Ministry of the Environment and Climate Change
Ministry of Science, Technology and Innovation
Office of the President's Chief of Staff

CLIMATE PLAN

Adaptation

Executive Summary

FEDERATIVE REPUBLIC OF BRAZIL

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Climate Adaptation Plan
Executive Summary

Brasília/DF (Federal District)
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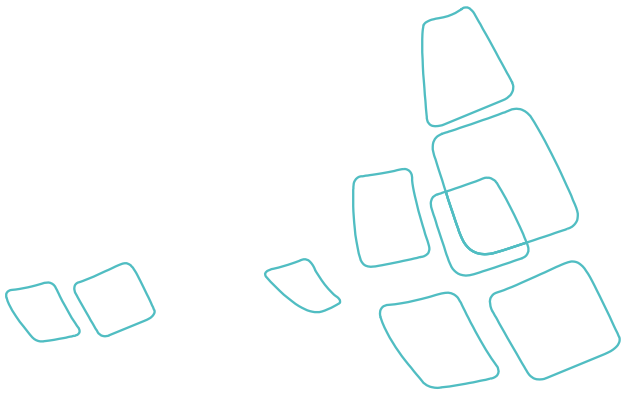


Foreword

Brazil is one of the most vulnerable countries to climate change, which is why adaptation planning is among the nation's top public policy priorities. This executive summary presents an overview of the main points of the National Adaptation Strategy and the 16 Sectoral and Thematic Adaptation Plans that make up the Climate Plan (*Plano Clima*), the key document that will guide Brazil's climate change response policy through 2035.

The Climate Plan establishes a milestone in Brazil's climate policy and issues a call for a sustainable, resilient, just, and low-carbon future—a future that is not only possible but will also position Brazil as a leader in confronting today's climate challenges.

The planning proposed by the Climate Adaptation Plan (*Plano Clima Adaptação*) seeks to integrate a climate perspective into a set of structural policies, programs, and projects for the country, with special emphasis on reducing inequalities and promoting climate justice. To achieve this, the engagement of subnational entities, civil society, the private sector, and the scientific community will be just as crucial as implementation by the federal government—ensuring multi-sectoral, multi-level, and participatory governance capable of adapting and transforming Brazil. Through measurable commitments, solid policies, and high-level cooperation, the country strengthens its leadership in the climate adaptation agenda and outlines strategic pathways to address current and future challenges within its territory.

Table of Contents

1. Introduction

Created in 2009, the National Policy on Climate Change (*Política Nacional sobre Mudança do Clima* - PNMC) holds a central position in Brazil's climate planning system. This policy has as its main instrument the National Plan on Climate Change (Climate Plan), which guides adaptation actions to reduce the adverse effects of climate change and the vulnerability of the country's environmental, social, and economic systems.

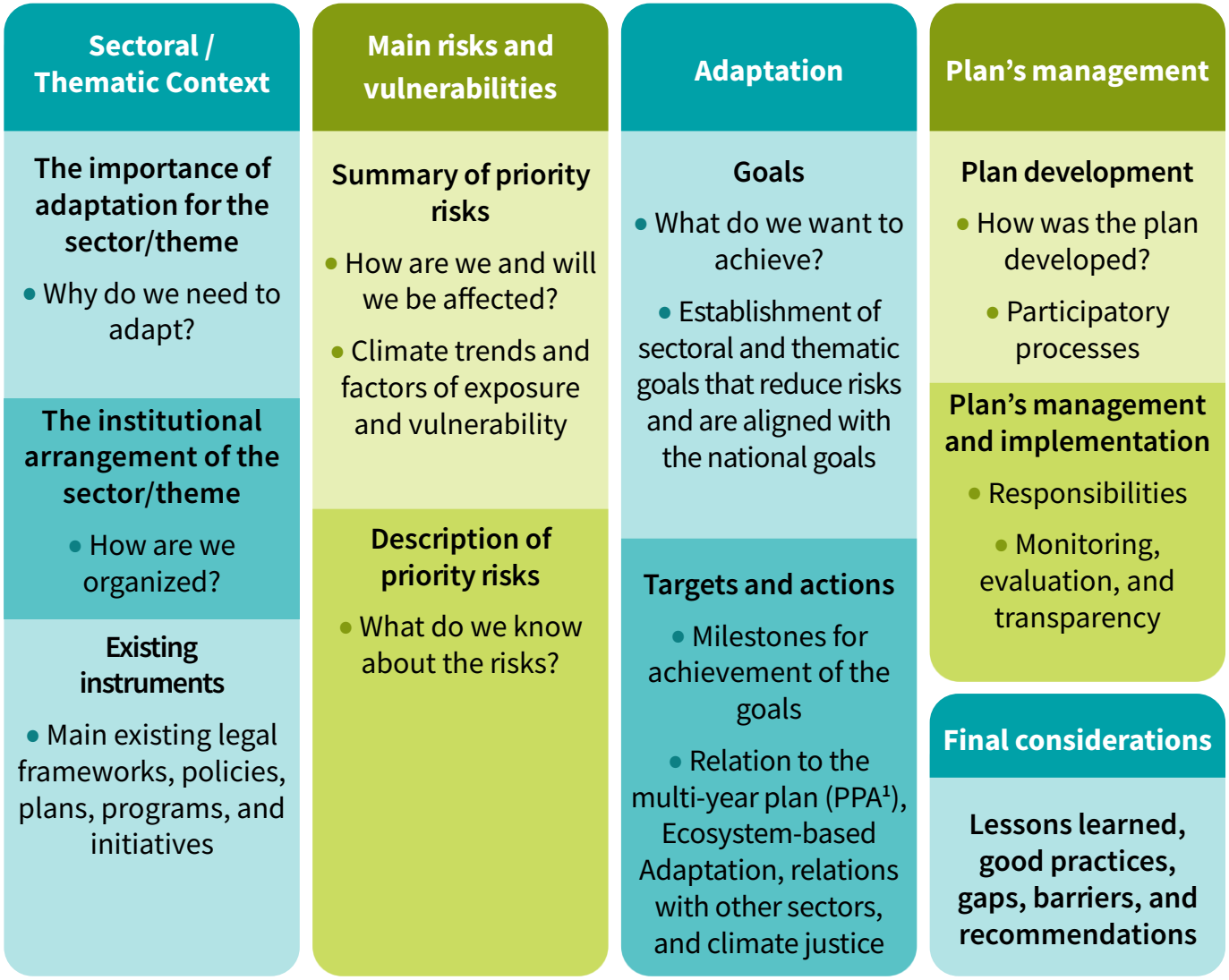
Comprising both adaptation and mitigation strategies, as well as the respective Sectoral and Thematic Plans, the Climate Plan updates Brazil's first National Adaptation Plan - NAP (*Plano Nacional de Adaptação* - PNA), from 2016, and is now called the Climate Adaptation Plan (*Plano Clima Adaptação*). The lessons learned from the monitoring and evaluation of the NAP, in 2017 and 2021, helped shape the process that gave rise to the Climate Adaptation Plan, notably:

- the need to ensure coordination at strategic levels of the federal government and the maturation of the governance structure, fostering integration among sectors and different federative levels;
- the definition of responsibilities;
- the establishment of national adaptation targets, linked to indicators that can be monitored within the Plan's timeframe and focused on the country's priorities; and
- the expansion of capacity-building actions associated with the generation and dissemination of evidence to address the new climate regime.

The climate governance structure in the country was strengthened in 2023 with the restructuring of the Interministerial Committee on Climate Change (*Comitê Interministerial sobre Mudança do Clima* - CIM), which is composed of 23 ministries and federal government bodies. Within the scope of the CIM, the Technical Working Group on Adaptation was established to develop the National Strategy and the Sectoral and Thematic Adaptation Plans, under the general coordination of the Ministry of the Environment and Climate Change (*Ministério do Meio Ambiente e Mudança do Clima* - MMA) and the technical-scientific coordination of the Ministry of Science, Technology and Innovation (*Ministério da Ciência, Tecnologia e Inovação* - MCTI).

To develop the Sectoral and Thematic Plans, the ministries followed a jointly agreed model (Figure 1). The interministerial participation ensured leadership in defining the contents and priorities, according to the governmental responsibilities specific to each ministry. The agreed guidelines also considered the lenses of climate justice and Ecosystem-based Adaptation (EbA), aiming to guide the prioritization of the most vulnerable communities and the conservation and restoration of ecosystems as a fundamental part of adaptation strategies.

Figure 1 – Templates for the Sectoral and Thematic Plans



Source: Own elaboration.

[1] The Multi-Year Plan (*Plano Plurianual* - PPA) is the main medium-term budget planning instrument of the Federal Government. It defines the guidelines, objectives, and goals of the federal public administration, encompassing capital expenditures and other resulting expenses, in addition to those related to ongoing programs. The PPA is established by law and has a four-year duration.

Climate policy that reflects Brazil

The Climate Adaptation Plan, presented in this document, represents a process of nearly three years of coordination among governments at different levels. This executive summary is a synthesis of the joint effort undertaken by 25 ministries, working in collaboration with subnational entities, civil society organizations, academia, the private sector, and public participation.

Initiated in 2023, it involved broad participation from both the public sphere and Brazilian society. For its development, 26 capacity-building events were held, including seminars, technical meetings, workshops, and webinars, with the participation of 871 representatives from various sectors and themes, among managers and specialists.

Social participation, driven by the Participatory Brazil Platform (*Plataforma Brasil Participativo*), allowed citizens to contribute directly to the National Adaptation Strategy (*Estratégia Nacional Adaptação* - ENA) and the Sectoral and Thematic Plans, as shown in Figure 2.

Figure 2 – Participatory process for developing the Climate Adaptation Plan

- **5** national preparatory workshops (private sector + civil society)
- **6** intersectoral and thematic workshops
- **6** orientation webinars for the Sectoral and Thematic Plans
- **871** participants
- **25** federal ministries

- **6** workshops with subnational governments, civil society, and the business sector
- **3** regional seminars focused on women and climate justice
- **7** in-person plenary sessions, organized by biome
- **4,161** participants
- **2,582** views on YouTube

- **298** thousand accesses
- **23** thousand participants
- **1,296** proposals for the Climate Plan
- **906** contributions to the National Strategy
- **2,778** contributions to the Sectoral and Thematic Plans
- More than **47** thousand votes
- **2** thousand comments

Source: Own elaboration.

The Climate Adaptation Plan is the result of an intensive drafting process, carried out based on the best available science, the inclusion of traditional knowledge, the engagement among ministries and subnational governments, and the participation of society at various stages of mobilization. The principles, vision, and general goal of the Climate Plan, as well as the guidelines and national adaptation goals are presented on the next pages.

VISION OF THE CLIMATE PLAN

The Climate Plan sets Brazil on the path to becoming a sustainable, resilient, safe, fair and prosperous country, with governments, civil society, the private sector and the scientific community fully aware, engaged and acting in an integrated manner in the face of climate change.

Realized by

GENERAL GOAL OF THE CLIMATE PLAN

The general goal of the Climate Plan is to guide, promote, implement and monitor coordinated actions aimed at transitioning to a net-zero greenhouse gas emissions economy by 2050 and adapting human and natural systems to climate change, through short-, medium- and long-term strategies, aligned with sustainable development and climate justice principles.

Composed of

NATIONAL ADAPTATION GOALS

1. Increase the resilience of populations, cities, territories and infrastructure to the climate emergency.
2. Promote sustainable and resilient production and regular access of the population to healthy food of adequate quality and quantity.
3. Promote water security by ensuring the availability of water, in both sufficient quality and quantity, for multiple uses, such as supply, production, energy and ecosystems.
4. Protect, conserve, restore and strengthen ecosystems and biodiversity, while ensuring the provision of ecosystem services.
5. Promote, protect and recover the health and well-being of populations, while respecting the ways of life of traditional peoples and communities.
6. Ensure energy security in a sustainable and accessible manner.
7. Promote socio-economic development and reduce inequalities.
8. Protect cultural heritage and preserve cultural practices and heritage sites in the face of climate change-related risks.
9. Strengthen the vital role of the ocean and coastal zones in tackling climate change.

Climate Justice

Socially vulnerable populations are the most affected by climate change; therefore, the Climate Adaptation Plan implements actions to promote climate justice. These actions are based on various dimensions, including gender, race, ethnic group, age, social class, and other factors that contribute to greater vulnerability.

Guided by

PRINCIPLES

The Climate Adaptation Plan is guided by the values of the Brazilian Federal Constitution. Its fundamental precepts are individual and collective rights, including the recognition of the original rights of indigenous peoples, social and environmental rights, as well as the prioritization of children and adolescents. It also complies with the climate agreements and commitments assumed by the country, including: the 1992 Rio Declaration on Environment and Development; the United Nations Framework Convention on Climate Change; the Convention on Biological Diversity; the United Nations Convention to Combat Desertification; the Sendai Framework for Disaster Risk Reduction 2015-2030; and the 2030 Agenda for Sustainable Development.

ADAPTATION GUIDELINES

1. Promoting sustainable development in its multiple dimensions, considering strategic sectors and themes for the country, with a view to reducing inequalities, promoting equity and ensuring a just transition.
2. Promoting climate justice based on the dimensions of gender, race, ethnicity, age, social class, geographical origin and other factors that influence vulnerability.
3. Promoting environmental protection, conservation and preservation, guided by the principles of precaution and prevention.
4. Multilevel and cross-cutting governance, with a view to having consistency, synergy and complementarity between strategies, taking into account territorial specificities.
5. Promoting transparency and participatory processes with society throughout the iterative adaptation cycle.
6. Integrating adaptation into policies, programs and projects that may be affected by climate change, including structuring initiatives and a long-term perspective.
7. Strengthening institutional capacities at the different levels of government, including those necessary for accessing sources of financing and means of implementation for adaptation measures that are appropriate to each context.
8. Promoting co-benefits between adaptation and mitigation of GHG emissions.
9. Adopting the best available knowledge, based on science, good sectoral and societal practices, traditional knowledge and other sources deemed appropriate.
10. Integrating incremental and transformational actions, based on an understanding of climate-related risks and their multiple conditioning factors, with different time horizons and implementation scales.
11. Promoting public awareness and understanding of climate change, its causes, consequences and approaches to reduce risks.
12. Adopting the Ecosystem-based Adaptation (EbA) approach, recognizing its potential to reduce climate risks and vulnerabilities in a systemic, flexible, socially just and cost-effective way, and its benefits for mitigation efforts, simultaneously.
13. Ensuring the flexibility and adaptability of the strategies, with reviews of the Plan and changes in context, in order to incorporate updates to the information and knowledge generated, as well as lessons learned.

