



# Brazilian National Policy on Climate Change

## Governance Aspects and Mitigation Challenges



# **BRAZILIAN GHG EMISSIONS PROFILE**

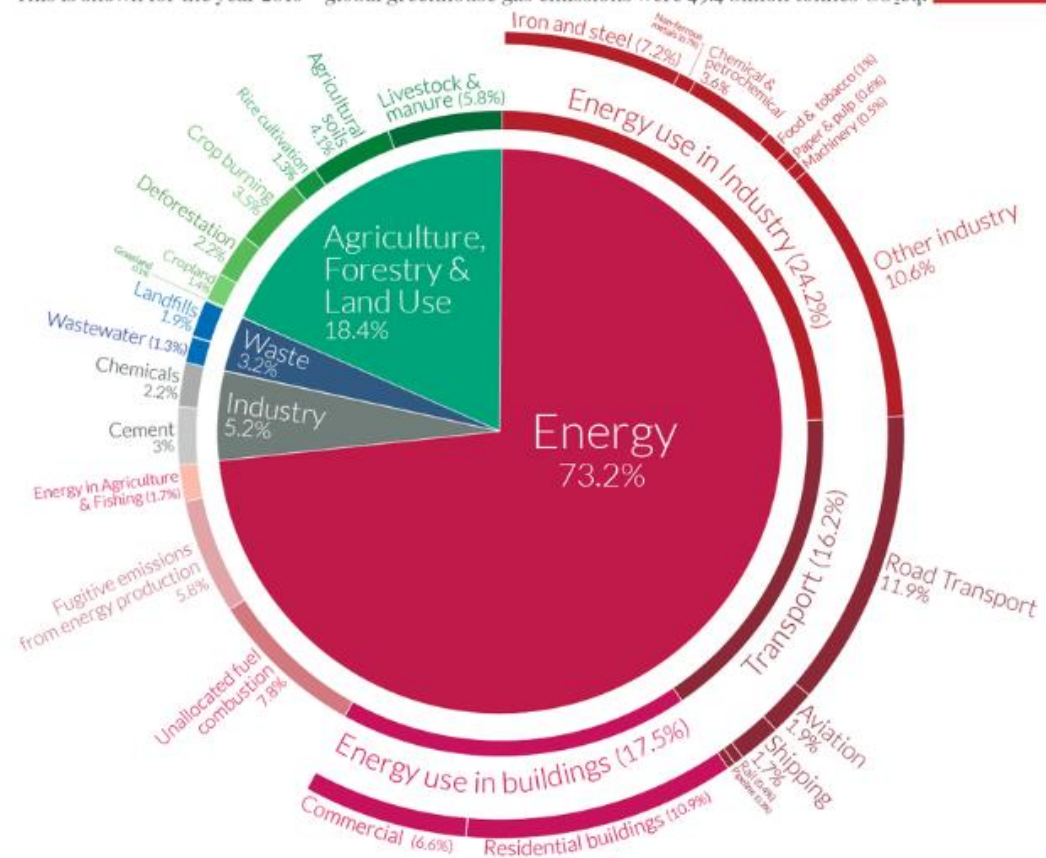
## **MITIGATION CHALLENGES**

# OVERVIEW OF GHG EMISSIONS

## WORLD: ENERGY

### Global greenhouse gas emissions by sector

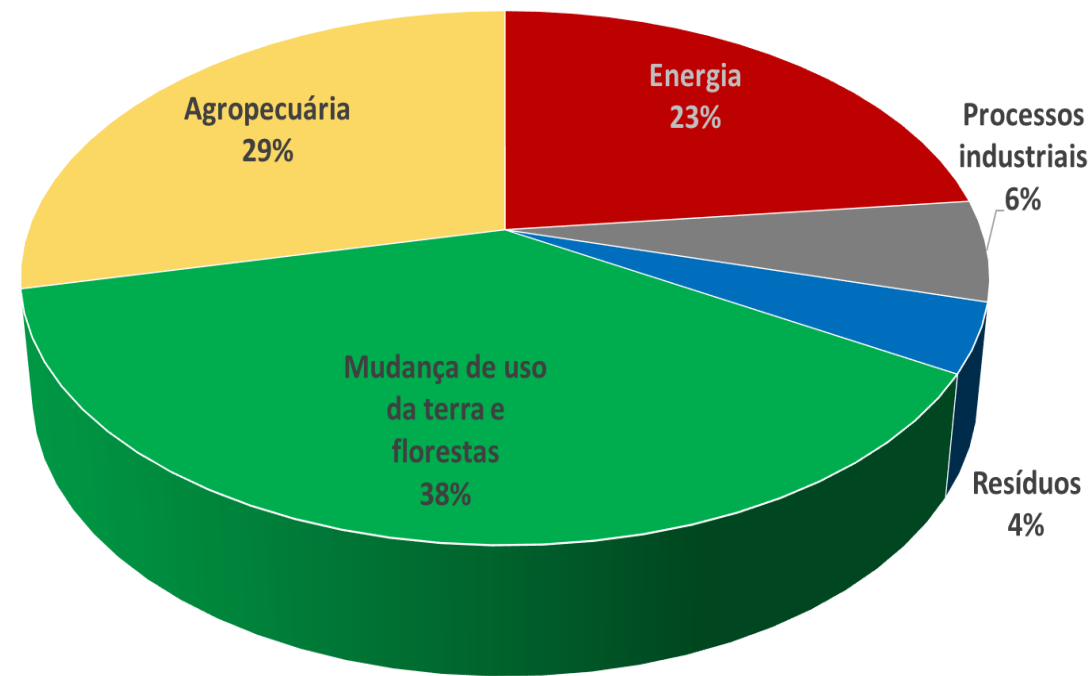
This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO<sub>2</sub>eq.



OurWorldinData.org – Research and data to make progress against the world's largest problems.  
 Source: Climate Watch, the World Resources Institute (2020).  
 Licensed under CC-BY by the author Hannah Ritchie. (2020).

