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Brazil's Climate Policy in Full 2025

Advances in the Year of COP30 and Challenges for 2026

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THE STATE OF CLIMATE POLICY IN BRAZIL IN 2025

In 2025, we monitored 41 public policy areas related to climate change in Brazil. Of these, we identified 21 advances, some quite significant, such as in the climate adaptation strategy and the expansion of renewable energies.

Another 15 areas showed insufficient progress, including the implementation of the 2025–2030 NDC, the slow pace of industrial decarbonization, and the lack of coordination in climate governance.

In three fundamental areas for the success of climate policy—Agriculture and Livestock, Water and Sanitation, and Mining—there was no progress in 2025. These sectors did not make firm commitments to the climate agenda.

Two areas were identified as regressing, including one of the most critical for combating global warming: fossil fuels, which remain in the government's future plans.

Tax policy, on the other hand, left the state of regression observed in 2024 and showed firm progress. Oceans, Peripheries, and Favelas maintained the positive trajectory initiated in the previous year.

Meanwhile, the agenda focused on Indigenous Peoples and Traditional Communities, despite the progress recorded in 2024, experienced a slower pace in 2025.

The 21 advances in key areas surpass the 20 recorded in 2024. Challenges remain in strategic sectors that demand robust actions, with a focus on the implementation of climate policies.

PUBLIC POLICY	AGENCIES INVOLVED	OUR EVALUATION IN 2024	OUR EVALUATION IN 2025	PHASE IN THE PUBLIC POLICY CYCLE
Climate adaptation	MMA, MCTI, MME, others	LITTLE PROGRESS	PROGRESSED	Under implementation
Family farming	MDA, MDS, MMA, Consea	PROGRESSED	PROGRESSED	Under implementation
Agriculture, livestock, and food supply	MAPA, BCB, EMBRAPA	LITTLE PROGRESS	NO PROGRESS	Under implementation
Water and sanitation	ANA, MCID, MMA, MCTI, INMET, INPE	LITTLE PROGRESS	NO PROGRESS	Under implementation
Protected areas	MMA	PROGRESSED	LITTLE PROGRESS	Under implementation
Automotive	MDIC, BNDES	PROGRESSED	PROGRESSED	Under implementation
Fuels	MME, MMA	PROGRESSED	PROGRESSED	Under implementation
Foreign trade	MDIC, MF, MMA	LITTLE PROGRESS	REGRESSED	Under implementation
Deforestation control	MMAMC	PROGRESSED	PROGRESSED	Under implementation
Legal defense	AGU	PROGRESSED	PROGRESSED	Under implementation
Circular economy	IBAMA, MMA, MCID	PROGRESSED	PROGRESSED	Under implementation
Education	MEC, CEMADEN, MMA	LITTLE PROGRESS	LITTLE PROGRESS	Under implementation
Employment and labor	MTE	NO PROGRESS	PROGRESSED	Under implementation
Renewable energies	MME, MAPA, MDIC	PROGRESSED	PROGRESSED	Under implementation
Long-term strategy for climate neutrality (net-zero)	Casa Civil, MRE, MMA, MCTI, MME, others	NO PROGRESS	PROGRESSED	Under formulation
Climate finance	BCB, BNDES, MMA, MF, CMN, CFSS, BNDES, MPO	PROGRESSED	PROGRESSED	Under implementation
Gender	MMUL	NO PROGRESS	LITTLE PROGRESS	Under implementation
Climate governance	CIM	LITTLE PROGRESS	LITTLE PROGRESS	Under implementation
Social housing	MCID	LITTLE PROGRESS	LITTLE PROGRESS	Under implementation
Racial equality	MIR, MMA	LITTLE PROGRESS	PROGRESSED	Under implementation
Industry	MDIC, MF	PROGRESSED	AVANÇOU POUCO	Under implementation
Artificial intelligence	MCTI, MDIC	PROGRESSED	PROGRESSED	Under implementation
Mining	MME	LITTLE PROGRESS	NO PROGRESS	Under formulation
Urban mobility	MCID	LITTLE PROGRESS	LITTLE PROGRESS	Under implementation
Disaster risk management and monitoring	MIDR, MCTI, INMET, INPE, CENAD, ANA, CEMADEN	PROGRESSED	LITTLE PROGRESS	Under formulation
2025-2030 NDC	Casa Civil, MRE, MMA, MCTI, MME, others	PROGRESSED	LITTLE PROGRESS	Under implementation
Business and entrepreneurship	ME	NO PROGRESS	LITTLE PROGRESS	Under implementation
Ocean and fisheries	MPA, MMA, MD, Navy	LITTLE PROGRESS	PROGRESSED	Under implementation
Peripheries and favelas	MCID, MIR	PROGRESSED	PROGRESSED	Under implementation
National defense and security policy	GSI, MD, Armed Forces, ABIN	NO PROGRESS	LITTLE PROGRESS	Under formulation
Foreign policy	MRE	PROGRESSED	PROGRESSED	Under implementation
Fiscal and budgetary policy	MPO, MGI, and sectoral ministries	LITTLE PROGRESS	PROGRESSED	Under implementation
Monetary and financial policy	BCB, STN, MF, CMN	PROGRESSED	PROGRESSED	Under formulation
Tax policy	MF, Congress	REGRESSED	PROGRESSED	Under implementation
Indigenous peoples and traditional communities	MPI, MAPA, MJSP	PROGRESSED	LITTLE PROGRESS	Under implementation
Institutional relations	SRI, SG	PROGRESSED	LITTLE PROGRESS	Under implementation
Health	MS	LITTLE PROGRESS	PROGRESSED	Under implementation
Fossil fuel transition	MME, MAPA, MDIC	LITTLE PROGRESS	REGRESSED	None
Transport	MT	PROGRESSED	LITTLE PROGRESS	Under implementation
Tourism	MTUR	PROGRESSED	LITTLE PROGRESS	Under implementation
Urbanization	MMA, MCTI, MCID	LITTLE PROGRESS	PROGRESSED	Under implementation

** See the acronyms in the list of acronyms on page 69*

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POLICY INVENTORY

The main instruments in development or already in operation to advance decarbonization in Brazil

SECTORS

- AGRICULTURE AND LIVESTOCK
- CLIMATE FINANCE AND BUDGET
- LAND USE AND FORESTRY (LULUCF)
- CROSS-CUTTING CLIMATE POLICIES
- CROSS-CUTTING POLICIES
- INDUSTRY
- WASTE
- ENERGY

INSTRUMENTS

- ○ Not yet published or approved
- ◎ Launched, reformulated, or resumed in 2025

PPA 2024-2027
Novo PAC
Plano ABC+
National Bioeconomy Plan
PPCerrado
National REDD+ Strategy
PPCDAm (Phase 5)
Planaveg
Forest Code
National Policy for Payment for Environmental Services
Favorecicle and ProRecicle
Pró-Catadoras and Pró-Catadores
Obligations under the Paris Agreement
Brazilian Emissions Trading System
Brazilian Emissions Trading System
National Policy on Climate Change
16 SECTORAL Adaptation Plans
CLIMATE PLAN
8 SECTORAL Mitigation Plans
Brazilian NDC
Ecological Transformation Plan
National Emissions Registry System
Ecoinvest
Amazon Fund
Sovereign Green Bonds
Climate Fund
BNDES Green Bonds
Sustainable Taxonomy
New Industry Brazil
Offshore Wind Regulation
National Electricity Conservation Program "Procel"
National Energy Plan 2050
Green Debentures
National Energy Transition Policy
Ten-Year Energy Expansion Plan – PDE 2034
Mover Program
Fuel of the Future Program
National Policy for Critical Minerals
RenovaBio
National Hydrogen Program
Energies of the Amazon Program

INTRODUCTION

IN A YEAR WHEN THE PLANET CAME EVEN CLOSER TO THE 1.5°C GLOBAL WARMING LIMIT, EXPOSING US TO GREATER AND IRREVERSIBLE CLIMATE DAMAGE, BRAZIL MADE PROGRESS IN DRAFTING A PLAN TO IMPLEMENT THE COMMITMENTS MADE UNDER THE CLIMATE CONVENTION FOR 2030 AND 2035, ON THE PATH TO NET-ZERO EMISSIONS BY 2050.

We have reached the end of the year in which Brazil hosted COP30 with a roadmap for a country with lower carbon emissions and greater resilience to climate change, but also facing the enormous challenge of translating what was outlined in the Climate Plan into action. The implementation of the Climate Plan will certainly be a central issue in the 2026 elections.

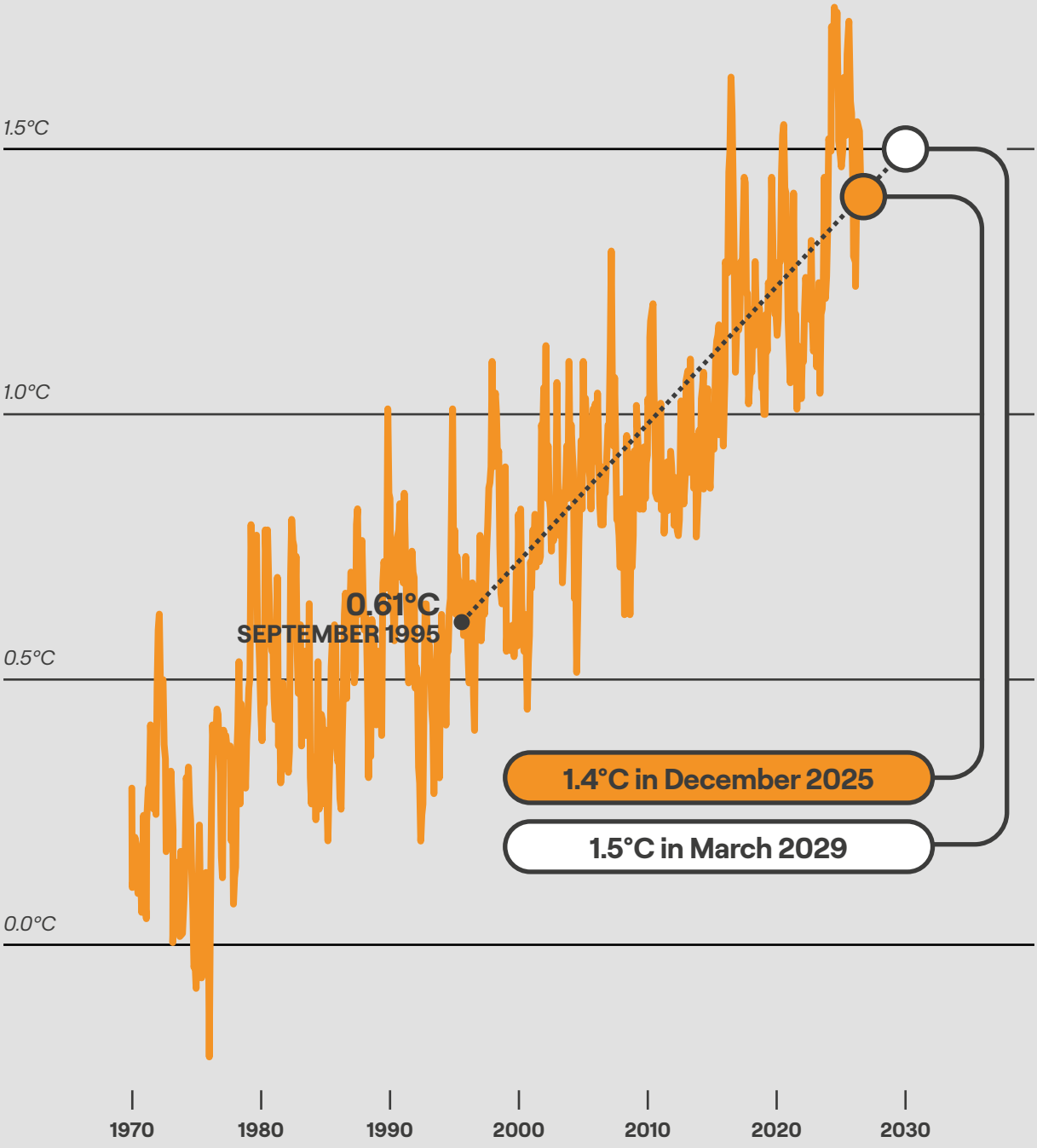
The country faces the risk of failing to meet its greenhouse gas emissions target set for 2025. This target, of 1.32 Gt CO2e, entails reducing 720 million tonnes of carbon dioxide over three years, based on the most recent official emissions inventory from 2022. However, any potential shortfall is only expected to become apparent in late 2026, likely projected in the next Biennial Transparency Report (BTR), a requirement for countries every two years under the Paris Agreement.

For now, Brazil has primarily relied on combating deforestation to reduce domestic emissions. The annual deforestation rate released by the National Institute for Space Research (INPE) on the eve of COP30 showed another year of declining deforestation in the Amazon, as well as in the Cerrado biome. Over three years, combating deforestation has reportedly prevented the emission of approximately 700 million tonnes of CO2e into the atmosphere, according to projections by the Ministry of the Environment.

Reducing deforestation, including legally authorized clearing, is a key component of Brazil's climate strategy for the coming years, alongside forest restoration.

FIGURE 1. The Copernicus Observatory projects that the planet will reach 1.5°C of warming by March 2029

Global surface temperature anomaly over a 30-year average relative to the pre-industrial period (1850-1900)



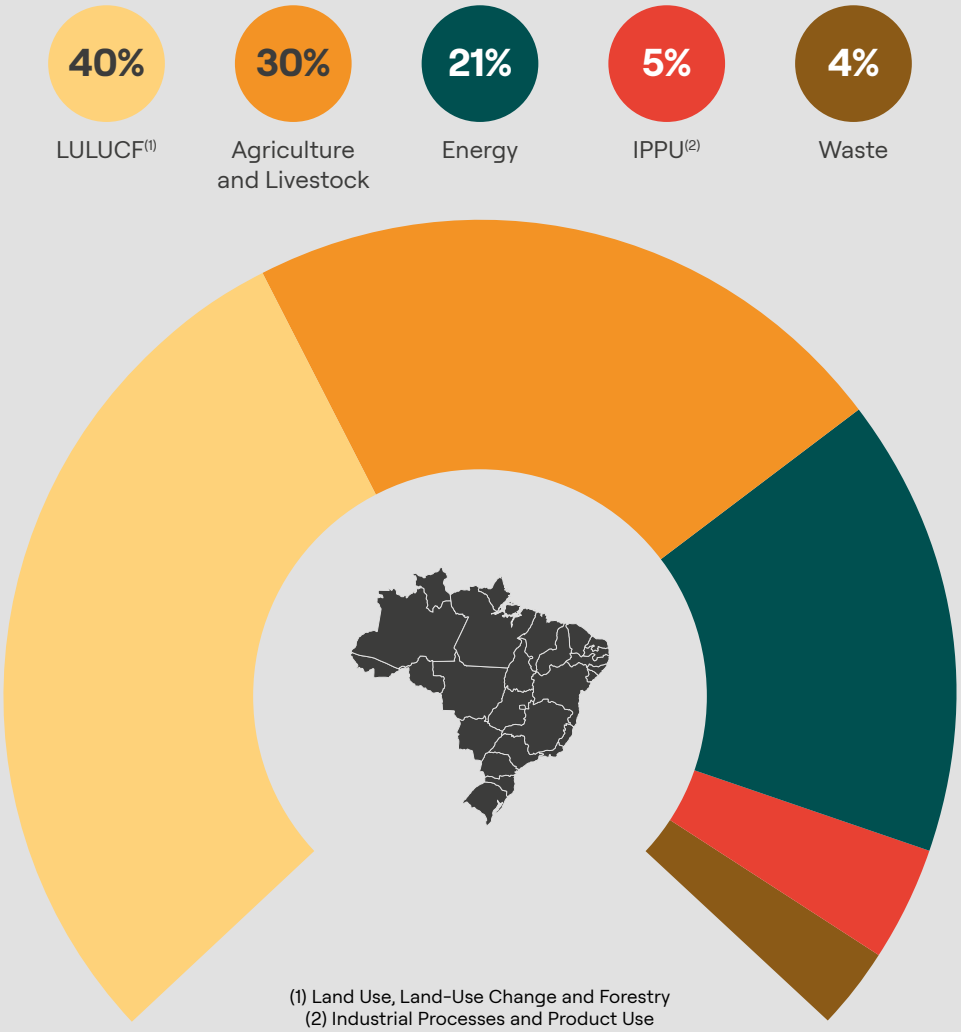
Source: Copernicus Climate Change Service – C3S Global Temperature Trend Monitor

Regrettably, the Climate Plan does not indicate a pathway for Brazil to transition away from fossil fuels, as determined at COP28 in Dubai, based on the First Global Stocktake of the Paris Agreement. In the roadmap outlined thus far, Brazil is expanding its role as one of the world's major oil producers, destined primarily for export. Even considering that the burning of exported oil does not weigh on Brazil's emissions accounting, maintaining the largest source of global warming is incompatible with efforts to stabilize the planet's climate.

The bidding for new oil wells, including in the frontier of the Foz do Amazonas basin, was one of the elements countering climate stabilization. It was accompanied by other decisions favoring fossil fuels in energy capacity auctions and strong denialism from the National Congress, which approved the dismantling of environmental licensing in Brazil and even threatens to grant amnesty for native vegetation liabilities on rural properties.

The same type of political difficulty stalled the submission to Congress of the new National Policy on Climate Change (PNMC), which is expected to replace the already outdated 2009 law.

FIGURE 2. Sectoral share of Brazil's total GHG emissions (2022 data, most recent national inventory)



(1) Land Use, Land-Use Change and Forestry
(2) Industrial Processes and Product Use

In early October, after more than a year of waiting, the government submitted the proposed PNMC to public consultation. The proposed bill helps provide institutionality to Brazil's climate commitments and the Climate Plan. Its passage through the National Congress will certainly be one of the priorities of the climate agenda in 2026.

Efforts toward climate change adaptation have advanced in the country. In addition to a national strategy detailed across 16 different sectors, coordination among the federal government, states, and municipalities is expected to establish local plans in 581 critical municipalities in 2026. These plans are combined with the efforts of the Resilient Green Cities Program, as will be seen in the following pages.

This third yearbook of the ***Brazil's Climate Policy in Full*** series begins with a "where we stand" on the decarbonization trajectory and continues to be organized, as in previous editions, by emission sectors, as reported in the national inventories (Figure 2). Other chapters address climate change adaptation, climate finance and governance, and the topic of artificial intelligence, aiming to provide an overview of Brazilian climate policies, their progress, and main challenges.

WHERE WE STAND: THE GAP TO ACHIEVING THE PARIS AGREEMENT COMMITMENTS

The most recent snapshot of Brazil's position on its trajectory to neutralize greenhouse gas emissions by 2050 dates back to 2022, the final year of the Bolsonaro administration. Data from the latest national inventory was released in December 2024 in the first Biennial Transparency Report (BTR). The next national inventory is scheduled for late 2026, reporting 2024 emissions.

This snapshot shows that Brazil had returned to an emission level of 2 Gt of carbon dioxide equivalent in 2021, something not seen since 2006, driven by the spike in deforestation at the end of the last decade. Indeed, this trajectory is strongly correlated with deforestation, our main source of greenhouse gas emissions. Whenever deforestation rises, emissions increase. And vice versa.

The snapshot also reveals the difficulty in reducing emissions from other sectors, especially in agriculture and livestock, which are heavily dominated by methane emissions from enteric fermentation, the digestive process of cattle. Emissions from agriculture and livestock, as well as from the energy, industrial processes, and waste sectors, remain on an upward trend in the Climate Plan, which projects an emission cut of between 49% and 58% from 2022 levels by 2035.

