hundreds of financial institutions around the goal of mobilizing the private sector to steer the world toward net zero emissions. The recent COP-27 Sharm el-Sheik Implementation Plan called for a "transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors."<sup>8</sup> Similarly, the CBD's Kunming-Montreal Global Framework on Biodiversity promotes the alignment of public and private financial flows with biodiversity targets, as well as the monitoring and disclosure of the risks and impacts of activities by large companies and financial institutions.<sup>9</sup> As such, sustainable finance aims to mobilize capital and reduce the financing gap needed to drive a just and sustainable transition.

<sup>8</sup> UNFCCC, 2022. [Link](#).

<sup>9</sup> CDB, 2023. [Link](#).

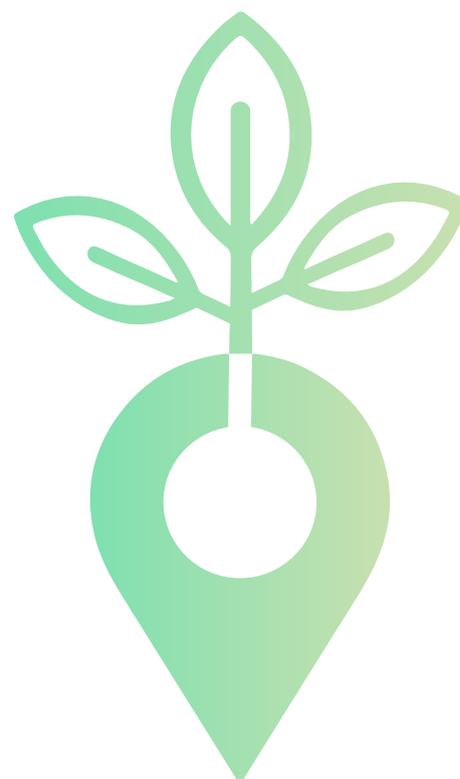
# What is a taxonomy, international and national initiatives and their relationship with sovereign thematic bonds

## Definition

Sustainable finance taxonomies play a pivotal role in mobilizing and redirecting capital flows toward investments needed to tackle the climate crisis, nature loss and social inequalities. The instrument provides a classification system that clearly, objectively, and scientifically defines activities, assets and/or categories of projects that contribute to climate, environmental and/or social goals, based on specific criteria. As defined by the International Capital Market Association (ICMA, 2021), they provide specific criteria and indicators that make it possible to assess whether an activity contributes to sustainability and/or the transition to a sustainable economy.<sup>10</sup>

Taxonomies offer a common terminology for companies, financial institutions, investors, regulators, governments and other stakeholders, coordinating investment decisions and the design of public policies. They must balance the need for international standardization with adaptation to the country's context and developments. Furthermore, taxonomies are essential for increasing the transparency of information on sustainable economic and financial activities. By establishing objective criteria, taxonomies facilitate the communication and evaluation of economic and financial activities, thereby improving the monitoring of the transition to a resilient and low-carbon economy.

The most common type of the instrument are green taxonomies, which classify activities that contribute to climate and environmental objectives. In the of case the climate change mitigation objective, an activity can be classified as green when it contributes to reducing GHG emissions. Many taxonomies require substantial positive contributions to the objective, while some include "transitional" activities. In the case of the objective of mitigating climate change, activities should show compatibility with a credible path to climate neutrality, based on a decarbonization pathway consistent with the Paris Agreement's climate goal of staying within the 1.5°C global warming limit, which implies reaching carbon neutrality by a defined year. Some taxonomies impose restrictions on the inclusion of transitional activities, restricting them to activities for which there is no zero-emission technological alternative that is viable from both a technological and economic point of view. This is evident, for example, in steel production. In these cases, the limit is typically set based on the best performance in the subsector.



<sup>10</sup> Available here.



**Taxonomies offer a common terminology for companies, financial institutions, investors, regulators, governments and other stakeholders, coordinating investment decisions and the design of public policies.**



A more flexible interpretation of this category applies to activities that offer a positive contribution to the goal, while not fully complying with a scientific transition scenario. This type is commonly referred to as a yellow or amber taxonomy.

Taxonomies can also include neutral or low-impact activities. These activities have neither a significant positive nor negative impact on the explicit objectives of the taxonomy - even though they are part of a sustainable economy (e.g., certain services such as in the care sector). Finally, taxonomies can define non-sustainable activities or activities with a substantial negative contribution that are significantly harming its objectives.

Taxonomies that combine different categories or degrees of contribution to the objectives of a taxonomy are called non-binary taxonomies or traffic light taxonomies. The most common case, however, is the existence of green or green-yellow binary taxonomies.

## Overview of international taxonomies

The global trend of implementing taxonomies for sustainable finance reflects the growing importance given to the sustainability agenda in economic and financial activities. In response, public and private sectors have sought to increase “green” investments. This resulted, for example, in a rapid growth of the market for green bonds, which grew 3.7 times in total value from 2015, the first year of relevant issuances (CBI, 2023), to 2022. The development of this market has been accompanied by the dissemination of predominantly voluntary guidelines relating to the issuance of green and sustainability bonds. However, with the growth of the market, the need for credible and official definitions and criteria has become increasingly evident. Therefore, over the last few years, various initiatives have emerged to establish standards and guidelines to guide investments in sustainable projects and activities.

In 2012, the Climate Bonds Initiative (CBI) published the Climate Bonds Standard, establishing criteria for the certification of climate and green bonds.<sup>11</sup> The CBI Taxonomy is an instrument designed to guide the issuance of green bonds, seeking to identify assets and projects compatible with a low-carbon economy in line with the climate change mitigation goals of the Paris Agreement.

The CBI Taxonomy, which uses a traffic-light system,<sup>12</sup> was developed using a multi-sectoral approach, with the collaboration of various technical and industrial groups. Based on the latest climate science, including the data provided by the Intergovernmental

<sup>11</sup> Available here.

<sup>12</sup> The CBI Taxonomy employs a traffic light-like signaling system to indicate whether assets and projects are compatible with carbon neutrality. The green light indicates automatic compatibility. The yellow light suggests potential compatibility, depending on more specific criteria being met. Red light means incompatibility. A grey circle is used to indicate when additional analysis is required to determine which signaling color is appropriate for a specific subset of assets or activities. More information is available at the [link](#).

Panel on Climate Change (IPCC) and the International Energy Agency (IEA), it is constantly updated to incorporate new technologies and sector-specific criteria.

The CBI played a significant role in the development of the European Union's Sustainable Finance Taxonomy. Currently, the CBI and the UN Office for Disaster Risk Reduction (UNDRR) are working on a Resilience Taxonomy to address issues of adaptation to climate change.

Also in 2012, the Chinese Securities Regulatory Commission (CSRC) also published a document that focused mainly on environmental protection and the circular economy. From this first effort, in 2015 the People's Bank of China (PBoC, the country's central bank) published the first version of the Green Bond Endorsed Projects Catalogue, which became the basis of the Chinese taxonomy. Moreover, in 2019, the National Development and Reform Commission (NDRC) - established in 1952 to coordinate development strategies - published the Green Industry Guidance Catalogue, which presents criteria for classifying sustainability for various economic activities (IPSF, 2022).

Finally, in 2021, the three initiatives were consolidated through a joint effort by these institutions to constitute the Green Bond Endorsed Projects Catalogue (2021 Edition).<sup>13</sup> In this instrument, the classification is made according to three objectives: respond to climate change; promote environmental progress (pollution control and ecological conservation); and achieve more efficient use of resources (circular economy, waste recycling and pollution prevention). Eligibility is determined based on the following criteria:

1. Make a significant contribution to one or more of the objectives;
2. Comply with the guidelines of the Green Industry Guidance Catalogue;
3. Adhere to a set of scientifically-based and consistent criteria;
4. Respect China's current stage of development;
5. Comply with relevant regulations and policies for safety, environmental protection and quality.

In addition to this effort, a taxonomy for financing the SDGs was developed by the Chinese Ministry of Commerce, in collaboration with the UN Development Program (UNDP), and published in June 2020. This instrument classifies projects by linking the 17 SDGs to three levels of guidance: the ICMA Social Bond Principles, a set of Chinese development policies and regulations, and a list of priority projects listed by the government. For each project, it is also

stated which vulnerable groups are to benefit: people below poverty line; excluded and/or marginalized groups of the population; children; elderly people; pregnant women; people with disabilities; migrants and displaced people; people with low levels of education; inhabitants of remote areas; and unemployed or underemployed people. Projects are assessed on the basis of a wide range of indicators, with more than 150 items. Eligibility is based on the assessment of significant contribution to at least one of the SDGs, without being significantly detrimental to any other.

In June 2020, the European Union (EU) Taxonomy was launched after more than two years of preparation, which established technical screening criteria and thresholds to determine whether an economic activity qualifies as environmentally sustainable for investment.<sup>14</sup> The EU Taxonomy aims to redirect capital flows toward sustainable investments, increase transparency and investor confidence, as well as raise awareness of the environmental impact of financial products or corporate obligations. It focuses on nine priority sectors and six environmental objectives that encompass climate change mitigation and adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems (EUROPEAN UNION, 2020, § 9).

To be classified as environmentally sustainable, an activity must (EUROPEAN UNION, 2020, § 3):

1. substantially contribute to achieve one or more of the environmental objectives;
2. do not cause significant harm to any of the other objectives;
3. comply with minimum social safeguards; and
4. comply with the technical screening criteria, which are defined by specific metrics and limits.

The EU adopted a binary taxonomy, including, however, not only fully green activities (e.g., the production of electricity from wind energy), but also "transitional activities", defined as "economic activity for which there is no technologically and economically feasible low-carbon alternative" (e.g., cement production). In addition to that, it incorporates "enabling" activities which are characterized by not making a substantial positive contribution by themselves, but are necessary to facilitate green activities (e.g., the manufacturing of rechargeable batteries) (EUROPEAN UNION, 2020, p. 10).

In terms of international agreements, the EU taxonomy is aligned with the SDGs of the UN's 2030

<sup>13</sup> People's Bank of China, 2021.

<sup>14</sup> Available [here](#).



Photo: Adobe Stock

Agenda through commitments and principles established in international treaties and agreements. Article 3(3) of the Treaty on European Union, for example, aims for an internal market that promotes sustainable development, with balanced economic growth and environmental protection.

The establishment of the EU Taxonomy was followed by a rise in initiatives for establishing taxonomies, including in Latin America. The United Nations Environment Programme Finance Initiative (UNEP FI), within the framework of the Working Group on Sustainable Finance Taxonomies for Latin America and the Caribbean (LAC), created by the Interagency Technical Committee of the Forum of Ministers of Environment of LAC, developed the LAC Taxonomy Common Framework, which is a guidance document that can serve as a voluntary reference to orient LAC countries that are developing sustainable finance taxonomies. It establishes guiding principles that will improve comparability and ensure interoperability of taxonomies across LAC and internationally.

A concomitant effort was made by the International Standards Organisation (ISO) with ISO 14,030. Divided into four parts, it establishes a standard for green bonds (part 1), green loans (2), a project taxonomy (3) and verification systems for sustainability (4). Currently, the Brazilian Association of Technical Stan-

dards (ABNT), which was part of the ISO working group to build the ISO 14,030, is working on translating the standard into the Brazilian context, work that will also serve as an input for the development of the Brazilian Sustainable Taxonomy.

The first taxonomies published in the Latin American region were the taxonomies of Colombia, launched in 2022,<sup>15</sup> and of Mexico,<sup>16</sup> in 2023. Costa Rica, Chile, Panama, Peru and the Dominican Republic are also in the process of developing their taxonomies, whereas all those countries are taking into account the interoperability with other countries' taxonomies.

The main objective of the Colombian taxonomy is to help different actors in the public and private sectors, such as bond issuers, investors, financial institutions and government agencies, to identify and assess investments that contribute to achieve the established environmental objectives. An example of Colombia's progress in sustainable finance is the publication, in July 2021, of its Framework for Sustainable Bonds, the first issuance of Sustainable Bonds in September of the same year, and the publication of its Green Taxonomy in April of 2022.<sup>17</sup>

<sup>15</sup> Available [here](#).

<sup>16</sup> Available [here](#).

<sup>17</sup> Available [here](#).

Initially voluntary, the environmental objectives of the Colombian taxonomy include climate change mitigation and adaptation (SDG 13), sustainable water management (SDG 6), promotion of a circular economy (SDG 12), pollution prevention and control (SDG 3), conservation of terrestrial and marine ecosystems and biodiversity (SDGs 14 and 15), as well as soil management, the latter being a major innovation in terms of taxonomy and fundamental for the region. To be classified as sustainable, activities must meet eligibility criteria and compliance requirements, while avoiding significant harm to any other environmental objectives and causing negative social impacts.

As for the climate mitigation objective, the Colombian taxonomy adopts a binary approach, but like the EU Taxonomy includes activities classified as transitional based on best practices in the sector, based on an analysis of national productive capacities. An example of these activities is cement manufacturing, both of which have a similar impact limit for the mitigation objective: emissions of up to 0.8 tCO<sub>2</sub>eq/t of clinker in Colombia and 0.722 tCO<sub>2</sub>eq/t of clinker in the EU. Similarly, the Colombian taxonomy includes enabling activities, such as information technologies aimed at reducing emissions through data-based solutions. Despite this provision, Colombia does not adopt a specific nomenclature for those activities, as the EU did (transitional and enabling). Regarding sectors and activities related to land use, the taxonomy employs a non-binary approach, establishing three levels of alignment of activities: basic, intermediate and advanced/transformational, with qualitative criteria.

It is interesting to note that the Colombian taxonomy explicitly indicates a relationship with 16 out of 17 Sustainable Development Goals. Divided between the three dimensions of the Agenda: economy (goals 8, 9, 10 and 12), society (goals 1 to 5, 7, 11 and 16) and biosphere (goals 6 and 13 to 15), without explicitly mentioning only the goal of building pacts and partnerships (SDG 17). According to the text of the Colombian taxonomy, this is an integrated approach between these aspects, which are reflected in the 2030 Agenda for Sustainable Development and are also intended to be applied to the taxonomy.

Mexico's taxonomy represents another significant milestone due to the inclusion of social objectives. As a strategic goal, the taxonomy provides for mobilization and redirection of public and private funds toward economic activities that have a positive impact on the environment and society.

The environmental objectives include mitigation and adaptation to climate change, management of water and marine resources, promotion of a circular economy, pollution prevention and control, and conservation of ecosystems and biodiversity. The social objectives encompass promoting gender equality and facilitating access to fundamental services pertinent to sustainable cities, healthcare, education, and financial inclusion.

The first version of Mexican taxonomy focuses on mitigation and adaptation to climate change, and the social objective of gender equality. In terms of the climate objectives, the taxonomy follows the structure and methodology of the EU Taxonomy and is guided by the technical criteria of the Colombian taxonomy. It adopts a binary approach and contains transitional and enabling activities like the EU Taxonomy. In the first phase, the Mexican taxonomy defined criteria for 124 activities in six sectors that are responsible for approximately 90% of Mexico's GHG emissions.

For the social objective of gender equality, Mexico established a non-binary index, which is based on a 43-questions-questionnaire and assesses, using a numerical scale, the degree to which the organization contributes to the three pillars: decent work, well-being and social inclusion. The index can be used to assess companies in all 20 sectors of the economy, in addition to those covered by the taxonomy.

Unlike other taxonomies discussed above, the Mexican taxonomy treats its relationship with the SDGs more objectively, relating the instrument to just seven of them. In environmental terms, three goals stand out: affordable and clean energy (SDG 7), climate action (SDG 13) and sustainable cities and communities (SDG 11). In terms of the economy, only the goals of industry, innovation and infrastructure stand out. Finally, in the realm of social objectives, three assume particular prominence: zero poverty (SDG 1), gender equality (SDG 5), and reducing inequalities (SDG 10).

This overview of international experiences indicates not only the scope of the objectives pursued in each experience, but above all the specific characteristics of each instrument. Although the mentioned taxonomies – especially of the EU, Colombia and Mexico – have a significant common basis, there are differences in terms of methodologies, technical criteria, focus and approach that indicate the need to adapt to the national situation. The following subsection focuses on taxonomies developed at the national level.



**This effort aims to coordinate other initiatives that have established criteria to guide sustainable finance, both in the public and private sectors.**



## Overview of taxonomy initiatives in Brazil

With a developed financial system, the implementation of a taxonomy for sustainable finance in Brazil is an opportunity to guide investment in activities aligned with the country's climate, environmental and social sustainability goals.

This effort aims to coordinate other initiatives that have established criteria to guide sustainable finance, both in the public and private sectors.

The Brazilian Federation of Banks (Febraban) launched a "Green Taxonomy" in 2015, in which economic activities are classified according to their contribution to sustainability and to their degree of exposure to environmental risks at the subsector level, based on the National Classification of Economic Activities (CNAE).<sup>18</sup> In 2019, Febraban revised its methodology, incorporating data from the Central Bank of Brazil (BCB) through the Credit Information System (CIS). This update allowed the analysis of all credit granted by the Brazilian banking system to legal entities.

Febraban's current taxonomy uses three categories to characterize the banking sector's financial activities: green economy, exposure to climate change and exposure to environmental risk. These categories make it possible to classify activities according to their contribution to sustainability and their degree of exposure to environmental risks. It is worth noting the limitations of using CNAE codes, both in terms of granularity (e.g., differentiating between electric and combustion-powered vehicles) and in terms of harmonization with other criteria for classifying national economic activities (e.g., the Rural Credit Manual) (FEBRABAN, 2021).

In 2020, the Federal Government published Decree 10.387, of 5 June 2020, which establishes the conditions for issuing infrastructure debentures considered to be a priority, including infrastructure projects with socio-environmental benefits in the sectors of urban mobility, energy, basic sanitation, and subnormal/isolated urban areas, encouraging the financing of activities related to green infrastructure.<sup>19</sup>

Under the Sustainable Agriculture Investment Plan (2020), the Ministry of Agriculture and Livestock (MAPA) published the report "Unlocking Brazil's Green Investment Potential for Agriculture," which identifies a portfolio of projects and assets eligible for green financing.<sup>20</sup> MAPA also presented the Sectoral Plan for Adaptation to Climate Change and Low Carbon Emissions in Agriculture 2020-2030 (ABC+ Plan), a national strategic agenda that aims to promote adaptation to climate change and control of GHG emissions in the Brazilian agriculture, establishing criteria to encourage the strengthening of environmentally sustainable production systems.

<sup>18</sup> Available [here](#).

<sup>19</sup> Available [here](#).

<sup>20</sup> Available [here](#).

As part of the Green Investment Strategy for Regional Development, launched in 2021 by the Ministry of Integration and Regional Development (MIDR), the report "Taxonomies and ESG Frameworks for Sanitation and Water Infrastructure" presents two taxonomies for the sanitation and water infrastructure sectors, and five frameworks aligned with environmental, social and governance (ESG) criteria, for the subsectors of water supply, sewage, solid waste, water infrastructure and revitalization of drainage basins.<sup>21</sup>

An initiative to identify and label sustainable investment funds by the Brazilian Financial and Capital Markets Association (Anbima, 2021) aims to make it easier to identify and choose investments in line with ESG criteria.<sup>22</sup>

The Financial Innovation Laboratory (Lab)<sup>23</sup> has played an important role in promoting taxonomy-related initiatives in Brazil. In 2021, in partnership with FiBraS project, the Lab published the report "Sustainable Finance Taxonomy: Overview and National Reality".<sup>24</sup> The publication addressed sustainable taxonomies, including concepts, importance, advantages, challenges and trends observed on the subject. The following year, the Lab set up a sub-working group dedicated exclusively to the topic of taxonomy. In 2023, the sub-group issued the report "Taxonomies in Sustainable Finance: Reflections for the Development of a Taxonomy in the National Context".<sup>25</sup> The purpose of this publication was to analyze the experiences of taxonomies under development, looking for lessons learned to support public policymakers, self-regulators and the financial system in the potential adoption of a sustainable finance taxonomy in Brazil. The report mapped several ongoing taxonomic initiatives, national and international, identifying their main elements. Furthermore, the Lab has promoted debates and seminars on the topic, bringing together various stakeholders.

Despite these initiatives, there is no consolidated Brazilian taxonomy capable of providing a unified and coherent structure, objectives and methodology across sectors.<sup>26</sup>

Therefore, this new initiative will serve to establish a single benchmark at the national level, making it possible to classify economic and financial activities in a clear and objective way.



**This new initiative will serve to establish a single benchmark at the national level, making it possible to classify economic and financial activities in a clear and objective way.**



21 MDR (2022), ESG Taxonomies and Frameworks for Sanitation and Water Infrastructure. Available at the link. MDR (2022), Frameworks in the Areas of Basic Sanitation and Water Security. Available at the [link](#).

22 Available here.

23 The Lab is a forum for multi-sectoral interaction and a space for public-private dialogue to promote financial innovation and sustainable finance in Brazil. The result of a partnership between the Brazilian Development Association (ABDE), the Inter-American Development Bank (IDB) and the Securities and Exchange Commission of Brazil (CVM), later joined by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH as part of the FiBraS project in 2019, the Lab brings together representatives from government, corporates and society to debate innovative alternatives for financing sustainable investments, addressing topics selected by the Lab's members.