Source: Our world in data, 2016.

## BRAZIL: DEFORESTATION AND AGRICULTURE



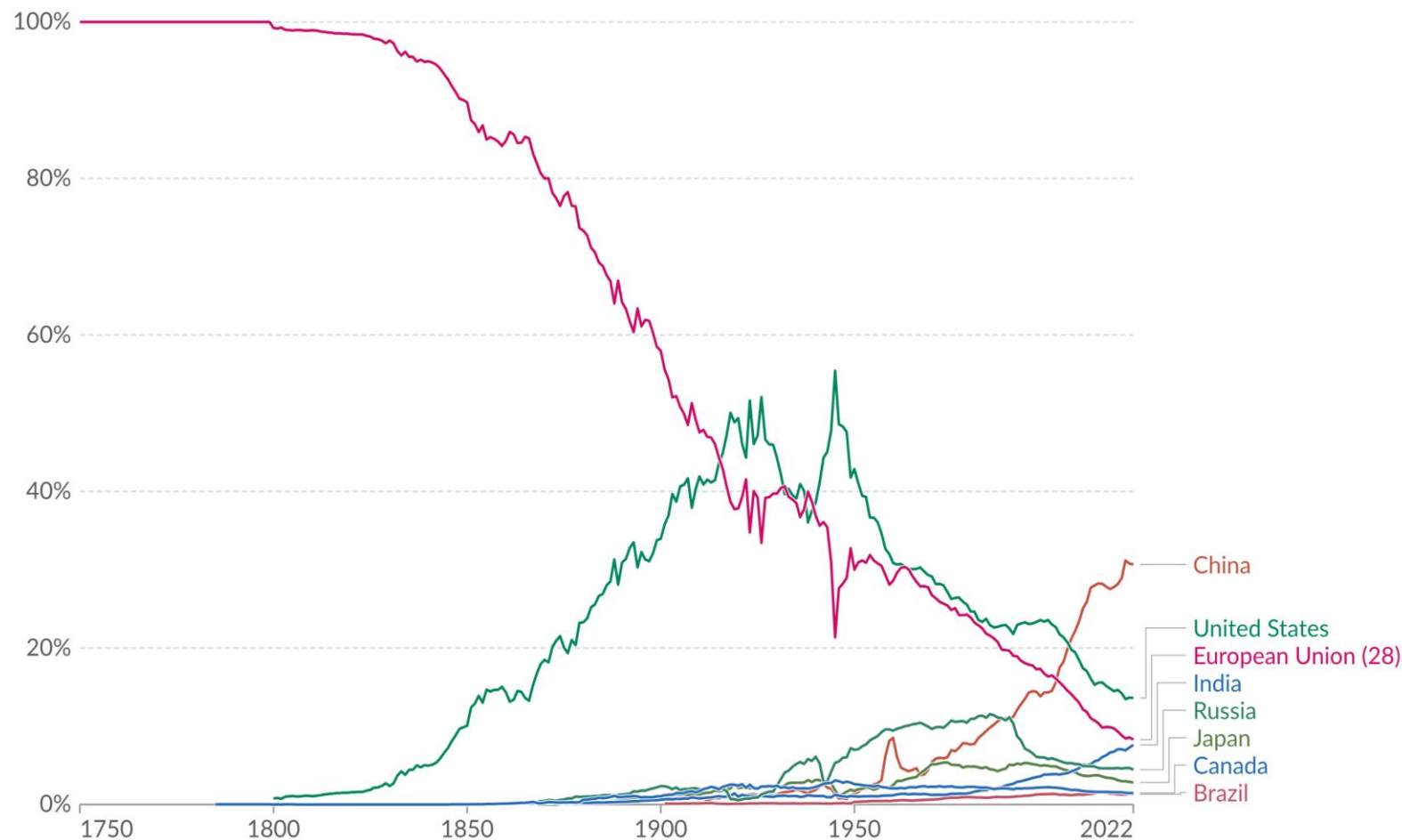
Source: MCTI, Estimativas Anuais de 2020, 6a edição, GWP-SAR, 2022.

# Share of global CO<sub>2</sub> emissions

Carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels and industry<sup>1</sup>. Land-use change is not included.

Our World  
in Data

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Data source: Global Carbon Budget (2023)

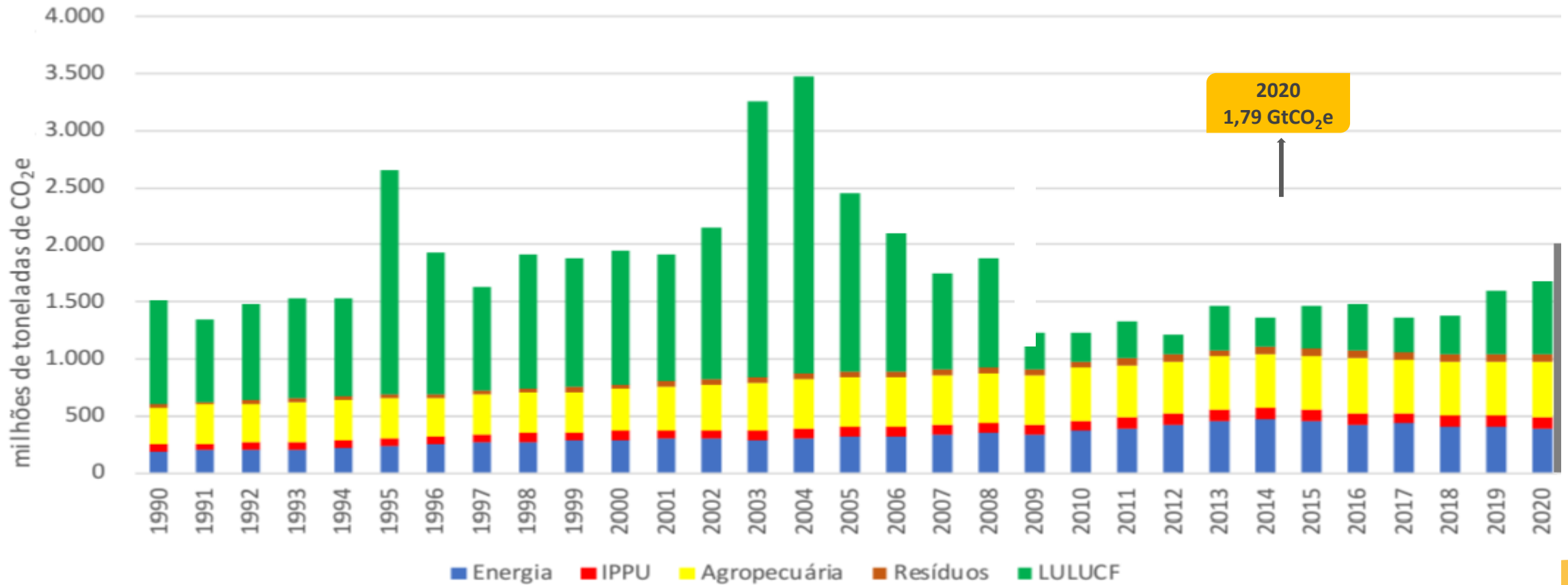
OurWorldInData.org/co2-and-greenhouse-gas-emissions | CC BY