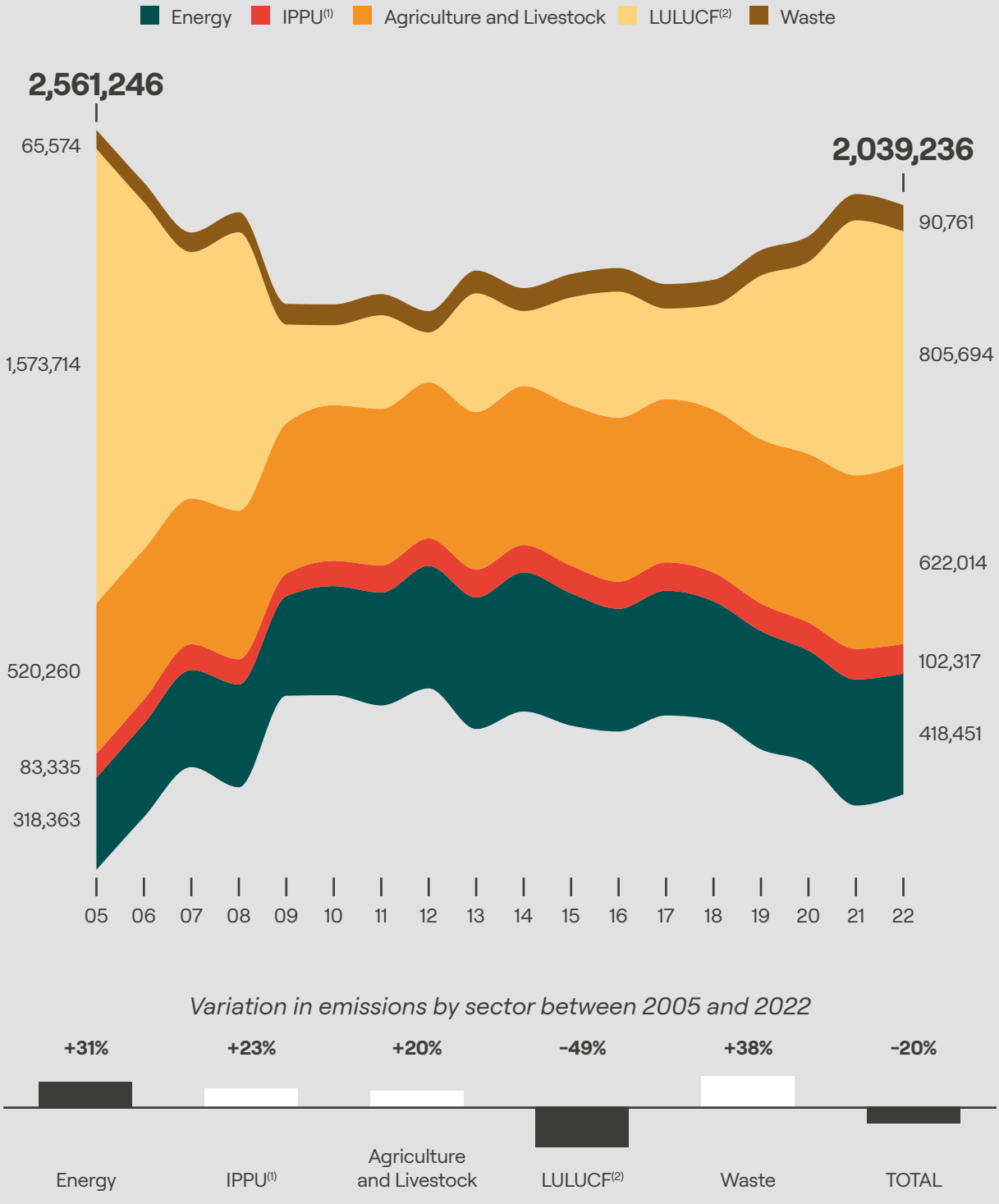
The estimate of Brazil's 2024 emissions, released on the eve of COP30 by the Greenhouse Gas Emission and Removal Estimating System (SEEG) of the Climate Observatory, indicated a sharp reduction in Land Use emissions, already accounting for carbon capture through forest restoration. This effort, unmatched by the other sectors, would be insufficient to meet Brazil's target for 2025.

Mandated by the Paris Agreement, the first Biennial Transparency Report avoided projecting a failure to meet the 2025 target established by our Nationally Determined Contribution (NDC), according to the 2023 update of the international commitment. However, it was already evident that reducing emissions from 2.039 Gt CO_2e to 1.32 Gt CO_2e, or 719 million tonnes of CO_2e in three years, would be an almost impossible mission.

"At the time of approval of this BTR, the Brazilian government was in the process of analyzing and validating the results of the GHG emission projections. Although the results are not yet presented in this BTR, the country has been making progress on GHG emission projections and scenarios. The properly completed and validated projections will be presented in the next BTR," states the report, postponing the projection on meeting the 2025 target to December 2026.

Considering that the First Global Stocktake of the Paris Agreement recommended a 43% cut in global emissions by 2030 and a 60% cut by 2035, based on 2019 levels, it is clear that Brazil needs to make up for lost time after moving against the climate agenda, especially between 2017 and 2021.

FIGURE 3. Evolution of Brazil's net sectoral emissions from 2005 to 2022, including the variation between the final and initial years of the series (In MtCO2e, GWP100-AR5)



(1) Industrial Processes and Product Use
(2) Land Use, Land-Use Change and Forestry
Source: National GHG Inventory Report of Brazil, 2024

THE CLIMATE PLAN

THE ROADMAP

The number one challenge of the climate agenda in 2025 was to establish a plan detailing the pathway for the country to achieve its internationally assumed commitments (Table 1) under the United Nations Climate Convention. Since late 2023, the Climate Plan had been under development within the Working Groups of the Interministerial Committee on Climate Change (CIM), which includes the participation of 23 ministries.

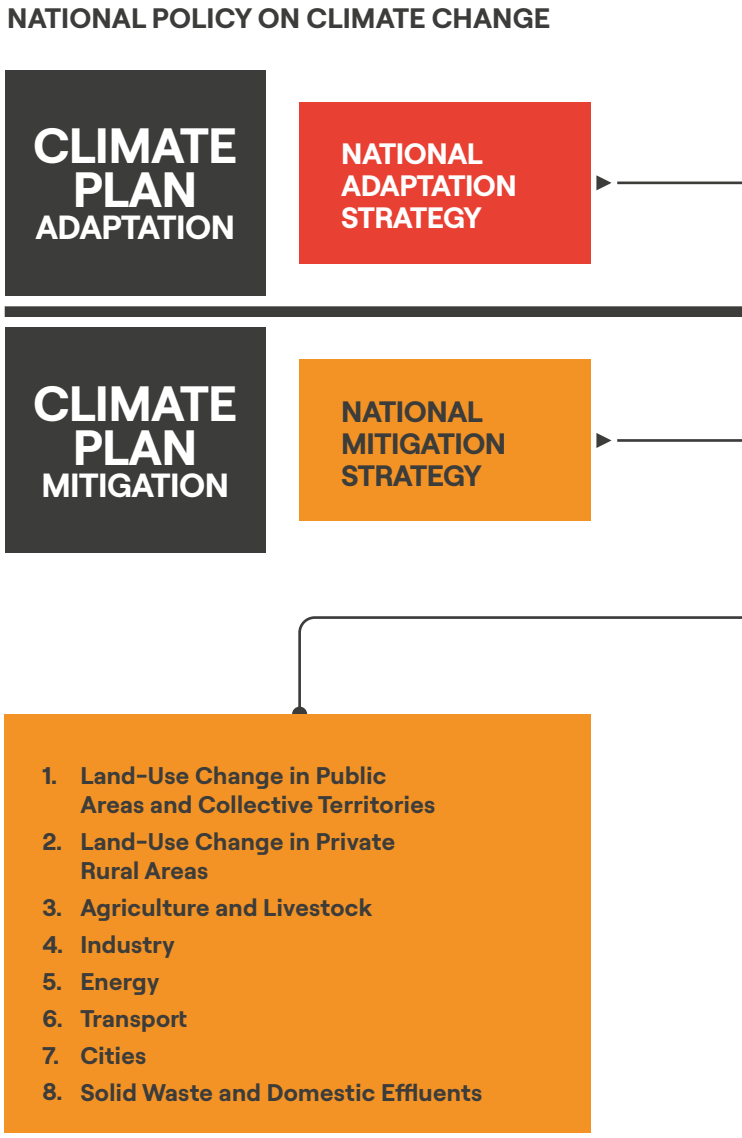
Its approval took place in a virtual meeting of the CIM on December 15, after more than two months of postponements caused by resistance from the agriculture and livestock sector. The impasse was resolved through the creation of an additional sectoral mitigation plan, aimed at addressing deforestation in private areas, but without mentioning the term deforestation and duly separated from the agriculture and livestock sectoral plan. Furthermore, the sector's share in reducing emissions was reduced from 37% to 21%, considered the most ambitious target for 2035.

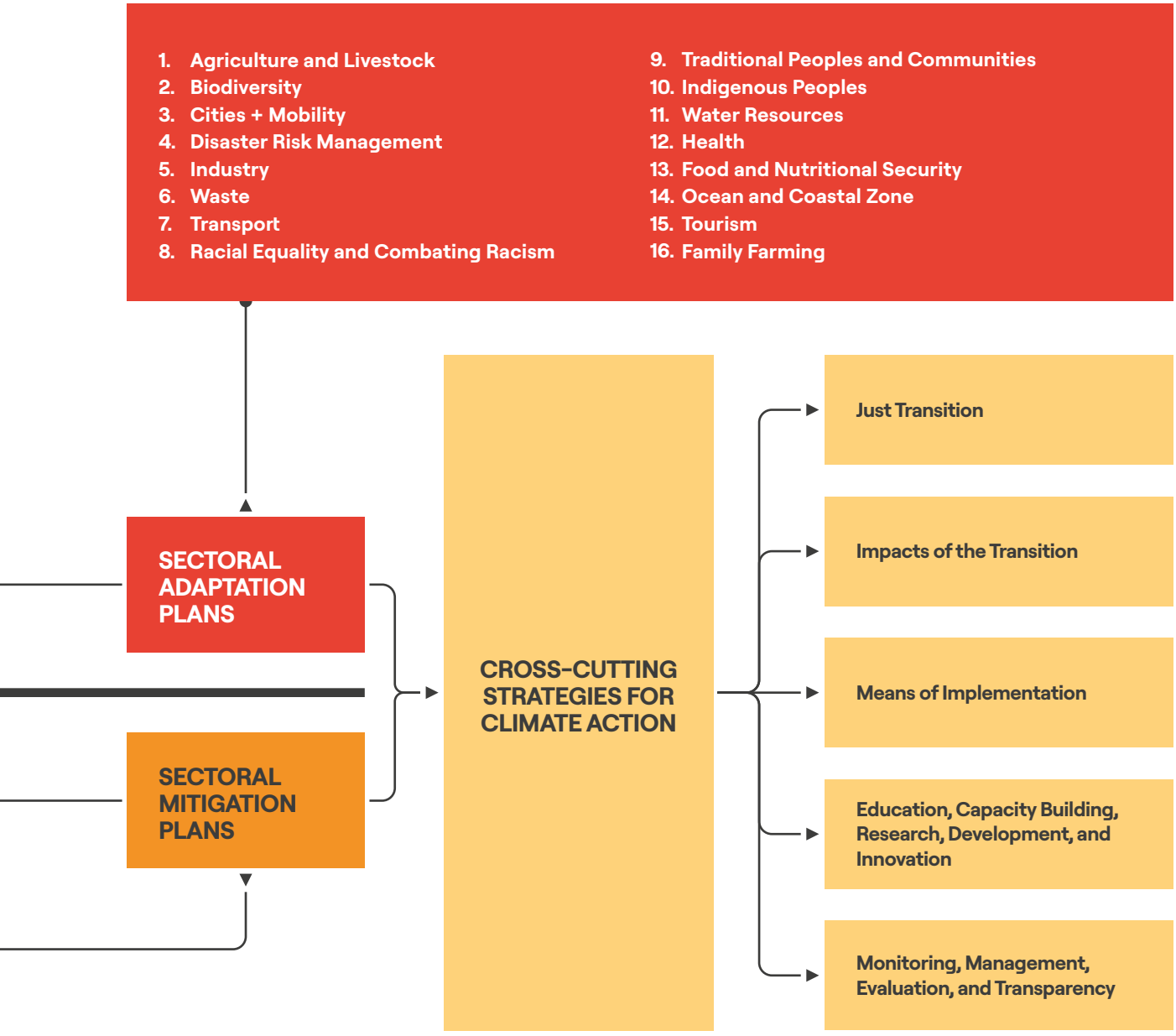
TABLE 1. National mitigation targets

TARGET	Horizon	Scope
LIMIT NET NATIONAL GHG emissions in 2025 to 1.32 $GtCO_2e$	**2025**	ALL GHG SECTORS
LIMIT NET NATIONAL GHG emissions in 2030 to 1.20 $GtCO_2e$	**2030**	ALL GHG SECTORS
LIMIT NET NATIONAL GHG emissions in 2035 to a range between 0.85 and 1.05 $GtCO_2e$	**2035**	ALL GHG SECTORS
ACHIEVE NET-ZERO GHG emissions	**2050**	ALL GHG SECTORS

Source: National Mitigation Strategy – Climate Plan (2024-2035)

FIGURE 4. The structure of the Climate Plan 2024-2035



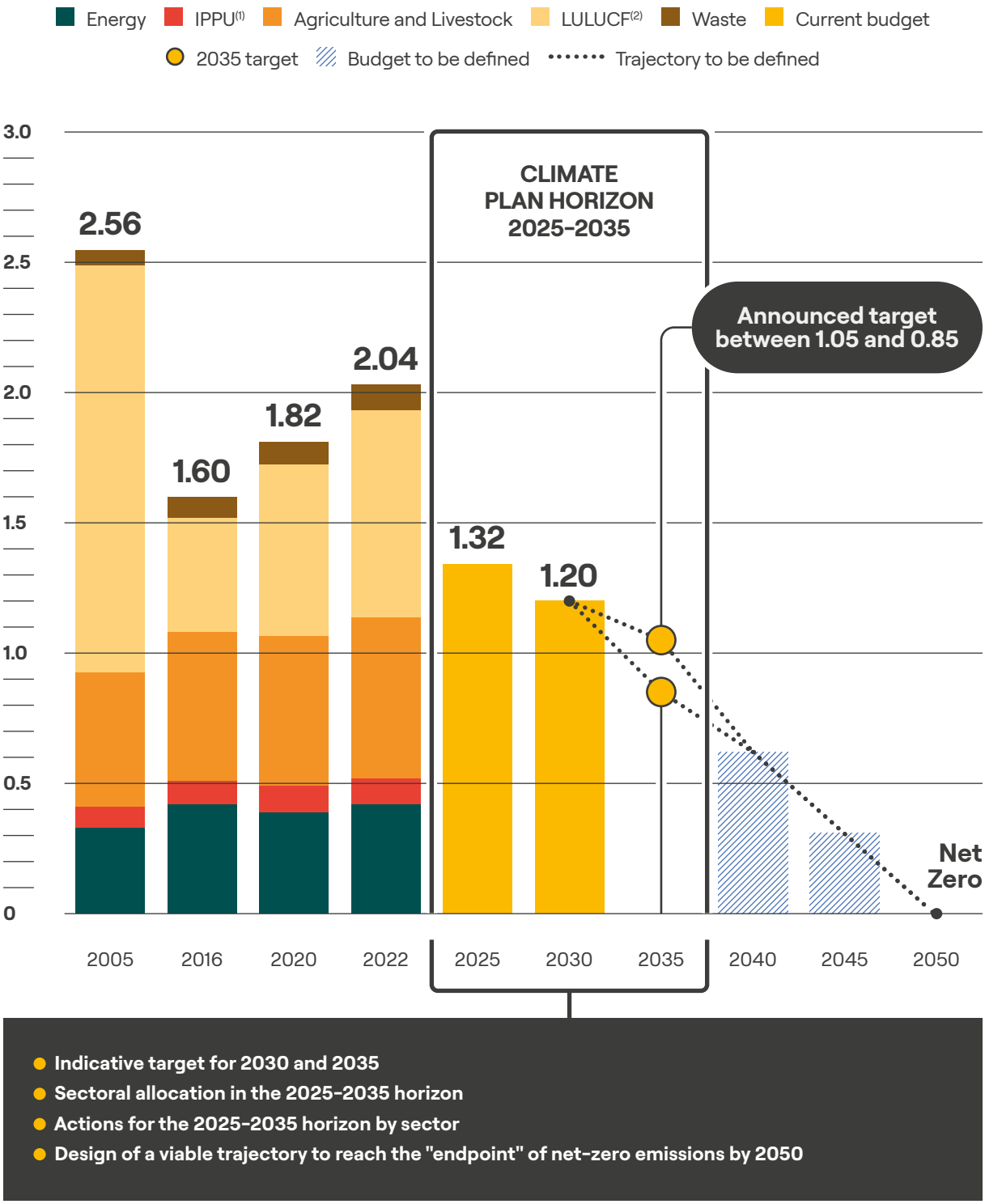


Without officially considering the 2025 target lost, the Climate Plan works on the targets for 2030 and 2035. Subjected to public consultations starting in late 2024, the plan consists of national mitigation and adaptation strategies, 8 sectoral mitigation plans, 16 sectoral adaptation plans, and five additional cross-cutting strategies, still in development at the time of writing this report.

These cross-cutting strategies address equally important themes, such as just transition and the means of implementation, which will determine how to finance and translate into action the nearly one thousand actions of the Plan. There are also strategies aimed at capacity building, monitoring, and transparency, which relate to the pillars of climate governance.

The horizon of the Climate Plan is 2035, the third milestone in the Brazilian climate commitment, before achieving net-zero emissions by 2050.

FIGURE 5. Mitigation trajectory and targets of the current Brazilian NDC (In $GtCO_2e$)



(1) Industrial Processes and Product Use (2) Land Use, Land-Use Change and Forestry
Source: National Mitigation Strategy – Climate Plan (2024-2035)

The range established for 2035, between 850 million tonnes of CO_2e and 1.05 Gt of CO_2e, was the subject of the NDC submitted by the Brazilian government to the Climate Convention in November 2024, during the Baku COP in Azerbaijan.

At the time of writing this report, a long-term strategy aimed at neutralizing greenhouse gas emissions by 2050 was taking shape within the Ministry of Planning, which coordinates Strategy 2050[3].

For the purpose of drafting the sectoral mitigation plans, the Climate Plan reallocated emissions from the five sectors of the national inventory into eight plans. The effort of each one can be seen in Table 2. Together, these sectoral plans operationalize the Brazilian commitment to the Climate Convention and represent a reduction of between 49% and 58% compared to the greenhouse gas emissions recorded in 2022.

When summarizing the main premises adopted in the development of the Climate Plan, the text of the National Mitigation Strategy explains that the lowest-cost alternatives for reducing Brazilian emissions were considered.

TABLE 2. The effort to reduce greenhouse gas emissions by sectoral mitigation plan (in $MtCO_2e$)

MITIGATION	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
LUC Public Areas and Collective Territories	448	-181	-140%	-250	-248	-156%	-155%
LUC Private Rural Areas	352	106	-70%	-34	-30	-110%	-109%
Agriculture and Livestock	643	649	1%	599	653	-7%	2%
Industry	179	198	11%	203	240	13%	34%
Energy	80	106	33%	81	115	1%	44%
Transport	116	126	9%	107	134	-8%	16%
Cities	136	121	-11%	75	111	-45%	-18%
Waste	85	75	-12%	69	75	-19%	-12%
TOTAL	**2.039**	**1.200**	**-41%**	**850**	**1.050**	**-58%**	**-49%**

(3) https://www.gov.br/planejamento/pt-br/assuntos/planejamento/Brasil2050

"Playing a central role in mitigation, among other measures, are the elimination of illegal deforestation and the reduction and compensation of the legal clearing of native vegetation, the recovery of native vegetation, the restoration of degraded pastures, the expansion of integrated crop-livestock-forestry systems, the dissemination of technologies for low-carbon agricultural production, the expansion of intensive cattle finishing systems, the growth of renewable electric energy sources, the sustainable expansion of the production and use of biofuels, the decarbonization of the urban mobility and transport sectors, the development of new carbon removal technologies in bioenergy production, and the decoupling between economic growth and increased emissions across all sectors," the text states.

It is noted that the effort to reduce emissions by 2035 is concentrated on combating deforestation, both illegal and that authorized by law on rural properties. In this case, the Climate Plan provides for the payment of incentives to discourage the clearing of native vegetation on rural properties, something that has faced strong resistance from the sector. The plan also relies on a considerable portion of forest restoration for Brazil to meet the 2030 target.

Forest restoration is the "cheapest" way to capture carbon from the atmosphere. In the case of private properties, this carbon capture can occur both through the recovery of native vegetation liabilities and the conversion of degraded pastures.

The land-use change sector, historically responsible for the largest volume of Brazilian emissions, becomes the one that captures the most carbon from the atmosphere within the horizon of the Climate Plan (with emissions distributed between the sectoral plans for Land-Use Change in Public Areas and Collective Territories, and Land-Use Change in Private Rural Areas).

The negative emissions expected in this sector would compensate for limited ambitions in the other sectors. Table 2 also makes it clear how the effort to reduce emissions is limited in industry and energy production, with projected increases of up to 34% and 44%, respectively, in their emissions. Other limitations will be exposed further on, in the analysis of each of the sectors.

In the breakdown of the summary framework above, it will become clear that the mitigation effort foreseen by the Climate Plan has significant gaps compared to what was expected of it. The main one of these gaps is the lack of a clear signal to transition away from fossil fuels, as foreseen in the final declaration of the Dubai COP, based on the First Global Stocktake of the Paris Agreement (GST)[4].

In recognizing the need for deep, rapid, and sustained reductions in greenhouse gas emissions, the final COP declaration indicated, in its famous paragraph 28, a transition away from fossil fuels, "in a just, orderly and equitable manner," in order to achieve net-zero emissions by 2050.

The Nationally Determined Contribution (NDC)[5], the Brazilian commitment to the Climate Convention, states: "In line with paragraph 28, the Climate Plan will provide details for the expansion of electricity generation and, in the medium and long term, the gradual replacement of the use of fossil fuels with electrification solutions and advanced biofuels, as well as the expansion of biofuel production associated with carbon capture and storage to meet the demand for negative emissions." The NDC created an expectation that was not met.

The fifth objective (among 12 national objectives) of the National Mitigation Strategy speaks of "encouraging the replacement of fossil fuels, promoting the development and efficient use of sustainable biofuels, electrification solutions, and low-carbon hydrogen."

The actions of the Climate Plan, however, at least up to 2035, project an increase in emissions in energy production, as well as in industry and the transport sector, where fossil fuels are used, as shown in Table 2.