2. National Adaptation Targets

Brazil adopts a robust set of specific and comprehensive targets and indicators—defining 312 sectoral and thematic targets to be achieved through 810 adaptation actions in key sectors and themes. Subsequently, 12 national targets were established, as presented in Table 1. The targets and indicators aim to ensure alignment with the Global Goal on Adaptation (GGA), reinforcing the commitment to reducing vulnerabilities, strengthening resilience, and enhancing adaptive capacity throughout Brazil.

The challenge of establishing adaptation targets remains a crucial political and strategic process to give concrete form to the national adaptation agenda. From this perspective, there is potential for future refinements as a natural continuity of the work, progressively transforming qualitative commitments into measurable parameters, capable of supporting decision-making and demonstrating concrete results to Brazilian society and the international community.

Table 1 – National targets of the Climate Adaptation Plan

	Targets
1.	By **2035**, ensure that **all states and at least 35% of Brazilian municipalities have Adaptation Plans**.
2.	By **2035**, provide **structural disaster risk reduction measures** to at least **4 million people** exposed to geohydrogeological disaster risk.
3.	By **2035**, expand **vegetation cover in urban areas by 180,000 hectares**, prioritizing municipalities at greater climate risk.
4.	By **2035**, **reduce to 7.5%** the total number of municipalities with the **minimum level of water security**.
5.	By **2035**, ensure that **100% of the projects for infrastructure works** to be supported by the Federal Government **consider climate risks**.
6.	By **2035**, **reduce, by at least 30%, operational interruptions in federal transportation infrastructure** caused by climate events.

	Targets
7.	By **2030**, **expand the extension of Marine Protected Areas to 30%**, with specific strategies for climate change included in the management plans.
8.	By **2035**, **connect 30% of the national territory through ecological corridors** between protected areas and Other Effective Area-Based Conservation Measures - OMECs, prioritizing territories at greater risk from climate change and climate refuge areas.
9.	By **2030**, expand the **adoption of diversified, sustainable, and resilient agricultural production systems** to **72.68 million hectares**.
10.	By **2035**, **eradicate severe food and nutrition insecurity**.
11.	By **2035**, have **100% of the health departments of the states and municipalities that are priority areas** for climate emergency **mobilized to adapt the SUS** – Brazilian Unified Health System (*Sistema Único de Saúde*) to climate change.
12.	By **2035**, ensure that **100% of power planning studies take climate risks into account**.

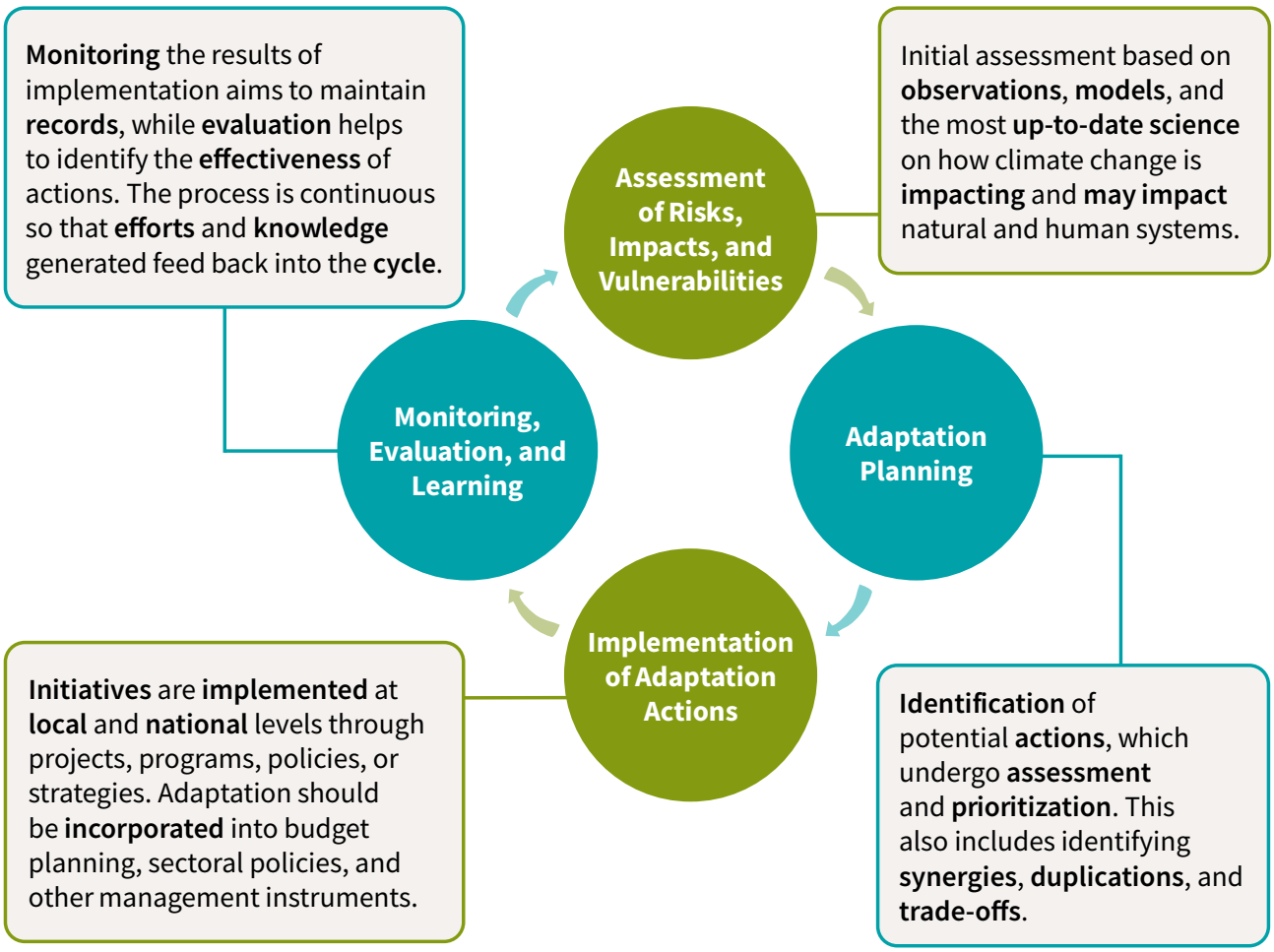
Source: Own elaboration.

3. Impacts, Vulnerabilities and Adaptation

Climate-related risks are dynamic and complex, resulting from changes in climatic and socioeconomic patterns (Wise *et.al.*, 2014; Simpson *et.al.*, 2021; IPCC, 2022). Considering that these factors evolve and interact over time, adaptation planning and implementation are guided by the so-called iterative adaptation cycle.

Being iterative, the cycle foresees that the process occurs in successive rounds, with evaluations and updates of information. Adaptation should therefore be guided by a continuous and progressive step-by-step process, as described in Figure 3.

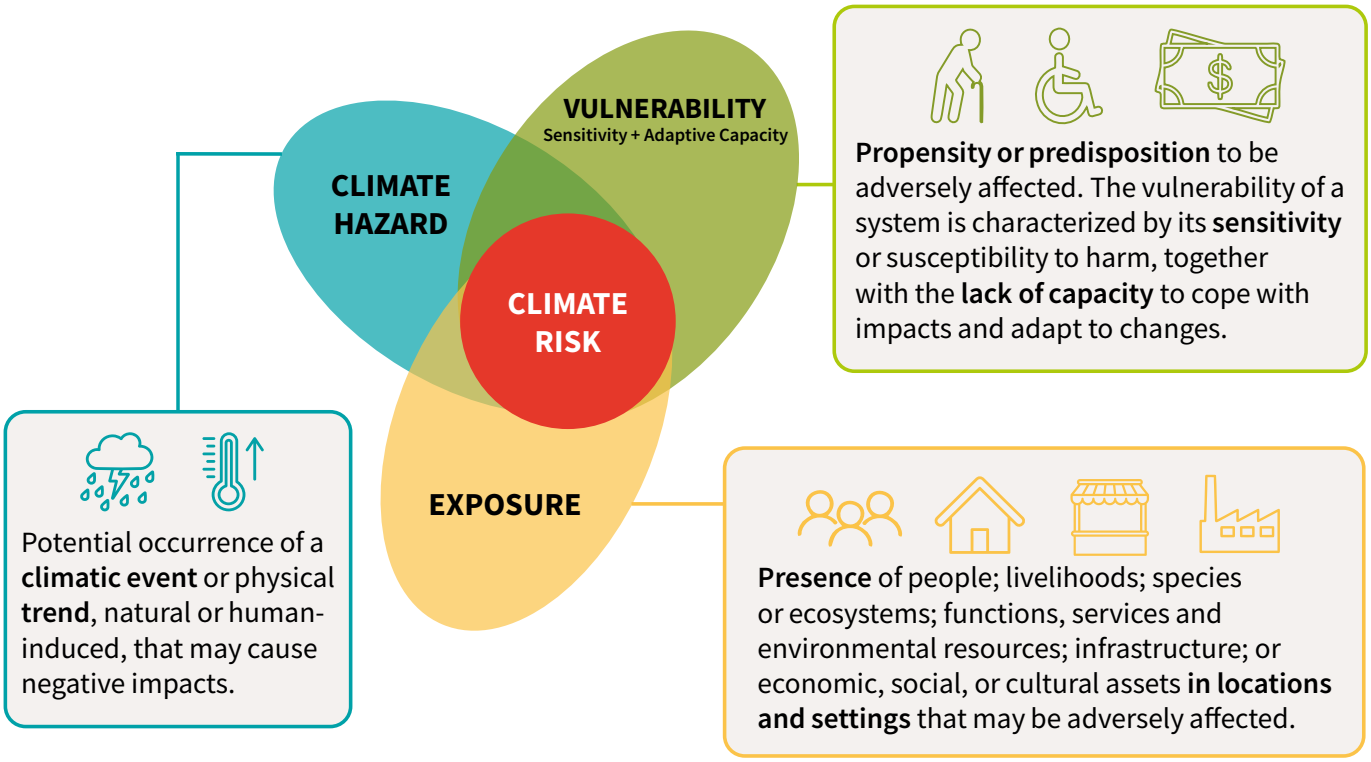
Figure 3 – Stages of the iterative adaptation cycle



Source: Adapted from UNFCCC, 2019.

The first step of the iterative adaptation cycle is the assessment of climate risks. Due to the multicausal nature of these risks, the Climate Adaptation Plan adopted a conceptual framework that integrates climatic, socioeconomic, and biophysical information, following the guidelines of the Intergovernmental Panel on Climate Change (IPCC), as illustrated in Figure 4.

Figure 4 – Risk analysis takes into account the combination of information on climate-related hazards, exposure, and vulnerability



Source: IPCC, 2014; IPCC, 2022.

Cross-cutting Themes for Adaptation

The Climate Adaptation Plan considered six complementary approaches:

Climate Justice – The disparity between responsibilities for causing climate change and the impacts it generates results in injustices both between and within countries. Climate justice addresses the climate crisis not only as an environmental issue but also as a matter of human rights and social justice, recognizing that climate change disproportionately affects vulnerable populations. The Climate Adaptation Plan incorporates climate justice as a human-centered approach to addressing climate change, safeguarding the rights of people in situations of vulnerability and sharing the burdens and benefits of climate change and its impacts in an equitable and fair manner (IPCC, 2022; MRFCJ, 2011).

Women – Numerous studies confirm that women and girls are more vulnerable to the impacts of climate change, which is why a gender perspective needs to be incorporated into climate public policies. Beyond being a powerful tool for gender equality, including this perspective helps achieve climate justice and enables girls and women to leverage their capacities as leaders and problem-solvers in addressing climate challenges. Gender mainstreaming is not only a matter of justice but also of policy effectiveness.

Environmental Racism – Black populations, traditional communities, and Indigenous peoples experience environmental and climate impacts disproportionately. Their vulnerability, already present due to their social and economic context, is amplified by climate change and extreme events, subjecting these communities to severe consequences. Combating environmental racism requires the implementation of policies aimed at reducing the inequalities stemming from Brazil's historical development process.

Human Mobility – Climate change exacerbates forced human displacement, both internally and across national borders. As climate risks increase in the coming decades, so will the risks for displaced people and for the host regions, deepening poverty and conflicts, among other vulnerabilities (Craparo *et.al.*, forthcoming; UNHCR, 2024). Adaptation measures can prevent and guide displacement, respecting rights, giving a voice to at-risk populations, and promoting the active participation of displaced people or those at risk of displacement.

Nature-based Solutions and Ecosystem-based Adaptation – When ecosystems are protected, sustainably managed, and restored, they help society address challenges effectively and adaptively. Actions inspired by and supported by nature with social, environmental, and economic benefits are called Nature-based Solutions (NbS), which include among their strategies Ecosystem-based Adaptation (EbA). Used as a guideline in the Climate Adaptation Plan, EbA employs, among other factors, biodiversity and ecosystem services to increase resilience and reduce the exposure and vulnerability of people, activities, and ecosystems to climate change.

Sustainable Development – By promoting a balanced approach across social, economic, and environmental pillars, sustainable development helps reduce the vulnerability of communities, ecosystems, and economies, making them better prepared to face extreme climate events and long-term changes. Sustainable development increases capacity to respond to climate shocks, strengthens institutions and infrastructure, promotes social justice, and encourages the rational use of natural resources. The Climate Plan aligns with the Sustainable Development Goals (SDGs), which aim to address major global challenges, including climate change, incorporating sustainable development as one of its adaptation guidelines.