**1. Fossil emissions:** Fossil emissions measure the quantity of carbon dioxide (CO<sub>2</sub>) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO<sub>2</sub> includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.

2022	
China	30.68%
United States	13.61%
European Union (28)	8.29%
India	7.62%
Russia	4.45%
Japan	2.84%
Canada	1.47%
Brazil	1.30%

# BRAZIL'S GHG EMISSIONS AND MITIGATION COMMITMENTS

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Data Source: Annual Estimates of GHG Emissions in Brazil - 6th edition (MCTI, 2022).

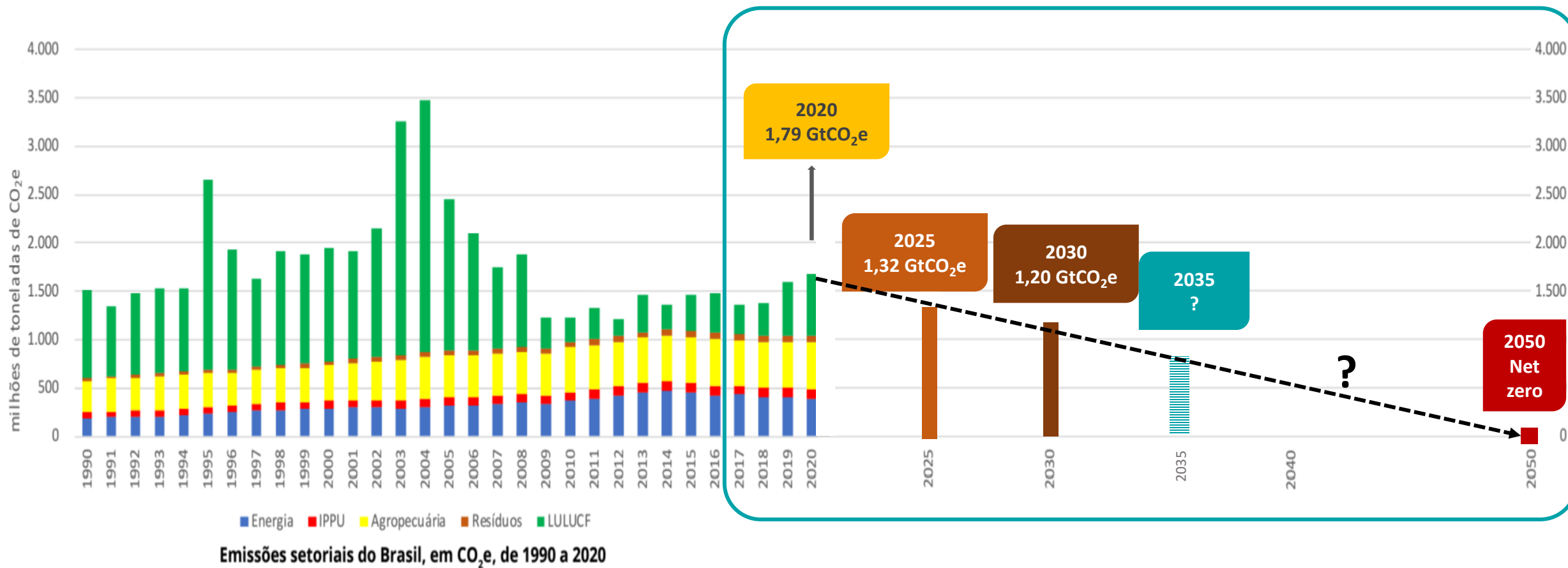
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# Brazil GHG Emissions and Mitigation Commitments

## How to achieve NDC goals?

What is the contribution of each sector to reach the goals?



Elaboração: DPMA/SMC/MMA, com dados das Estimativas Anuais de Emissões de GEE no Brasil – 6ª edição (MCTI, 2022).