(4) https://unfccc.int/sites/default/files/resource/cma2023_16a01E.pdf?download
(5) https://www.gov.br/mma/pt-br/assuntos/noticias/brasil-entrega-a-onu-nova-ndc-alinhada-ao-acordo-de-paris/ndc-versao-em-portugues.pdf/

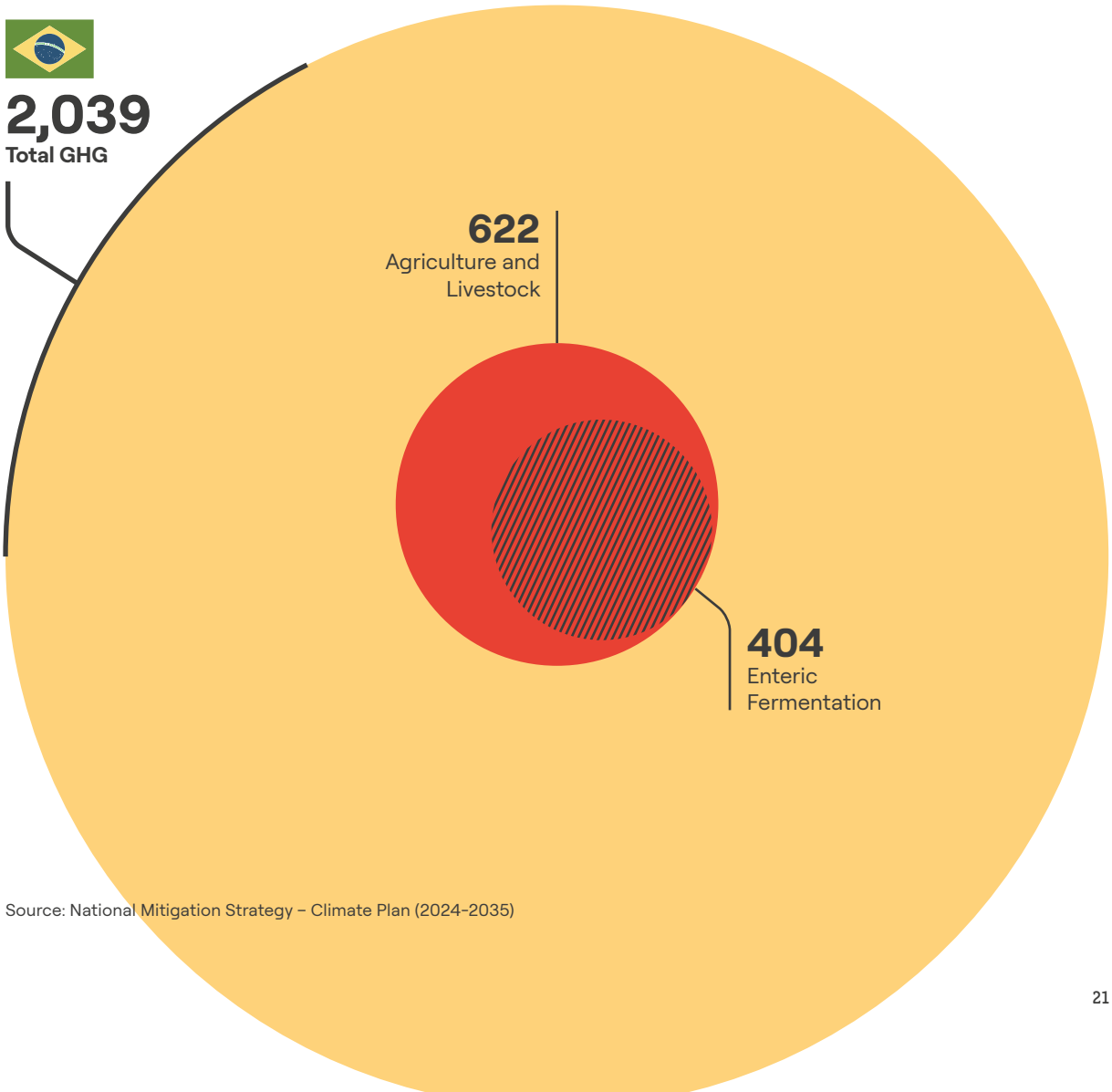
Another significant gap in the Climate Plan takes place in the agriculture and livestock sector. It is known that this is the sector of the Brazilian economy that emits the most greenhouse gases. Without considering deforestation, for which the activity is also largely responsible due to the clearing of areas for crops and pastures, agriculture and livestock account for 30% of Brazilian emissions.

The second objective of the National Mitigation Strategy speaks of "fostering the widespread adoption of sustainable and low-GHG emission agricultural and livestock production models, ensuring food security for all."

But there is no measure in the Climate Plan to address the largest source of emissions in the sector, enteric fermentation, resulting from the digestive process of cattle, responsible for 65% of the sector's greenhouse gases and almost a fifth (20%) of Brazil's total emissions, according to data from the national inventory used in the National Mitigation Strategy.

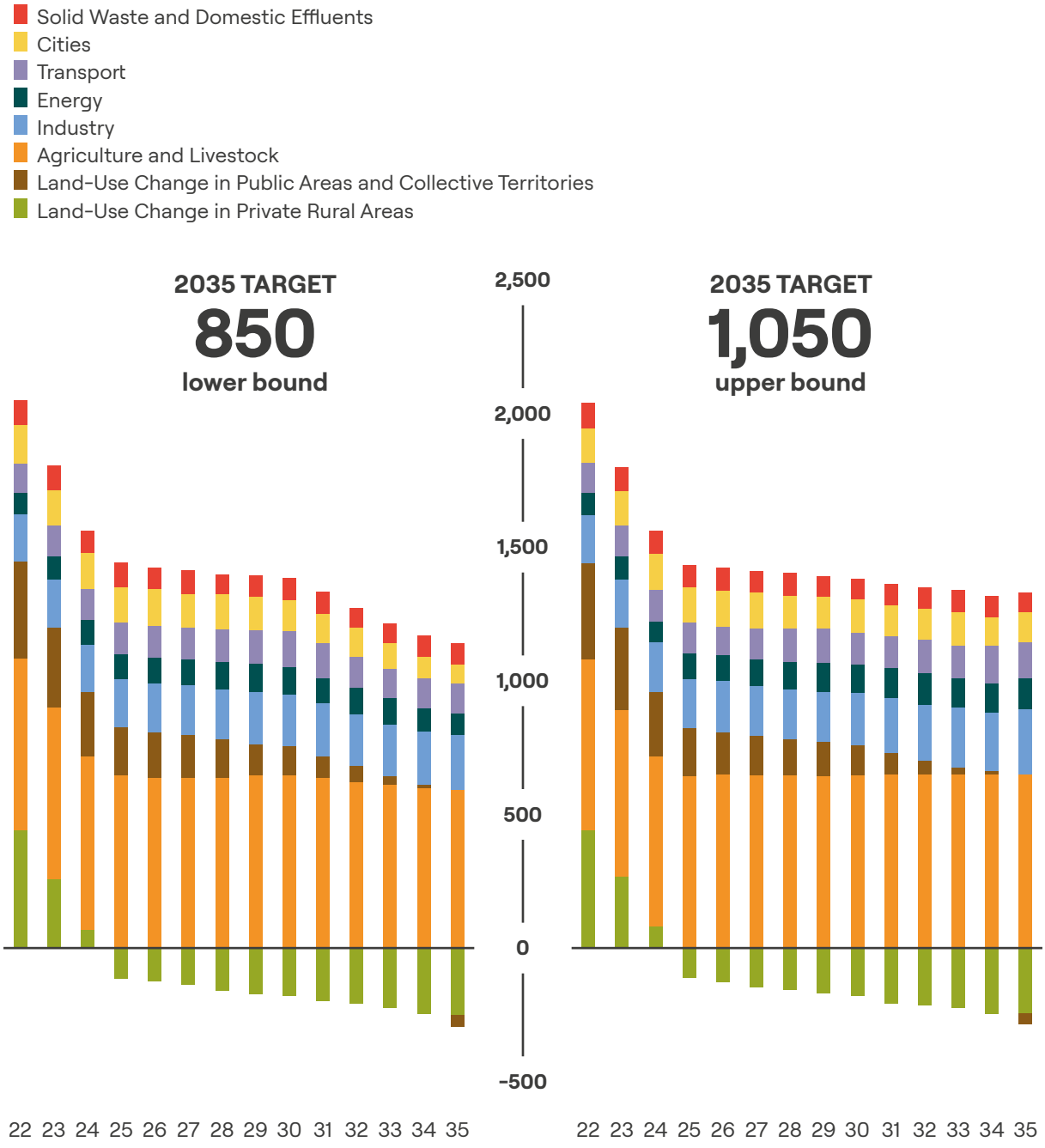
Just as a basis for comparison, enteric fermentation emits almost four times the volume of emissions from trucks, highway buses, and domestic aviation combined, which represent the largest share of fossil fuel burning in the country.

FIGURE 6. Share of enteric fermentation in the country's total net emissions in 2023 (In $MtCO_2e$)



Source: National Mitigation Strategy – Climate Plan (2024-2035)

FIGURE 7. Sectoral targets for 2030 and 2035 (In $MtCO_2e$)



Source: National Mitigation Strategy – Climate Plan (2024-2035)

The Climate Plan maintains Agriculture and Livestock as the sector that emits the most greenhouse gases up to 2035, both in the lower and higher ambition scenarios of the Brazilian target, as Figure 7 indicates.

The greenhouse gas emission reduction pathways in Brazil will be detailed in the following chapters.

LAND USE

THE LARGEST SOURCE OF EMISSIONS, CONCENTRATING MOST OF THE SOLUTION

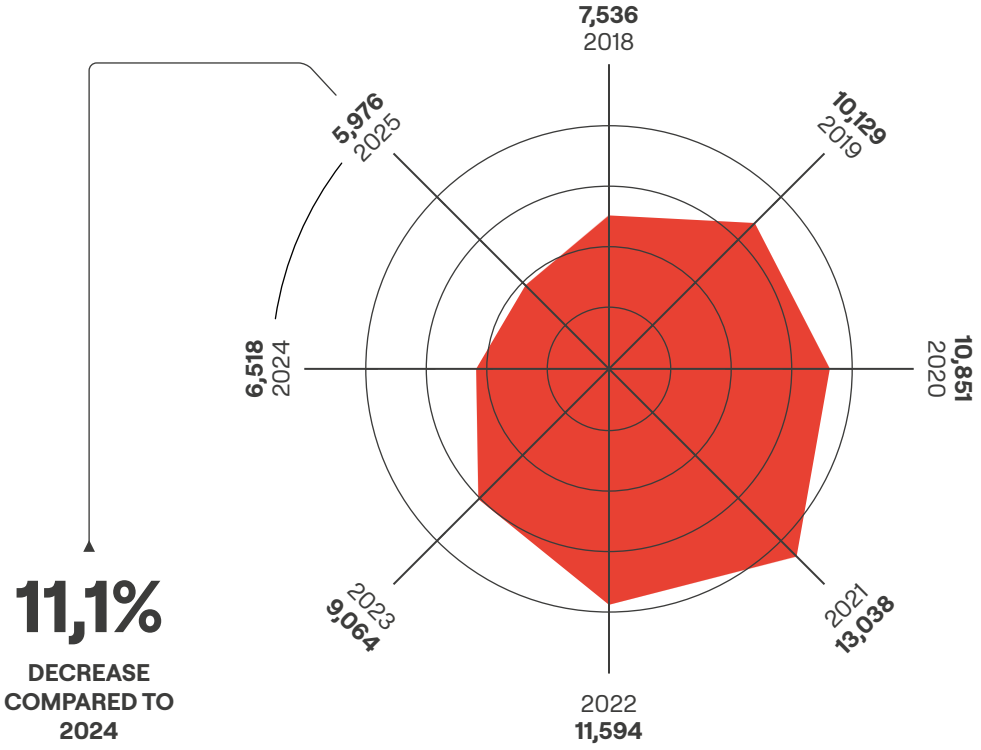
Deforestation alerts in the Amazon totaled 960 km2 of forest loss in May 2025, in a single month. Besides indicating a 92% increase compared to the deforestation alerts recorded in the same month of the previous year, satellite images showed a change in pattern. In that month, the alerts were dominated (51%) by indications of forest collapse, resulting from repeated fires, officially classified as deforestation by progressive degradation.

It was with relief that Minister Marina Silva (Environment) announced on the eve of COP30 the annual deforestation rate, measured by the National Institute for Space Research (INPE) between August 2024 and July 2025. Despite the growing weight in recent years of forests collapsed by fires, which escape the control of the fight against deforestation, the Amazon had the lowest deforestation rate in 11 years: 5,796 km², a drop of 11.08% compared to the previous year.

In the Cerrado, the deforested area was larger than in the Amazon: 7,235 km², an extent concentrated in Matopiba, the agricultural frontier expanding across the states of Maranhão, Tocantins, Piauí, and Bahia. It was the second year of decline in deforestation in the biome after a series of increases.

And as another piece of good news, since environmental legislation allows rural property owners to deforest between 20% and, on the eve of the start of COP30, made official a draft of the National Bioeconomy Development Plan (PNDBio)[6], to be implemented within ten years. The plan had been expected for over a year, since the launch of the National Bioeconomy Strategy, with the goal of coordinating and implementing public policies aimed at developing a new economic and productive development model based on the sustainable use, regeneration, and conservation of biodiversity.

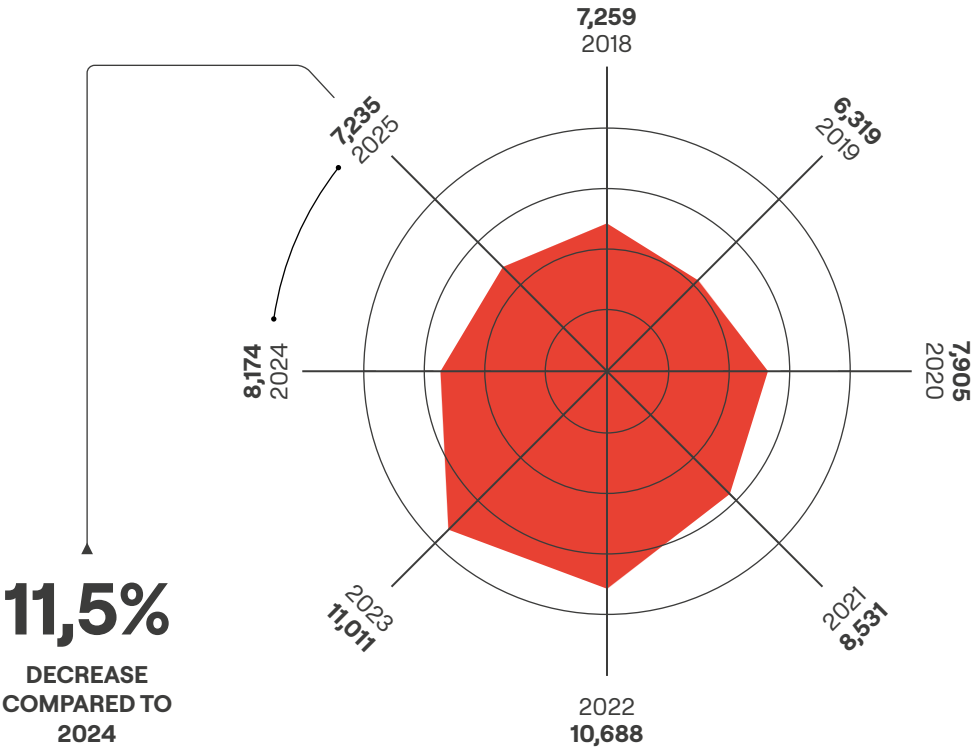
FIGURE 8. Deforested area in 2025 in the Amazon biome (In km²)



Source: INPE/Deter

(6) https://www.in.gov.br/web/dou/-/resolucao-cnbio-n-7-de-7-de-novembro-de-2025-668938516

FIGURE 9. Deforested area in 2025 in the Cerrado biome (In km²)



Source: INPE/Deter

The plan is expected to act in parallel with command and control actions in the fight against deforestation, especially in the Amazon. The goals of the plan are to be defined by February 2026.

Between August 2024 and July 2025, the calculation period for the official deforestation rate, the number of inspection operations was almost 148% higher than in the same previous period. The number of environmental crime occurrences jumped from 932 to 1,754. Over 75 public civil actions were filed by the Attorney General's Office and Ibama against deforestation and fires in the region.

Integrated firefighting via presidential decree[7] and stricter rules that prohibit the granting[8] of credit to deforesters or rural property owners in an irregular situation in the Rural Environmental Registry were relevant measures against environmental fraud. Up to August 2025 alone, almost 6,500 credit operations were blocked, according to the Central Bank.

Among the 81 municipalities considered priority in the fight against deforestation[9], 70 mayors joined the fight against forest degradation. They rely on federal public resources for local actions. In 78% of these municipalities, deforestation fell; in 22%, deforestation increased, according to the Ministry of the Environment, in a balance sheet presented in August. The Cerrado biome also has a list of 60 priority municipalities for combating deforestation[10].

(7) https://legislacao.presidencia.gov.br/atos/?tipo=DEC&numero=12173&ano=2024&ato=5d9kXWq5ENZpWT22c
(8) https://www.bcb.gov.br/estabilidadefinanceira/exibenormativo?tipo=Resolu%C3%A7%C3%A3o%20CMN&numero=5193
(9) https://www.gov.br/mma/pt-br/assuntos/controle-ao-desmatamento-queimadas-e-ordenamento-ambiental-territorial/programa-uniao-com-municipios
(10) https://pesquisa.in.gov.br/imprensa/servlet/INPDFViewer?jornal=515&pagina=57&data=04/12/2024&captchafield=firstAccess

FIGURE 10. Priority municipalities for actions to prevent, control, and reduce deforestation and forest degradation, and municipalities with monitored and controlled deforestation

- Municipalities that joined the program
- Municipalities that did not join the program

1 AC Feijó
2 AC Manoel Urbano
3 AC Rio Branco
4 AC Sena Madureira
5 AC Tarauacá
6 AM Apuí
7 AM Boca do Acre
8 AM Canutama
9 AM Humaitá
10 AM Itapiranga
11 AM Lábrea
12 AM Manaus
13 AM Manicoré
14 AM Maués
15 AM Novo Aripuanã
16 MT Apiacás
17 MT Aripuanã
18 MT Bom Jesus do Araguaia
19 MT Cláudia
20 MT Colniza
21 MT Comodoro
22 MT Confresa
23 MT Conquista D'Oeste
24 MT Cotriguaçu
25 MT Feliz Natal
26 MT Gaúcha do Norte
27 MT Guarantã do Norte
28 MT Juara
29 MT Juina
30 MT Marcelândia
31 MT Nova Bandeirantes
32 MT Nova maringá
33 MT Nova Ubiratã
34 MT Paranaita
35 MT Paranatinga
36 MT Peixoto de Azevedo
37 MT Porto dos Gaúchos
38 MT Querência
39 MT Ribeirão Cascalheira
40 MT Rondolândia
41 MT Santa Terezinha
42 MT São Félix do Araguaia
43 MT São José do Xingu
44 MT União do Sul
45 MT Vila Bela da Santíssima Trindade
46 PA Altamira
47 PA Anapu
48 PA Bannach
49 PA Cumaru do Norte
50 PA Dom Eliseu
51 PA Itaituba
52 PA Itupiranga
53 PA Jacareacanga
54 PA Marabá
55 PA Medicilândia
56 PA Moju
57 PA Mojuí dos Campos
58 PA Novo Progresso
59 PA Novo Repartimento
60 PA Pacajá
61 PA Paragominas
62 PA Placas
63 PA Portel
64 PA Prainha
65 PA Rondon do Pará
66 PA Rurópolis
67 PA Santa Maria das Barreiras
68 PA Santana do Araguaia
69 PA São Félix do Xingu
70 PA Senador José Porfírio
71 PA Trairão
72 PA Ulianópolis
73 PA Uruará
74 RO Buritis
75 RO Candeias do Jamari
76 RO Cujubim
77 RO Machadinho D'Oeste
78 RO Nova Mamoré
79 RO Porto Velho
80 RR Mucajaí
81 RR Rorainópolis

Source: Ministry of Environment and Climate Change (MMA)

In parallel with the fight against deforestation, the recovery of native vegetation has advanced. At the end of 2024, the government announced the revision of the National Native Vegetation Recovery Plan (Planaveg), with the goal of recovering 12 million hectares by 2030[11]. This is the same target as the first Brazilian NDC, announced in 2016.

During the COP, the Ministry of the Environment announced[12] that 3.4 million hectares of native vegetation had been restored, slightly more than a quarter of the 2030 target. Most of these 3.4 million hectares correspond to natural regeneration in Conservation Units and Indigenous Lands.

Data on the program's progress are incipient, although there are estimates in the analysis document of the cross-cutting environmental agenda, published by the Ministry of Planning in partnership with the Inter-American Development Bank (IDB)[13], Figure 11.