Projections for Climate Change in Brazil

Adaptation to climate change must consider risks and vulnerabilities both in the present and future scenarios. The development of the Climate Adaptation Plan relied on analyses and data from the best available scientific knowledge.

Table 2 presents a summary based on the conclusions of the main data sources and references, covering both the observed period and future projections for Brazil. Future scenarios with global warming levels of 1.5 °C and 2 °C were considered.

The changes most likely to occur in the future are:

- **Increase in temperature and heatwaves in all macro-regions.**

- **Increase in annual rainfall in the South.**

- **Increase in extreme rainfall and persistent extreme rainfall in the North, Southeast and South regions.**

- **Increase in the frequency and duration of droughts in the Northeast, Center-West and Southeast regions.**

- **Increase in severe winds in the North, Northeast, Southeast and South regions.**

- **Rising sea levels and sea temperature, marine heatwaves and ocean acidification along the entire Brazilian coast.**

Table 2 – Observed and future changes by region for 14 types of climate-related hazards

Climate-related hazards	North			Northeast			Center-West			Southeast			South		
	Observed	Future		Observed	Future		Observed	Future		Observed	Future		Observed	Future	
		1.5 °C	2 °C		1.5 °C	2 °C		1.5 °C	2 °C		1.5 °C	2 °C		1.5 °C	2 °C
Average temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Maximum temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Minimum temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Heat waves	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Annual rainfall	– *	▼	▼	▼	▽	– *	– *	▽	▽	▽	△	△	▲	▲	▲
Extreme rainfall	▲	▲	▲	▼	▲	▲	△	▲	▲	▲	▲	▲	▲	▲	▲
Extreme persistent rainfall	△ *	△	▲	▽ *	▲	▲	– *	▲	▲	▲ *	▲	▲	▲	▲	▲
Frequency of drought	–	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▽	▽	▽
Duration of drought	△	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▽	△	△
Severe wind	▲	▲	▲	▲	▲	▲	△	▲	▲	▲	▲	▲	▲	▲	▲
Mean sea level	▲	▲	▲	▲	▲	▲				▲	▲	▲	▲	▲	▲
Sea surface temperature	▲	▲	▲	▲	▲	▲				▲	▲	▲	▲	▲	▲
Marine heatwaves	▲	▲	▲	▲	▲	▲				▲	▲	▲	▲	▲	▲
Ocean acidification	▲	▲	▲	▲	▲	▲				▲	▲	▲	▲	▲	▲

▲ increase with a lot of evidence (more than half of the sources agree)

△ increase with some evidence (half or fewer of the sources agree)

▼ decrease with a lot of evidence (more than half of the sources agree)

▽ decrease with some evidence (half or fewer of the sources agree)

– undefined (no evidence or source with opposing signs of change)

* shows differences in the sign of change within the macro-region

plausible trend (high confidence)

possible trend (medium confidence)

uncertain trend

Not Applicable

Source: Own elaboration based on multiple sources[2].

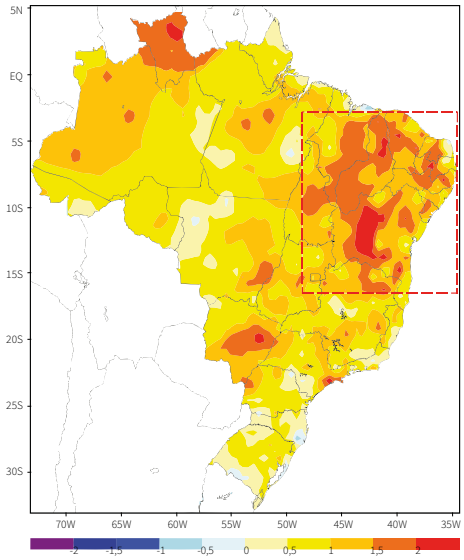
Data from 1,252 meteorological stations and 11,473 rain gauges were used for the analysis of observed climate change in Brazilian territory, as represented in the following maps.

Information from each decade of the 1961–2020 period was compared to a historical baseline from 1961 to 1990, allowing conclusions about the distribution and magnitude of observed changes across the territory. The trend in sea surface temperature warming along the western edge of the South Atlantic was analyzed for the period from 1993 to 2022, using the measure in degrees Celsius per year (°C/year).

[2] Source: Avila-Diaz *et.al.*, 2020; Ballarin *et.al.*, 2023; Dunn *et.al.*, 2020; Gutiérrez *et.al.*, 2024; INMET, 2024; INPE, 2024; IPCC, 2023; Li *et.al.*, 2021; NASA, 2024; Oliver *et.al.*, 2018; Pes *et.al.*, 2017; Pires *et.al.*, 2021; Regoto *et.al.*, 2021; Tomasella *et.al.*, 2022; Vousdoukas *et.al.*, 2018.

The following maps illustrate part of the results and main conclusions for the analyzed variables (Figures 5 to 10). The complete mapping is available for consultation in the National Adaptation Strategy.

Figure 5 – Observed average maximum temperature anomaly for 2011-2020, using the 1961-1990 period as a reference with the area of interest selected on the map



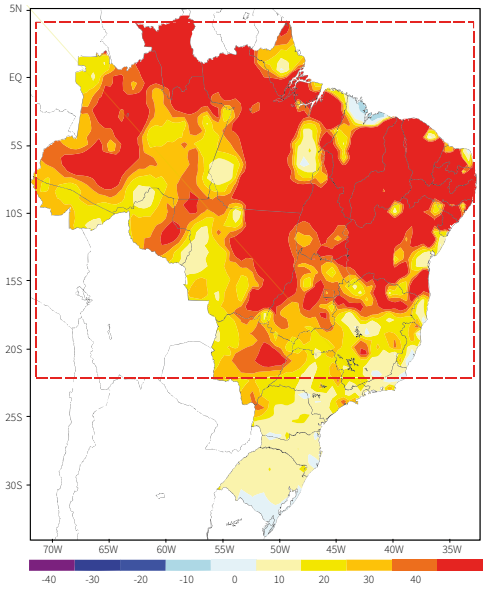
Maximum Temperature Anomaly 2011–2020

Average Maximum Temperature

Increase across the country, reaching 3 °C in some places, especially in the Northeast and in the states of Roraima and Mato Grosso do Sul.

Source: INPE, 2023.

Figure 6 – Warm Spell Duration anomaly (WSDI[3], Warm Spell Duration Index) observed for 2011-2020, using the 1961-1990 period as a reference with the area of interest selected on the map



WSDI Anomaly 2011–2020 (days)

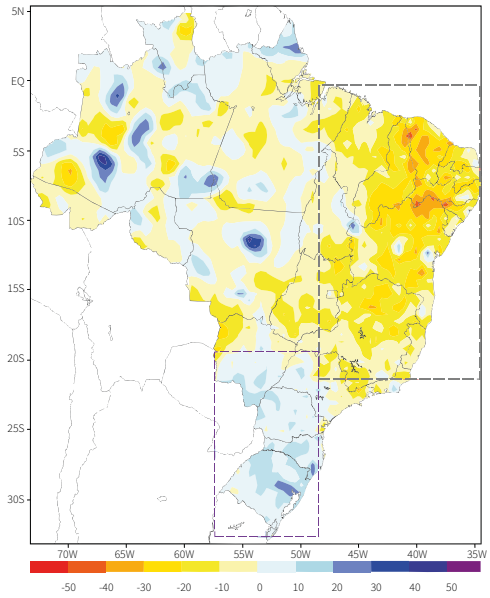
Heat Waves

Significant increase across practically all of Brazil, going from 7 days in the historical period to 52 days between 2011 and 2020, representing almost an 8-fold increase.

Source: INPE, 2023.

[3] The WSDI is obtained by computing heat waves with at least 6 consecutive days in which the maximum temperature was higher than the 90th percentile of the maximum temperature (centered on a 5-day moving window) of the reference period (1961-1990).

Figure 7 – Percentage precipitation anomaly observed for 2011-2020, using the 1961-1990 period as a reference with the areas of interest selected in the gray (area 1) and purple (area 2)



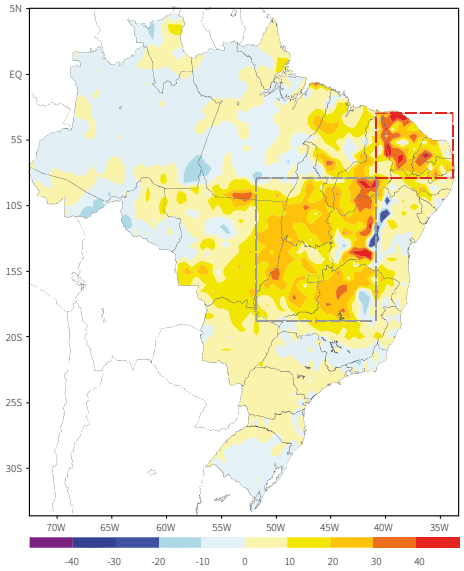
Percentage Precipitation Anomaly 2011–2020

Annual Accumulated Precipitation

Reduction in the Northeast and parts of the Central-West and Southeast. Increase in the South and in parts of the North.

Source: INPE, 2023.

Figure 8 – Consecutive Dry Days (CDD) anomaly observed for 2011–2020, using the period 1961–1990 as reference, with the area of interest selected on the map



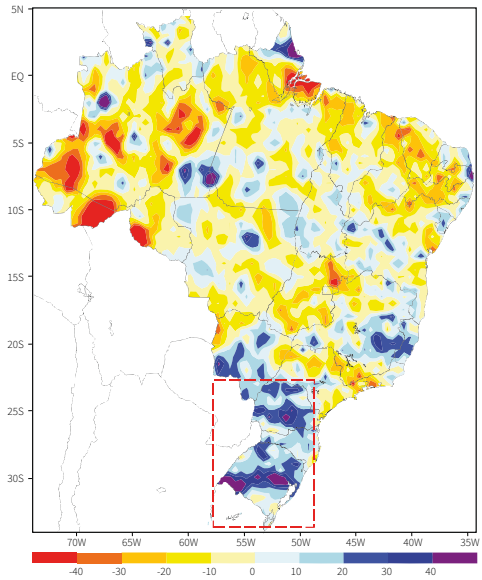
CDD Anomaly 2011–2020 (days)

Duration of Consecutive Dry Days

More prolonged drought periods were observed throughout most of the country. The Northeast and Central-West showed the most severe worsening: the average increased from 80 to 100 days in the last decade.

Source: INPE, 2023.

Figure 9 – Annual maximum 5-day precipitation anomaly (RX5day) observed for 2011–2020, using the period 1961–1990 as reference, with the area of interest selected on the map



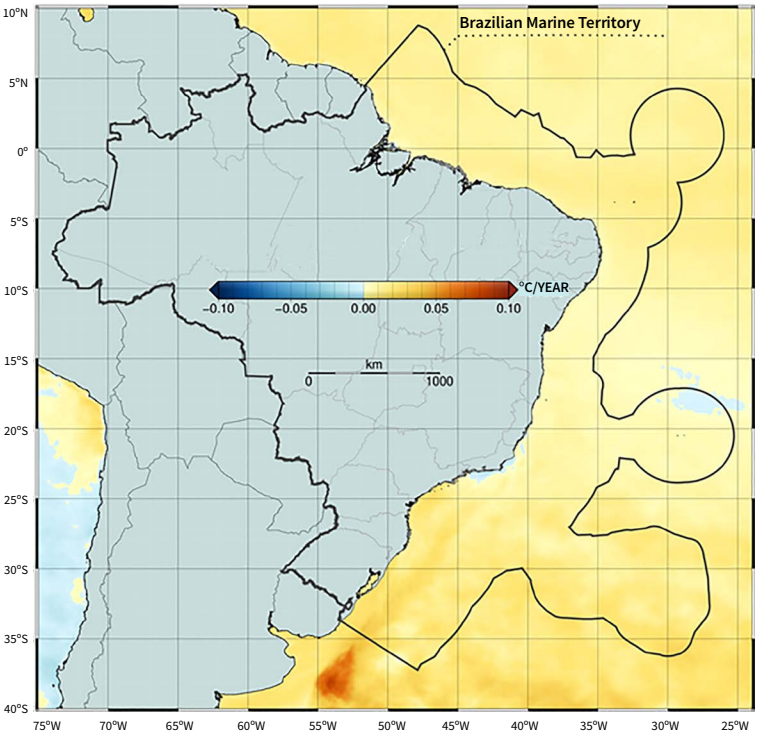
RX5day Anomaly 2011–2020 (mm)

Prolonged Heavy Rainfall

The Southern region has been the most affected in recent decades, with an increase in the average values of the heaviest rainfall accumulated in 5 days in a year, from 140 mm to 160 mm.

Source: INPE, 2023.