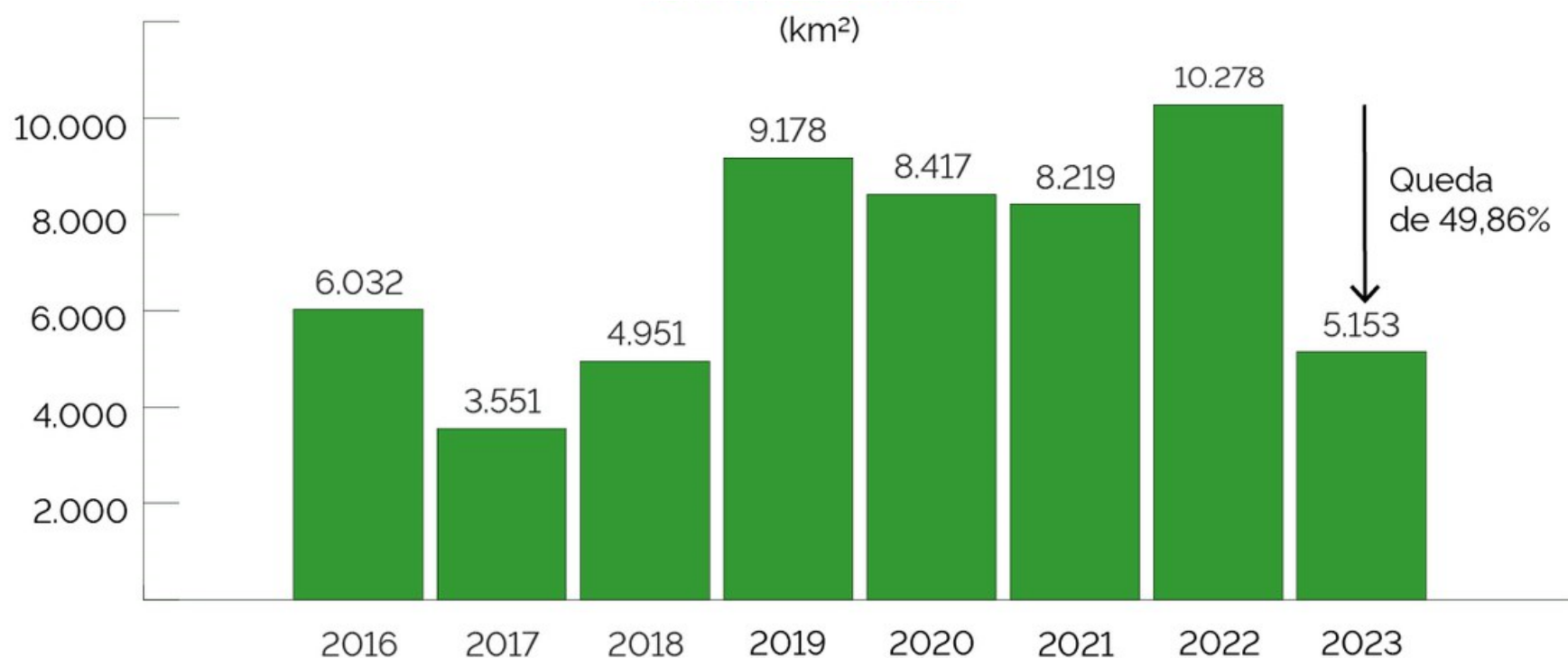
IPPU = Industrial Processes and Product Use  
LULUCF = Land Use, Land-Use Change and Forestry

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# Areas under Deforestation Alerts in the Amazon

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Data Source: DETER (INPE/MCTI, 2024). Available at <https://www.gov.br/mma/pt-br/area-sob-alertas-de-desmatamento-na-amazonia-cai-50-em-2023>

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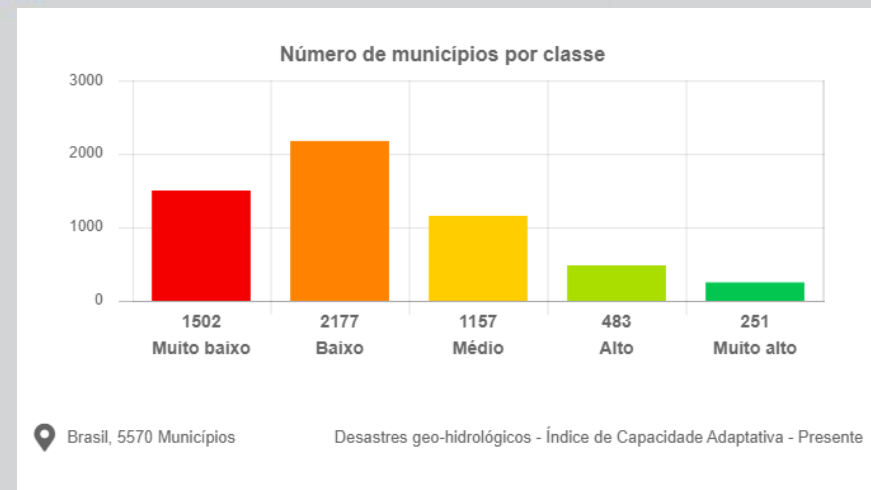
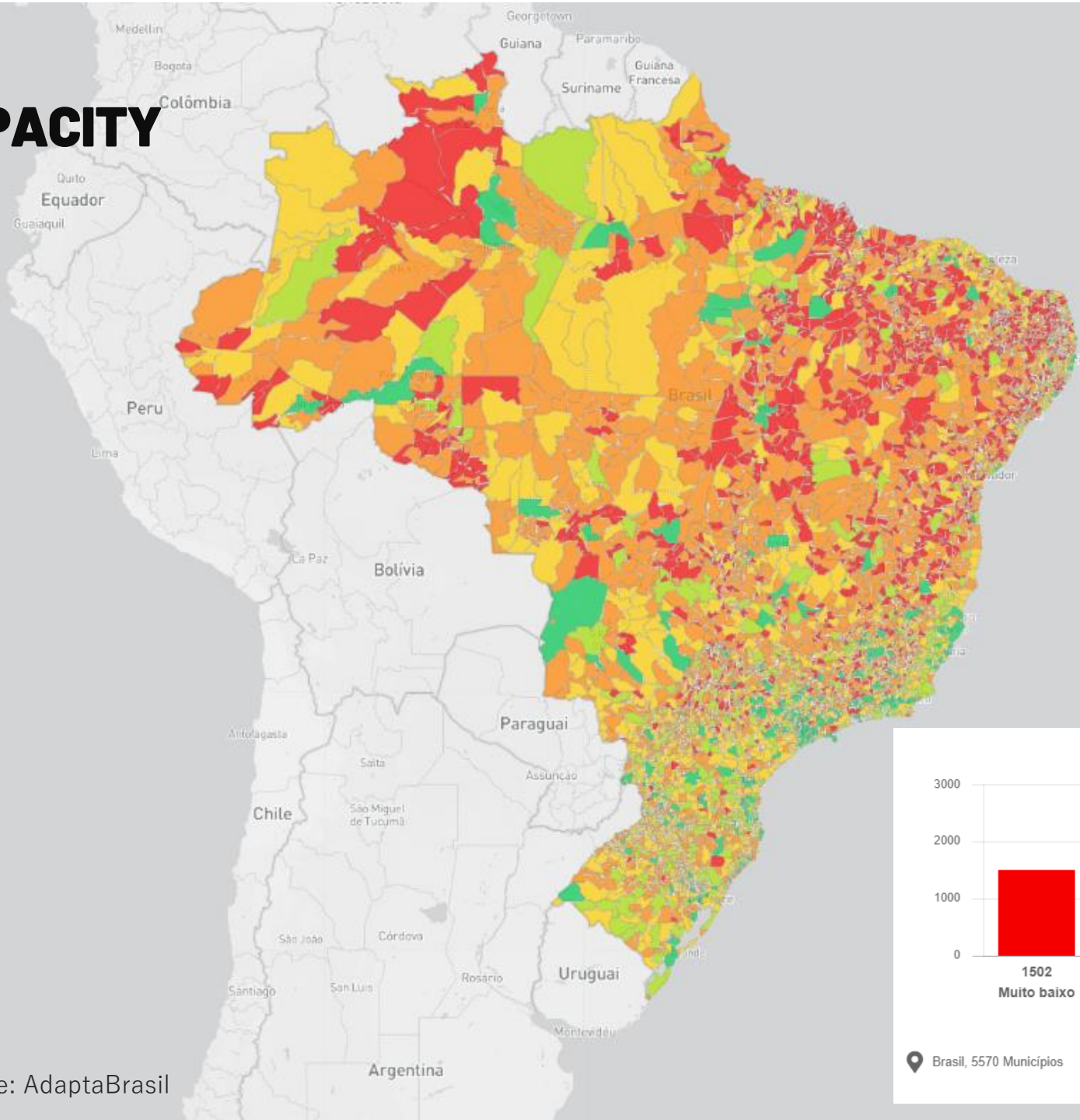