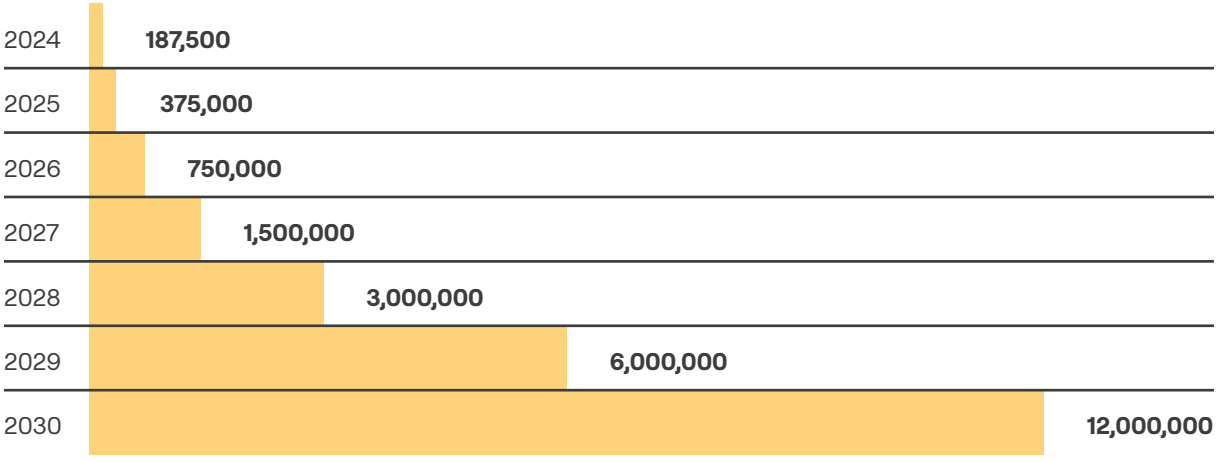
The recovery of native vegetation is one of the most relevant assumptions considered in the Climate Plan in its chapter on land use and forests, and it relies primarily on the recovery of environmental liabilities on rural properties.

In addition to meeting the target of recovering 12 million hectares by 2030 and recovering an additional 8.9 million hectares in the period up to 2050, the Climate Plan considered as assumptions the elimination of illegal deforestation by 2030, the reduction of the legal clearing of native vegetation through economic incentives, and the compensation for the legal clearing of native vegetation from 2030 onwards.

In the set of projections of the Climate Plan, as mentioned above, the largest contribution to reducing emissions falls to the land-use sector. An analysis of the Climate Plan's tables reports that reducing deforestation and forest restoration will be responsible for the reduction and capture of up to 1.084 gigatonnes of carbon dioxide equivalent in the most ambitious target for 2035.

The fight against deforestation in public areas, protected forests in both conservation units and indigenous lands, and forest restoration in public areas and protected territories will account for the reduction or capture of 698 million tonnes of carbon between 2022 and 2035.

FIGURE 11. Area of native vegetation cover under recovery (In hectares)



Source: Integrated Planning and Budget System – SIOP (Data from December 2023)

(11) https://www.gov.br/mma/pt-br/composicao/sbio/dflo/plano-nacional-de-recuperacao-da-vegetacao-nativa-planaveg
(12)https://www.gov.br/mma/pt-br/noticias/brasil-anuncia-3-4-milhoes-de-hectares-em-processo-de-restauracao-no-ambito-do-planaveg-durante-a-cop30
(13) https://www.gov.br/planejamento/pt-br/assuntos/noticias/2024/fevereiro/relatorio-sintetiza-a-importancia-e-o-grau-de-transversalidade-da-agenda-ambiental-no-ppa-2024-2027/agente-transversal-meio-ambiente.pdf

TABLE 3. Breakdown of sectoral targets for 2030 and 2035 in the Sectoral Plan for Public Lands and Collective Territories

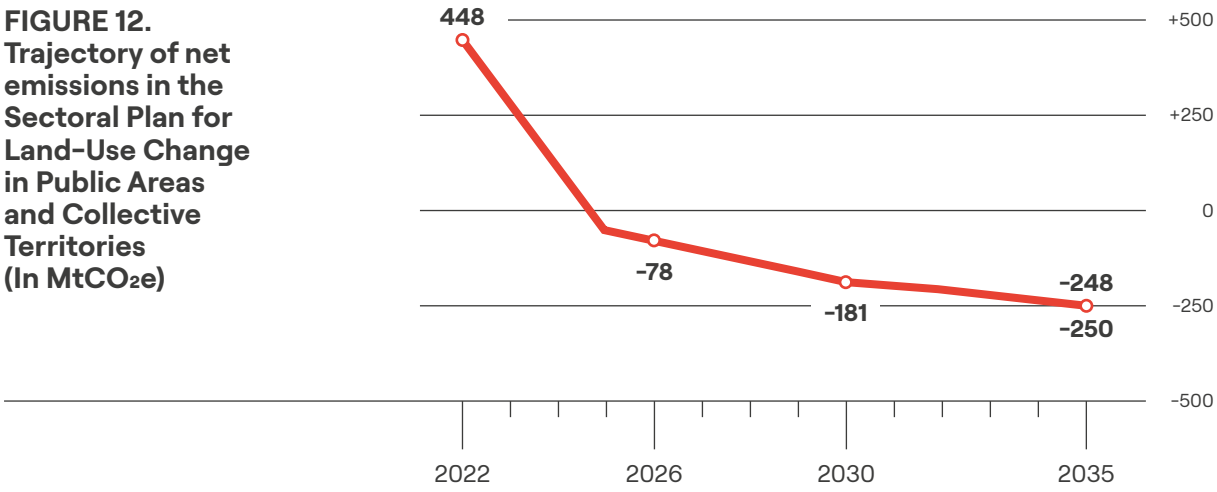
PUBLIC LANDS AND COLLECTIVE TERRITORIES	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
Clearing of native vegetation and land-use and land-cover conversion in public lands and collective territories	**710**	**107**	**-85%**	**46**	**48**	**-94%**	**-93%**
CUs, ILs, Quilombola territories, and rural settlements	**294**	**107**	**-85%**	**46**	**48**	**-94%**	**-93%**
Public land tracts	**143**						
Data gap	**273**						
Maintenance and recovery of native vegetation in public lands and collective territories	**-262**	**-288**	**+10%**	**-296**	**-296**	**+13%**	**+13%**
CUs, ILs, Quilombola territories, and rural settlements	**-233**	**-288**	**+10%**	**-296**	**-296**	**+13%**	**+13%**
Public land tracts	**-6**						
Data gap	**-23**						
TOTAL	**448**	**-181**	**-140%**	**-250**	**-248**	**-156%**	**-155%**

Source: National Mitigation Strategy – Climate Plan (2024-2035)

The sectoral plan for land-use change in public areas and collective territories projects a steep curve as early as 2025, yet to be confirmed. Following pressure from the agriculture and livestock sector, the fight against deforestation on rural properties reduced its share in the drop of greenhouse gas emissions to 386 million tonnes of carbon in the most ambitious target. The final version of the Climate Plan records remaining emissions from deforestation on these properties of between 201 and 205 million tonnes of carbon equivalent in 2035.

Meanwhile, the recovery of native vegetation and the conversion of degraded pastures will account for the capture of an additional 128 million tonnes of carbon from the atmosphere by 2035 compared to 2022.

FIGURE 12. Trajectory of net emissions in the Sectoral Plan for Land-Use Change in Public Areas and Collective Territories (In $MtCO_2e$)



These results regarding the fight against deforestation and forest restoration were allocated to two different sectoral plans, analyzed here together in the land use and forests sector.

If the Climate Plan's concentrated efforts in fighting deforestation and recovering native vegetation do not produce the expected results, emission cuts will have to occur in the other sectors of the economy. Target tracking will be annual, through monitoring and evaluation reports, one of the pillars of climate governance.

TABLE 4. Breakdown of targets related to Land-Use Change on Rural Properties for 2030 and 2035

LAND-USE CHANGE ON RURAL PROPERTIES	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
Clearing of native vegetation and land-use and land-cover conversion on rural properties (LULUCF)	459	326	-29%	201	205	56%	55%
Maintenance and recovery of native vegetation in productive sector areas, pasture recovery, commercial forests (LULUCF)	-107	-220	+106%	-235	-235	-119%	-119%
TOTAL	352	106	70%	-34	-30	110%	109%

Source: National Mitigation Strategy – Climate Plan (2024-2035)

AGRICULTURE AND LIVESTOCK

STILL MISALIGNED WITH THE CLIMATE AGENDA

The final version of the Climate Plan, approved on December 15, 2025, after tough negotiations, removed the commitment to fighting deforestation and limited the reduction of greenhouse gas emissions from the sector to a maximum of 6%, in a share that exceeds 30% of Brazilian emissions.

Table 5 shows that the targets for both 2030 and 2035 allow for a slight increase in emissions in the group dominated by enteric fermentation – the digestive process of cattle. In the Climate Plan's most ambitious scenario for 2035, emissions from this group would fall by 6%.

The relationship of the agriculture and livestock sector with the climate agenda has proven difficult. While accounting for a considerable share of greenhouse gas emissions in Brazil, agricultural activity resists reducing emissions, even though it relies heavily on climate stability to produce.

So far, the main policy aimed at reducing emissions from the sector is the ABC Plan, renamed in its most recent version (from 2020 to 2030) as the Sectoral Plan for Climate Change Adaptation and Low Carbon Emission in Agriculture, with a view to Sustainable Development. Or, in the leaner version: the Plan for Adaptation and Low Carbon Emission in Agriculture – ABC+.

Although the Plan has already completed 25 years since its first phase, the Biennial Transparency Report (BTR) exposed obstacles in evaluating its results. According to the report, the SICOR ABC+, a Central Bank of Brazil system for registering rural credit operations related to the ABC+ Plan, had difficulty obtaining data to "respond to the indicators, targets, and commitments established in the ABC+." Note that the ABC+ mitigation target, measured in millions of Mg of CO_2e by 2030, is very far from the emissions of 622 million tonnes of CO_2e in 2022, recorded in the sector in a single year.

TABLE 5. Targets for 2030 and 2035 in the Sectoral Plan for Agriculture and Livestock

AGRICULTURE AND LIVESTOCK	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
Enteric fermentation	**404**	**628**	**+1%**	**582**	**634**	**-6%**	**+2%**
Manure management	**29**						
Rice cultivation	**12**						
Managed soils	**145**						
Liming	**27**						
Urea application	**5**						
Fuel combustion	**21**	**21**	**0%**	**17**	**19**	**-19%**	**-10%**
TOTAL	**643**	**649**	**+1%**	**599**	**653**	**-7%**	**+2%**

TABLE 6. Targets of the ABC+ Plan

TECHNOLOGIES		TARGET (In millions)	MITIGATION (In millions) Mg CO_2 eq
Practices for the recovery of degraded pastures (PRPD) • (in ha)		**30.0**	**113.7**
No-till Farming System (SPD)	No-till farming system for grains (SPDG) • (in ha)	**12.5**	**12.1**
	No-till farming system for vegetables (SPDH) • (in ha)	**0.08**	**0.88**
Integration Systems (SIN)	Crop-Livestock-Forest Integration (ILPF) • (in ha)	**10.0**	**34.1**
	Agroforestry Systems (SAF) • (in ha)	**0.1**	**37.9**
Planted Forests (FP) • (in ha)		**4.0**	**510.0**
Bioinputs (BI) • (in ha)		**13.0**	**23.4**
Irrigated Systems (SI) • (in ha)		**3.0**	**50.0**
Animal Production Waste Management (MRPA) • (in m^3)		**208.4**	**277.8**
Intensive Finishing (TI) • (in number of animals)		**5.0**	**16.24**
TOTAL ABC+	**(in hectares)**	**72.68**	**1,076.12 Mg CO2 eq**
	(in m^3)	**208.4**	
	(in number of animals)	**5.0**	

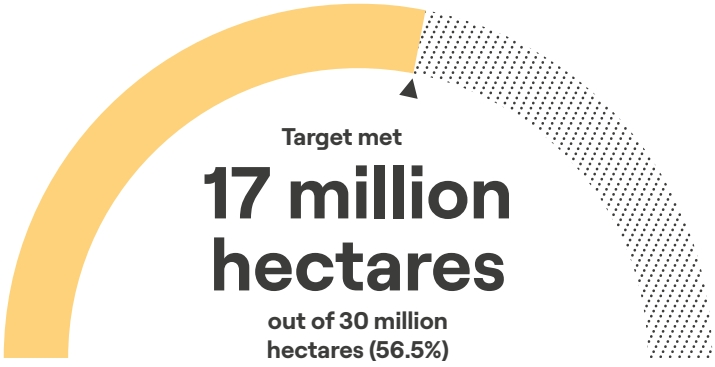
Source: Ministry of Agriculture and Livestock (MAPA)

The ABC+ results tracking dashboard[14] on the Ministry of Agriculture and Livestock (MAPA) website has data updated only up to 2022 and restricted to the recovery of degraded pastures. According to this dashboard, out of the target to recover 30 million hectares of degraded pastures, 16.9 million hectares would have already been recovered. In other words, the target for the period would have already been met by more than 56%.

However, this information does not align with the National Program for the Conversion of Degraded Pastures, created in 2023 and renamed in 2025 as "Caminho Verde"[15], with the goal of recovering 40 million hectares of degraded pastures in 10 years. This program relies on resources mobilized in the second Eco Invest auction (see more in the chapter: Climate Finance – a major challenge, but the cost is lower than inaction).

FIGURE 13. Areas of recovered pastures under the ABC+ Plan

Practices for the Recovery of Degraded Pastures – PRPD (In millions of hectares)



Recovery of degraded pastures and the number of properties served year by year (In hectares)

YEARS PRPD		PROPERTIES
2024	7,396,759	1,251,234
2025	6,615,203	1,056,005
2026	2,929,497	516,736

Source: Ministry of Agriculture and Livestock (MAPA)

(14) https://dd.serpro.gov.br/publico/sense/app/1a98b6b3-82eb-467f-bcbb-b48a31161144/sheet/88d4a99a-af35-4556-a160-6807baaaac57/state/analysis
(15) https://www.gov.br/agricultura/pt-br/campanhas/caminho-verde

The Sectoral Plan for Agriculture and Livestock points out financial barriers and a lack of greater technical training for the large-scale adoption of ABC+ Plan technologies. But the fact is that only a small portion of the Safra Plan, for rural production financing, is allocated to technologies that reduce greenhouse gas emissions from the activity. This year, R$ 516.2 billion was announced for commercial agriculture.

A study by the Talanoa Institute[16] released in July shows that the Program for Financing Sustainable Agricultural Production Systems (RenovAgro), the main investment line in so-called low-carbon agriculture, with R$ 8.15 billion projected, accounts for the equivalent of 17.14% of the share of investments with interest rates equalized with taxpayer money. The Talanoa Institute has been advocating that loans featuring interest rates subsidized by federal funds should be entirely directed toward low-carbon agriculture and livestock

Renovagro accounts for only 8% of the total investment of the 2025/2026 Safra Plan, considering free market interest rates, controlled interest rates without public funds, and equalized interest rates. Out of the total amount of resources for both working capital and investments announced in July, only 1.6% is for production more aligned with the commitments made by Brazil in the climate agenda, while the majority is still directed toward traditional agriculture and livestock.

The Safra Plan for Family Farming, with a forecast of R$ 89 billion for small farmers, places greater emphasis on the context of the climate crisis, as credit lines were created to support agroecology, sustainable irrigation, and adaptation to climate change.

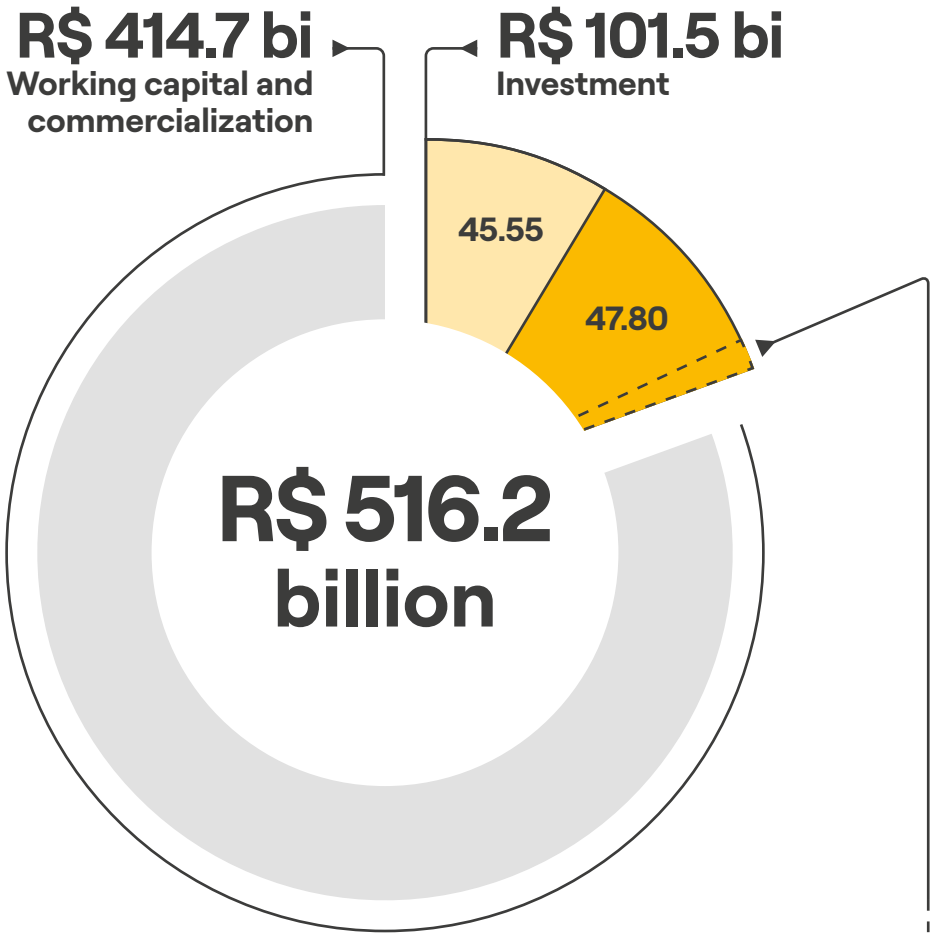
Family farming also features innovative actions in the Sectoral Plan for Agriculture and Livestock, such as the implementation of productive agroecological corridors in metropolitan regions. It is an action that, as the plan states, articulates food security and the reduction of greenhouse gas emissions, not only by capturing carbon in the soil but also by reducing emissions associated with food transport.

Freight transport is one of the biggest challenges in reducing emissions from burning fossil fuels, as will be seen in the following chapter. Agroecological corridors have the additional advantage of an estimated medium to low investment in the Climate Plan.

A relevant innovation in the Safra Plan was the alignment of a larger part of the financing to compliance with the Agricultural Climate Risk Zoning (ZARC)[17], a measure aimed at reducing losses caused by climate events. To have access to Rural Insurance (with public subsidy) or the Agricultural Activity Guarantee Program (Proagro), which consumed almost R$ 7 billion in public resources this year, producers must follow lower climate risk windows. In September, a resolution by the National Monetary Council (CMN) opened a credit line of R$ 12 billion to refinance producers who have suffered crop losses since 2020[18].

(16) https://politicaporinteiro.org/2025/07/02/plano-safra-2025-2026-investimentos-em-agropecuaria-de-baixo-carbono-avanca-menos-do-que-o-necessario-enquanto-plano-para-agricultura-familiar-sinaliza-maior-alinhamento-aos-compromissos-climaticos/
(17) https://www.gov.br/agricultura/pt-br/assuntos/riscos-seguro/programa-nacional-de-zoneamento-agricola-de-risco-climatico/zoneamento-agricola
(18) https://www.in.gov.br/en/web/dou/-/resolucao-cmn-n-5.247-de-19-de-setembro-de-2025-657189655

FIGURE 14. Low-carbon investments represent 1.6% of the 2025/2026 commercial Safra Plan



R$ 8.15 BILLION IS PROJECTED FOR RENOVAGRO, a program that finances sustainable practices in agriculture and livestock

- RECOVERY OF DEGRADED PASTURES
- VEGETATION REPLACEMENT IN PRESERVATION AREAS (APP AND RL)
- CROP-LIVESTOCK-FOREST INTEGRATION (ILPF)
- ORGANIC AND AGROECOLOGICAL AGRICULTURE
- USE OF BIOINPUTS AND BIOFERTILIZERS
- IMPLEMENTATION OF RENEWABLE ENERGY
- FOREST FIRE PREVENTION AND COMBAT ACTIONS

Source: Ministry of Agriculture and Livestock (MAPA) and Secretariat of Agricultural Policy (SPA)

ENERGY
A BUMPY TRANSITION

It may have gone unnoticed, but Brazil hit a historic record in July of this year. According to the National Agency of Petroleum, Natural Gas and Biofuels (ANP), total oil and gas production in the month surpassed the mark of 5 million barrels of oil equivalent per day. Oil production was 22.5% higher than in July 2024, and natural gas production in July grew 26.1% compared to the same period.

The following day, still in early September, Petrobras CEO Magda Chambriard declared that the state-owned company will maintain priority on fossil fuel production until 2035; the company's production of renewable energy (solar, wind, and green hydrogen) would be left for after that date. Petrobras claims to be a "leader in the energy transition," but its business plan for the 2026-2030 period brought a reduction of almost 20% in investments in renewable energy, especially wind, solar, and biorefining.

At the opening of the COP30 proceedings, President Luiz Inácio Lula da Silva advocated a "roadmap" to end dependence on fossil fuels, the largest source of greenhouse gas emissions on the planet. A few days after the end of the COP, a presidential dispatch set a deadline of early February 2026 for the Ministries of Mines and Energy, Finance, Environment, and the Chief of Staff (Casa Civil) to present a proposed resolution to the National Council for Energy Policy (CNPE) with a roadmap for the "gradual reduction of dependence on fossil fuels in the country."

But the transition away from fossil fuels established in the final declaration of the Dubai COP in 2023 remains without a defined schedule in Brazil, as in the rest of the world.