24 Available here.

25 Available here.

26 Available [here](#).



**Sustainability bonds will increase budgetary resources for financing environmental and social measures that are essential for sustainable development.**



## Relationship with sovereign thematic bonds

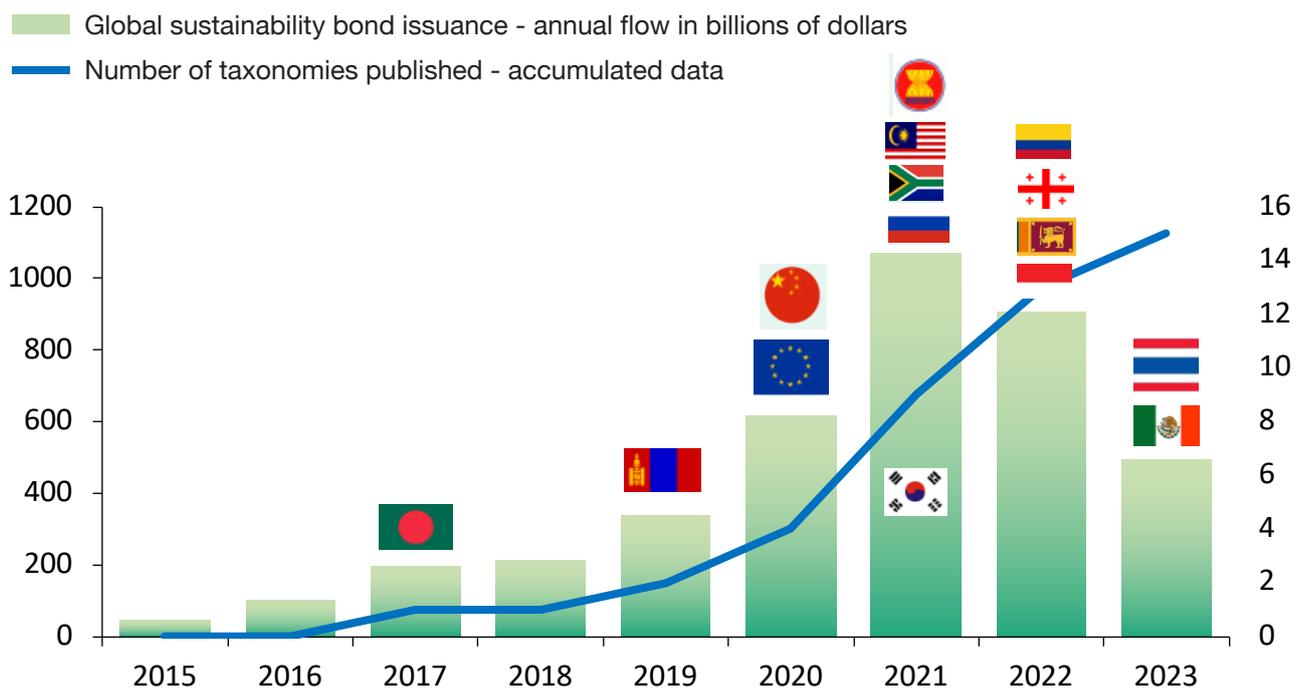
The absence of national taxonomies has not been a restrictive factor for the evolution of the sovereign sustainable debt market, as can be seen in Chart 1, which shows the shift of sovereign bonds with the launch of taxonomies. However, the absence of national taxonomies implies the use of other international taxonomies and standards to define the types of investment eligible for issuances. Sovereign bonds end up being issued without technical criteria being adapted to national contexts, which can also imply less coverage of bonds in terms of activities vis-à-vis sustainable investment potential in the country. That said, the coordination of a national taxonomy and issuance of thematic bonds is desirable given the advantages of aligning efforts to tackle sustainability issues in the interest of interoperability (which will be discussed in section 7).

Sovereign debt instruments have been increasingly used by various countries - developed or developing - to help finance public policies and climate, environmental and social commitments. Providing an additional source of finance for public budgets, sustainability bonds will increase budgetary resources for financing environmental and social measures that are essential for sustainable development.<sup>27</sup>

The so-called thematic bonds seek to achieve a lower financial cost to accelerate the financing of investment projects and Re-

<sup>27</sup> [Brazilian Framework for Sovereign Sustainability Bonds.](#)

**Chart 1 – Flow of sustainability bonds and publication of national or regional taxonomies**



Source: Environmental Finance Data and Natixis. Prepared by: Central Bank of Brazil.

search, Development and Innovation in areas that are crucial to the transition to a sustainable economy. More recently, several countries have made progress in expanding the list of potential uses for these resources, including activities such as biodiversity conservation.<sup>28</sup>

With that in mind, the Federal Government issued Decree 11.532, of 17 May 2023, which set up the Sovereign Sustainable Finance Committee, bringing together ten Ministries to draw up the framework for issuing sovereign thematic bonds through Federal Public Debt; identify budget programs that meet the eligibility criteria established in the framework; monitor its implementation; and draw up the allocation and impact reports and other documents resulting from the issuance of sovereign thematic bonds provided for in the framework.<sup>29</sup> There is a commitment that the first sovereign sustainability bonds will be issued in the second half of 2023.

The first stage of the process was to approve the Sovereign Sustainability Bond Framework, a document that underpins the federal government's commitment to use the funds from the issuance of the bonds for budgetary expenses that will enable environmental and social progress in the country. To this end, it lists categories of eligible and ineligible expenditures within the framework of the Annual Budget Laws.<sup>30</sup> In addition, the document also establishes "exclusion criteria", which consist of certain activities or allocations that are not eligible for funding. At each round

28 IMF, Sovereign Climate Debt Instruments: An Overview of the Green and Catastrophe Bond Markets. Available at the [link](#).

29 Decree 11532, 16 May 2023, available at the [link](#).

30 It is important to note that there is no link between the funds raised from the bonds issued and the expenditures they are backed by in the LOA. Rather, there is a commitment by the federal government to allocate an amount of resources in the budget programs related to these expenses equivalent to the amount raised from the issuance of sovereign sustainable bonds.

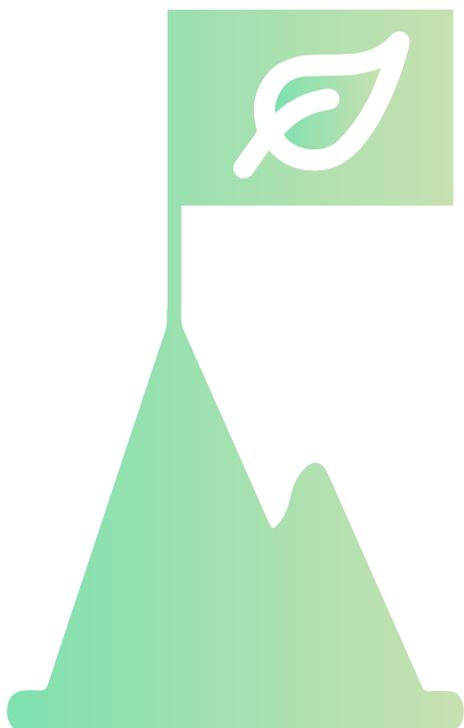
of issuance, the Committee will be responsible for identifying budget programs that meet the eligibility criteria established in the framework and monitoring the financial execution of these programs. Finally, annual allocation and impact reports will be drawn up for each bond issue, containing information on the impacts and results associated with the environmental and/or social benefits of the activities financed by the Sustainability Bonds.

Fundamental to the functioning of this instrument, therefore, is the guarantee that the funds raised with its issuance are effectively directed toward certain expenses. In fact, one of the biggest costs associated with thematic bonds relates to the greater need to disclose and monitor the use of resources.<sup>31</sup> Without an efficient mechanism to ensure this, there is no guarantee of obtaining the premium associated with the bond (called *greenium*).

It should be emphasized that although the Sustainable Sovereign Bond Framework and the Sustainable Taxonomy constitute a set of instruments for aligning the sustainability objectives of economic policies, they are not the same. While the former is used to identify all the public spending that supports fundraising under the banner of sustainability, the latter is used to guide economic and financial activities in a broad sense, whether they are financed by the public sector or not. Furthermore, the Multiannual Budget Plan (PPA) 2024-2027 identifies spending related to tackling the climate crisis, but this does not necessarily coincide with the criteria that will be developed by the Taxonomy. Therefore, the Ministry of Finance and the Ministry of Planning and Budget are in dialogue about the development of these instruments, seeking increasing alignment as they are consolidated.

31 Doronzo, Siracusa, and Antonelli (2021).

# Objectives of the Brazilian Sustainable Taxonomy



## Strategic objectives

The development of a Brazilian taxonomy aims to respond to the country's main environmental and social challenges, taking into account its commitments, objectives and priority plans.

The role of the taxonomy in coordinating investments that contribute to the transformation toward a resilient and GHG emission-neutral economy, but also to other dimensions of sustainable and inclusive development related to the UN's 2030 Agenda, has already been noted. This transformation will be faster the more complementary the efforts of the public and private spheres, the different economic sectors and civil society are.

Considering the above, as with other national experiences, there are three strategic objectives for Brazil's Sustainable Taxonomy:

1. Mobilize and redirect public and private financing and investment toward economic activities with positive climate, environmental and social impacts, aimed toward sustainable, inclusive and regenerative development;
2. Promote technological development aimed at climatic, environmental, social and economic sustainability, with increased productivity and competitiveness of the Brazilian economy on a sustainable basis;
3. Create the basis for producing reliable information on sustainable finance flows by encouraging transparency, integrity and a long-term vision for economic and financial activities.

The aim is to make two crucial dimensions of the economic transformation strategy clear: on the one hand, to encourage coordinated action among the various economic agents and, on the other, to create mechanisms for monitoring these efforts. After all, it is not enough to increase confidence in the adequacy of investments to meet the needs of the climate crisis. It is necessary to establish objective metrics for evaluation, monitor the volume and pace of resources allocated to identify any gaps and update financial instruments, eliminating the risk of illegal or harmful behavior.

The climate, environmental and social objectives that will be covered by the Brazilian taxonomy are:

Climate and environmental objectives:

1. Climate change mitigation
2. Adaptation to climate change

3. Protection and restoration of biodiversity and ecosystems
4. Conservation, sustainable management and use of soil and forests
5. Sustainable use and protection of water and marine resources
6. Transition to a circular economy
7. Contamination prevention and control
8. Socio-economic objectives:
9. Generate decent work and raising incomes
10. Reduction of socio-economic inequality, considering racial and gender aspects
11. Reduction of regional and territorial inequalities in the country
12. Promotion of quality of life by guaranteeing rights and increasing access to basic social services

Similar to Mexico, Brazil intends to include social objectives in its taxonomy given the relevance of social issues for the country's sustainable development and the close interrelationship with climate and environmental challenges. At the same time, the climate and environmental objectives will be aligned with those of other taxonomies referenced in the previous section, especially with the additional objective of sustainable soil and conservation, management and sustainable use of forests, in line with the Colombian taxonomy.

It is necessary to emphasize that, similar to the other mentioned processes, the taxonomy will, in its first stage, focus on outlining the criteria for substantial contribution to the environmental and climate objectives 1, 2, and 4. Additionally, the socio-economic objectives 9 and 10 will be prioritized in the first version of the taxonomy. The interrelationship between the objectives will be addressed by the design of the general criteria of the taxonomy, requiring that an eligible activity not only contribute substantially to one of the defined objectives but also that it is not significantly harm any of the other objectives, while also complying with minimum safeguards<sup>21</sup> (section 7).

## Climate and environmental objectives

Climate and environmental objectives play a crucial role as a strategic guide for financial institutions and investors. By covering climate mitigation and adaptation, protection of ecosystems and biodiversity, circular economy, pollution prevention and control, sustainable water management and use, land use and preservation, they provide a target point for identifying and financing projects aligned with environmental sustainability objectives. By adopting these objectives, the financial sector contributes to the protection of the environment and fosters a greener and more



**It is necessary to establish objective metrics for evaluation, monitor the volume and pace of resources allocated to identify any gaps and update financial instruments, eliminating the risk of illegal or harmful behavior.**



balanced economy, promoting sustainable development and the well-being of society as a whole.

### **1) Climate change mitigation (human intervention to reduce GHG emissions and/or increase GHG sinks)<sup>32</sup>**

In 2020, Brazil was the world's seventh largest GHG emitter (flux), responsible for 2.28% of total GHG emissions (CLIMATE WATCH, 2023). Most of these emissions come from land use, forestry and land-use change (38%), including deforestation, followed by agriculture (28.5%), and the energy sector (23.2%). The waste sectors and industry account for 6.1% and 4.2%, respectively (MCTI, 2022).

The combined effect of global warming and biodiversity loss will lead to a long-term decrease in carbon stocks in forest biomass, jeopardizing the role of the Amazon as a carbon sink, mainly dependent on forest responses to increases in atmospheric CO<sub>2</sub>. The southern part of the Amazon is already a source of CO<sub>2</sub> emissions into the atmosphere (IPCC, 2022).

Major measures were adopted by Brazil to mitigate climate change, including the commitment to halt deforestation in six biomes (Amazon, Atlantic Forest, Caatinga, Cerrado, Pampa and Pantanal), encouraging the use of renewable energies, promoting sustainable agricultural practices and implementing energy efficiency policies (BRASIL, 2020).

Regarding the energy sector, Brazil has been taking steps to continue expanding its great potential in renewable sources, in particular wind, solar, biofuels and, to a lesser extent, low-carbon hydrogen. Brazil's leading role in electricity from renewable sources and sustainable fuels can and must be expanded. In 2022, the energy matrix already had 47.4% renewable sources, while the global average was 16% (EPE, 2023; IRENA, 2023).

### **2) Adaptation to climate change**

Measures to promote adaptation to the adverse effects of climate change, strengthening the resilience of vulnerable sectors and communities.

Brazil is a country highly vulnerable to climate change. The challenges associated with adaptation in areas such as agriculture, water resources, infrastructure and health, among others, are extensive and diverse. Projections point to warming throughout the whole territory,

with the Midwest and Southeast regions being the most affected (BRASIL, 2016). According to the projections, the interannual variability in temperature will increase, and the rise in rainfall will be more noticeable in the South, especially during the summer and spring. The Southeast is a region of low climate predictability, making projections of rainfall changes uncertain. Simulations also show an increase in the number of consecutive dry days in the Northeast and a decrease in consecutive wet days in the Amazon region (IPCC, 2022).

According to the IPCC (2022), recent studies show strong negative impacts of climate change on agriculture, resulting in loss of income and employment, food price increases and food insecurity. These effects will likely have disproportional, serious impacts on the poorest rural families. The drought increase also affects hydroelectric power generation. In addition, extreme weather events such as flash floods are a threat to urban infrastructure and buildings, whether on the coast or inland.

Climate impacts worsen social and regional inequalities. Socioeconomic issues alongside the climate and environmental crises contribute to increasing social pressures, leaving certain groups even more vulnerable, making adaptation more difficult and increasing the population's vulnerability (IPCC, 2022).

It is estimated that annual climate adaptation investments of between USD 160 and USD 340 billion will be needed by 2030 and between USD 315 and USD 565 billion by 2050 worldwide (UNEP FI, 2022). This range is in line with new estimates that calculate investment needs of USD 71 billion per year between 2022 and 2030 based on the Nationally Determined Contributions (NDCs) and national adaptation plans of 76 developing countries. The measures include investments in technological innovation, climate research and monitoring, and warning systems to reduce and manage climate and environmental risks.

The responses, however, remain fragmented, incremental and sector-specific, unevenly distributed. Barriers to adaptation include limited resources, lack of private sector involvement, insufficient mobilization of funding, little climate knowledge and a low sense of urgency. Therefore, disparities between the estimated costs of adaptation and the funding allocated need to be addressed (IPCC, 2022).

### **3) Protection and restoration of biodiversity and ecosystems**

Brazil is one of the most biodiverse countries in the world, home to 10 to 15% of all known species

<sup>32</sup> IPCC Glossary. Available [here](#).

(BRASIL, MMA, 2023). However, this natural heritage is facing serious threats. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), biodiversity loss is the result of five main factors: land-use change, climate change, pollution, invasive alien species and irrational use of natural resources. The combination of the different causes of biodiversity loss, including deforestation, alongside the effects of global warming, is resulting in a significant decline in forests and biodiversity in Brazil.

The list of endangered species includes 1,173 species of fauna and 2,113 species of flora. Agricultural expansion is causing major conversions in areas of tropical vegetation and savannas (the Amazon, Cerrado, Caatinga and Pampa). In the Atlantic Forest and Cerrado biomes, up to 85% of plant and animal species, habitats and communities in biodiversity hotspots are projected to be negatively impacted by climate change (BRASIL, MMA, 2023; IPCC, 2022).

Tackling this decline in nature requires the expansion of public initiatives for conservation, restoration, management and sustainable use associated with improving the management and expansion of Conservation Units and environmental reserves, and ensuring the effectiveness of the preservation instruments provided for in Brazil's Forest Code. Finally, it is important to establish incentives to meet the commitment to recover 12 million hectares of forest, as set out in the Nationally Determined Contribution (NDC) presented by Brazil under the Paris Agreement and reaffirmed in the National Policy for Native Vegetation Recovery (PROVEG), established by Decree N°. 8,972/2017.

#### **4) Conservation, sustainable management and use of soil and forests**

Responsible land use, curbing deforestation and the degradation of forest areas, as well as encouraging the restoration of degraded landscapes. It is worth highlighting that combating illegal deforestation is essential and should primarily be carried out through command-and-control initiatives in order to achieve zero illegal deforestation by 2030 as per the revised NDC. However, reducing or achieving a net reversal of deforestation through regenerative techniques, for instance, should be encouraged and enhanced via economic mechanisms. Lastly, efforts should also be directed towards protecting the physical, chemical and biological integrity of soils. Soil is fundamental to life on the planet, providing essential ecosystem services such as water purification, water, nutrient and carbon reservoirs, and species habitat. However, a study by the UN's Food and Agriculture Organization (FAO) showed that more than 30% of the world's soils are degraded.<sup>33</sup> The biodiversity of soils, which is home to around 25% of all living species, is threatened by excessive use of land and the improper use of chemical fertilizers and pesticides.

<sup>33</sup> FAO, 2015. Available at the [link](#).



**The combined effect of global warming and biodiversity loss will lead to a long-term decrease in carbon stocks in forest biomass, jeopardizing the role of the Amazon as a carbon sink, mainly dependent on forest responses to increases in atmospheric CO<sub>2</sub>. The southern part of the Amazon is already a source of CO<sub>2</sub> emissions into the atmosphere.**



The loss of soil cover is responsible not only for the emission of carbon stored by it but also results in the loss of biodiversity and deteriorates the quality and quantity of stored water, which makes it necessary to maintain its integrity and its biogeochemical cycles. In a complementary way, Salinization, i.e., the accumulation of salt in the soil caused by improper irrigation, as well as changes in land use and overgrazing, is another significant threat that severely reduces crop productivity. According to the FAO (2015), approximately 25 to 30% of the irrigated agricultural area in northeastern Brazil is undergoing salinization.

In addition, according to the IPCC (2022), the Brazilian Semi-Arid region - which covers a large part of the Northeast - is one of the areas in the world most drastically affected by climate change, with more intense droughts and higher temperatures, accelerating the expansion of land affected by desertification and degradation. Considering that this is one of the least socioeconomically developed regions in the country, targeted measures against desertification and soil degradation, would also contribute to combating poverty and social inequality.

## 5) Transition to a circular economy

Transition from a linear to a circular economy, reducing the use and waste of raw materials and promoting the circular flow of material via recovery, retention and value addition. These are activities that use resources more efficiently, increase the durability and useful life/use of products, their repairability and recycling potential and the use of secondary raw materials, substantially reduce hazardous content and minimize waste disposal.

Growing environmental and climate pressures indicate that linear models of doing business are nearing their limits. The expansion of agricultural activity and the extraction of raw materials such as minerals has resulted in land degradation and biodiversity loss in many regions of Brazil, with significant impacts on livelihoods and the economy. To achieve a circular economy in the country, it will be crucial to promote changes in consumption and production patterns, invest in an adequate, resilient infrastructure and foster technological innovation for the efficient and sustainable use of resources. A restorative and regenerative model can decouple economic development from the consumption of finite resources and eliminate negative externalities (CE100 Brasil, 2017).

In particular, an initial challenge for the adoption of a circular economy in the country is the low recycling

rate, which prevents materials from returning to the production cycle. Merely 4% of solid waste undergoes recycling, and a mere 74% of Brazilian municipalities have initiated waste-selective collection programs, many of which are still in their infancy. This strains the final disposal system and has adverse effects on natural resources (AGÊNCIA BRASIL, 2022).

In Brazil, there are 2,167 waste dumps and controlled landfills, with relatively low rates of waste-selective collection and recycling. Treatment of the organic fraction of waste is also at an early stage, despite accounting for half of the municipal solid waste produced. The situation is even more complicated in small and medium-sized municipalities, which face irregularities in the collection of household waste, low coverage in rural areas and the inadequate disposal of waste in dumps and controlled landfills. The New Basic Sanitation Legal Framework brought some changes to the National Solid Waste Policy (PNRS) to overcome these issues. However, there are still significant challenges in the management and handling of solid urban waste, including the absence of official systems for waste-selective collection and composting of organic waste, as well as widely indecent working conditions for recyclable material collectors. These issues highlight the need to improve solid waste management in the country (IPEA, 2023).

The transition to a circular economy could generate opportunities for innovation and value in Brazil, taking advantage of its unique characteristics and natural capital. A restorative and regenerative model that seeks to associate economic activities with the circular management of resources and reduce negative externalities (CE100 Brasil, 2017).

In the industrial sector, there are opportunities to explore new business models, design and material recovery, inclusive of the existing informal economy, which are key to a circular economy. Sectors such as electronics, construction, textiles and plastics have significant potential for waste reduction, material recovery and circular value chains (CNI, 2018). In the extractive industry sector, there are also interesting opportunities to increase efficiency through research and development and the implementation of projects associated with the economic use of tailings, barren rock, and mining waste (ANM, 2020). The extractive industry also has interesting opportunities to increase its efficiency through research and development and the implementation of projects associated with the economic utilization of tailings, waste rock and mining waste (ANM, 2020).

## 6) Sustainable use and protection of water and marine resources

Sustainable water management, preserving its quality and quantity, as well as the conservation of river and marine ecosystems. Efficient use, protection of sources and reduction of water pollution in the management of covered economic activities as well as the development of the Brazilian blue economy and its interrelation with the maritime and port sectors. Brazil is home to around 12% of the world's freshwater reserves, with a significant concentration in the Amazon Basin.<sup>34</sup> Still, the country faces serious problems related to water scarcity, desertification, drought and pollution of water sources.

Several factors have contributed to threatening the quantity and quality of freshwater sources in the country, such as the lack of adequate infrastructure, which negatively impacts the water resources system, including water supply, transportation and basic sanitation.<sup>35</sup>

Basic sanitation is one of the main challenges, even though it is a fundamental right guaranteed by the Constitution. According to data from the National Sanitation Information System (SNIS), in 2021, around 35 million Brazilians (17% of the population) did not have access to treated water and 97 million (47% of the population) did not have access to sewage collection services. Another important issue is the lack of proper wastewater treatment. Only around 46% of the sewage generated in the country is treated, which means that most of the effluent is discharged directly into rivers, lakes and oceans, polluting water resources and affecting aquatic life.<sup>36</sup> The New Basic Sanitation Legal Framework<sup>37</sup> provides for the universalization of sanitation services, with the goals of achieving a coverage of 99% drinking water services and 90% sewage collection and treatment by 2033.

Moreover, Brazil faces challenges related to marine pollution, the result of untreated sewage and inadequate solid waste management (IPEA, 2020).

Ocean and coastal ecosystems in Brazil, such as coral reefs, river deltas and estuaries, mangroves and beaches, are highly sensitive to and negatively impacted by climate change and associated risks such as rising sea temperatures. Observed impacts include a reduction in coral abundance, density and cover,

increase in coral bleaching; changes in the plankton community and ocean and coastal food-web structures, wetland loss and changes in macrobenthic communities (IPCC, 2022). Damage to coral reefs and mangroves not only harms important habitats for marine species, but also leaves coastal communities more vulnerable to marine flooding. Along with climate change, overfishing is causing river and marine species to collapse, jeopardizing food security and local economies.

Sustainable and efficient water management has mainly focused on improving the quantity and quality of water supply, including large infrastructure projects, which are, however, often contested and can aggravate water-related conflicts. Inclusive water regimes that overcome social inequalities and approaches that include nature-based solutions, such as wetland restoration and water storage and infiltration infrastructures, with synergies for ecosystem conservation and disaster risk reduction, have proven to be more successful for adaptation and sustainable development (IPCC, 2022).