# ADAPTIVE CAPACITY

**Of the 5570 municipalities, 3,679 have low or very low adaptive capacity**



Fonte: AdaptaBrasil



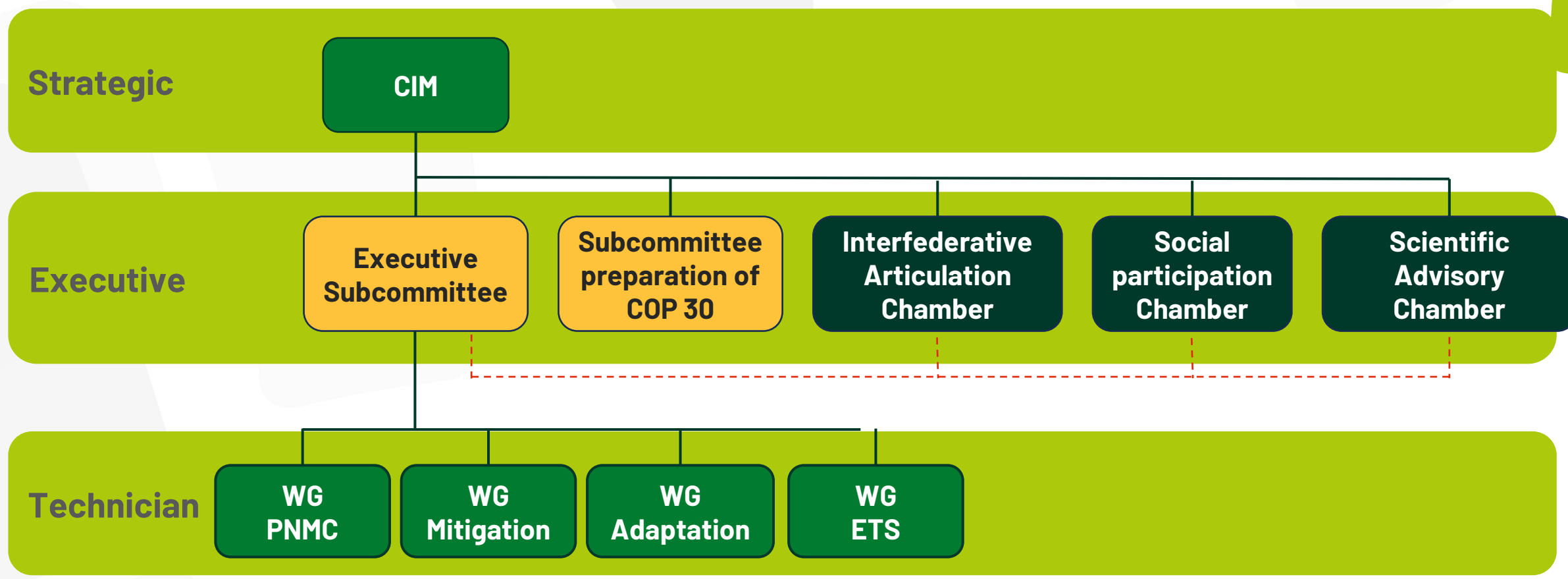




# GOVERNANCE ASPECTS

# PLANO CLIMA

# Current model

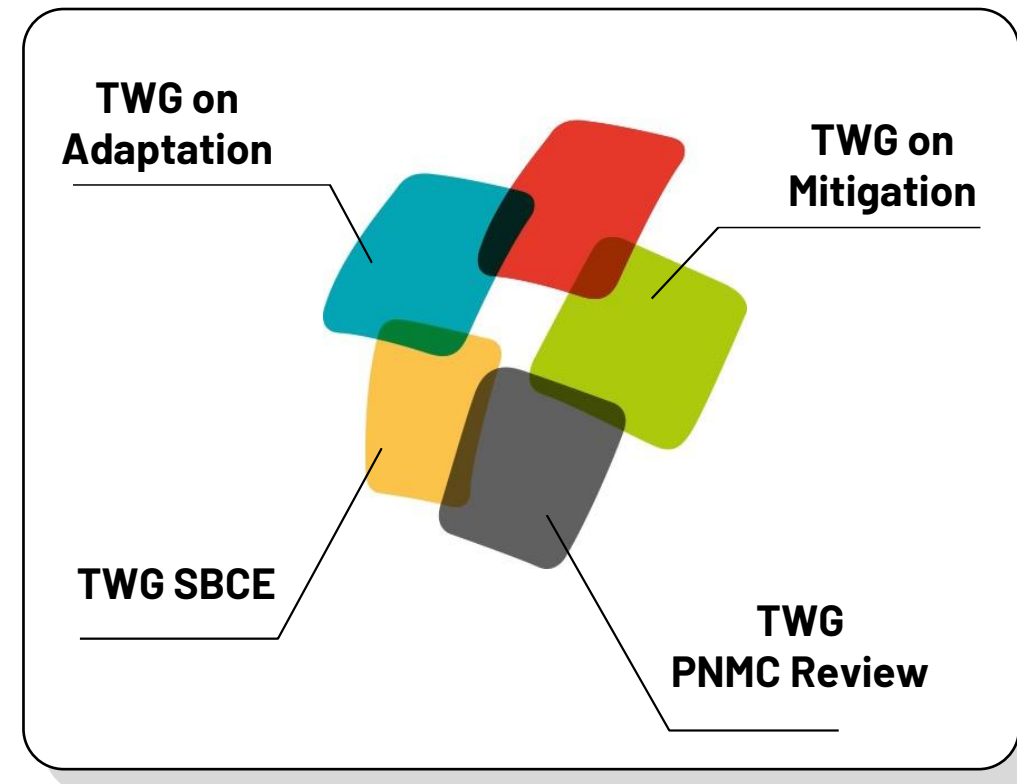


# CIM - Interministerial Committee on Climate Change

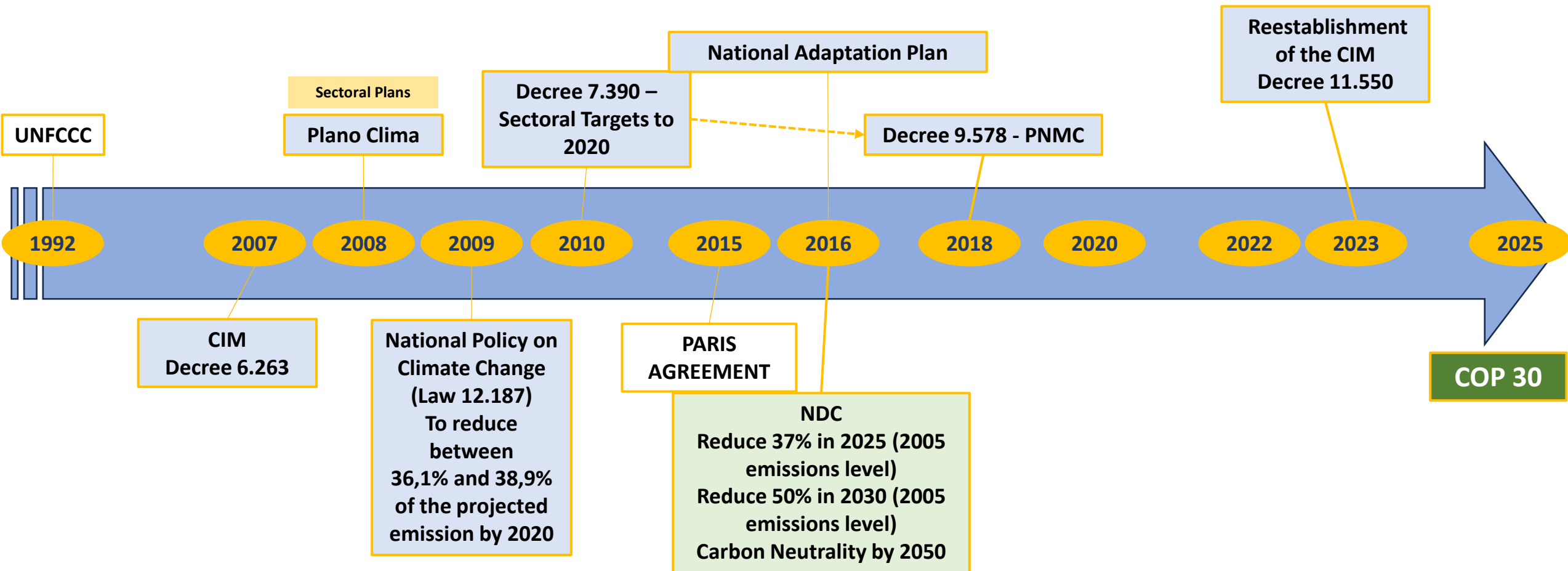
## Decree No. 11,550/2023

- **Objective:** To coordinate the implementation of actions and public policies within the scope of the Federal Executive Branch related to the National Policy on Climate Change (PNMC)
- **Composition (20 entities):** CC/PR; MAPA; MCid; MCTI; MDA; MDIC; MF; MIR; MIDR; MMA; MME; MPO; MPI; MRE; MS; MTE; MT; SG/PR; FBMC; Rede Clima.
- **First Meeting (14/09/2023):**
  - ✓ The correction of the Brazilian NDC (already carried out)
  - ✓ Creation of 4 Temporary Technical Groups (TWGs):
  - ✓ TWG on Adaptation
  - ✓ TWG on Mitigation
  - ✓ TWG on the Brazilian Emissions Trading System (SBCE)
  - ✓ TWG Review of the PNMC