There have been several moments when Brazilian climate policy went against the projections of the International Energy Agency (IEA), which point to a reduction in oil demand by the end of this decade.

TABLE 7. Breakdown of targets for Energy emissions in the sectoral plans

ENERGY	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
Energy production	80	106	33%	81	115	1%	44%
Transport	116	126	9%	107	134	-8%	16%
Urban mobility	100	99	-1%	58	94	-42%	-6%
Buildings	30	19	-37%	18	18	-42%	-41%
Industry (Fuel combustion)	71	74	4%	76	95	7%	34%
Agriculture, fishing and aquaculture (Fuel combustion)	21	21	0%	17	19	-19%	-10%
TOTAL	**418**	**445**	**6%**	**356**	**475**	**-15%**	**14%**

Also in September, the Ministry of Mines and Energy changed the rules for contracting capacity reserve and two auctions scheduled for March 2026, which will contract coal-fired power plants and oil and diesel thermal plants. Biodiesel plants were left out. In the days following COP30, the government failed to veto an incentive for coal plants in the law reorganizing the electricity sector. As a result, until 2040, there will be a compulsory purchase of electricity produced by coal-fired power plants with contracts in force on December 31, 2022, and scheduled to end no later than December 31, 2028.

More seriously, the Climate Plan, in the version submitted for public consultation, does not clearly indicate a reduction in the production or consumption of fossil fuels.

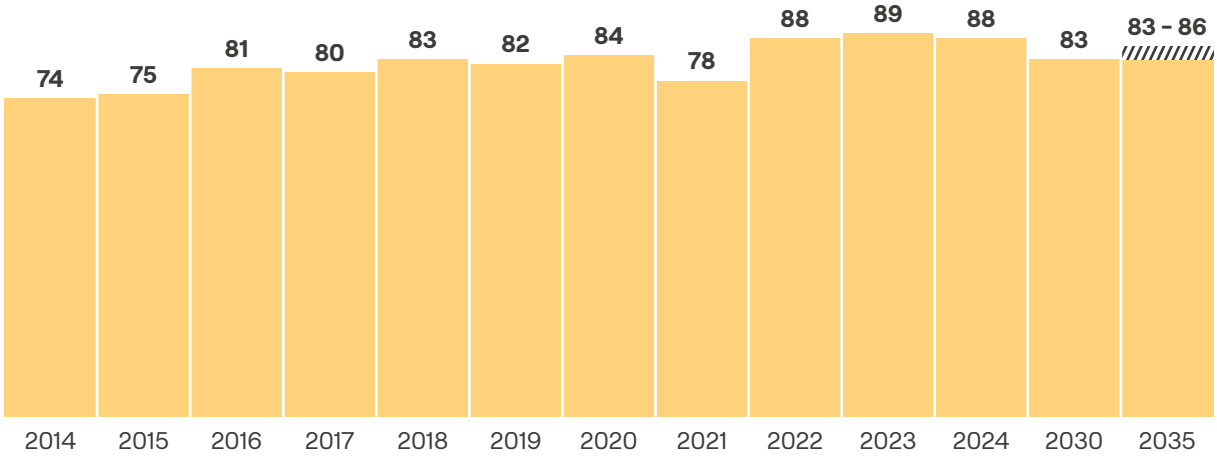
The emissions officially accounted for in the energy sector were distributed for the purposes of the National Mitigation Strategy into five different sectoral plans. In order of magnitude, they are: Transport, Cities (both for urban mobility and building emissions), Energy Production, Industry, and Agriculture.

In the set of actions dealing with energy production and consumption, the Climate Plan projects an increase of up to 14% in greenhouse gas emissions by 2035. In the most optimistic hypothesis of staying at the floor of the band of our climate commitment in this period, a 15% reduction in emissions would occur. There is greater pressure on the continuity or increase in the burning of fossil fuels in energy production, industry, and transport, with the possibility of increasing their emissions by 44%, 34%, and 16%, respectively, by 2035. What draws attention in the Sectoral Plan for Energy Production is the projected drop in the percentage of renewable sources in electricity generation.

The first of the plan's "impactful actions" talks about meeting the increase in demand by maintaining or increasing the percentage of renewability in the electricity matrix. The numbers, however, point in another direction.

Considering not only the National Interconnected System (SIN) but also isolated systems, electricity imports, and self-production not injected into the grid, the Brazilian electricity matrix is 88.2% renewable, according to data from the National Energy Balance[19]. The Climate Plan's targets are 82.7% renewability in 2030 and something between 82.7% and 86.1% in 2035. In other words, the Brazilian electricity matrix, a kind of national pride, will become less clean within the horizon of the Climate Plan.

FIGURE 15. Renewability of the electricity matrix (In %)



Source: National Energy Balance 2025 – Synthesis (base year 2024), EPE and Climate Plan

(19) https://www.epe.gov.br/sites-pt/publicacoes-dados-abertos/publicacoes/PublicacoesArquivos/publicacao-885/topico-767/BEN_S%C3%ADntese_2025_PT.pdf

The text submitted for public consultation mentions financial barriers, especially for energy storage technologies, as well as obstacles such as the intensive use of strategic minerals in batteries. And it justifies that it considered a historical average of renewability, since hydroelectric generation is subject to variations due to extreme climate events. Periods of drought reduce power generation by hydroelectric plants.

Other actions called "impactful" stem from the Fuels of the Future law(20), approved in 2024, and relate to the use of biofuels and the production of sustainable aviation fuel (SAF). The addition of biodiesel and ethanol to diesel and gasoline rises, respectively, to 20% and 30% in 2030, and to 25% and 35% in 2035. Since August 2025, the addition of ethanol to gasoline is already at 30%. Since then, the blending of biodiesel into diesel is 15%.

National production of synthetic fuels will rise to 1.6 billion liters in 2030 and to somewhere between 2.6 and 4.5 billion liters of SAF and green diesel in 2035, also according to the Climate Plan targets. The increase in biomethane production is also on the list of impactful actions, with lower greenhouse gas emissions compared to (fossil-based) gas.

Transport leads energy consumption in Brazil (33.2%), mainly due to road freight transport. Following this are industries (31.7%) and residences (10.8%).

TABLE 8. Distribution of the carbon budget in the Sectoral Plan for Transport

TRANSPORT	2022 Total ($MtCO_2e$)		2030 Target ($MtCO_2e$)		Variation (%) 2030/2022	2035 Target ($MtCO_2e$)				Variation (%) 2035/2022	
						Lower		Upper		Lower	Upper
Medium trucks	12	89	9	85	-5%	6	69	8	85	-22%	-4%
Semi-heavy trucks	32		31			24		29			
Heavy trucks	45		45			39		48			
Intercity buses	11		16		44%	9		16		-15%	43%
Rail transport	3		4		37%	4		5		37%	60%
Domestic navigation	4		4		8%	4		5		-3%	23%
Domestic aviation	9		17		93%	20		24		126%	162%
TOTAL	**116**		**126**		**9%**	**107**		**134**		**-8%**	**16%**

Source: National Mitigation Strategy – Climate Plan (2024-2035)

(20) https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/lei/l14993.htm

TABLE 9. Distribution of the carbon budget in the Sectoral Plan for Cities

TRANSPORT	2022 Total ($MtCO_2e$)		2030 Target ($MtCO_2e$)		Variation (%) 2030/2022	2035 Target ($MtCO_2e$)				Variation (%) 2035/2022	
						Lower		Upper		Lower	Upper
Automobiles	69	100	68	99	-1%	44	58	65	94	-42%	-6%
Motorcycles	5		5			4		5			
Urban buses and minibuses	14		15			3		14			
Light trucks	12		12			7		11			
Buildings (residential)	27	30	19		-37%	18		18		-42%	-41%
Buildings (commercial)	3										
Settlements (net)	6		3		-50%	0		0		100%	-100%
TOTAL	136		121		-11%	75		111		-45%	-18%

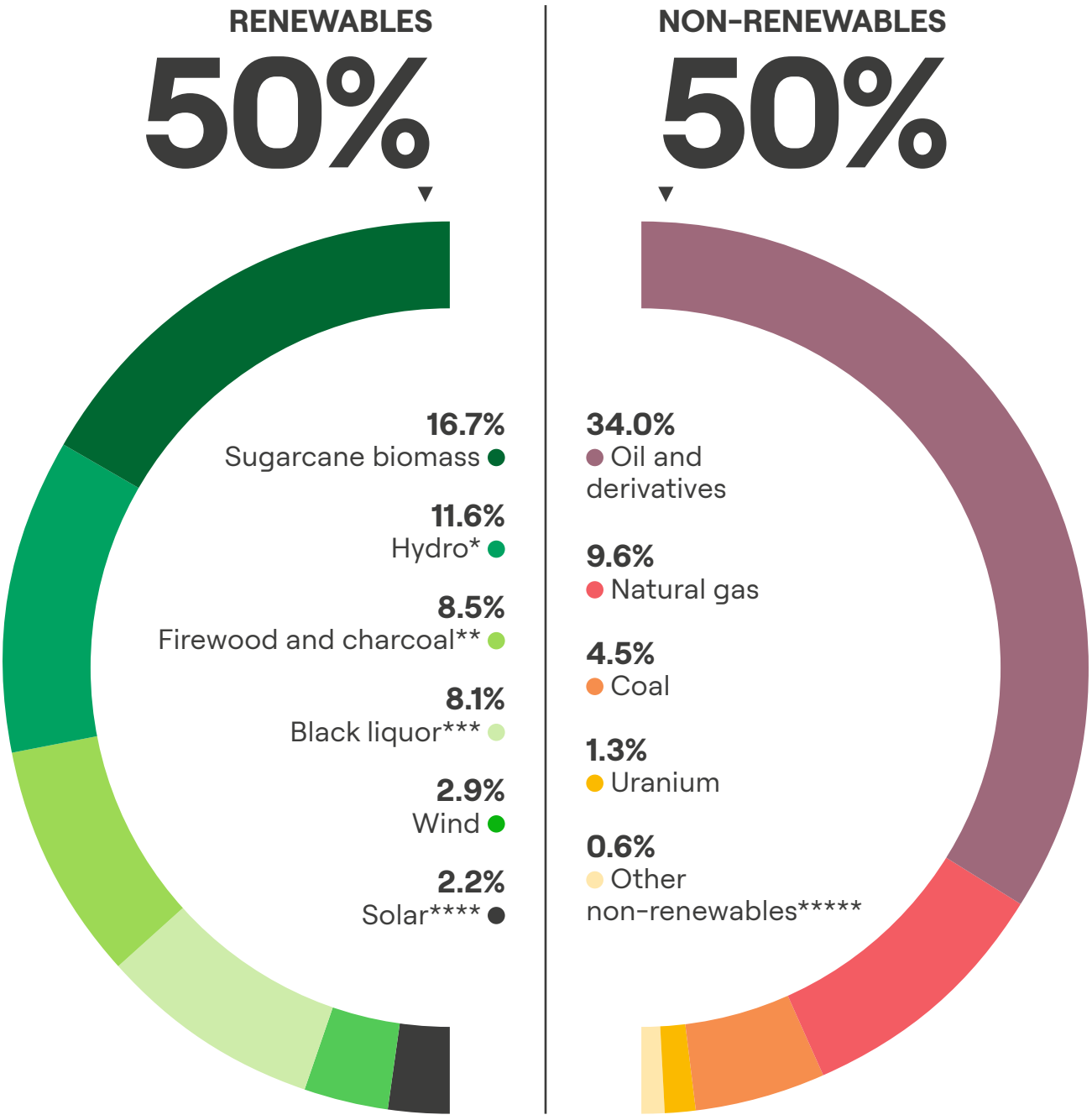
In the Climate Plan, these transport emissions, officially accounted for in the energy sector in the national greenhouse gas inventory, appear allocated in the sectoral plans for transport and cities, with their respective targets for both 2030 and 2035.

There is no target in the Climate Plan regarding the renewability percentage of the Brazilian energy matrix, which reached 50% in 2024, well above the 14.3% average for renewable sources in the world. In Brazil, oil still accounts for 34% of the domestic energy supply. Together with natural gas and coal, fossil sources total 48.1% of the energy matrix. With an electricity matrix that is retreating in its percentage of renewable sources and an energy matrix with no clear indication of a gradual phase-out of fossil fuels by 2035, one might ask: what kind of energy transition is this?

Here is the explanation provided in the Climate Plan: "While in other countries the transition is associated with significant changes in their matrices, in Brazil the challenge is how to best harness the benefit of the diversity of renewable sources and explore their possible complementarities and synergies to maintain energy security, reduce energy poverty, and further decrease GHG emissions."

The Sectoral Plan for Energy Production leaves the "intensification of the transition in the oil and gas sector" for the period between 2035 and 2050, in a future stage of the energy transition, supposedly deeper, which would include the consolidation of renewable and low-emission sources, the broad and integrated adoption of storage systems, the production and use of low-emission hydrogen, the increasing use of bioenergy, synthetic fuels, and Bioenergy with Carbon Capture and Storage (BECCS), in addition to the expansion of the nuclear matrix.

FIGURE 16. Breakdown of the Domestic Energy Supply in 202



* Includes electricity imports
** Includes wood chips
*** Includes black liquor, biodiesel, other biomasses, biogas, and industrial charcoal gas
**** Includes Solar Photovoltaic (distributed and centralized generation) and Solar Thermal sources
***** Includes natural gas liquids, blast furnace gas, steelworks gas, sulfur gas, and others

Source: National Energy Balance 2025 – Synthesis (base year 2024), EPE

A key piece in the Brazilian energy transition, biofuel production has estimated investments of R$ 110 billion between 2025 and 2035[21], according to studies by the Energy Research Office (EPE) for the 2035 Decennial Plan. The largest share of these investments would go toward the production of sustainable aviation fuel (SAF) and low-carbon hydrogen, the expansion of sugarcane fields (maintaining sugarcane as the main raw material for ethanol production), and also the production of corn ethanol.

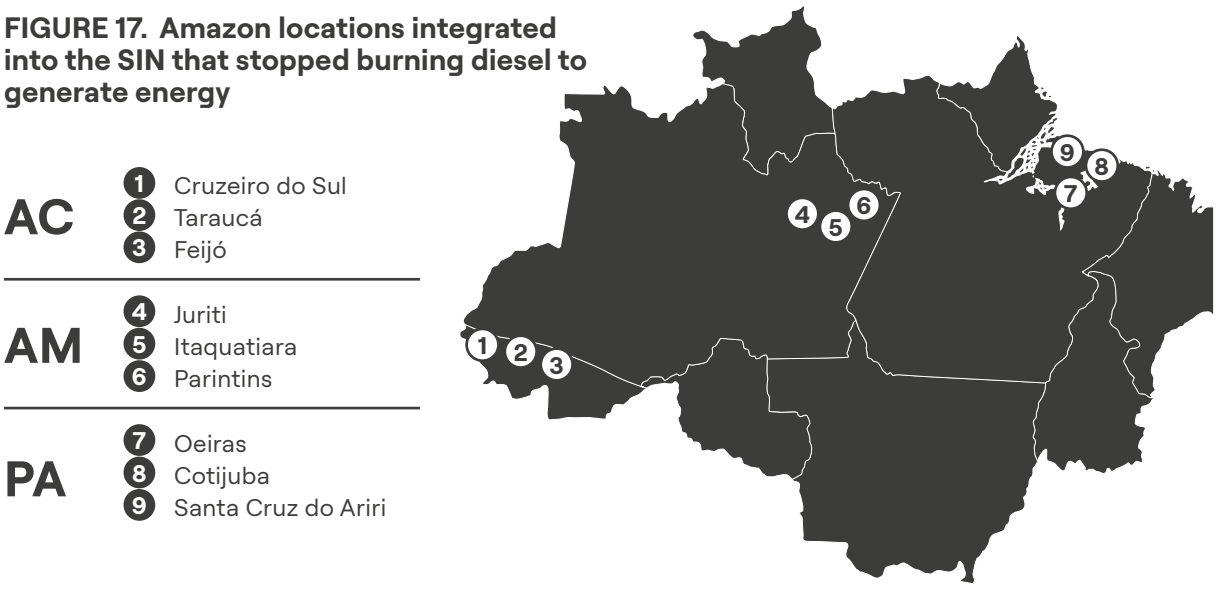
In 2025, the energy transition of isolated systems in the Amazon advanced, replacing generation by diesel thermal plants, although without measured results in terms of greenhouse gas emission reductions. The Energies of the Amazon Program, launched in 2023, connected the following locations to the National Interconnected System (SIN): Cruzeiro do Sul, Feijó, and Tarauacá in Acre; Parintins, Itacoatiara, and Juruti in Amazonas; and Oeiras do Pará, Cotijuba, and Santa Cruz do Arari in Pará. By the end of the year, the Ministry of Mines and Energy expects to complete the transmission line between Manaus (AM) and Boa Vista (RR), the only Amazonian capital still in an isolated system. And the next auctions for isolated systems are already expected to have a minimum percentage of 22% renewable energy.

The expansion of renewable energy supply also suffered setbacks in 2025. The main one was the curtailment (cuts) in wind and solar generation ordered by the National Electric System Operator (ONS) to avoid overloading the grid. The excess supply of clean energy could cause blackouts in the grid, hence the need for cuts. By mid-September, 4.3 thousand GWh ceased to be generated by these clean sources, a volume 230% higher than the amount of forced reduction for the entire year of 2024[22].

Solutions to the problem of excess renewable energy supply involve investments in transmission lines and mega-batteries to store this generation, in addition to installing highly energy-dependent facilities, such as data centers, close to the generation sites, and limiting the production of small solar systems.

Strongly associated with the energy transition agenda, the exploration of critical and strategic minerals had not yet gained a specific policy by the time this report closed. These are minerals used in wind and solar energy generation and in batteries for electric cars, for example.

FIGURE 17. Amazon locations integrated into the SIN that stopped burning diesel to generate energy



(21) https://www.gov.br/mme/pt-br/assuntos/noticias/estudo-projeta-expansao-da-producao-de-biocombustiveis-com-r-110-bilhoes-ate-2035
(22) https://oglobo.globo.com/economia/negocios/noticia/2025/09/22/cortes-obrigatorios-de-geracao-para-evitar-apagoes-levam-empresas-a-suspender-projetos-de-energia-solar-e-eolica.ghtml

The government chose to support the bill presented in the Chamber of Deputies with the support of the Brazilian Mining Institute (IBRAM), which had an urgency request approved for its voting in September but remains under deliberation.

Bill (PL) 2780/2024(23) proposes the creation of a Committee for Critical and Strategic Minerals chaired by the Minister of Mines and Energy and composed of 7 other ministers, representatives of states and municipalities, the private sector, and civil society. This committee's competencies would include supporting the licensing of the exploration of these minerals, as well as guaranteeing incentives for research and production. A worrying fact: the bill does not provide specific environmental safeguards, such as for mining in protected areas in the Amazon or on indigenous lands. Nor does it clearly guide the addition of value to these minerals within the national territory, allowing for the export of commodities.

In May, the Ministry of Mines and Energy presented estimates of reserves and production for a list of critical or strategic minerals, such as lithium, copper, nickel, niobium, rare earths, cobalt, vanadium, and graphite. The MME itself admits that mineral research in Brazil (and the consequent sizing of reserves) is still incipient, an area in which resources from the Federal Budget are being invested.

TABLE 10. Estimated reserves of strategic minerals

MINERAL	Brazil Reserve 2024 (t)	World Reserve 2024 (t)	Brazilian share
LITHIUM	1,370,000	30,000,000	4.4%
COPPER	11,200,000	980,000,000	1.1%
NICKEL	16,000,000	130,000,000	12.3%
NIOBIUM	16,000,000	17,000,000	94.1%
RARE EARTHS	21,000,000	90,000,000	23.3%
COBALT	70,000	11,000,000	0.6%
VANADIUM	120,000	18,000,000	0.7%
GRAPHITE	74,000,000	290,000,000	25.5%
SILICON (QUARTZ)	–.–	–.–	
MANGANESE	270.000.000	1,700,000,000	15.9%
ALUMINUM (BAUXITE)	2,700,000,000	29,000,000,000	9.3%

(23) https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra?codteor=2450892&filename=PL%202780/2024

INDUSTRIAL PROCESSES
LOW AMBITION

The Brazilian industry accounts for about 8.8% of the total greenhouse gas emissions in the country. Including fossil fuel combustion, the Climate Plan projects that emissions from the Brazilian industry will increase by up to 11% by 2030 and between 13% and 34% by 2035, compared to 2022 levels. At the end of this Climate Plan period, the industry's share of the country's total greenhouse gas emissions would jump from 8.8% to something between 23% and 24% in 2035.

The text of the sectoral plan for industry submitted to public consultation attributed this increase in emissions to the country's economic growth projections. Parallel to the increase in emissions, a gradual substitution of fossil fuels would occur. The goal would be to ensure the share of renewable energy sources in industrial consumption is above 65% in 2030 and 2035.

The use of (fossil) gas is projected for a longer period, replacing other more polluting fuels, such as coal and fuel oil, "while advancing the development of low-carbon solutions, such as biogas and biomethane, electrification, low-carbon hydrogen, industrial cogeneration, and carbon capture."

The sectoral plan text also states that its implementation faces "a significant set of risks and uncertainties of a technological, regulatory, economic, socio-political, and institutional nature."