## 7) Contamination prevention and control

Prevent and control air, water and soil pollution, minimizing negative impacts on the environment and human health. This may essentially address four aspects: contamination of water and soil by chemical products in production processes (agrochemicals, pesticides, cleaning water, etc.); contamination of the air by gases and particles other than those associated with the greenhouse effect (particulate matter, non-methane hydrocarbons, etc.); management of solid waste and the prevention of its burning; and control of noise and vibrations resulting from production activities.

On this topic, it is worth emphasizing that there is an urgent need for a Brazilian taxonomy, considering the volume of pesticides consumed in the country. According to data from the FAO's FAOSTAT portal, Brazil has had the highest per capita consumption of pesticides since 2007, reaching 1.77 kg in 2020. Although it is closely followed by Oceania's average of 1.7 kg per person, it is significantly above the American continent's average of 1.35 kg per capita.<sup>38</sup> Excessive consumption of these substances can not only harm human health, as the National Cancer Institute has pointed out,<sup>39</sup> but also natural resources (BRASIL, MMA, 2023).

34 More information at the [link](#).

35 Sanitation services include water supply, sewage, urban cleaning, solid waste management, drainage and rainwater management.

36 More information at the [link](#).

37 Law 14026/2020, available at the [link](#).

38 Information is available on the FAOSTAT website, at the following [link](#).

39 See, for example, [this survey](#).



All these measures indicate the importance of making the generation of quality jobs and higher incomes one of the taxonomy's objectives so that it can serve as an instrument for promoting change in our labor market.



## Socio-economic objectives

### 8) *Generating decent work and income*

As presented in Section 1, the Ecological Transformation is not restricted to reducing the environmental footprint of economic activity, but is also aimed at productive development and generating quality jobs. According to data from the World Bank's Open Data website, since the 2014 crisis, Brazil's per capita income has fallen below that of the average of Latin America and the Caribbean (LAC), as well as other upper middle-income countries. In the period before, at least since 1990, Brazil had a higher average per capita income than these two groups. In 2022, however, the LAC region had an average income 7% higher, while other countries with similar income-levels had more than 20% higher incomes.<sup>40</sup>

Additionally, Brazil still has a high level of informality. Using data from the Continuous National Household Sample Survey (PNAD-C), it is possible to identify this structural characteristic by aggregating the three types of unregistered work categories (in the private and public sectors and domestic workers), plus self-employed workers and auxiliary family members. These five categories together accounted for an average of 46% of the employed population from the start of the survey in 2012 until the first quarter of 2023. The most recent figure has risen to 47.5%, more than four percent above the all-time low reached in the second quarter of 2014.<sup>41</sup>

Another relevant indicator of the employment situation is the turnover rate, measured by the ratio of the minimum value between new hires and offboarding in the year and the average of the total number of jobs between the current year and the previous one. In other words, the rate provides a measure of the percentage of changes in employment relationships in relation to the total in the economy. Tracked for years by the Inter-Union Department of Statistics and Socio-Economic Studies alongside the Ministry of Labor, the indicator reached 54.8% in 2015 for employees subject to the Consolidated Labor Law (CLT). This figure still reflected the slowdown in the labor market, given that turnover in the country tends to be higher the more intense the labor market is and that it had reached a peak of 64.5% in 2011. Such high turnover reflects, on the side of hired employees, the few incentives to stay in a job and, on the side of those hiring, the little need to accumulate experience in the position. The fact that 71% of turnover is the result of the decision of the hiring employer, the so-called involuntary turnover rate, is highly indicative of the latter.<sup>42</sup>

All these measures indicate the importance of making the generation of quality jobs and higher incomes one of the taxonomy's

<sup>40</sup> Data available on the World Bank Data website, available at the [link](#).

<sup>41</sup> Data available on the IBGE Automatic Recovery System - SIDRA website, available at the [link](#).

<sup>42</sup> Study available at the [link](#).

objectives so that it can serve as an instrument for promoting change in our labor market.

As expected, these measures are even more relevant when racial and gender aspects are considered, as will be discussed in the ninth objective, below.

### 9) Reducing socio-economic inequalities, considering racial and gender aspects

As already noted, tackling the climate crisis can represent an opportunity not only for economic development, but also for changing the pattern of structural inequalities that has shaped Brazil's history. The choice of the nomenclature sustainable taxonomy, rather than green or social, indicates the instrument's alignment with this goal. As with the definition of sovereign sustainability bonds, this classification is chosen when there is integration between climate and environmental issues - associated with green - and tackling inequalities - related to social.<sup>43</sup>

Although social objectives have only been included in less than a quarter of existing national taxonomies as of April 2023,<sup>44</sup> the inclusion is considered essential given Brazil's history of deep and persistent social inequalities.

Some figures compiled by the UN Human Development Report illustrate the severity of the situation.<sup>45</sup> Looking at personal income inequality, around two million people, 1% of the national population, earned a share of income equivalent to almost double the amount earned by the eighty million people, or 40% of the population, with the lowest income. While the first group earned just over a quarter of the national GDP in 2021, the second group only earned 13.2% of the income generated in the country. This is the seventh highest concentration of income at the top out of a total of 171 countries surveyed. It is no wonder that Brazil suffered the fourth-largest drop in the ranking when comparing the Human Development Index with its inequality-weighted equivalent.

The profound and unusual inequality is due to a number of factors. Therefore, the sustainable taxonomy

43 There is a schematic presentation of the different nomenclatures in the report "The sustainable finance market in Brazil in 2022" published by GIZ (2023) in the context of the Project Sustainable Finance in Brazil (FiBraS). Available at this [link](#).

44 "The new geography of taxonomies" survey carried out by the Natixis consultancy and made available exclusively to the Ministry of Finance.

45 All the indexes are available at the UN Development Program Data Center, which is available at this [link](#).

will develop metrics for tackling inequalities in the following dimensions: gender, race/ethnicity and region/territory.

Regarding the pursuit of gender equality, as set out in SDG 5 of the 2030 Agenda, the Brazilian situation is less alarming in comparative terms, but still requires attention. According to the Gender Equality Index, comprising health, economic and political representation indicators, Brazil ranks 94th out of 170 countries analyzed, considering data from 2021. However, the difference between the labor force participation rate for the same year was the 70th highest among 180 countries that had data available.

The second factor is the most relevant to the discussion of Brazilian income inequality: racism. The recent survey "Perceptions of racism in Brazil",<sup>46</sup> organized by the Peregum Black Reference Institute and the SETA Project and carried out by Ipec, showed that 44% of the Brazilian population regards race, color, and ethnicity as the primary factors contributing to inequalities. In comparison, social class was cited as the main factor by 29% of respondents.

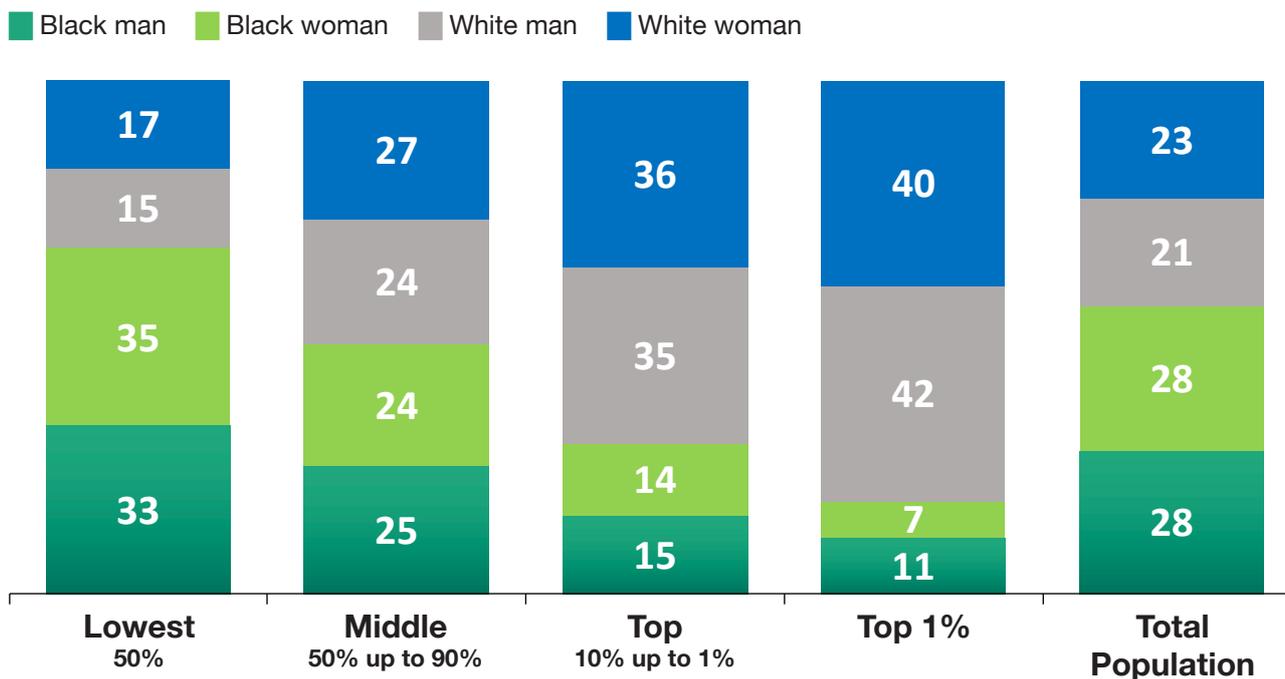
The data from the Continuous PNAD corroborates the centrality of racism in the discussion on inequalities. In 2022, the average income of black people was 60% of that of white people. When the average labor income of black women is compared with that of white men, the disparity becomes even more evident, given that black women received an average of 46.6% of the income of white men.

Chart 2 below reinforces this finding by showing the demographic composition (taking race and gender into account) of four income strata: the lowest-income half, the next 40%, and the richest 10% divided into the top 1% and the following 9%. As shown, while black people represented 67.5% of the lower half of the income scale in 2022, white people accounted for 81.8% of the richest stratum. The rightmost column indicates the demographic composition of the population to make it easier to see which strata are over- or under-represented.

These statistics highlight the importance of considering inequality in an intersectional way,<sup>47</sup> understanding the overlapping aspects of race, gender and region. It is for this reason that the design of the social indicator for the Brazilian Sustainable Taxonomy should objectively and explicitly cover these aspects in an integrated manner.

46 Research published on 27 July 2023. Available at the [link](#).

47 On the term, see Crenshaw (1989).

**Chart 2 – Composição demográfica conforme raça e gênero de estratos de renda selecionados**

Source: Continuous PNAD. Prepared by the authors.

### 10) Reduce regional and territorial inequalities

Another aspect of the taxonomy's inequality dimension are regional or territorial inequalities. There are significant contrasts in economic indicators and quality of life between the regions of Brazil, as well as between rural and urban areas, centers and peripheries, among others. Using data from the fifth survey of the Continuous PNAD for 2022, which measures income obtained from all sources, it is possible to identify a significant disparity, especially in relation to the Northeast region, followed by the North.

As can be seen in Chart 3, 15% of the effective income from all jobs<sup>48</sup> is earned by people living in the Northeast region, which is home to 27% of the population. The North region also displays this difference, albeit to a lesser extent, with almost 9% of the population earning 6% of the income from employment. The extent of inequality becomes more evident if compared to the Southeast, where 42% of the population lives, but the earned income from employment is equivalent to 51.4% of the total.

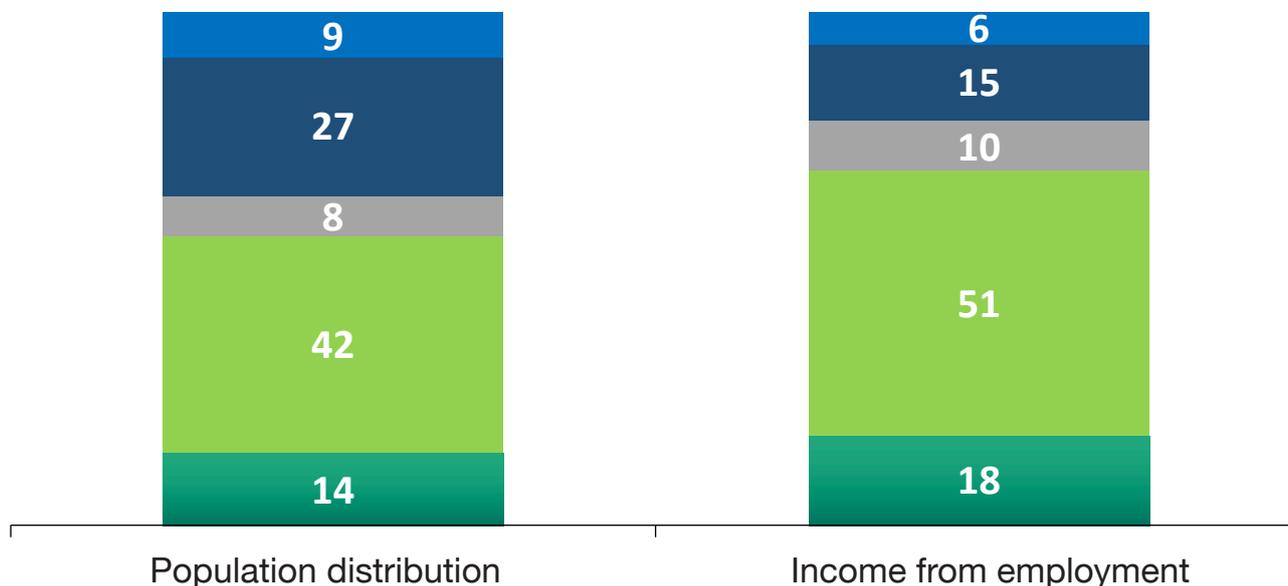
### 11) Promote quality of life, ensure rights, and expand access to basic social services

From a macroeconomic point of view, a new investment cycle that sustains a path of wage and employment expansion requires a strategy that transcends currency, trade and monetary po-

<sup>48</sup> Provided by variable VD4020 from the 5th PNAD-C survey.

**Chart 3** – Allocation of total income from employment and distribution of the population by major regions

■ SL ■ SE ■ CO ■ NE ■ NO



Source: Continuous PNAD. Prepared by the authors.

licies, as Medeiros (2015) argues. Development policies need to aim for increased productivity of labor and greater access to public goods, to make it possible to raise real wages without excessive pressure on labor costs and, therefore, inflation. Thus, the expansion of investments in public goods is a policy aimed at both distribution and increasing competitiveness (*idem*).

When family income rises, so does the demand for services, notably transportation, health and education, as well as sanitation, energy, telecommunications and information technology. Therefore, it must be a priority to provide these basic services through public and private investment in rural and urban infrastructure on a sustainable basis. This strategy contributes to a virtuous economic dynamic that enables supply to sustain demand, while at the same time guaranteeing rights provided for in the Constitution and promoting sustainability. As the United Nations Development Programme (UNDP, 2023) argues, the effective provision of responsive, agile and inclusive public services can strengthen a country's social contract and social cohesion between individuals, groups and generations. This objective is inspired by the Mexican taxonomy and its social objective for sustainable cities.

# Context of Brazil's international commitments and national legislation



## International commitments

Climate change and environmental degradation represent two of the main global challenges humanity faces this century. The severity of these issues is increasing at an unprecedented rate and is putting the livelihoods of billions of people at risk. In that respect, the international community has agreed to combat climate change and environmental degradation and to build a path toward sustainable development.

Some of the main international agreements and processes which Brazil adheres to include the 2030 Agenda for Sustainable Development, the Paris Agreement, the Convention on Biological Diversity and its Kunming-Montreal Global Biodiversity Framework, and the Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, as well as other agreements on the environment, human rights and other social issues.

## 2030 Agenda for Sustainable Development

The UN General Assembly, through its 193 Member States, adopted the 2030 Agenda for Sustainable Development in September 2015. It is the main global reference for promoting sustainable development in its three dimensions: social, economic and environmental/climate.<sup>49</sup> The 2030 Agenda's mandate originates from the Rio+20 Conference, held in Brazil in 2012, and is the result of a multilateral and consultative process involving national governments and its various stakeholders, such as civil society, the private sector and academia.

The 2030 Agenda sets out 17 Sustainable Development Goals (SDGs) and 169 universal and transformative targets that focus on eradicating poverty, hunger and inequality, protecting the planet and its natural resources, and sustainable economic growth. The 17 SDGs are interrelated, hence balanced and integrated solutions will be required to achieve the goals. The universal commitment established by the 2030 Agenda reflects the recognition that all countries - developed and developing - have targets to meet, taking into account different national realities, capacities and levels of development and respecting national policies and priorities.

The 2030 Agenda also establishes means of implementation, which encompass issues of financing, technology transfer, technical training and international trade, as well as monitoring and reporting mechanisms.

In 2016, the Brazilian government adopted the 2030 Agenda and created the National Commission for the Sustainable Development Goals.<sup>50</sup> The Commission was comprised of representatives from

<sup>49</sup> UN, 2015, the 2030 Agenda for Sustainable Development. Available at the [link](#).

<sup>50</sup> Set by Decree 8,892/2016. Available at the [link](#).

the federal, state and municipal governments, and from civil society, being responsible for proposing strategies, instruments, actions and programs for the implementation of the SDGs. From 2019 to 2022, the Commission was demobilized. Underscoring its significance and expediting the execution of the 2030 Agenda in Brazil, the government has recently reinstated the Commission by Decree 11,397/2023 (BRASIL, PR, 2023).<sup>51</sup>

## Paris Agreement

In June 1992, Brazil hosted the UN Conference on Environment and Development (UNCED) in Rio de Janeiro. The conference and its results were a milestone for international climate and environmental efforts. 154 governments signed the UN Framework Convention on Climate Change (UNFCCC), which was adopted in New York in May 1992 and entered into force two years later, in 1994.<sup>52</sup> The Convention is the basis for international governmental climate action. A landmark agreement under the UNFCCC is the Paris Agreement, a global treaty that was signed in December 2015 by the UNFCCC signatory countries during COP-21.<sup>53</sup> The agreement aims to (a) hold the increase in the global average temperature to well below 2°C above pre-industrial levels, and pursue efforts to limit temperature increase to 1.5°C; (b) increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low GHG emissions development in a manner that does not threaten food production; and (c) make finance flows consistent with a pathway toward low GHG emissions and climate-resilient development. To achieve the goals of the agreement, countries present so-called NDCs. Decree N° 9.073/2017, incorporated Brazil's commitment to the Paris Agreement into the national legislative framework.<sup>54</sup> Brazil's current NDC, presented in October 2023, sets the goal of reducing GHG emissions by 53.1% below 2005 levels by 2030 and achieving emissions neutrality by 2050 (BRASIL, 2022)<sup>55</sup>. Although these commitments are

numerically the same as those of the first NDC of 2015, they are calculated on a higher basis than before, due to a methodology review of the national emissions inventory prepared by the MCTI. Therefore, the proposed revision of Brazil's NDC actually meant a reduction in emissions targets. It was for this reason that the Interministerial Committee on Climate Change (CIM) approved, at its meeting on 14 September 2023, the announcement that Brazil is considering again the absolute emissions targets set in 2015.<sup>56</sup> Section 5.2 provides further details on the role of the Interministerial Committee on Climate Change.

Additionally, at COP-26 in 2021, Brazil also committed, along with 143 other countries, to halting and reversing forest loss and land degradation by 2030, and to facilitating the alignment of financial flows with international targets for reversing forest loss and degradation.<sup>57</sup>

## Kunming-Montreal Convention on Biological Diversity and its Global Biodiversity Framework

At the previously mentioned UN Conference on Environment and Development in Rio de Janeiro in 1992, the Convention on Biological Diversity (CBD) was established, to which Brazil is a signatory. Since its signing, Brazil has made a series of commitments to work on the three pillars of the CBD: conservation of biological diversity, sustainable use of biodiversity, and fair and equitable sharing of the benefits arising from the utilization of genetic resources (MMA, 2020).

During the 15th COP of the CBD, countries adopted the Kunming-Montreal Global Framework (CBD, 2023), under the CBD.<sup>58</sup> The framework sets 23 targets for 2030 that aim to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and the planet, conserving and sustainably using biodiversity and ensuring fair and equitable sharing of the benefits from the use of genetic resources. Also noteworthy is the importance given to indigenous communities for the conservation, restoration, and sustainable use of biodiversity in the implementation of the framework.

It provides for the gradual harmonization of public and private financial flows with biodiversity targets. Moreover, it points out the importance of public poli-

51 Decree 11,397/2023, available at the [link](#).

52 UNFCCC (1994). CHAPTER XXVII ENVIRONMENT. Available at: [https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg\\_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=\\_en](https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en)

53 UNFCCC (2016). 1/CP.21 Adoption of the Paris Agreement. Available at the [link](#). UNFCCC, 2016, The Paris Agreement. Available at the [link](#).

54 Available at the [link](#).

55 Emission neutrality is defined by the IPCC as the balance in which anthropogenic emissions of greenhouse gases into the atmosphere are offset by anthropogenic removals over a specified period. For the joint analysis of multiple greenhouse gases, it is necessary to adopt metrics for comparing them, such as their potential to affect temperature and the duration they remain in the atmosphere. Glossary available at the [link](#).

56 More information at the [link](#).

57 Available at the [link](#).

58 CDB (2023). Decision 15/4 of the Kunming-Montreal Global Biodiversity Framework. Available at the [link](#).



**The 2030 Agenda is the main global reference for promoting sustainable development in its three dimensions: social, economic and environmental/ climate**



cies, regulations, and administrative measures that encourage that large companies and financial institutions must monitor, assess and transparently disclose the risks, dependencies and impacts of their activities on biodiversity, with the aim of gradually reducing negative impacts, increasing positive impacts, reducing biodiversity-related risks of companies and financial institutions, and promoting actions to achieve sustainable production models.

### ***Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa***

Signed by the Brazilian government in Paris in October 1994, and enacted by Decree 2.741/1998, the Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, aims to combat desertification and mitigate the effects of drought.<sup>59</sup> Desertification and land degradation processes, resulting from various natural and anthropogenic factors, including climate change and inappropriate land use, affect the quality of life and food security of affected populations. Soil is fundamental to life on the planet, providing essential ecosystem services such as water purification, water, nutrient and carbon reservoirs, and species habitat.

The Convention recognizes that meeting the goal requires the application of integrated long-term strategies based both on increasing land productivity and on the rehabilitation, conservation and sustainable management of land and water resources, to improve living conditions, particularly at the level of local communities. The Convention highlights the need to mobilize public and private, national, bilateral and multilateral funding sources and mechanisms.

### ***Conventions of Basel, Rotterdam and Stockholm***

The Conventions of Basel (1989), Rotterdam (1998) and Stockholm (2001) are international environmental agreements and treaties under the UN Environment Programme (UNEP) that deal with the management of hazardous waste and chemicals.<sup>60</sup> Their common goal is to protect human health and the environment from hazardous chemicals by restricting and ultimately eliminating their production, use, trade, emission and storage.

