

Carbon Pricing: Concepts, Development and Future Governance

Brazilian Perspective

- COP 25-

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Carbon Pricing Initiatives Around the World



46 NATIONAL
28 SUBNATIONAL
jurisdictions

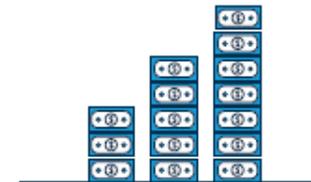


11 GtCO₂e = 20%
of GHG emissions covered



Range of prices in existing initiatives
US\$1 - 127/tCO₂e

51% of the emissions covered are priced < US\$10/tCO₂e



US\$44 BILLION
raised in carbon pricing revenues in 2018.

Carbon Pricing Initiatives Around the World



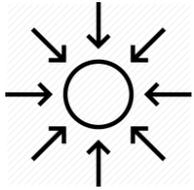
Source: World Bank (“State and Trends of Carbon Pricing, 2019”).

■ Regional, National and Subnational Carbon Pricing Initiatives

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> ■ Finland carbon tax (1990 →) ■ Poland carbon tax (1990 →) ■ Norway carbon tax (1991 →) ■ Sweden carbon tax (1991 →) ■ Denmark carbon tax (1992 →) ■ Slovenia carbon tax (1996 →) ■ Estonia carbon tax (2000 →) ■ Latvia carbon tax (2004 →) ■ EU ETS (2005 →) ■ Alberta CCIR (2007 →) ■ Switzerland ETS (2008 →) ■ New Zealand ETS (2008 →) ■ Switzerland carbon tax (2008 →) ■ Liechtenstein carbon tax (2008 →) ■ BC carbon tax (2008 →) ■ RGGI (2009 →) ■ Iceland carbon tax (2010 →) ■ Tokyo CaT (2010 →) ■ Ireland carbon tax (2010 →) ■ Ukraine carbon tax (2011 →) | <ul style="list-style-type: none"> ■ Saitama ETS (2011 →) ■ California CaT (2012 →) ■ Japan carbon tax (2012 →) ■ Australia CPM (2012 - 2014) ■ Québec CaT (2013 →) ■ Kazakhstan ETS (2013 →) ■ UK carbon price floor (2013 →) ■ Shenzhen pilot ETS (2013 →) ■ Shanghai pilot ETS (2013 →) ■ Beijing pilot ETS (2013 →) ■ Guangdong pilot ETS (2013 →) ■ Tianjin pilot ETS (2013 →) ■ France carbon tax (2014 →) ■ <u>Mexico carbon tax (2014 →)</u> ■ Spain carbon tax (2014 →) ■ Hubei pilot ETS (2014 →) ■ Chongqing pilot ETS (2014 →) ■ Korea ETS (2015 →) ■ Portugal carbon tax (2015 →) ■ BC GGIRCA (2016 →) | <ul style="list-style-type: none"> ■ Australia ERF Safeguard Mechanism (2016 →) ■ Fujian pilot ETS (2016 →) ■ Washington CAR (2017 →) ■ Ontario CaT (2017 - 2018) ■ Alberta carbon tax (2017 →) ■ <u>Chile carbon tax (2017 →)</u> ■ <u>Colombia carbon tax (2017 →)</u> ■ Massachusetts ETS (2018 →) ■ <u>Argentina carbon tax (2018 →)</u> ■ Canada federal OBPS (2019 →) ■ Singapore carbon tax (2019 →) ■ Nova Scotia CaT (2019 →) ■ Saskatchewan OBPS (2019 →) ■ Newfoundland and Labrador carbon tax (2019 →) ■ Newfoundland and Labrador PSS (2019 →) ■ Canada federal fuel charge (2019 →) ■ Prince Edward Island carbon tax (2019 →) ■ South Africa carbon tax (2019 →) ■ China national ETS (2020 →) |
|---|---|---|

} Initiatives in Latin America

■ Lessons from Kyoto Protocol



Level of Centralization



Independence of Regulator



How to determine the compliance value of Units Transferred Internationally



Conditions for robust accounting

**Importance of Governance:
Predictability and Stability
of Policy Regulation**

■ Carbon Markets

Challenges - Paris Agreement

Main Challenges

- The detailed rules still under discussion



Too many credits available

- possible use of old CD credits



Risk of Double Counting

- creation of robust accounting rules



Protecting local stakeholders

- Rules for the involvement of local communities in projects - safeguards and grievance mechanism -ensure fairness



