

An aerial photograph of a dense tropical rainforest with a winding river. The river flows through the center of the image, surrounded by lush green trees. The lighting is warm, suggesting a sunset or sunrise, with long shadows and a golden glow. The text is overlaid on the left side of the image.

A Discussion on the 2025 COP 30 Environment Conference in Belém Brazil

...creating the opportunity to become a global hub of climate solutions

#1 CO₂-offset supplier: mitigate up to 1 Gt CO₂e p.a. by 2030 through NBS, with **+\$70B** of revenue pool¹

Zero illegal deforestation through command and control (tech + law enforcement) & effective fighting of natural fires

Increased **Sustainability** in wastewater treatment coverage and **clean water supply**

Protagonist in Wind and Solar: LCOE: \$33/MWh pre-incentives; 7-10 GW installed yearly, with **\$15B+/yr** in investments²

Green H₂ : Competitive renewable grid and local demand positioning to capture **10-15%** of global exports +2030³

Leadership in biomass & land for sustainable expansion could allow replacement of fossil fuels with **biofuels** in transport sector

Worldwide hub for low-carbon industrial products and key supplier of critical minerals benefiting from clean energy, competitive Green H₂, natural resources and NBS

#1 country in Regenerative Agric. at scale (up to 100 Mn hectares of Crop-Livestock-Forest Integration or no-till farming, +70% of cattle yields with pastureland recovery)

Expansion of efficient long-haul modals (waterway, rail) to reduce emission footprint

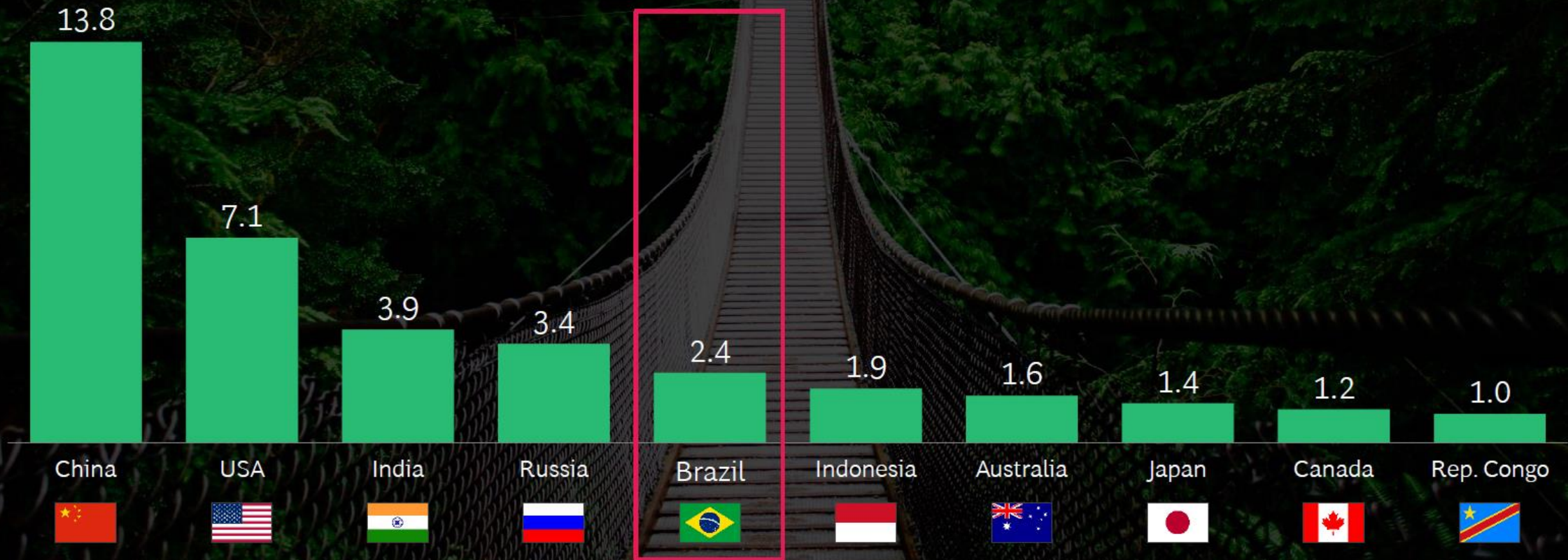


1. Assume potential of NBS in a price-competitive scenario with carbon price at \$70/ton CO₂. 2. Average Levelized Cost of Energy for wind & Solar plants, considering experts inputs, capacity expansion as disclosed by ONS in 2023, and average renewable energy investments in Brazil between 2015-2022 as reported by UNCTAD in 2023. 3. BCG estimates

Brazil is positioned as the 5th in rank of emissions, being a fundamental part to achieve global NZ goals...