Figure 10 – Trend of sea surface temperature change in the South Atlantic Ocean, with the boundaries of the Coastal-Marine System



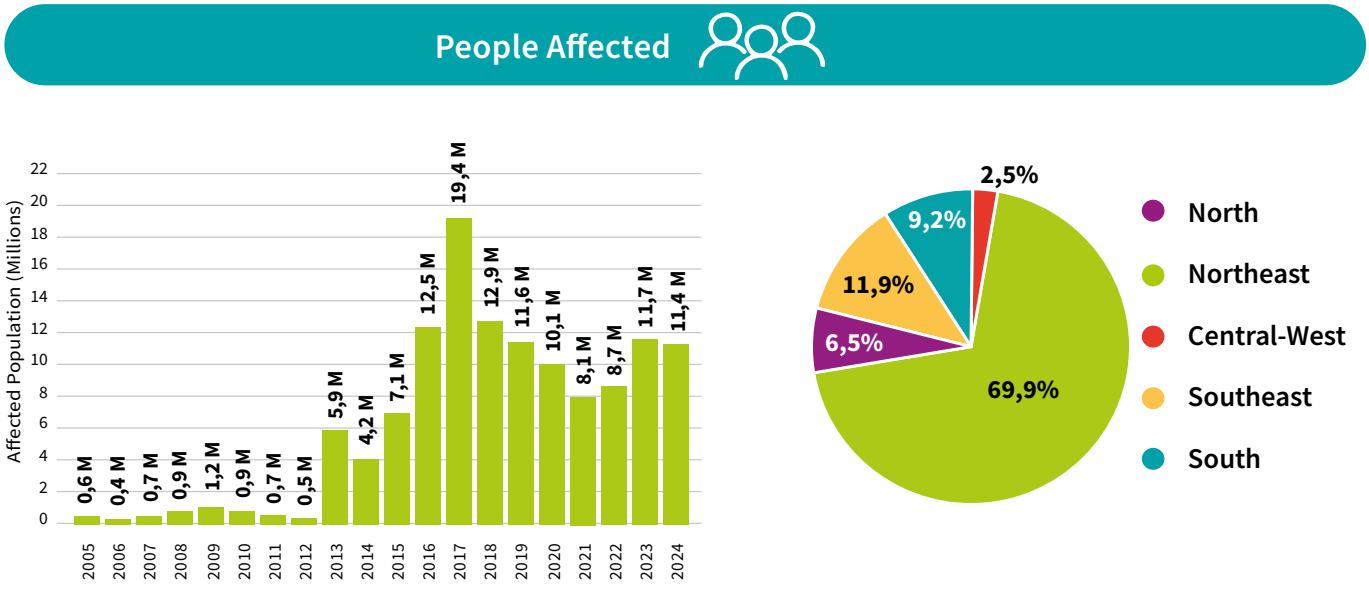
Sea Surface Temperature Trend: 1993–2022

Source: CPTEC/INPE.

The proportion, frequency, and magnitude of disasters have been increasing.

In recent years, there has been a rise in the number of people affected by extreme climate events such as droughts, heat waves, wildfires, floods, and landslides. The data also reflects significant advances in monitoring and reporting capacity over the years. Figure 11 illustrates the increase in the number of recorded cases of people affected by climatological, hydrological, and meteorological disasters over the past two decades.

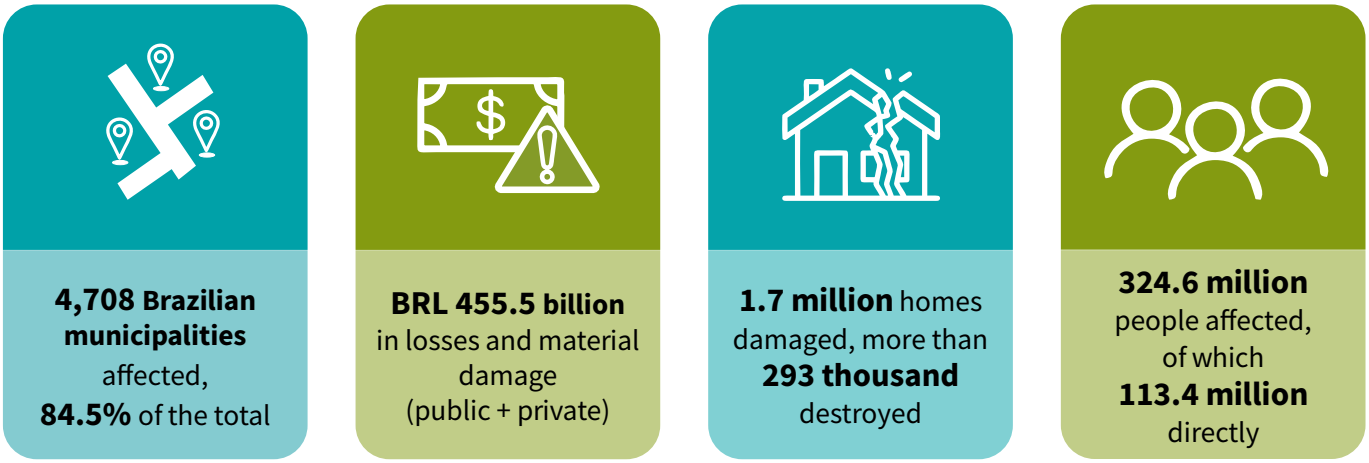
Figure 11 – People affected per year and by region, considering climatological, hydrological, and meteorological disasters



Source: Atlas Digital de Desastres no Brasil (Brasil, 2025).

In the last decade, the number of cities impacted by disasters caused by extreme climate events has increased significantly. Between 2015 and 2024, 84.5% of Brazil's 5,570 municipalities were affected, resulting in losses, material damages, and negative impacts on 324.6 million people (Figure 12).

Figure 12 – Climate-related impacts in Brazil over the last decade (2015–2024)



Source: Atlas Digital de Desastres no Brasil (Brasil, 2025).

What if we reach climate tipping points?

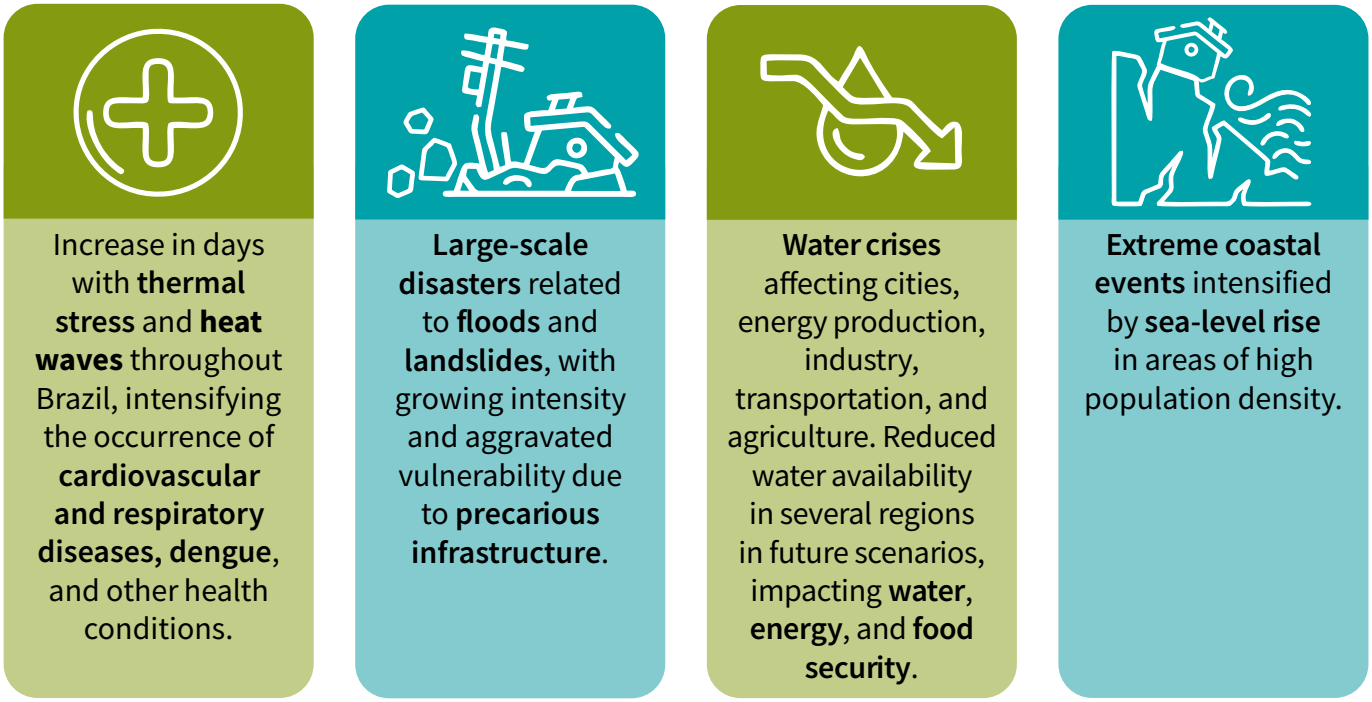
Once the planet surpasses certain climate thresholds—reaching points of no return or tipping points—it will no longer be possible to revert to a previous climatic condition. Abrupt and dangerous impacts for humanity would become irreversible (Lenton *et.al.*, 2019). For Brazil, global warming exceeding 1.5 °C above pre-industrial levels, combined with deforestation and wildfires, would lead the Amazon rainforest to collapse (Flores *et.al.*, 2024). Another tipping point is the extinction of coral reefs, which would endanger the only reef environments in the South Atlantic—found in Brazil—upon which hundreds of millions of people depend (Pearce-Kelly *et.al.*, 2024).

Beyond these phenomena, the destabilization of ocean circulation systems, the melting of the West Antarctic and Greenland ice sheets, among other factors, are interdependent and could act as a domino effect in worsening climate conditions. This would lead to the collapse of ecosystems, loss of biodiversity, and degradation of ecosystem services. Once triggered, this process would result in a global average temperature much higher than at any time in the past 1.2 million years, causing severe consequences for humanity (Steffen *et.al.*, 2018; Wunderling *et.al.*, 2024).

Main Risks, Impacts, and Vulnerabilities in Brazil

The observed impacts are multisectoral, varying in magnitude and geographic extent, with projections indicating further worsening (Figure 13).

Figure 13 – Climate change impacts observed in Brazil



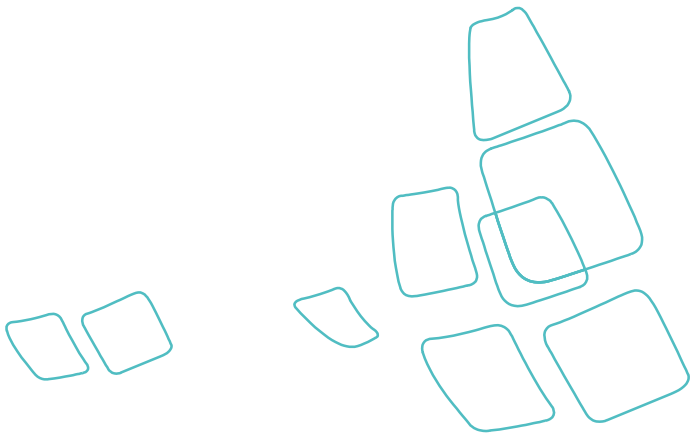
Source: Own elaboration.

What is the cost of inaction?

It is estimated that the cost of inaction could result in a loss of BRL 17.1 trillion in Brazil's Gross Domestic Product (GDP) by 2050, and the elimination of approximately 4.4 million jobs.

Computable General Equilibrium (CGE) models and Integrated Assessment Models (IAM) were used in the Strategic Study on the Economic Impacts of Climate Change in Brazil to assess the financial impact of inaction (Brasil, 2025). The results indicate that by 2050, the Brazilian economy would face a cumulative loss equivalent to 146% of the national GDP recorded in 2024. The analyses point to a significant reduction in economic activity, employment, and productivity levels, among other indicators, as well as a marked worsening of regional disparities as a result of climate change impacts.

The costs of inaction significantly outweigh the costs associated with action. The urgency is clear. The window of opportunity to avoid severe economic, social and environmental losses, guaranteeing a livable and sustainable future, is rapidly closing. In this context, we highlight the key role of this National Climate Plan, which, through the national strategy and the Sectoral and Thematic Adaptation Plans, provides guidelines for the coordinated mobilization of society as a whole to develop an effective response to the climate crisis.



4. Management of the Climate Adaptation Plan

The country's climate planning will be strengthened through cross-cutting strategies that address topics common to both mitigation and adaptation. These strategies aim to address:

- a just transition and climate justice;
- the mainstreaming of gender perspectives into climate policy;
- education, capacity-building, research, development, and innovation;
- means of implementation; and
- governance arrangements and mechanisms for monitoring, evaluation, and transparency.

Means of Implementation

Given the challenges of making Brazil less vulnerable to climate change, in addition to the planned public budget—which may be reoriented toward adaptation—it will also be necessary to rely on domestic and international private resources, international cooperation, and climate finance funds for the agenda, with priority given to actions aimed at addressing inequalities. These resources will include both traditional and innovative mechanisms, to be leveraged jointly and responsibly between the federal government and subnational entities.

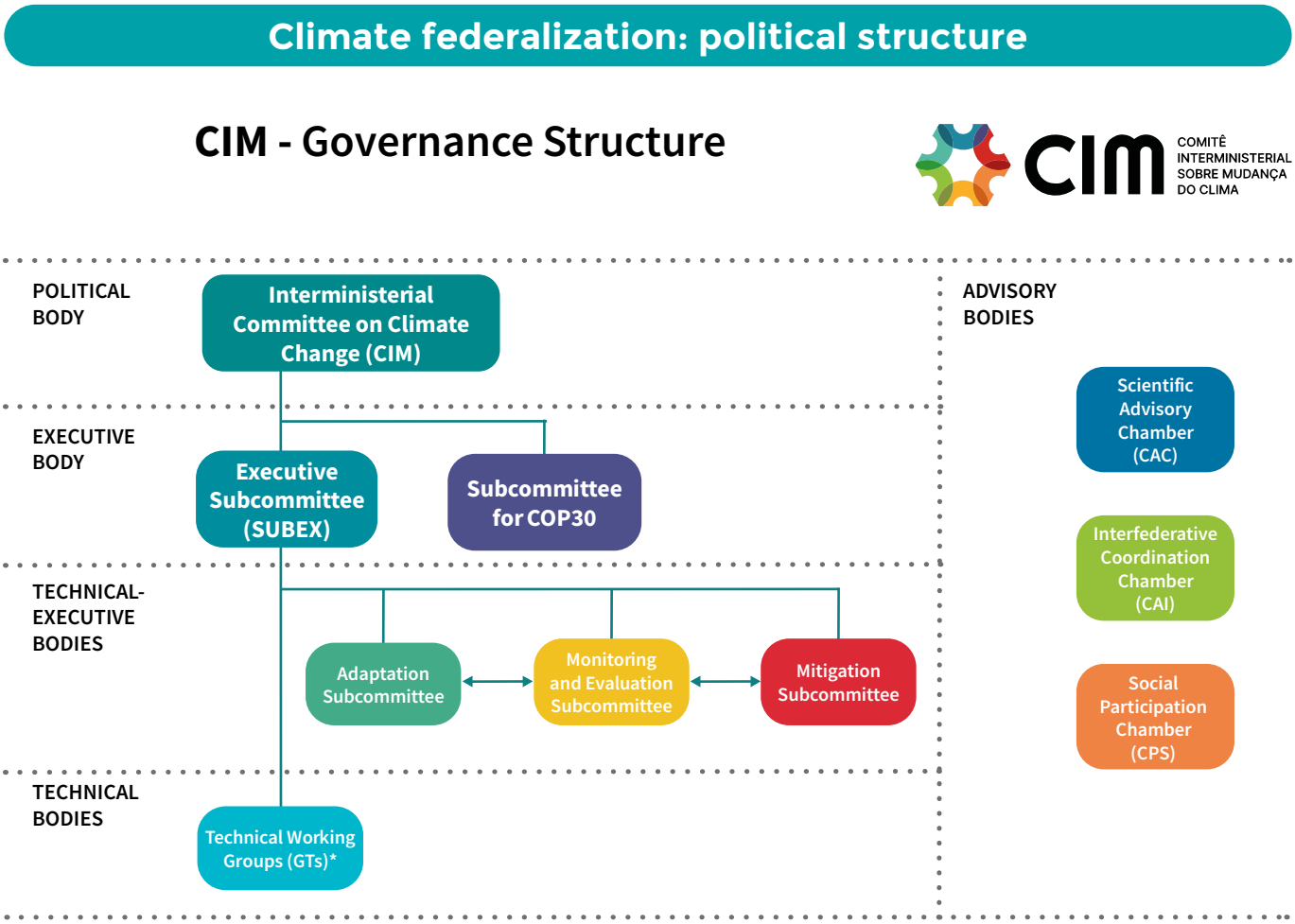
Technology transfer and capacity building, essential to ensuring the effectiveness and sustainability of adaptive actions, are also considered central elements of the means of implementation for adaptation. Access to environmentally appropriate technologies and equipment, along with the strengthening of institutional capacity at the state and municipal levels, are crucial to improving diagnostics and promoting concrete measures to enhance the resilience of natural and human systems in the face of climate change.