The industry's sectoral targets do not seem to align with the industrial policy launched in 2024, known as Nova Indústria Brasil (NIB). Its Mission 5, with estimated public investments of R$ 88.3 billion in bioeconomy, decarbonization, and energy transition and security by 2033, planned to cut greenhouse gas emissions per value added of the industry's Gross Domestic Product (GDP) by 30% and raise the share of biofuels in the transport energy matrix by 50%, in addition to increasing the use of biodiversity.

In July, without estimates for greenhouse gas emission reductions, the government launched an incentive for the production and consumption of cleaner and more economical vehicles through a reduction in the rate of the Tax on Industrialized Products (IPI). Cars with lower emissions could have their tax rate zeroed. The incentive is part of the Mover Program (Green Mobility and Innovation) and would come into effect in 2025, with an expected validity until December 2026.

At the closing of this report, the release of a National Industrial Decarbonization Strategy (ENDI) was awaited.

TABLE 11. Breakdown of targets of the Sectoral Plan for Industry for 2030 and 2035

INDUSTRY	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
IPPU	102	120	18%	125	143	23%	40%
Fuel combustion	71	74	4%	76	95	7%	34%
Industrial wastewater	6	5	-17%	5	4	-17%	-33%
CCUS	0	-1	-.-	-3	-2	-.-	-.-
TOTAL	**179**	**198**	**11%**	**203**	**240**	**13%**	**34%**

WASTE

PROBLEM THAT CAN HELP WITH THE SOLUTION

Linked to waste and sewage treatment, the waste sector is responsible for about 4% of greenhouse gas emissions in the country. It represents a major challenge for cities like Rio de Janeiro, where it leads as the main source of global warming gas emissions; in São Paulo, it is the second largest source of emissions. In the Climate Plan, it is one of the sectors showing a drop in emissions in the period up to 2035, between 12% and 19%.

The sector is pointed out as part of the solution for the energy transition, through the utilization of gases produced in landfills and sewage treatment plants. Among the targets of the Sectoral Plan for Waste are the energetic utilization of 45% of the biogas generated in landfills and 25% of the biogas generated in domestic sanitary effluent treatment plants by 2035. The use of this biogas helps in substituting fossil fuels.

To speak of waste is to speak of sanitation policies, which are still far from universalization. Selective waste collection is present in only 32.2% of municipalities. Although 70% of collected waste is sent to sanitary landfills, many municipalities maintain open dumps and inadequate landfills.

Data from 2022 show that just over half of the Brazilian population has access to sewage networks, and just over half of the collected sewage undergoes treatment. Among the treatment systems, those with low efficiency in reducing greenhouse gases predominate, such as anaerobic lagoons and septic tanks with filters, without capturing gases for energetic utilization.

TABLE 12. Breakdown of targets of the Sectoral Plan for Waste

SOLID WASTE AND DOMESTIC WASTEWATER	2022 Total ($MtCO_2e$)	2030 Target ($MtCO_2e$)	Variation (%) 2030/2022	2035 Target ($MtCO_2e$)		Variation (%) 2035/2022	
				Lower	Upper	Lower	Upper
Solid waste disposal (managed sites)	44	49	-11%	45	49	-18%	-11%
Solid waste disposal (uncategorized sites)	10						
Biological treatment of solid waste	0						
Incineration	1						
Domestic wastewater	30	26	-13%	24	26	-20%	-13%
TOTAL	**85**	**75**	**-12%**	**59**	**75**	**-19%**	**-12%**

Source: National Mitigation Strategy – Climate Plan (2024-2035)

ADAPTATION

THE GREAT CHALLENGE OF IMPLEMENTATION

In mid-August 2025, the National Water and Basic Sanitation Agency recognized a "Critical Situation"[24] of water scarcity for more than two months in the rivers of the Juruá, Purus, and Acre river basins, which recorded water levels well below the average expected for this time of year. A situation that has been repeating itself since 2023 in the Amazon.

In the rest of the country, intense heat waves with record temperatures in the summer, and severe cold at the end of June, with heavy frost and snow in the South. Above-average rainfall in some regions of the country and drought events in others.

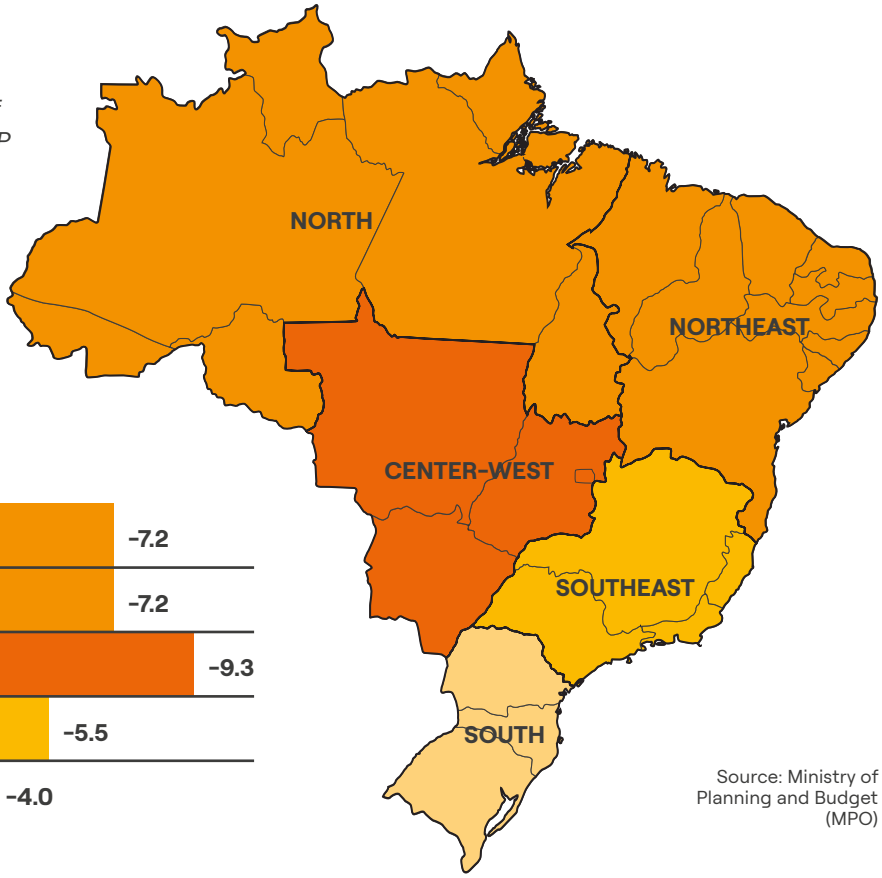
Even without recording this year a tragedy like the one that killed 169 people, affected the lives of another two million, and cost R$ 60 billion to the federal public coffers in 2024, the country reaches the end of the year with an estimate of how much extreme events caused by climate change could cost the country in the near future. Calculations made during the development of Strategy 2050, led by the Ministry of Planning, advance into the trillions of reais, which is expected to be released by the end of this year.

In a global warming scenario of 4 degrees Celsius, a highly undesirable scenario, the Brazilian economy could lose R$ 17 trillion, or the equivalent of one and a half GDPs by 2050. If the planet fails to curb greenhouse gas emissions, the country could lose more than 4 million jobs in this same scenario.

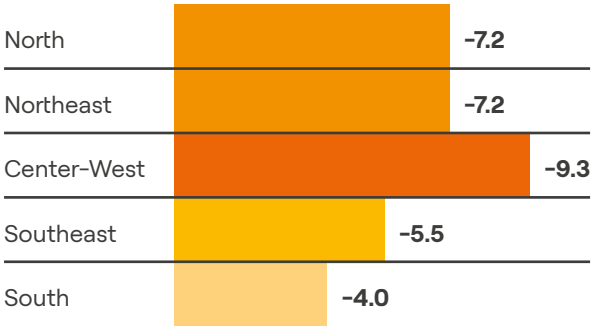
The latest official estimates indicate that climate change has already directly affected more than 113 million Brazilians in the last decade, in almost 5,000 municipalities, and with billions in losses.

FIGURE 18. Cost of inaction, estimated at R$ 17 trillion by 2050

Failure to meet the goals of the Paris Agreement could cause an accumulated loss of up to 5.9% in the Brazilian GDP by 2050 — the equivalent of R$ 17 trillion, about 1.5 times the projected GDP for 2024



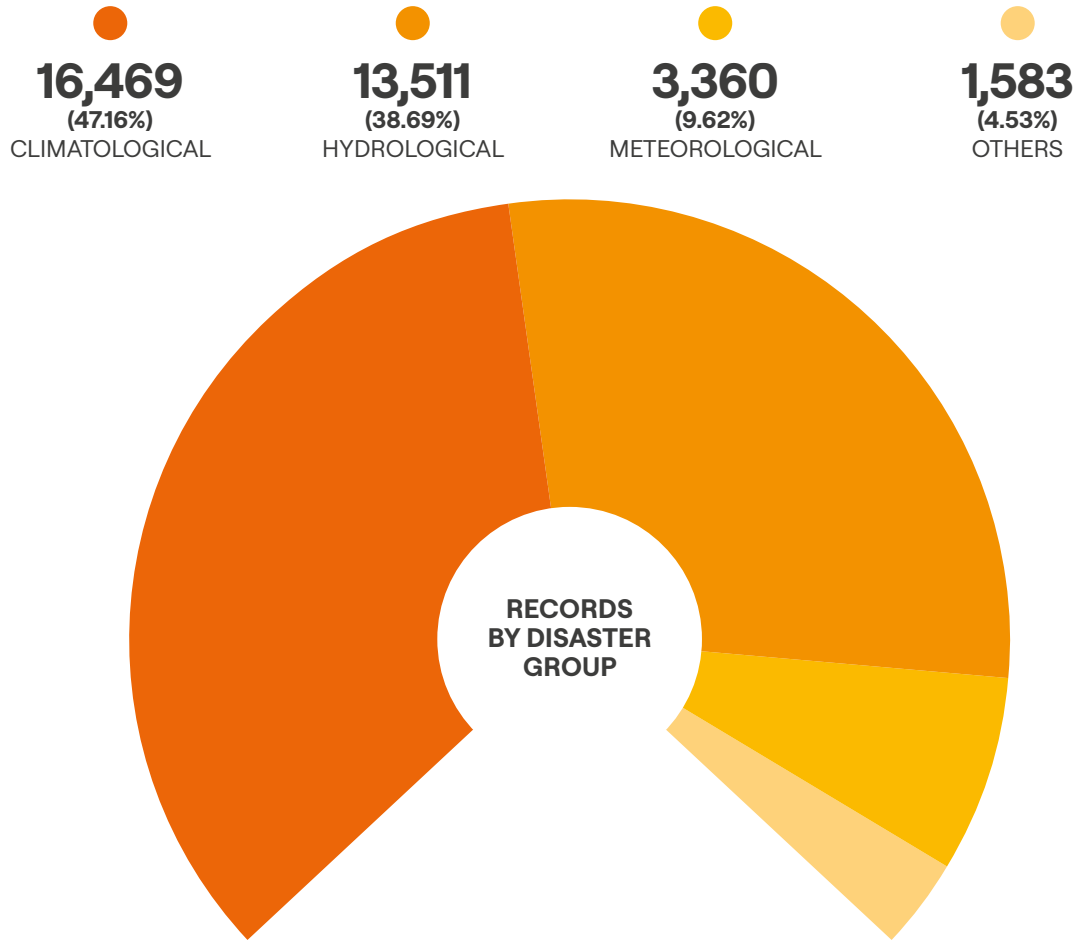
Impact on GDP by 2050 if warming is 4°C instead of 1.5°C in each region of the country



Source: Ministry of Planning and Budget (MPO)

(24) https://www.gov.br/ana/pt-br/assuntos/noticias-e-eventos/noticias/entra-em-vigor-a-declaracao-de-situacao-critica-de-escassez-quantitativa-dos-recursos-hidricos-nos-rios-amazonicos-jurua-purus-acre-e-iaco

FIGURE 19. Climate-related impacts in Brazil between 2015 and 2024

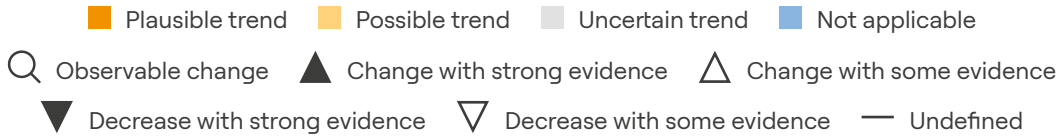


HUMAN DAMAGES	**4.80 million** Displaced and homeless	**1.10 million** Injured and sick	**113.44 million** Directly affected
MATERIAL DAMAGES	**68.20 billion** Material damages	**34.11 billion** Public losses	**353.19 billion** Private losses

Source: National Mitigation Strategy – Climate Plan (2024-2035)

Brazil is highly vulnerable to climate change, as indicated by studies used in the National Adaptation Strategy, to be officially launched later in 2025. Figure 20 shows an increase in the chances of all types of extreme events, such as heat waves, prolonged periods of drought, and heavy rainfall in all regions of the country, even under scenarios of 1.5°C global warming, which we are rapidly approaching.

FIGURE 20. Climate threats under 1.5-degree and 2-degree scenarios



THREATS	NORTH			NORTHEAST			CENTER-WEST			SOUTHEAST			SOUTH		
	Observable change	1.5	2	Observable change	1.5	2	Observable change	1.5	2	Observable change	1.5	2	Observable change	1.5	2
Average temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Maximum temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Minimum temperature	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Heatwaves	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Annual precipitation	— *	▼	▼	▼	▽	— *	— *	▽	▽	▽	△	△	▲	▲	▲
Extreme precipitation	▲	▲	▲	▲	▲	▲	△	▲	▲	▲	▲	▲	▲	▲	▲
Persistent extreme precipitation	△ *	△	▲	▽ *	▲	▲	— *	▲	▲	▲ *	▲	▲	▲	▲	▲
Drought frequency	— *	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▽	▽	▽
Drought duration	△	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▽	△	△
Severe wind	▲	▲	▲	▲	▲	▲	△	▲	▲	▲	▲	▲	▲	▲	▲
Mean sea level	▲	▲	▲	▲	▲	▲	■	■	■	▲	▲	▲	▲	▲	▲
Sea surface temperature	▲	▲	▲	▲	▲	▲	■	■	■	▲	▲	▲	▲	▲	▲
Marine heatwave	▲	▲	▲	▲	▲	▲	■	■	■	▲	▲	▲	▲	▲	▲
Ocean acidification	▲	▲	▲	▲	▲	▲	■	■	■	▲	▲	▲	▲	▲	▲

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

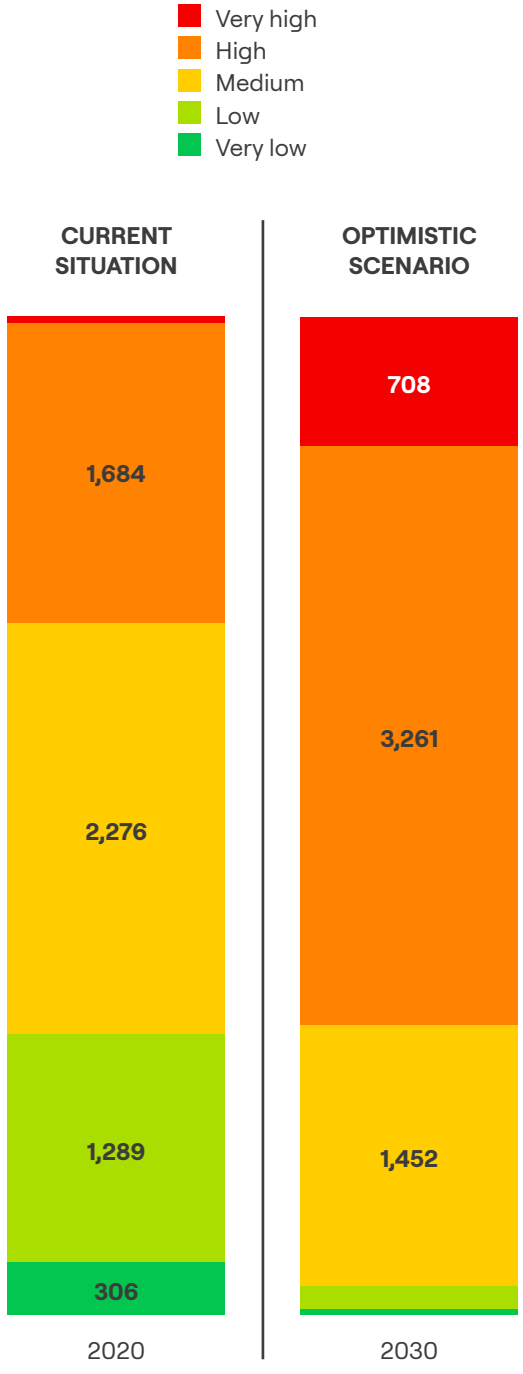
Sea-level rise only spares the Center-West because the region is landlocked. On the other hand, this region, which houses most of the country's agricultural production, is already the most affected by prolonged periods of drought, especially in the Matopiba frontier, which brings together parts of Maranhão, Tocantins, Piauí, and Bahia. It is in this territory that the production of Brazil's largest export product, soybeans, is expanding.

Water scarcity appears as one of the priorities of the National Adaptation Strategy and its 16 sectoral plans, due to its impacts on hydroelectric power generation, food production, and also navigability. The Adapta Brasil platform, currently undergoing improvements, including the possibility of visualizing impacts across various sectors by municipality, already points to an "optimistic" projection that almost 60% of Brazilian municipalities will face water scarcity as early as 2030

Among the impacts of climate change on the population's health, the Adapta Brasil platform highlights the increased risk of diseases such as dengue, zika, and chikungunya due to heatwaves. As early as 2030, the projection is of a high or very high risk for heatwaves in no less than 89% of the 5,570 Brazilian municipalities. The red patch on the map below, the area of highest risk, covers more than 2,000 municipalities.

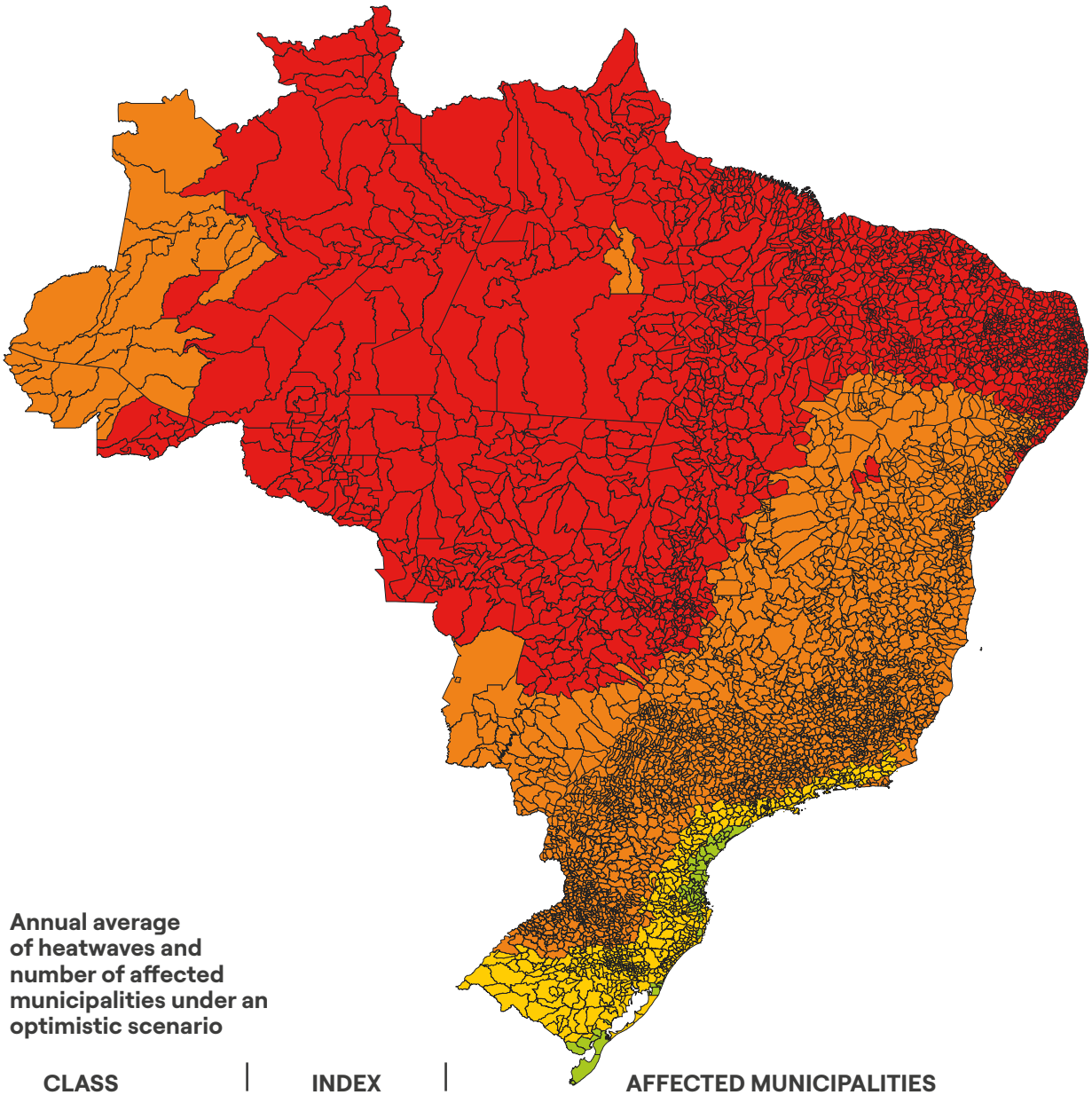
FIGURE 21. Water scarcity projection reaches the majority of Brazilian municipalities in 2030

Risk index across the 5,570 municipalities



Source: Adapta Brasil platform – Ministry of Science, Technology and Innovation (MCTI)

FIGURE 22. Increased risk of arboviral diseases due to heatwaves in 2030



Annual average of heatwaves and number of affected municipalities under an optimistic scenario

CLASS	INDEX	AFFECTED MUNICIPALITIES
Very high	0.80 a 1.00	2,011
High	0.60 a 0.79	2,943
Medium	0.40 a 0.59	542
Low	0.20 a 0.39	73
Very low	0.00 a 0.19	0
Data unavailable		1

Source: Adapta Brasil platform – Ministry of Science, Technology and Innovation (MCTI)

The Climate Adaptation Plan is equivalent to the Brazilian National Adaptation Plan (NAP) to be submitted to the United Nations. The plan lists 12 national targets, which unfold into another 312 sectoral targets to be achieved through 830 actions detailed in 16 sectoral adaptation plans.