### ***International conventions on human rights and other social objectives to combat inequalities***

Regarding social objectives, Brazil is a signatory to the various international declarations and conventions on human rights,

<sup>59</sup> Established by Decree 2.741/1998. Available at the [link](#).

<sup>60</sup> Basel Convention (1989), available at the [link](#). Rotterdam Convention (1998), [link](#). Stockholm Convention (2001), [link](#).

in particular: the Universal Declaration of Human Rights<sup>61</sup> (1948); the Declaration on Fundamental Principles<sup>62</sup> and Rights at Work of the International Labor Organization (ILO); the Geneva Slavery Convention<sup>63</sup>; the International Covenant on Civil and Political Rights (1966); the International Covenant on Economic, Social and Cultural Rights (1966); the American Convention on Human Rights<sup>64</sup> (Pact of San José de Costa Rica) (1969); the Protocol of San Salvador (1988); the Beijing Declaration and Platform for Action of the Fourth World Conference on Women (1995); the Declaration of the World Conference against Racism, Racial Discrimination, Xenophobia and Related Intolerance (2001); the Yogyakarta Principles on the Application Of International Human Rights Law In Relation To Sexual Orientation And Gender Identity (2006); the UN Declaration on the Rights of Indigenous Peoples<sup>65</sup> (2007); UN Human Rights Council Resolution 17/19 on Human Rights, Sexual Orientation and Gender Identity<sup>66</sup> (2011); and the Joint Declaration by UN entities on Ending Violence and Discrimination against Lesbian, Gay, Bisexual, Transgender and Intersex People (2015).

Other relevant international guidelines include the UN Guiding Principles on Business and Human Rights, published in 2011, which constitute the first international initiative to guide ways to effectively achieve internationally recognized rights linked to the SDGs in business.<sup>67</sup> They describe principles that should be implemented by states and companies, including the eight ILO Fundamental Conventions on Fundamental Principles and Rights at Work and the UN International Bill of Human Rights. In relation to gender equality objectives, the UN also has established the Women's Empowerment Principles.<sup>68</sup> The Green Climate Fund (GCF) has an Indigenous Peoples Policy, which is supplemented by operational guidelines.<sup>69</sup>

In addition to stressing the need to follow a path toward sustainable development, the agreements, conventions and documents referenced above have in common the fact that they highlight the fundamen-

tal role of mobilizing public and private, national and international financial resources to achieve the objectives collectively set by the international community. For Brazil to reach the targets at the national level, a taxonomy can serve as a key instrument to guide capital flows toward a low-carbon economy, resilient to climate change, based on environmental conservation and social well-being.

## National commitments and regulations

Brazil has a comprehensive legislative framework to address climate and environmental protection issues, in support of fulfilling its international commitments and national targets. Given the extensive scope of relevant regulations, Annex I presents further regulations additionally to those cited in this section. The laws and regulations must be taken into account when developing the Brazilian taxonomy, in addition to other relevant sectoral legislation.

Article 3 of the **Constitution of the Federative Republic of Brazil of 1988** establishes national development and the eradication of poverty and marginalization, as well as the reduction of social and regional inequalities as fundamental purposes of the Republic. Furthermore, Article 225 imposes on the public authorities and the community the duty to defend the environment and preserve it for present and future generations, recognizing the right of all to an ecologically balanced environment, which is a common good and essential to the quality of life.<sup>70</sup>

Based on Brazil's commitments under the CBD (approved by Legislative Decree 2/1994, and enacted by Decree 2.519/1998), Article 225 of the Constitution and the National Environmental Policy (established by Law 6.938/1981), the National Biodiversity Policy (PNB) was established by Decree 4.339/2002, to implement the CBD in Brazil.<sup>71</sup> The PNB addresses the conservation and sustainable use of biodiversity.

Law 12,651/2012, the New Forest Code, affirms the commitment to the preservation of forests and other forms of native vegetation, as well as biodiversity, soil, water resources and the integrity of the climate system, for the well-being of present and future generations.<sup>72</sup> The law thus established rules on the protection of vegetation, permanent preservation areas and legal reserves, forest exploitation and related matters, including deforestation control.

61 UN, 1948. Universal Declaration of Human Rights. Available at the [link](#).

62 Available at the [link](#).

63 Enacted by Decree 58.563/1966. Available at the [link](#).

64 Enacted by Decree 678/1992. Available at the [link](#).

65 UN, 2007. Resolution 61/295 United Nations Declaration of the Rights of Indigenous Peoples. Available at the [link](#).

66 UN, 2007. Human Rights Council, 2011. Resolution 17/19.

Available at the [link](#).

67 UN, 2007. Guiding Principles on Business and Human Rights.

Available at the [link](#).

68 UN, 2007. Women's Empowerment Principles. Available at the [link](#).

69 GCF. Indigenous People Policy. Available at the [link](#). GCF. Operational Guidelines: Indigenous Peoples Policy. Available at the [link](#).

70 Available at the [link](#).

71 Decree 4.339/2002. Available at the [link](#). Law 6.938/1981.

Available at the [link](#).

72 Available at the [link](#).



**Article 3 of the Constitution of the Federative Republic of Brazil of 1988 establishes national development and the eradication of poverty and marginalization, as well as the reduction of social and regional inequalities as fundamental purposes of the Republic.**



The law created the Rural Environmental Registry (CAR), which integrates environmental information on each rural property into the National Rural Environmental Registry System (SICAR), forming a database for environmental and economic control, monitoring and planning, and combating deforestation. As another instrument of the Forest Code, the Environmental Regularization Programs (PRA) includes a set of actions, guided and monitored by the states, to be carried out by rural landowners and landholders to recover or restore degraded and altered areas.

Also noteworthy is the creation, by the Forest Code, of the Support and Incentive Program for the Preservation and Recovery of the Environment. The program established incentives for the adoption of technologies and best practices that reconcile agricultural and forestry productivity with a reduction in environmental impacts, as a way of promoting ecologically sustainable development. Among the incentives are the access to agricultural credit and agricultural insurance on better conditions, payment or incentives for environmental services, as well as tax and commercial incentives. Obtaining agricultural credit (or rural credit) requires verification of the environmental regularity of the rural property, to be conducted by financial institutions based on data from the CAR and the PRA.

The National Policy to Combat Desertification and Mitigate the Effects of Drought, established by Law 13,153/2015, is the Brazilian government's main instrument to support local communities and affected landowners in the struggle against desertification and drought, fostering greater access to water, food and increased land productivity.<sup>73</sup> The policy promotes best practices and the sustainable use of natural resources, such as low-carbon agriculture, sustainable forestry and extractive management of non-timber products, the implementation of technologies for the efficient use and reuse of water, as well as family farming on an environmentally sustainable basis. Among its instruments are the Brazilian Action Plan to Combat Desertification and Mitigate the Effects of Drought, the State Plans, the Annual Report, the Early Warning System for Drought and Desertification, and the Plans for the Prevention and Control of Deforestation.

Moreover, recognizing the limited availability of detailed information about Brazilian soils, the National Soil Program (PronaSolos) was established to galvanize collaborative efforts among partner institutions, fostering the advancement of research, documentation, inventory, and interpretation of soil data across Brazil.

Also within the scope of sustainability in rural production, the **Sectoral Plan for Adaptation to Climate Change and Low Carbon Emissions in Agriculture 2020-2030 (ABC+ Plan)** is worth noting.<sup>74</sup> The ABC+ Plan aims to promote climate resilience and GHG mitigation measures among rural producers, family farmers, agrarian reform settlers, cooperatives, and traditional peoples and communities. The governance of the implementation and monitoring of the results of the ABC+ Plan has been improved through the Agricultural Observatory and

<sup>73</sup> Available at the [link](#).

<sup>74</sup> Available at the [link](#).

the Integrated Information System of the ABC+ Plan.<sup>75</sup> In the current administration, the ABC+ Plan has gained more resources for credits through the Program for Financing Sustainable Agricultural Production Systems (RenovAgro), with more than BRL 5 billion available, with interest rates between 5% and 7% (generally lower than the subsidized rates of the Safra Plan). It is also worth noting that in the current Safra Plan, which totals over BRL 360 billion, rural producers, who's registry in the CAR is validated, receive a discount on the already subsidized interest rate for rural credit.

As for climate change mitigation and adaptation goals, in addition to other environmental goals, the **National Climate Change Policy (PNMC)**, established by Law 12.187/2009, represents the legal basis and main instrument of the Brazilian government to guide the country's actions to reduce GHG emissions and foster adaptation to climate change.<sup>76</sup> As a voluntary national commitment, in 2009 the law set the goal of reducing its projected emissions by between 36.1% and 38.9% by 2020.

The **National Plan for Adaptation to Climate Change (PNA)**, instituted by Ordinance 150/2016, aimed to reduce the nation's vulnerability to climate change and carry out risk management associated with a changing climate.<sup>77</sup> The PNA 2016-2020 was an instrument drawn up by the federal government in collaboration with civil society, the private sector and state governments, covering eleven sectors (MMA, 2021). The PNA review (second cycle) is underway and the Plan's General Strategy Sectoral Strategies should be available by the end of 2024.

Another important instrument is the National Emissions Registration System (SIRENE), established by Decree 9.172/2017.<sup>78</sup> The computer system delivers comprehensive results of all GHG emissions in Brazil, encompassing sectors such as Waste, Agriculture, Land Use, Land-Use Change and Forestry, Energy, Industrial Processes, and the Use of Other Products.<sup>79</sup>

75 Through Decree 10.606/2021.

76 Available at the [link](#).

77 Available at the [link](#).

78 Available at the [link](#).

79 Specifically, SIRENE provides the results of the National Inventory of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases not Controlled by the Montreal Protocol (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, CF<sub>4</sub>, C<sub>2</sub>F<sub>6</sub>, HFC-23, HFC125, HFC134a, HFC143a, HFC152a, SF<sub>6</sub>, CO, NO<sub>x</sub> and NMVOC). It also contains information related to another emissions accounting initiative, the Annual Greenhouse Gas Emissions Estimates. MCTI, 2021. Available at the [link](#).

Among the sectoral plans for climate action are the ABC+ Plan, the National Energy Plan, the Low Carbon Manufacturing Industry Plan, the Transport and Urban Mobility Sectoral Plan for Mitigation and Adaptation to Climate Change and the Low Carbon Mining Plan.

A key instrument of climate governance, the **Inter-ministerial Committee on Climate Change (CIM)**, mentioned above, was re-established by Decree 11,550/2023.<sup>80</sup> The CIM is the federal executive's institutional instrument for monitoring the implementation of actions and public policies within the scope of the federal executive relating to the PNMC. The CIM is responsible for coordinating the preparation, implementation and follow-up of Sectoral Mitigation and Adaptation Plans within the scope of the PNMC, the NDC, including the respective targets, the means of implementation and the monitoring, reporting and verification (MRV) instruments. In this function, the CIM started a process to update the sectoral plans that will establish each sector's emission target. The CIM's competencies also include establishing guidelines and drafting proposals for economic and financial mechanisms to be adopted to enable the implementation of strategies that are part of climate change policies.

## Human Rights

Article 1 of the Federal Constitution guarantees Brazilians and foreigners residing in Brazil the right to human dignity and other fundamental rights. According to Article 3, the fundamental objectives include the eradication of poverty and marginalization, reduction of social and regional inequalities, and promotion of wellbeing for all, without prejudice to origin, race, sex, color, age, or any other form of discrimination.

The main instrument is the National Human Rights Program (PNDH-3), established by Decree 7,037/2009.<sup>81</sup> The Decree established the program's guidelines, including the implementation of a sustainable development model, characterized to be socially and economically inclusive, environmentally balanced and technologically responsible, culturally and regionally diverse, participatory and non-discriminatory (Guideline 4); the appreciation of the human person as the central subject of the development process (Guideline 5); and the promotion and protection of environmental rights as human rights, including for future generations (Guideline 6). It also sets forth the guarantee of human rights in a universal, indivisible and interdependent way (Guideline 7) and the

80 Available at the [link](#).

81 Available at the [link](#).



The CIM is the federal executive's institutional instrument for monitoring the implementation of actions and public policies within the scope of the federal executive relating to the PNMC



combat against structural inequalities (Guideline 9). The targets, timeline and resources needed to implement the PNDH-3 are outlined and approved in biannual Human Rights Action Plans.

### *Labor rights*

Brazil has ratified a total of 82 ILO Fundamental Conventions, covering all the Fundamental Conventions except Convention 87 on Freedom of Association.<sup>82</sup> Labor rights are established by Article 7, complemented by the Articles 8 to 11 of the Federal Constitution, the Brazilian Consolidation of Labor Laws (CLT)<sup>83</sup> and the Regulatory Standards of the Ministry of Labor and Social Security.

The fight against **labor analogous to slavery** is regulated by the following regulations: ILO Convention 29 on Forced Labor, enacted by Decree 41.721/1957;<sup>84</sup> ILO Convention 105 on the Abolition of Forced Labor, enacted by Decree 58,822/1966;<sup>85</sup> Criminal Code, specifically Article 149 (slave labor), Article 149-A (human trafficking) and Articles 197 to 207 (crimes against the organization of labor);<sup>86</sup> MTPS/MMIRDH Interministerial Ordinance 4/2016 and MTB Ordinance 1.129/2017, which provide for the rules relating to the Register of Employers who have subjected workers to labor analogous to slavery, known as the slave labor's "dirty list", which is published on the official website of the Ministry of Labor;<sup>87</sup> SIT Normative Instruction 139/2018, which provides for inspection to eradicate work in conditions analogous to slavery and further provisions;<sup>88</sup> 2nd National Pact for the Eradication of Slave Labor of 2008<sup>89</sup> which will be renewed by the National Commission for the Eradication of Slave Labor, established by Decree 9.887/2019;<sup>90</sup> Federative Pact for the Eradication of Slave Labor, updated by Ordinance 1.620/2021, which aims to stimulate coordination between federal entities in actions to eradicate slave labor, including through State, Municipal and District Plans for the Eradication of Slave Labor, and through cooperation with the National Assistance Flow for Victims of Slave Labor, published by the Ordinance 3.484/2021.<sup>91</sup>

82 Decree 10,088/2019, consolidates the normative acts that provide for the enactment of ILO Conventions and recommendations ratified by the Federative Republic of Brazil. Available at the [link](#). The eight Fundamental Conventions of the ILO Declaration consist of the Fundamental Principles and Rights at Work on Forced Labor (1930), Freedom Of Association And Protection Of The Right To Organize (1948), the Right To Organize And Collective Bargaining (1949), Equal Remuneration (1951), Abolition Of Forced Labor (1957), Discrimination In Employment And Occupation (1958), Minimum Age (1973), and the Worst Forms Of Child Labor (1999). Available at the [link](#). Information on international labor standards in Brazil is available on the [ILO Brazil website](#).

83 Available at the [link](#).

84 Available at the [link](#).

85 Available at the [link](#).

86 Decree-Law 2,848/1940 (available [here](#)), amended by Law 10,803/2003 (available [here](#)).

87 MTPS/MMIRDH Interministerial Ordinance 4/2016 is available at the [link](#).

MTB Ordinance 1,129/2017 is available at the [link](#). Register of Employers and other information from the MTE on combating slave labor is available at the [link](#).

88 Available at the [link](#).

89 The National Pact To Eradicate Slave Labor is available at the [link](#). The National Policy to Combat Slave Labor is available at the [link](#).

90 Available at the [link](#).

91 Ordinance 1,620/2021, is available at the [link](#). Ordinance 3,484/2021, is available at the [link](#).

Particularly with regard to child labor, it is worth highlighting the UN Convention on the Rights of the Child of 1990, enacted by Decree 99.710/1990;<sup>92</sup> the Statute of the Child and Adolescent, established by Law 8.069/1990, in particular Articles 60 to 69 (protection at work);<sup>93</sup> ILO Convention 6 on Night Work For Children In Industry, approved by Act of the Head of the Provisional Government in 1934, ratified on 27 March 1934;<sup>94</sup> ILO Convention 138 concerning the Minimum Age For Admission To Employment, approved by Legislative Decree 179/1999;<sup>95</sup> ILO Convention 182 and Recommendation 190 on the Prohibition And Immediate Action For The Elimination Of The Worst Forms Of Child Labor, approved by Legislative Decree 178/1999, and regulated by Decree 6.481/2008;<sup>96</sup> the Consolidation of Labor Laws (CLT), Articles 402 to 441 (protection of the work of minors aged 14 to 18); and MTP Normative Instruction 2/2021, which provides for the procedures to be observed by Labor Inspectors in the situations listed.<sup>97</sup>

The combat against **discrimination** based on sex, origin, race, color, marital status, family situation, disability, professional rehabilitation, age, among others, is regulated by the following norms: Articles 5 and 7 of the Federal Constitution, which prohibit any practice of discrimination; the Brazilian Consolidation of Labor Laws (CLT), in particular Articles 5 and 373-A (gender equality) and Article 461 (equal pay, provided the position is identical, without discrimination on grounds of sex, race, ethnicity, origin or age); ILO Convention 100 on Equal Remuneration, ratified by Legislative Decree 24/1956;<sup>98</sup> Legislative Decree 104/1964, which ratified ILO Convention 111 on Discrimination (Employment and Occupation);<sup>99</sup> Law 9,029/1995, which prohibits any discriminatory and limiting practice for the purpose of access to or maintenance of employment relationships, on the grounds of sex, origin, race, color, marital status, family situation, disability, professional rehabilitation, age, etc.;<sup>100</sup> Decree 9.571/2018, which establishes the National Guidelines for Businesses and Human Rights;<sup>101</sup> and MTP Normative Instruction 3/2021.<sup>102</sup>

### Gender and racial equality

National regulations on gender and ethnic-racial equality include: Decree 4,377/2002, which enacts the 1979 Convention on the Elimination of All Forms of Discrimination against Women;<sup>103</sup> ILO Convention 111 on Discrimination (Employment and Occupation), ratified by Legislative Decree 104/1964;<sup>104</sup> ILO Convention 100 on Equal Remuneration, ratified by Legislative Decree

92 Available at the [link](#).

93 Available at the [link](#).

94 Decree 10.088/2019. Available at the [link](#).

95 Available at the [link](#).

96 Legislative Decree 178/1999, is available at the [link](#). Decree 6,481/2008, is available at the [link](#).

97 Available at the [link](#). The Normative Instruction was amended by MTP Normative Instruction MTP 2/2022, and MTP Normative Instruction 3/2022.

98 Available at the [link](#).

99 Available at the [link](#).

100 Available at the [link](#).

101 Available at the [link](#).

102 Available at the [link](#).

103 Available at the [link](#).

104 Available at the [link](#).



**Article 1 of the Federal Constitution guarantees Brazilians and foreigners residing in Brazil the right to human dignity and other fundamental rights.**





**To ensure that these guidelines are implemented, it is essential to reinforce the commitment to further advance the role of the state as protector of those social groups, to build a culture of respect that organizes its internal structures**



24/1956;<sup>105</sup> the Racial Equality Statute, established by Decree 12.288/2010, which aims to guarantee the Black population equal opportunities, the defense of individual, collective and diffuse ethnic rights and combating discrimination and other forms of ethnic intolerance;<sup>106</sup> Articles 38 to 42 apply to racial equality in the labor market, promoting, for example, the guarantee of access to credit for small-scale production in rural and urban areas, with affirmative action for Black women; Article 37 establishes that financial agents, whether public or private, shall promote measures to enable the Black population to access housing loans; the 1965 International Convention on the Elimination of All Forms of Racial Discrimination, ratified by Decree 65,810/1969.<sup>107</sup>

### *Indigenous peoples and traditional communities*

Regulations on the rights of indigenous peoples and traditional communities include: Article 231 of the Federal Constitution which recognizes the original rights of indigenous peoples over the lands they traditionally occupy, with the Union responsible for delimiting, protecting and ensuring respect for all their property; Decree 1,775/1996 which provides for the administrative procedure for the delimitation of indigenous lands;<sup>108</sup> the guarantee of the right to Free and Informed Prior Consultation, in accordance with ILO Convention 169 on Indigenous and Tribal Peoples, approved by Legislative Decree 143/2002;<sup>109</sup> the National Policy for Territorial and Environmental Management in Indigenous Lands (PNGATI), established by Decree 7,747/2012, with the goal of guaranteeing and promoting the protection, recovery, conservation and sustainable use of the natural resources of indigenous lands and territories, ensuring the integrity of indigenous heritage, the improvement of quality of life and full conditions for the physical and cultural reproduction of current and future generations of indigenous peoples, respecting their socio-cultural autonomy;<sup>110</sup> Article 68 of the Federal Constitution, which recognizes the right of permanent ownership of the land traditionally occupied by the remaining Quilombola communities; and Decree 4,887/2003, which regulates the procedure for the identification, recognition, delimitation and titling of lands occupied by remaining Quilombola communities.<sup>111</sup>

To ensure that these guidelines are implemented, it is essential to reinforce the commitment to further advance the role of the state as protector of those social groups, to build a culture of respect that organizes its internal structures. Similarly, the importance of sharing benefits from the economic use of traditional knowledge held by these peoples should be emphasized, as defined by Law N° 13,123/2015. The taxonomy can be used to reinforce this.

<sup>105</sup> Available at the [link](#).

<sup>106</sup> Available at the [link](#).

<sup>107</sup> Available at the [link](#).

<sup>108</sup> Available at the [link](#).

<sup>109</sup> Available at the [link](#).

<sup>110</sup> Available at the [link](#).

<sup>111</sup> Available at the [link](#).



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## Safeguards

To ensure compliance with sustainable corporate governance standards in their climate, environmental and social dimensions, certain safeguards are being incorporated. These, in the context of taxonomies, typically apply to dimensions of social sustainability that are not explicitly addressed by the defined objectives. However, given the national challenges of reducing emissions, it is worth highlighting the possibility of defining environmental safeguards that ensure compliance with criteria for biome preservation. The safeguards will be defined by existing Brazilian legislation and standards, and by international conventions and standards, relating in particular to human and labor rights, as well as transparency.

The most relevant international conventions and standards include the UN Guiding Principles on Bu-

ness and Human Rights, which contain the eight Fundamental Conventions of the ILO Declaration on Fundamental Principles and Rights at Work<sup>112</sup> and the United Nations International Bill of Human Rights.<sup>113</sup>

112 The eight Fundamental Conventions of the ILO Declaration consist of the Fundamental Principles and Rights at Work on Forced Labor (1930), the Freedom of Association and Protection of the Right to Organize (1948), the Right to Organize and Collective Bargaining (1949), Equal Remuneration (1951), Abolition of Forced Labor (1957), Discrimination in Employment and Occupation (1958), Minimum Age (1973), and the Worst Forms of Child Labor (1999). Available at the [link](#).

113 OECD, 2023, Guidelines for Multinational Enterprises on Responsible Business Conduct, 2023 Edition. Available at the [link](#). UN, 1948, Universal Declaration of Human Rights. Available at the [link](#). UN, 2012, Guiding Principles on Business and Human Rights. Available at the [link](#).