Federative Governance

To coordinate integrated actions in a country of continental dimensions, it is crucial to strengthen **Climate Federalism** through a multilevel and multisectoral approach, as a key element for implementing the Climate Plan, as illustrated in Figure 14. In this context, the Federative Coordination Chamber was established to promote the participation of states, the Federal District, and municipalities in the development, enhancement, and implementation of measures for climate change mitigation and adaptation.

The guidelines, vision, general goal, and national adaptation goals should therefore guide multisectoral policies and programs across the different levels of government, taking into account territorial specificities and the varying institutional and financial capacities among federative entities.

Figure 14 – Governance structure of the Inteministerial Committee on Climate Change



(*) Active GTs: SBCE GT, Capacity Building GT, Monitoring and Transparency GT, Means of Implementation GT, and Just Transition GT.

Source: MMA, 2025.

Social Participation

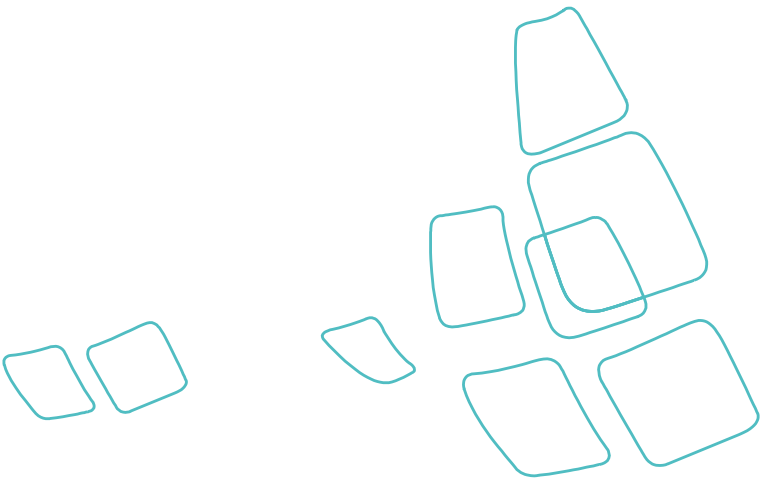
The participation of civil society, the business sector, and the scientific community in monitoring the Climate Adaptation Plan will be enabled through various participatory spaces and processes. Opportunities for social participation must be available at both the federal and subnational levels, ensuring a balance of interests, credibility, and representativeness. In Figure 14, the Social Participation Chamber and the Scientific Advisory Chamber are indicated as consultative spaces, aimed at promoting the involvement of civil society and the private sector in public policies, and at supporting climate policy with the best available science.

Monitoring, Evaluation, and Learning

The Interministerial Committee on Climate Change (*Comitê Interministerial sobre Mudança do Clima* - CIM) serves as the permanent forum for promoting and monitoring actions and public policies related to the Climate Plan at the federal level. This body will monitor progress and assess the achievement of national and sectoral/thematic targets, linking adaptation and mitigation plans, actions, and indicators to continuously improve and adjust responses to emerging demands and challenges related to the climate scenario. This continuous monitoring by the CIM will also ensure the periodic review of the Climate Plan, which is scheduled to be updated at least every four years.

Knowledge Management and Transparency

Climate adaptation in Brazil will require a robust knowledge management system. Collaborative tools and digital platforms will ensure the circulation, sharing, and continuous improvement of information and practices related to climate adaptation. Knowledge management will also help close existing information gaps in strategic sectors such as energy, food, and water security, among others. Additionally, it will provide data and risk analyses focusing on vulnerable populations. Reports, monitoring and evaluation information, as well as updated indicators, will be made available through the system to ensure broad and transparent public access.



5. Sectoral and Thematic Adaptation Plans

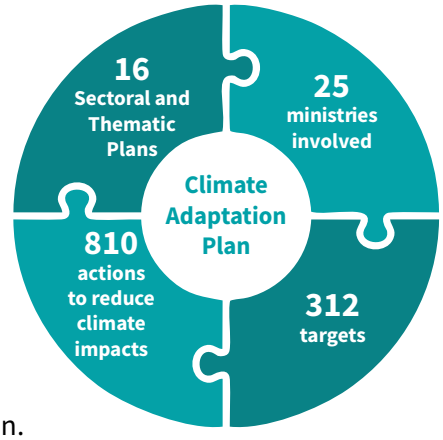
The Climate Adaptation Plan is further detailed through 16 Sectoral and Thematic Plans, designed to address the country's diverse social, economic, cultural, and environmental dimensions. To achieve this, a broad participatory process was carried out, involving collaboration among ministries as well as the engagement of multiple segments of society (Figure 15). These plans cover key themes and sectors for the country, namely:

- **Agriculture and livestock**
- **Family farming**
- **Biodiversity**
- **Cities**
- **Energy**
- **Racial equality and combating racism**
- **Industry and mining**
- **Ocean and coastal zones**
- **Traditional peoples and communities**
- **Indigenous peoples**
- **Water resources**
- **Disaster risk reduction and management**
- **Health**
- **Food and nutrition security**
- **Transport**
- **Tourism**

Brazilian citizens made 2,778 contributions to the Sectoral and Thematic Plans through the Participatory Brazil Platform.

The same template was applied to all Sectoral and Thematic Plans so that, despite their specificities, they include the same sections: sectoral/thematic context; main risks and vulnerabilities; goals, targets, and adaptation actions; plan management; and final considerations.

Figure 15 – Highlights of Brazil's Climate Adaptation Plan



Source: Own elaboration.

SECTORAL PLAN FOR AGRICULTURE AND LIVESTOCK

Coordination: Ministry of Agriculture and Livestock (*Ministério da Agricultura e Pecuária* - MAPA)

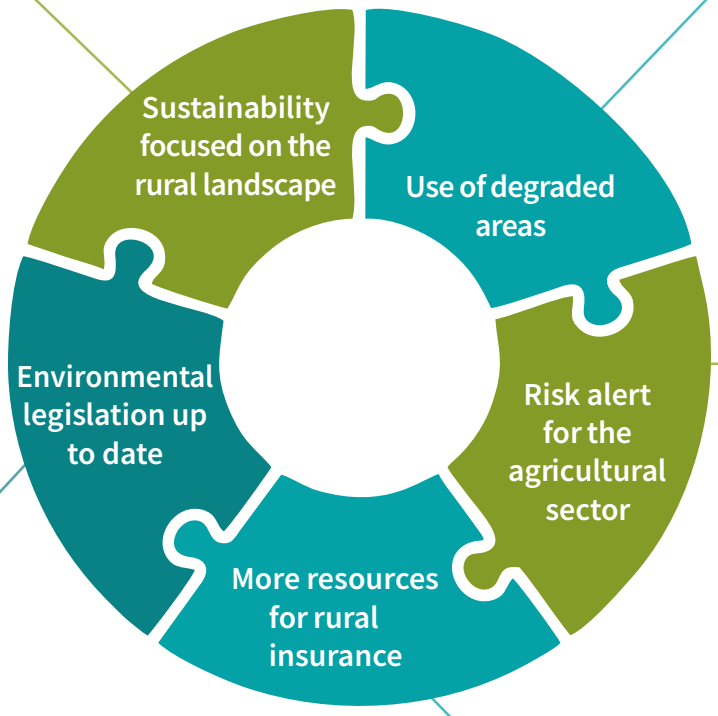
Sectoral Goals

1. Provide public policies to increase the adaptive capacity of agricultural and livestock production to climate change.
2. Adapt agricultural and livestock systems and ensure productive performance, making them resilient and sustainable.
3. Promote the conservation and sustainable use of genetic resources to adapt agroecosystems to climate change.

8 targets and 18 actions, including:

Encourage the adoption and maintenance of sustainable systems, practices, products, and production processes, considering the Integrated Landscape Approach on the rural property.

Convert and restore degraded pastures into sustainable forests.



Establish the climate alert network for agricultural risks.

Support rural producers in complying with environmental legislation, with emphasis on the restoration of native vegetation in Permanent Preservation Areas and Legal Reserves.

Increase funding for the Rural Insurance Premium Subsidy Program.

SECTORAL PLAN FOR FAMILY FARMING

Coordination: Ministry of Agrarian Development and Family Farming (*Ministério do Desenvolvimento Agrário e Agricultura Familiar* - MDA)

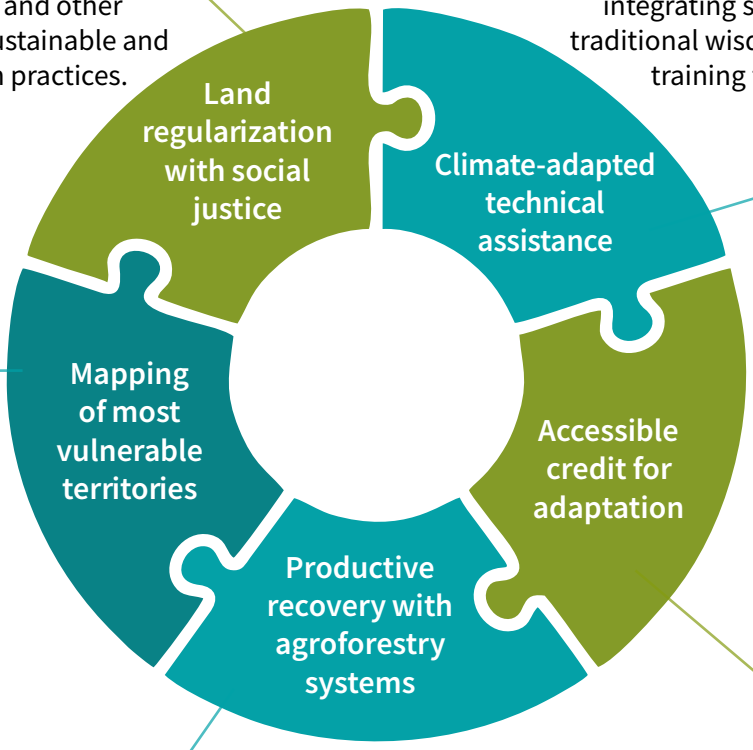
Sectoral Goals

1. Expand access to land, infrastructure, and productive resources to ensure the climate adaptation of family farming.
2. Strengthen agroecological systems and the protection of agrosociobiodiversity, with access to credit and markets to enhance climate resilience.
3. Expand knowledge, innovations, and technologies for the climate adaptation of family farmers and their territories.

87 targets and 96 actions, including:

Ensure access to land for families under agrarian reform, prioritizing women, youth, Indigenous peoples, *Quilombola* communities, and other vulnerable groups, with sustainable and agroecological production practices.

Expand access for family farmers to quality technical assistance and rural extension services adapted to local realities, integrating scientific knowledge and traditional wisdom, while continuously training technicians and farmers for the agroecological transition.



Establish technical parameters to identify and prioritize territories most vulnerable to climate change, directing policies and resources more effectively.

Support environmental and productive recovery through financing of Agroforestry Systems and sustainable soil management, benefiting vulnerable communities and promoting environmental conservation.

Facilitate access to credit from the National Program for Strengthening Family Agriculture (*Programa Nacional de Fortalecimento da Agricultura Familiar* - Pronaf) aimed at climate adaptation for investments such as solar-powered irrigation, water infrastructure, agroecological systems, sustainable technologies, and resilient production.