Top 10 countries – Greenhouse gas (GHG) emissions

Per country, 2019, in Gt CO₂e



... while local emissions & challenges highly differ from those in rest of the world

Total GHG emissions

2019, share of total (in Gt CO₂e)

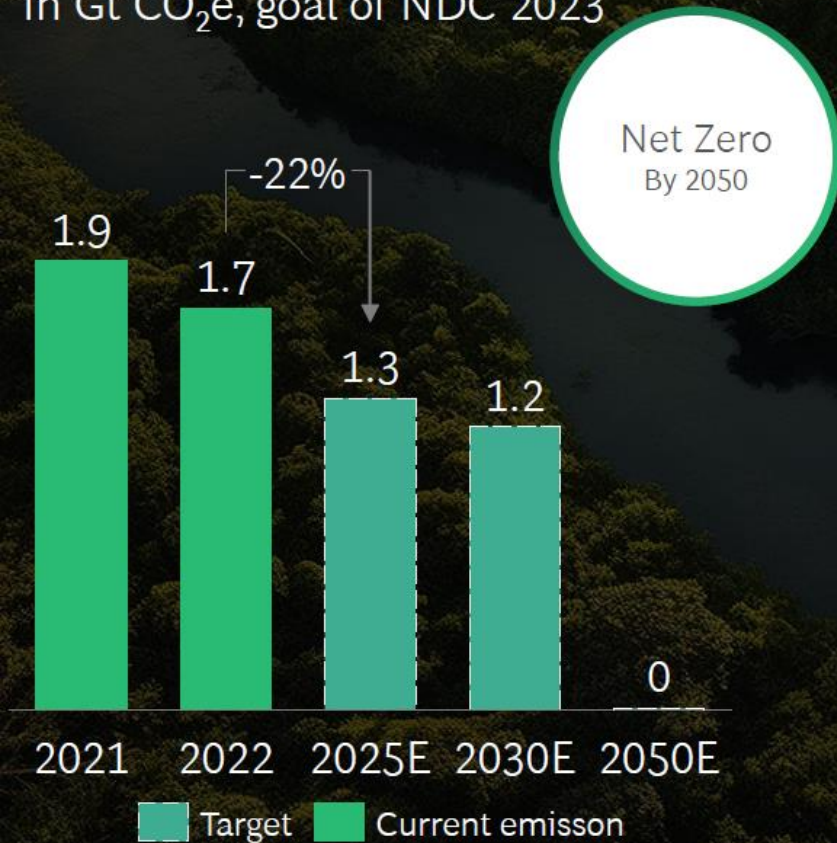


1. Combination of agriculture, forestry and other land use
Source: Climate TRACE; BCG analysis

Brazil is still far from its desired targets for NZ & deforestation, and is currently reviewing NDCs to meet Paris Agreement