# Selected sectors



**The sectors that will be analyzed by the Technical Groups are based on the characteristics of the domestic production matrix, in the light of the three main international taxonomy references**



## Presentation of the selected sectors

It is quite common in debates about taxonomy to refer to it as a living document, which necessarily needs to be reviewed and potentially expanded on a regular basis. This need stems, among other reasons, from the technological advances associated with economic dynamics, which result in the improvement of processes and the generation of new products and services.

As the climate and nature crises progress, on the one hand, certain technologies and techniques become more widespread and, on the other hand, the need for technological innovations capable of reducing additional detrimental effects of economic activity increases, which will result in more restrictive criteria for an activity to be considered sustainable. Similarly, new activities that are better adapted to a changing climate and the environment are likely to emerge, requiring their inclusion in the sustainable taxonomy over time.

As indicated earlier, the development of the Brazilian Sustainable Taxonomy will be widely based on the experiences already implemented, making incremental changes to adapt it to the national reality, in line with the consideration stated in Section 2. Thus, the sectors that will be analyzed by the Technical Groups are based on the characteristics of the domestic production matrix, in the light of the three main international taxonomy references.

In line with other published sustainable finance taxonomies, the National Classification of Economic Activities (CNAE) produced by the Brazilian Institute of Geography and Statistics (IBGE), which also represents the unit of analysis of the System of National Accounts, will be used as a reference for identifying and selecting relevant sectors, as discussed in section 3, which will later be detailed to the section, division, group and class levels. The CNAE is a classification based on the UN's International Standard Industrial Classification of All Economic Activities (ISIC), facilitating interoperability with other taxonomies.

Aside from the sectors economic relevance, their importance for the defined climate, environmental and social of the objectives serves as criterion for the identification and selection of those sectors that will be included into the Brazilian taxonomy. For example, for the climate mitigation objective, data from the Emissions Inventory published by the MCTI will be used.

Indeed, it is important to clarify that the classification of activities by the CNAE only serves to map a set of activities, for which in a subsequent stage technical assessment criteria will be developed to define under which criteria an activity qualifies as environmentally and/or socially sustainable. The classification of activities within the CNAE do not have the required degree of

granularity that allows to identify whether an activity with a specific CNAE code can be considered as sustainable or not.

In this sense, the development of the taxonomy will also prompt a dialogue with the CONCLA itself, which is responsible for the CNAE, in order to identify the best way to officially recognize sustainable activities that have not yet been included<sup>1</sup>

On the basis of a preliminary assessment to identify and select relevant sectors (or sections<sup>2</sup>) that shall be covered by the Brazilian Sustainable Taxonomy, for which subsequently relevant activities will be identified and technical criteria be developed, are:

- Agriculture, Livestock, Forest Production, Fishing and Aquaculture (A)

<sup>1</sup> During the public consultation of the Action Plan, the use of the CNAE was questioned, due to cases of productive activities missing from the classification, such as equipment for combustion cars and electric cars.

<sup>2</sup> Nomenclature for the largest group of CNAE activities.

- Extractive Industries (B)
- Manufacturing (C)
- Electricity and Gas (D)
- Water, Sewage, Waste Management Activities and Decontamination (E)
- Construction (F)
- Transportation, Storage and Mail (H)
- Social Services for the quality of life and its planning (selected from other classes)

The sectors identified for inclusion in the Brazilian taxonomy correspond, for the most part, to the sectors covered by the EU, Colombian and Mexican taxonomies, namely agriculture, livestock and forestry; manufacturing industries; energy; water and waste management. On the other hand, as explained in the Mexican taxonomy, the indicator of contribution to social issues can be applied to all sectors, not just those considered explicitly.

It is worth noting the inclusion of extractive industries, a highly relevant sector in terms of economic, social and environmental issues for Brazil. Although Australia and

**Table 1** - Sectors included in the taxonomies of the EU, Colombia and Mexico

Sector Selection - Mitigation and Adaptation				
Sector	EU	Colombia	Mexico	Brazil
Agriculture, Livestock, Forest Production, Fishing and Aquaculture (A)	Forest production	X	X	X
Extractive Industries (B)				X
Manufacturing (C)	X	X	X	X
Electricity and Gas (D)	X	X	X	X
Water, Sewage, Waste Management Activities and Decontamination (E)	X	X	X	X
Construction (F)	X	X	X	X
Transportation, Storage and Mail (H)	X	X	X	X
Information and Communication (J)	X	X		(X)
Financial, Insurance and Related Services (K)				
Real estate activities (L)				
Professional, Scientific and Technical activities (M)	(X)			
Administrative Activities and Complementary Services (N)				
Education (P)				
Human Health and Social Services (Q)				
Carbon Capture, Storage and Use		X		

Source: Prepared in-house based on the taxonomies referred to.



**Brazil is the third-largest agricultural producer and the second-largest food exporter in the world. In addition, we have the largest rainforest, whose deforestation is the source of more than half of our annual GHG emissions.**



Chile are considering to include the mining sector in their taxonomy, there is still no precedent for developed taxonomies with criteria for this sector. Brazil, together with Australia and Chile, would thus innovate in developing a new set of technical criteria for this sector.

For comparison, Table 1 shows which sectors were included in each of the reference taxonomies, using the CNAE nomenclatures, plus a "carbon capture, storage and use" sector, given its inclusion in the Colombian taxonomy.

## The sectors' contribution to the objectives and their economic relevance

This section presents some key statistics on the climate and environmental impacts of the selected sectors, as well as highlighting their economic relevance and job creation.

### *Agriculture, Livestock, Forest Production, Fishing and Aquaculture (CNAE Class: A)*

The agriculture, livestock, forestry, fishing and aquaculture sector encompasses the orderly exploitation of natural plant and animal resources in natural and protected environments (IBGE, 2023a).<sup>3</sup> The sector is a cornerstone of the Brazilian economy. Brazil is the third-largest agricultural producer and the second-largest food exporter in the world. In addition, we have the largest rainforest, whose deforestation is the source of more than half of our annual GHG emissions. The scale and specificities of the agricultural and forestry sector in Brazil will be taken into account in this particular assessment.

In the first quarter of 2023, the sector employed approximately 8.5% of the country's employed population and recorded BRL 675.5 billion in added value in 2022, accounting for 7.9% of the country's GDP.<sup>4</sup>

In 2021, the sector had 18.4% of women and 81.6% of men in the total number of people employed; the percentage of the Black population was 59.5%, while the percentage of white was 39.6% (IBGE, 2023b).

According to the 6th edition of the "Annual Estimates of Greenhouse Gas Emissions in Brazil", in 2020, GHG emissions generated directly by agricultural activities represented 28.5% of Brazil's total

<sup>3</sup> Includes agricultural cultivation, animal husbandry and production; the cultivation of forest species for timber production, cellulose and environmental protection; timber extraction from native forests, the collection of plant products and wildlife exploitation in their natural habitats; the extractive fishing of fish, crustaceans and mollusks and the collection of aquatic products, as well as aquaculture - the breeding and cultivation of animals and products from the aquatic environment. Also included in section A are the cultivation of agricultural products and the breeding of genetically modified animals (IBGE, 2023).

<sup>4</sup> The gender statistics provided are based on a sample of people employed by companies or other organizations, and do not take into account self-employed people, employers or people employed as family and auxiliary workers.

GHG emissions, second only to the Land Use, Land Use Change and Forestry (LULUCF) sector, which was responsible for 38% of GHG emissions. In addition, unsustainable agricultural practices lead to soil degradation, loss of biodiversity, pollution and scarcity of water resources, and have adverse impacts on human health (MCTI, 2022; FAO, 2021).

The political and regulatory framework built for the development of more sustainable agriculture in Brazil has contributed to the adoption of less carbon-intensive practices and technologies recommended by the ABC+ Plan. Since 2010, there has been an increase of 8.35% (17.4 million hectares) in pasture areas with Crop-Livestock-Forest Integration and Recovery of Degraded Pastures (MAPA, 2022; Rede ILPF, 2023).

Despite the positive experiences, in particular illegal deforestation jeopardizes the national project of low-carbon and sustainable agriculture, reducing the attraction of international capital and limiting the access of Brazilian agricultural products to markets, as well as compromising the goals outlined in the Brazilian NDC and the 2030 Agenda (Map-Biomas, 2022).

Furthermore, the sector is highly exposed to climatic and socio-environmental risks, both physical and transitional, requiring priority in the adoption of adaptation measures. Changes in climatic parameters are already being noticed, such as an increase in the frequency and intensity of climatic and hydro-meteorological extremes (e.g., heat waves, droughts, intense rainfall, floods), impacting agricultural productivity, with the potential to reduce income and employment, and the territory's suitability for different crops. On the other hand, regulatory changes associated with decarbonization, environmental preservation and human and labor rights bring market risks for Brazilian producers (EC, 2021; IPPC, 2022; Nobre, 2018).

The fishing and aquaculture sectors make essential contributions to global food security and nutrition. Estuaries and coastal lagoons are subject to climate vulnerability, putting at risk the provision of ecosystem services, fishing practices, especially traditional ones, and the maintenance of the lifestyle and cultural habits of traditional peoples and communities and indigenous populations. Extreme weather events will increase the risks of food insecurity, through spikes in food prices, reduced food diversity and reduced income for agricultural and fishing livelihoods, preventing the achievement of UN SDG 2 ("Zero Hunger") by 2030 in regions with limited adaptation capacities (MMA, 2016; IPPC, 2022; FAO, 2022).

Finally, it is worth highlighting the importance of encouraging the sector to make progress in ensuring

food sovereignty, overcoming the current situation of worsening hunger as reported by national and multi-lateral institutes. According to a note from the Penssan Institute, from 2014-16 to 2017-19 there was an increase of 2.2 percentage points in the share of the population affected by moderate or severe food insecurity, according to the FAO methodology, reaching 20.6% of the population. The pandemic period, however, caused this percentage to reach the serious mark of 32.8% in the 2020-22 biennium. According to the Institute's own methodology, the situation is even more serious, identifying that at least 58% of the population suffers from some degree of food insecurity, including the so-called medium level, as measured by the Brazilian Food Insecurity Scale (EBIA).<sup>5</sup>

Tackling this issue can stimulate the diversification of the production structure in rural areas, to the extent that there is significant complementarity between the crops grown on family and non-family farms, as identified in the Agricultural Census. For the 2017 survey, 73% of beans, for example, were produced on non-family farms, while 64% of milk production and 70% of cassava production were produced on family farms.<sup>6</sup> Given the predominance of these type of farms in states in the North and Northeast and the fact that they are labor-intensive, incorporating 67% of people working in agriculture, this diversification can be beneficial for the set of objectives highlighted by this taxonomy.<sup>7</sup>

## Energy and industrial sectors

The climate impact of the economic activities of the CNAE groups "Extractive industry", "Manufacturing", "Electricity and gas", "Construction" and "Transportation, storage and mail" can be assessed from the perspective of energy supply and energy demand.

The energy sector<sup>8</sup> accounted for 23.2% of Brazil's total GHG emissions in 2020, making it the third most carbon-intensive sector in Brazil. For 2020, given the Covid-19 pandemic, there was a 2% reduction in the country's total energy consumption compared to 2019. Energy demand from the energy, transportation and services sectors fell by 4.1%, 6.4% and 9.5% respectively (MCTI, 2022).

<sup>5</sup> Available on the [link](#).

<sup>6</sup> Neto et al. (2020). What is the share of family farming in food production in Brazil and Rondônia? Article from Embrapa, available on the [link](#).

<sup>7</sup> IBGE (2019). Censo Agropecuário 2017 - Resultados definitivos. Available at the [link](#).

<sup>8</sup> The activities of the energy sector, which are not to be confused with the CNAE classification of sectors of economic activity, involve the production, transformation, transportation and consumption of energy, and are divided into two sub-sectors: emissions from burning fuels and fugitive emissions (oil and gas industry and mineral coal production).



**In addition to being the 2nd largest producer of iron ore in the world, Brazil has strategic mineral reserves for the energy transition such as copper, lithium, nickel, cobalt, vanadium, graphite and rare earth elements.**



Brazil's energy supply relies heavily on renewable sources such as biofuels, charcoal, hydroelectricity and other biomass. In 2022, Brazil's energy matrix was made up of 50.7% fossil sources, 47.4% renewable sources and 1.9% other non-renewable sources, while the global average for renewable sources was 16%. The presence of renewable sources in the electricity sector is even more significant, with 10% of fossil sources, 2.1% of nuclear and 87.9% of renewable sources<sup>9</sup>, compared to a world average of 28% renewables (EPE, 2023; IRENA, 2023).

If, on the one hand, the high presence of renewable sources contributes to climate mitigation in sectors with high energy demand, such as industries and transportation, on the other hand, it increases the exposure of these sectors to physical climate risks associated with the cultivation of agricultural-based energy inputs (e.g., the loss of sugarcane or soybean harvests due to longer periods of drought can reduce or increase the cost of ethanol and biodiesel production) or with variations in the hydrologic regime that directly affect hydroelectricity generation capacity (EPE, 2018). These characteristics reinforce the importance of identifying projects capable of promoting the adaptation of these facilities, in particular, as well as planning to deal with a possible reduction in their generating potential, from a broader perspective. At the same time, the diversification of biomass sources for biofuel production, such as corn ethanol and other oilseeds for biodiesel production, can reduce exposure to these risks.

### ***Extractive industries (CNAE Class: B)***

The economic activities included in the CNAE's "Extractive industries" class include the extraction of minerals in their natural state and the processing of ores (e.g., pelletizing)<sup>10</sup> (IBGE, 2023a).

Furthermore, Brazil, which is the world's second-largest iron ore producer, has strategic mineral reserves for the energy transition, such as copper, lithium, nickel, cobalt, vanadium, graphite and rare earth elements. Brazil has the largest reserves and production capacity of niobium ferroalloy, a metal needed to produce special types of steel used in wind turbines, electric vehicles and electronic components (BIRD, 2020; EY, 2023; MME, 2023b).

In 2021, 0.4% of the population were employed in the extractive industries, of which 14.7% were women. The extractive industries accounted for 5.4% of the added value at basic GDP prices, representing BRL 462.7 billion in 2022 (IBGE, 2023c; IBGE 2023d).

<sup>9</sup> In 2022, the Brazilian electricity matrix was made up of 61.9% hydraulic sources, 11.8% wind, 8.0% biomass and 4.4% solar.

<sup>10</sup> In the natural state, minerals are solid (coal and other ores), liquid (crude oil) and gaseous (natural gas), and can be produced in underground mines, open-cast mines or wells. It also includes complementary processing activities associated with extraction, as long as they do not alter the physical or chemical characteristics of the minerals.

Fugitive emissions<sup>11</sup> from oil mining and extraction together account for around 5% of the energy sector's emissions. Emissions related to the coal mining process have been progressively reduced, while emissions associated with oil extraction have increased due to the exploration of the pre-salt layer. It is important to note that several processes carried out by mining companies and the oil and gas industry are classified in manufacturing. Among the sources of GHG emissions from "Extractive industries", iron ore pelletizing units stand out (MCTI, 2022).

The environmental and social impacts of legal mining vary according to the size of the mining enterprises, the mineral goods produced and the region where they are located. In general, mining has a greater impact in the implementation and operation phases, and can have environmental impacts on the local fauna and flora, the microclimate and hydrological dynamics (lowering of the groundwater table), atmospheric emissions (particulate matter), changes in the quality and risk of contamination of aquifers and water bodies, GHG emissions and profound changes in the landscape.

The disasters of Fundão (Mariana) and Brumadinho demonstrated the risks associated with the collapse of tailings dams. In terms of social impacts, the following are worth mentioning: conflicts in legally protected territories, occupational health and safety, historical heritage (e.g. archaeological sites), alteration of the social and cultural dynamics of the territory, and demand for services and infrastructure above the support capacity of the region where the project is located (MME, 2022).

### Manufacturing (CNAE Class: C)

The economic activities covered by the "Manufacturing" class include activities carried out in industrial plants and factories, using machines moved by motive power and other equipment for handling materials. Manual and artisanal production is also considered an industrial activity, even when carried out at home, as well as the direct sale to the consumer of products produced by the company itself, such as sewing workshops. It is the largest section of the CNAE and includes a wide range of activities from the production of cosmetics and pharmaceuticals to metallurgy, the refining of petroleum products and the production of biofuels (IBGE, 2023a).

<sup>11</sup> Release of GHGs stored during the breaking down of coal and its adjacent layers, during mining operations, transportation, and processing.

The latter, in particular, are a fundamental part of the strategy of diversifying technological routes that should guide Brazil's energy transition, investing in the potential for decarbonizing modes of transport such as aviation and maritime transport. To this end, the federal government has been working on integrating various programs through Fuel for the Future. Through this initiative, already successful actions, such as RenovaBio, would be formulated in a unified way with the National Sustainable Aviation Fuel Program (SAF), the National Green Diesel Program, and a policy to increase the percentage of anhydrous alcohol mixed with gasoline.<sup>12</sup>

In 2021, the manufacturing employed 14.8% of people, 30% of whom were women. The sector accounted for 12.9% of the added value at basic GDP prices, representing BRL 1,105 billion in 2022. In 2021, the manufacturing was made up of 280,542 micro and small companies employing 2.2 million people, 17,196 medium-sized companies employing 1.7 million people and 4,414 large companies employing 3.2 million people (IBGE 2023d; IBGE, 2023c; IBGE 2023d; CNI, 2021).

In the first quarter of 2023, industry in general, comprising extractive industries and manufacturing, employed approximately 12.9% of the country's employed population and recorded BRL 1,568 billion in added value in 2022, accounting for 18.3% of the country's GDP (IBGE, 2023b; IBGE, 2023c).

In 2021, 32.5% of the people employed in the industrial sector<sup>13</sup> were women and 67.5% were men; 50.1% were black, 49.2% were white (IBGE, 2023b). According to estimates by the Climate Observatory, GHG emissions from industrial activities were in the order of 170 million tons of GHG, or approximately 8% of the country's total emissions (SEEG, 2023).<sup>14</sup>

Emissions in the industrial sector come from two main sources: (i) energy consumption and (ii) industrial process or product use (IPPU). In 2020, the industrial segments emitted 165 Mt CO<sub>2</sub>e, with the steel, cement and chemical industries responsible for most of these emissions. In the last ten years, emissions from the industrial sector have stagnated at around 160

<sup>12</sup> More information on the [link](#).

<sup>13</sup> Aggregating the following CNAE groups: extractive industries, manufacturing, electricity and gas and water, sewage, waste management activities and decontamination.

<sup>14</sup> The estimation of GHG emissions from industry requires an accounting of subsectors within "Energy" and "Industrial processes and product use" (PIUP) involving emission sources such as: fugitive emissions from the extraction of coal, oil and natural gas, stationary combustion and emissions from industrial processes.



**As for the strategic goal of technological densification, productivity-driven growth of manufacturing industry production is essential for economic growth and the productivity of the total economy, especially in middle-income countries.**



Mt CO<sub>2</sub>e, mainly due to the economic crises that have affected industrial activity (Centro Clima, 2023; MCTI, 2022).

As for the strategic goal of technological densification, productivity-driven growth of manufacturing industry production is essential for economic growth and the productivity of the total economy, especially in middle-income countries (Marconi et al., 2016). Furthermore, according to the literature, the high-tech manufacturing sectors are the ones that most promote growth due to economies of scale and spillover effects, among other causes (Cantore et al., 2016). There is great potential for reducing emissions, gaining energy efficiency and developing less carbon-intensive technological solutions, especially in the hard-to-abate sectors.

### ***Electricity and Gas (CNAE Class: D)***

The group of activities in the CNAE's "Electricity and gas" class includes the production, transmission and distribution of electricity, gas supply and the production and distribution of steam and hot water through a permanent network of lines, pipes and ducts (IBGE, 2023a).

Economic activity groups D (Electricity and Gas) and E (Water, Sewage, Waste Management Activities and Decontamination), in aggregate, had an added value of BRL 214.2 billion for the year 2022, which corresponded to 2.5% of the country's GDP.<sup>15</sup> In the same period, the "Electricity and Gas" sector employed 0.3% of the employed population, with a participation of approximately 19.5% of women (IBGE, 2023b; IBGE, 2023c; IBGE 2023d).

Climate impacts of and on "Electricity and Gas" activities have already been presented within the energy sector. It is worth adding the relevance of regional perspectives in energy generation, considering, for example, the need for transition routes to isolated electrical systems in the North. On the other hand, the impact of major infrastructure projects, such as hydroelectric dams, also needs to be properly analyzed, insofar as they can lead to the loss of native vegetation, the transformation of a lotic environment into a lentic one with alterations to the hydrological flow, as well as related social impacts, for example involuntary displacement of the local population<sup>16</sup> (EPE, 2012).

### ***Water, Sewage, Waste Management Activities and Decontamination (CNAE Class: E)***

The group of activities in the water, sewage, waste management activities and decontamination sector includes water collection, treatment and distribution activities, whether through a perma-

<sup>15</sup> The IBGE (2023d) report "IBGE Indicators: Quarterly National Accounts Volume Indicators and Current Values" presents information on the added value of classes D and E only in aggregate form.

<sup>16</sup> Special attention should be paid to developments in areas occupied by social groups with an identity relationship with the territory, such as family farmers, riverine communities, traditional peoples and communities and indigenous peoples.

ment network of pipes and ducts or other forms of distribution (IBGE, 2023a). In 2022, the sector employed 0.8% of employed people, approximately 19.5% of whom were women (IBGE, 2023b; IBGE, 2023c; IBGE 2023d).

Economic activities for the collection and treatment of water and effluents and the collection, final disposal and treatment of solid urban waste contributed 4.2% of Brazil's total GHG emissions in 2020, an increase of 10.0% compared to 2016. Of this amount, 60.9% comes from the disposal of solid waste, 37.7% from the treatment of effluents and dumping of wastewater and urban waste, 1.3% from open burning and waste incineration, and 0.1% from the biological treatment of solid waste (MCTI, 2022).

The treatment and disposal of solid waste in Brazil display a significant contrast. Large urban centers have the option of disposing of solid waste in sanitary landfills with biogas capture and recovery facilities for the generation of electricity, while other municipalities dispose of waste in uncontrolled landfills and open dumps, generating environmental impacts and being associated with harsh social conditions.

Initially, the commitment to close open dumps was scheduled for 2014, which was postponed to 2024, as provided for in the National Solid Waste Policy (PNRS)<sup>17</sup> and the New Basic Sanitation Legal Framework<sup>18</sup>. However, around 7% of the waste produced is not collected, and 39.5% of the waste collected (30.2 million tons/year) is disposed of improperly.

According to the National Sanitation Information System, selective collection takes place in 1,567 municipalities, collecting around 1.7 million tons per year. In 2021, municipalities and contracted companies were responsible for the selective collection of 73.8% of the mass of waste in the Southern macro-region, while associations or cooperatives of waste pickers selectively collect 81.6% of the mass of waste in the Northern macro-region. According to the National Movement of Waste Pickers, there are an estimated 800,000 waste pickers in Brazil, 70% of whom are women (MDR, 2023; MDR, 2022; ABRELPE, 2022; Centro Clima, 2023b). In addition to waste collectors, the waste and scrap metal wholesale sector is also a relevant segment of employment and production in the sector and therefore exemplifies some of the potential limitations of sticking to the CNAE as the analytical unit of the taxonomy, insofar as they are found in the services of Section G (Trade, Repair of Motor Vehicles and Motorcycles).