Effective mitigation in global emissions

- Go beyond the zero-sum compensation: partial cancelation all credits compensation not enough



Avoid perverse incentives for weak targets

- Incentives focus on adoption ambitious targets x selling emission reductions

■ Brazilian Background



International Commitments

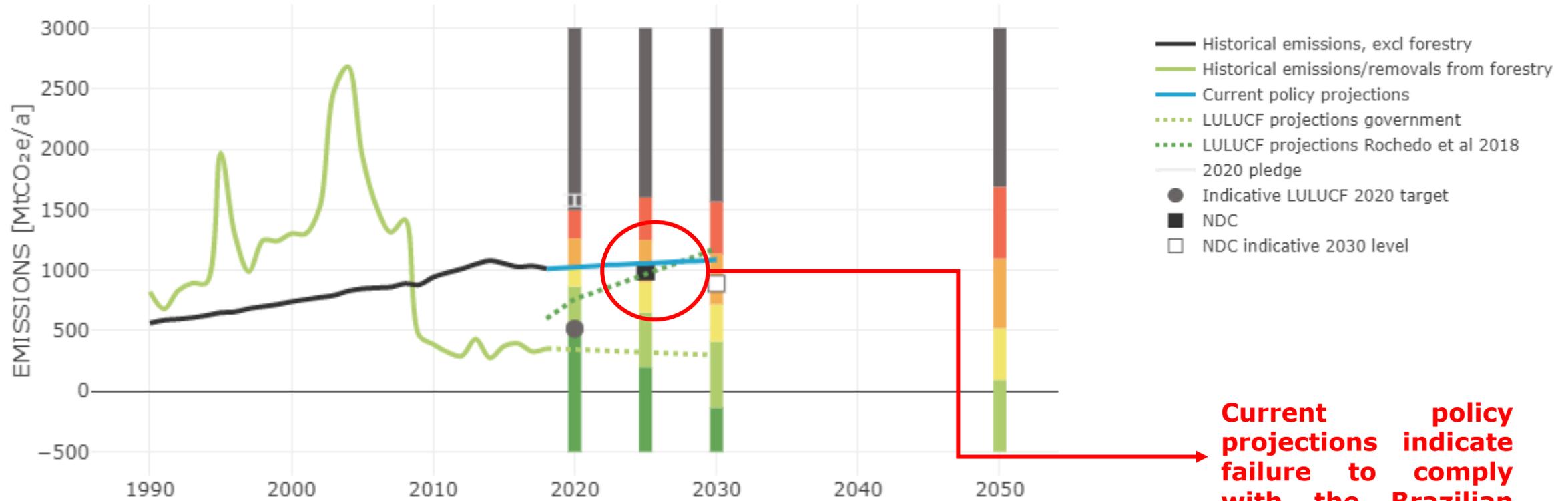
- **1994** – Brazil ratified the United Nations Framework Convention on Climate Change – UNFCC.
- **2002** – Brazil ratified the Kyoto Protocol.
- **2015** – Brazil signed the Paris Agreement at the 21st Conference of the Parties (COP 21).

Brazilian Nationally Determined Contribution – NDC

Brazil committed to lowering the country's 2005 GHG emissions levels by at least:

- ❖ **37% by 2025;**
 - ❖ **43% by 2030.**
-

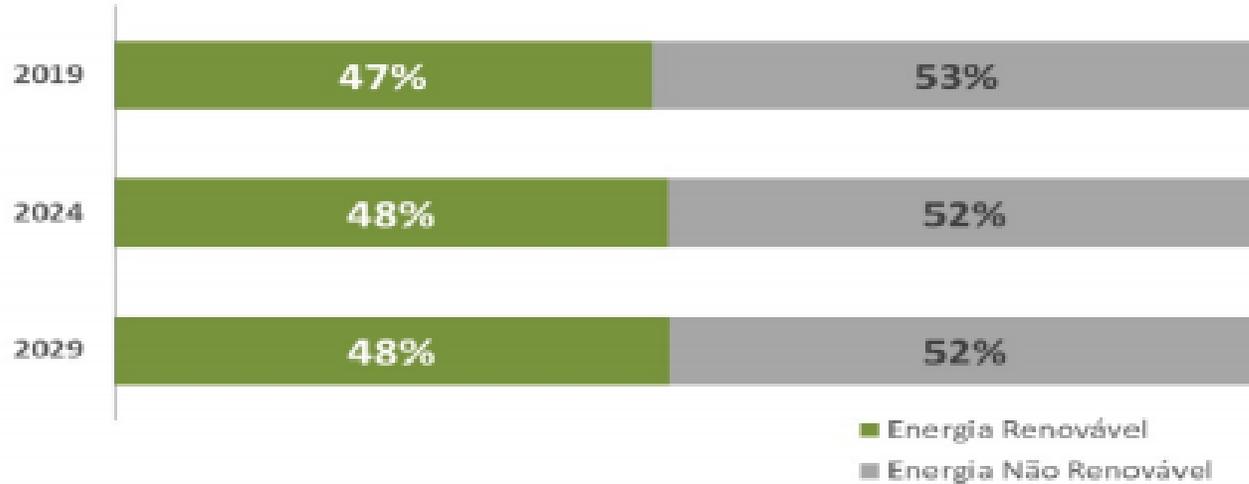
Brazilian Background



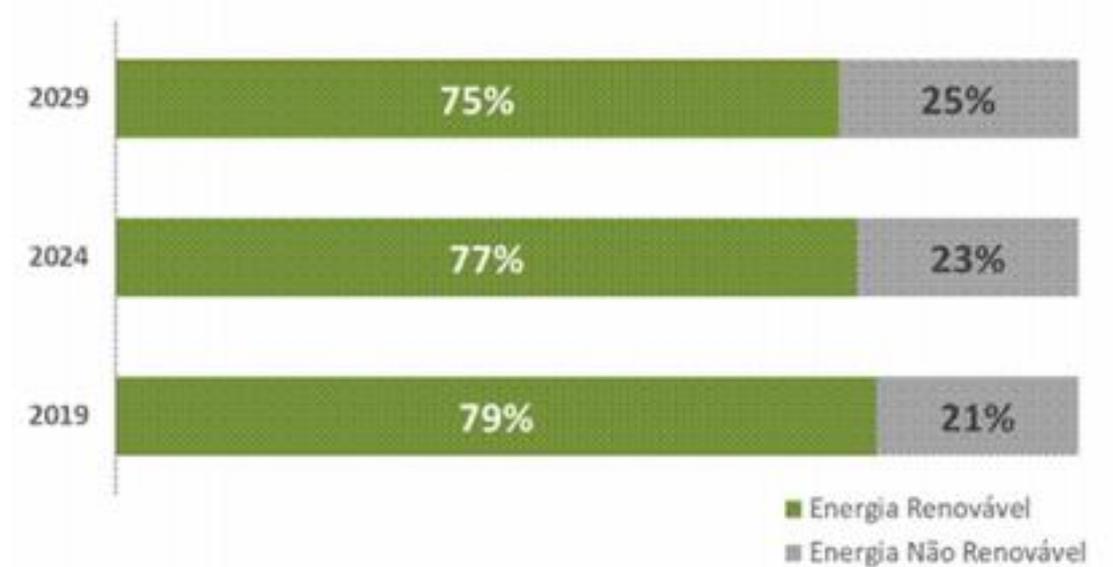
Current policy projections indicate failure to comply with the Brazilian NDC's target.