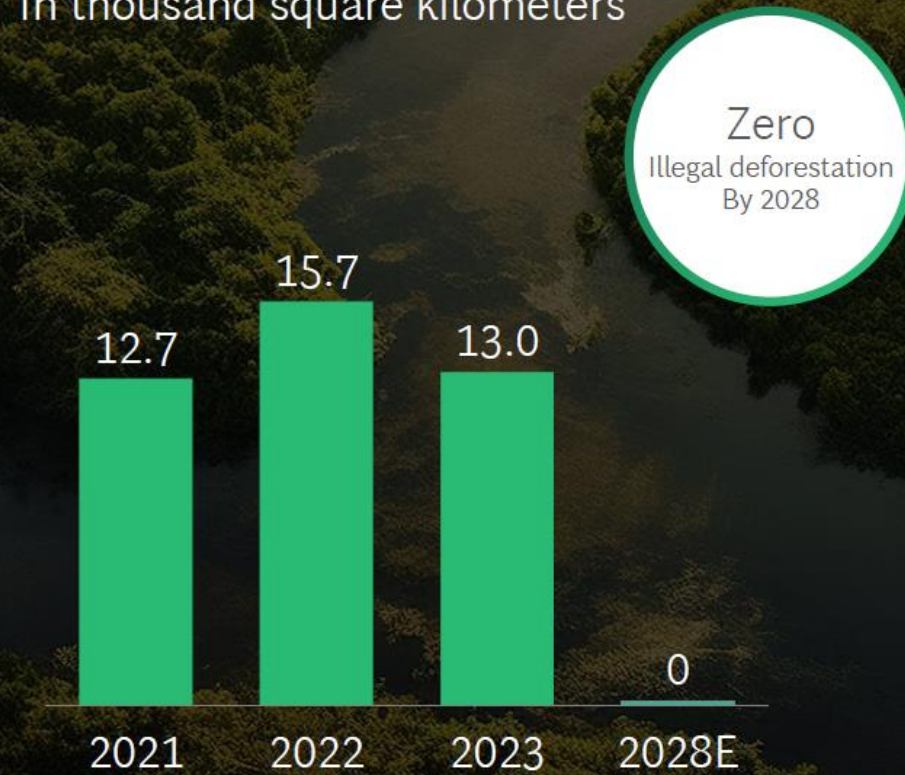
Brazil Net GHG emissions

In Gt CO₂e, goal of NDC 2023



Annual deforestation level

In thousand square kilometers



Brazilian government is revising its Nationally Determined Contribution (NDC), to be announced by 2025, following the Paris Agreement's 1.5 °C guideline

Brazil can become a Climate Hub by leveraging distinctive comparative advantages

1

Nature

BR is #1 country in reforestation globally, holding up to 1.0 Gt CO₂e per year of NBS mitigation potential



Reforestation
& Restoration



Avoided forest
conversion

2

Sustainable Agriculture

#1-2 exporter of most commodities (soy, orange juice, sugar, meat, corn), BR can continue to scale-up while reducing emissions



Regenerative
Agriculture



Biological
Fertilizers



Low-carbon
protein

3

Renewable Energy

88% of renewable power (vs. 29% world); Availability & low costs on wind, solar and biomass enables low emission footprint



Biomass
& Biofuels



Renewable
Energy



Green
H₂

4

Green industrial products

Natural resources, clean energy and biodiversity allows supply of low-carbon goods addressing regulatory requirements



Critical
Minerals
resources



Low-carbon
basic items
(e.g., Steel,
Cement...)



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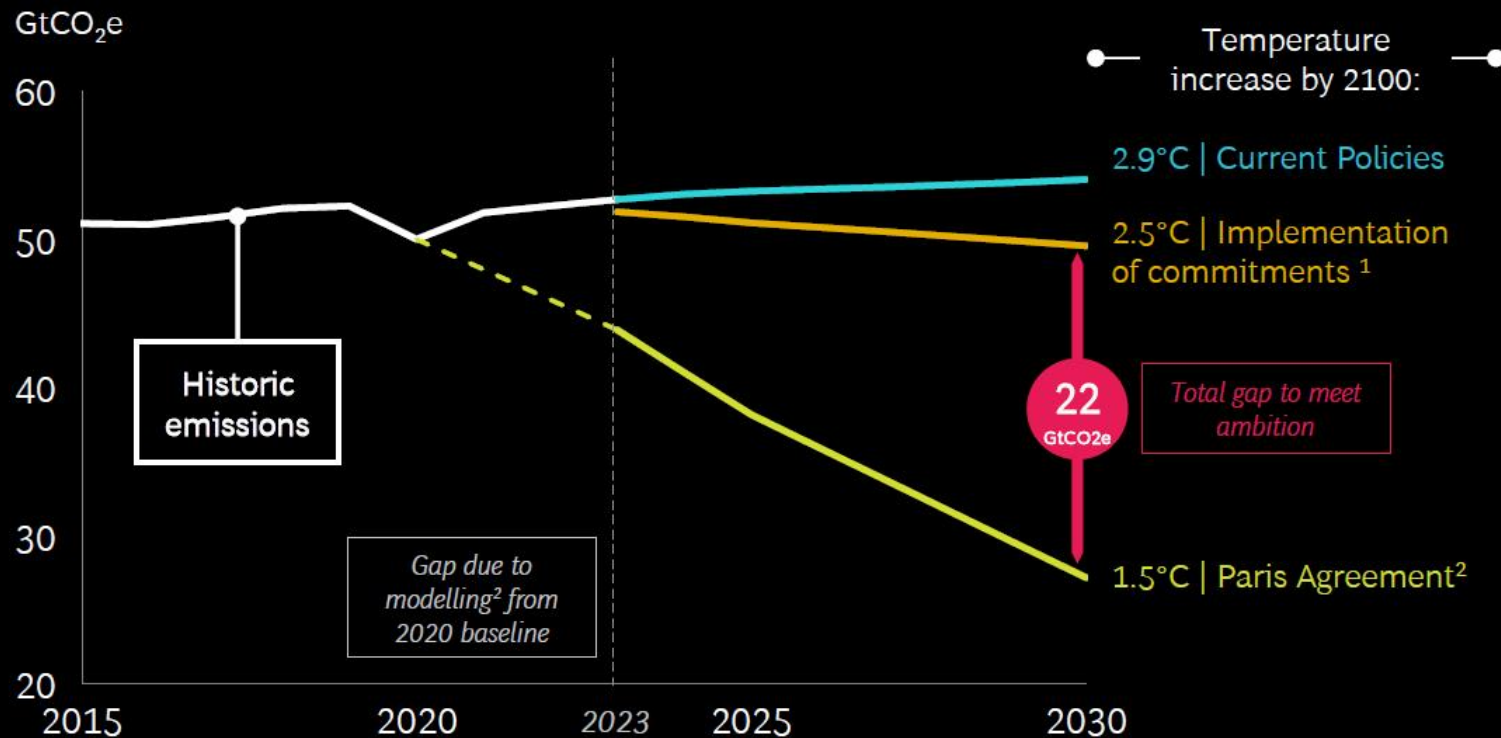