Brazil, like other developing countries, has specific characteristics in the solid waste, water and sewage sectors. The impacts caused by the inadequate disposal of solid urban waste in dumps and controlled landfills directly influence environmental conditions, as they are continuous sources of pollution of water, soil, flora, fauna and GHG emissions. In addition, they have a



**Large urban centers have the option of disposing of solid waste in sanitary landfills with biogas capture and recovery facilities for the generation of electricity, while other municipalities dispose of waste in uncontrolled landfills and open dumps, generating environmental impacts and being associated with harsh social conditions.**



<sup>17</sup> Law 12,305/2010.

<sup>18</sup> Law 14,026/2020.

direct impact on the health of the surrounding population, up to a radius that can reach 60 km (ABRELPE, 2022).

### Construction (CNAE Class: F)

The construction sector includes building construction activities in general, infrastructure projects and specialized construction services that are part of the construction process. In 2023, the sector employed approximately 7.3% of the country's employed population. The sector recorded BRL 274.2 billion in added value in 2022, accounting for 3.2% of the country's GDP (IBGE, 2023a; IBGE, 2023b; IBGE, 2023c; IBGE 2023d).

In 2021, 9.9% of the total number of people employed in the sector were women and 90.1% were men; 66.2% were black, while 33% were white (IBGE, 2023b).

The main source of GHG emissions in the sector is the burning of fuel by mobile sources related to the equipment used by the contractor during the project, accounting for approximately 5% of the energy sector's emissions in 2019. It is precisely because of this interrelationship between economic activities that it is necessary to incorporate comprehensive project evaluation methodologies, as emphasized by the life cycle principle described in section 7. However, the construction sector involves other sources of GHG emissions that are accounted for in other economic segments, such as GHG emissions resulting from vegetation suppression before construction<sup>19</sup>, or emissions associated with the production of construction materials<sup>20</sup>, or even GHG emissions resulting from energy consumption (e.g., heating and cooling) during the operation of the building<sup>21</sup> (MCTI, 2022).

It should be noted that the construction sector should also be considered for its relevance in terms of adapting to climate change, particularly to avoid physical risks. The promotion of climate-resilient infrastructure and disaster prevention are elements that should be integrated into the sector's sustainability analysis. In this sense, it is necessary to identify, in an integrated manner with the Technical Group on Services for Quality of Life, the needs to deal with the risk mapping carried out, for example, by the MCTI's Adapta Brasil platform.<sup>22</sup> Finally, the social issue is of great im-

19 Accounted for in the GHG inventory in the Land Use and Land-Use Change (LULUC) sector.

20 Accounted for in the GHG inventory in the Industrial Processes and Product Use (IPPU) sector.

21 Accounted for in the energy sector.

22 Available on the [link](#).

portance, especially in terms of formal employment, training of workers and promoting social housing and housing improvements.

### Transportation, Storage and Mail (CNAE Class: H)

The transportation, storage and mail sector includes passenger and goods transportation activities by rail, road, waterway, air and pipeline, storage and loading and unloading activities, as well as mail, courier and delivery activities. It also includes auxiliary transportation activities, such as the management and operation of road, rail, port and airport terminals and related activities.

In 2023, approximately 5.5% of the country's employed population were employed in the sector. The sector recorded BRL 265.6 billion in added value in 2022, accounting for 3.1% of the country's GDP (IBGE, 2023a; IBGE, 2023b; IBGE, 2023c; IBGE 2023d).

In 2021, 18% of people employed in the sector were women and 82% were men; 55.4% were black, and 43.6% white (IBGE, 2023b).

The transportation sector is the world's largest consumer of oil-based fuels, accounting for 60% of global oil demand. It is also responsible for around 23% of global energy consumption and 14% of anthropogenic GHG emissions. In Brazil, the transportation sector is responsible for 13% of national GHG emissions, with a 10% reduction in 2019 compared to the peak recorded in 2014. Despite having 24% biofuels in its energy matrix, fossil fuels are still predominant. To meet the target of limiting the global temperature increase to 1.5°C, it is necessary to focus on further decarbonizing passenger and freight transportation (Climate Center, 2023b; Climate Forum, 2019).

According to studies by the Organization for Economic Cooperation and Development (OECD), maritime trade is expected to triple by 2050, in comparison to 2015, which will require investments in the maritime and port sectors. Nevertheless, these sectors are subject to the decarbonization targets of the International Maritime Organization (IMO), of which Brazil is a member state, which envisage achieving carbon neutrality by 2050, with a reduction in total emissions of between 20% and 30% by 2030 and between 70% and 80% by 2040.

Considering the sectoral potential and the relevance of the Brazilian Blue Amazon, port and maritime sectors will also be considered by this Technical

Group, especially focused on the core activities for the Blue Economy, as suggested by the international guidelines such as the Blue Finance Guidelines of the International Finance Corporation (IFC) and the Sustainable Blue Economy Finance Principles of the United Nations Environment Programme Finance Initiative.

### ***Social services for the quality of life and its planning (Selected from other CNAE classes)***

This group is intended to cover services of other CNAE sections, to encompass those whose activities can have significant climate, environmental and/or social impacts, such as tourism, telecommunications, information and communications, business support for industrial chains (including Research & Development & Innovation services), health and education, urban and regional planning, among others. The list of services specific to this group will be identified and selected as the taxonomy is being developed, as it will require in-depth research. The technical assessment criteria can also be inspired by the one used by the Mexican Availability, Accessibility, Acceptability and Quality Framework.

As Bohnenberger (2022) argues, most sectoral perspectives on sustainability neglect the importance of services. Although their sustainability can be difficult to assess, the impacts of their activities can be crucial instruments for other goods and services to be produced, sold or distributed. They fulfill specific functions in the value chains for climate and environmental issues, while also having the potential to generate quality jobs.

For many services, urban aspects are particularly relevant, considering that 76% of the Brazilian population lives in predominantly urban areas, which corresponds to more than 150 million people (IBGE, 2020). The City Statute provides for the "guarantee of the right to sustainable cities, as a right to urban land, housing, environmental sanitation, urban infrastructure, transportation and public services, work and leisure, for present and future generations" (BRASIL, 2001). The 2030 Agenda reinforces this objective with SDG 11, which aims to "make cities and human settlements inclusive, safe, resilient and sustainable". The UN's New Urban Agenda, meanwhile, proposes "to achieve cities and human settlements where all persons are able to enjoy equal rights and opportunities, as well as their fundamental freedoms". Therefore, there is a potential for the taxonomy to contribute to the financing of these interventions.

# Taxonomy design

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This section presents the structure of the taxonomy, indicating how the objectives will be articulated and which principles will guide the development of the technical criteria and limits for the impact of each type of activity that will be covered by the taxonomy.

## General criteria

The activities, which will be included in the taxonomy, will have to fulfil three criteria simultaneously, in line with the structure introduced by the EU Taxonomy, and adopted by many other taxonomies, including the other two taxonomies used as references. For an activity to qualify as sustainable from the point of view of the defined objective(s), it must:

- i. i. Make a substantial positive contribution to one or more of the objectives;
- ii. Do not significantly harm any of the other defined objectives;
- iii. Comply with minimum safeguards (presented in section 5).

## Principles for defining specific technical criteria and limits

The principles presented below should form the basis for the parameters that will be used to assess the impact of economic activities. In the case of the EU Taxonomy, the substantial contribution criterion was built on the basis of three categories: 1) reducing pressure on the environment, 2) acting in a regenerative way on the environment and 3) acting directly so that either of the two types of impact occur. The Brazilian sustainable taxonomy will build its own substantial contribution over the course of the technical groups' work.

In any case, the definition of these technical criteria shall be guided by the following principles:

**Scientific basis:** The criteria for climate and environmental objectives must be scientifically informed. For mitigating climate change, the thresholds of the quantitative criteria should be based on the national NDC commitments and the scientific data and scenarios of the IPCC and the national emissions inventory published annually by the MCTI. Recognizing the distinct nature of social objectives, the criteria should be guided by the purpose of reducing inequalities, as defined in national and international commitments and targets, such as the 2030 Agenda for Sustainable Development. It is worth highlighting the possibility of using widely recognized methodologies developed by civil society organizations for setting targets, such as the Science Based Tar-

gets Initiative (SBTi),<sup>1</sup> and impact assessment, such as the Brazilian GHG Protocol Program.<sup>2</sup>**Technical criteria:** Priority will be given to quantitative criteria that set concrete thresholds for an activity to be classified as sustainable should be applied. Alternatively, if the objective or activity in question cannot be implemented by a quantitative metric, qualitative criteria will be applied. To define the criteria and thresholds, an appropriate method must be applied according to the type of activity in question. The following types of metrics are worth mentioning:

- i. Metrics based on impact or absolute performance: Defining a certain level of impact or performance in terms of pressure exerted on the objective; these are indicators of: absolute measures such as gCO<sub>2</sub>e emitted, or relative, for example gCO<sub>2</sub>e/unit of production emitted.
- ii. Metrics based on best-in-class performance: Defining a certain level that is considered best practice in the sector, its class or sub-class, applicable in the case of hard-to-abate activities that are in the transition process.
- iii. Metrics based on good practices or processes in qualitative cases: Defining a set of processes or a list of qualitative requirements.

**Life cycle impacts:** To ensure a holistic assessment of eligible activities, the life cycle impacts of the activity should be considered to the greatest degree possible, in accordance with the cost-effectiveness verification principle.

**Coherence:** Coherence with international goals, agreements and standards and with relevant national policies and regulations. In that context, it is important to emphasize that the taxonomy should serve as an instrument for "inducing" the transition of activities and not for "accommodating" practices already adopted.

**Consistency:** The definition of criteria and thresholds should follow a consistent methodology to ensure that requirements are leveled between the different sectors and activities, seeking to establish a level playing field.

<sup>1</sup> Non-governmental organization responsible for defining emissions parameters in line with the 1.5° C global warming target for various sectors. Formed by the Carbon Disclosure Project (CDP), the United Nations Global Compact, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). Information at the [link](#).

<sup>2</sup> Joint initiative between the Center for Sustainability Studies of the Getúlio Vargas Foundation (FGVces, in the Portuguese acronym), WRI, MMA, the Brazilian Business Council for Sustainable Development (CEBDS, in the Portuguese acronym) and the World Business Council for Sustainable Development (WBSCD). Information at the [link](#).

**Proportionality:** Considering the different characteristics of the potential users of the taxonomy, for example, small and medium-sized companies focused on the domestic market as compared to large companies active on international markets. The Brazilian taxonomy thus aims to establish a model that considers the proportionality principle to be inclusive and proportional, so it is applicable by a wide range of users to guide their transition. Any differentiated requirements should be reviewed periodically.

**Applicability:** To make the taxonomy viable in practice, it is essential to balance simplicity in its application with the complexity needed to ensure the induction of a transition economy. An appropriate balance must be reached between the level of ambition and detail needed to ensure the credibility and robustness of the taxonomy on the one hand, and simplicity and cost-effectiveness in its application to facilitate the taxonomy's applicability in practice on the other. The complexity of the taxonomy - for example, in terms its objectives, sectors, activities and categories covered - can increase in stages, taking into account periodic reviews.

**Evolving instrument:** It will be necessary to review the criteria periodically, reflecting revisions to commitments and plans for the objectives (for example, sectoral decarbonization plans), regulatory reforms or technological advances. Especially for hard-to-abate activities, it will be necessary to establish a structured process of periodic updating of the technical criteria and thresholds. The review process also needs to consider whether or how to establish grandfathering or legacy rules, to give the market certainty over activities that were classified as eligible before the revision of criteria. Such exemption clauses can be applied permanently or temporarily. For example, a current "sustainable credit" may be exempt from adopting new, more restrictive criteria, but the new criteria should apply if the credit will be renewed.

The principles presented above should guide the sectoral and thematic technical groups, which will be in charge of drawing up a methodology for defining specific technical criteria and thresholds, taking into account sectoral particularities.

For the climate change mitigation goal, the criteria must be classified in a binary way, in the sense that compliance or non-compliance with the specific criteria and thresholds determines whether the activity is taxonomy-aligned or not. Considering the principles presented and the technical criteria established by Colombia, Mexico and the European Union, it will be essential to formulate suitable criteria tailored to the Brazilian context.



**The Brazilian taxonomy thus aims to establish a model that considers the proportionality principle to be inclusive and proportional, so it is applicable by a wide range of users to guide their transition.**



Especially in the case the objective of conservation, sustainable management and use of soil and forests, the technical groups should assess the possibility of using a non-binary methodology that considers different degrees of compliance. Examples are the Colombian and Mexican taxonomies, which define three levels of compliance: basic, intermediate and advanced/transformational activities. At the national level, the methodology of the Brazilian Agricultural Research Corporation (Embrapa), which classifies the degree of sustainability of production units according to their practices, can serve as a basis for defining these categories.<sup>3</sup>

It should be noted that during the public consultation there was a call for the adoption of a traffic light taxonomy, which would include other levels in addition to the strategy presented here. As interesting as the model is, it was considered more strategic to seek interoperability with standards from countries in the region, while still incorporating criteria for the inclusion of transition sectors, which do not yet have technological or economically viable ways of achieving zero or near-zero emissions. The identification of activities that are harmful to the environment and the climate, in turn, can be analyzed by the Technical Groups when they see fit.

**Transition activities:** In addition to the classification of activities that are fully aligned with the defined objectives – e.g., in case of the climate change mitigation objective, neutral or almost neutral in terms of GHG emissions - the transition to sustainable economies requires substantial reductions in GHG emissions in activities for which there are still no viable zero-GHG emission alternatives, both technologically and economically (for example, in the production of steel or cement - "hard-to-abate" sectors). As such, and in accordance with the other taxonomies referred to in this document, the proposed Brazilian taxonomy should consider "transition activities". The criteria for these transition activities must follow a credible transition scenario for achieving the objective in question. In the case of the climate change mitigation objective, such activities could, for example, be qualified as contributing substantially to the objective if their GHG emissions represent the best performance in their sector or class, if they do not impede the development and implementation of zero- or low-carbon alternatives, and if they do not result in a lock-in or dependence on assets incompatible with the goal of long-term climate neutrality, taking into account the life cycle of the activity or asset.

The technical criteria will have to be adapted periodically in line with the sector's decarbonization pathway, based on science. Finally, it should be noted that for this category of activities the list of projects is even more relevant, as they can represent investments to adopt processes that are less harmful to the environment and/or the climate.

<sup>3</sup> Embrapa works with two complementary methodological approaches that can be used by rural producers and companies to analyze sustainability in agriculture: (i) the APOIA-NovoRural indicator system, which applies an objective and quantitative analysis of sustainability indicators, to improve the environmental management of rural activities; (ii) Ambitec-Agro, a multi-criteria system with a simple format for obtaining and collecting evidence in the field, without the need for an instrumental and laboratory analytical approach. Embrapa, 2016. Environmental Impact Assessment Tools and Sustainability Indicators at Embrapa. Available at the [link](#).



Photo: Adobe Stock

**Enabling activities:** The Brazilian taxonomy shall also include "enabling" activities. These are activities that do not make a direct substantial positive contribution in themselves, but are necessary to enable eligible activities (e.g., research, consulting, information and communication technologies; components, products and equipment providing inputs for green technologies).

In the future, the possibility of extending the Brazilian taxonomy to other categories of activities, as well as to other objectives, sectors and activities, will be considered. Finally, it is worth noting that the Technical Group responsible for developing the EU Taxonomy suggested the importance of focusing on monitoring the principle of not doing significant harm as something based on corporate transparency and monitoring due diligence process, rather than a controversy-only approaches. In this way, safeguards are restricted to legal issues, which must also be observed when setting up financial products or granting incentives.

## Interoperability

Establishing the structure, principles and methodology presented is also directly related to facilitating a model that is comparable with other taxonomies already in place, promoting recognition and interoperability between them. This refers to the ability of different systems, organizations and people to communicate and interact transparently, exchanging information effectively and efficiently.<sup>4</sup>

<sup>4</sup> See, for example, Ministry of Management and Innovation in Public Services, 2020, Interoperability. Available at the [link](#).

For a system to be considered interoperable, it is important that it operates according to common standards and principles. Interoperability or harmonization of taxonomies does not mean that they need to be identical, but they should be functionally equivalent and comparable.

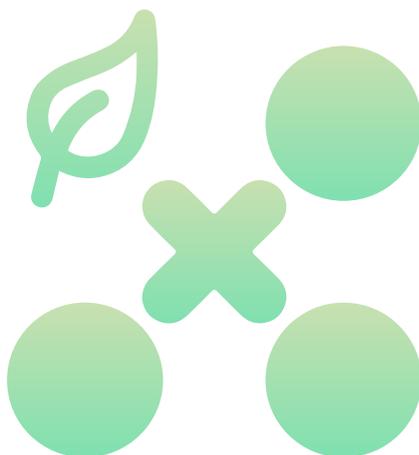
This interoperability of taxonomies will be developed through the following characteristics:

- Objectives (Section 4): starting with climate change mitigation and adaptation objectives and social objectives, taking into account the principle of not causing significant harm to the other objectives.
- Structure and principles: establishing general criteria (substantial contribution, no significant harm; safeguards) and specific technical criteria through a methodology based on similar principles.
- Sectors: applying a classification methodology comparable to the European, Mexican and Colombian taxonomies and using a standardized economic activity classification system (applying the CNAE).

Exchange of experiences: dialog and cooperation with international institutions, governments, private sector actors and civil society from the outset of its development. Finally, it is important to establish an appropriate balance between alignment with other taxonomies and adaptation to the national context, according to the country's specific socioeconomic and environmental characteristics, for example, in relation to Brazil's social challenges, GHG emissions profile and decarbonization pathway, as defined by the governance of the PNMC.

# Thematic technical groups

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## Tackling inequalities

As mentioned in section 4, only a few national taxonomies already published include social objectives and are, therefore, considered sustainable - combining climate, environmental and social objectives. In the EU, an extension focused on social objectives was considered, however, the Platform on Sustainable Finance<sup>1</sup> only published a proposal for the document and the effort has not move forward in the European Commission.

However, for the reasons explained beforehand, it is considered that urgent measures need to be taken in this area in Brazil. In this context, the Mexican instrument meant a milestone, as it laid the foundations for this focus on Latin American experiences.

In addition, there are national experiences that contribute to the outlining of social aspects in the Brazilian taxonomy. Since 2004, Brazil has had the ABNT NBR 16001 standard, which sets the standard for social responsibility, defining criteria that can be externally audited. Although it does not include targets related to the inequalities in question here (racial, gender and regional), it presents governance parameters in line with the environmental, social and governance (ESG) agenda.

The standard was updated in 2012, following the launch in 2010 by the International Standards Organization (ISO) of the ISO 26000 Standard, the result of a working group led jointly by Brazil and Sweden. This standard, unlike the Brazilian one, established guidelines for governance with social responsibility and, due to its structure, did not allow external auditing. The incorporation of these guidelines into the Brazilian update, however, did not change the methodology of the Brazilian standard to allow external certification and, since 2015, ABNT NBR 16001 require compliance with the new guidelines.

The minimum requirements of ABNT NBR 16001 for a social responsibility management system take into account:

- a. accountability and transparency;
- b. ethical behavior;
- c. respect for the interests of the stakeholders;
- d. compliance with legal requirements and other requirements subscribed to by the organization;
- e. respect for international standards of behavior;
- f. respect for human rights; and
- g. promoting sustainable development.

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<sup>1</sup> The advisory council responsible for drawing up technical recommendations for the European instrument, which will be discussed in the next section.

Despite the greater detail of the meaning of social responsibility, it has not yet made explicit affirmative action in relation to the inequalities in question.

In 2016, the Ethos Institute and the Center for the Study of Labor Relations and Inequalities (CEERT) published a set of indicators for Promoting Racial Equity that incorporated not only the Brazilian standard, but also other international standards and Brazilian regulations.

The document is inspired by the Declaration and Programme of Action of the Third World Conference against Racism in Durban; ILO Convention 111 on Discrimination (Employment and Occupation), ratified by Brazil; the Racial Equality Statute (Law 12,288/2010) and the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative.

Based on these references, the document sets out evaluation indicators at the company level based on four dimensions (vision and strategy, governance and management, social and environmental), separated into themes and sub-themes. In total, there are 55 binary questions on the issue of race, divided into stages of commitment to the agenda. Supported by the Inter-American Development Bank and the British government's Newton Fund, the cooperation also developed the Practices for Racial and Gender Equity Database and set up the Business Coalition for [Racial and Gender Equity](#).

More recently, in 2020, the Global Compact Network Brazil, a sustainability initiative that aims to better align corporate management with principles of social and environmental responsibility, launched the program "Equity is a priority: Gender." The initiative sets quantifiable targets for the pursuit of gender equality, taking into account the composition of management positions.

Each company that joins the program can choose between having 30% of women in top leadership positions by 2025, or 50% of women in these positions by 2030. If the company opts in, it must generate a report in the Gender Gap Analysis Tool of the Women's Empowerment Principles.

In 2021, the Global Compact, also in conjunction with Ceert, launched the "Equity is a priority: ethnic and racial" program. It sets targets for Black people in management positions. The monitoring of the signatory companies involves filling in Diversity Censuses to monitor the composition of the workforce and the relative positions within the company.

Finally, in 2022 the Pact for the Promotion of Racial Equality published the ESG Index for Racial Equali-

ty (IEER) as part of its Racial ESG Protocol, which is still under development. The index<sup>2</sup> is comprised of three levels: the first considers the presence and hierarchical position of Black people within the company; the second considers the adoption of affirmative policies and the retention of Black people in the company; and finally, the third considers the impact of investments on racial inequality.<sup>3</sup>

In July 2023, the Securities and Exchange Commission of Brazil (CVM) approved a document proposed by the stock exchange B3 that establishes measures related to environmental, social and corporate governance issues that must be complied with by listed companies on a "practice or explain" basis. These measures have been grouped into two sections in the document entitled "ESG Annex". The first refers to the composition of the board of directors and the second to company documents.<sup>4</sup>

The first section establishes the election of at least one woman (regardless of the sex assigned at birth) and one person from an underrepresented community (Black; LGBTQIA+; or disabled) as a full member of the board of directors or statutory board. The second section deals with the presence of ESG requirements in the policies of the organization or in the nomination policy approved by the company's board of directors.