■ Brazil: Energy Background

Energy Mix



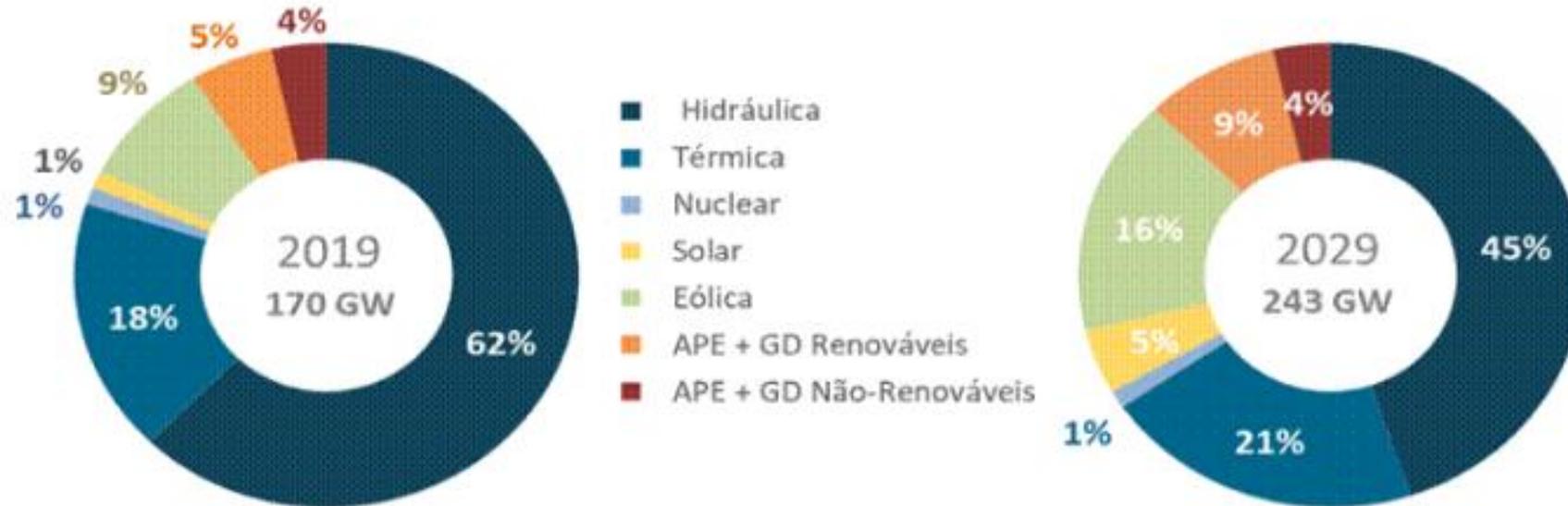
Electricity Mix



Brazil: Energy Background

Electric Energy Mix

Gráfico 11-4. - Evolução da composição da capacidade instalada total por fonte

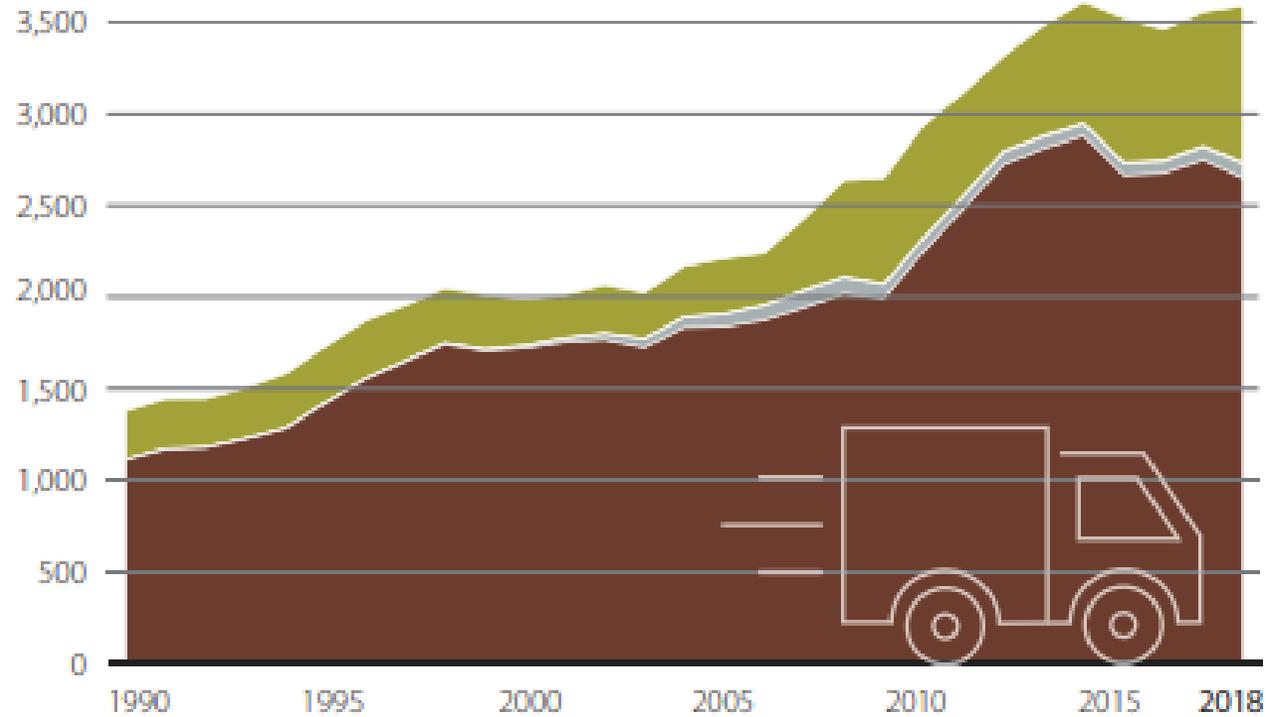


Nota: Não inclui Parcela da UHE Itaipu pertencente ao Paraguai

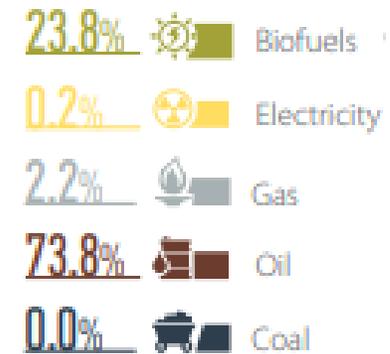
Brazil Energy Background

Transport energy mix

Final energy consumption of transport
by source (PJ/year)



Share in 2018



Source: Enerdata 2019

■ Brazilian Background

Deforestation Rate of the Amazon Forest - 9.762 km² (2019)