THEMATIC PLAN FOR BIODIVERSITY

Coordination: Ministry of the Environment and Climate Change (*Ministério do Meio Ambiente e Mudança do Clima* - MMA)

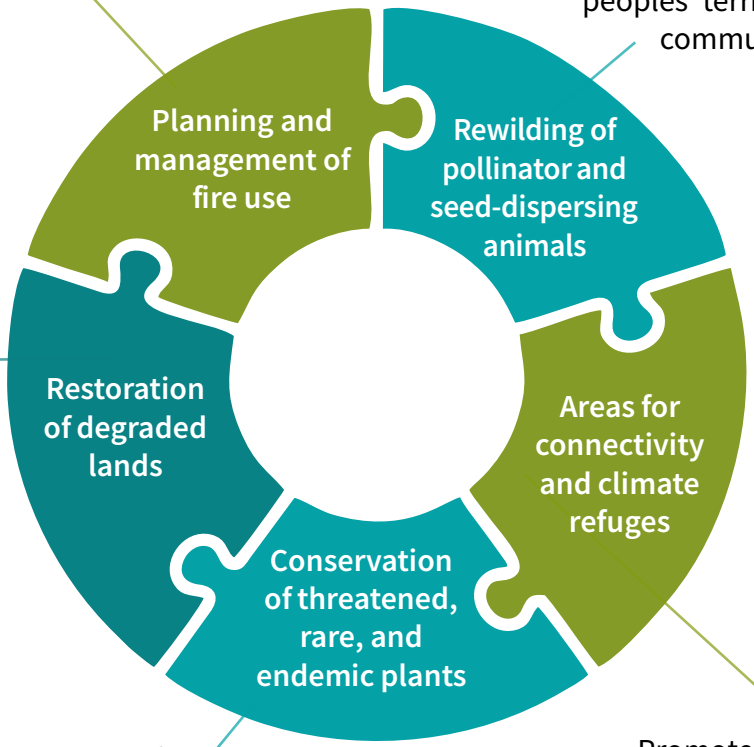
Thematic Goals

1. Ensure urgent management actions to halt the extinction of threatened species and population declines.
2. Ensure management actions to reduce the loss of ecosystem resilience, maintaining and strengthening the provision of associated ecosystem services.
3. Increase landscape connectivity to enable biodiversity adaptation to climate change.

6 targets and 31 actions, including:

Establish Integrated Fire Management Plans in the areas covered by the National Center for Forest Fire Prevention and Control (*Prevfogo*).

Establish the National Rewilding Plan, prioritizing pollinator and seed-dispersing species in key areas for biodiversity adaptation, with focus on Indigenous peoples' territories, traditional communities, and family agriculture areas.



Restore 2 million hectares of degraded lands in the Caatinga biome.

Implement *ex situ* conservation actions for threatened, rare, and endemic plant species to recover populations and include them in enrichment and ecosystem restoration projects.

Promote the restoration of areas important for ecological connectivity and potential climate refuges, including recovery plans for such areas.

SECTORAL PLAN FOR CITIES

Coordination: Ministry of Cities (*Ministério das Cidades* - MCID)

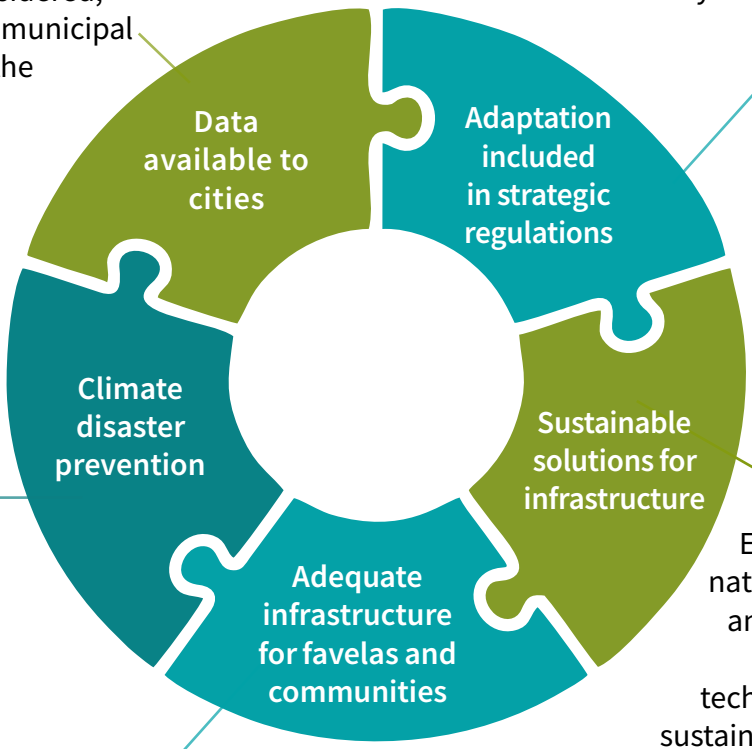
Sectoral Goals

1. Improve and disseminate information and promote research on the adaptation of cities to climate change to support the development of more resilient cities.
2. Enhance the management, governance, and planning of cities for climate change adaptation.
3. Adapt infrastructure and services in cities and communities to climate change through sustainable and resilient solutions, promoting climate justice.

8 targets and 61 specific actions organized into 19 strategic actions, including:

Expand and integrate data and information on climate change in cities, ensuring that different territorial realities are considered, from intra-urban to supra-municipal levels, including through the disaggregation of data on vulnerable communities.

Update strategic regulations to incorporate climate change adaptation measures, ensuring social participation and considering territorial diversity and climate scenarios.



Support actions for climate disaster prevention, prioritizing vulnerable territories, nature-based solutions, and local practices, taking into account the specificities of each social group and community involvement.

Encourage the use of nature-based solutions and ecosystem-based adaptation, social technologies, and other sustainable and innovative solutions in urban infrastructure projects, with community involvement and prioritization of vulnerable territories.

Provide adequate infrastructure to slum and urban community areas as a form of adaptation to potential climate change impacts, ensuring social protagonism throughout the process.

SECTORAL PLAN FOR ENERGY

Coordination: Ministry of Mines and Energy (*Ministério de Minas e Energia* - MME)

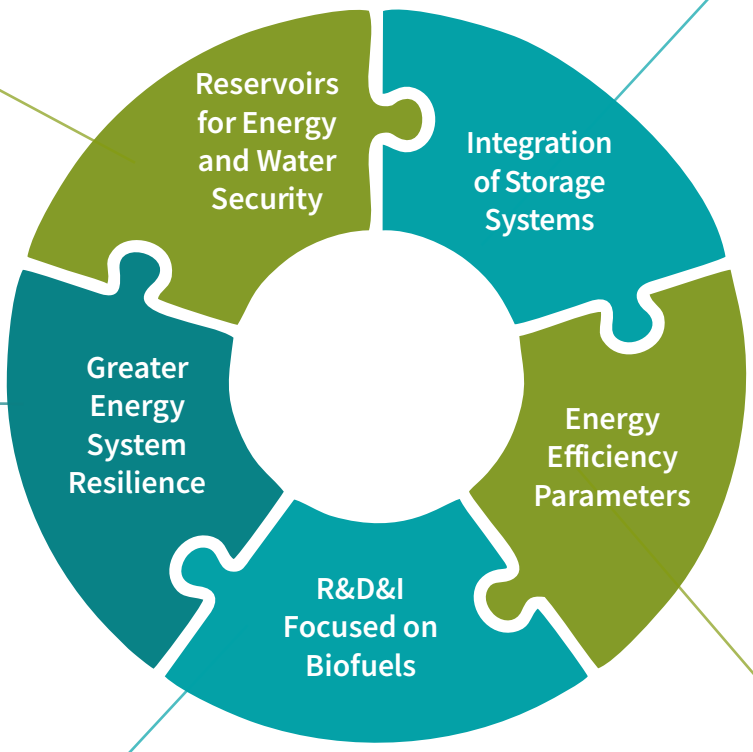
Sectoral Goals

1. Ensure the supply and access to electricity in the face of climate-related hazards, promoting the fight against energy poverty.
2. Ensure the supply of fuels, particularly biofuels and low-carbon-intensity fuels, in the face of climate-related hazards.
3. Implement and strengthen the resilience of infrastructure in the energy sector.

16 targets and 38 actions, including:

Develop studies to identify potential regulation reservoirs that provide benefits for water security and meet multiple water-use demands, including for the energy sector, prioritizing new reservoirs for technical, economic, and socio-environmental feasibility studies.

Promote regulatory adjustments to integrate storage systems, including reversible power plants, into the National Interconnected System.



Conduct studies on enhancing the resilience of the electrical system against extreme climate events.

Promote and monitor the integration of research, development, and innovation actions for biofuels.

Establish minimum energy efficiency standards for machines, equipment, and energy-consuming buildings.

THEMATIC PLAN FOR RACIAL EQUALITY AND COMBATING RACISM

Coordination: Ministry of Racial Equality (*Ministério da Igualdade Racial* - MIR)

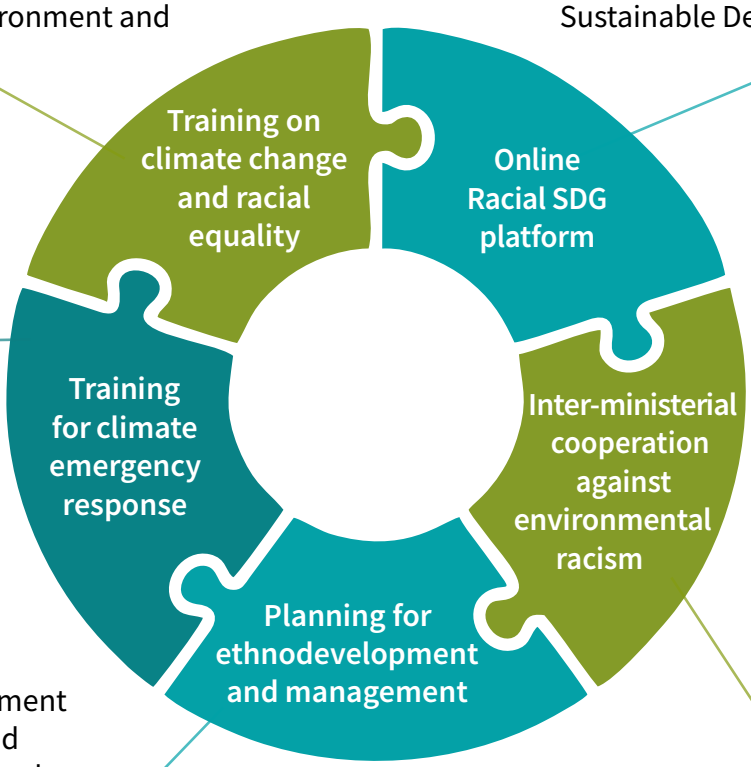
Thematic Goals

1. Promote the production of racialized environmental data to support the development, implementation, monitoring, and evaluation of public policies.
2. Combat and overcome Environmental Racism to reduce inequalities and promote climate justice.
3. Ensure the territorial, environmental, social, economic, and cultural rights of *Quilombola* communities, Traditional African-derived Peoples and Communities, *Terreiro*-based peoples, Gypsy people, and Black populations, reducing socio-environmental vulnerabilities and increasing resilience to extreme climate events.

7 targets and 23 actions, including:

Train managers and counselors of the National System for the Promotion of Racial Equality (SINAPIR) in partnership with the Ministry of the Environment and Climate Change (MMA).

Develop a web platform for visualizing Racial SDG data by 2026, focusing on racial issues as outlined in the 2030 Agenda for the Sustainable Development Goals.



Train community agents to respond to climate emergencies.

Prepare local ethnodevelopment plans and local territorial and environmental management plans based on communities' relationships with their territories, taking into account community ways of life and the sustainable use of natural resources.

Establish the Inter-ministerial Ordinance of the Committee to Combat Environmental Racism by 2025.

SECTORAL PLAN FOR INDUSTRY AND MINING

Coordination: Ministry of Development, Industry, Trade, and Services (*Ministério do Desenvolvimento, Indústria, Comércio e Serviços* - MDIC)

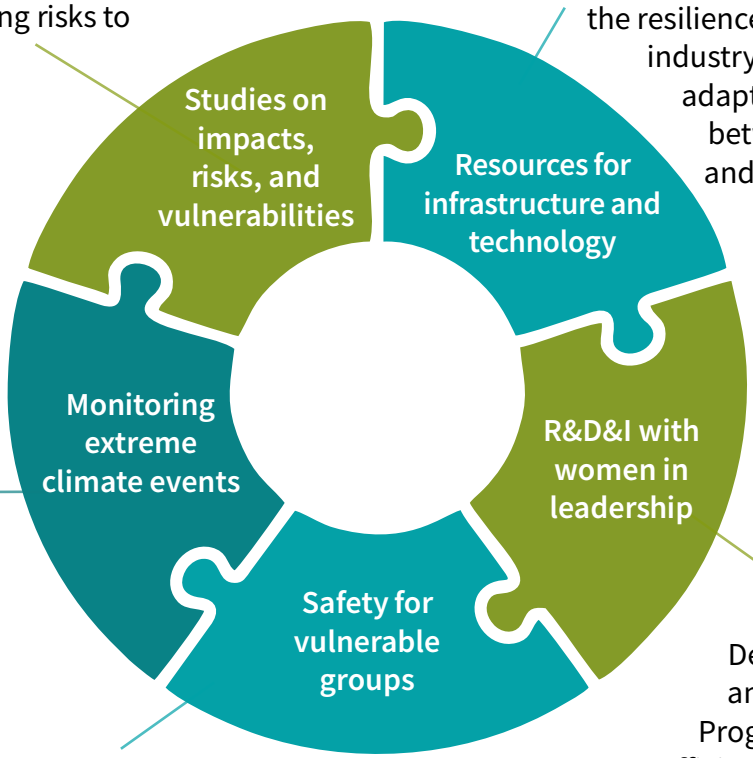
Sectoral Goals

1. Promote the implementation of preventive and resilient actions in the Brazilian industrial sector to strengthen the adaptive capacity of industrial infrastructure, productive activities, and surrounding communities, including the gradual replacement of high-emission industrial inputs and processes with low-carbon solutions, such as green hydrogen.
2. Ensure the supply flow of inputs, energy, water, and raw materials, in sufficient quantity and quality, to the national industry, encouraging diversification, efficient use, and prioritization of national supply chains.
3. Reduce risks associated with working conditions in the industrial sector and enhance workplace safety.

7 targets and 23 actions, including:

Conduct studies and analyses on the climate impacts, risks, and vulnerabilities of each industrial subsector from a territorial perspective, including risks to surrounding communities.

Promote and foster fiscal and financial incentives for the production and adoption of capital goods that increase the resilience of the national industry, including joint adaptation strategies between the public and private sectors.