### Technical Working Groups - CIM



# BRAZILIAN NATIONAL POLICY ON CLIMATE CHANGE TIMELINE



# NATIONAL POLICY ON CLIMATE CHANGE

## PLANO CLIMA 2024-2035



**PLANO  
CLIMA**  
Mitigação

National Mitigation  
Strategy

Mitigation Sectoral Plans



**PLANO  
CLIMA**  
Adaptação

National Adaptation  
Strategy

Adaptation Sectoral Plans

### TRANSVERSAL STRATEGY FOR CLIMATE ACTION

Just Transition

Means of  
implementation

Education, Training,  
and R,D&I

Monitoring,  
Assessment and  
Transparency

## Mitigation Sectoral Plans

1. Agriculture and cattle ranching
2. Forests and land use
3. Cities, including urban mobility
4. Energy and Mining
5. Industry
6. Waste management
7. Transport

## Adaptation Sectoral Plans

1. Agriculture and cattle ranching
2. Family farmers
3. Biodiversity
4. Cities
5. Disaster and Risk Management
6. Industry
7. Energy
8. Transports
9. Racial equality
10. Traditional communities
11. Indigenous Populations
12. Water Resources and Management
13. Health
14. Food Security and Nutrition
15. Oceans and Coastal Zones
16. Tourism

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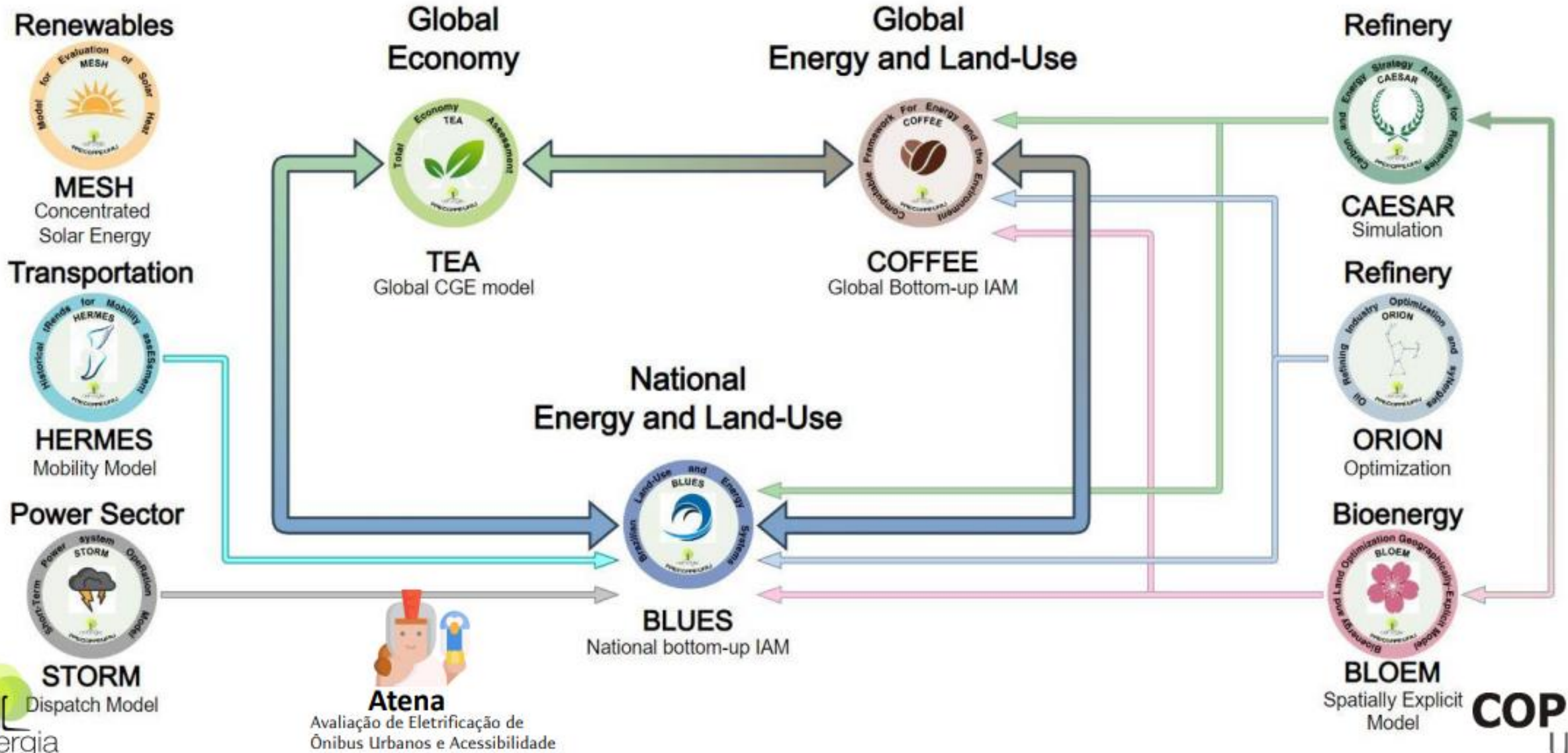


# Modeling and Scenarios

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# Brazilian Land Use and Energy System Model (BLUES)





# General Assumptions for Climate Plan - National Mitigation Strategy

**01**

Economy-wide targets already set for 2025 (1.32 GtCO<sub>2</sub>e), 2030 (1.2 GtCO<sub>2</sub>e) and 2050 (net-zero GHG emissions)

**02**

2035 target with emissions below the 2030 target - Paris Agreement, Mission 1.5°C and COP 30

**03**

Defining more cost-effective trajectories for the economy as a whole

**04**

BLUES model (CENERGIA/COPPE) calibrated with premises built jointly with the Ministries, but with a forecast for continuous improvement