Also concerning the board of directors, according to public data sent by the companies to the CVM, the remuneration of presidents represents between 50% and 75% of the total paid to the board. This monitoring is carried out by the regulatory body, which requires the highest and lowest salaries on the board to be reported, as well as the average.<sup>5</sup>

More recently, with a focus on diversity in companies, B3 launched iDiversa - an index that aims to measure the financial performance of companies that stand out in relation to others in terms of gender and race inclusion. The index can cover all segments of the organization. For the organization to be part of the index, it must have at least one Black or indigenous person on the board of directors and in both governance bodies. From this point of view, iDiversa is compiled based on the information in the reference forms registered by the companies with the CVM. The index has three evaluation levels, namely: the B3 diversity score, eligibility criteria and weighted criteria.<sup>6</sup>

This brief overview highlights the diversity of initiatives that aim to quantify the performance and gaps in ta-

2 The methodology is available at this link.

3 More details are available at this link.

4 More information at the [link](#).

5 More information at the [link](#).

6 More information at the [link](#).

ckling race and gender inequalities at the company level. Although none of them mention the regional dimension, which is also serious (see analysis in section 4), they all point to guidelines for methodologies that can help calibrate the taxonomic compass.

### Initiatives to promote gender and race equality

2012	ABNT NBR 16001 - Social Responsibility Standard
2012	Racial Equality Statute (Law 12,288/2012)
2016	Indicators for the Promotion of Racial Equity, by the Ethos Institute and the Center for the Study of Labor Relations and Inequalities (CEERT)
2020	Program "Equity is Priority: Gender", from the Global Compact Network Brazil
2021	Program "Equity is Priority: Ethnic", from the Global Compact in conjunction with CEERT
2022	ESG Racial Equity Index (IEER), from the Pact for the Promotion of Racial Equity

### Thematic group for monitoring, reporting and verification

Among the taxonomies used as a reference, only the EU Taxonomy already has mandatory requirement of statements indicating alignment with its parameters, as mentioned in section 2. The annual sustainability report of corporations is required to contain information on the share of taxonomy alignment of the activities of companies subject to the Corporate Sustainability Reporting Directive, which requires information about the capex, opex and turnover related to taxonomy's aligned activities.<sup>7</sup> The process of linking reporting requirements, however, was challenged in part due to the short timeframe between the publication of the first Climate Delegated Act in December 2021 and the need to present statistics on alignment as early as 2022. In the case of the voluntary use of the "European Green Bonds", issuers will have to demonstrate that at least 85% of funds are taxonomy-aligned, according to the recently adopted political agreement on the European Green Bond Standard.<sup>8</sup> It is worth noting that Colombia and Mexico, for their part, only mention voluntary use. However, Colombia's Financial Superintendence cites the taxonomy as a reference in its rules for issuing green bonds and for voluntary pension fund portfolios.<sup>9</sup>

<sup>7</sup> European Commission, 2020. EU Regulation 2020/852 on Taxonomy. Available at the [link](#). European Union, 2022. Directive (EU) 2022/2464 regarding corporate sustainability reporting. Available at the [link](#).

<sup>8</sup> European Commission, 2023. Sustainable Finance: Commission welcomes political agreement on European green bond standard. Daily News, 1 March 2023. Available at the [link](https://ec.europa.eu/commission/presscorner/detail/en/mex_23_1301) [https://ec.europa.eu/commission/presscorner/detail/en/mex\_23\_1301]. The Chinese taxonomy also applies green bonds: People's Bank of China, National Development and Reform Commission and China Securities Regulatory Commission, 2021, Green Bond Endorsed Projects Catalogue, 2021 Edition.

<sup>9</sup> See Basic Legal Circular in Part III, Title I, Chapter II for titles and in chapter VI Annex 2 for funds, available at the [link](#).

Based on these experiences, the intention is to adopt a gradual timetable for linking Brazilian regulations to the taxonomy, as will be described in section 10.

The MRV thematic group will be responsible (i) for identifying and suggesting which instruments and regulations could be linked to the taxonomy, taking into account existing regulations established by the financial system's regulatory authorities; and (ii) for designing a system that allows for the monitoring of sustainable finance flows and, consequently, of the ecological transformation process. To this end, reporting methodologies should be sought that facilitate verification and comparability – such as digitized systems along the lines of the Extensible Business Reporting Language (XBRL) – as well as prioritizing the simplicity of communications in order to allow for broad understanding.

To choose the regulations that can be linked, as well as to define the adoption schedule, the potential impacts, risks and opportunities will be taken into account, along with a cost-effectiveness and proportionality assessment, as stated in the previous section. Reporting requirements can include pre-concession or pre-issuance information (on intended resource allocation and expected impacts) as well as post-concession or post-issuance information (on actual allocation and impact). Standardized verification of the proper application of the taxonomy is an important instrument to ensure the reliability and integrity of its application, as discussed in the strategic objectives. Considering that the existence of a taxonomy alone does not prevent greenwashing, compliance can be verified by different forms of independent external review, such as a second opinion, certification or audit.

In addition to classifying individual activities, some measures associated with the taxonomy can consider to incorporate information at the organizational level. Not considering the organization's full sustainability profile can increase the risk of greenwashing if, for example, an organization issues a green bond to finance specific activities without changing its net impact on the climate, environmental or social objective in question. This can apply especially in the case of hard-to-abate activities. In this context, the publication of the S1 and S2 Standards by the International Sustainability Standards Board (ISSB), regarding standards for indicating risks and opportunities associated with climate change, is fundamental for monitoring this alignment at the company level, and could potentially be adapted in its national version to include the reporting of statistics on alignment with the taxonomy.

In this regard, the publication of CVM Resolution 193 in October 2023 was of fundamental importance, establishing a timetable for the voluntary use of the S1 and S2 Standards for the year 2024, which will become mandatory from 2027, in relation to the financial year 2026.<sup>10</sup> The advance of this adoption, focused on the so-called financial materiality, in which information is considered regarding the financial impact that the company may suffer as a result of climate risks, can also be complemented



**Public authorities thus need to be able to provide objective, credible and stable measures in the short and medium term of what they consider to be the standard of sustainability in the taxonomy. Only then will it be possible to demand effective action from the agents involved.**



<sup>10</sup> Information at the [link](#).

by the perspective of impact materiality. This second approach also incorporates the impact of the company itself on the environment and stakeholders related to it. The Global Reporting Initiative (GRI), for example, is one of the reporting standards that incorporates this impact materiality with the greatest adherence.<sup>11</sup> The development of the taxonomy and the work of this Technical Group, with the presence of all the regulatory bodies and the Central Bank, can further advance this agenda.

The setup of the MRV system will be essential guarantee the integrity of the information on sustainable finance. This system will enable to measure the financial flows directed toward sustainable investments, as well as evaluate the effectiveness of policies and instruments aimed at the transition of the economy, identify their shortcomings and take measures to address them. A centralized monitoring platform, along the lines of the one implemented by Colombia,<sup>12</sup> can provide detailed information on the financial resources allocated to sustainable activities and projects by source, use, sector, region and other relevant factors. Transparency and accessibility of data are fundamental so that all stakeholders, including government and other public authorities, the private sector, academic and research institutions, and civil society, can monitor and evaluate the country's progress toward a more sustainable economy and identify investment opportunities.

It should be emphasized that the monitoring activity requires a continuous effort to guarantee the integrity of the information. It is well known that the ESG agenda has yielded reputational and even economic gains for different economic agents. However, not all the initiatives that claim to be fully aligned with these objectives are matched by practical action.

A recent survey by the consulting firm Kearney of the largest companies operating in Brazil in the 13 sectors covered by the National Climate Change Policy brou-

11 More information about the organization at the [link](#).

12 See the platform "Monitoreo, Verificación y Reporte de Financiamiento Climático" at this [link](#).

ght some of this situation to light.<sup>13</sup> Although 89% of them have a sustainability report, less than half of them have set a target for emissions neutrality, as defined by the SBTi.<sup>14</sup> In addition, for almost a fifth of the survey sample, the study found that the public commitments, although ambitious, had a low rate of implementation.

The Brazilian Business Council for Sustainable Development (CEBDS) carried out a survey in 2023 involving 53 companies, focusing on their decarbonization initiatives.<sup>15</sup> Of these, a mere 21% reported that their efforts were primarily driven by governmental or regulatory mandates.

Concern over the discrepancy between pledges and actions prompted UN Secretary General António Guterres to establish a group of high-level experts in 2022, dedicated to scrutinizing commitments and ensuring neutrality among non-national entities. During COP-27 in Egypt, the group unveiled a report featuring ten recommendations designed to combat greenwashing,<sup>16</sup> adopting a stance of "zero tolerance" towards such practices.<sup>17</sup>

Public authorities thus need to be able to provide objective, credible and stable measures in the short and medium term of what they consider to be the standard of sustainability in the taxonomy. Only then will it be possible to demand effective action from the agents involved.

13 Information is available in the article "A portrait of Brazil's net zero targets in five points", published in Reset Capital on 30 June 2023, available at the [link](#).

14 It is a non-governmental organization responsible for defining emissions parameters in line with the 1.5°C warming target for various sectors. The organization is the result of a joint effort between the Carbon Disclosure Project (CDP), the UN Global Compact, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF).

15 Challenges facing the Brazilian business sector on the net zero journey. Available at the [link](#).

16 A term used to describe the pursuit of a reputational or economic benefit from environmental or climate commitments that fail to materialize.

17 The report titled "Integrity matters: net zero commitments by businesses, financial institutions, cities and regions" is available at the [link](#).

# Governance

As mentioned, a sustainable taxonomy should be treated as a living document. For this to be feasible, it is crucial to have a governance system that can guide its development, allows for adjustments and revisions, and monitors its implementation and usage. The UN Environment Programme suggests in its Common Framework for Sustainable Finance Taxonomies for Latin America and the Caribbean, that the governance of a taxonomy should be divided into three levels (UNEP FI, 2023). The first level is tasked with establishing the guidelines, the second with coordinating the technical work, and the third with developing the sectoral criteria.

In Europe, the entity responsible for developing the instrument was the European Commission's Directorate-General for Financial Stability, Financial Services and Capital Markets Union (DG-FISMA). This Directorate-General, a structure equivalent to a ministry in the institutional framework at a national level, created the Technical Expert Group (TEG) on Sustainable Finance, which worked for more than two years, between 2018 and 2020, on proposing the structure and criteria for evaluating covered activities (TEG, 2019). The TEG consisted of 35 members from the financial, economic and academic sectors, civil society, as well as EU and international organizations, appointed by the European Commission.<sup>1</sup> In developing its recommendations, the TEG held public consultations and consulted more than 200 experts.<sup>2</sup> In 2020, the TEG's temporary mandate ended and it was replaced by the permanent Platform on Sustainable Finance (PSF). During its first mandate, the PSF had 35 members, including European agencies, representatives of other public, private and non-governmental organizations selected through a public call, and 14 observers, part of which were from public institutions and part from the private sector.<sup>3</sup> The PSF works through thematic and sectoral subgroups and engages with various interested parties through mechanisms such as public consultations. All representatives have a two-year mandate.

Based on the recommendations of the TEG and the PSF, the European Commission, established in the legislative process together with the European Parliament and the European Council — the representative body of the EU Member States — the taxonomy regulation and several complementary regulations that determined the technical criteria for the six environmental objectives.

In Colombia, the development was conducted within the framework of the Institutional Taxonomy Board (Mesa de Taxonomía), coordinated by the Ministry of Finance.

The Ministry of Finance and Public Credit and the Financial Superintendence of Colombia - which gathers all the regulatory agencies of the financial system. The Board also included the Ministry of the Environment and Sustainable Development, the National Planning Department and the National Administrative Department of Statistics. It was this group of organizations that, together with technical assistance from the World Bank Group, led the work of consultants divided into eight sectoral groups, responsible for the technical definitions of criteria and thresholds.

<sup>1</sup> The list of TEG members is available at the [link](#).

<sup>2</sup> The responses to the first two public consultations can be found [here](#) and [here](#), respectively.

<sup>3</sup> The list of PSF members is available at the [link](#); the mandate is described in this [link](#).



**Figure 1** – Governance structure for the development of the Brazilian Sustainable Taxonomy



Source: Prepared by the authors.

In Mexico, the process began with the establishment of the Committee of Sustainable Finance in 2020, which included the Ministry of Finance and Public Credit, the Central Bank of Mexico, four regulatory agencies and six private observers. It was this group that, in collaboration with the IFC and the GIZ, set up the technical Working Groups in 2021, six of which were sectoral and two thematic. The latter were responsible for establishing the novelty of the social objectives mentioned in section 2, with the objectives of gender equality and sustainable cities, directly related to SDGs 5 and 11 of the 2030 Agenda.

Considering these examples, it was decided that the governance of the Brazilian Sustainable Taxonomy would be divided into three levels, as illustrated in Figure 1, and composed of four bodies. The first level will be comprised of the Sustainable Taxonomy Development Working Group – also called the Interministerial Committee – which is deliberative and composed of all the ministries that are part of the process. Below this forum will be the Supervisory Group, responsible for coordinating the ten technical groups, eight of which are sectoral and two thematic, as presented before. These groups, in turn, shall hold hearings with experts on a regular basis throughout the work, according to the timetable defined by the Supervisory Committee.

Lastly, there will also be an Advisory Committee comprising 18 non-governmental representatives: 4 financial institutions, 8 from the real economy - with a representation of each sector covered -, 2 trade union organizations/social movements, 2 from the third sector and 2 from academia. For its composition, an invitation to bid will be published, in which the criteria for submitting applications in each category will be defined. The group with its full representation is expected to be set up in March, at the same time as the

Technical Groups begin their work. Despite its consultative nature, all the intermediate documents assessed by the Supervisory Committee will also have to be analyzed by this Committee.

Alongside the work of the Supervisory Group will be the multilateral organizations that are technical partners in this project: GIZ and UNEP FI. The Supervisory Group will be coordinated by the Ministry of Finance (MF) and will comprise the Office of the Chief of Staff (CC), the Ministry of the Environment (MMA), the Ministry of Planning and Budget (MPO), the Ministry of Indigenous Peoples (MPI), the Central Bank of Brazil (BCB), the Brazilian Development Bank (BNDES), Securities Commission (CVM) and the National Council of Industrial Development (CNDI).

The technical groups, in turn, will be coordinated by the entities indicated in the green boxes in Figure 2, while those in the blue box will monitor development. The work will be complemented by the technical body responsible for defining the criteria and thresholds in the case of the sectoral groups, for developing an index of contribution to reducing inequality and for designing the MRV system in the case of the thematic groups.

It should be noted that during the public consultation there were requests for non-governmental representatives to be part of the Technical Groups of the Brazilian Sustainable Taxonomy, with equal decision-making power. The decision was maintained that the Technical Groups are formed only with the presence of government and contracted specialized consultants, but that they will be in constant and effective exchange with the Participatory Committee. To clarify the flow of exchange, timetable and action plans of the governance bodies, we have added the flowchart in Figure 3.

**Figure 2 – Technical Groups and their composition**

 <b>Agriculture, Livestock, Forest Production, Fishing and Aquaculture (A)</b>		 <b>Extractive Industries (B)</b>	
<b>Coordination</b>	<b>Other Participants</b>	<b>Coordination</b>	<b>Other Participants</b>
MF, MAPA, MDA, MMA, MPA	MME, CVM, CC, BNDES, MDIC, MCTI, BCB	MME	MMA, CC, BNDES, MDIC
 <b>Manufacturing (C)</b>		 <b>Electricity and Gas (D)</b>	
<b>Coordination</b>	<b>Other Participants</b>	<b>Coordination</b>	<b>Other Participants</b>
MDIC	MMA, CC, BNDES, MCTI	BNDES	MMA, CC, MME, MDIC, MCTI
 <b>Water, Sewage, Waste Management Activities and Decontamination (E)</b>		 <b>Construction (F)</b>	
<b>Coordination</b>	<b>Other Participants</b>	<b>Coordination</b>	<b>Other Participants</b>
MMA	CC, BNDES, MCTI, MCidades	CC	MMA, BNDES, MDIC, MTE
 <b>Transportation, Storage and Mail (H)</b>		 <b>Social services for quality of life and planning</b>	
<b>Coordination</b>	<b>Other Participants</b>	<b>Coordination</b>	<b>Other Participants</b>
MT	MMA, BNDES, MME, MDA, MCTI	MF	MCTI, MMA, MIR, MTur, MTE
 <b>Monitoring, Reporting and Verification</b>		 <b>Tackling inequalities</b>	
<b>Coordination</b>	<b>Other Participants</b>	<b>Coordination</b>	<b>Other Participants</b>
MF, BNDES	MPO, MME, MDA, CVM, MDIC, CC, BCB, MCTI, MAPA, MTur, MMA, MTE	MIR, MMulheres	MDA, CVM, CC, BNDES, MTE

Source: Prepared by the authors.

Figure 3 – Flowchart

Until 20/01/24	<b>1st Meeting</b>	<b>CITSB</b>	1 - Approve regulations 2 - Compose CS and GTs 3 - CC Notice	
Until 23/03/24	<b>Technical Preparation</b>	<b>Sector Groups</b>	Defining references and presenting a work plan	
Until 08/03/24	<b>2nd Meeting</b>	<b>CITSB</b>	Approval of work plans	
Until 15/04/24	<b>Product 1</b>	<b>Sector Groups</b>	Methodology for Selecting Activities	
		<b>Thematic Groups</b>	Reducing inequalities	References for the assessment of inequalities considering race, gender and regions/territories
			Monitoring, Reporting and Verification	References of statements of impact materiality and systems of sustainable finance governance
Until 06/05/24	<b>1st Meeting</b>	<b>Advisory Committee</b>	Analysing Products 1	
Until 13/05/24	<b>1st Meeting</b>	<b>Supervisory Committee</b>	Analysing Products 1	
Until 27/05/23	<b>Product 2</b>	<b>Sector Groups</b>	List of activities to be included	
		<b>Thematic Groups</b>	Reducing inequalities	Preliminary proposal for racial and gender inequality assessment metrics
			Monitoring, Reporting and Verification	Preliminary proposal for financial statements impact
06/10/2024	<b>2nd Meeting</b>	<b>Advisory Committee</b>	Analysing Products 2	
Until 17/06/24	<b>2nd Meeting</b>	<b>Supervisory Committee</b>	Analysing Products 2	
Until 24/06/24	<b>Activity</b>	<b>Sector Groups</b>	Conducting workshops for consultation and systematization	
Until 01/07/24	<b>3rd Meeting</b>	<b>CITSB</b>	Analysing Products 2	
Until 08/07/24	<b>Product 3</b>	<b>Sector Groups</b>	Preliminary proposal of technical criteria	
		<b>Thematic Groups</b>	Reducing inequalities	Preliminary proposal for regional/territorial indicators
			Monitoring, Reporting and Verification	Preliminary proposal for a governance for sustainable finance
Until 22/07/24	<b>3rd Meeting</b>	<b>Advisory Committee</b>	Analysing Products 3	
Until 29/07/24	<b>3rd Meeting</b>	<b>Supervisory Committee</b>	Analysing Products 3	
Until 09/09/24	<b>Activity</b>	<b>Sector Groups</b>	Conducting workshops for consultation and systematization	
Until 07/10/24	<b>Product 4</b>	<b>Sector Groups</b>	Sectoral/thematic preparatory chapter for the TSB document	
Until 21/10/24	<b>4th Meeting</b>	<b>Advisory Committee</b>	Analysing Products 4	
Until 28/10/24	<b>4th Meeting</b>	<b>CITSB</b>	Analysing Products 4	
Until 11/11/24	<b>Product 5</b>	<b>Sector Groups</b>	Final version of the chapter	

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Until 02/12/24	<b>Product 6</b>	<b>Sector Groups</b>	Final documentation report on the work of the Technical Group	
Until 23/12/24	<b>4th Meeting</b>	<b>Supervisory Committee</b>	Analysing Products 6	
Until 23/12/24	<b>5th Meeting</b>	<b>Advisory Committee</b>	Analysing Products 6	
Until 27/01/25	<b>Product 7</b>	<b>Sector Groups</b>	Revised Final Documentation Report	
Until 28/10/24	<b>5th Meeting</b>	<b>CITSB</b>	TSB validation	

# Timeline of the taxonomy's development and implementation

To develop this Action Plan, an Interinstitutional Working Group (GTI) was established, comprising the entities mentioned in the first section of this document. Once the priority subjects to be included in the Plan had been defined, a schedule of regular meetings had been set up to define the instrument's priorities and minimum consensus. Once these guidelines had been agreed to, the document was drafted with support from the technical partner GIZ (German Cooperation) and, once a first version had been completed, the GTI went through another round of revisions to reach the version that was published on 21 September 2023 for a three-week public consultation as well as ten public audiences, one each per sector and theme.

Thus, the public consultation inaugurates the stage of dialogues outside the government on the development of the taxonomy, whose timeline is shown in Figure 4. Once this round is completed, the definitive version of the action plan will be presented publicly at COP-28 in Dubai.

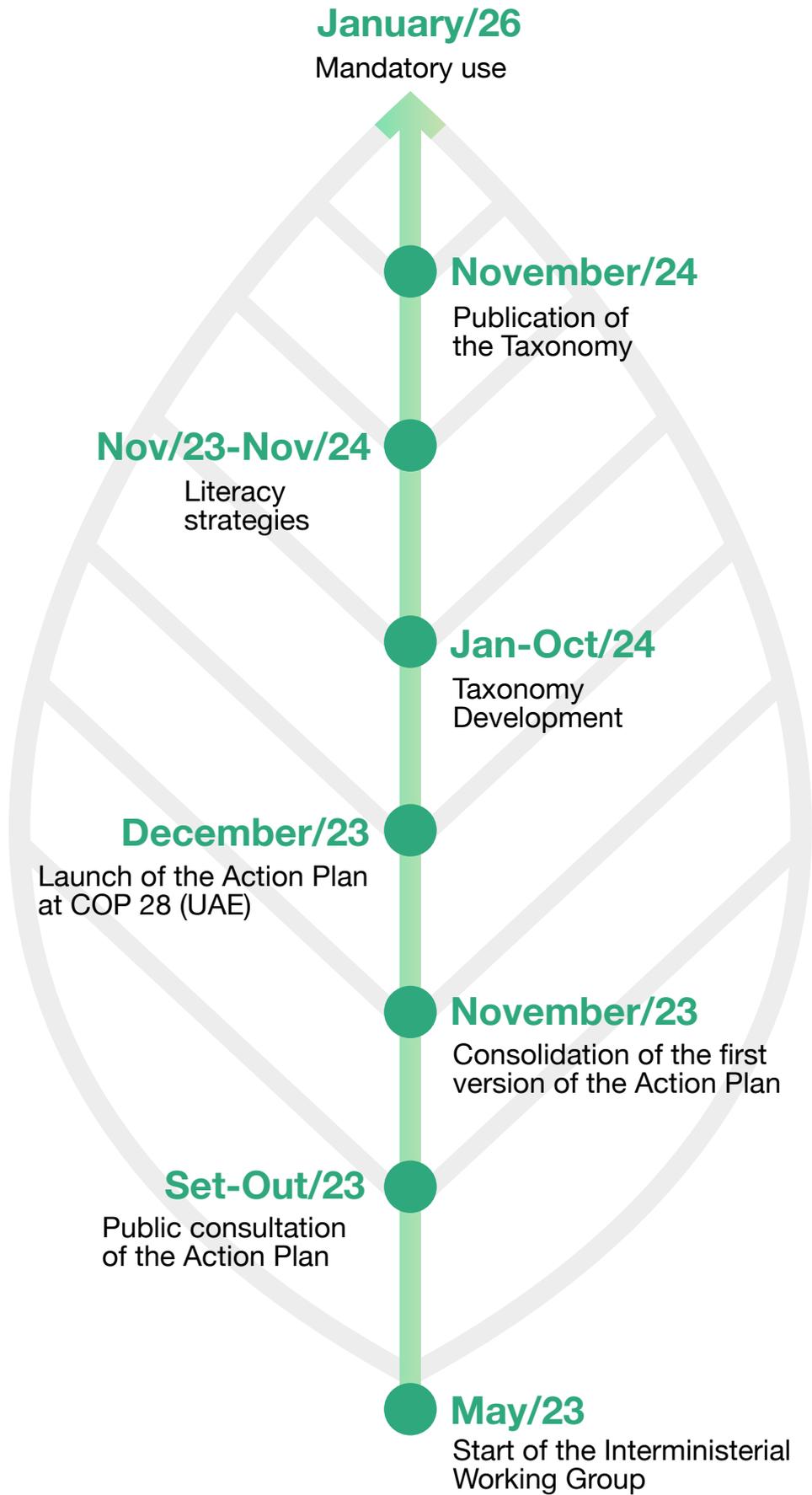
Following this public engagement, the process of setting up the sectoral and thematic Technical Groups will continue. The development of a first version of the taxonomy is expected to take ten months and will be completed by mid-October 2024. During the first half of the year, the invitation to bid for the composition of the Advisory Group will be published, and it will start operating in the second half of the year. Once the first version is finished, a new public consultation process will begin to present the methodology used and receive suggestions for its improvement.