Invest in advanced technologies for monitoring extreme climate events and related deaths and illnesses, specifically concerning those to which industry and mining are most exposed.

Develop Research and Development Programs on energy efficiency, storage, and renewable energies for industrial use, ensuring the presence of women in leadership positions in the research activities.

Promote research on occupational health and safety in industry and mining and its interface with climate change and extreme weather events, prioritizing historically vulnerable groups, especially Black people, Indigenous peoples, and women.

THEMATIC PLAN FOR OCEAN AND COASTAL ZONES

Coordination: Ministry of the Environment and Climate Change (*Ministério do Meio Ambiente e Mudança do Clima* - MMA)

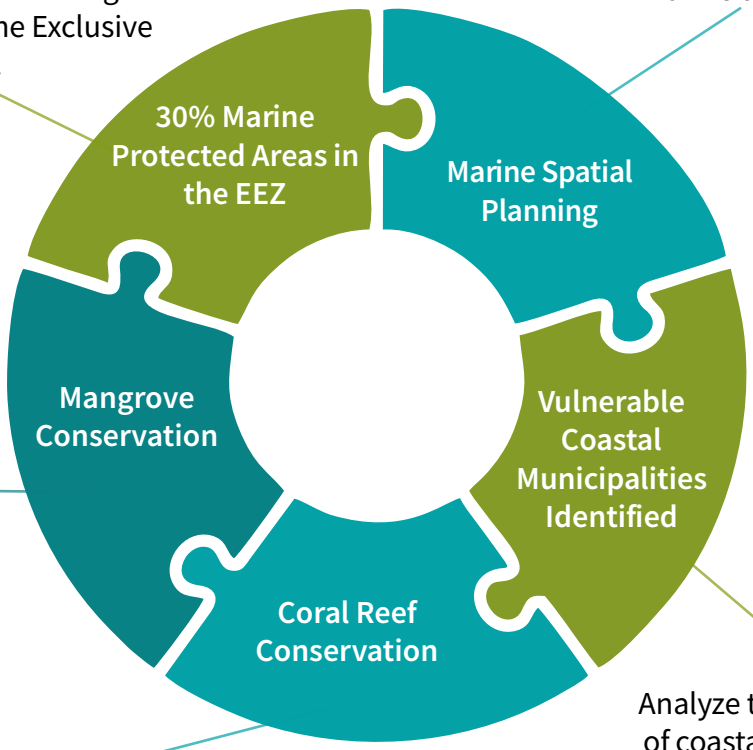
Thematic Goals

1. Expand the protection of coastal and marine ecosystems to ensure the conservation of their biodiversity and associated ecosystem services.
2. Safeguard the livelihoods of Traditional Peoples and Communities in coastal and marine areas in the face of climate change.
3. Strengthen the resilience of coastal zones to extreme events and climate change, in connection with river basins.
4. Enhance the implementation of environmental and territorial management instruments that guide economic activities related to the ocean and coastal zones, incorporating the climate perspective.

20 targets and 23 actions, including:

Create and expand Coastal and Marine Protected Areas and recognize mosaics of protected areas, ensuring 30% coverage of Marine Protected Areas in the Exclusive Economic Zone (EEZ) by 2030.

Develop Marine Spatial Planning (MSP) for the entire Brazilian marine territory by 2030.



Implement the National Program for the Conservation and Sustainable Use of Brazilian Mangroves (*ProManguezal*) by 2030.

Analyze the vulnerability of coastal municipalities to erosion, flooding, sea-level rise, and extreme climate events, considering the river basins, and publish a list of the most vulnerable municipalities by 2026.

Implement the National Strategy for the Conservation and Sustainable Use of Coral Reefs (*ProCoral*) by 2030.

THEMATIC PLAN FOR TRADITIONAL PEOPLES AND COMMUNITIES

Coordination: Ministry of the Environment and Climate Change (*Ministério do Meio Ambiente e Mudança do Clima* - MMA)

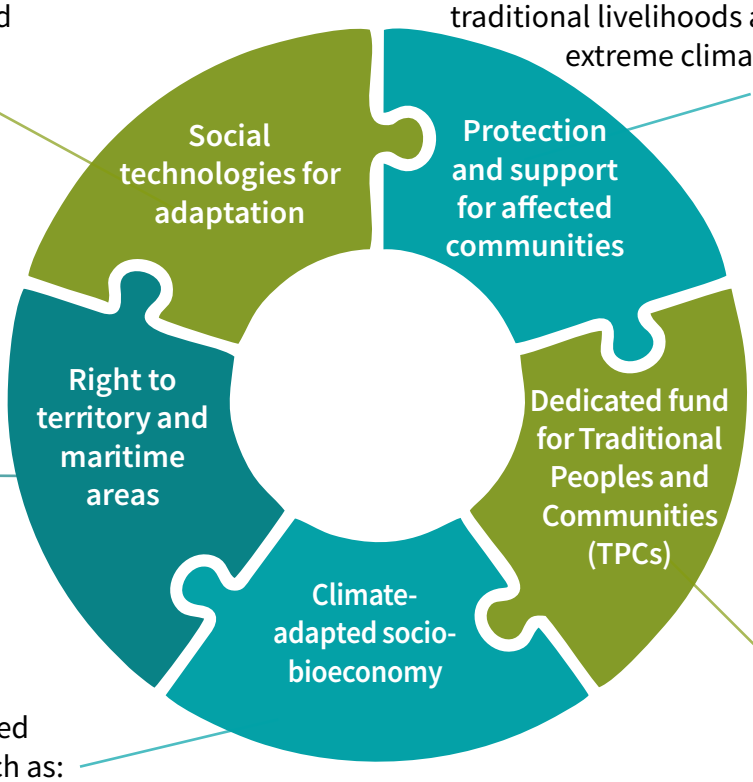
Thematic Goals

1. Ensure the conditions for Traditional Peoples and Communities to remain in their traditionally occupied territories, safeguarding the means to sustain their ways of life, with special attention to gender diversity.
2. Guarantee access to preventive and emergency health care for Traditional Peoples and Communities in their territories.
3. Ensure economic autonomy and water and food security for Traditional Peoples and Communities in the face of extreme climate events, with special attention to gender diversity.

9 targets and 40 actions, including:

Implement social technologies for climate change adaptation for traditional peoples and communities.

Establish emergency aid mechanisms and social protection instruments for communities whose traditional livelihoods are compromised by extreme climate events, including:
Basic food baskets
Financial assistance
Primary healthcare services.



Carry out land regularization of 2,000 new territories and maretories belonging to traditional peoples and communities.

Implement climate adaptation projects focused on socio-bioeconomy, such as:
Community economy, Ethnodevelopment, Community-based tourism, Agroforestry systems, Community forest management plans, Seed banks, Artisanal fishing, Adaptive family farming, Adaptive infrastructure, Environmental protection, etc.

Create an adaptation fund to address climate emergencies specifically for traditional peoples and communities, including gender diversity considerations.

THEMATIC PLAN FOR INDIGENOUS PEOPLES

Coordination: Ministry of Indigenous Peoples (*Ministério dos Povos Indígenas* - MPI)

Thematic Goals

1. Strengthen Indigenous well-being and the collective health of the peoples.
2. Enhance resilience and water, food, and nutritional security.
3. Protect territorial and cultural heritage, as well as traditional ways of life.
4. Increase the resilience of infrastructure and essential services.

17 targets and 67 actions, including:

Complete and approve 40 Detailed Reports on the Identification and Delimitation of Indigenous territories.

Issue 21 declaratory ordinances of Indigenous Lands, under the responsibility of the Secretariat for Access to Justice of the Ministry of Justice and Public Security.

Establish new federal brigades in Indigenous lands.

Implement an integrated response protocol for climate emergencies, considering local specificities, in order to ensure the strengthening of the adaptive capacity of the economic, cultural, community, and spiritual activities of Indigenous peoples.

Strengthen the capacity of communities, especially Indigenous women, children, adolescents, and youth, to manage their territories in the face of the climate crisis and to autonomously implement the Indigenous Plans for Addressing Climate Change.

THEMATIC PLAN FOR WATER RESOURCES

Coordination: Ministry of the Environment and Climate Change (*Ministério do Meio Ambiente e Mudança do Clima* - MMA)

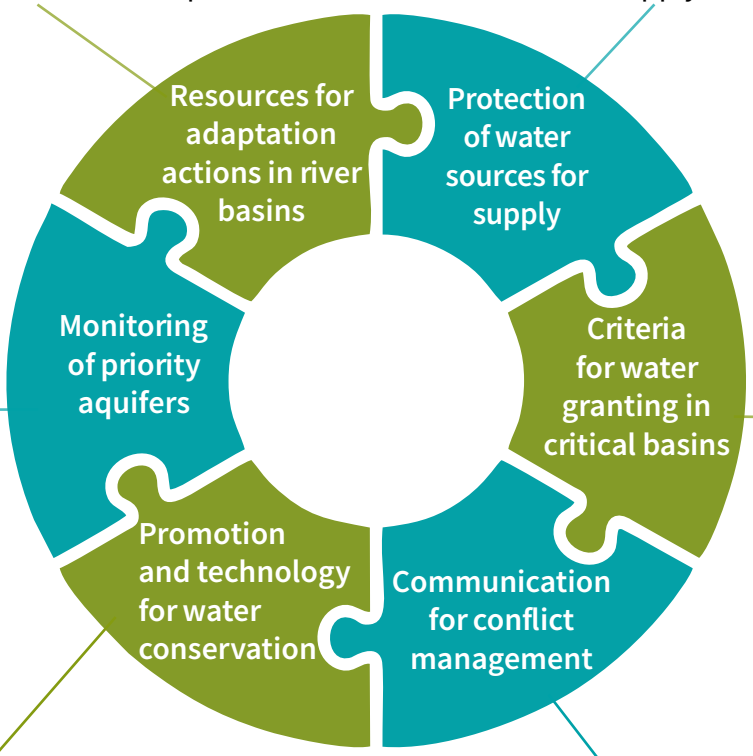
Thematic Goals

1. Enhance the preparedness of the National Water Resources Management System (*Sistema Nacional de Gerenciamento de Recursos Hídricos* - SINGREH) and water-using sectors for climate change, with a view to promoting climate justice and gender equality.
2. Improve information, monitoring, and assessment tools for water management.
3. Expand water security through the revitalization of river basins and ensuring access to water in sufficient quantity and quality.

6 targets and 43 actions, including:

Incorporate the climate change dimension into the implementation and updating of the water charging methodology in critical river basins, aiming to expand the instrument and increase the use of resources for adaptation actions.

Restore Permanent Preservation Areas and wetlands and promote soil conservation in adjacent areas, considering priority areas for the protection of water sources used for public supply and aquifer recharge areas.



Expand the monitoring network of aquifers in river basins that are priorities in terms of demand, criticality, and environmental vulnerability.

Evaluate water granting processes, negotiated water allocation, and other mechanisms based on climate change scenarios, establishing measures for priorities and restrictions on large volumes granted in critical basins.

Promote social technologies for water conservation in micro-basins, such as Zero Base Dams, through funding lines, technology implementation, local partnerships, manuals, training, among others.

Develop and implement at least two learning and strategic communication programs, especially with River Basin Committees, aimed at managing conflicts over water use during floods and droughts.

SECTORAL PLAN FOR DISASTER RISK REDUCTION AND MANAGEMENT

Coordination: Ministry of Integration and Regional Development (*Ministério da Integração e do Desenvolvimento Regional* - MIDR)

Sectoral Goals

1. Reduce disaster risks, considering the types and priority areas in the country, through the promotion of non-structural actions (measures and instruments) and structural actions (works and infrastructure) for prevention, mitigation, and preparedness, within the context of climate change.

2. Reduce damages and losses from disasters, considering the types and priority areas in the country, through the promotion of non-structural actions (measures and instruments) and structural actions (works and infrastructure) for response and recovery, within the context of climate change.

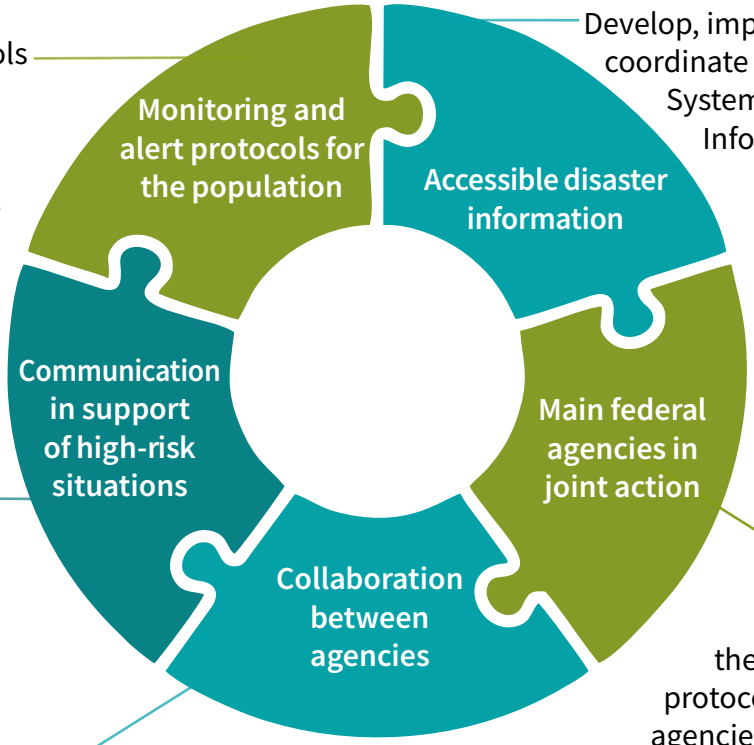
3. Strengthen governance and institutional and social capacities to promote coordinated and integrated actions with the sectors, agencies, and entities involved in disaster risk reduction and management.

10 targets and 89 actions, including:

Develop and update joint protocols for monitoring and sending alerts, by risk type or group, to standardize these procedures and ensure coverage of the entire at-risk population, with special attention to the most vulnerable.

Develop a protocol involving institutions of the Federal System regarding communication in situations of very high disaster risk.