**05**

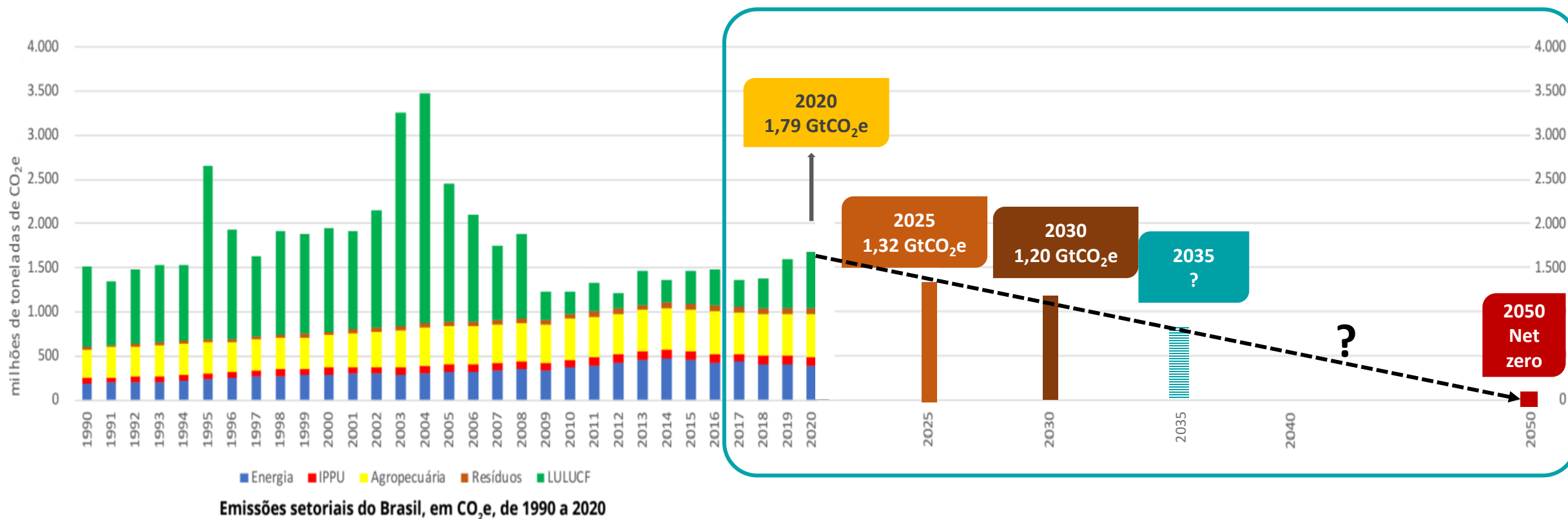
2035 target will be defined in band, with an interval of emissions to achieve it

**06**

IPCC Scenario SSP2:  
- Population growth  
- Economic growth  
- International demand for goods and services

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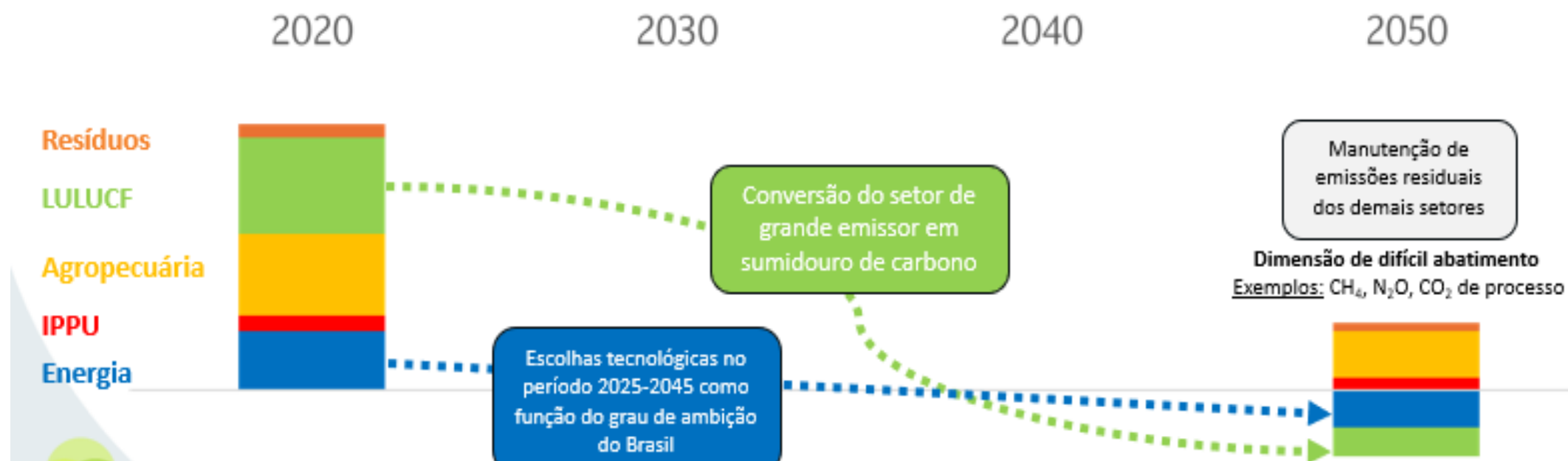
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# Key Findings

In 2021, Brazil deepened its ambition, with a goal of **Net-Zero GHG emissions by 2050**

This requires a strong downward trajectory of **CO2 emissions, with negative levels from the 2040s onwards to offset the remaining gases**, which accounted for 40% of GHG emissions in recent years.

It also means that **all sectors** must adopt mitigation measures and accelerate the **“decoupling” between economic growth and GHG emissions** (GHG emissions intensity reduction) emissões), although in diverse timeframes.



**THANK YOU !**

**National Secretariat for Climate Change (SMC)**

**Ministry of Environment and Climate Change (MMA)**

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