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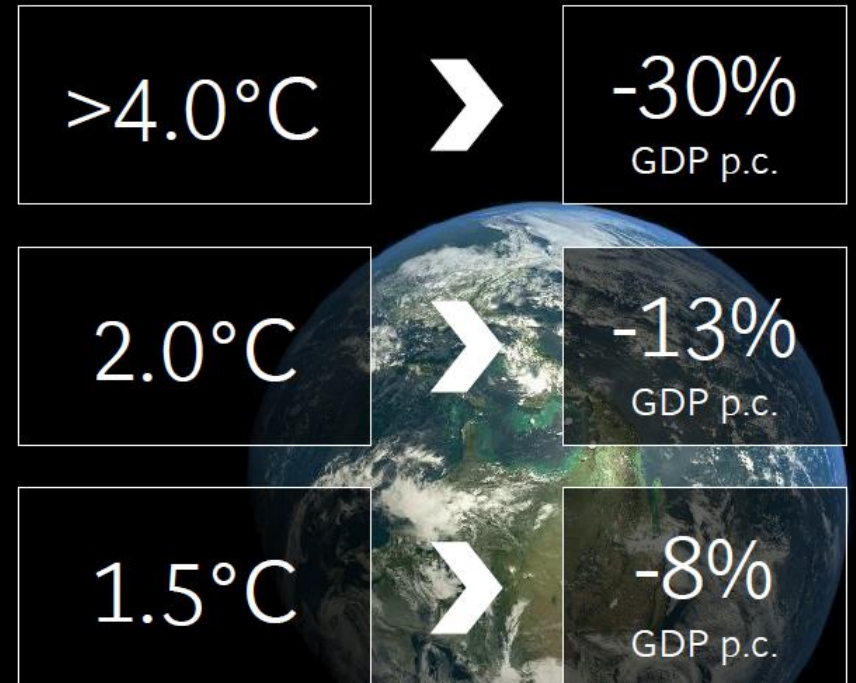
Decarbonizing world's economy is urgent and crucial to avoid major disasters and loss of wealth in this century

Total emission per Warming scenario

World, GtCO₂e



GDP loss (per capita) by 2100 due to disasters and Climate Change



1. Based on submitted NDCs. 2. Modelling conducted from 2020 baseline using projected 2020 emissions. Note: Emission gap for 2°C pathway estimated to be ~14 GtCO₂e (UNEP Emissions Gap Report 2023). Temperature increase refers to global warming by 2100; GDP loss (due to Global Warming impact) is per capita, vs. no additional global warming. Source: ClimateReanalyzer.org; Climate Change Institute; University of Maine; Climate Action Tracker; UN Intergovernmental Panel on Climate Change (IPCC); BCG analysis