Simultaneously, with the release of the first version, the “literacy process” for the instrument, as encouraged by the Federal Government, will begin. International experiences have shown that there can be some difficulty in the initial adoption of the instrument and that a period of public roll-out and capacity-building is needed to facilitate its use at first.

Finally, there will be a process of defining the regulations that will be linked to the taxonomy, in particular those related to reporting mentioned in the previous section. It is envisaged that a year after its release and first introduction, it will be defined, in a dialogue process, which norms will incorporate links to the taxonomy.



**Figure 4 -** Timeline for the taxonomy development and implementation



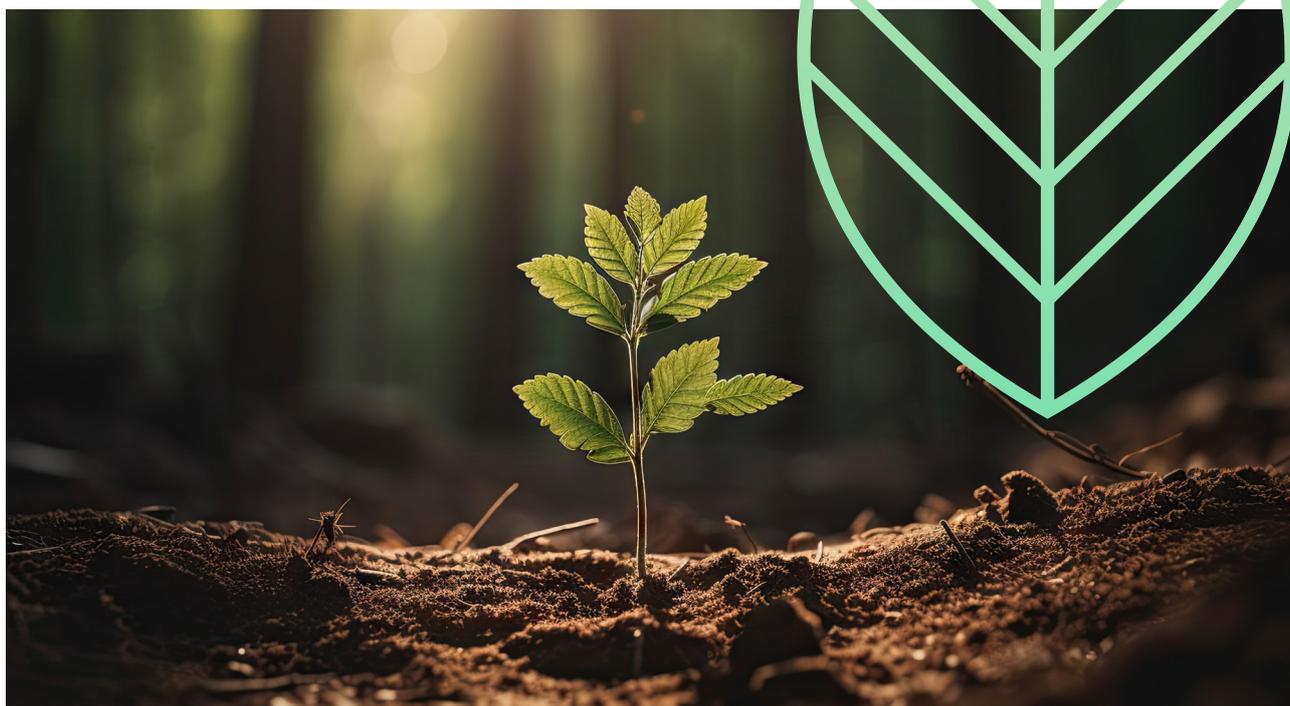
## Final remarks

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The establishment of a Sustainable Taxonomy in Brazil is a fundamental national public policy for sustainable and inclusive development. Brazil's society is embarking on a process that, despite its accelerated timetable, aims to achieve results that will contribute to tackling the climate and nature crises, generating decent jobs and income and reducing inequalities. This Action Plan proposes objectives, a general structure, principles and safeguards, under consideration of the relevant sectors, that corresponds to the most important national and international commitments in favor of the life of all species.

In this document, the public, private and academic sectors and civil society institutions have a first agreement on a taxonomy that is genuinely committed to a collective vision of the future, which will guide investments toward a new dynamic economy capable of generating decent work, promoting competitiveness and productivity, tackling environmental and climate challenges, and reducing inequalities in all their dimensions.

*Photo: Adobe Stock*



# List of abbreviations

<b>ABRELPE</b>	Brazilian Association of Public Cleaning and Special Waste Companies
<b>ESG</b>	Environmental, Social and Governance
<b>LAC</b>	Latin America and the Caribbean
<b>Anbima</b>	Brazilian Financial and Capital Markets Association
<b>ARPA</b>	Amazon Protected Areas Program
<b>IDB</b>	Inter-American Development Bank
<b>BMZ</b>	Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung German Federal Ministry for Economic Cooperation and Development
<b>CAR</b>	Rural Environmental Registry
<b>CBI</b>	Climate Bond Initiative
<b>CDB</b>	Convention on Biological Diversity
<b>CIM</b>	Interministerial Committee on Climate Change
<b>CNAE</b>	National Classification of Economic Activities
<b>CNI</b>	National Confederation of Industry
<b>UNCED</b>	United Nations Conference on Environment and Development
<b>Conama</b>	National Environmental Council
<b>COP</b>	Conference of the Parties
<b>EPE</b>	Energy Research Office
<b>Embrapa</b>	Brazilian Agricultural Research Corporation
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>Febraban</b>	Brazilian Federation of Banks
<b>FiBraS</b>	Project Sustainable Finance in Brazil
<b>GCF</b>	Green Climate Fund
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse gases
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit German International Cooperation Agency
<b>GTT</b>	Technical Working Group
<b>IBGE</b>	Brazilian Institute of Geography and Statistics
<b>IFC</b>	International Finance Corporation
<b>UNEP FI</b>	United Nations Environment Program Finance Initiative
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IPPU</b>	Industrial Process Or Product Use
<b>IRENA</b>	International Renewable Energy Agency
<b>ISO</b>	International Standards Organization

<b>LULUCF</b>	Land Use, Land Use Change and Forests
<b>MAPA</b>	Ministry of Agriculture, Livestock, and Food Supply
<b>MCTI</b>	Ministry of Science, Technology, and Innovation
<b>MDR</b>	Ministry of Development and Regional Integration
<b>MMA</b>	Ministry of the Environment and Climate
<b>MME</b>	Ministry of Mines and Energy
<b>MRV</b>	Monitoring, reporting and verification
<b>NDC</b>	Nationally Determined Contributions
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>SDG</b>	Sustainable Development Goals
<b>ILO</b>	International Labor Organization
<b>UN</b>	United Nations
<b>GDP</b>	Gross Domestic Product
<b>ABC+ Plan</b>	Agricultural Policy for Climate Adaptation and Low Carbon Emission
<b>PAN</b>	National Action Plans for Conservation
<b>PNA</b>	National Climate Change Adaptation Plan
<b>PNDH-3</b>	National Human Rights Program
<b>PNGATI</b>	National Policy for Territorial and Environmental Management in Indigenous Lands
<b>PNMC</b>	National Policy on Climate Change
<b>PNRS</b>	National Solid Waste Policy
<b>PPCDAm</b>	Action Plan for Deforestation Prevention and Control in the Legal Amazon
<b>PRA</b>	Environmental Regularization Programs
<b>PronaSolos</b>	Brazilian Soil Survey Program
<b>RenovAgro</b>	Program for Financing Sustainable Agricultural Production Systems
<b>CIS</b>	Credit Information System
<b>SICAR</b>	National System of the Rural Environmental Registry
<b>SIRENE</b>	National Emissions Registry System
<b>SNIS</b>	National Fire Information System
<b>UE</b>	European Union
<b>UNEP FI</b>	United Nations Environment Programme Finance Initiative
<b>UNDRR</b>	United Nations Disaster Risk Reduction Office
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change

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# Annex I - National regulations associated with environmental objectives

In addition to the legislation mentioned in Section 5, the following regulations bring together Brazil's commitments on the following topics: climate change, biodiversity and combating deforestation and fires, solid waste and water resources.

Commitments	Note	Act of Institution	Topic
<b>Projected national GHG emissions for 2020 will be 3,236 million tonCO<sub>2</sub>eq</b>	The projection was for 2020	Decree N° 9,578/2018	Climate Change
<b>100% of GHG emissions are covered by a mitigation plan</b>	N/A	Multi-Year Plan (PPA) Proposal 2024-2027 (will be included in the PPA Law)	Climate Change
<b>21 priority states with actions to implement state policies to Combat Desertification and Mitigate the Effects of Drought</b>	N/A	Multi-Year Plan (PPA) Proposal 2024-2027 (will be included in the PPA Bill) <b>Decree N° 2,741, which enacts the international convention to combat desertification.</b>	Climate Change
<b>28% of the Coastal and Marine Zone, important for mitigation and adaptation, protected</b>	N/A	Multi-Year Plan (PPA) Proposal 2024-2027 (will be included in the PPA Bill)	Climate Change
<b>220 Participatory, Popular and Territorial Environmental Education initiatives</b>	N/A	Multi-Year Plan (PPA) Proposal 2024-2027 (will be included in the PPA Bill)	Climate Change
<b>Climate Governance Model implemented and operational (Institutional measure)</b>	N/A	PPA Proposal 2024-2027	Climate Change
<b>New NDC developed based on Sectoral Mitigation and Adaptation Plans (PPA institutional measure)</b>	N/A	PPA Proposal 2024-2027	Climate Change
<b>Article 18. The projection of national greenhouse gas emissions for the year 2020, as referred to in the Sole Paragraph of article 12 of Law 12,187/2009, will be 3,236 million tonCO<sub>2</sub>eq, comprising the projections for the following sectors: I - land-use change - 1,404 million tonCO<sub>2</sub>eq;</b>	Reference (goal was for 2020)	Decree N° 9,578/2018 - Consolidates normative acts issued by the Federal Government regarding the National Climate Change Fund (FNMC), as referred to in the Law N° 12,114 of 9 December 2009, and the National Climate Change Policy (PNMC), as provided for in Law No. 12,187 of 29/12/2009, 29 December 2009.	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
<p>Article 19. To achieve the voluntary national commitment stipulated in article 12 of Law No. 12,187/2009, actions will be implemented aiming to reduce between 1,168 million tonCO<sub>2</sub>eq and 1,259 million tonCO<sub>2</sub>eq of the total emissions estimated in article 18.</p> <p><b>Paragraph 1. To comply with the provisions of the caput, the following actions initially considered in the plans referred to in article 17 will be taken into account: I - eighty per cent reduction in annual deforestation rates in the Legal Amazon in relation to the average between 1996 and 2005; II - forty per cent reduction in annual deforestation rates in the Cerrado Biome in relation to the average between 1999 and 2008; (...) IV - recovery of 15 million hectares of degraded pastures; (...) VIII – expansion of forest planting by 3 million hectares;</b></p>	Reference (goal was for 2020)	Decree N° 9,578/2018 - Consolidates normative acts issued by the Federal Government that provide for the FNMC, as referred to in the Law N° 12,114, 9 December 2009, and the PNMC, referred to in Law N° 12,187, 29 December 2009.	Biodiversity and Combating Deforestation and Fires
<p><b>Percentage reduction in the total area of native vegetation suppressed per year and biome. Reference index: 27,460.74 km<sup>2</sup></b></p>	Multi-Year Plan (PPA) Proposal - deadline to be submitted to the National Congress by 31 August 2023	Multi-Year Plan (PPA) Proposal 2024-2027 (will be included in the PPA Bill)  <b>PPA Target</b>	Biodiversity and Combating Deforestation and Fires
<p><b>Reforestation (restoration/recovery) of 12 million hectares of degraded areas by 2020</b></p>	NDC	NDC Planaveg Decree Convention on Biological Diversity	Biodiversity and Combating Deforestation and Fires
<p><b>1. Biodiversity Knowledge (Component 1 of the National Biodiversity Policy)</b></p>	N/A	<p><b>Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.</b></p>	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
2. Biodiversity Conservation (Component 2 of the National Biodiversity Policy)	N/A	Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.	Biodiversity and Combating Deforestation and Fires
3. Sustainable Use of Biodiversity Components (Component 3 of the National Biodiversity Policy)	N/A	Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.	Biodiversity and Combating Deforestation and Fires
4. Monitoring, Assessment, Prevention and Mitigation of Impacts on Biodiversity. (Component 4 of the National Biodiversity Policy)	N/A	Decree N° 2,519/1998 - promulgates the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reinstates the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
<p><b>5. Access to Genetic Resources and Associated Traditional Knowledge and Benefit Sharing (Component 5 of the National Biodiversity Policy)</b></p>	<p>N/A</p>	<p>Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.</p> <p>Law N° 13,123 - concerns access to genetic heritage and associated traditional knowledge.</p>	<p>Biodiversity and Combating Deforestation and Fires</p>
<p><b>6. Education, Public Awareness, Information and Publicizing Biodiversity. (Component 6 of the National Biodiversity Policy)</b></p>	<p>N/A</p>	<p>Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.</p>	<p>Biodiversity and Combating Deforestation and Fires</p>
<p><b>7. Legal and Institutional Strengthening for Biodiversity Management. (Component 7 of the National Biodiversity Policy)</b></p>	<p>N/A</p>	<p>Decree N° 2,519/1998 - enacts the CBD and Decree N° 4,339/2022 - Establishes principles and guidelines for the implementation of the National Biodiversity Policy. Decree N° 11,367, 1 January 2023 - establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for Deforestation Prevention and Control in the Legal Amazon - PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, Atlantic Forest, Caatinga, Pampa and Pantanal.</p>	<p>Biodiversity and Combating Deforestation and Fires</p>

Commitments	Note	Act of Institution	Topic
Achieve zero deforestation through PPCDs: Action Plan for Deforestation Prevention and Control in the Legal Amazon	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Suspend/cancel 100% of irregular CAR registrations overlapping federal public lands and notify CAR registrants with illegal deforestation through SICAR according to priority area and size of deforestation.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Increase support for sustainable production inclusion projects for indigenous peoples, traditional peoples and communities, family and rural farming and community enterprises by 50%, valuing socio-biodiversity product chains, compared to the average of the last 4 years.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
A 20% increase in commercial actions through government procurement policies and programs (PAA, PNAE, PGPM, PGPM-Bio), in comparison to 2022 figures.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Developing 5 National Integration Routes based on agroforestry systems (SAFs) (Cocoa, Açaí, Biodiversity, honey and fruit growing)	N/A	PPCDAM - 5 <sup>th</sup> phase – Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Strengthen 100 community-based organizations in Federal Conservation Units for the improvement, formulation and implementation of public policies and related projects.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Monitoring the production of 17 socio-biodiversity products supported by PGPM-Bio	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Implement 55 projects to stimulate socio-biodiversity chains and agro-ecological products, through production stimulus and/or the expansion of local transportation, sanitation, connectivity and renewable energy infrastructure.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Inspect 30% of the illegally deforested area identified by last year's consolidated Prodes	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
Embargo 50% of the illegally deforested area identified by last year's consolidated Prodes in federal Conservation Units	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Increase by 10% the number of environmental infraction notices judged in the first instance/year in comparison to 2022	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
File 3,500 administrative proceedings per year to investigate administrative infractions against the flora in the Amazon	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
File 50 civil lawsuits for the enforcement of collective rights (ACPs) per year to collect compensation for damages to the Amazon flora	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Make deforestation alerts available by <i>Deter Intenso</i> for the entire 12 months of the year.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Hire 4 rotary-wing aircraft to assist in operations to combat deforestation and fires.	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Integrate data from vegetation suppression authorizations (ASV) from the 9 states of the Legal Amazon into Sinaflor	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Establish federal fire brigades for the prevention and firefighting in the 9 states of the Legal Amazon	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Combat forest fires annually in all critical areas in the Legal Amazon	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
List 100% of the vacant lands as Union's property	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Georeference 100,000 rural occupations on public land	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Designate 29.5 million hectares of federal public forests that are undesignated	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
Demarcate 230,000 km of marginal land limits of federal rivers	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Monitor the existence of irregularities in 5,000 rural plots of land or certification of rural properties in undesignated federal unallocated public land	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Audit 20% of requests for landholding regularization, certification and registration of rural properties on public lands with evidence of irregularities	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires <a href="https://chat.openai.com/c/b243429c-b304-4fe8-ba5a-71c6bd1bab2d">https://chat.openai.com/c/b243429c-b304-4fe8-ba5a-71c6bd1bab2d</a>
Create 3 million hectares of conservation units by 2027	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
100% of conservation units located in priority areas with developed management plans	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
80% of conservation units with advisory committees established and active	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
40% of the area of federal UCs in the public domain regularized	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
40% of federal UCs with consolidated limits	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Develop 8 plans for territorial and environmental management in indigenous lands	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires
Assist 1,000 beneficiaries through the creation of PRONAF credit for traditional peoples and communities, with the purpose to support and stimulate seed multiplication fields, cultivation of medicinal plants and production of herbal medicines	N/A	PPCDAM - 5 <sup>th</sup> phase - Decree N° 11,367, 1 January 2023	Biodiversity and Combating Deforestation and Fires

Commitments	Note	Act of Institution	Topic
Adopt measures to ensure compliance with the provisions of the CITES Convention, to protect certain species from excessive trade to ensure their survival;	N/A	Decree N° 3,607, 21 September 2023 - International Trade in Endangered Species of Wild Fauna and Flora - CITES – Cites	Biodiversity and Combating Deforestation and Fires
Reverse packaging logistics that imposes obligations on manufacturers, importers, distributors and retailers of certain types of products. One of the wastes that received special attention in the PNRS due to its large volume in the market was packaging in general, derived from packaged products. One of the key points in this regulatory move on packaging was the Sectoral Agreement on Packaging in General, which stipulated a minimum recycling target of 22% of the annual volume disposed of by companies on the national market.	Reduction of at least 22% of packaging disposed of in landfills	National Solid Waste Policy  - PNRS (Law N° 12,305/2010). Decree N° 10,936, 12 January 2022 - regulates Law N° 12,305/2010). PLANARES. Sectoral Agreement on Reverse Logistics of Packaging.	Solid Waste
Closure of garbage dumps by 2024.	There is currently an upward trend in the number of garbage dumps sites	National Solid Waste Policy - PNRS (Law N° 12,305/2010). Decree N° 10,936, 12 January 2022 - regulates Law N° 12,305/2010). PLANARES. Law N° 14,026, 15 July 2020 - basic sanitation legal framework	Solid Waste
For hazardous waste, mandatory energy recovery of flammable waste when there are duly licensed facilities within 150km of the source of the waste.	N/A	National Solid Waste Policy - PNRS (Law N° 12,305/2010). Decree N° 10,936, 12 January 2022 - regulates Law N° 12,305/2010). PLANARES	Solid Waste
Protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.	N/A	Decree N° 9,470/2018 - Minamata Convention on Mercury - deadlines after which the manufacture, import or export of production will not be permitted (elimination date).	Solid Waste
Protecting human health and the environment from persistent organic pollutants (POPs)	N/A	Decree N° 5,472/2005 - Enacts the Stockholm Convention on Persistent Organic Pollutants - aims to ban and restrict the use of chemical substances classified as Persistent Organic Pollutants (POPs): innovates by inserting the precautionary principle, strengthening national capacities and determining shared responsibility of the productive sectors.	Solid Waste

Commitments	Details	Act of Institution	Topic
<b>Target to halve the number of people without access to clean water and basic sanitation</b>	<b>Target was until 2015</b>	<b>World Summit on Sustainable Development - Rio+10.</b>	Water Resources
<b>27 state and district training programs for water resources management periodically reviewed and implemented</b>	N/A	National Water Resources Policy (Law Nº 9,433/1997) - article 5 The instruments of the National Water Resources Policy are: I - Water Resources Plans - Main Goals PNRH 2022-2040	Water Resources
<b>All (100%) of Brazil's water licensing systems enabling online applications with automated procedures.</b>	N/A	National Water Resources Policy (Law Nº 9,433/1997) - article 5 The instruments of the National Water Resources Policy are: I - Water Resources Plans - Main Goals PNRH 2022-2040	Water Resources
<b>Remote sensing monitoring of irrigation water consumption implemented in 6 interstate drainage basins of special management interest.</b>	N/A	National Water Resources Policy (Law Nº 9,433/1997) - article 5 The instruments of the National Water Resources Policy are: I - Water Resources Plans - Main Goals PNRH 2022-2040	Water Resources
<b>Water use for dilution of domestic effluents discharged regulated in 80% of municipalities that discharge effluents into water bodies with high water quality impairment.</b>	N/A	National Water Resources Policy (Law Nº 9,433/1997) - article 5 The instruments of the National Water Resources Policy are: I - Water Resources Plans - Main Goals PNRH 2022-2040	Water Resources
<b>Water abstraction for public supply regularized in 90% of the identified irregular municipalities in the Water Atlas.</b>	N/A	National Water Resources Policy (Law Nº 9,433/1997) - article 5 The instruments of the National Water Resources Policy are: I - Water Resources Plans - Main Goals PNRH 2022-2040	Water Resources



**Ministry of Finance**  
Secretariat of Economic Policy  
*Undersecretary for Sustainable  
Economic Development*



Por meio da:



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