Among the targets is the one that reduces to 7.5% the total number of municipalities with water insecurity and serves, with disaster risk prevention works, at least 4 million people exposed to the threat of flash floods, floods, and landslides in the country (Table 13).

To reduce the impact of heatwaves and heavy rainfall in cities, the Climate Adaptation Plan foresees expanding vegetation cover in urban areas by 180,000 hectares (or 1,800 km²), prioritizing municipalities with the highest climate risk. As a measure of comparison, this is equivalent to 31% of the deforested area in the Amazon in the latest official rate.

TABLE 13. National Adaptation Targets and respective indicators

TARGETS	INDICATORS
By 2035, ensure that all states and 35% of Brazilian municipalities have Adaptation Plans	***Number of states and percentage of municipalities with published Adaptation Plans***
By 2035, serve at least 4 million people exposed to geohydrological disaster risk with disaster risk prevention works	***Number of people benefiting from disaster risk prevention works and urban drainage and slope containment infrastructure works***
By 2035, expand vegetation cover in urban areas by 180,000 hectares, prioritizing municipalities at higher climate risk	***Number of hectares of expanded vegetation cover in urban census tracts***
By 2035, reduce to 7.5% the total number of municipalities with a minimum water security level	***Percentage of municipalities with a minimum water security level***
By 2035, ensure that 100% of plans and projects for infrastructure works contracted by the Federal Government consider climate risks	***Percentage of plans and projects for infrastructure works supported by the Federal Government that consider climate risks***
By 2035, reduce operational interruptions caused by climate events in federal transport infrastructure by at least 30%	***Percentage of operational interruptions caused by climate events in federal transport infrastructure***

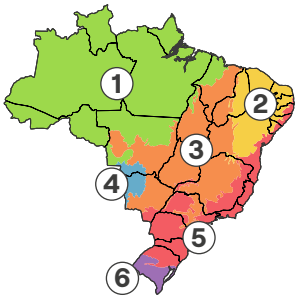
Source: Ministry of Environment and Climate Change (MMA)

TARGETS	INDICATORS
By 2030, expand the extent of Marine Protected Areas to 30%, with specific climate change strategies in management plans	***Percentage of the extent of Marine Protected Areas in the Exclusive Economic Zone (EEZ), including specific strategies for climate change***
By 2035, connect 30% of the national territory through ecological corridors between protected areas and other Other Effective Area-based Conservation Measures – OECMs, prioritizing territories under higher climate risk and climate refugia	***Percentage of the national territory connected by ecological corridors***
By 2030, expand the adoption of diversified, sustainable, and resilient agricultural production systems across 72.68 million hectares	***Number of hectares adopting Sustainable Production Systems, Practices, Products, and Processes (SPSabc), excluding Intensive Finishing (number of animals) and Animal waste management*** ***Number of hectares of family farming production units with agroecological production***
By 2035, eradicate severe food and nutritional insecurity	***Number of households with severe food insecurity***
By 2035, have 100% of state and priority municipal health departments for climate emergencies mobilized for the adaptation of the SUS to climate change	***Percentage of state health departments mobilized for the adaptation of the SUS to climate change*** ***Percentage of priority municipal health departments mobilized and with completed diagnostics of impacts, vulnerabilities, and adaptation to climate change in the SUS*** ***Percentage of DSEIs (Special Indigenous Sanitary Districts) included in the diagnostics carried out by State Health Departments***
By 2035, ensure that 100% of electricity expansion planning considers climate risks and resilience	***Percentage of electricity expansion studies and plans that incorporate risk and climate resilience analysis***

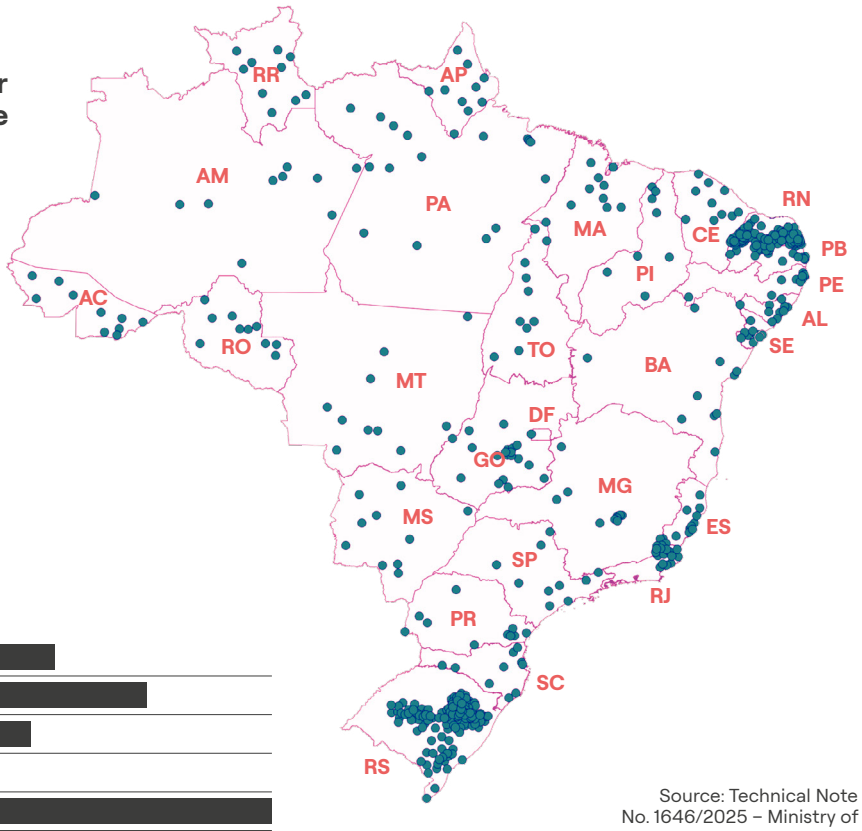
Source: Ministry of Environment and Climate Change (MMA)

FIGURE 23. Distribution map of the municipalities proposed by the states for the implementation of the AdaptaCidades initiative

Distribution of the 581 municipalities by biome



1	Amazon	77
2	Caatinga	141
3	Cerrado	60
4	Pantanal	5
5	Atlantic Forest	229
6	Pampa	69



Source: Technical Note No. 1646/2025 – Ministry of Environment and Climate Change (MMA)

A notable advance in the adaptation agenda was the selection of 581 municipalities considered priorities, which will receive training in 2026 to develop their local adaptation plans. The selection, carried out jointly with the governments of 26 states and the Federal District, involves a population of almost 53 million inhabitants, or the equivalent of about 26% of the Brazilian population, according to a technical note[25]. In the states of Rio Grande do Norte and Rio Grande do Sul, the selection had its territorial scope expanded to encompass consortia of municipalities. In the case of Rio Grande do Sul, the selection of a larger number of municipalities is due to the climate emergency experienced in the state in 2024.

Given the urgency of dealing with the impacts of climate change and the large financing gap for this type of project, the **Talanoa Institute** insists on the need to align public investments with climate resilience. In this chapter on adaptation, we draw attention to the investment portfolio of the Growth Acceleration Program (PAC), which gathers the R$ 1.3 trillion in investments planned for the 2023-2026 period, with public money as well as private partnerships and resources from state-owned companies.

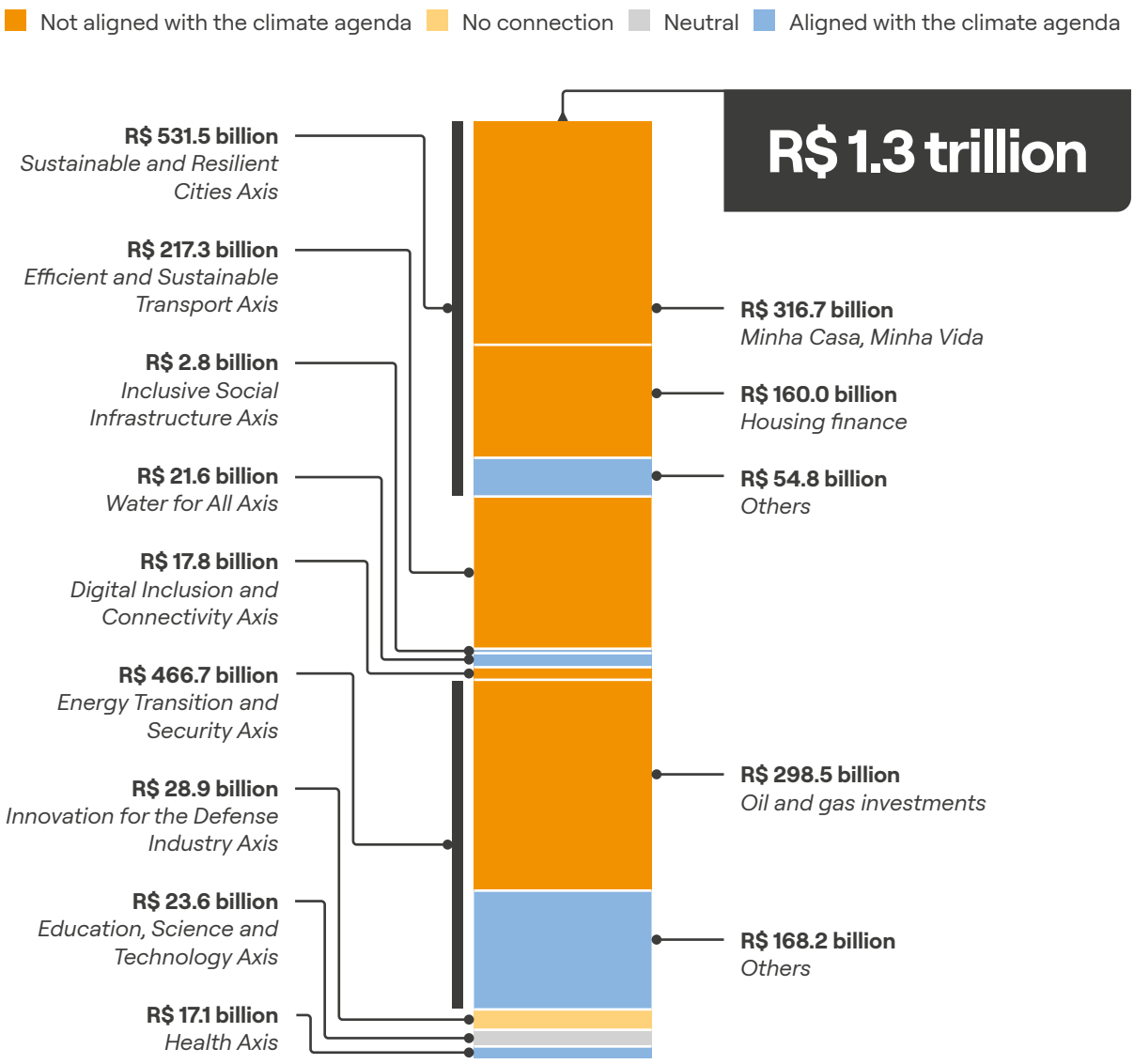
The largest slice of PAC investments is entitled Sustainable and Resilient Cities[26]. This axis of the program totals investments of R$ 531.5 billion (about 41% of the total). Within this axis, however, the largest portion of the planned spending is destined for the Minha Casa Minha Vida program, for housing production and access to housing. The program lacks clear criteria for climate risk analysis and resilience promotion.

(25) https://www.redus.org.br/adaptacidades/biblioteca/447c2065-e3c5-400e-bab5-1900376bf443
(26) https://www.gov.br/casacivil/pt-br/novopac/cidades-sustentaveis-e-resilientes

Housing finance holds the second-largest share of investments in this axis, which allocates a smaller portion to disaster prevention works, solid waste management, sewage systems, urban mobility, and slum upgrading, areas more aligned with the climate change adaptation agenda, totaling R$ 54.8 billion between 2023 and 2026. This amount represents only 18% of the investments planned for the same period in oil and gas, which contribute to worsening the climate crisis.

Even so, PAC resources are pointed out as an important source of funding for short-term adaptation in a document[27] on the financing of the Resilient Green Cities Program (PCVR), a kind of umbrella for adaptation actions in cities that will feature a project bank.

FIGURE 24. PAC investments between 2023 and 2026 (In R$ billions)



(27) https://www.andusbrasil.org.br/acervo/publicacoes/279-caminhos-para-a-elaboracao-da-estrategia-de-financiamento-do-pcvr

ARTIFICIAL INTELLIGENCE

INCENTIVIZED DATACENTERS, BUT ONLY WITH CLEAN OR RENEWABLE ENERGY

A months-long negotiation, led by the Ministry of Finance, was concluded in September 2025 to attract the installation of datacenters in Brazil. With the issuance of a provisional measure[28], the National Datacenter Policy and the Special Taxation Regime for Datacenter Services (REDATA) were created. Datacenters are hubs for storing, processing, and managing large volumes of data and digital applications.

The provisional measure signaled the confrontation of the main problem associated with this type of installation, whose expansion is linked to the growing use of artificial intelligence resources. The text conditions the granting of tax incentives to sustainability criteria yet to be defined, which were submitted to public consultation until the end of October. Among these criteria is the requirement that the electricity supply be provided exclusively by clean and renewable generation sources, through supply contracts or self-production.

The massive energy consumption by datacenters creates an extra concern for the climate agenda. A study by the International Energy Agency (IEA)[29] reveals that global electricity consumption by datacenters will double by 2030, with these facilities consuming almost 3% of the global energy demand.

Hence the importance that the increase in energy consumption in the country does not occur through the burning of fossil fuels. The energy consumption increase scenarios of the Climate Plan do not yet account for this increased demand for datacenters, however.

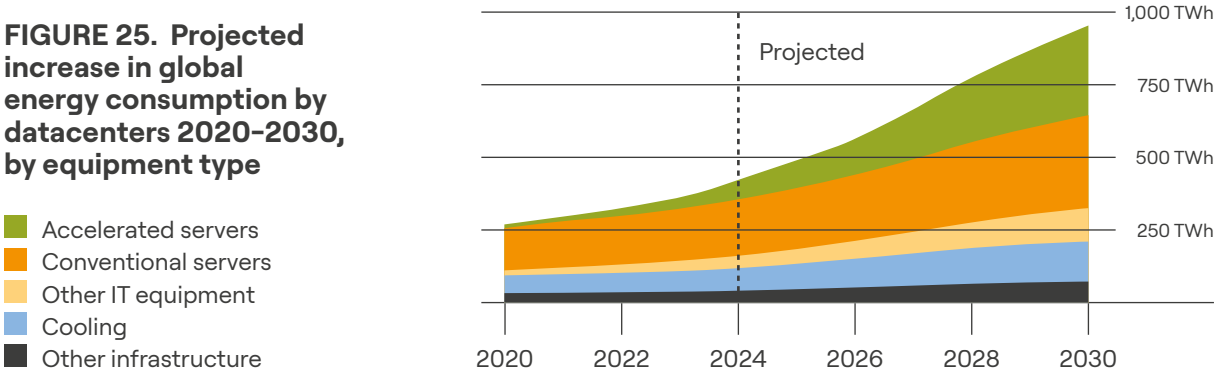
The provisional measure that creates the datacenter policy and the respective tax incentives also conditions the benefits of ReData to lower water consumption, used for cooling these facilities. The text requires the presentation of a water efficiency index of less than five-hundredths of a liter per kilowatt-hour.

The ReData benefits are valid for 5 years and are expected to cost the Brazilian taxpayer, through tax exemptions, R$ 5.20 billion in 2026, R$ 1.00 billion in 2027, and another R$ 1.05 billion in 2028. The expectation is that the incentives will attract R$ 2 trillion in investments and could quadruple Brazil's data processing capacity in 10 years.

Currently, 60% of digital services depend on datacenters abroad. The explanatory memorandum accompanying the September provisional measure identifies in this dependence "substantial risks to national sovereignty." The provisional measure conditions access to ReData's tax benefits to making at least 10% of the installed capacity available to the domestic market.

But the installation of datacenters in Brazil continues to spark controversy. The Secretariat of Water Resources of Ceará authorized Casa dos Ventos, a partner company of TikTok in the construction of a datacenter in Caucaia (CE), to use a volume of water 7.3 times larger than declared at the beginning of the project[30], in a region with a history of droughts.

FIGURE 25. Projected increase in global energy consumption by datacenters 2020-2030, by equipment type



(28) https://www.in.gov.br/en/web/dou/-/medida-provisoria-n-1.318-de-17-de-setembro-de-2025-656851861
(29) https://www.iea.org/reports/energy-and-ai
(30) https://climainfo.org.br/2025/11/30/ceara-autoriza-data-center-do-tiktok-a-usar-7-vezes-mais-agua-que-o-previsto-no-licenciamento/

CLIMATE FINANCE

A MAJOR CHALLENGE, BUT THE COST IS LOWER THAN INACTION

Brazil begins 2026 still without a clear estimate of the cost of implementing its climate commitments, both for reducing emissions and for adapting to climate change. The so-called means of implementation, which involve climate finance, were submitted to public consultation[31] during COP30, without values. The Strategy for Means of Implementation document of the Climate Plan identifies that the biggest challenge for financing the Brazilian climate agenda is reducing legally authorized deforestation on private properties.

"Reducing the authorized suppression of native vegetation requires building a new framework of positive economic incentives, capable of making conservation more advantageous and attractive than land-use conversion," says the Strategy text. "The main barriers related to the theme are the insufficiency of predictable resource sources and at the scale necessary to encourage the maintenance of native vegetation," it adds.

Alongside forest restoration, adaptation appears as a priority in the Strategy launched for public consultation, especially to increase the resilience of Brazilian cities to climate change. In this chapter, nature-based solutions, such as tree planting, are highlighted for reducing the risks of floods and heatwaves.

It must be highlighted that one of the 12 targets of the Climate Adaptation Plan establishes that, by 2035, all infrastructure works and projects contracted by the federal government will have to consider climate risks. Aligning public spending with a climate crisis scenario is of the utmost importance.

Whatever the value, the cost of the NDC will hardly exceed the estimated cost for the country if it does not face the climate crisis. A preliminary estimate made within the scope of Strategy 2050, coordinated by the Ministry of Planning, reaches R$ 17 trillion over 25 years in GDP loss if the planet fails to correct its course to contain greenhouse gas emissions and moves towards a highly dystopian scenario of 4 degrees of warming.

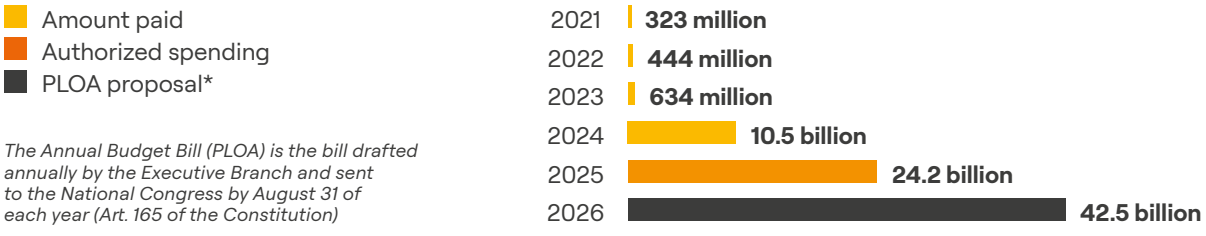
Without recording an extreme climate event like the floods in Rio Grande do Sul in 2024, the country has been advancing in climate finance. The most notable mechanism is the Climate Fund, with two main arms: loans via BNDES and Eco Invest, aimed at attracting private and foreign resources through auctions.

Since 2024, the Climate Fund has been relying on increasing volumes of money from the Federal Budget, especially from the issuance of green bonds in the international market (three issuances so far) and, starting in 2026, with the allocation of oil resources (73% of the Fund's projected spending, according to the Annual Budget Bill sent to Congress).

The portion of the Climate Fund operated by BNDES has allocated most of its resources to financing renewable energy, especially photovoltaic energy production and corn ethanol plants, showed a survey conducted by the **Talanoa** Institute[32], which began monitoring the Climate Fund on a monthly basis.

In mid-2025, the bank began analyzing an unprecedented volume of climate change adaptation projects submitted by states and municipalities[33], which had insignificant loan amounts in 2024.