Brazil is uniquely positioned to offer effective climate solutions at scale for the world

1 Introduction

Decarbonize the world is crucial, demanding immediate action

- Key to reduce climate change impacts and avoid up to **~30% in GDP loss**
- Advances are noticeable, yet <35% of emissions are covered by commitments by 2050
- A sustainable future demands action along 4 pillars – this report focuses on Mitigation and Adaptation & Resilience

2 Mitigation

BR is well-positioned to be a Net-Zero catalyst and attract **\$2.6-3T** of investments by 2050

- Natural resources, high productivity & green power matrix favor position
- Potential to lead in RegAg¹, NBS², Green H₂, Biofuels & Industry
- Leading to up to 1.7x in investments by 2030
- Enabled by low emission solutions on 4 sectors: Nature, Sustainable Agri, Renewable Energy, Green Industry

3 Adaptation & Resilience

Effects of climate change require A&R actions from private & public sector in BR

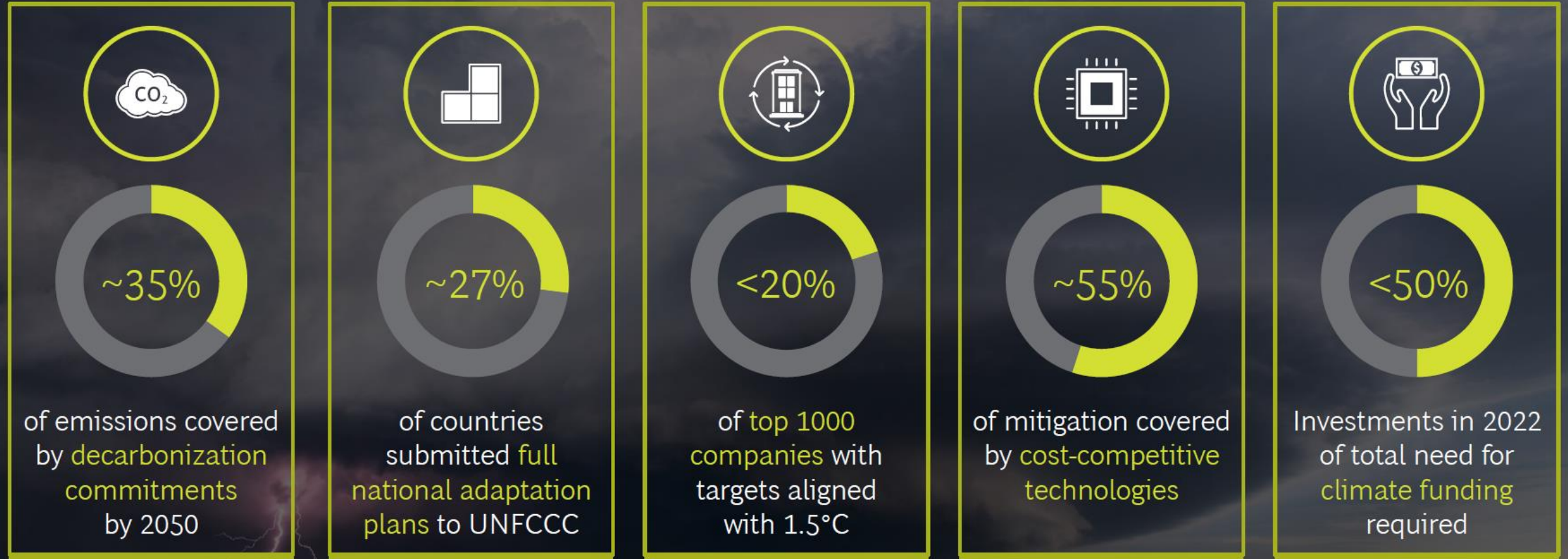
- +50% of disasters globally vs. 90's, and **+BRL 420B** damage in Brazil in 10 years
- 7 key areas to invest, with up to 15x benefit-to-cost ratio
- **+150B p.a.** investment gap, specially from private sector
- Public & private sectors to combine efforts with the right funding to advance projects

4 Biofuels' Case Study

Brazil has an opportunity to transform the transport sector with biofuels

- BR already a top global producer, #2 in ethanol & #4 in biodiesel
- ~100 Mha of degraded area available for sustainable expansion and high productivity
- Reaching full potential, Brazil could supply 100% of its transport sector with Biofuels...
- ... reducing sector emissions by 55%+ and unlocking up to **\$200B** in investments