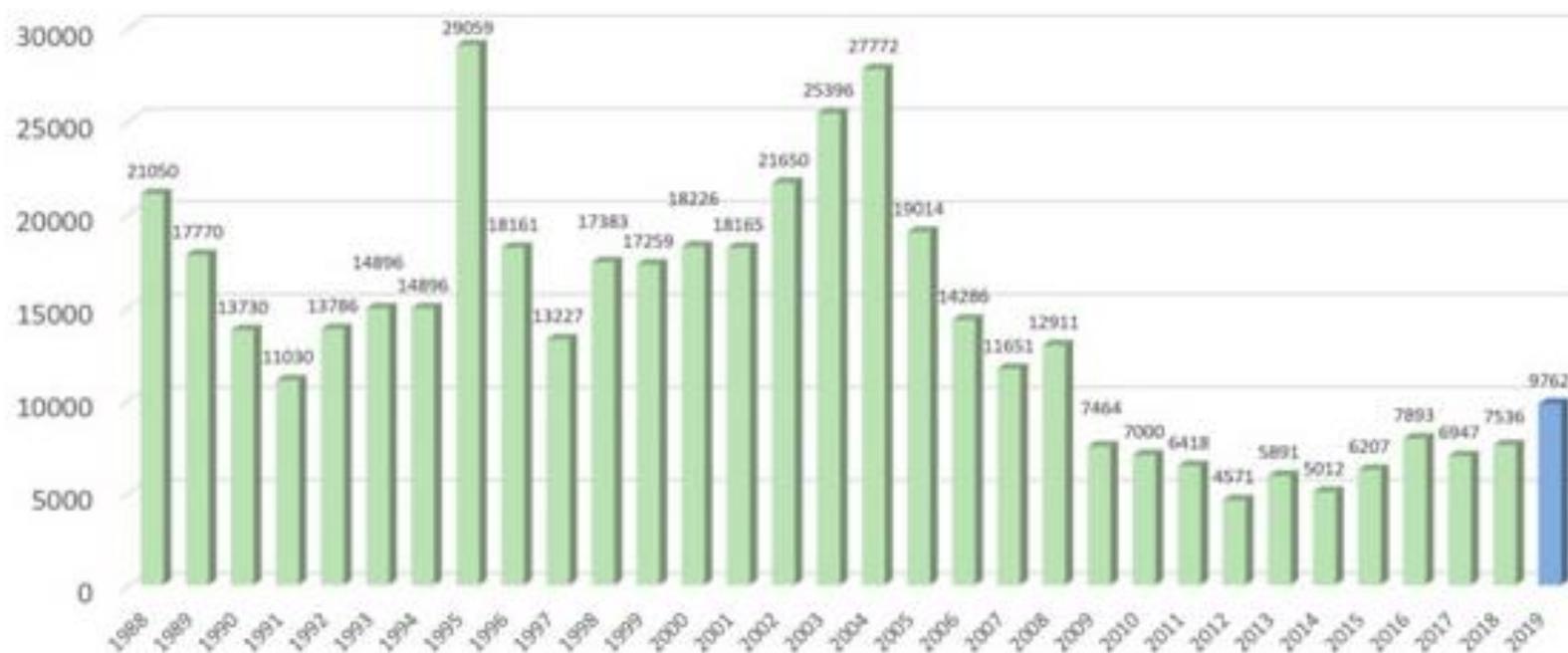


Figura 4 – Taxa anual de desmatamento desde 1988 na Amazônia Legal. Em azul a estimativa para 2019.

■ Brazilian Environmental Legal Framework



➤ **Brazilian Constitution:**

- ✓ **Article 225** - fundamental right to an ecologically balanced environment (on both individual and collective basis).

➤ **Law no. 12,187/2009 - Brazilian National Policy on Climate Change:**

✓ **Components:**

- Socioeconomic development and Protection of the Climate System;
- Measures to promote adaptation to climate change;
- **Development of the Brazilian Emission Reduction Market - MBRE;**
- Consolidation and expansion of legally protected areas and incentives to reforestation/ recomposition of forest cover;
- Reduction of anthropogenic GHG emissions by sources;
- Strengthening anthropogenic GHG removals by sinks;
- Preservation, conservation and recovery of environmental resources.

■ Carbon Pricing Initiatives in Brazil

Domestic Carbon Pricing Policies

Brazilian National Policy on Climate Change (Law no. 12,187/2009):

Article 5. The instruments of the National Policy on Climate Change are as follows:

(...)

VI – **fiscal and tax measures** destined to stimulate emission reduction and removal of greenhouse gases, including differentiated tax rates, breaks, exemptions compensations and incentives, to be established by specific law.

→ Possibility of
Carbon Taxes

(...)

XI – **financial and economic mechanisms** that are national in scope and referring to mitigation and adaptation to climate change.

Article 9. The **Brazilian Emission Reduction Market - MBRE** shall be operated in commodities, futures and stock exchanges and in over-the-counter trading companies authorized by the Securities and Exchange Commission – CVM, where negotiations for securities representing certified avoided greenhouse gas emissions shall take place.

→ Creation of an
Emission Trade System (ETS)

■ Carbon Pricing Initiatives in Brazil

Domestic Carbon Pricing Policies – Carbon Market



Brazilian Biofuels Policy (Law no. 13,576/2017):

Decarbonization Fossil fuel sector

100% **market oriented** mechanism: incentives energy efficiency + reduction of the carbon footprint.

Potential (i) Expand biofuels sector Production on sustainable basis; (ii) favor decarbonization fuel sector.

Innovative Program:

No carbon tax, subsidies or tax increase to biofuels,
No tax break,
No command for adding biofuels to fuels (mix)

Decarbonization credits (CBIO)

generated by biofuel producers, purchased by fuel distributors

increase the cost of fossil fuels while reducing the relative costs of biofuels.

■ Carbon Pricing Initiatives in Brazil

Domestic Carbon Pricing Policies – Carbon Market



Brazilian Biofuels Policy (Law no. 13,576/2017)

- Renovabio Program is based on three pillars:

1. **Annual decarbonization targets** set by the government minimum 10-year period;
2. **Issuance of GHG emissions reduction certificates**, named “CBio”
3. **Biofuels production certification** life cycle analysis.