FIGURE 26. Climate Fund quadruples spending forecast in 2026 (In R$)



The Annual Budget Bill (PLOA) is the bill drafted annually by the Executive Branch and sent to the National Congress by August 31 of each year (Art. 165 of the Constitution)

(31) https://brasilparticipativo.presidencia.gov.br/processes/planoclima/f/1877
(32) https://institutotalanoa.org/wp-content/uploads/2025/07/00_Boletim-Fundo-Clima-02-20250714.pdf
(33) https://politicaporinteiro.org/wp-content/uploads/2025/08/03_Boletim-Fundo-Clima.pdf

Increasing adaptation financing is one of the issues under study by the working group coordinated by the Ministry of Environment, which will propose improvements to the Climate Fund's resource application plan by March 2026.

In the Eco Invest portion, four auctions were launched aimed at attracting private and foreign investments for climate finance. The third and fourth auctions were still ongoing at the closing of this report. The second auction will allocate R$ 16.5 billion for the conversion of 1.4 million hectares of degraded pastures in the country, an important piece of the climate strategy. These public resources from the Climate Fund will mobilize another R$ 13.7 billion from the private sector, with 60% raised in the foreign market, according to a report from the National Treasury[34].

The attraction of private resources fell short of the first Eco Invest auction, held in August 2024, when each real of public money attracted 5.5 reais of private money, on average. In the second auction, each public real brought in less than one private real.

Although public coffers have not suffered the impact of extreme climate events like the one in Rio Grande do Sul, the forecast for spending on risk and disaster management increased to R$ 2.7 billion by the end of this year, through extraordinary credits. Last year, not counting the tragedy in the South, spending reached the R$ 7 billion mark.

Outside the Federal Budget, climate finance counts on a relevant contribution from the Amazon Fund. With the resumption of donations from countries in 2023, the fund approved R$ 2 billion[35] in new projects in 2025. The Amazon Fund plays an important role in forest restoration, one of the pillars of the Brazilian climate strategy. Restaura Amazônia public notices, amounting to R$ 450 million, promote the planting of native species, agroforestry systems, sustainable production, and income generation in indigenous lands, settlements, and conservation units. As they originate from donations from countries to Brazil, these are non-reimbursable resources.

Native vegetation restoration projects are also part of the Brazil Climate and Ecological Transformation Investment Platform (BIP) [36], launched at the end of 2024. It works as a project showcase to attract investments in the transition to a low-carbon economy. Nature-based solutions and the bioeconomy constitute one of the priority sectors, with impacts on both the reduction of greenhouse gas emissions and adaptation to climate change. Industry, urban mobility, and energy are the other priority sectors. The investment potential indicated on the platform in December 2025 was R$ 23 billion.

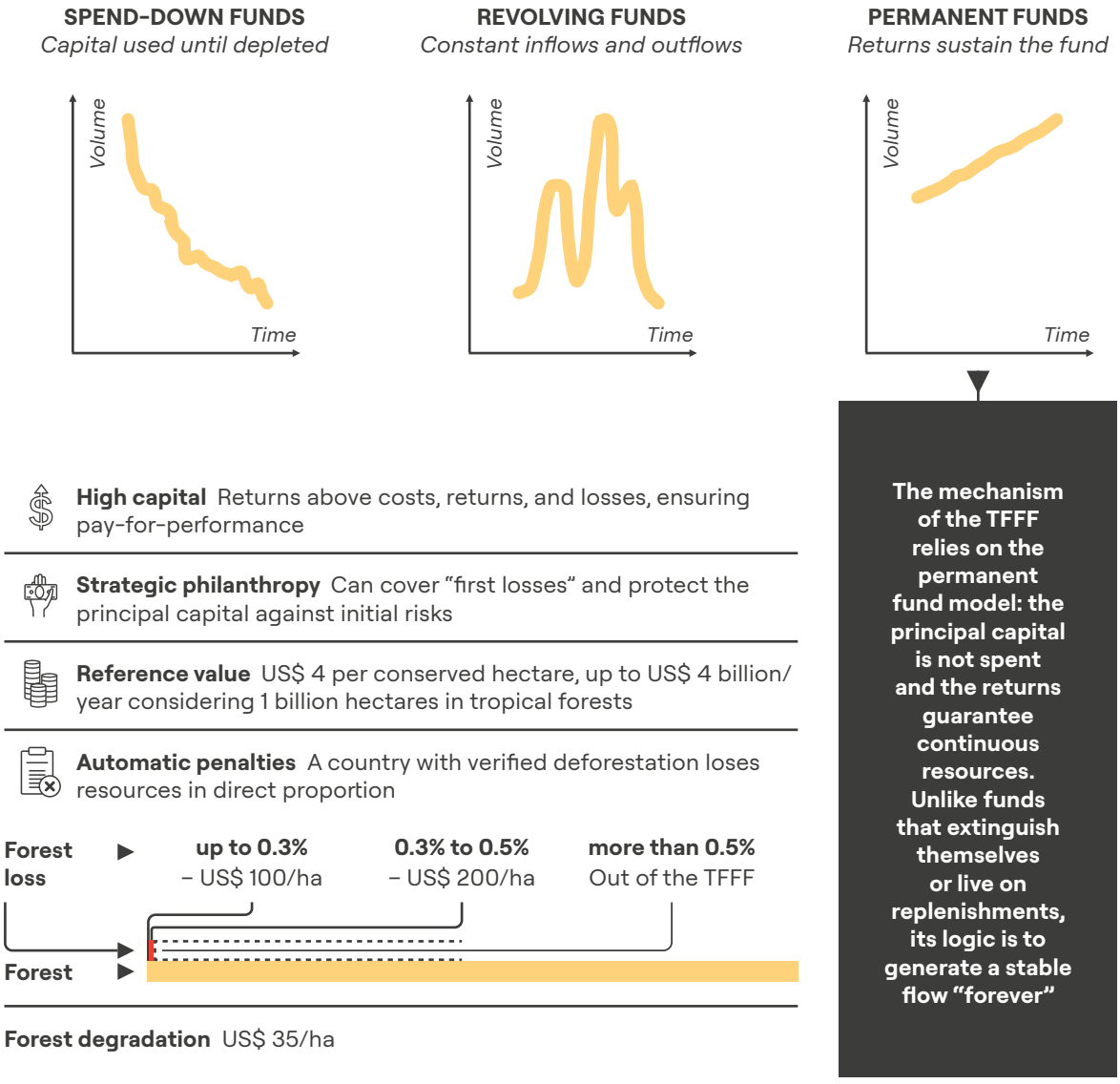
During COP30, the Brazilian government invested in another mechanism to expand climate finance, the Tropical Forests Forever Facility (TFFF), intended to finance the conservation of tropical forests in developing countries and support those who live in them.

As of the closing of this report, the TFFF had the promise of about US$ 6.7 billion in investments, from a core resource contribution estimated at US$ 25 billion from governments, philanthropy, and sovereign wealth funds. The amount announced during the COP is still insufficient for the new fund to run and leverage another US$ 100 billion in the market. The stock of forests, indispensable in stabilizing the climate regime, will be remunerated through satellite monitoring. Brazil expects to count on something between US$ 1 billion and US$ 1.5 billion (about R$ 5 billion) per year from the future fund.

On the eve of COP30, Brazil established[37] the Brazilian Sustainable Taxonomy, an investment classification mechanism designed to boost investments that are sustainable both environmentally and socially. Climate objectives, such as the mitigation of greenhouse gas emissions and adaptation to climate change, are covered. This official classification will have voluntary adoption, as a reference for the financial market.

(34) https://thot-arquivos.tesouro.gov.br/publicacao-anexo/25951
(35) https://www.gov.br/mma/pt-br/noticias/fundo-amazonia-aprova-mais-de-r-2-bilhoes-em-2025-e-brasil-avanca-na-meta-rumo-ao-desmatamento-zero
(36) https://www.gov.br/fazenda/pt-br/acesso-a-informacao/acoes-e-programas/transformacao-ecologica/bip
(37) https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2025/decreto/D12705.htm

FIGURE 27. More conservation generates resources; more loss, penalties



For example, financing that involves the suppression of native vegetation on rural properties is not considered sustainable[38], even if within the legal limits provided by the Forest Code.

Still in 2025, an extraordinary secretariat was created within the Ministry of Finance to handle the regulation of the regulated carbon market. The Brazilian Emissions Trading System (SBCE) was created by law in 2024, but the forecast is that its impacts in containing greenhouse gas emissions will still take a few years.

The climate finance measures were grouped under the Ecological Transformation Plan (PTE) and can be tracked through the monitoring of the Ministry of Finance[39].

(38) https://www.gov.br/fazenda/pt-br/orgaos/spe/taxonomia-sustentavel-brasileira/cadernos
(39) https://pte.mf.municipios.fgv.br/api/planejamento/painel-de-monitoramento

CLIMATE GOVERNANCE

SEEKING STRONGER INSTITUTIONAL FRAMEWORKS

Climate policy has been conducted transversally since 2023 through the Interministerial Committee on Climate Change (CIM)[40][41]. The political level involves 23 state ministers and constitutes the highest deliberative body, under the presidency of the Chief of Staff's Office.

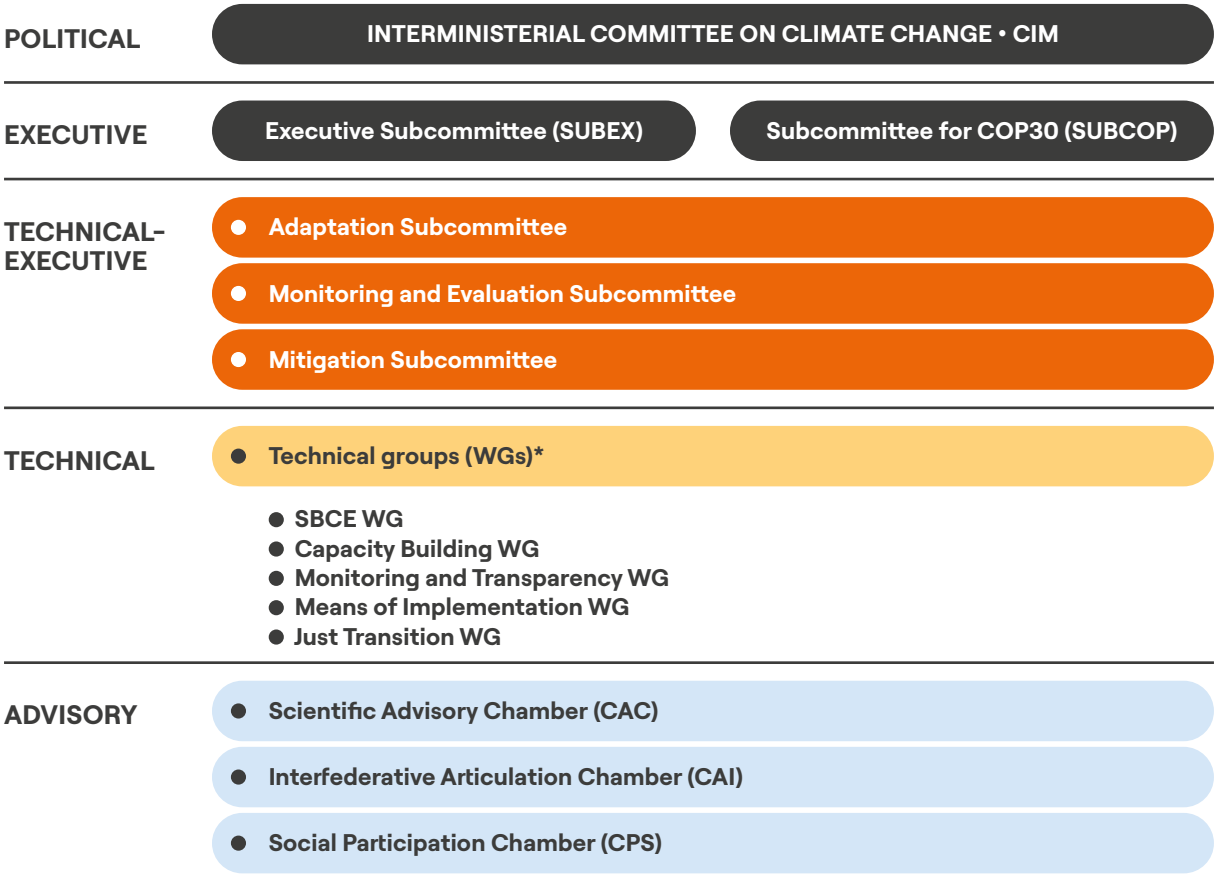
At the executive level, 11 ministries meet in the Executive Subcommittee (SUBEX) for discussions in a stage prior to the collegiate of ministers. Recently created for the implementation phase of the Climate Plan, three technical-executive bodies are separated by three themes: mitigation, adaptation, and monitoring and evaluation.

At the technical level, there are eight working groups. These WGs drafted both the national strategies and the sectoral mitigation and adaptation plans, as well as the regulation of the Brazilian Emissions Trading System (SBCE) and the revision of the National Policy on Climate Change (PNMC).

Technical groups are still working on the four cross-cutting strategies of the Climate Plan: means of implementation, just transition, capacity building, and monitoring and evaluation, in addition to the revision of the Brazilian emissions inventory.

Installed in early September, chambers for scientific advice, interfederative articulation, and social participation will have an advisory role. The role of the chambers is, respectively, to ensure scientific bases and evidence for CIM decisions, articulate climate action across different levels of government, and promote dialogue with civil society, expanding the transparency of climate policies. The chambers act through recommendations to the CIM.

FIGURE 28. The governance structure of climate policy

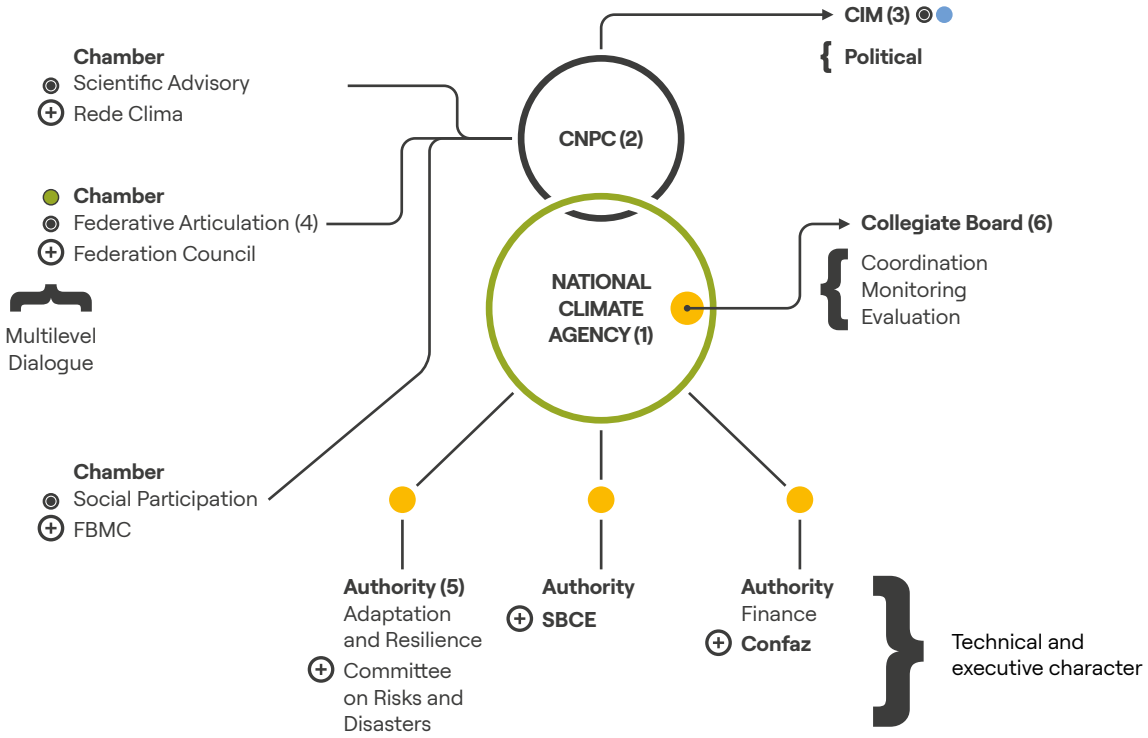


(40) https://www.planalto.gov.br/ccivil_03/_Ato2023-2026/2024/Decreto/D12040.htm#art1
(41) https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/decreto/d12144.htm

FIGURE 29. Proposed climate governance model

◉ Already exist ○ Collaboration ● Consensus building ● Continuity ● Transversality

(1) New structure, autonomous and independent, with staggered mandates. Concentrates the executive role
(2) National Climate Policy Council. New structure, corresponds to the expansion and strengthening of the current CIM. It has a deliberative and decision-making character
(3) Represents the political core of the current CIM, interministerial voice
(4) Multilevel agreement mechanism, includes the Federation Council and elevates Federative Articulation, granting states and municipalities a full seat on the CNPC, with the same relevance as the CIM (federal)
(5) Authorities are new mechanisms and have a technical and executive character, within the structure of the national agency
(6) Concentrates the coordinating role of the agency, absorbing and expanding the action of the current SUBEX



The **Talanoa** Institute assesses that the CIM played a fundamental role in drafting the Climate Plan, but that the implementation of climate policy going forward requires a more robust governance structure. This structure, in addition to ensuring the necessary transversality for climate policy, needs to advance in articulation and capacity building with federative entities and in monitoring and evaluation mechanisms, as well as maintaining alignment with scientific evidence.

In 2025, **Talanoa** published studies developed in partnership with the Getulio Vargas Foundation[42], launching some proposals for debate, among them the creation of a National Climate System. Unlike public policy systems such as the Unified Health System and the National Social Assistance System, this new system would have a greater role in coordination than in service provision.

(42) https://institutotalanoa.org/publicacoes/

FINAL CONSIDERATIONS

THERE ARE MANY INCONVENIENT TRUTHS

In 2007, An Inconvenient Truth won the Oscar for best documentary, and its main figure, then U.S. Vice President Al Gore, was awarded the Nobel Peace Prize along with the Intergovernmental Panel on Climate Change (IPCC). Eighteen years and two more IPCC reports later, we can conclude that the landscape of Brazilian climate policy brings not just one, but many inconvenient truths, some of which are difficult to handle.

Brazil is among the planet's ten largest greenhouse gas emitters, both in the current emissions snapshot and when accounting for historical emissions, which are led here by deforestation. It is also one of the largest oil producers, the burning of which constitutes the greatest source of global warming. Agriculture, significant to the GDP, accounts for a considerable portion of greenhouse gas emissions in the country. Furthermore, Brazil is highly vulnerable to climate change, from populations in areas at risk of floods and landslides to the impacts of prolonged droughts on food and energy production.

We ended 2024 with a new climate commitment presented to the Climate Convention, the NDC. However, a roadmap was still missing– how to transition to a low-carbon and climate-resilient economy. With the roadmap defined during 2025, it is necessary to move forward with the implementation of the Climate Plan, even if it does not yet provide clear answers regarding the necessary transition away from fossil fuels and also faces resistance in reducing emissions in agriculture.

Beyond the Climate Plan, the **Talanoa** Institute has been advocating for a general alignment of public policies and spending with a climate perspective. It is also urgent to ensure that the climate policy restructured starting in 2023 withstands political-electoral scenarios. A relevant contribution can be made by the new National Policy on Climate Change, which was submitted for public consultation and will need to pass through the National Congress in 2026.

Although the climate crisis imposes global challenges, within the limits of national territory, the challenges are also giant.

LIST OF ACRONYMS

ABIN • Brazilian Intelligence Agency
AGU • Office of the Attorney General of the Union
ANA • National Water and Basic Sanitation Agency
ANAC • National Civil Aviation Agency
ANP • National Agency of Petroleum, Natural Gas and Biofuels
APEX • Brazilian Trade and Investment Promotion Agency
BCB • Central Bank of Brazil
BNDES • Brazilian Development Bank
Casa Civil • Chief of Staff's Office
CEMADEN • National Center for Monitoring and Early Warning of Natural Disasters
CENAD • National Center for Risk and Disaster Management
CFSS • Federal Council of Supplementary Health
CIM • Interministerial Committee on Climate Change
CMN • National Monetary Council
Consea • National Council for Food and Nutritional Security
EMBRAPA • Brazilian Agricultural Research Corporation
FUNAI • National Foundation for Indigenous Peoples
GSI • Institutional Security Office
IBAMA • Brazilian Institute of the Environment and Renewable Natural Resources
INMET • National Institute of Meteorology
INPE • National Institute for Space Research
MAPA • Ministry of Agriculture and Livestock
MCID • Ministry of Cities
MCTI • Ministry of Science, Technology and Innovation
MD • Ministry of Defense
MDA • Ministry of Agrarian Development and Family Farming
MDIC • Ministry of Development, Industry, Trade and Services
MDS • Ministry of Social Development, Assistance, Family and Fight Against Hunger
ME • Ministry of Economy
MEC • Ministry of Education
MF • Ministry of Finance
MGI • Ministry of Management and Innovation in Public Services
MIDR • Ministry of Integration and Regional Development
MJ • Ministry of Justice
MJSP • Ministry of Justice and Public Security
MMA • Ministry of the Environment and Climate Change
MME • Ministry of Mines and Energy
MMUL • Ministry of Women
MPA • Ministry of Fishing and Aquaculture
MPI • Ministry of Indigenous Peoples
MPO • Ministry of Planning and Budget
MRE • Ministry of Foreign Affairs
MT • Ministry of Transport
MTE • Ministry of Labor and Employment
MTUR • Ministry of Tourism

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