... yet efforts to mitigate & adapt to climate change are falling short of what is required



Source: Net Zero Tracker; Climate Watch; CAT; 1.5°C national pathway explorer; IPCC; IEA; PPCA; Glasgow Declaration; World Bank; EHPA; Climate policy database

Source: UNFCCC (53 have submitted NAPs to the UNFCCC as of Jan 2024, out of 195 Parties to the Paris Agreement)

Source: CDP data [2018-2021]; GFANZ [2023]; Net Zero Tracker [2023]; Refinitiv [2023]; SBTi [2023]

Source: IEA; IPCC; Höglund-Isaksson et al. (2021); desk research

Source: IEA; UNEP; CPI; World Bank; OECD; SAF Investor

The path to sustainability relies on 4 pillars - mitigation, adaptation & resilience are the focus of the report



Mitigation

Limitation of the effects of climate change by **reducing emissions or removing greenhouse gases** from the atmosphere



Adaptation & Resilience

Adjustment for environmental changes from climate change to mitigate harm or exploit opportunities **and quickly recover** from climate events efficiently



Loss & Damage

Answer to residual impacts of insufficient mitigation and adaptation from extreme or slow-onset events



Climate Finance

Investments in mitigation, adaptation and resilience as well as covering the costs of loss and damage

Focus of this report

The path to sustainability relies on 4 pillars - mitigation, adaptation & resilience are the focus of the report



Mitigation

Limitation of the effects of climate change by **reducing emissions** or **removing greenhouse gases** from the atmosphere



Brazil can become a hub of low-emissions solutions, leveraging its capabilities and natural resources



Adaptation & Resilience

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On the climate journey, Brazil hosting of COP30 sets the prospect for ambitious global commitments

Country has advanced in several climate-related topics in recent years...

...Brazil leadership in diplomatic discussions will enhance its role in advocating for decisive actions



Providing **environment for dialogue** that could lead to substantial shifts in all countries commitments towards 2030/2035 ...

... given that major progress is needed on **concrete actions for global energy and climate transition** (e.g. climate finance) ...

... at the same time, offering concrete and ambitious projects to **materialize Brazil's key comparative advantages...**

... presenting a **business opportunity** to boost and fund global Net Zero & Adaptation efforts



**1992
RIO DE
JANEIRO**

Start of
climate talks

Industrialised countries
commit to reduction

1995 BERLIN

1997 KYOTO

US\$100 billion to
fund climate action

Adjusting points
of Kyoto Protocol

2009 COPENHAGEN

1998 BUENOS AIRES

2°C set
as target

All countries must
reduce emissions

Rio+20

Extension of
Kyoto Protocol

2010 CANCÚN

2011 DURBAN

2012 RIO DE JANEIRO

2012 DOHA

**2024
BAKU**

Some reduction
in use of oil for
electricity
benefits

Accelerating
phase-out of coal

Paris Agreement's
goal of 2 C

2023 DUBAI

2021 GLASGOW

2015 PARIS

Participation of
civil society

An aerial photograph showing a winding river or stream cutting through a lush, green forest. The water is a light brownish-grey color, contrasting with the vibrant green of the surrounding trees. The forest appears dense and healthy, with sunlight filtering through the canopy in some areas.

It took more than 20 years of discussions on the environment for the international community to commit to action, at the Earth Summit in 1992 in Rio de Janeiro, Brazil. The resulting UNFCCC (United Nations Framework Convention on Climate Change) came into force two years later, providing a framework for ongoing climate negotiations in the form of preparatory conferences and the annual COP. These conferences are held in different countries located on the various continents on a rotating basis.

In 1995, the first Conference of the Parties took place in Berlin, followed by COP2 in Geneva, Switzerland. Both formed the basis for subsequent international climate talks. In 1997, the focus was the implementation of the UNFCCC. After long negotiations, the Parties agreed on the Kyoto Protocol, the most far-reaching climate agreement to date. For the first time, an absolute and legally binding limit on greenhouse gas (GHG) emissions for industrialized countries was anchored in an international treaty.

The Kyoto Protocol was ratified by 191 nations several years later in 2005. Notably, the US was not among this group, in spite of becoming a signatory during COP4.