Develop a joint operational protocol for the response of agencies within the Federal Civil Protection and Defense System, which coordinates disaster response across Brazil.



Develop, implement, and coordinate the National System for Disaster Information and Monitoring.

Update the operational protocol for federal agencies involved in disaster risk management: National Water and Basic Sanitation Agency (ANA), Mineral Resources Research Company (CPRM/SGB), National Center for Risk and Disaster Management (CENAD), and National Center for Monitoring and Early Warning of Natural Disasters (CEMADEN).

SECTORAL HEALTH PLAN

Coordination: Ministry of Health (*Ministério da Saúde* - MS)

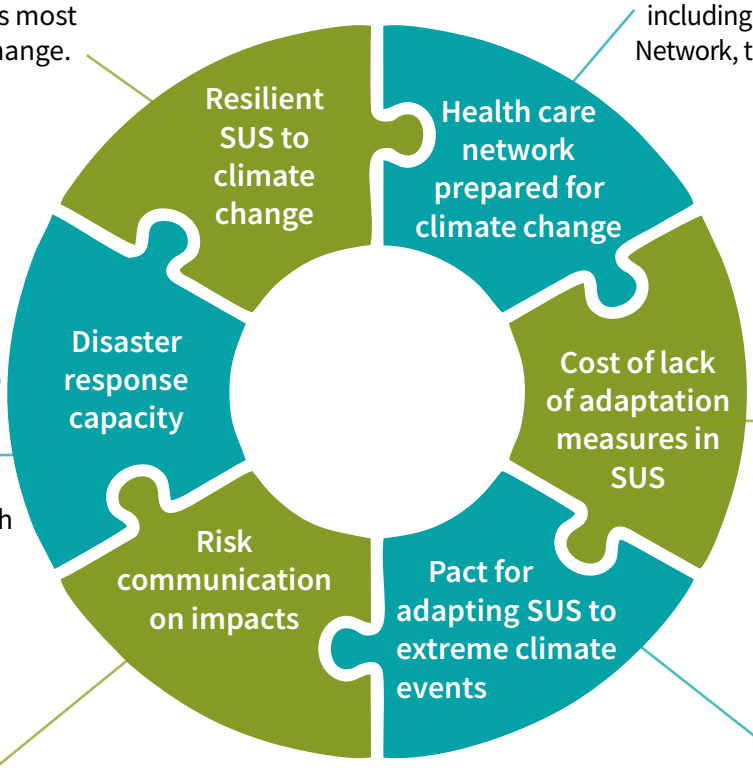
Sectoral Goals

1. Enhance Health Surveillance capacity, including community-based health monitoring, for the purposes of monitoring, assessment, early warning, and intervention, aiming to reduce climate-related morbidity and mortality.
2. Improve Health Care capacity to ensure the provision of health services, including the preparation of resilient infrastructure and teams to address the negative effects of climate change.
3. Expand Health Promotion and Education strategies to raise awareness of the impacts of climate change and reduce its negative effects.
4. Strengthen the adoption of Science, Technology, Innovation, and Production strategies for the adaptation of the Unified Health System (*Sistema Único de Saúde* - SUS) to climate change.

27 targets and 93 actions, including:

Ensure the resilience of the Unified Health System (SUS) in the face of extreme climate events by 2031 in 100% of the territories most vulnerable to climate change.

Publish national guidelines to guide the organization of the Health Care Network in response to climate change by 2027, including the Emergency and Urgency Network, the *Melhor em Casa* Program, among others.



Support 100% of priority municipalities to expand their capacities for preparedness, surveillance, and response to public health emergencies caused by disasters.

Generate estimates on the cost of the absence of adaptation measures for SUS and estimates on the impact of adaptation measures by 2035.

Enhance capacity and promote training in risk communication regarding the impacts of climate change in 100% of health departments and Indigenous Special Health Districts in states and municipalities prioritized for climate emergencies by 2035.

Coordinate sectoral and inter-federative agreements to assess impacts, vulnerabilities, and adaptation to climate change in SUS, including climate indicators in policies and service quality assessment tools of the health care network, as well as risk classification for extreme climate events and certification of good practices in the health care network.

SECTORAL PLAN FOR FOOD AND NUTRITION SECURITY

Coordination: Ministry of Development and Social Assistance, Family, and Fight Against Hunger (*Ministério do Desenvolvimento e Assistência Social, Família e Combate à Fome* - MDS)

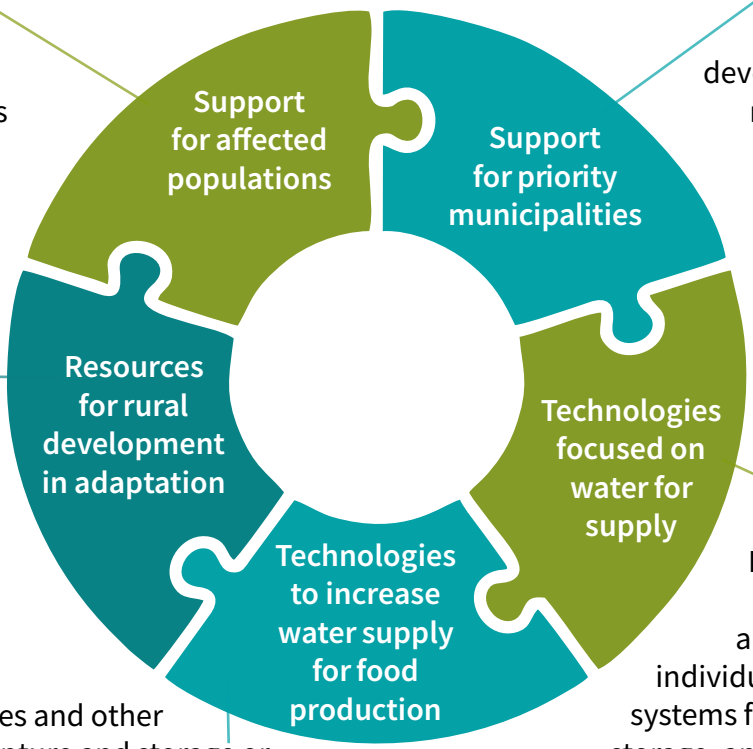
Sectoral Goals

1. Strengthen the social protection network in urban and rural communities most sensitive to the negative impacts of climatic events, enhancing the resilience capacity of vulnerable families.
2. Increase the availability of and access to healthy food in territories most exposed to climate change.
3. Strengthen the network of public and social food and nutrition security facilities in territories most exposed to extreme climate events.
4. Promote access to water for human and animal consumption and food production for populations most vulnerable and located in territories most exposed to the effects of climate change.
5. Support the development of Healthy and Sustainable Food Systems through the promotion and dissemination of technical and scientific knowledge and its appropriation by sectors most vulnerable to climate change.

34 targets and 60 actions, including:

Improve the mechanisms for granting and delivering emergency benefits in municipalities to populations affected by public calamities and emergencies.

Support priority municipalities in developing food and nutrition security actions to be included in local climate adaptation action plans.



Expand the coverage of the Rural Development Program in accordance with state adaptation plans.

Implement social technologies and other efficient systems for water capture and storage or low-consumption irrigation for food production.

Implement social technologies and other efficient individual and collective systems for water capture, storage, and distribution for consumption.

SECTORAL TRANSPORT PLAN

Coordination: Ministry of Transport (*Ministério dos Transportes* - MT)

Sectoral Goals

1. Promote climate resilience in Civil Aviation infrastructure and operations through technological modernization, strengthening environmental inspection and wildfire prevention capacities, and implementing advanced monitoring and weather forecasting systems, with a focus on safety, human well-being, and climate justice.

2. Promote climate resilience in the port and waterway sector by improving risk management, expanding disaster prevention and response capacities, and adapting to climate change, including the implementation of extreme event forecasting systems, technological innovation, alert issuance, and greater logistical efficiency through integration with other transport modes (aviation, railway, inland waterways, and coastal shipping).

3. Ensure the sustainability and resilience of road transport infrastructure and operations through the implementation of climate adaptation measures and interventions in risk-prone areas.

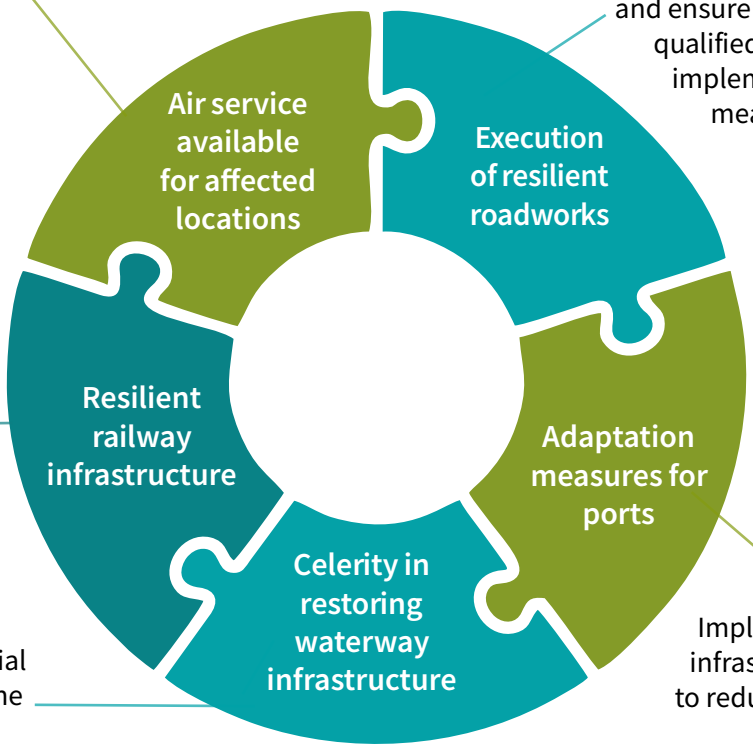
4. Increase the resilience of the railway sector through the implementation of structural measures, enhancement of the legal framework, and expansion of sector capacities for prevention, risk management, and climate change adaptation, ensuring the operation and protection of infrastructure and right-of-way against climate risks.

33 targets and 58 actions, including:

Promote and coordinate actions to reactivate or maintain air services for locations impacted by severe climate events, with social participation in crisis management by local vulnerable groups.

Publish an ordinance establishing regulations to allocate resources for resilient infrastructure.

Restore waterway infrastructures damaged by extreme climate events within a reasonable time after territorial use stabilization, throughout the duration of the Plan.



Provide the necessary financial resources and ensure the availability of a qualified technical team for implementing adaptation measures in risk areas.

Implement structural or infrastructural measures to reduce climate risk and adapt ports.

SECTORAL TOURISM PLAN

Coordination: Ministry of Tourism (*Ministério do Turismo* - MTur)

Sectoral Goals

1. Promote the sustainable development and resilience of tourist destinations through the implementation of climate adaptation practices that strengthen the local ecosystem and encourage environmental awareness, as well as the conservation and preservation of environments, generating benefits for both tourists and local communities.

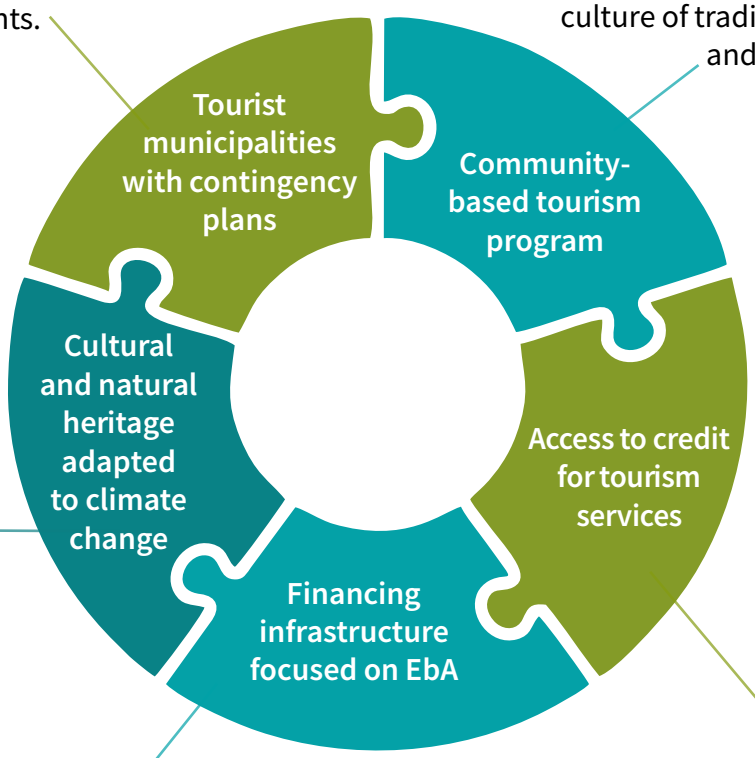
2. Promote climate resilience and safety in Brazilian tourist destinations through integrated adaptation solutions, aiming for sustainable and safe tourism in the face of climate challenges.

3. Value and contribute to the protection of the livelihoods, traditional knowledge, and cultures of tourist communities dependent on or linked to natural and cultural heritage, with a focus on promoting climate justice.

17 targets and 47 actions, including:

Develop a crisis response protocol to expand contingency plans, with specific actions for the tourism sector, ensuring the protection and evacuation of workers and tourists in disasters caused by extreme climate events.

Implement a national community-based tourism program focused on valuing and conserving the ways of life and culture of traditional peoples and communities.



Implement a national program for climate adaptation of the infrastructure of recognized cultural and natural heritage in tourist destinations, in cooperation with the Ministry of Culture (MinC).

Implement a national program to finance resilient infrastructure, focused on Ecosystem-based Adaptation (EbA), in tourist regions vulnerable to extreme climate events.

Provide a specific credit line from the General Tourism Fund (Fungetur) to finance sustainability and climate action initiatives by tourism service providers.

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CLIMATE PLAN
Adaptation

Executive Summary

Access the National Adaptation Strategy:

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MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION
MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE
BRAZILIAN GOVERNMENT
BRASIL
STANDING WITH THE BRAZILIAN PEOPLE