Annual target set by CNPE

Compulsory purchase of CBios by fuel distributors

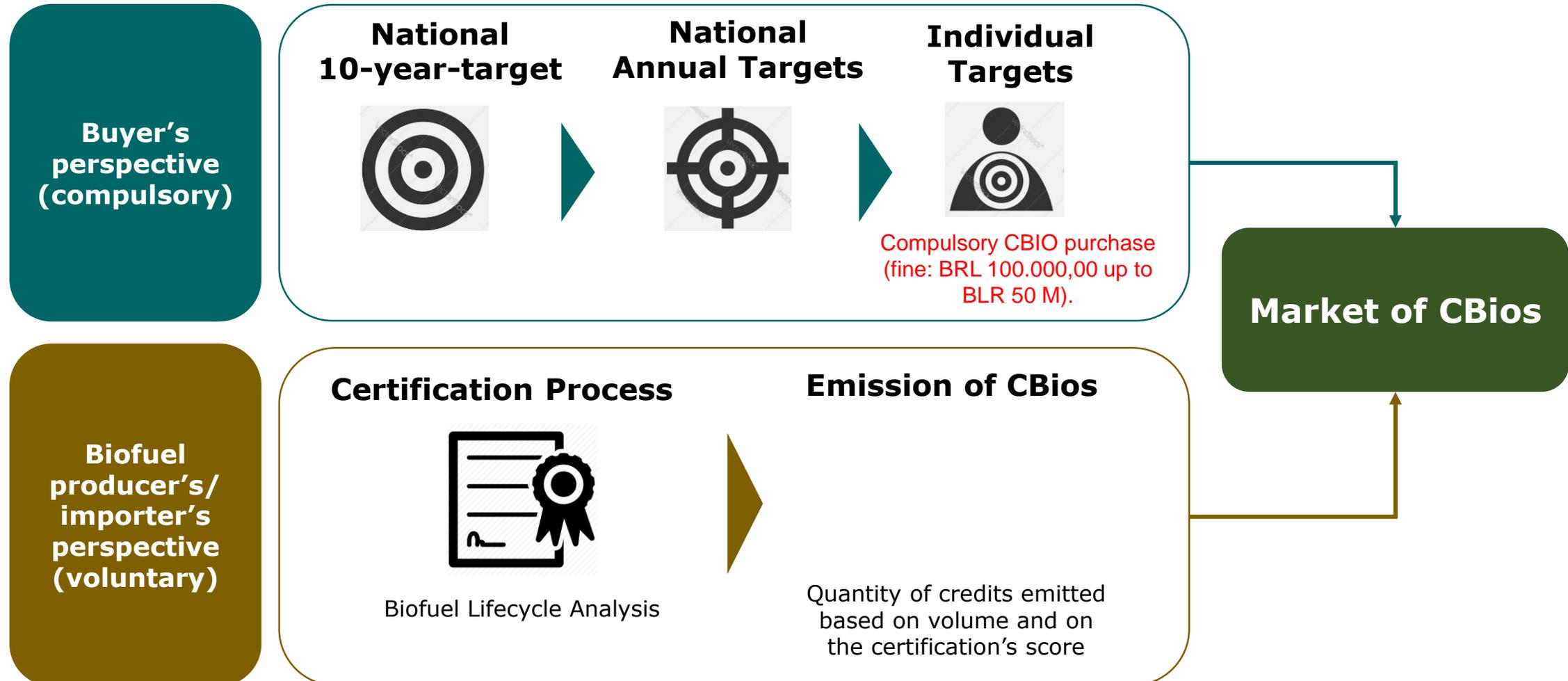
Market of CBios

Production of CBios by Biofuel Importers or Producers

Certification Process

■ RENOVABIO : Main Characteristics

➤ **Sectorial Policy** – restricted to fossil fuels.



■ Carbon Pricing Initiatives in Brazil

Perspective on Carbon Taxes

- **Under evaluation:**
- Austerity Measures
- New government goals (fiscal sustainability: restrictions to raise tax burden)
- Competitiveness

Brazil Taxes	Last	Previous	Highest	Lowest	Unit	
Corporate Tax Rate	34.00	34.00	37.00	25.00	percent	[+]
Personal Income Tax Rate	27.50	27.50	27.50	27.50	percent	[+]
Sales Tax Rate	17.00	17.00	17.00	17.00	percent	[+]
Social Security Rate	39.80	39.80	42.80	31.00	percent	[+]
Social Security Rate For Companies	28.80	28.80	31.80	20.00	percent	[+]
Social Security Rate For Employees	11.00	11.00	11.00	11.00	percent	[+]

■ Carbon Pricing - Future perspectives



Image Source: Climate Strategies.

- Framework that values Brazil's Attributes:
 - ✓ Internalization (value of benefits).
- Full and equitable participation design.
- Independent and transparent governance.
- Consideration of Developing Countries Competitiveness - **Reflexive approach.**
- Broader view on International Policies -focus on Sustainable Development.

POLITICAL WILL = PEOPLE PRESSURE / VOICE

Thank you!
iGracias!



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