With the Kyoto Protocol, 37 industrialised countries committed themselves to reduce GHG emissions to 5.2% below 1990 levels between 2008 and 2012. No restrictions were imposed on developing countries, even high polluters. International emissions trading was also introduced. The similar but differentiated principle of responsibilities were created to contrast the speed in which developing and developed countries were to reduce GHG emissions.

RIO + 20

The United Nations Conference on Sustainable Development (Rio+20) was held in Rio de Janeiro, Brazil, on 20-22 June 2012, producing a political outcome document with measures for sustainable development. At Rio, Member States initiated the development of Sustainable Development Goals (SDGs) to build on the previous Millennium Development Goals and align with the post-2015 agenda. The conference also adopted guidelines for green economy policies.

Agenda 2030 for Sustainable Development:

The Sustainable Development Goals (SDGs), created at the 2012 Rio+20 Conference, set universal goals across social, environmental, and economic dimensions with input from UN member states and non-governmental actors. Developed between 2013 and 2015, the 17 SDGs form the 2030 Agenda (signed in 2015 by 193 UN Member States), guiding global policies and UN reform. Brazil supports an integrated approach to sustainable development, implementing policies like Bolsa Família, the Ecological Transformation Plan, and Amazon deforestation control, which impact various SDGs. Introduced in 2023, SDG 18 promotes ethnic and racial equality and is currently being formalized.

PERSPECTIVES FOR COP30 IN BELÉM

Previous COPs have had a greater civil society involvement, and in Brazil, it is not different.

President Lula chose to present Belém as a host city because the world associates Brazil with the environment, and its forests.

It is important to recall that a good part of our greenhouse gas emissions comes from deforestation, which by the way diminished 50% last year, but it is still important.

In Dubai, we all agreed to stop deforestation by 2030. We created a group of countries called “United for our Forests”. The United for our Forests comprises 70 countries around the world will be a major ally in this task.

Financing the energy transition. We have urgencies! Mid-income countries have to pay a very high price for any resources they can obtain in the market. We will discuss this issue at the G20. There is still no mechanism that translates the urgency of investments in reducing climate change.

De-risking is a new concept. If we succeed to include climate-associated projects in the mainstream of investments, this will be a major development. We need to move away from the concept that we will have in the future funds to invest in environment preservation. This needs to change while we will make available projects that affect the environment in some form or another. Countries should include in their development plan a series of projects contemplating the environment. As mentioned previously, this was discussed during the G20 talks in Rio de Janeiro, this last November and will continue in the BRICS-plus summit in Brazil next year. A significant outcome of the COP-29 summit was the initiation of the "Baku to Belém Roadmap to 1.3 Trillion," aiming to mobilize \$1.3 trillion annually by 2035 to support climate actions in developing countries. This roadmap is designed to facilitate increased financial flows from both public and private sectors, with progress reports anticipated at COP30 in Belém, Brazil.

An aerial photograph of a river meandering through a vast, dense tropical rainforest. The river is a light brown color, contrasting with the deep green of the forest. The forest canopy is thick and textured, with some areas appearing darker than others. The river flows from the top right towards the bottom left, with several bends and loops.

If we succeed in including the urgency element in de-risking we may succeed in financing environment projects.

Brazil is very keen on observing science. Science has concluded that if we surpass 1.5 degrees in global warming, we may provoke the “savanization” of the rainforest, and other tropical forests around the world. Science is surprised on how quickly things are happening, how fast our world climate is changing, and events which are occurring now should have happened only in 2040. It is seemingly a tricky discussion to discuss financing environmental projects using oil revenues, but the is general idea in the discussions that we pretend to have at the G20, and also in the BRICS - plus meeting to be hosted in Brazil next year. Energy conservation needs to be addressed in a major way. Brazil is today a country that can produce energy in tremendous scale in a sustainable way.

This poises Brazil and other countries to benefit from de-risking investments associated with climate improvement.

We need to incentivize countries in being more ambitious in their NDCs. Perhaps the perspective of receiving investments will push them in that direction.

I still believe that the yearly discussion on the environment made available by the holding of COPs is a routine that brings countries together jointly to solve a common planetary problem and will contribute, in the long run, to diminish some of the political cleavages of this era.

José Mauro da
Fonseca Costa Couto

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COP30 in Brazil, please contact:

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AMBASADA
BRAZILA



BEOGRAD